AGENDA
IRVINE RANCH WATER DISTRICT
WATER RESOURCES POLICY AND COMMUNICATIONS COMMITTEE
MONDAY, NOVEMBER 5, 2018

CALL TO ORDER 2:30 p.m., Committee Room, Second Floor, District Office
15600 Sand Canyon Avenue, Irvine, California

ATTENDANCE Committee Chair: Mary Aileen Matheis _____
Member: Steve LaMar _____

ALSO PRESENT			
Paul Cook	_____	Cheryl Clary	_____
Beth Beeman	_____	Paul Weghorst	_____
Mark Tettemer	_____	Christine Compton	_____
Fiona Sanchez	_____	Amy McNulty	_____
Wendy Chambers	_____	Kellie Welch	_____
Ray Bennett	_____	Jo Ann Corey	_____
Paige Midstokke	_____	_____	_____
_____	_____	_____	_____

COMMUNICATIONS

1. Notes: Weghorst
2. Public Comments
3. Determine the need to discuss and/or take action on item(s) introduced that came to the attention of the District subsequent to the agenda being posted.
4. Determine which items may be approved without discussion.

INFORMATION

5. DEVELOPMENT OF WATER LOSS STANDARDS AND WATER LOSS AUDIT REPORT – MCNULTY / SANCHEZ / WEGHORST

   Recommendation: Receive and file.

6. 2018 LEGISLATIVE AND REGULATORY UPDATE – COMPTON / COOK

   Recommendation: Receive and file.

ACTION

7. 2019-2020 FEDERAL ADVOCACY SERVICES – COMPTON / COOK

   Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement with Kadesh & Associates for federal advocacy and consulting services for the period of December 1, 2018, through December 31, 2020, at a rate of $10,000 per month plus reasonable reimbursable direct expenses for a total contract amount not to exceed $265,000.

8. STATE ADVOCACY SERVICES – COMPTON / COOK

   Recommendation: That the Committee review and discuss the responses to the District's Request for Qualifications for State Advocacy Services and discuss which firms to interview.

9. PROPOSED IRWD POLICY PRINCIPLES REGARDING METROPOLITAN WATER DISTRICT'S REGIONAL RECYCLED WATER PROGRAM – WEGHORST

   Recommendation: That the Board adopt the proposed IRWD policy position paper regarding Metropolitan Water District's Proposed Regional Recycled Water Program.

10. CONSULTANT SELECTION FOR A STUDY OF IRWD'S FUTURE POTENTIAL WATER EFFICIENCY – HASTINGS / MCNULTY / SANCHEZ / WEGHORST

    Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement with EKI Environment & Water in the amount of $158,958 to conduct a study on IRWD's Future Potential Water Efficiency.

OTHER BUSINESS

11. Directors' Comments

12. Adjourn

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Availability of agenda materials: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the above-named Committee in connection with a matter subject to discussion or consideration at an open meeting of the Committee are available for public inspection in the District's office, 15600 Sand Canyon Avenue, Irvine, California ("District Office"). If such writings are distributed to members of the Committee less than 72 hours prior to the meeting, they will be available from the District Secretary of the District Office at the same time as they are distributed to Committee Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available at the entrance of the meeting room at the District Office.

The Irvine Ranch Water District Committee Room is wheelchair accessible. If you require any special disability-related accommodations (e.g., access to an amplified sound system, etc.), please contact the District Secretary at (949) 453-5300 during business hours at least seventy-two (72) hours prior to the scheduled meeting. This agenda can be obtained in an alternative format upon written request to the District Secretary at least seventy-two (72) hours prior to the scheduled meeting.

November 5, 2018
Prepared by: A. McNulty
Submitted by: F. Sanchez / P. Weghorst
Approved by: Paul A. Cook

WATER RESOURCES POLICY AND COMMUNICATIONS COMMITTEE

DEVELOPMENT OF WATER LOSS STANDARDS AND WATER LOSS AUDIT REPORT

SUMMARY:

Staff has prepared and submitted IRWD's Fiscal Year (FY) 2017-18 Water Loss Audit Report to the California Department of Water Resources (DWR). All of the supporting data and documentation that was used to prepare the report was certified by a third-party data validator. At the Committee meeting, staff will provide an overview of the State Water Resources Control Board water loss standards development and present IRWD's water loss audit results.

BACKGROUND:

IRWD has implemented water loss control programs since 1991, with the introduction of proactive leak detection and meter replacement programs. In 2017, water loss prevention and revenue recovery were added to the program portfolio. This suite of programs minimizes leakage from the IRWD distribution system, prevents water theft, ensures that customers are accurately billed, and demonstrates the District's commitment to responsible resource management. The positive impact of the District's water loss control programs is evident in the Water Loss Audit results.

The American Water Works Association (AWWA) Water Loss Audit historically was prepared to fulfill reporting requirements related to the California Urban Water Conservation Council's Best Management Practices. In 2015, state Senate Bill 555 was enacted and requires that each urban retail water supplier submit a third-party validated audit to DWR by October 1 every year, starting in 2017. The data that are reported by the urban retail water suppliers during 2017 and 2018 serve as baseline data to inform the State Board in the development of water loss standards.

Water Loss Standards:

SB 555 directed the State Board to develop standards related to water loss no earlier than January 1, 2019, and no later than July 1, 2020. In 2018, new water efficiency legislation included a water loss component in the calculation of a utility's water efficiency target. As a result, the water loss standards developed by the State Board must be volume-based in order to fit with the water efficiency target calculation.

During 2018, staff participated in three stakeholder meetings conducted by the State Board in which participants could provide input on 1) various water loss programs and equipment, and 2) development of cost-effectiveness calculations. The State Board sought input from water utilities with water loss programs, such as IRWD's, to inform their design of the standards. Staff's presentation to the State Board included recommendations for a water loss standard that would reflect the existing issues with data quality and acknowledge the significant variability in system operation, infrastructure composition and age, costs, available resources, and starting points among water agencies throughout the state.

Statewide data from the 2017 and 2018 water loss audits will be used by the State Board to inform the development of the water loss standards. The State Board intends to release a draft of proposed water loss standards in December 2018, and then hold a final stakeholder meeting in January 2019. Following the stakeholder meeting and input, the State Board will develop final proposed water standards and initiate its formal rule-making process to adopt the proposed standards. Staff will continue to provide input to the State Board throughout the process, and will provide updates to the Committee as the water loss standards are developed.

Due to IRWD's long history of water loss program implementation and high quality data, the IRWD audit results are consistently very good every year, with low levels of water loss. The audit results and performance indicators are explained below.

IRWD Water Loss Audit:

Staff recently prepared and submitted IRWD's FY 2017-18 Water Loss Audit Report to DWR. IRWD's FY 2017-18 Water Loss Audit Report was prepared by a multi-disciplinary team of District staff utilizing the audit procedures outlined in the AWWA M36 Water Audits and Loss Control Programs manual and associated software. The M36 procedures call for estimating total water losses that are comprised of two categories: Real Losses and Apparent Losses. Real Losses include leaks, line breaks and overflows that occur anywhere in the distribution system upstream of customer meters. Apparent Losses include unauthorized use of water, metering inaccuracies and systematic data handling errors. The IRWD water audit report summary is provided as Exhibit "A" and the third-party validation certificate is provided as Exhibit "B".

Audit Performance Indicators:

The audit provides a basic water balance and several performance indicators for the reporting period. These indicators include the Infrastructure Leakage Index, Real and Apparent Losses per connection per day and per pounds per square inch (psi), percentage of non-revenue water, and data validity grade. These indicators are explained in more detail below.

The Infrastructure Leakage Index is calculated as follows:

$$\text{Infrastructure Leakage Index} = \frac{\text{Current Annual Real Losses}}{\text{Unavoidable Annual Real Losses}}$$

A perfect Infrastructure Leakage Index score is 1.00 indicating a very tight potable water distribution system with loss volumes that are equal to the Unavoidable Annual Real Losses. These unavoidable losses are calculated for each system and represent a minimum level of leakage expected based on the size of system, pressure and number of connections.

Water losses are categorized as either real or apparent. Two metrics are used to report on real loss. One is total Current Annual Real Losses, which varies based on the size of the utility and other factors. The second metric is gallons per connection per day, which helps to normalize the results. The results can be further normalized by using gallons per connection per day per a weighted average of system operating pressure. Apparent Loss is reported as a total volume and on a per connection per day basis.

Non-revenue water includes both real and apparent loss. It is represented as a percentage of the total potable supply and as a percentage of the total operating costs.

All data that are entered into the AWWA Water Loss Audit report software is evaluated and assigned a Data Validity Grade. The Data Validity Grade is a measure of audit data accuracy and ranges from zero to 100, with a score of 100 representing the highest level achievable. The scale does not represent 100 being the best. There are measures that would improve a utility's Data Validity Grade but may not actually save water, may not be cost-effective or simply may not be appropriate for the utility.

IRWD Water Loss Audit Results:

Agencies with aggressive water loss control programs, such as IRWD, can expect an Infrastructure Leakage Index close to the technical minimum value of 1.0, provided the data used in reporting are valid. An Infrastructure Leakage Index value less than 1.0 is not typically realistic based on the unavoidable leakage calculated for the system. As shown in the table below, IRWD's Infrastructure Leakage Index for FY 2017-18 is 0.45 compared with 1.03 in FY 2016-17.

One possible explanation for this low index relates to IRWD's participation in Orange County Water District's in lieu pumping program during FY 2017-18. This caused imported water to make up 87% of the total potable supply that year compared with only 23% during FY 2016-17. If the source meters for the imported water under-registered, the increase in imported purchases in FY 2017-2018 would account for the difference between the actual and measured supply volume, resulting in a lower Infrastructure Leakage Index; staff is investigating this further.

Comparison of Key Performance Indicators for Fiscal Years 2016-17 and 2017-18:

	Fiscal Year 2016-17	Fiscal Year 2017-18
Infrastructure Leakage Index	1.03	0.45
Unavoidable Annual Real Loss	2,501 AF	2,667 AF
Total Real Loss	3,428 AF	1,191 AF
- per connection per day	20.77 gallons	8.86 gallons
- per connection per day per psi	0.25 gallons	0.11 gallons
Apparent Loss	849 AF	675 AF
- per connection per day	6.84 gallons	5.02 gallons
Non-revenue Water by Volume of Supply	6.8%	4.0%
Non-revenue Water by Operating Cost	17.1%	9.0%
Data Validity Grade	76	78

Staff has streamlined the annual water loss reporting process by improving the data collection and interdepartmental data transfer process. To ensure an appropriate water loss standard is developed and that early adopters such as IRWD are not penalized for being proactive, staff will continue to implement cost-effective water loss control programs and engage in the State Board rule-making process.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

IRWD's Water Loss Audit program is not a project as defined in the California Environmental Quality Act as authorized under the California Code of Regulations, Title 14, Chapter 3 and Section 15378.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit "A" – Summary of IRWD FY 2017-18 Water Loss Audit Report
Exhibit "B" – Data Validation Certificate

Exhibit "A"

Summary of IRWD's FY 2017-18 Water Loss Audit Report

AWWA Free Water Audit Software:
System Attributes and Performance Indicators

WAS v5.0
American Water Works Association

Water Audit Report for: Irvine Ranch Water District
Reporting Year: 17-18 | 7/2017 - 6/2018

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 78 out of 100 ***

System Attributes:

	Apparent Losses:	675.204	acre-ft/yr
+	Real Losses:	1,191.376	acre-ft/yr
=	**Water Losses:**	**1,866.580**	acre-ft/yr
	? oidable Annual Real Losses (UARL):	2,666.92	acre-ft/yr
	Annual cost of Apparent Losses:	$664,709	
	Annual cost of Real Losses:	$1,638,142	Valued at **Variable Production Cost**

Return to Reporting Worksheet to change this assumpiton

Performance Indicators:

Financial:	Non-revenue water as percent by volume of Water Supplied:	4.0%	
	Non-revenue water as percent by cost of operating system:	9.0%	Real Losses valued at Variable Production Cost
Operational Efficiency:	Apparent Losses per service connection per day:	5.02	gallons/connection/day
	Real Losses per service connection per day:	8.86	gallons/connection/day
	Real Losses per length of main per day*:	N/A	
	Real Losses per service connection per day per psi pressure:	0.11	gallons/connection/day/psi
	From Above, Real Losses = Current Annual Real Losses (CARL):	1,191.38	acre-feet/year
	? structure Leakage Index (ILI) [CARL/UARL]:	0.45	

* This performance indicator applies for systems with a low service connection density of less than 32 service connections/mile of pipeline

Level 1 Validation Certificate

This document verifies that the Level 1 Validation process was completed. The session details and audit review outcomes are included here.

This certificate is required for submission – alongside the Level 1 validated water audit software file – to the California Department of Water Resources.

Call Date:8/15/2018

Water Supplier

Supplier Name: Irvine Ranch Water District

Supplier Participants:

Amy McNulty, Allan Pascual,

Dave Crowe, Enrique Zanetti

Christopher Smithson, Ken Pfister, Dave Perez

Validator

Validator: Reinhard Sturm, Water Systems Optimization

Validator Qualifications: Water Audit Validator Certificate from the AWWA California Nevada Section

KeyAuditMetrics

Data Validity Score:	78	
ILI:	0.45	
Real Loss:	8.86	gal / conn / day
Apparent Loss:	5.02	gal / conn / day
Non-Revenue Water as Percent of Cost of Operating System:	9.0%	

Certification Statement by Validator

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

Level 1 Validation – Water Supplier Confirmation

This document confirms participation in and endorsement of the Level 1 Validation as completed.

This acknowledgement is required for submission – alongside your Level 1 validated water audit software file – to the California Department of Water Resources.

Water Supplier Name:	IRVINE RANCH WATER DISTRICT
Water Supplier Public Water System ID:	3010092
Water Audit Period:	FY2017/18

Water Audit & Water Loss Improvement Steps

Steps taken in the audit period timeframe to increase data source accuracy, reduce real losses,and/or reduce apparent losses, as informed by the water audit.

a. Verified reports from both Operations Department and Finance Department and made sure production water volume were consistent on both.
b. Calculated the other Dyer Well waste water which are not metered and subtracted from production volume.
c. Fire Hydrant usage was taken-off from Billed-Metered volume and added to Unbilled-Metered water volume.
d. Unbilled-Metered water volume was dedicated for IRWD-owned property usage and fire hydrants usage.

Certification Statement by Water Supplier Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

Executive Name (print):	Paul Cook
Executive Position:	General Manager
Signature:	
Date	28 SEPT 2018

November 5, 2018
Prepared and
submitted by: C. Compton
Approved by: Paul A. Cook

WATER RESOURCES POLICY AND COMMUNICATIONS COMMITTEE

2018 LEGISLATIVE AND REGULATORY UPDATE

SUMMARY:

This report provides an update on the 2017-2018 legislative session and IRWD priorities. As legislation and regulations develop, staff will provide updates and recommendations to the Water Resources Policy and Communications Committee and the Board, as appropriate. Staff recommends that the report be received and filed.

BACKGROUND:

The 2017-2018 state legislative session has concluded. The 2019-2020 legislative session will convene on December 3, 2018. Legislators will have until February to introduce new legislation. As for the 115th Congress, Congress will return for the lame duck session after the November 6, 2018, election.

State Budget Update:

September Revenue Numbers:

On October 11, 2018, State Controller Betty Yee released her monthly report on the State's finances. She announced that the State took in $12.10 billion during the month of September. This was $585.4 million, or 5.1 percent, more than the revenue assumptions contained in the Fiscal Year 2018-2019 Budget. According to the Controller's report, in September:

> "all of the "big three" revenue sources — personal income tax (PIT), corporation tax, and sales tax — came in higher than assumed in the enacted budget. For the first quarter of the 2018-19 fiscal year, revenues of $28.71 billion are 5.2 percent ($1.43 billion) higher than projected in the budget enacted at the end of June. Total revenues for FY 2018-19 thus far are 10.8 percent ($2.79 billion) higher than for the first quarter of FY 2017-18."

2017-2018 State Legislative Update:

Water Tax and Other Funding Alternatives for Safe and Affordable Drinking Water:

At the end of session, Assembly Speaker Anthony Rendon (D-Lakewood) announced that the bills related to a water tax and other funding alternatives for Safe and Affordable Drinking Water would not move forward this year. His statement committed the Assembly to working on the safe and affordable drinking water issues next year, and announced that Assemblymembers Eduardo Garcia (D-Coachella) and Heath Flora (R-Ripon) would lead the Assembly's effort on the matter. The statement also noted that the Assembly would build on "the hard work of Senator Bill Monning" (D-Santa Cruz) and others.

Since the end of the 2017-2018 state legislative session, staff has continued to work with the District's associations and industry partners on the funding of safe and affordable drinking water. Staff has continued to engage in discussions related to alternatives for funding for safe and affordable drinking water. To date, both the Association of California Water Agencies (ACWA) and the California Municipal Utilities Association (CMUA) have or are working to develop alternative concepts for funding for safe and affordable drinking water in California. The concept proposed by ACWA staff is attached as Exhibit "A". CMUA is still working to craft its concept.

Staff will update the Committee on the discussions they are engaging in, and the steps being taken to develop alternative funding concepts for consideration as part of the discussions surrounding safe and affordable drinking water in California.

2018 State Regulatory Update:

AB 401 Implementation - Study of Low Income Rate Assistance:

AB 401 (Dodd, 2015) requires the State Board Water Resources Control Board (State Board) to develop and provide the Legislature a plan for a statewide Low-Income Rate Assistance Program (LIRA) by February 1, 2018. As a result, the State Board held a series of public meetings in 2017 seeking input on various scenarios, which would provide low-income rate assistance to up to 34 percent of Californians, and over the past two years have meet with a smaller group of stakeholders to discuss options for the plan. The State Board's effort is based on the following philosophy:

> "Californians have a right to safe water. State policy through AB 685 (2012) aims to ensure universal access to water by declaring that "every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes." However, water is becoming more expensive. California's growing economy and population create continued demand for water. Meanwhile, drought and water leaks tighten available supplies. In addition, pipes and aging infrastructure result in expensive repairs or replacements. These conditions contribute to higher costs. The result is that more low-income households have unaffordable drinking water."*(http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/assistance/)*

Earlier this year, State Board staff indicated that despite the plan being due per statute on February 1, 2018, the plan had been delayed indefinitely until the State Board believed it had a more well developed plan to present to the Legislature. Recently, State Board staff have indicated that they will be working to release a draft plan early next year.

While the State Board has released little new information on the plan during the last six months, ACWA, CMUA and other interest groups continue to weigh in on the subject of a statewide LIRA program with the State Board. Attached as Exhibit "B" and Exhibit "C" are comments and proposals submitted to the State Board by ACWA and CMUA, respectively, on a statewide

LIRA program. Additionally, the topic of greater LIRA in investor-owned water utility rate design has recently become the subject of a California Public Utilities Commission proceeding.

State Board Electronic Annual Report:

In 2018, the State Board added questions to the 2017 Electronic Annual Report (eAR) for the Drinking Water Program. The eAR has historically been the annual report through which public water systems report annual water usage and contact information to the State Board's Division of Drinking Water. This changed with the 2017 report.

In addition to the traditional information requested, the 2017 eAR included questions related to water rates, affordable drinking water, water loss from distribution systems and climate change adaptation strategies and resiliency. From the water community's perspective, the new content requested lacked a nexus to the stated purpose of and the authority cited for the annual report. At the time the 2017 eAR was released, IRWD signed onto an ACWA water community coalition letter commenting on the new questions and format of the 2017 report.

In response to the concerns raised by the water community, the State Board put together a stakeholder forum to discuss the eAR changes. The purpose of the forum is to improve the clarity of questions included in future eARs, and to communicate why various new questions are asked and how answers could be used in decisions, rulemaking, policy development, and metrics. IRWD was included as a participant in the forum. The first meeting of the stakeholder forum was held on October 11, 2018. Staff will provide the Committee with an update on the 2018 eAR and the forum discussions.

State Board Groundwater Surface Water Workshop:

On August 29, 2018, the California Court of Appeals decided *Environmental Law Foundation, et al. v. State Water Resources Control Board.* The court was asked to determine if the public trust doctrine applies to groundwater extractions near the Scott River in Siskiyou County. In a narrow ruling, the court held that the potential adverse impacts of groundwater extraction on the Scott River, which is a public trust resource, must be considered when the county issues well permits. While the court stated that its ruling was narrow, the opinion essentially holds that the public trust doctrine applies to groundwater extractions that may impact surface waters. The full opinion can be read at http://www.courts.ca.gov/opinions/ documents/ C083239.PDF.

Following the court's ruling in the case, the State Board announced that it will hold a public workshop in December to discuss the groundwater-surface-water connection, the requirements of the Sustainable Groundwater Management Act, and the impacts of groundwater pumping on surface water instream flows. In particular, the workshop will include:

- Discussion of surface water depletion requirements and authorities under the California Water Code and California Constitution (SGMA, public trust, waste and unreasonable use);

- Presentations by experts on potential strategies for preventing or managing depletions based on realistic scenarios; and

- Opportunities for attendees to weigh in on the benefits and drawbacks of those strategies.

Staff will monitor the workshop and any future regulations proposed by the State Board on groundwater extractions and impacts on surface water to ensure the District's interests in groundwater are protected.

