PALMDALE WATER DISTRICT

A CENTURY OF SERVICE

April 7, 2021

AGENDA FOR REGULAR MEETING OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT TO BE HELD AT 2029 EAST AVENUE Q, PALMDALE OR VIA TELECONFERENCE

FOR THE PUBLIC: VIA TELECONFERENCE ONLY

DIAL-IN NUMBER: 571-748-4021 ATTENDEE PIN: 688-602-545#

Submit Public Comments at: https://www.gomeet.com/688-602-545

MONDAY, APRIL 12, 2021

6:00 p.m.

NOTES: To comply with the Americans with Disabilities Act, to participate in any Board meeting please contact Dawn Deans at 661-947-4111 x1003 at least 48 hours prior to a Board meeting to inform us of your needs and to determine if accommodation is feasible.

Additionally, an interpreter will be made available to assist the public in making **comments** under Agenda Item No. 4 and any action items where public input is offered during the meeting if requested at least 48 hours before the meeting. Please call Dawn Deans at 661-947-4111 x1003 with your request. (PWD Rules and Regulations Section 4.03.1 (c))

Adicionalmente, un intérprete estará disponible para ayudar al público a hacer **comentarios** bajo la sección No. 4 en la agenda y cualquier elemento de acción donde se ofrece comentarios al público durante la reunión, siempre y cuando se solicite con 48 horas de anticipación de la junta directiva. Por favor de llamar Dawn Deans al 661-947-4111 x1003 con su solicitud. (PWD reglas y reglamentos sección 4.03.1 (c))

Agenda item materials, as well as materials related to agenda items submitted after distribution of the agenda packets, are available for public review at the District's office located at 2029 East Avenue Q, Palmdale (Government Code Section 54957.5). Please call Dawn Deans at 661-947-4111 x1003 for public review of materials.

PUBLIC COMMENT GUIDELINES: **The prescribed time limit per speaker is three-minutes. Please refrain from public displays or outbursts such as unsolicited applause, comments, or cheering. Any disruptive activities that substantially interfere with the ability of the District to carry out its meeting will not be permitted, and offenders will be requested to leave the meeting. (PWD Rules and Regulations, Appendix DD, Sec. IV.A.)**

Each item on the agenda shall be deemed to include any appropriate motion, resolution, or ordinance to take action on any item.

1) Pledge of Allegiance/Moment of Silence.

2) Roll Call.

3) Adoption of Agenda.

4) Public comments for non-agenda items.

5) Presentations:

5.1) None at this time.

6) Action Items - Consent Calendar (The public shall have an opportunity to comment on any action item on the Consent Calendar as the Consent Calendar is considered collectively by the Board of Directors prior to action being taken.)

6.1) Approval of minutes of Regular Board Meeting held March 22, 2021.

6.2) Payment of bills for April 12, 2021.

6.3) Approval of District 2021-2022 membership in the Water Research Foundation. ($11,029.36 – Budgeted – Budget Item No. 1-02-5070-011, Memberships – Operations Manager Masaya)

7) Action Items - Action Calendar (The public shall have an opportunity to comment on any action item as each item is considered by the Board of Directors prior to action being taken.)

7.1) Consideration and possible action on a Palmdale Water District Long-Term Water