Other Pending State Regulations:

In addition to the regulations discussed above, the following is a list of some of the other state regulations and agency reports staff is monitoring, tracking or planning to engage in over the next three to 12 months. As the next drafts of the regulations or report are released for public review and comment, staff will engage, as appropriate. The pending regulations and reports actively being tracked include the:

- Building Standards Commission's "2019 California Plumbing Code;"

- Department of Water Resources' (DWR) and the State Board's implementation of the "Making Water Conservation a California Way of Life" legislation;

- DWR's "The Open and Transparent Water Data Act (AB 1755, Dodd) Implementation Plan;"

- DWR's "California Water Plan: Update 2018;"

- DWR's "Public Draft of Stormwater Targets for Groundwater Recharge and Direct Use in Urban California;"

- State Board's development of a "Cross Connection Policy Handbook;"

- State Board's proposed "Environmental Laboratory Accreditation Program Regulations;"

- State Board's proposed "Mercury TMDL and Statewide Mercury Control Program for Reservoirs" regulations;

- State Board's proposed regulations on "Prohibiting Wasteful Water Use Practices;"

- State Board's proposed "Recycled Water Policy Amendments;"

- State Board's "State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State" regulations;

- State Board's "Water Loss Performance Standards Regulations;" and

- State Board's "Water Loss Performance Standards Regulations;" and

- State Board's "Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California" and draft "Toxicity Provisions."

2018 Federal Legislative Update:

America's Water Infrastructure Act of 2018:

In October Congress passed the "America's Water Infrastructure Act of 2018," which included the Water Resources Development Act of 2018. On October 23, President Donald Trump signed the bill into law. The House Transportation and Infrastructure Committee summary of the bill is attached as Exhibit "D".

2019 Legislative Planning:

Request for Qualifications for State Legislative Advocates:

Given the retirement of the District's current state advocate, staff released a Request for Qualifications (RFQ) on October 8, 2018, to solicit qualifications from full-service lobbying firms to represent the District on state legislative issues in Sacramento. Statement of Qualifications in response to the RFQ are due by November 2.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit "A" – ACWA Proposed Legislation on Safe and Affordable Drinking Water
Exhibit "B" – ACWA's Comments on the State Board AB 401 LIRA Implementation Plan
Exhibit "C" – CMUA's Comments on the State Board AB 401 LIRA Implementation Plan
Exhibit "D" – House Transportation and Infrastructure Committee Summary of the America's Water Infrastructure Act of 2018

ACWA State Legislative Committee
2018 Annual Planning Meeting
October 26, 2018

Proposal Number 2: Safe and Affordable Drinking Water Fund, Safe and Affordable Drinking Water Trust, and Related Provisions

Submitted by: Cindy Tuck, ACWA Deputy Executive Director for Government Relations
Advocate: Cindy Tuck

I. BACKGROUND

Most Californians have safe drinking water, but some communities in California do not have access to safe drinking water. For some communities, this is due to the lack of financial capacity – particularly with respect to operation and maintenance (O&M) costs. Federal funding, in the form of Safe Drinking Water State Revolving Fund (SRF) dollars are available for capital projects, but they cannot be used for O&M costs. Similarly, general obligation (G.O.) bond funding is available for capital projects, but G.O. bonds generally cannot be used for O&M costs.

At the State Legislature, there have been proposals for the creation of a Safe and Affordable Drinking Water Fund. No one has opposed the creation of the fund. The issue has been appropriative funding mechanisms for the fund.

A. Legislative Action in 2017 and 2018

In 2017, Senator Bill Monning (D-Carmel) advanced SB 623 to create a Safe and Affordable Drinking Water Fund that would have primarily been funded by: 1) agricultural taxes (on the sale of fertilizers and the operations of dairies); and 2) a statewide water tax on retail residential and business customers. Creation of a fund was not an issue, but ACWA and a broad coalition strongly opposed the proposed statewide water tax as a funding mechanism. The Assembly Appropriations Committee referred the bill to the Assembly Rules Committee in August of 2017, where it remained parked for the remainder of the 2017-18 Legislative Session.

In 2018, the Brown Administration proposed a budget trailer bill based on the SB 623 framework. ACWA led a coalition of over two hundred organizations that recommended funding alternatives but opposed the proposed statewide water tax. One of the funding alternatives that ACWA suggested was the use of a limited amount ($34.34 million per year) of General Fund dollars in combination with federal funds, G.O. bond funds, and the proposed agricultural taxes.

After extensive advocacy by the ACWA-led lobbying team, communications and outreach and significant actions at the Subcommittee level, the Legislature's Budget Conference Committee met on June 8, 2018 and took the following actions:

1) **Rejected** the budget trailer bill;

2) Set aside $23.5 million in General Fund funding for allocation to safe drinking water actions later in the Legislative Session for Fiscal Year 2018-19; and

3) Approved $5 million in General Funds for the State Water Resources Control Board (State Water Board) to provide lead testing, remediation and technical assistance for child day care centers. (This relates to AB 2370 (Holden) – a chaptered bill regarding testing for lead in drinking water for day care centers.)

The Legislature took these positive actions on June 5, 2018 – three days after the voters approved Proposition 68, which included $250 million for safe drinking water and clean water. That funding must be prioritized for disadvantaged communities. The Legislature was also aware that Proposition 3 would be on the November ballot with $500 million for safe drinking water that, if approved, would also have to be prioritized for disadvantaged communities. (The bonds have been supported by ACWA, agricultural groups, environmental justice organizations and other stakeholders.)

It is worth noting that the Budget Conference Committee's action was consistent with ACWA's first alternative, except that it did not include the agricultural taxes because those taxes had been linked to the proposed statewide water tax.

In August of 2018, the Legislature approved SB 862 (Committee on Budget and Fiscal Review) which, now as approved by the Governor, amends the State Budget Act of 2018 to make various appropriations for Fiscal Year 2018-19. SB 862 provides more of the detail for how the $23.5 General Fund set-aside will be appropriated, including:

1) $3,000,000 to the State Water Board for a **needs analysis** of drinking water systems;

2) $6,800,000 to the State Water Board for the Safe Drinking Water for Schools grant program;

3) $5,064,000 to the State Water Board for Drinking Water Quality activities; and

4) Part of $10,000,000 for emergency relief grants (e.g., for well replacement and point-of use and point-of-entry treatment).

B. Sponsored Legislation Proposal

The issue of sustainable funding for drinking water solutions for disadvantaged communities will be back in 2019. On the last day of the 2017-18 Legislative Session, Assembly Speaker Anthony Rendon issued a statement noting that the Legislature had put Proposition 68 on the ballot and approved over $25 million for emergency drinking water projects, lead testing and remediation, and other water projects. He noted further that "(...) much more needs to be done (...).

ACWA staff suggests that ACWA sponsor legislation to put forth a solution that does not rely on a statewide water tax. In short, the proposal would:

1) Create the Safe and Affordable Drinking Water Fund (the Fund);

2) Create the Safe and Affordable Drinking Water Trust (the Trust); and

3) Require the addition of a voluntary contribution check-off box to the Form 540 state tax return for the Safe and Affordable Drinking Water Fund.

The concept for the trust was ACWA's "Alternative 2" in 2018. This proposal has not been heard or debated in a policy committee hearing or budget subcommittee hearing. The concept is that the bill would create the trust, and the trust's principal would be funded with an infusion of General Fund dollars (e.g., $750 million) **during budget surplus years**. The funding of the trust's principal could be achieved in one year or over the course of a few years (e.g., $250 million per year for three years). Early estimates are that the net revenue from investment of the principal could be $50 million per year. Given that the State Water Board's estimate of the annual need for O&M funding for non-nitrates noncompliance was less than that amount (it was $34.4 million per year, including for the chromium VI stander which has been rescinded), this solution is attractive. This proposal is also consistent with the work of ACWA DAC Drinking Water Initiative Action Plan which suggests use of the General Fund because the issue is a social issue for the State of California.

Attachment 2 is a draft of the core elements for the creation of the Fund and the creation of the Trust. Staff is suggesting that a drafting group be formed to assist staff in refining the language.

Attachment 3 is a draft of the voluntary contribution check-off box language. The same drafting group could refine this language.

Other elements could be added to this bill proposal. For example, the agricultural part of the budget trailer bill could be added if it is not linked to a statewide water tax.

ASSOCIATION OF CALIFORNIA WATER AGENCIES
LEGISLATIVE PROPOSAL
SUBMIT BEFORE: AUGUST 31, 2018[1]

Each year ACWA's State Legislative Committee (SLC) solicits legislative proposals from ACWA members. The SLC reviews and considers at its Annual Planning Meeting in the fall sponsoring or supporting each proposal that has been submitted by the deadline. The Committee evaluates the proposals and determines whether to sponsor or support legislation based on ACWA's Strategic and Business Plan, policy principles and priorities. In order to have your agency's proposal considered this year, we are requiring, in addition to the completion of this form, the submittal of a copy of a resolution passed by your governing body in support of the proposal (or at a minimum confirmation that your agency has noticed consideration of the resolution by the deadline). **The deadline is August 31, 2018.**

Please refer to the attached sample form when filling out this document. Contact Richard Filgas, State Relations Assistant, at Richardf@acwa.com or (916) 441-4545 if you have questions.

Contact Person*	
Name:	Cindy Tuck
Title:	Deputy Executive Director for Government Relations
Agency:	Association of California Water Agencies
Telephone:	(916) 441-4545
Fax :	(916) 325-3206
Email:	cindyt@acwa.com
Submittal Date:	October 2, 2018 (Deadline is for ACWA Member Agencies)
Submitting ACWA Member Agency: NA	
Region #:	NA
Title of Proposal (subject area): Safe Drinking Water Funding	

*ACWA will be contacting this person to ask clarifying questions about this proposal within the next few weeks. The contact person is also expected to attend the October 26, 2018, Annual Planning Meeting in person to provide information and answer questions from the State Legislative Committee in order for the proposal to move forward within ACWA's process.

[1] Proposals submitted after this deadline may not be considered until the Annual Planning Meeting in October 2019.

BACKGROUND

A. What is the problem or deficiency in existing law that your proposal seeks to fix?

See Attachment 1.

B. What are you trying to accomplish or prevent through this proposal?

See attachment 1.

C. Has a similar bill ever been previously introduced? If so, please identify the bill, the legislative session, year, and outcome, if known.

Nothing just like this proposal has been previously introduced. There have been bills (SB 623, Monning, 2017), the Budget Trailer Bill (2018) and SB 845 (Monning, 2018), that have proposed the creation of a Safe and Affordable Drinking Water Fund. However, the first two of those measures proposed a statewide water tax as a major funding mechanism. SB 845 proposed a highly inefficient voluntary remittance as the funding mechanism. All three of these bills died on August 31, 2018.

D. Could this bill have an impact on more than one agency? Would this proposal affect only your agency? Which ACWA member agencies and what type(s) of agency (e.g. county water district, municipal water district, flood control agency, etc.) is likely to be impacted by this legislation?

This proposal is intended to help solve a state social issue. It would not set mandates on local water agencies. (Local water agencies already face the challenge of water quality and supply reliability issues at the local level.)

ACTIONS

A. What type of action would you like ACWA to take regarding this proposal if it moves through the legislative process?

Note: A "support" position means ACWA will support legislation once it is introduced. ACWA's legislative advocates will write position letters on the bill and offer testimony in committee hearings. A "sponsor" position indicates that ACWA will attempt to secure a legislator to introduce the proposed legislation and will actively lobby on the bill's behalf throughout the year-long process.

_X_ Sponsor ___ Support

B. Please list statewide or local organizations that are likely to support or oppose your legislative proposal and why (include specific reasons).

Support: Examples Include:
ACWA Member Agencies
California Municipal Utilities Association
California Special Districts Association
Northern California Water Association
Regional Water Authority
Southern California Water Committee

It is likely that many of the over two hundred organizations that opposed the budget trailer bill and SB 845 (Monning) in 2018 would support this bill.

Ideally the environmental justice organizations and agricultural organizations that supported SB 623, the budget trailer bill, and SB 845 would support this measure, but that is yet to be determined.)

Opposition: To be determined

Ideally the environmental justice organizations and agricultural organizations that supported SB 623, the budget trailer bill and SB 845 would not oppose this measure, but that is yet to be determined.

C. Who are your local State Legislators? Have you ever contacted them regarding this proposal? If so, who, when, and what was the outcome of the discussion? Have they indicated a willingness to author or support this proposal, or conversely, could they oppose it?

Not Applicable – If the State Legislative Committee agrees that ACWA should sponsor this legislation, ACWA will then reach out to a potential author.

D. Have you informed other water agencies in your region regarding this proposal?

___ Yes ___ No (Not Applicable)

If so, please state which districts.

If not, which districts border your water agency? (Not Applicable)

E. List witnesses who would be available to testify before legislative committees in Sacramento, accompanied by an ACWA Legislative Advocate, on behalf of this proposal. Include the organization each witness represents with his or her name, phone number, email address, and other contact information.

An ACWA advocate would serve as the lead witness and would develop a group of witnesses to testify in support of the bill.

PROPOSAL

A. California Code Sections to be amended or added:

Please see Attachment 2 and Attachment 3.

B. Please attach the proposed bill language and any additional background information that could assist the State Legislative Committee in assessing your proposal, such as newspaper articles, internal water agency correspondence, newsletters, and legal advice or opinions.

Please see Attachment 1.

C. Describe specific examples illustrating the problem you are trying to fix. Attach additional sheets if necessary.

The State Water Resources Control Board has on its website a list of 272 public water systems that are out-of-compliance with the drinking water standards. Some (not all) of these systems will need financial assistance in order to become a sustainable system. Please see Attachment 4. Please note that this list addresses public water systems and does not address state small systems or individual wells owned by landowners.

D. Attach a copy of a resolution passed by your agency's governing body in support of this proposal.

Not Applicable (This is a proposal from ACWA staff. Staff did brief the ACWA Board of Directors regarding this proposal on September 28, 2018.)

ATTACHMENT 2

ASSOCIATION OF CALIFORNIA WATER AGENCIES
POTENTIAL SPONSORED 2019 STATE LEGISLATION
Proposal 2 – Safe Drinking Water Funding

Part 1 – Creation of the Safe and Affordable Drinking Water Fund and the Safe and Affordable Drinking Water Trust

The people of the State of California do enact as follows:

SECTION 1.

Chapter 4.6 (commencing with Section 116765) is added to Part 12 of Division 104 of the Health and Safety Code, to read:

CHAPTER 4.6. SAFE AND AFFORDABLE DRINKINGWATER

Article 1. Legislative Findings and Declarations

116765. The Legislature finds and declares all of the following:

(a) Section 106.3 of the Water Code declares that it is the policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.

(b) For all public water systems, the operation and maintenance costs to supply, treat, and distribute potable water that complies with federal and state drinking water standards on a routine and consistent basis may be significant.

[Add additional findings.]

Article 2. Definitions

116766. For the purposes of this chapter:

[Add appropriate definitions.]

Article 3. Safe and Affordable Drinking Water Fund

116767. (a) The Safe and Affordable Drinking Water Fund is hereby established in the State Treasury. Notwithstanding Section 13340 of the Government Code, all moneys in the fund are continuously appropriated to the board without regard to fiscal years, in accordance with this chapter. Moneys in the fund at the close of the fiscal year shall remain in the fund and shall not revert to the General Fund. Moneys in the fund shall

not be available for appropriation or borrowed for use for any purpose not established in this chapter unless that use of the moneys receives an affirmative vote of two-thirds of the membership in each house of the Legislature.

[Add additional provisions regarding the purpose and administration of the fund.]

(x) The board may undertake any of the following actions to implement the fund: (1) Provide for the deposit of all of the following moneys into the fund:

(A) Federal funding.

(B) Appropriations by the Legislature from the General Fund.

(C) Net revenue from the Safe and Affordable Drinking Water Trust.

(D) Appropriations by the Legislature from the Greenhouse Gas Reduction Fund.

(E) Voluntary contributions, gifts, grants, or bequests.

SECTION 2. Chapter 4.7 (commencing with Section 116774.1) is added to Part 12 of Division 104 of the Health and Safety Code, to read:

Chapter 4.7 Safe and Affordable Drinking Water Trust Act of 2019

ARTICLE 1. Short Title

116774.1
This chapter shall be known and may be cited as the Safe and Affordable Drinking Water Trust Act of 2019.

ARTICLE 2. Legislative Findings of Necessity and Cause for Action

116774.3

(a) Because section 106.3 establishes the policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes, it is in the interest of the people of the state to enact this chapter to establish a trust fund for the governmental purpose of providing a continual source of funding for communities to gain and retain access to safe, clean and affordable drinking water and to carry out the governmental purposes described in Chapter 4.6 (commencing with Section 116765) of this part.

(b) The primary purpose of the Safe and Affordable Drinking Water Trust, a charitable trust established pursuant to this chapter, shall be to provide a perpetual source of funding each

year to the Safe and Affordable Drinking Water Fund established pursuant to section 116767 in furtherance of the trust fund purposes in subsection (a).

(c) It is the intent of the Legislature that the terms of this chapter shall be liberally construed to achieve this purpose.

ARTICLE 3. Safe and Affordable Drinking Water Trust

116774.5
Unless the context otherwise requires, the following definitions govern the construction of this chapter:

(a) "Board" means the State Water Resources Control Board

(b) "Beneficiary" means the people of the state, as represented by the board in its implementation of the provisions of Chapter 4.6 (commencing with Section 116765) of this part and its administration of the Safe and Affordable Drinking water Fund established pursuant to section 116767. The beneficiary's interest in the trust shall only be to the net income generated from the trust principle.

(c) "Income" means the money, enhanced value, or other income the trust receives as current return from the investment of the trust principal.

(d) "Net Income" means the trust income earned July 1 through June 30 of the previous year minus all of the necessary and reasonable expenses incident to the administration of the trust during that same period.

(e) "Principal" means the trust property, inclusive of any increase designated as part of the trust corpus by the trustee as a result of a higher than anticipated return on the investment of the trust principal, which is held in trust for the beneficiary and to accomplish the governmental purposes described in section 116774.3.

(f) "Trust" means the Safe and Affordable Drinking Water Trust.

(g) "Trust Fund" means the account established pursuant to subdivision (a) of section 116774.7 to hold the trust property.

(h) "Trust Property" means the money transferred to the trust fund pursuant to subdivision (d) of section 116774.7 and any donation to the trust fund received and accepted by the trustee after January 1, 2019.

(i) "Trustee" means _____(to be added)

116774.7

(a) There is hereby created in the State Treasury the Safe and Affordable Drinking Water Trust Fund for holding the trust property of the Safe and Affordable Drinking Water Trust and for the purpose of implementing the public and governmental purposes chapter. Notwithstanding Section 13340 of the Government Code, net income distributed by the trustee from the trust fund is hereby continuously appropriated, without regard to fiscal years, to the board for deposit in and expenditure from the Safe and Affordable Drinking Water Fund in accordance with Chapter 4.6.

(b) Moneys in the trust fund, including the trust principle and trust income, shall not be available for appropriation or be borrowed for use for any purpose not established in this chapter unless that use of the money, principle or income receives an affirmative vote of two-thirds of the membership in each house of the Legislature.

(c) Funding of the trust principle is hereby authorized and is subject to appropriation by the Legislature. All appropriations to the trust are hereby irrevocably transferred from the general fund to the trustee for deposit in Safe and Affordable Drinking Water Trust Fund for investment to accomplish the purposes of this chapter and on the conditions prescribed in section 116774.11.

(d) Notwithstanding any adopted budget act, no money deposited into the Safe and Affordable Drinking Water Trust Fund to fund the trust principal pursuant to this article and no net income transferred from the Safe and Affordable Drinking Water Trust Fund to the Safe and Affordable Drinking Water Fund may be transferred to the General Fund.

ASSOCIATION OF CALIFORNIA WATER AGENCIES
POTENTIAL SPONSORED 2019 STATE LEGISLATION
Proposal 2 – Safe Drinking Water Funding

Part 2 – Voluntary Check-off on Form 540 for Contributions to the Safe and Affordable Drinking Water Fund

SECTION 1. Article 24 (commencing with Section 18902) is added to Chapter 3 of Division 2 of the Revenue and Taxation Code.

Article 24. Contributions to Safe and Affordable Drinking Water Fund

18902. (a) An individual may designate on the tax return that a contribution in excess of the tax liability, if any, be made to the Safe and Affordable Drinking Water Fund established by Section XXXXX of the California Water Code.

(b) The contributions shall be in full dollar amounts and may be made individually by each signatory on a joint return.

(c) A designation under subdivision (a) shall be made for a taxable year on the original return for that taxable year, and once made shall be irrevocable. If payments and credits reported on the return, together with any other credits association with the individual's account, do not exceed the individual's tax liability, the return shall be treated as though no designation has been made.

(d) If an individual designates a contribution to more than one account or fund listed on the tax return, and the amount available is insufficient to satisfy the total amount designated, the contribution shall be allocated among the designees on a pro rata basis.

(e) The Franchise Tax Board shall revise the forms of the return to include a space labeled "Safe and Affordable Drinking Water Fund" to allow for the designation permitted under subdivision (a). The form shall also include in the instruction information that the contribution may be in the amount of one dollar ($1) or more and that the contribution shall be used consistent with the purposes of the fund.

(f) A deduction shall be allowed under Article 6 for (commencing with Section 17201) of Chapter 3 of Part 10 for any contributions made pursuant to subdivision (a).

ASSOCIATION OF CALIFORNIA WATER AGENCIES

AB 401 (DODD, 2015) IMPLEMENTATION

SUGGESTIONS FOR THE DEVELOPMENT OF A PLAN FOR A LOW INCOME WATER RATE ASSISTANCE PROGRAM

October 2, 2018

1. Introduction

The Association of California Water Agencies (ACWA) appreciates the opportunity to provide suggestions for the State Water Resources Control Board's (State Water Board) development of a plan for a Low Income Water Rate Assistance (LIWRA) Program pursuant to AB 401 (Dodd, 2015).

2. Applicability and Scope

Recognizing that AB 401 defined "low-income" as a household with income that is equal to or no greater than 200 percent of the federal poverty level (FPL), the legislation asked the State Water Board to look at a number of elements for funding and implementing a LIWRA Program – the level of "low-income" was one specific factor to be evaluated, but the law does not preclude the State Water Board from looking at different income levels. The State Water Board should consider whether or not 200 percent of the FPL is the appropriate criterion for this program. For example, should the program focus instead on severely disadvantaged communities or other measures of poverty?

AB 401 requires the State Water Board to report on the "feasibility, financial stability, and desired structure of the program (...)." [Please see California Water Code Section 189.5(e)(1).] It would be informative for the State Water Board's report to the Legislature to include a sensitivity analysis that compares the cost and scope of the program for various applicability criteria.

3. Benefit

A. Basis

A key part of the plan is the assistance eligible recipients would receive. The basis for that assistance should be tied to the Human Right to Water:

> "(a) It is hereby declared to be the established policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for ***human consumption, cooking and sanitary purposes.*** (...)" [California Water Code Section 106, emphasis added.]

Given the scope of the Human Right to Water, the basis for the plan should be tied to efficient indoor water use only and should not include outdoor use. State water use efficiency law enacted in 2018 sets standards for indoor residential water use of 55 gallons per capita per day (gpcd) until 2025, 52.5 gpcd from 2025 to 2030, and 50 gpcd beginning in 2030. (These State per-capita-indoor-water-use-efficiency standards are to be used by local water suppliers to develop water supplier water use objectives on a service-area basis.) For example, for 55 gpcd, the basis for a monthly benefit for a family of four would be 8.82 hundred cubic feet.

4. Funding Source and Collection

A. Funding Sources

1. Water affordability is a state social issue and should be addressed as such. The General Fund is an appropriate funding source for state social issues. The General Fund is based in part on income tax which is a progressive tax (i.e., people with higher incomes pay more and people with lower incomes pay less).

2. The funding source should not be a water tax.

   a. It is not sound policy to tax something that is essential to life.

   b. Taxing water would work against keeping water affordable.

   c. It would be highly inefficient and very expensive for over 3,000 public water systems to become tax collectors for the State of California.

   d. Public water systems do not have customer income information or staff to deal with eligibility verification or fraud.

B. Collection

1. One state entity - the Franchise Tax Board - can efficiently invoice and collect the funding.

5. Benefit Distribution

A. Base on CalFresh

1. ACWA recommends using CalFresh as the mechanism for benefit distribution.

2. CalFresh is a longstanding program that helps low-income households afford food, which is essential to life, just as drinking water is essential to life.

3. CalFresh has the eligibility criterion of 200 percent of the federal poverty guideline.

4. CalFresh is implemented with electronic benefit transfer (EBT) cards. The delivery of the benefit through CalFresh would not be limited to households that directly pay

water bills. (For example, this would benefit those renting homes and residents of multi-unit apartment complexes.)

B. Immigration Status Issue

1. CalFresh is a State-implemented federal program. Participants must demonstrate their legal permanent residency status. However, the State could augment the California Food Assistance Program (CFAP) which the State maintains for applicants who cannot receive CalFresh due to their immigration status.

6. Existing Programs

A. Some water agencies do have LIWRA programs, which include local charity partnerships and/or are funded by sources other than ratepayer dollars.

B. The State should incorporate existing public water system LIWRA programs that conform to a minimum standard.

7. Closing

ACWA appreciates the State Water Board staff's consideration of these suggestions and comments. If you have any questions, please contact Cindy Tuck, Deputy Executive Director of Government Relations, at cindyt@acwa.com.

ACWA
Association of California Water Agencies

Bringing Water Together

October 2, 2018

Mr. Max Gomberg
Climate and Conservation Manager
State Water Resources Control Board
1001 I Street, 24th floor
Sacramento, CA 95814

RE: Suggestions regarding Development of a Draft Plan for a Low-Income Water Rate Assistance Program (AB 401, Dodd, 2015 Implementation)

Dear Max,

The Association of California Water Agencies (ACWA) appreciates the opportunity to provide additional input during the State Water Resources Control Board's (SWRCB's) development of a plan for a Low-Income Water Rate Assistance Program as required by AB 401 (Dodd, 2015). ACWA represents more than 445 public water agencies that collectively supply approximately 90% of the water delivered in California for domestic, agricultural, and industrial uses. Attached are ACWA's suggestions.

Thank you for considering these suggestions. If you would like to discuss them, or if you have any questions, please contact me at cindyt@acwa.com.

Sincerely,

Cindy Tuck

Cindy Tuck
Deputy Executive Director for Government Relations

Attachment

cc: The Honorable Felicia Marcus, Chair, SWRCB
Honorable Members, SWRCB
Ms. Eileen Sobeck, Executive Director, SWRCB
Mr. Eric Oppenheimer, Chief Deputy Director, SWRCB

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CMUA
CALIFORNIA MUNICIPAL UTILITIES ASSOCIATION

CMUA Low-Income Water Rate Assistance Program Proposal

Prepared by: Danielle Blacet | Director for Water
Jonathan Young | Regulatory Advocate

January 3, 2018

Revenue Collection:

a. Franchise Tax Board (FTB) / income tax
   i. How it would work
      - Legislature would require the FTB to add a new charge on taxpayers – either all taxpayers with incomes over 200% of the federal poverty line or only high-income earners and corporations.
      - The state would develop a neutral band of Californians who would not pay the tax nor receive the benefit. For example, individuals who earn between 201% and 205% of the Federal poverty line would be exempt.
      - Collected funds would go to a special fund that would be separate from the General Fund, such as the FTB's existing Voluntary Contribution Funds.
   ii. Considerations
      - Single agent for collection; optimizes efficiency.
      - Builds on an existing structure that has direct access to income information and household size.
      - If flat tax collected on individuals, no price signal for conservation.
      - No clear nexus with water rates.

Benefit Distribution Via Local Agency/CalFresh Model

a. Statewide online portal
   i. Applicants would visit a State Water Board maintained webpage/database as part of the Human Right to Water Portal. The webpage could be similar to http://findyourrep.legislature.ca.gov/.
      - Agencies with LIWRA programs would be required to submit service boundaries and details of their program to the state. This information would be required to receive funds as noted below, incentivizing agencies to participate and/or develop programs.
      - Once an applicant enters their respective information (address, single family/multifamily), the website would indicate whether a local rate assistance program exists along with that agency's contact information (agency name, phone number, website, etc.).
      - If a local program does not exist, and for residents living in multi-family housing, the website would direct the applicant to the California Department of Social Services CalFresh application website: http://www.cdss.ca.gov/food-nutrition/calfresh. Applicants could apply online, or at their local county social services agency.

b. Local Agency/CalFresh Model

i. **Existing Programs**

- Local agencies/IOUs would maintain their existing LIWRA programs.
- Applicants would be required to apply annually. Annual application ensures up to date information and correct distribution of the benefit.
- The state would send the local agency a portion of the funds for direct rate assistance. Funding would be based on a set of minimum requirements.
- Agencies could use existing funding mechanisms or state collected funds to promote alternatives to direct rate assistance similar to Energy Savings Assistance Programs, rebates, home inspections, education, outreach, etc.
    a. This approach would ensure water savings incentive/efficiency participation by low-income qualified residents and help resolve barriers to low-income assistance similar to those studied recently by the Energy Commission regarding the electric utility sector.
    b. For low-income housing operated publicly or through non-profits, this type of local water savings assistance program would also assist in reducing operating costs that are passed on to the low-income residents.
- Agencies would submit an annual report to the SWRCB highlighting enrollment statistics, benefits distributed and other relevant information.

ii. **State Run Program**

- Where a local program does not exist, individuals would apply via the state portal, via an NGO contracted through CalFresh or at local county assistance offices.
- Current enrollees in CalFresh where a local program exists would receive a notice alerting them of the local program and how to enroll. Enrollees where there is not a local program would automatically be enrolled in the statewide assistance program. Enrollees would receive an explanation of the benefit via the corresponding agency.
- Utilize lessons learned and best practices developed by the Department of Social Services' Safe Drinking Water Pilot Program.
- This structure could lead to higher enrollment in CalFresh, a bonus for eligible families.

iii. **Non-Profit Engagement**

- State/local agencies would approve 3rd party/non-profit or community assistance organizations to participate in rate assistance programs similar to the way the Department of Social Services already contracts for enrollment outreach.
    a. Approved parties would receive a pre-determined portion of the overall benefit for the designated community for outreach, application assistance and rate assistance.
- Approved parties would provide quarterly reports on enrollment and efficacy to the CDSS/SWRCB.

AMERICA'S WATER INFRASTRUCTURE ACT

TITLE I: THE WATER RESOURCES DEVELOPMENT ACT

The Water Resources Development Act of 2018 (WRDA) represents Congress' continued investment in vital American infrastructure. Our ports, inland waterways, locks, dams, flood protection, ecosystem restoration, and other water infrastructure are essential to generating economic growth, moving goods throughout the country and beyond our borders, and protecting our communities.

Through the regular consideration of WRDA legislation and by providing direction and reforms to the U.S. Army Corps of Engineers, Congress enables locally driven, but nationally important, federal investments in water resources infrastructure.

Prior to 2014, Congress had not passed a WRDA in seven years. As a result, many improvements languished while project costs rose and regulatory burdens remained unaddressed. With WRDA 2018, following the successful passage of the 2014 and 2016 laws, Congress is now back on track. **Simply put, WRDA works.**

WRDA 2018:

- Authorizes locally driven, but nationally vital, investments in our Nation's water resources infrastructure.
- Strengthens economic growth and competitiveness, helps move goods throughout the country and abroad, and protects our communities.
- Follows the transparent process Congress established under the 2014 reforms for considering proposed Army Corps of Engineers activities.
- Builds upon previous reforms of the Corps to further accelerate the process for moving projects forward more efficiently and at lower cost.
- Upholds Congress' constitutional duty to provide for infrastructure and facilitate commerce for the Nation.

IMPROVES AMERICA'S WATER RESOURCES INFRASTRUCTURE:

- Provides for needed investment in our ports, channels, locks, dams, and other infrastructure that supports the maritime and waterways transportation system and provides flood protection for homes and businesses.
- Authorizes Army Corps of Engineers Chief's Reports received since the last WRDA law of 2016.
  - » Chief's Reports are the final recommendations to Congress by the Corps' Chief of Engineers for thoroughly studied water resources infrastructure priorities.
  - » These infrastructure improvements have been proposed at the local level, in cooperation and consultation with the Corps, and provide national economic and environmental benefits.
  - » All Chief's Reports have been fully vetted by the Transportation and Infrastructure Committee at hearings this Congress.
- Authorizes studies for future water resources improvements included in the Corps' 2017 and 2018 annual reports to Congress.
- Reauthorizes the Levee Safety Initiative, and the National Dam Safety Program through 2023 to help protect American communities from flooding.
- Keeps American jobs in America by strengthening our competitiveness and ensuring that our transportation system remains attractive to private sector job creators.

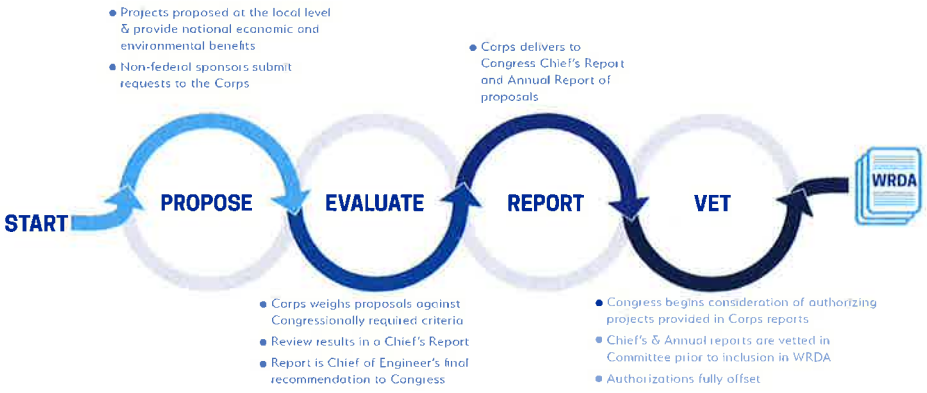
BUILDS UPON WRDA REFORMS:

- Eliminates barriers that result in project delays and improves the utility of the contributed and advanced funds provisions from previous WRDA laws. This allows the Corps to accept funds from non-federal sponsors to advance studies and project elements.
- Maintains and builds upon process reforms established under WRRDA 2014 that allow greater local

participation in project selection.
- Directs the National Academy of Sciences to evaluate the current organizational structure of the Corps' civil works functions, identify impediments to efficient project delivery, and provide recommendations to Congress.
- Requires the Corps to directly engage stakeholders in the development of implementation guidance.

WRDA Follows an Approval Process Established by Congress

In 2014, Congress passed the Water Resources Reform and Development Act (WRRDA) and established a new, transparent, locally driven process for Congressional review and approval of Army Corps water resources development activities. WRDA 2018 follows this established process, and also continues the two-year cycle of addressing infrastructure that is vital to America's economy and job growth.



PROMOTES FISCAL RESPONSIBILITY:

- Fully offsets new authorizations with deauthorizations.
- Sunsets inactive project authorizations to prevent future project backlogs.
- Reduces the inventory of projects that are not needed for the missions of the Corps.

ENHANCES OVERSIGHT, TRANSPARENCY & ACCOUNTABILITY:

- Follows the transparent process established by Congress in WRRDA 2014 to review and prioritize water resources development activities with strong Congressional oversight.
- Improves transparency for non-federal partners by requiring the Secretary to support greater awareness of the Corps' Annual Report process established in WRRDA 2014.
- Requires added transparency with Army Corps reports on maintenance backlog obligations.

MAINTAINS REGULAR ORDER:

- Ensures proper Congressional oversight of the Army Corps of Engineers, provides regular opportunity for reform, and enables Congress to address infrastructure needs by maintaining the two-year cycle of considering WRDA legislation.
- Saves money by allowing needed infrastructure improvements and project modifications to move toward completion, preventing unnecessary project cost increases that occur with delays.

TITLE II: DRINKING WATER SYSTEM IMPROVEMENT

MODERNIZES OUR DRINKING WATER INFRASTRUCTURE:

- Brings greater investment in and modernization of the country's aging drinking water infrastructure.
- Authorizes more than $4.4 billion over three years for the state drinking water revolving loan fund program.
- Improves accountability by aiding states and utilities with compliance and asset management.
- Protects communities by updating antiterrorism and resilience measures at public water systems.
- Enhances transparency for consumers about the quality of their drinking water.
- Authorizes $100 million over the next two fiscal years for areas affected by natural disasters that need help repairing their drinking water systems or hooking up to other ones to obtain potable drinking water.

TITLE III: ENERGY

PROMOTES HYDROPOWER DEVELOPMENT AND INCREASES FERC TRANSPARENCY:

- Encourages the use of clean, baseload hydropower by streamlining the regulatory permitting process.
- Gets new hydropower projects to market faster, saving time and money.
- Removes barriers to investments in hydropower, which creates jobs and provides low-cost, emissions-free electricity to consumers.
- Strengthens consumers' participation in the FERC rate process by increasing transparency.

TITLE IV: OTHER MATTERS

STORMWATER AND WASTEWATER INFRASTRUCTURE IMPROVEMENTS & LEGISLATIVE REAUTHORIZATIONS:

- Reauthorizes the Water Infrastructure Finance and Innovation Act (WIFIA) through 2021.
- Eases administrative burdens and provides additional sources of funding for State Infrastructure Financing Authorities when applying for WIFIA loans, and makes other improvements to the program.
- Assists small, rural, Tribal communities and low income households with technical assistance in meeting their clean water needs.
- Provides communities with additional resources for combating sewage overflows.
- Ensures on-the-job training, skills development, and apprenticeships in the water utility sector as well as connecting students to career paths in the water utility sector.

November 5, 2018
Prepared and
submitted by: C. Compton
Approved by: Paul A. Cook

WATER RESOURCES POLICY AND COMMUNICATIONS COMMITTEE

2019 - 2020 FEDERAL ADVOCACY SERVICES

SUMMARY:

On September 4, 2018, the District released a Request for Qualifications (RFQ) for federal advocacy services. Through the RFQ process, IRWD sought to retain the firm best suited to meet the District's federal advocacy needs. The District received nine responses to the RFQ and interviewed the top two qualified firms. The two firms interviewed were Carpi & Clay and Kadesh & Associates.

Based on the firm's qualifications and strategic ability to influence policy decisions at the federal level, staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with Kadesh & Associates for federal advocacy services. The contract term is proposed to be December 1, 2018, through December 31, 2020 – covering the 116th Congress – and would include a $10,000 monthly retainer plus reimbursement of reasonable direct expenses.

BACKGROUND:

IRWD released an RFQ for federal advocacy services on September 4, 2018. Statements of Qualifications (SOQs) in response to the RFQ were due October 1. The District received nine responses, from which two firms were selected for interviews. The list of the firms invited to respond to the RFQ and the list of firms that submitted SOQs is attached as Exhibit "A".

On October 15 and October 16, IRWD interviewed Carpi & Clay and Kadesh & Associates at their respective offices in Washington D.C. to provide federal advocacy services to the District. While both firms are exceptionally qualified, based on the SOQs and the interview, Kadesh & Associates presented the most robust qualifications related to federal advocacy on California water policy on behalf of public agencies and demonstrated the most comprehensive strategy for accomplishing IRWD's federal funding and policy objectives in alignment with the District's needs.

Kadesh & Associates – Qualifications:

Mark Kadesh, President of Kadesh & Associates, and his team of three have a combined 70 years of experience in regulatory and legislative affairs. Mr. Kadesh, who would serve as the primary point of contact between the Kadesh & Associates team and IRWD, has an extensive legislative and political background. Since 2007, Kadesh & Associates has represented clients at the federal level. Prior to becoming an advocate, Mr. Kadesh served as Chief of Staff for Senator Dianne Feinstein (D-CA) in addition to working for other members of Congress.

Joining Mr. Kadesh in representing IRWD will be Dave Ramey and Christian Kierig. Mr. Ramey will serve as the Project Manager for the firm's contract with IRWD while Mr. Kierig

will serve as the lead for Congressional appropriations. Both Mr. Ramey and Mr. Kierig also have extensive legislative and political backgrounds. Prior to becoming an advocate two years ago, Mr. Ramey served for over three decades as a senior staffer in the House of Representatives, nearly 20 years of which was in the role of Chief of Staff for Representative Ken Calvert (R-CA). Mr. Kierig, prior to becoming an advocate nearly 10 years ago, served as Senator Feinstein's key appropriations advisor, coordinating funding request for infrastructure projects, and has extensive experience with the appropriations process.

More details regarding the experience and background of the Kadesh & Associates team are included in the Kadesh SOQ, which is attached as Exhibit "B".

Kadesh & Associates' Advocacy Approach:

IRWD strives to be a leader in water resources public policy and governance. During the 115th Congressional session, the District engaged in a number of federal policy discussions regarding water infrastructure, water supply reliability, and Title XVI. If selected, the Kadesh & Associates team would work closely with IRWD staff and Board to identify the District's federal priorities for the 116th Congress and to develop an advocacy strategy to accomplish those priorities levering the firm's very strong bipartisan network in the United States Senate, House of Representatives, Administration and resource agencies.

Kadesh & Associates brings decades of experience and key contacts that will provide the District with a high level of knowledge, credibility, and access in Washington, D.C., which will assist the District with achieving its federal policy, funding and regulatory goals. The firm has a strong record of engaging with clients on proper messaging, tracking, and monitoring funding and legislative opportunities, coordinating appropriate advocacy meetings, and communicating with clients.

For these reasons and to advance IRWD's federal advocacy efforts, staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with Kadesh & Associates for a 25-month period, beginning December 1, 2018, through December 31, 2020. Entering into a 25-month contract with Kadesh & Associates would allow the District to prepare for and have continuity in its Washington, D.C. representation throughout the entire 116th Congress.

FISCAL IMPACTS:

The current contract for federal advocacy services with The Furman Group will expire on December 31, 2018. The current contract included a $12,500 monthly retainer plus reimbursement of direct expenses for a total contract amount not to exceed $336,000.

The proposed contract with Kadesh & Associates would cover the period of December 1, 2018, through December 31, 2020, at $10,000 per month, inclusive of travel costs for the Kadesh & Associates team to travel to the District, plus reasonable reimbursable direct expenses. If approved by the Board, the new contract would have a not-to-exceed amount of $265,000 and will be charged against the FY 2018-2019 and FY 2019-2020 Operating Budgets.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

That the Board authorize the General Manager to execute a Professional Services Agreement with Kadesh & Associates for federal advocacy and consulting services for the period of December 1, 2018, through December 31, 2020, at a rate of $10,000 per month plus reasonable reimbursable direct expenses for a total contract amount not to exceed $265,000.

LIST OF EXHIBITS:

Exhibit "A" – List of Firms Invited and Responsive to IRWD's RFQ
Exhibit "B" – SOQ for Federal Advocacy Services from Kadesh & Associates

EXHIBIT "A"

Firms Invited to Respond to IRWD's Request for Qualifications (RFQ) for Federal Advocacy Services and Firms That Submitted Statements of Qualifications (SOQs)

Firms That Submitted SOQs In Respond to the RFQ:

1. Blue Water Strategies
2. Carpi Clay & Smith
3. Federal Advocates
4. Foly & Lardner LLP
5. Kadesh & Associates
6. Natural Resources Result, LLC
7. Van Scoyoc Associates
8. VNF Solutions
9. Water Strategies, LLC

Firms Invited to Respond to the RFQ:

1. Alcalde & Fay
2. Brownstein Hyatt Farber Schreck
3. Earth & Water Law Group
4. ENS Resources, Inc.
5. Mercury
6. Packard Government Affairs
7. The Ferguson Group
8. Troutman Sanders Strategies

IRVINE RANCH WATER DISTRICT

PROPOSAL FOR FEDERAL ADVOCACY SERVICES

Submitted by

KADESH & ASSOCIATES

September 27, 2018

KADESH & ASSOCIATES

230 Second Street, SE
Washington, DC 20003
202-547-8800

IRVINE RANCH WATER DISTRICT (IRWD)

KADESH & ASSOCIATES FEDERAL ADVOCACY SERVICES PROPOSAL

KADESH & ASSOCIATES BACKGROUND

Kadesh & Associates is a top-ranked, bipartisan federal advocacy firm, recognized for its track record of success and accomplishments. Our firm is unique in specializing in advocating for California interests and has been very successful in representing California public and private entities before Congress and the Administration. Our highly respected, bipartisan team has been acknowledged consistently by Members of Congress and key Congressional aides and lobbyists as one of Washington's most effective lobbying firms (The Hill, Bloomberg Government). Bloomberg Government recently ranked *Kadesh & Associates* in the top 20 performing lobbying groups, among nearly 2,000 competitors. Members of our firm have proven themselves to be strategic, smart and capable, garnering a stellar reputation in strategically working both sides of the Capitol and the California Delegation in particular.

We also have extensive experience and success working effectively with the Executive Branch, government agencies and regulatory bodies in advancing our clients' priorities. Based on our bipartisan experience on Capitol Hill, we know when and how to move our clients' priorities by leveraging our issue expertise, policy experience and strategic partnerships and relationships with the California Congressional delegation, members of the House and Senate leadership, key committee staff and with the Administration. We have considerable experience working with the U.S. Army Corps of Engineers, the Department of the Interior, the Environmental Protection Agency, the Department of Commerce, and the Department of Transportation, on funding, administrative, regulatory and policy matters.

Our firm's success has been largely based on working closely with our clients to establish clear priorities and developing and implementing effective legislative and regulatory strategies to achieve those goals. Our clients are often their own best advocates and we aim to position our clients to reach the most appropriate audience at the most opportune time with the most effective message. This approach has been successful for our existing clients, and we propose this strategy if retained by the IRWD.

Combined, *Kadesh & Associates'* bipartisan team has over seven decades of legislative and advocacy experience, including extensive work on California water, water infrastructure and environmental issues. *Kadesh & Associates'* expertise in water issues and in securing federal funding was gained through direct experience working on the policies and politics related to these issues as senior Congressional staffers and as federal advocates providing advocacy services before Congress and the Administration.

We have reviewed the Scope of Work outlined in the RFQ and are confident that we have an established track record in providing all the required political, strategic and technical services for this contract. This includes outreach to the District's California delegation and key Administration officials to keep them apprised of the District's projects, priorities, and needs; introductions to new members and officials; coordination of Washington D.C. meetings for key IRWD officials; the exploration of additional advocacy avenues for IRWD's priorities; and, Bill tracking and monitoring of pertinent legislation and pending regulations that could affect the District.

KEY LOBBYISTS AND TEAM ORGANIZATION

Mark Kadesh, President of *Kadesh & Associates*, will serve as the primary point of contact for *Kadesh & Associates*. He would be closely assisted by Dave Ramey and Chris Kierig, Principal Consultants. Importantly, we anticipate and encourage IRWD staff to call on any member of our team frequently as the need arises. This type of flexibility and timely "24/7" access has been highly effective in working with our current clients. This on-going level of close communication and collaboration will help ensure the District's success in advancing its federal legislative and regulatory policy goals.

Mark Kadesh, *President of Kadesh & Associates*, will serve as *Project Director* for this contract, playing a lead role in public policy strategy development and implementation. Mr. Kadesh has extensive legislative and political experience and insights gained from his distinguished public policy career, including sixteen years working on Capitol Hill. For seven years he served as Chief of Staff to Senator Dianne Feinstein (D-CA) and previously served as her Legislative Director, handling and gaining in-depth knowledge of issues ranging from tax, commerce, environmental regulations, transportation, water, energy, finance, trade and appropriations. Mr. Kadesh also served as Deputy Campaign Manager for Senator Feinstein's 2006 Senate Re-election Campaign. He served as Chief of Staff to Representative Jane Harman (D-CA) and as a Legislative Assistant for Senator Daniel Patrick Moynihan (D-NY).

As a federal advocate, Mr. Kadesh has spent the past decade advocating for California public and private sector interests. He has consistently been named a top lobbyist who has "mastered the art of working Capitol Hill's hallways" (The Hill, Bloomberg Government).

Dave Ramey, a *Principal at Kadesh & Associates,* will serve as the Project Manager for this contract given his considerable expertise in water, infrastructure and environmental policy issues. Mr. Ramey's impressive career in public service has included over three decades of experience as a senior staffer in the House of Representatives. He served nearly twenty years as Chief of Staff to Representative Ken Calvert (R-CA), Chairman of the California Republican Delegation, where he capably administered the office's political, legislative, and communications functions. Mr. Ramey coordinated Rep. Calvert's duties on the Appropriations Committee where Calvert serves as Chairman of the Interior Subcommittee and a senior Member of the Defense, and Energy & Water Subcommittees. Prior to serving as Chief of Staff to Representative Calvert, Mr. Ramey served as his Legislative Director where he oversaw the office's legislative and budget affairs.

Christian Kierig, a *Principal Consultant at Kadesh & Associates*, will serve as the lead for Congressional appropriations and will play a lead role in Congressional and Administration advocacy. Mr. Kierig is highly knowledgeable of the internal workings of the appropriations process and with infrastructure and water issues unique to California. For eight years, he served as Legislative Assistant for Senator Dianne Feinstein (D-CA) where he was responsible for handling the Senator's membership on the Senate Appropriations Committee. As the Senator's key appropriations advisor, he coordinated funding requests for infrastructure projects and programs. This included working directly with California counties and cities to advance their local agendas through federal funding.

Joyce West, *Kadesh & Associates' Public Policy Contracts Manager*, will be responsible for compliance with administrative contact requirements and providing support for meetings, reporting and budgeting. Ms. West has over twenty years of experience managing public policy grants and contracts.

Full CVs for Mark Kadesh, Dave Ramey, and Christian Kierig are attached. Per the RFQ, the contact information for *Kadesh & Associates* is as follows:

Mark Kadesh, President, *Kadesh & Associates*
230 2nd Street, SE, Washington, DC 20003
Mark@KadeshDC.com (202-547-8800)

KADESH & ASSOCIATES' APPROACH

Kadesh & Associates' success has largely been based on leveraging our extensive bipartisan experience serving at the top levels in the trenches on Capitol Hill for California's two most senior Appropriators – House and Senate, Democrat and Republican. This has afforded us unmatched insight, understanding, and access to the California Delegation and staff, and access to relevant committees and agencies. We capitalize on our substantive policy and legislative expertise and our well-established contacts with California's Congressional Delegation and Congressional, Executive Branch, government agency, and regulatory policymakers and staff.

Shrewd strategy development and diligent implementation is central to our success. We work closely with our clients to formulate clear strategic priorities. We then aggressively develop and execute results-oriented strategies to achieve our clients' federal advocacy and funding goals. A key factor distinguishing us from other top lobbying firms is that there are no junior members of our team. Our clients receive the full attention of seasoned professionals who have held senior positions on Capitol Hill. We function proactively and strategically to achieve results for our clients.

Our prior experience in federal strategy development, lobbying and federal funding, has shown there are several critical elements that, when combined, create an effective agenda and implementation strategy:

Timely Communications, Intelligence Gathering and Feedback. The first critical element is maintaining an efficient communications system between the District and *Kadesh & Associates*. We schedule regular conference calls to discuss day-to-day events and issues and use on-going e-mail reports and telephone contacts for issue-specific topics and concerns which arise. Scheduled communications provide a forum for regular exchange of information and intelligence reporting regarding on-going activities and new developments for immediate feedback and consideration. In addition to regularly scheduled calls, we anticipate and plan to have timely phone and email contact with the District's team to discuss and advance strategic priorities as issues arise.

Identifying Strategic Priorities/Opportunities and Developing Advocacy Action Plans. The second critical element is the development of clear priorities within the IRWD's legislative and policy platform. *Kadesh & Associates* will work closely with the District to identify federal opportunities to address its needs as well as craft a legislative and regulatory strategy to advance policy initiatives. Some of the policy initiatives will require interaction with the Administration and regulatory officials. *Kadesh & Associates* will work closely with the District to give thoughtful consideration to the best methods of moving policy initiatives in the legislative and regulatory arenas (e.g., as amendments or stand-alone measures). We anticipate using the annual budget and appropriations process to address the District's funding issues. Importantly, *Kadesh & Associates* has excellent working relationships with Senator Feinstein who currently serves as Ranking Member of the Senate Energy & Water Appropriations Subcommittee and Congressman Calvert who chairs the House Interior Appropriations subcommittee and sits on the House Energy & Water Appropriations subcommittee.

Besides the House and Senate Appropriations Committees, the firm has excellent connections with other key Committees, including the House Transportation and Infrastructure Committee, which has jurisdiction over WRDA, the Senate and House Energy and Natural Resources Committees, and with Representative Mimi Walters and the California delegation. These committees are legislatively active, offering significant opportunities to advance IRWD's goals through legislation, hearings or other means.

Raising Congressional/Regulatory Awareness and Maintaining Strategic Partnerships. Raising IRWD's profile with key Congressional offices and Administration/Regulatory officials will be a priority. IRWD's work on retail potable water service, sewage collection and treatment, water recycling, water banking, and urban runoff treatment services appeals to both sides of the aisle. By partnering with other water districts with similar interests, we could open the door to working with key members not from California. Our team has proven effective in helping our clients build productive, strategic relationships with organizations that share mutual policy objectives. As a bipartisan firm, we're exceptionally well positioned to build successful bipartisan coalitions.

Developing Effective and Compelling Communications. Our team excels in messaging. We are skilled in crafting the optimal way to make policy and political arguments that result in positive outcomes. It will be important for *Kadesh & Associates* to work closely with the District in developing supporting communications and documents relating to key priorities. These communications include Congressional briefings, messaging, hearing testimony, and legislative correspondence as needed by our Congressional and regulatory contacts. Because every member of *Kadesh & Associates'* team has extensive Hill experience, we know first-hand how these communications can be most effectively framed.

QUALIFICATIONS AND RELATED EXPERIENCE

Kadesh & Associates has a consistent and impressive record of accomplishment in representing our current clients, working effectively with the Legislative and Executive branches to advance their federal priorities. Our public clients include the Metropolitan Water District of Southern California, the Santa Clara Valley Water District, the Mammoth Community Water District, the South Coast Air Quality Management District, the California High Speed Rail Authority, Riverside County, the Port of Los Angeles, Metrolink and the Los Angeles Metropolitan Transportation Authority. Our private clients include Northrop Grumman, Edison International and Alaska Airlines.

Importantly, *Kadesh & Associates* has extensive, first-hand experience securing federal funding for our clients and advocating for needs through legislative or regulatory actions, maximizing opportunities offered by appropriations and authorization processes, and through federal regulatory and grant processes. Despite the current era of budget austerity, our team has an excellent record of success in securing federal funding for our clients' critical projects.

Specific examples of *Kadesh & Associates'* federal advocacy accomplishments achieved by its team of seasoned policy and federal advocacy professionals are outlined below. Importantly, this includes a consistent record of success in advocating for other California water districts.

- **Metropolitan Water District of Southern California (MET)** continues to play a pivotal role in water distribution and conservation in Southern California. *Kadesh & Associates* works closely with MET to obtain federal funding for water-related issues relating to Title XVI, CALFED, and, most recently, funding and regulatory issues relating to WaterFix. In addition to a full slate of regular meetings with Members of the House and Senate and relevant committees, *Kadesh & Associates* obtained high-level Administration meetings, including meeting with the Secretary of the Interior

Ryan Zinke to discuss WaterFix, the Colorado River, WIFIA, ESA reform and implementation and Department of Interior reorganization. We work closely with MET's federal team and regularly arrange meeting for Board members and staff. Our primary point of contact is: Jeff Kightlinger/Executive Director/(213) 217-6211.

- **Santa Clara Valley Water District.** Pursuant to two major client visits annually and ongoing follow up with Congressional offices, a major funding victory of $177 million from the Army Corps of Engineers was announced in July 2018 from the Disaster Supplemental Funding to protect the southern end of the San Francisco Bay from sea-level rise and coastal flooding. *Kadesh & Associates* worked with Senator Feinstein and the House delegation over several years to obtain this funding. This project is a partnership with the California State Coastal Conservancy, the U.S. Army Corps of Engineers (USACE), and regional stakeholders to provide coastal flood protection, restore and enhance tidal marsh and related habitats, and provide recreational and public access opportunities. Initial construction for flood protection is planned for the urban area of North San José and the community of Alviso. The federal portion of construction is expected to cost $177 million. In addition to federal funding and the potential for state funding, this project relies on federal participation from USACE to plan, design and construct the project. Our primary point of contact is: Rachael Gibson/Deputy Administrative Officer, of Government Relations/408-630-2884.

- **The Los Angeles Metropolitan Transportation Authority (MTA).** *Kadesh & Associates* has represented MTA before Congress and the Administration since 2010. This includes working on appropriations, re-authorization, and the federal budget. Through these efforts, funding has been included in the FY15-FY19 Presidential budget requests for the Westside subway and the Downtown Regional Connector. In FY18, this culminated in Congressional appropriations of $300 million for these projects. *Kadesh & Associates* also played a key role in obtaining a letter of no prejudice from the FTA allowing tunneling work to begin early on the final segment of the Westside Subway. Our primary point of contact is: Raffi Haig Hamparian/Government Relations Manager/(213) 922-3769.

- **The Port of Los Angeles.** *Kadesh & Associates* has represented the Port of Los Angeles since 2011. Our funding efforts include working to increase the rate of return to California ports from the Harbor Maintenance Trust Fund and to expand the permitted uses of those monies. This has included working on Energy-Water appropriations and the Water Resources Development Act. We also obtained DOE funding to support the Port's zero emissions goods movement program. Our primary point of contact is: David Libatique/Senior Director of Government Affairs/(310) 732-3905.

We consider our work on behalf of our clients to be of the highest caliber and believe our current clientele reflects this in their long-standing relationships with the firm. In the event a conflict arises, we would immediately contact the clients impacted and attempt to develop a suitable resolution. We believe an open dialogue can address and prevent many of the concerns raised by potential conflicts.

COST/PRICING INFORMATION

We propose a monthly fixed fee retainer of $10,000 including travel costs for our team to travel to the District. This will facilitate the strategic planning, communications, advocacy and lobbying services of Mr. Kadesh, Mr. Ramey and Mr. Kierig to be available to the District as needed to fully achieve the tasks outlined in the RFQ as described in this proposal.

ATTACHMENT A

KADESH & ASSOCIATES RESUMES

Mark Kadesh

230 2nd Street, SE, Washington, DC 20003
Mark@KadeshDC.com 202-547-8800

EDUCATION

1988 **Harvard University**
Kennedy School of Government
Master of Public Policy. Public management, economics, statistics, finance, decision analysis, negotiations and political analysis coursework.

1985 **Brandeis University**
Bachelor of Arts Degree in Politics. Summa cum laude, high honors, Phi Beta Kappa.

EMPLOYMENT

2007-Current **Kadesh & Associates**
President
Federal advocacy and government consulting firm that focuses on California-based interests.

2006-2007 **Bartlett, Bendall and Kadesh**
Partner
Washington D.C.-based consulting and lobbying organization.

1999-2006 **Senator Dianne Feinstein (D-CA)**
Chief of Staff
Managed five offices, 75 employees and a $4 million annual budget. Directed political, legislative, administrative and media operations of the office.

1998 **Senator Dianne Feinstein (D-CA)**
Legislative Director
Provided and oversaw legislative development and analysis.

1998 **Jane Harman for Governor Campaign**
Research Director
Managed the research and policy positions of candidate.

1994-1998 **Representative Jane Harman (D-CA)**
Chief of Staff
Managed three offices, fifteen employees and a $900,000 annual budget. Directed political, legislative, administrative and media operations of the office.

1992-1994 **Senator Dianne Feinstein (D-CA)**
Senior Legislative Assistant
Legislative responsibilities included tax, trade, banking, budget and economic issues.

1989-1992 **Senator Daniel Patrick Moynihan (D-NY)**
Legislative Assistant
Legislative responsibilities included banking, public works, budget and commerce issues.

1989 **The Urban Institute**
Research Associate II
Evaluated the impact and efficacy of court mediation.

Dave Ramey

230 Second Street, SE
Washington, DC 20003
Dave@KadeshDC.com 202-547-8800

EDUCATION

1984 **College of William and Mary**
Bachelor of Arts in International Relations, Minor in Government.

2010 **US Naval War College**
Master of Arts with Highest Distinction, National Security and Strategic Studies.

EMPLOYMENT

Nov 2016 to Current **Kadesh & Associates**
Principal
Federal advocacy and government consulting firm specializing in California-based interests.
Co-Chairman of the bipartisan California State Society.

May 1997 to Oct 2016 **Congressman Ken Calvert (CA-42),** Chair, Interior Appropriations Committee
Chief of Staff to Chairman of the House Republican Delegation
Administered all political, legislative, communication and personnel functions for twelve-term Member with a 15-person staff and $1.2 million budget. Chaired the California Republican Administrative Personnel group.

Jan 1993 to April 1997 **Congressman Ken Calvert (CA-43)**
Legislative Director
Oversaw legislative, communication, personnel and budget functions; designed and executed legislative program; hired and trained staff.

Dec1988 to Dec 1992 **House Republican Conference, Hon. Jerry Lewis, Chairman**
Senior Advisor and Foreign Policy/Defense Analyst
Wrote position papers, speeches and reports; designed and staffed retreats for House Republican Members.

July 1987 to Nov1988 **House Republican Policy Committee, Hon. Jerry Lewis, Chairman**
Foreign Policy and Defense Analyst
Wrote position papers, speeches and reports; designed and staffed retreats for House Republican Members; and convened Member and staff discussions on legislative and political issues.

Feb1985 to June 1988 **House Republican Research Committee, Hon. Jerry Lewis, Chairman**
Foreign Policy and Defense Analyst
Wrote position papers, speeches and reports; designed and staffed retreats for House Republican Members; conducted briefings and directed task forces.

CHRISTIAN N. KIERIG

4619 Greene Place NW • Washington, D.C. 20007 • (202) 236-7497

EXPERIENCE

Principal Consultant, Kadesh & Associates
Washington, D.C. January 2008 – Present

- Helped establish very successful start-up government relations firm, including client development and service.

Senior Associate, CJ Strategies
Washington, D.C. *July 2006 – December 2007*

- Involved with almost every aspect of a small, start-up government relations business, including client retention and generating new business.

Senior Associate, Copeland Lowery & Jacquez
Washington, D.C. *February 2001 – June 2006*

- Represented over 30 clients, ranging from cities and counties to small businesses.
- Developed tailored legislative strategies to match clients' needs with opportunities at the federal level and saw those projects through to completion.
- Interacted with Members of Congress and Administration officials to advance client legislative agendas and obtain federal funding for client priorities.
- Generated new business, including proposal writing and long-term client development.

Legislative Assistant, United States Senator Dianne Feinstein (D-CA)
Washington, D.C. *January 1999 – February 2001*

- Primary staff for a member of the U.S. Senate's Committee on Appropriations, which controls all discretionary federal spending.
- Developed first-hand knowledge of the Congressional budget process and how to maneuver within that environment.
- Advised local officials, public entities, and private groups seeking federal appropriations and Congressional spending for transportation needs, community and economic development programs, water projects, health initiatives, military programs, and other projects.
- Evaluated thousands of annual appropriations requests for federal funding and worked with the Committee to develop the Senator's priorities and secure funding.

Director of Special Projects, United States Senator Dianne Feinstein (D-CA)
Washington, D.C. *January 1994 – June 1998*

- Primary point of contact for elected officials and others seeking federal assistance including appropriations and grant funding.
- Coordinated federal response to the 1994 Northridge earthquake and floods in California.
- Drafted legislation for consideration in Senate committees and on the Senate floor, including the establishment of the Presidio Trust.

Assistant to the Legislative Director, United States Senator Dianne Feinstein (D-CA)
Washington, D.C. *November 1992 – January 1994*

- Reported on day-to-day Senate floor activities including pending legislation and relevant amendments.
- Supervised twelve legislative correspondents responding to constituent mail and inquiries.

EDUCATION

Pepperdine University, Malibu, California, *August, 2006*
Masters of Business Administration – Graziadio School of Business

Occidental College, Los Angeles, California, *June, 1992*
Bachelors of Arts in Political Science

November 5, 2018
Prepared and
submitted by: C. Compton
Approved by: Paul A. Cook

WATER RESOURCES POLICY AND COMMUNICATIONS COMMITTEE

STATE ADVOCACY SERVICES

SUMMARY:

Due to the retirement of IRWD's existing advocate for state issues, the District has initiated a process to retain a new consultant for state advocacy services.

BACKGROUND:

For many years, IRWD has received state advocacy services from O'Haren Government Relations. Given the pending retirement of IRWD's current state advocate, the District issued a Request for Qualifications (RFQ) to solicit qualifications from full-service lobbying firms to represent IRWD on state legislative issues in Sacramento. The RFQ for state advocacy services was released on October 8, 2018, with responses due by noon on November 2, 2018.

Through the RFQ process and review of the submitted Statements of Qualifications (SOQs), IRWD seeks to retain the firm best suited to meet the District's state advocacy needs. After an initial screening of the SOQs, each selected firm will be invited to an interview with the Water Resources Policy and Communications Committee; interviews are currently scheduled for November 13, 2018.

Staff will discuss with the Committee the SOQs received within the November 2 deadline, and will provide its recommendation for the list of firms to interview. Copies of the SOQs will be distributed when available in advance of the Committee meeting.

FISCAL IMPACTS:

Expenses for state advocacy services have been included in the FY 2018-2019 Operating Budget.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

That the Committee review and discuss the responses to the District's Request for Qualifications for State Advocacy Services and discuss which firms to interview.

LIST OF EXHIBITS:

None.

November 5, 2018
Prepared and
submitted by: P. Weghorst
Approved by: Paul A. Cook

WATER RESOURCES POLICY AND COMMUNICATIONS COMMITTEE

PROPOSED IRWD POLICY PRINCIPLES REGARDING METROPOLITAN WATER DISTRICT'S REGIONAL RECYCLED WATER PROGRAM

SUMMARY:

Metropolitan Water District of Southern California is considering the development of a groundwater augmentation program, sometimes referred to as "the Carson Plant". This program will provide advanced treatment to effluent from the Joint Water Pollution Control Plant, a facility operated by the Sanitation Districts of Los Angeles County and located in the city of Carson. A full-scale Carson Plant would produce up to 150 million gallons per day (MGD) of purified water that would be delivered for recharge to four groundwater basins in Orange County and Los Angeles County. The proposed project would become a major source of water for the Orange County Groundwater Basin. To help guide IRWD's advocacy efforts related to the proposed Carson Plant and its related facilities, staff has prepared the attached policy position paper. Staff recommends that the Board adopt the proposed policy principles as revised based on input provided by the Committee.

BACKGROUND:

In 2004, IRWD began producing policy papers on topics of particular interest to the District. Because of IRWD's standing in the water industry, the opinion of the District is regularly solicited on issues of vital interest to the industry and the community. In order to keep these position papers current and germane to explaining the District's position, staff occasionally recommends that the Board review the papers and, when appropriate, adopt new policies or incorporate revisions.

Policy Principles for Metropolitan's Regional Recycled Water Program:

Metropolitan is currently studying the feasibility of developing the Carson Plant – a regional water recycling program consisting of facilities to treat effluent from the Joint Water Pollution Control Plant in Carson and to convey this advance-treated water to four groundwater basins in Metropolitan's service area, including the Orange County Groundwater Basin, for recharge. The ongoing feasibility study includes the operation of a demonstration-scale project that is currently under construction that will be used to verify the designs for the full-scale project. The feasibility study will also identify the requirements for product water delivery facilities and financing the project. A full-scale project would provide up to 150 MGD of advanced purified water to the region and would become a major source of water for Orange County. A fact sheet describing the proposed program, prepared by Metropolitan, is provided as Exhibit "A".

To help guide IRWD's advocacy efforts related to the proposed Carson Plant, staff has prepared the policy position paper regarding Metropolitan's Proposed Regional Recycled Water Program, which is attached as Exhibit "B". Staff recommends that the Board adopt the proposed policy principles as revised based on input provided by the Committee.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

None.

RECOMMENDATION:

That the Board adopt the proposed IRWD policy position paper regarding Metropolitan Water District's Proposed Regional Recycled Water Program.

LIST OF EXHIBITS:

Exhibit "A" – Fact Sheet for the Metropolitan Water District's Proposed Regional Recycled Water Program in Carson

Exhibit "B" – Draft IRWD Policy Position Regarding Metropolitan Water District's Regional Recycled Water Program in Carson

EXHIBIT "A"

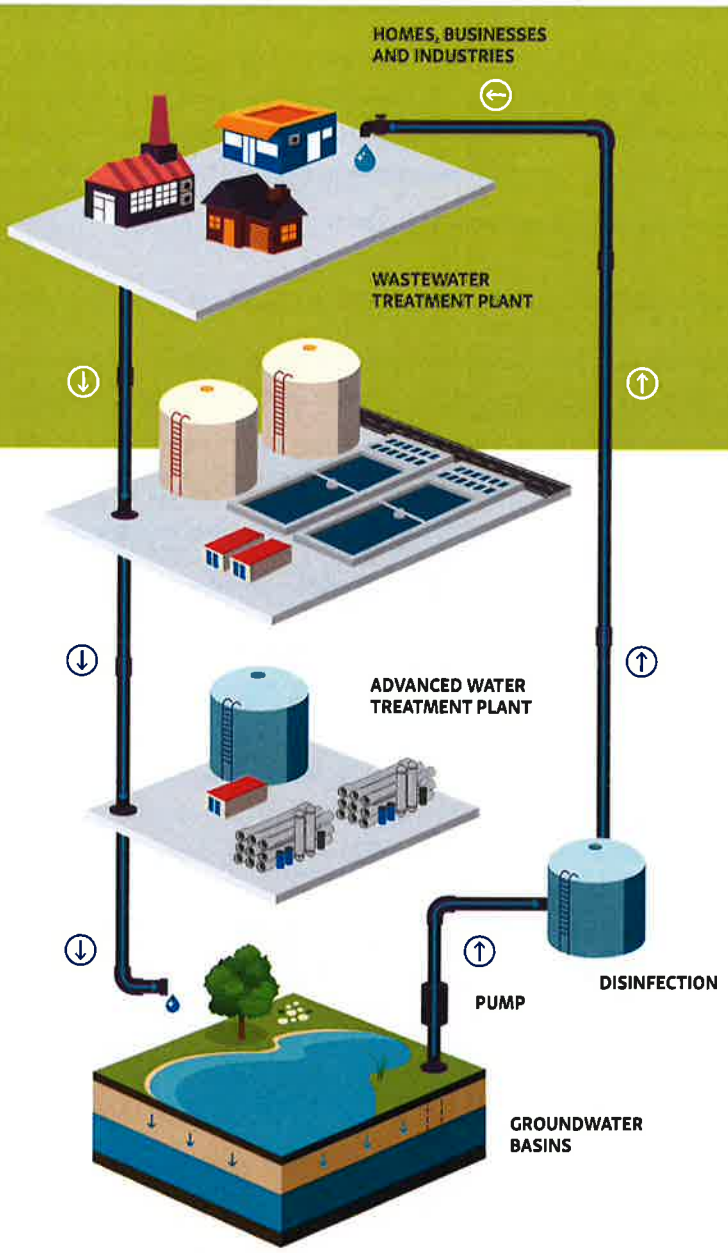
A NEW SOURCE OF WATER FOR SOUTHERN CALIFORNIA

Regional Recycled Water
Advanced Purification Center

Water is too precious to use just once. So the Metropolitan Water District of Southern California is making a major investment in a potential water recycling project that will reuse water currently sent to the ocean. The Regional Recycled Water Program, a partnership with the Sanitation Districts of Los Angeles County, will purify wastewater to produce high quality water that can be used again. The program will start with a demonstration facility and could eventually become one of the largest advanced water treatment plants in the world.

How it works

The process begins with wastewater discharged from homes, businesses and industries. After the wastewater has been cleaned and treated, it flows to an advanced water treatment plant where it is further purified. The water then replenishes groundwater basins and is eventually pumped up, disinfected and used again.



Why it works

- Uses region's largest untapped source of treated wastewater, currently sent to the ocean.
- Produces a drought-proof source of water, readily available rain or shine.
- Prepares the Southland in the event of a catastrophic earthquake by increasing local water supplies.
- Replenishes groundwater basins, which provide 30% of Southern California's water supply and have seen levels drop to historic lows in recent years.
- Helps meet needs of region's growing economy and population at a cost comparable to other local water resources.
- Helps ensure regional water reliability through diversifying sources, in addition to conservation, local supply development and imported water.

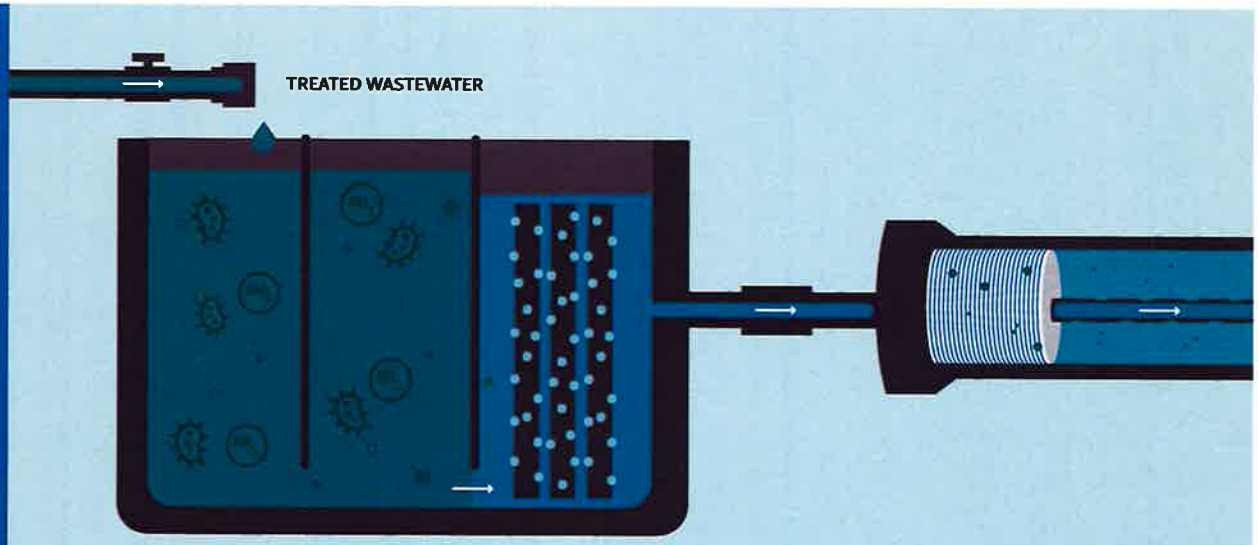
INTRODUCING THE REGIONAL RECYCLED WATER ADVANCED PURIFICATION CENTER

The new Regional Recycle
treated wastewater from t
a rigorous purification pro
water treatment technolo
contaminants such as pha
down to the microscopic l

THE PURIFICATION PROCESS

After wastewater is cleaned and treated through multiple processes, it flows to the Regional Recycled Water Advanced Purification Center for additional treatment.

The end result is high quality, purified water that could eventually help replenish groundwater.



1 **Membrane Bioreactors:** Microorganisms remove ammonia and other nitrogen compounds, while membranes filter tiny particles, smaller than 1/100 of a grain of sand.

2 **Reverse Osmosis:** Pressurized m
remove microscopic materials, su
pharmaceuticals and salts, elimin
99% of all impurities.

CONTINUING A RECYCLED WATER LEGACY

The past five decades have seen recycled water use in Southern California grow exponentially, for both irrigation and groundwater replenishment.

1990 recycled water usage:
100,000 acre-feet

Wastewater treatment plants add processes to produce more recycled water. Purple pipes are adopted as

2000 recycled water
175,000 acre-feet

Oran
large
in the

As Southern California's population

STARTING SMALL AND SCALING UP

The Advanced Purification Center is a demonstration facility that will generate information needed for the potential future construction of a full-scale recycled water plant. It uses a unique application of membrane bioreactors designed to significantly increase efficiency in water recycling. Scientists and engineers will test the process to ensure the resulting purified water meets the highest water quality standards. Once approved by regulators, the innovative process could be used around the globe.

ADVANCED PURIFICATION CENTER:

A 500,000 gallon/day demonstration facility

Cost: $17 million for construction

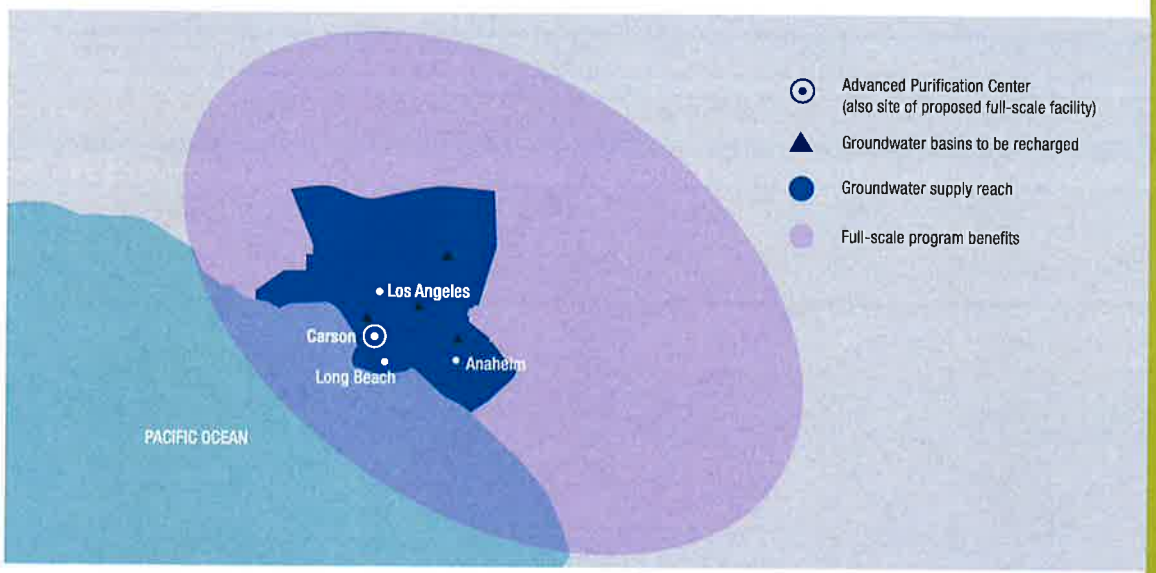
Timeline: Under construction; operation begins late 2018

FULL-SCALE ADVANCED WATER TREATMENT PLANT:

A full-scale facility would produce up to 150 million gallons daily, enough to serve more than 335,000 homes. Purified water would be delivered through 60 miles of pipelines to 4 groundwater basins in Los Angeles and Orange counties. These basins supply water to 7.2 million people.

Cost: $2.7 billion to build, $129 million annually to operate, resulting in a water cost of $1,600/acre-foot.

Timeline: 11 years to design and build, once approved



THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

SANITATION DISTRICTS OF LOS ANGELES COUNTY

THE PARTNERS

The Metropolitan Water District of Southern California is a state-established cooperative of 26 cities and water agencies serving nearly 19 million people in six counties. The district imports water from the Colorado River and Northern California to supplement local supplies, and helps its members to develop increased water conservation, recycling, storage and other resource-management programs.

The Sanitation Districts of Los Angeles County is a regional public agency consisting of 24 independent special districts serving over 5.6 million people in 78 cities and the unincorporated territory within Los Angeles County. The Sanitation Districts protect public health and the environment through innovative and cost-effective wastewater and solid waste management and, in doing so, convert waste into resources such as recycled water, energy and recycled materials.

www.lacsd.org

The Metropolitan Water District of Southern California

700 N. Alameda St.
Los Angeles, CA 90012

P.O. Box 54153
Los Angeles, CA 90054-0153

(213) 217-6000

(800) call-mwd (225-5693)

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September 2017

EXHIBIT "B"

IRVINE RANCH WATER DISTRICT POLICY POSITION ON METROPOLITAN WATER DISTRICT'S PROPOSED REGIONAL RECYCLED WATER PROGRAM

DRAFT

November 5, 2018

Issue Summary:

Metropolitan Water District of Southern California is currently studying the feasibility of developing a groundwater augmentation program utilizing advanced-treated recycled water, sometimes referred to as "the Carson Plant". This regional water recycling program consists of facilities to treat effluent from the Joint Water Pollution Control Plant, which is operated by the Sanitation Districts of Los Angeles County in the city of Carson. The program would convey advance-treated recycled water for recharge at four groundwater basins in Metropolitan's service area, including the Orange County Groundwater Basin. State water policy recognizes the benefits of this type of project as a groundwater augmentation program, which would be similar to the Groundwater Replenishment System operated by Orange County Water District. Metropolitan's ongoing feasibility study includes the operation of a 0.5 million gallons per day (MGD) demonstration-scale project that is currently under construction that will be used to verify the designs for a full-scale project. The feasibility study will also identify the requirements for product water delivery facilities and financing the program.

A full-scale project would provide up to 150 MGD of advanced purified water to the region and is expected to be available as a major source of reliable water for Orange County. Since the Carson Plant would provide a new source of water to Metropolitan's service area, it would further diversify and improve the water supply reliability of all of Southern California.

Background:

The Carson Plant would utilize proven, state-of-the-art water treatment technologies, including a membrane bioreactor (MBR) system, followed by a reverse osmosis system. Ultraviolet light and an effective oxidant would destroy any remaining viruses, pharmaceuticals, and other chemical compounds.

The program is currently envisioned to provide a source of water to four groundwater basins in Los Angeles and Orange County. Water deliveries to the basins would occur through approximately 60 miles of pipelines. It is anticipated that Orange County would receive up to 65,000 acre-feet per of purified water to be recharged by Orange County Water District. Currently, the cost to construct the project is estimated at $2.9 billion with an estimated cost of water of $1,600 per acre-foot. Once the project is approved, Metropolitan estimates that the project would take 11 years to design and construct. The project would comply with rules that have already been established in state policy for the indirect potable reuse (IPR) of water. Following is an overview of state policy related to the use of recycled water in California.

Existing State Policy:

In 2013, the State Water Resources Control Board amended California's Recycled Water Policy, which included a mandate to increase the use of recycled water in the state by 500,000 acre-feet per year (AFY) by the year 2030. This policy is currently being revised by the State Board to

include additional water quality control provisions for recycled water. In 2014, California adopted IPR rules that provide detailed criteria for treatment processes, contaminants to test for, and how long treated water must remain in the ground as a result of groundwater augmentation projects. In 2018, the state finalized surface augmentation regulations that allow advanced treated potable reuse water to be discharged into surface reservoirs that provide drinking water through traditional potable water treatment facilities. As yet, California does not have regulations that govern direct potable reuse (DPR) of water. In October 2017, AB 574 was signed into law that sets year 2023 as the deadline for the development of raw water augmentation regulations that would facilitate DPR uses of highly treated recycled water by introducing the water upstream of existing conventional potable water treatment plants.

To help guide IRWD's advocacy efforts related to the Metropolitan's proposed Carson Plant, staff has prepared the following policy position principles:

Policy Principles:

1. State, regional and local water resource policies should encourage and not penalize the use of tertiary treated water along with the development of groundwater, surface and raw water augmentation projects that make use of proven technologies for the advanced treatment and use of recycled water.

2. The use of tertiary and advanced-treated recycled water should be maximized in advance of consideration of or commitments to implementing more expensive, less reliable, and environmentally harmful seawater desalination projects.

3. Metropolitan should update its ongoing feasibility study of the Carson Plant once the state releases raw water augmentation regulations in 2023. Consideration of these rules may result in a project that would produce water at a lower cost than currently envisioned by focusing exclusively on augmenting groundwater supplies.

4. The use of existing facilities should be considered by Metropolitan wherever possible to improve the cost effectiveness of the Carson Plant. The use of existing facilities should not impair the ability of Metropolitan to optimize the use of its facilities for the storage, treatment and distribution of imported water.

5. Metropolitan should meld the costs of water from the Carson Plant into its full-service rate structure. If the project is used for groundwater augmentation, then the cost of water should be melded into Metropolitan's Full-Service Tier 1 Untreated Rate. If the project is used for raw water augmentation, then the cost of water should be melded into the Full-Service Tier 1 Treated Rate.

6. Metropolitan should consider entering into partnerships with other water agencies for the design, construction and/or operation of it Regional Water Recycling Program that do not result in local agencies subsidizing the cost of water to other agencies in Metropolitan's service area.

7. IRWD should assist Metropolitan in its ongoing feasibility study by sharing IRWD's experiences in the application of Membrane Bioreactors technologies at the Michelson Water Recycling Plant.

8. Reliability benefits from the Carson Plant should be incorporated into ongoing and future water supply reliability studies performed in Orange County and Metropolitan's service area.

9. IRWD should advocate for participation in the Carson Plant by the Municipal Water District of Orange County and Orange County Water District as a means of maintaining higher water levels in the Orange County Groundwater Basin and improving the water supply reliability of all Orange County.

November 5, 2018
Prepared by: N. Hastings / A. McNulty
Submitted by: F. Sanchez / P. Weghorst
Approved by: Paul A. Cook

WATER RESOURCES POLICY AND COMMUNICATIONS COMMITTEE

CONSULTANT SELECTION FOR
A STUDY OF IRWD'S FUTURE POTENTIAL WATER EFFICIENCY

SUMMARY:

A study of IRWD's Future Potential Water Efficiency is proposed to assist IRWD with understanding the current extent and impacts of water efficiency programs, device saturation, identifying opportunities for future water savings, and evaluating the potential efficacy of future water efficiency programs within IRWD. The results of the study will inform the strategic planning, design, and implementation of future water efficiency programs and support activities that will IRWD's ensure compliance with statewide water use efficiency targets. Staff issued a Request for Proposal (RFP) to 18 firms to conduct the study; three proposals were received. Staff recommends the Board authorize the General Manager to execute a Professional Services Agreement with EKI Environment & Water in the amount of $158,958 to conduct a study of IRWD's Future Potential Water Efficiency.

BACKGROUND:

IRWD has a long history of implementing water efficiency programs. A study of IRWD's Future Potential Water Efficiency will help to keep the District at the forefront of water use efficiency and strategically guide future program planning efforts. The study horizon will extend through 2040 to align with the Urban Water Management Plan planning period.

Benefits of a Study of IRWD's Future Potential Water Efficiency:

A study of IRWD's Future Potential Water Efficiency will provide the following benefits:

- Quantify the water savings of past indoor and outdoor water efficiency programs. Savings would be determined by customer sector, water type, indoor and outdoor use, village and other relevant factors;
- Identify the most cost-effective potential indoor and outdoor water efficiency programs based on the avoided water and embedded energy costs. The avoided costs would be determined by customer sector, water type, village, and other relevant factors;
- Inform future water efficiency program design and provide the foundation for the next update to the District's Water Efficiency Plan;
- Provide IRWD with a methodology to plan and track future water efficiency programs and savings; and
- Further enhance IRWD's role as an industry leader in water and energy efficiency.

Consultant Selection Process:

On August 21, 2018, staff issued an RFP to 18 firms to conduct a study on Future Potential Water Efficiency. Three firms submitted proposals: A & N Technical Services, Envirosmart Solutions Group, and EKI. Staff completed a thorough evaluation of the proposals, conducted interviews and completed reference checks. The consultant selection matrix is attached as Exhibit "A".

Staff recommends the selection of EKI to complete the work. Key strengths of the EKI's proposal include:

- A strong project team that has in-depth understanding and expertise in designing, implementing, analyzing and modeling water efficiency programs to support water resources planning efforts;

- Extensive experience using principles of data science and analytics to conduct and present quantitative analyses of water efficiency program saturation and effectiveness; and

- Significant experience developing unique and proven methods to evaluate water use and savings potential to identify where best to target programs, identify future program opportunities and inform the strategic targeting and implementation of water efficiency programs.

Following the evaluation, staff met with EKI to negotiate and finalize the scope of work and overall fee. EKI's final scope of work, cost estimate and schedule are attached as Exhibit "B".

FISCAL IMPACTS:

Funding in the amount of $158,958 is included in the FY 2018-19 Operating Budget.

ENVIRONMENTAL COMPLIANCE:

This item is not a project as defined in the California Environmental Quality Act as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15378.

RECOMMENDATION:

That the Board authorize the General Manager to execute a Professional Services Agreement with EKI Environment & Water in the amount of $158,958 to conduct a study on IRWD's Future Potential Water Efficiency.

LIST OF EXHIBITS:

Exhibit "A" – Consultant Selection Matrix
Exhibit "B" – EKI Environment & Water Scope of Work

EXHIBIT "A"
CONSULTANT EVALUATION MATRIX

Future Potential Water Efficiency Study Consultant Selection Matrix

Item	Description	Weights	A & N Technical Services	EKI	Enviro Smart
A	TECHNICAL APPROACH	60%			
1	Adherence to RFP Requirements	10%	2	1	3
2	Understanding of required services and project details	25%	2	1	3
3	Approach and Methodology	45%	2	1	3
4	Schedule	20%	2	1	3
	Weighted Score (Technical Approach)		2.00	1.00	3.00
B	QUALIFICATIONS AND EXPERIENCE	40%			
1	Project Manager	50%	1 Thomas Chesnutt, CAP, Pstat PhD, 28 yrs Exp	2 Kathryn Wuelfing MESM, 12 yrs Exp	3 Ajay Dhawan BS, 9 yrs Exp
2	Technical Leads	20%	1 Dana Holt MS, 31 yrs Exp Patrick Atwater MS, 8 yrs Exp Christopher Tull MS, 3 yrs Exp David Pekelny, PhD 27 yrs Exp Maureen Erbeznik 28 yrs Exp	2 Nelson Schlater, P.E. MS, 20 yrs Exp Tina Wang, P.E. MS, 4yrs Exp Anona Dutton, P.G./C.Hg MS, 17 yrs Exp	3 Lisa Maddaus, P.E. MS, 22 yrs exp Anil Bamezai, PhD 27 yrs Exp Michelle Maddaus, P.E MBA, 18 yrs exp Chris Matyas 18 Yrs Exp, BS Eng. Tess Kretschman 12 yrs Exp
3	Project Team Experience (sub and prime)	20%	2	1	3
4	Firm's Relevant Experience (sub and prime)	10%	2	1	3
	Weighted Score (Experience)		1.30	1.70	3.00
	COMBINED WEIGHTED SCORE		1.72	1.28	3.00
	Ranking of Consultants		2	1	3

C	SCOPE OF WORK						
TASK		Task Hours	FEE	Task Hours	FEE	Task Hours	FEE
1	Project Administration	168	$27,080	166	$36,700	60	$10,650
2	Historical Water Efficiency Program Analysis	296	$38,120	280	$51,929	224	$36,220
3	Future Water Efficiency Program Analysis	410	$57,880	216	$40,810	190	$32,350
4	Data Analysis and Processing	376	$48,520	48	$8,095	80	$14,720
5	Reporting	160	$21,680	102	$19,874	200	$32,400
6	Production Costs, Travel, etc.		$0		$1,550		$3,500
7							
8							
	SUB-TOTAL PROFESSIONAL SERVICES, FEES (Does Not Include Optional Items)	**1,410**	**$193,280**	**812**	**$158,958**	**754**	**$129,840**
15	Optional Items						
	TOTAL PROFESSIONAL SERVICES, FEE	**1,410**	**$193,280**	**812**	**$158,958**	**754**	**$129,840**
	Does not include optional tasks Avg $/hr		$137		$196		$172
D	OTHER						
	Miscellaneous Items						
	Joint Venture		Yes		No		Yes
	Exceptions taken to IRWD Std. Contract		No		No		No
	Insurance (Professional & General Liability)		Yes		Yes		Yes

EXHIBIT "B"

eki environment & water

Corporate Office
577 Airport Boulevard, Suite 500
Burlingame, CA 94010
(650) 292-9100
ekiconsult.com

September 17, 2018

Irvine Ranch Water District Office
Engineering Counter
15600 Sand Canyon Ave.
Irvine, CA 92718

WATER EFFICIENCY POTENTIAL STUDY

Dear Ms. McNulty:

EKI Environment & Water, Inc. (EKI) is pleased to submit this Proposal in response to the *Request for Proposal for a Water Efficiency Potential Study* (RFP) issued by the Irvine Ranch Water District (IRWD or District) on August 21, 2018. EKI understands that IRWD is seeking a well-qualified consultant to: (1) evaluate the current extent of water use efficiency (WUE) program and device saturation the District's service area; (2) identify opportunities for future water savings; and (3) evaluate the cost effectiveness of potential WUE programs to inform IRWD's future planning and strategic implementation.

EKI is uniquely qualified to provide the District with the technical expertise needed to successfully complete this Project. We are well-suited to work closely with the District to perform this Water Efficiency Potential Study for the reasons highlighted below.

- EKI has extensive experience using principles of data science and analytics to conduct and present quantitative analyses of WUE program saturation and effectiveness and to support strategic planning of WUE programs. We have also used this approach to support other water resources planning efforts including the development of Drought Response Plans, Water Shortage Contingency Plans (WSCPs), and Urban Water Management Plans (UWMPs) for water retailers throughout California.
- Through our work for retail and wholesale water agencies, we have developed unique and proven methods to evaluate water use and savings potential including: (1) geospatial analysis of WUE program participation density (i.e., "hot and cold spot" analysis) to identify well-served and under-served areas of customers; (2) measurement of <u>actual</u> water savings achieved from program participation; (3) identification of program participation drivers relative to geographic, customer demographic and property characteristic data; and (4) application of these analyses to identify future program opportunities and inform the strategic targeting and implementation of WUE programs.
- EKI advises clients on the evolving water conservation regulations related to the *Making Water Conservation a California Way of Life* initiative, including assisting clients with understanding the developing regulations and their potential implications.
- EKI has significant experience working with, and presenting to, staff, boards and stakeholders on matters related to water conservation. For example, Ms. Dutton of EKI was responsible for implementation of the multi-million-dollar Bay Area Water Supply and Conservation Agency

(BAWSCA) regional water conservation program, which was administered on behalf of its 26-member agencies. As such, she brings applicable "boots on the ground" experience regarding what it takes to implement a successful water conservation strategy, including the funding and support required.

- EKI understands the District's desire to develop this study in a cost-effective manner and has demonstrated a strong capability to adhere to established budgets and schedules similar to what will be required to successfully execute this Project.

Our collaborative, data-driven approach to this Water Efficiency Potential Study will help IRWD evaluate and adapt its efforts to respond to the changing water supply reliability and regulatory environment. We look forward to working with you and welcome any questions you may have about our proposal.

Very truly yours,

EKI Environment & Water, Inc.

Anona Dutton, P.G., C.Hg.
Vice President / Principal-In-Charge

Kathryn Wuelfing
Project Manager

SCOPE

EKI Environment & Water, Inc. (EKI) understands that the Irvine Ranch Water District (IRWD or District) has a long history of water use efficiency (WUE) program implementation and analysis, including achieving a significant reduction in single-family residential (SFR) indoor water use from 2007 – 2012, which was a primary focus of IRWD's WUE programs at that time.[1] In more recent years, particularly during and after the historic drought of 2013-2015, IRWD's WUE focus has shifted more heavily towards programs that target outdoor water use by all customers. Given that the District consistently offers WUE programs to its customers and that the particular programs and suite of offerings are continually adapted to respond to a variety of drivers, including District need, technological innovation, drought conditions, and program cost-effectiveness, EKI proposes this study of water efficiency potential to strategically guide the District's future program planning efforts.

We are committed to conducting a study that meets IRWD's objectives. We are open to refinements to our proposed scope to achieve a project result that best fits the needs of the District and its customers.

We have prepared this proposal in response to the *Water Efficiency Study Request for Proposals* (RFP) dated 21 August 2018. Based on the RFP, we understand that IRWD's primary objectives for this Water Use Efficiency Study are to, at a minimum:

1. Quantify the water savings of past indoor and outdoor water efficiency programs, by customer sector, water type, indoor and outdoor use, village, and other relevant factors; and
2. Identify the most cost-effective potential indoor and outdoor water efficiency programs based on the avoided water and embedded energy costs, by customer sector, water type, village, and other relevant factors.

We have developed the scope described below to meet these objectives and to support IRWD by:

- Leveraging IRWD's past program participation and customer water use data to help the District better understand more about which customers are participating in which programs and to accordingly inform strategic design, selection, and marketing of future WUE programs and services;
- Employing a rigorous, data-driven method to evaluate geospatial, demographic, and property characteristic trends in program participation and to identify geographic areas and customer characteristics that are currently under-represented in program participation;
- Evaluating current program saturation rates based on active program participation and the passive, natural replacement of fixtures using a calibrated[2] conservation model tool;
- Estimating the maximum potential water savings for future programs based on the distribution of current water use by IRWD customers and identification of the reasonably attainable, but highly-efficient level of water use that is achievable with today's technology for each customer sector;

[1] IRWD, 2013. *Irvine Ranch Water District Water Efficiency Plan,* December 2013.

[2] The passive savings model will be calibrated with observed water demand reduction data for IRWD customers to ensure a more accurate assessment of current device saturation and projection of future passive adoption rate.

- Developing and evaluating the water savings and cost-effectiveness of up to four (4) WUE program scenarios, each reflective of a different potential WUE strategy (i.e., Business as Usual, Outdoor Water Efficiency Only, Targeting of Under-Represented Market Sectors, and Aggressive/Water Shortage-Driven); and
- Developing compelling maps, charts and graphics that will support visualization of the results and conclusions of this Study and make them accessible to a broad audience, including the public and decision-makers.

We have presented our proposed scope and approach under the tasks below, based on the RFP and our understanding of IRWD's system, available data, and objectives. We have proposed a collaborative approach that allows for frequent opportunities for input by District staff at all stages throughout the Project. We feel that this collaborative process between District staff and EKI will result in the most beneficial work product and outcome for IRWD and its customers.

Task 1: Project Administration

Based on our experience conducting similar efforts, EKI places high value on collaboration with, and input from, District staff throughout the Project development process. We have distinguished ourselves in our ability to develop open and lasting relationships with our clients that facilitate the efficient development of project components, and better ensures that the resultant work product meets or exceeds expectations. Based on our interactions with District staff to date, we feel strongly that our teams can work closely together to affect a successful and compelling Project.

Subtask 1a – Project Management and Meetings

A key means to ensure that District staff input is incorporated, and that the Project schedule, budget, and expectations are well managed, is through frequent and organized communications. EKI will work with District staff to identify mutually beneficial means and frequency of communication and have identified the following key items that will provide the scaffolding for efficient Project management:

- One (1) in-person project kickoff meeting to introduce key members of the Project team and to review project scope and objectives;
- Provide an anticipated schedule for each task, which will be updated as needed so that the District is adequately informed of Project progress and status;
- Provide monthly invoices supported by progress status reports, which will be broken down by task and subtask as identified in this proposal;
- Participation in approximately periodic progress meetings (teleconference) and preparation of brief meeting notes to document key decisions and action items (assumed 6 meetings); and
- Up to (2) in-person meetings to present key Project results.

For each meeting EKI will develop an agenda and brief meeting minutes, which will include action items, key decisions, and other items of record.

We have assumed that the District will designate one staff member as the project manager, and that the IRWD project manager will be the primary point of contact and responsible for facilitating coordination, participation, and other input from other IRWD staff, as appropriate.

Subtask 1b – Review of Available Project Data and Identification of Key Data Gaps and Potential Approaches to Filling Data Gaps

EKI understands that IRWD has a significant amount of readily available data that can be applied for this Project (e.g., water use and historical water efficiency program data at the account and meter level, geospatial coordinates for each meter, embedded energy values assigned to each meter, North American Industry Classification System [NAICS] codes for the majority of commercial, industrial and institutional customers, and a detailed land use database). As discussed further under Task 4, EKI will submit a detailed data request to IRWD immediately following the Project kick-off meeting. EKI will review the data provided by IRWD, relevant publicly available datasets[3] to the extent that they supplement data provided by IRWD, and existing reports and documents (i.e., IRWD's Water Efficiency Plan, Embedded Energy Plan, Water Shortage Contingency Plan), and any other materials provided by District staff.

Technical Memorandum #1

Following the review of these data, EKI will prepare a draft technical memorandum (TM) to document the data assimilation effort (TM #1). This memorandum will: (1) summarize the available data, (2) identify data gaps material to key analyses, and (3) describe planned approach to fill these gaps (e.g., assumptions, additional analysis, or additional data to be compiled, as discussed with District staff). This TM will also include a preliminary "data exploration" analyses to understand trends and the level of significance of data gaps, and may include an evaluation of potential approaches to bridging such data gaps.

EKI will provide the draft TM #1 to IRWD for review and comment. Comments on the draft TM #1 will be incorporated into the draft Project report, described under Task 5.

Timing is Everything

EKI recommends extending the historical study period to include summer 2018 to allow for evaluation of participation trends over a longer post-drought period (i.e., the "rebound").

EKI also recommends extending the future study horizon through at least 2040, for consistency with the next Urban Water Management Plan (UWMP) planning period.

Task 1 Deliverables

- Project kick-off and bi-weekly meetings, with agendas and meeting notes
- Task-based Project schedule, updated as needed
- Monthly invoices and task-based progress status reports
- Draft TM #1: Summary of Available Data, Key Data Gaps, and Potential Data Gap-Filling Approaches

Task 2: Historic Water Efficiency Program Analysis

IRWD has a very active water conservation program and suite of offerings and outreach campaigns, which are complimented by regional conservation program offerings provided by Metropolitan Water District (MWD) and Municipal Water District of Orange County (MWDOC). EKI understands that IRWD tracks the implementation of these WUE programs and routinely assesses their effectiveness. However, one of the objectives of this Project is to perform a comprehensive analysis and quantification of: (1) rates of participation in WUE programs and associated program saturation; and (2) water savings achieved

[3] Such as Assessor's parcel classifications, land use classifications, and Census-demographic data.

through implementation of past WUE programs. The results of this task will be used to inform the analysis of potential future WUE program opportunities under Task 3.

The RFP specifies that the WUE program analysis should consider program participation from 2005 through 2017. However, given the timing of this Project,[4] we suggest including evaluating participation and water use through the summer of 2018, to capture more of the "post-drought" period and relevant trends.

Subtask 2a – Analysis of Past Program Participation and Program Saturation

As part of the basis for estimating the remaining potential for future WUE programs and savings (Task 3), EKI will evaluate past customer participation in up to ten (10) WUE programs (or groups of programs)[5] and saturation rates based on both active and passive adoption of water-efficient technologies and behaviors. The results of these analyses will help IRWD to better understand more about which customers are participating in which programs and will accordingly inform strategic design, selection, and marketing of future WUE programs and services. Each of the sets of analyses described herein will include the development of compelling maps, charts and graphics that will support visualization of the results and conclusions and make them accessible to a broad audience.

Past Program Participation

EKI will summarize the total participation and device distribution from past program participation from 2005 through summer 2018. Participation will be evaluated relative to key geographic, property, and customer demographic characteristics. More specifically, program participation will include breakdown and comparisons by:

- Customer sector category (i.e., single-family residential [SFR], multi-family residential [MFR], large landscape, commercial, institutional, and industrial, or another similar breakdown);
- Industry grouping based on NAICS code (for Commercial, Industrial and Institutional [CII] programs);
- Village (for residential programs);
- Neighborhood-level medium household income, based on Census data (for residential programs);

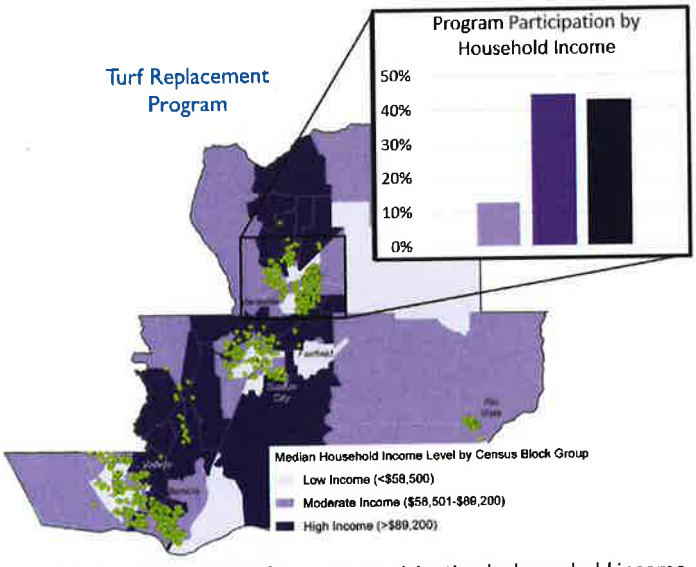


Figure 1. Example analysis of program participation by household income, based on Census Block Group. Our work in other regions indicates that lower income households have disproportionately low participation rates in WUE programs.

[4] Project is anticipated to begin in late October or early November 2018.

[5] In EKI's experience, performance of the analysis on a smaller number of key programs can yield very compelling results. If desired, additional programs can be assessed for an additional fee. Like-programs may be grouped together (e.g., by device) or separately (e.g., to evaluate the difference in participation in rebate versus no-cost programs).

- Age of building stock based on County Assessor parcel data (for residential and CII programs, as appropriate); and
- Building or lot size, based on County Assessor parcel (for residential and CII programs, as appropriate).

This analysis will also look at temporal trends in program participation, with a particular focus on changes in program participation before, during, and following the recent drought and in connection with specific marketing and outreach campaigns.

Given the wide variety of programs offered to IRWD customers (by IRWD, MWD, and MWDOC) over the study period, EKI will work with IRWD to determine appropriate program groupings (e.g., by device type) so that the resultant analyses are streamlined into meaningful and actionable categories. These groupings will be used consistently for the analyses described below.

Evaluation of Trends of Multiple Program Participation

EKI understands that IRWD wishes to understand program saturation on the whole home-level as well as consider water savings achieved by WUE program "bundles." EKI will therefore evaluate trends in customer multi-program participation by residential households. This analysis will aim to answer questions such as:

- What proportion of customers have elected to only participate in only indoor or only outdoor programs?
- What proportion of customer have participated in one program, several programs, or many programs?
- Do customers who have participated in multiple programs tend to participate all at once or participate in different programs over the course of several years?

Based on the results of this evaluation, and in consultation with IRWD, EKI will identify any geographic, property characteristic, or demographic characteristics that appear to be driving these participation trends.

Geospatial Participation Density Analysis

EKI proposes to perform geospatial analyses of program participation to identify program participation density for various programs and groups of programs (see Figure 2). This analysis will be used to identify statistically significant areas of high and low participation density (participation "hot" and "cold" spots) for residential water use efficiency programs. These results will be summarized and presented by village which: (1) will allow for a comparison of the relative program

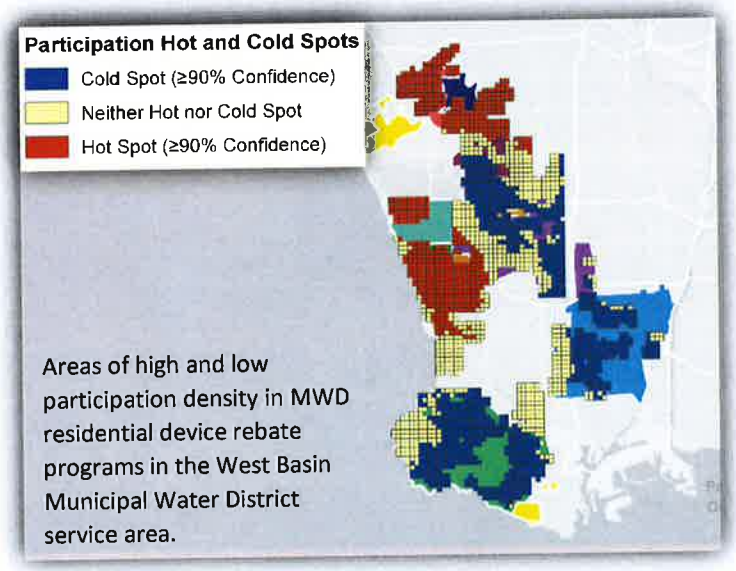


Figure 2. Example Geospatial Hot Spot Analysis

saturation between villages, and (2) can be used to inform future program targeting and marketing efforts. Maps will be produced showing hot and cold spots based on villages, for each device and customer type. These data can also be provided to IRWD as GIS files.

We have employed this methodology for other water agencies throughout the State and find that it is an effective way to both quantify and visualize participation density trends across large, diverse service areas. Such an analysis transforms program participation mapping (often shown as a myriad of overlapping dots) into meaningful results that can be easily digested and used to inform program targeting and marketing. This technique can also be used to help illustrate non-quantifiable benefits, such as the "neighbor-to-neighbor" effect that is sometimes associated with the adoption and spreading of certain WUE programs (e.g., lawn conversion programs).

Natural (Passive) Fixture Replacement

Trust... but Verify

Model assumptions and results of natural fixture replacement savings will be calibrated using observed water demand reductions at accounts that have NOT participated in WUE programs. Validating the modeled passive adoption savings with actual water use trends will ensure a more accurate assessment of current device saturation and projection of future passive adoption rates.

Natural, or passive, replacement of fixtures is difficult to quantify and is typically done one of two ways: (1) using modeled estimates based on past studies and literature values, or (2) based on surveys or audits of customers. In our opinion, it is difficult and typically cost- and schedule-prohibitive to obtain a statistically representative sample size for this information by telephone or in person survey. For example, in the recent Water Conservation Potential Study[6] conducted by the Los Angeles Department of Public Works (LADWP), 615 telephone surveys of SFR customers were conducted, representing just 0.1% of the over 450,000 SFR accounts in the service area. In our opinion, such a small sample size does not result in a higher level or confidence in the accuracy of change-out rates relative to what is achieved using modeled values based on other studies and literature values.

EKI understands that IRWD uses the Alliance for Water Efficiency (AWE) Water Conservation Tracking Tool to model and track the effectiveness of its WUE programs. One of the elements of this tool is an estimate of natural, or passive, fixture replacement and the associated water savings due to new plumbing and building codes. EKI proposes to use this function of IRWD's AWE Tracking Tool as the initial basis to estimate natural replacement over the study period. EKI will then evaluate the observed reduction in water use at accounts that have not participated in active WUE programs and compare the observed demand reduction to the modeled values. The AWE Tracking Tool model assumptions will then be adjusted based on this comparison and input from IRWD staff to ensure a high level of confidence in the modeled values.

Device Saturation

Building from the analyses described in the sections above, EKI will quantify program saturation rates based on: (1) known program participation, and (2) estimated natural replacement rates. Device saturation will be summarized by customer sector, home/account level, and village. Saturation rates for CII accounts will also be summarized by industry. This analysis will also consider the results of geospatial,

[6] LADWP, 2017. Water Conservation Potential Study, Executive Report, September 2017.

demographic, and property characteristic trends in program participation to identify geographic areas and characteristics that are under-represented in terms of program participation. The results of this analysis will be used to develop and identify opportunities for future WUE programs under Task 3.

Technical Memorandum #2

Preliminary results of the above analyses will be shared with District staff during regular Project update meetings, which will allow IRWD to provide feedback and guidance. Following the completion of the above analyses of WUE program participation and saturation, EKI will prepare a draft TM to document the analytical methods and results (TM #2). TM #2 will describe the source of the data, technical approach, total devices distributed via the various WUE programs, and estimated device saturation by customer sector, home/account level, and village. TM #2 will include compelling maps, charts and graphics that will support visualization of the results and conclusions and make them accessible to a broad audience.

EKI will provide the draft TM #2 to IRWD for review and comment. Comments on the draft TM #2 will be incorporated into the draft Project report, described under Task 5.

Subtask 2b – Analyze and Quantify Water Savings Achieved by Past Programs

In order to analyze and quantify actual water savings achieved due to past program participation, EKI proposes to utilize a "cohort analysis method" to measure program-specific water savings at the account-level based on billing history and program participation data. In our work with other agencies we have found this to be a robust, cost-effective, and transparent method of quantifying real and program-specific water savings, providing more confidence in future water savings for planning purposes, and presenting clear and defensible results to decision-makers and the public.

As illustrated in Figure 3, to quantify water savings achieved by a given WUE program, EKI will compare water use before and after implementation of a given WUE measure/intervention (typically a device replacement or audit) for program participants to the water use at geographically- or industry-stratified cohort accounts who have not participated in the same or other WUE programs in the given time frame.[7] The incremental volume of water saved by program participants compared to that of the cohort can then be attributed to program participation, as all other factors are normalized.

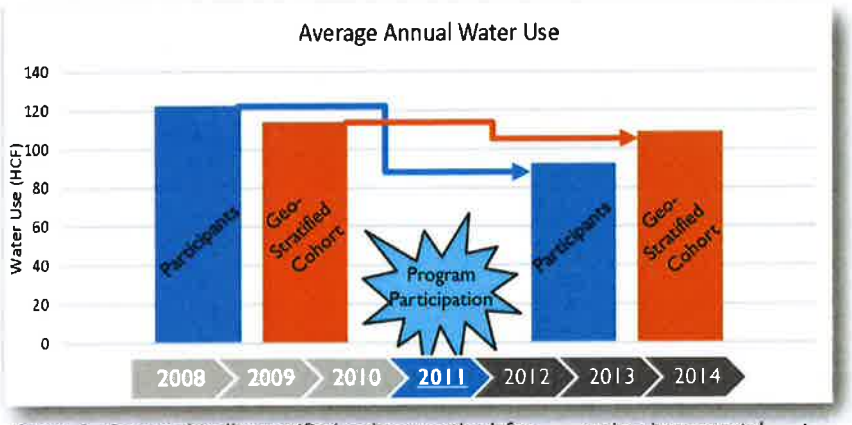


Figure 3. Geographically-stratified cohort method for measuring incremental water savings associated with WUE program participation. As can be seen in the above figure, while both the "participants" and the "cohorts" reduced their water use over the selected time frame, the participant group reduced their water use more than the cohort, allowing quantification of the real and measurable water savings associated with program participation.

[7] To be included in the analysis, participant accounts cannot have participated in any other program during this timeframe and all accounts included in the analysis must be active (i.e., occupied and demonstrating a minimum level of annual water use).

Specifically, for residential water users, comparing the change in participating account water use to a non-participating cohort located in the same geographic area (e.g., Census Block Group or other discrete land use grouping designated by IRWD) effectively controls for factors that can influence water use including, climate, house and yard size, general socio-economic factors, etc. Stratification of commercial and industrial user cohorts by NAICS industry grouping provides a similar set of controls under this method. As with the above analyses, WUE programs will be grouped to limit the overall number of analyses to those that are most meaningful for planning purposes (e.g., by fixture/appliance type).

Technical Memorandum #3

Following the completion of the program water savings analysis, EKI will prepare a draft TM to document the methods and results (TM #3). TM #3 will describe the source of the data, technical approach, water savings by selected WUE program/measure, and total water savings by customer sector, home/account level, and village. TM #3 will include compelling maps, charts and graphics that will support visualization of the results and conclusions and make them accessible to a broad audience.

EKI will provide the draft TM #3 to IRWD for review and comment. Comments on the draft TM #3 will be incorporated into the draft Project report, described under Task 5.

Task 2 Deliverables

- Draft TM #2: Historical Water Efficiency Program Participation and Saturation
- Draft TM #3: Water Savings Achieved by Past Programs

Task 3: Future Water Efficiency Program Analysis

EKI understands that the District consistently offers WUE programs to its customers but that the programs and suite of offerings expand and contract commensurate with District need, technological innovation, drought conditions and program cost-effectiveness. Therefore, under this task, EKI proposes to evaluate: (1) current water use and the opportunities for future water savings, (2) up to four WUE program scenarios, each reflecting a different potential WUE strategy, and (3) the water savings and cost-effectiveness of implementing each these scenarios.

The RFP suggests the study period for future analysis should extend from 2019 to 2030. EKI recommends extending this study period further, through at least 2040, for consistency with the next Urban Water Management Plan (UWMP) planning period. Water use savings will be calculated for each customer sector and industry classification, and summarized at the agency-wide level.

Subtask 3a – Evaluation of Current Water Use and Opportunities for Water Savings

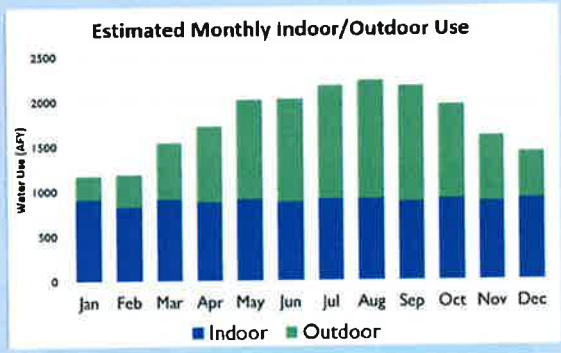
In order to evaluate the potential for future water savings and programs, and to inform the WUE program scenarios described below, EKI proposes to evaluate current water use by IRWD customers by customer sector and village. In addition to total water use, this evaluation will: (1) quantify indoor versus outdoor water use, and (2) identify the maximum savings potential by customer sector.

Indoor vs. Outdoor Water Use

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

Estimation of Indoor vs. Outdoor Water Use

For customer accounts without dedicated irrigation meters, the amount of water used indoors versus outdoors must be estimated. In warm arid climates such as IRWD's service area, landscaping is typically irrigated year-round, which makes the common method of basing indoor water use on winter month demand less accurate than in cooler, wetter climates. EKI has developed a modified version of this method, using an annual irrigation peaking factor to adjust the winter water use estimates. This irrigation peaking factor is calculated based on potable and/or recycled water deliveries to landscape customers, and therefore reflects both local conditions and climatic variability between years. We believe this method is more reflective of actual water use and can be applied to water use on a sector-by-sector, village, or even customer account-level basis.



Estimated Maximum Potential Savings per Water Sector

In order to determine the maximum potential water savings for IRWD over the planning horizon, EKI proposes to use a "population statistics approach" to identify current high efficiency users within each customer sector and industry group.[8] EKI will evaluate the distribution of current water use for customers within specific customer sectors and industry groups. Then, based on the distribution curves, an annual, per-account water use value will be selected that is representative of a reasonably attainable, but highly-efficient water use that is achievable with today's technology - for example, selecting the 90% Lower Confidence Limit of the mean for each customer category.[9] This "high efficiency" benchmark for each customer sector will be used to project an estimate of the maximum potential savings over the planning horizon (i.e., if each SFR account only used this much water, how much water could we save?). The specific methodology will be refined based on the actual data, and EKI anticipates presenting several options for review and discussion with IRWD staff.

Subtask 3b – Future Water Efficiency Program Scenarios

EKI proposes to evaluate the four (4) WUE program implementation scenarios described below. EKI will work with IRWD to define the specific programs to be included under each scenario, and will consider similar scenarios previously applied such as those reflected in the 2015 Embedded Energy Plan.[10]

- **Scenario 1 – Business as Usual Model:** Per the RFP, this scenario will reflect a business-as-usual model with WUE programs offered to customers under normal supply conditions. This approach

[8] For this analysis, EKI will work with IRWD to parameterize the "population" for inclusion in this analysis. For example, single-family residential water users included in this analysis may be limited to active accounts with property sizes greater than 4,000 square feet and less than 10,000 square feet.

[9] Water use may not follow a normal distribution and different distributions may be observed in different customer categories. The distribution types will be determined and parametric or non-parametric lower confidence limit calculation methods will be applied as appropriate.

[10] IRWD, 2015. Embedded Energy Plan Final Report, prepared by Navigant Consulting Inc. and HDR Engineering, Inc., December 2015.

will include a suite of cost-effective programs open to all customers on a voluntary basis, with the goal of being easily sustained with minimal to moderate staff resources. This scenario will include a mix of indoor and outdoor programs.

Tradeoffs and Policy

The feasibility of potable reuse shifts the value proposition for recycled water, and consequently the value of indoor water use efficiency.

*However, because Scenario 2 does not reduce **hot** water use, the associated energy savings would be lower.*

- **Scenario 2 – Outdoor Water Use Efficiency Only Model:** This scenario will reflect a WUE program that focuses all efforts on outdoor water use, including (if desired by IRWD), programs that increase efficiency of current/existing recycled water users. Indoor water use has the potential for recapture and recycling through the sanitary sewer system, while water used outdoors is lost from the system. This scenario balances the increasing value and utility of recycled water for IRWD with the need for overall water demand reduction and IRWD's past success reducing indoor water use. Like the Business as Usual model, this scenario will focus on programs open to all customers on a voluntary basis and minimal to moderate staff resources.

- **Scenario 3 – Targeting Under-Represented Market Sectors Model:** This scenario will reflect a WUE program that focuses on reaching the customer groups and market sectors identified under Task 3 as having been under-represented by participation in programs to date. This scenario will consider both indoor and outdoor programs and, based on consultation with IRWD, may include programs that have eligibility limitations for participation.

- **Scenario 4 – Aggressive, Water Shortage-Driven Model:** Per the RFP, this scenario will reflect the implementation of more aggressive WUE programs during drought conditions or supply shortages that require greater than 20% water demand reduction (e.g., inclusive of Water Shortage Contingency Planning Levels 1, 2, and 3, see Figure 4). This scenario will reflect WUE programs that require an increased level of staff resources and more aggressive targeting of specific customer groups.

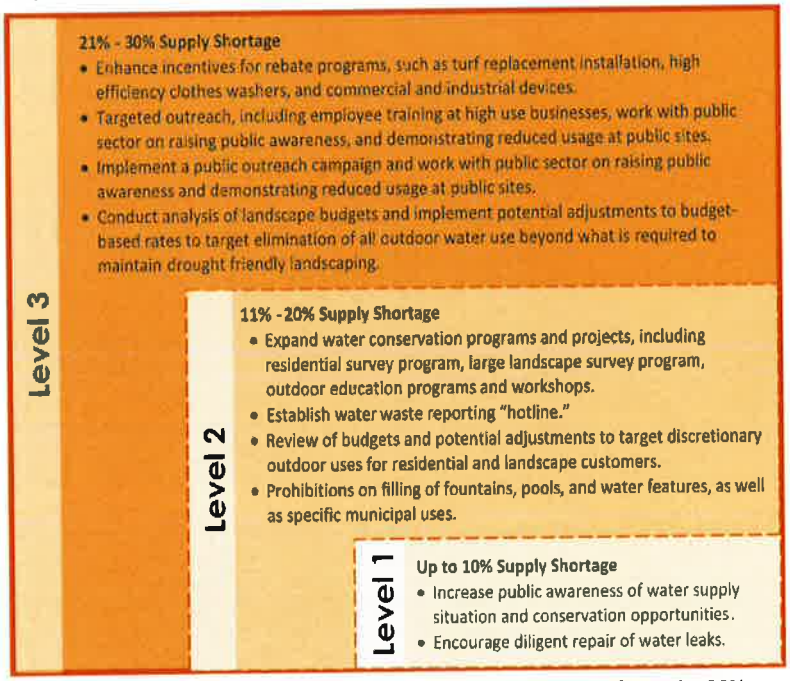


Figure 4. Shortage Levels and Response Actions Considered for a 21-30% Supply Scenario, IRWD 2018 WSCP Update. Scenario 4, Aggressive model will reflect WUE programs that would be implemented during a Level 3 water shortage.

In developing the above scenarios, EKI will included higher performance technologies that are currently or likely available in the near-term (e.g., <1 gallon per flush toilets, new leak detection and water loss control technologies, etc.) as well as behavior-based measures (e.g., adjustment of irrigation watering schedules and timing, and use of membrane filtration cleaning for swimming pools in lieu of draining and refilling). Subtask 2a includes an evaluation of device saturation that considers active WUE programs, passive/natural replacement of fixtures, and identification of customer sectors and groups that are under-represented in active WUE program participation. The results of this analysis will also be used to inform the development of these scenarios. The hot and cold spot participation density analysis and the demographic and property characteristic analyses described under Subtask 2a will be used to identify any customer groups that are currently under-represented by participation in past programs. The findings of this evaluation will be used, in particular, to inform Scenario 3. These four scenarios will serve as the basis for the analyses described below.

Necessity is the Mother of Invention

As water agencies face reduced supply reliability and the need for growth and new development within their service areas, many are addressing challenge through local water demand offset policies, which require developers to contribute or institute demand reduction projects.

Notably, there has also recently been a shift to include require ***on-site reuse of blackwater*** *(wastewater including that from toilet flushing).*

EKI has evaluated water demand offset policies on behalf of agencies and is currently working with private sector clients to implement on-site blackwater reuse for toilet flushing, roof irrigation, and cooling tower makeup uses. Treatment for on-site reuse includes package systems with biological, membrane, and disinfection steps, ranging from individual building treatment systems to a "cluster" treatment system serving multiple buildings and/or the entire industrial/commercial development. More frequent sampling and residuals disposal are factored into the overall evaluation to decide if individual systems or a cluster system is the more cost-effective approach.

Subtask 3c – Cost-Effectiveness of Future Programs

EKI understands that a key component of this study is the identification of program cost efficiency based on the avoided water and embedded energy costs. Cost-effectiveness of WUE is complicated to quantify because many of the benefits are indirect, and can include: (1) the deferred cost of obtaining new or additional water supply, (2) the deferred costs of infrastructure expansion, (3) enhanced water supply reliability, (4) avoided costs of water treatment and conveyance (i.e., embedded energy costs), (5) reduction of urban runoff from irrigation over-watering, (6) compliance with state regulations and initiatives like *Making Water Conservation a California Way of Life*, and (7) supporting an ethic/culture of responsible stewardship of natural resources.

EKI therefore proposes to quantify the cost-effectiveness of the program scenarios identified above with the following considerations and analyses:

- Analysis will include estimates of embedded energy savings based on the meter-specific embedded energy values provided by IRWD.
- EKI assumes that IRWD will provide estimated staff and program costs associated with the WUE program scenarios, based on staff's experience implementing similar programs.

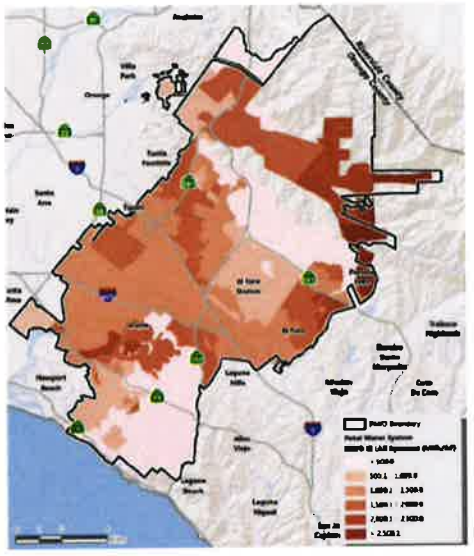


Figure 5. Energy intensity (kWh/AF) associated with water service varies by customer location, due to differences in water source, treatment process, pumping elevation, distribution loss, wastewater collection and treatment, etc.

- EKI will discuss and confirm estimates of measure lifetime, penetration rates, adoption rates, and avoided costs included in the analyses.
- EKI will utilize IRWD's version of the AWE Conservation Tracking Tool to model projected cost and water savings.
- Estimates of avoided costs will be based on embedded energy and other avoided costs for imported water and wastewater service, as provided by IRWD.

Technical Memorandum #4

Following the completion of the program water savings, EKI will prepare a draft TM to document the methods and results of Subtasks 3a through 3c (TM #4). TM #4 will describe the source of the data, technical approach, current water use and maximum potential savings, estimated water savings under conservation program scenarios, and relative cost effectiveness. TM #4 will include compelling maps, charts and graphics that will support visualization of the results and conclusions and make them accessible to a broad audience.

EKI will provide the draft TM #4 to IRWD for review and comment. Comments on the draft TM #4 will be incorporated into the draft Project report, described under Task 5.

Task 3 Deliverables

- Draft TM #4: Future Water Savings Potential

Task 4: Data Analysis and Processing

As described previously, EKI will provide IRWD with an initial data request within one week of the Project kick-off meeting. EKI understands that IRWD will provide data as Excel spreadsheets with a unique service point identified (SP_ID) for all program participants. EKI assumes that the SP_ID will be mapped to relevant account information such as location coordinates, customer sector, NAICS code, and water use billing history. EKI has extensive experience managing and analyzing large quantities of conservation program, account-level water use, geospatial, and other data using Excel, Microsoft Access, Microsoft SQL Server, R, and ArcGIS, among other tools.

To facilitate the analyses in Tasks 2 and 3, EKI will build a working relational database in Microsoft Access or SQL Server (as appropriate, depending on the amount of data), to manage and mine program participation and account-level water use data. EKI has found this approach to have many benefits for similar projects, in that it facilitates efficient management and manipulation of large datasets; allows for the utilization of queries that allow for efficient repetition of analyses for multiple programs, including sensitivity analyses; and facilitates the transfer of data to and from ArcGIS to support geospatial analyses. This Project database and other files summarizing analytical results (Excel workbooks and GIS files) can be provided to IRWD at the completion of the Project.

For the analyses described under Tasks 2 and 3, EKI will evaluate WUE programs and potential by categories as described below:

- **Customer Sector and Sub-sector:** EKI will analyze the water efficiency potential by IRWD customer sectors including SFR, MFR, CII, potable irrigation, and recycled irrigation. EKI will work with IRWD to determine the appropriate sub-sectors to be included in this analysis (e.g., separating the commercial sector into small and large businesses based on square footage and water consumption and/or industry based on NAIC codes). The analysis will include an estimate for indoor versus outdoor use for each customer sector and sub-sector, using the methodology described in Task 3; EKI will work with IRWD to determine the specifics of applying this methodology.
- **Market Events and End Use:** The analyses under Tasks 2 and 3 will identify and consider the water efficiency potential of major market events that target a specific customer sector and create new opportunities for water efficiency. These market events may include new technologies as identified in Task 3, industrial process line upgrades, replacement of failed and failing equipment or products, remodeling, and retrofit. The estimated maximum potential water savings by sector and industry analysis described under Subtask 3a will be used to identify the "most efficient" level of water use based on current technology.

CII Performance Measures

DWR is in the process of developing CII performance measures by 2021 through a stakeholder process. These performance measures may include some combination of the following:

- Educating CII water users on best management practices,
- Conducting water use audits,
- Preparation of individual water management plans,
- Conversion of mixed CII meters to dedicated irrigation meters for large landscapes,
- Other technologies in lieu of dedicated irrigation meters, and/or
- Detailed classification of CII accounts.

*For purposes of future Water Use Objectives, CII performance measures exclude process water use.

Prior to conducting the analyses under Tasks 2 and 3, EKI will discuss assumptions and methodology with IRWD staff during bi-weekly meetings (Task 1) and obtain confirmation regarding the assumptions and methodology in writing from IRWD.

Task 4 Deliverables

- Development of project database to support Tasks 2 and 3

Task 5: Reporting

Demand Curve/ Water Efficiency Program Prioritization

After evaluating the water efficiency potential of specified customer sectors under each scenario in Task 3, EKI will develop "demand curves" for each WUE measure/scenario that weighs the potential for adoption rates of each measure/scenario by customer sector, with the anticipated water savings, cost of program implementation, and cost effectiveness identified under Task 3. Based on this, and in consultation with

IRWD, the WUE program scenarios will be prioritized by customer sector and grouping. The results of this prioritization will be included in the *Water Efficiency Potential Study Report* described below.

Report of Water Efficiency Potential Study

Based on the information developed pursuant to Tasks 2 through 4, EKI will incorporate IRWD input on the draft TMs and prepare a draft *Water Efficiency Potential Study Report* that includes an explanation of study methodology and approach, results, conclusions and output data. The Draft Report will also include the demand curves developed under this task and a tabular and graphical summary of the annual incremental water savings potential by fiscal year and cumulative water savings potential through the study period (e.g., 2030 or 2040). The Draft Report will be provided to IRWD staff for review and comment.

Following receipt of IRWD comments on the Draft Report, EKI will revise and prepare a Final *Water Efficiency Potential Study Report*. The Final Report will be delivered to IRWD including five (5) paper copies and one (1) electronic copy, as well as associated electronic files including narrative text in Microsoft Word format and spreadsheet files in Microsoft Excel format.

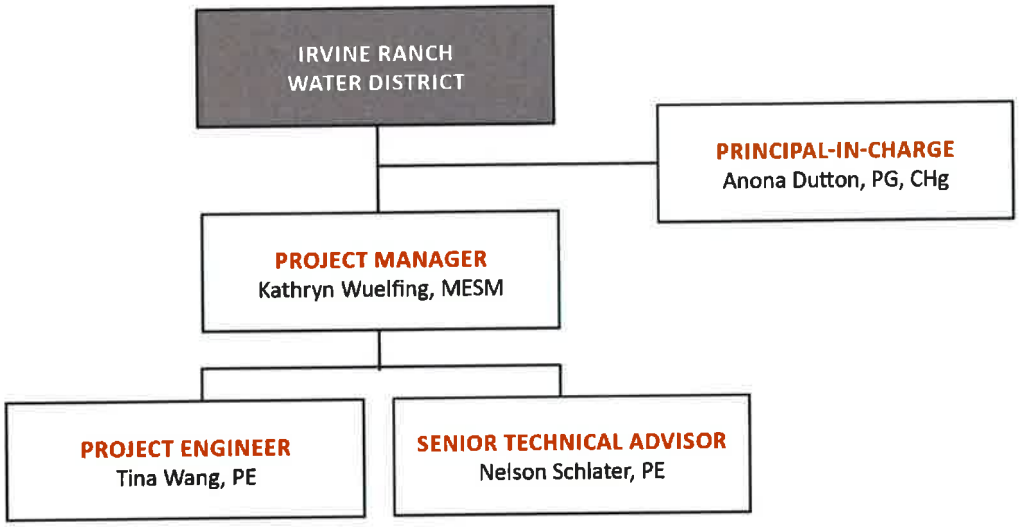
Task 5 Deliverables

- Draft Water Efficiency Potential Study Report
- Final Water Efficiency Potential Study Report and associated electronic files

TEAM

The qualifications, experiences and roles of the key professionals are summarized below, with detailed resumes for key personnel included in Attachment B. EKI understands key personnel assigned to the project shall not be reassigned without prior written approval from IRWD.

Each EKI team member understands the importance of staff continuity on projects and is fully committed to this project.



Anona Dutton, PG, CHg – Principal-in-Charge

Ms. Dutton has over 17 years of professional experience performing and managing water resources projects. She has managed multi-million dollar efforts to secure reliable water supplies for water agencies and developers, including leading the technical efforts to minimize the water footprint of new and existing development; assessing groundwater and surface water rights and supply yields; securing water transfer options; and evaluating the feasibility of developing new water supply sources such as recycled water, desalination water, and other non-potable sources (stormwater, rainwater, and greywater). Her work has also included Water Conservation Program Planning, developing Water Supply Master Plans, supporting the development of Water System Master Plans, conducting Water Supply Assessments (WSAs), and preparing UWMPs and WSCPs. As Principal-in-Charge, Ms. Dutton will provide strategic and technical direction, QA/QC, and ensure that appropriate staff resources are made available to meet the project needs.

Kathryn Wuelfing, MESM – Project Manager

Ms. Wuelfing has over 12 years of experience working in environmental science and water resources, and brings a specialization in the design of figures and complex graphics to communicate data-rich concepts to technical and non-technical audiences alike. Her work at EKI has included water resources planning; designing and implementing data-driven water conservation program evaluation and modeling techniques; development of spreadsheet-based and database tools for use by clients; groundwater and stormwater hydrogeologic modeling; predictive modeling of water use, sewer flows, and wastewater quality for municipal water agencies; and developing UWMPs and SB 610-compliant WSAs. Ms. Wuelfing assists clients with compliance with and preparation for changing water conservation regulations, including the *Making Water Conservation a California Way of Life* initiative. Ms. Wuelfing's technical skills include design and

management of relational databases, geospatial relational databases (ESRI ArcGIS tools), SQL programming, data visualization and presentation, and statistical analysis. As Project Manager, Ms. Wuelfing will serve as the primary Client contact, coordinate the team's work on a daily basis, track budget and overall project schedule, and develop project goals and technical approaches.

Tina Wang, PE – Water Resources Engineer

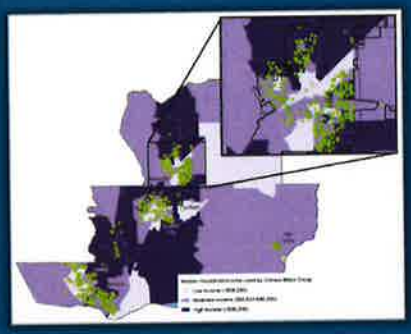
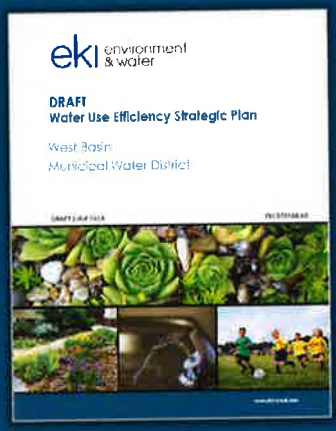
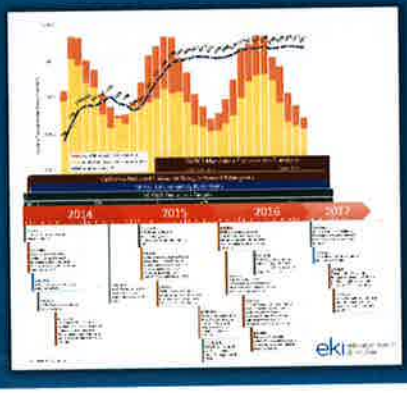
Ms. Wang has an educational background in water resources, hydrologic, water quality, and environmental engineering. She has project experience in supporting public clients with water resources planning, which includes developing UWMPs, WSCPs, water and sewer master plans, and drought response plans, as well as conducting WSA. She has also provided technical support on water system permitting, water right evaluations, water transfers, and Sustainable Groundwater Management Act implementation. As Water Resources Engineer, Ms. Wang will be responsible for researching and compiling project information, performing geospatial and quantitative analyses, drafting documents, and preparing information tables and graphics.

Nelson Schlater, PE – Principal Engineer/Senior Technical Advisor

Mr. Schlater has 20 years of municipal experience (11 years of aerospace experience for a total of 31 years of engineering experience). Mr. Schlater has lead efforts in designing water and wastewater treatment systems for both industrial and municipal applications, including on-site blackwater treatment for non-potable water needs such as toilet flushing, cooling towers, and landscape irrigation. These efforts also involve evaluation of water balances and flow rates for industrial processes and cooling tower end uses. He has managed water and wastewater master and facility planning and pipeline and treatment projects ranging from planning to complex design and construction support. He lead-authored the equipment procurement chapter and co-authored the design chapter in the *Water Environment Federation (WEF), Manual of Practice (MOP) 36: Membrane Bioreactors*. As Senior Technical Advisor, Mr. Nelson will be available as a resource to support project analyses and development of technical approaches, especially related to the CII sector.

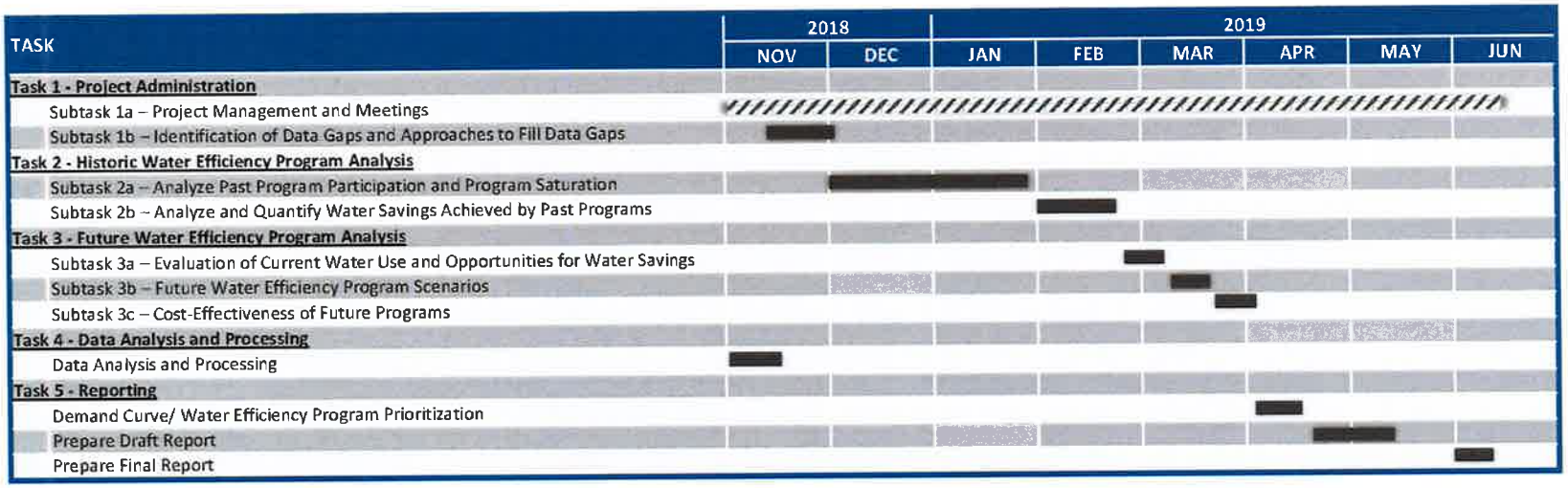
REFERENCES

Below, we have specified three clients who can speak to the performance of the key EKI team members included in this proposal on projects similar to this Project. For additional information regarding these and other projects, please refer to EKI's Statement of Qualifications submitted to IRWD in July 2018.

PROJECT NAME	CLIENT REFERENCE
Residential Water Use and Conservation Potential Study 	**Solano County Water Agency (SCWA)** Andy Florendo Water Conservation Coordinator 810 Vaca Valley Parkway, Ste. 203 Vacaville, CA (707) 455-1111 aflorendo@scwa2.com
Water Use Efficiency Strategic Plan Development 	**West Basin Municipal Water District (West Basin)** Gus Meza Sr. Water Efficiency Specialist 17140 S Avalon Blvd Carson, CA 90746 (310) 660-6209 gusm@westbasin.org
Drought Report Support and Regional Water Supply Reliability Modeling 	**Bay Area Water Supply and Conservation Agency (BAWSCA)** Nicole Sandkulla General Manager 155 Bovet Road, Suite 650 San Mateo, CA (650) 349-3000 nsandkulla@bawsca.org

SCHEDULE

EKI is prepared to start work on the Water Efficiency Potential Study immediately upon authorization to proceed. We anticipate that study development will be largely complete by June 2019. We will inform IRWD of any issues that arise that may affect the schedule for completion or impact the anticipated level of effort. A general schedule for the Water Efficiency Potential Study effort is presented below. If desired, EKI can work with IRWD staff to identify opportunities to expedite Project completion, reducing the total Project duration to six (6) months rather than the eight (8) months shown below.



BUDGET

Table 1 – Budget Estimate for Proposed Scope of Work

Irvine Ranch Water District

TASKS	EKI Labor						Expenses			TOTAL
	G5 or CAD/ GIS	G2 - Tina Wang	Project Manager (AS1) - Kat Wuelfing	SEN I - Nelson Schlater	OFC - Anona Dutton	TOTAL EKI Labor, including 4% Comm. Charge (1)	CAD/GIS Charge (per hour)	OTHER DIRECT COSTS (2)	TOTAL EXPENSES (1)	
	124	175	213	270	280	($)	$20		($)	($)
Task 1 - Project Administration										
Subtask 1a – Project Management and Meetings										
Kick-off Meeting at IRWD			10		8	$4,545	$0	$750	$0	$5,295
Regular meetings (teleconference; assumed 6 meetings)			18		6	$5,735	$0	$0	$0	$5,735
Up to 2 in-person meetings to present key project results			20		8	$6,760	$0	$800	$0	$7,560
Ongoing project management			20		2	$5,013	$0	$0	$0	$5,013
Subtask 1b – Review of Available Data, Identification of Key Data Gaps and Potential Approaches to Filling Data Gaps										
Review and Identification of Data Gaps	4	12	8		2	$5,054	$0	$0	$0	$5,054
Draft TM #1: Summary of Available Data & Data Gaps Assessment	4	24	16		4	$9,593	$0	$0	$0	$9,593
Subtotal	8	36	92	0	30	$36,700	$0	$1,550	$0	$38,250
Task 2 - Historic Water Efficiency Program Analysis										
Subtask 2a – Analyze Past Program Participation and Program Saturation										
Past Program Participation	20	8	4		2	$5,504	$0	$0	$0	$5,504
Evaluation of Trends of Multiple Program Participation	8	4	8		2	$4,114	$0	$0	$0	$4,114
Geospatial Participation Density Analysis	4	8	16		2	$6,099	$0	$0	$0	$6,099
Natural (Passive) Fixture Replacement	12	16	4	2	2	$6,490	$0	$0	$0	$6,490
Device Saturation	24	8	4	2	2	$6,581	$0	$0	$0	$6,581
Draft TM #2: Historical Water Efficiency Program Participation and Saturation	4	24	16		4	$9,593	$0	$0	$0	$9,593
Subtask 2b – Analyze and Quantify Water Savings Achieved by Past Programs										
Water Savings Analysis	8	16	8		2	$6,298	$0	$0	$0	$6,298
Draft TM #3: Water Savings Achieved by Past Programs	4	16	12		4	$7,251	$0	$0	$0	$7,251
Subtotal	84	100	72	4	20	$51,929	$0	$0	$0	$51,929

Table 1 – Budget Estimate for Proposed Scope of Work (continued)

Irvine Ranch Water District

TASKS	EKI Labor						Expenses			TOTAL
	G5 or CAD/ GIS	G2 - Tina Wang	Project Manager (AS1) - Kat Wuelfing	SEN I - Nelson Schlater	OFC - Anona Dutton	TOTAL EKI Labor, including 4% Comm. Charge (1)	CAD/GIS Charge (per hour)	OTHER DIRECT COSTS (2)	TOTAL EXPENSES (1)	
	124	175	213	270	280	($)	$20		($)	($)
Task 3 - Future Water Efficiency Program Analysis										
Subtask 3a – Evaluation of Current Water Use and Opportunities for Water Savings										
Evaluation of water use by sector and village	12	12	4		2	$5,200	$0	$0	$0	$5,200
Estimation of indoor and outdoor water use	12	18	6		2	$6,735	$0	$0	$0	$6,735
Identify current highest efficiency water use benchmarks	12	18	6	2	2	$7,297	$0	$0	$0	$7,297
Subtask 3b – Future Water Efficiency Program Scenarios	4	16	8	6	2	$7,467	$0	$0	$0	$7,467
Subtask 3c – Cost-Effectiveness of Future Programs	8	16	8	2	2	$6,860	$0	$0	$0	$6,860
Draft TM #4: Future Water Savings Potential	4	16	12		4	$7,251	$0	$0	$0	$7,251
Subtotal	52	96	44	10	14	$40,810	$0	$0	$0	$40,810
Task 4 - Data Analysis and Processing										
Data Analysis and Processing	24	8	16			$8,095	$0	$0	$0	$8,095
Subtotal	24	8	16	0	0	$8,095	$0	$0	$0	$8,095
Task 5 - Reporting										
Demand Curve/ Water Efficiency Program Prioritization	4	16	8	2	4	$6,926	$0	$0	$0	$6,926
Prepare Draft Report	8	24	8		4	$8,337	$0	$0	$0	$8,337
Prepare Final Report	4	12	6		2	$4,611	$0	$0	$0	$4,611
Subtotal	16	52	22	2	10	$19,874	$0	$0	$0	$19,874
TOTAL:	**184**	**292**	**246**	**16**	**74**	**$157,408**	**$0**	**$1,550**	**$0**	**$158,958**

Notes:

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

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

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

JOINT VENTURE

EKI has the depth and breadth of resources to provide all services for this project in-house. No joint venture and/or proposed subcontract arrangements will be used during this Project.

CONFLICT OF INTEREST

EKI is not aware of any personal or organizational conflicts of interest prohibited by law that would impact this Project.

INSURANCE

EKI can comply with the District's insurance requirements. EKI carries at least $1,000,000 coverage for professional liability, general liability and property damage.

CONTRACT

EKI has reviewed the sample Professional Services Agreement and notes no exceptions.

Attachment A

Schedule of Charges

Client/Address: Irvine Ranch Water District Office
Engineering Counter
15600 Sand Canyon Ave.
Irvine, CA 92718

eki environment & water

Proposal/Agreement Date: 17 September 2018 **EKI Project # B8-104**

SCHEDULE OF CHARGES FOR EKI ENVIRONMENT & WATER, INC. [1] **1 January 2018**

Personnel Classification	Hourly Rate
Officer and Chief Engineer-Scientist	280
Principal Engineer-Scientist	270
Supervising I, Engineer-Scientist	260
Supervising II, Engineer-Scientist	250
Senior I, Engineer-Scientist	238
Senior II, Engineer-Scientist	225
Associate I, Engineer-Scientist	213
Associate II, Engineer-Scientist	199
Engineer-Scientist, Grade 1	185
Engineer-Scientist, Grade 2	175
Engineer-Scientist, Grade 3	160
Engineer-Scientist, Grade 4	140
Engineer-Scientist, Grade 5	124
Engineer-Scientist, Grade 6	109
Technician	100
Senior GIS Analyst	128
CADD Operator / GIS Analyst	113
Senior Administrative Assistant	125
Administrative Assistant	99
Secretary	82

Direct Expenses

Reimbursement for direct expenses, as listed below, incurred in connection with the work will be at cost plus fifteen percent (15%) for items such as:

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

A Communication charge for e-mail access, web conferencing, cellphone calls, messaging and data access, file sharing, local and long distance telephone calls and conferences, facsimile transmittals, standard delivery U.S. postage, and incidental in-house copying will be charged at a rate of 4% of labor charges. Large volume copying of project documents, e.g., bound reports for distribution or project-specific reference files, will be charged as a project expense as described above.

Reimbursement for company-owned automobiles, except trucks and four-wheel drive vehicles, used in connection with the work will be at the rate of sixty cents ($0.60) per mile. The rate for company-owned trucks and four-wheel drive vehicles will be seventy-five cents ($0.75) per mile. There will be an additional charge of thirty dollars ($30.00) per day for vehicles used for field work. Reimbursement for use of personal vehicles will be at the federally allowed rate plus fifteen percent (15%).

CADD Computer time will be charged at twenty dollars ($20.00) per hour. In-house material and equipment charges will be in accordance with the current rate schedule or special quotation. Excise taxes, if any, will be added as a direct expense.

Rate for professional staff for legal proceedings or as expert witnesses will be at a rate of one and one-half times the Hourly Rates specified above.

The foregoing Schedule of Charges is incorporated into the Agreement for the Services of EKI Environment & Water, Inc. and may be updated annually.

[1] Formerly known as Erler & Kalinowski, Inc.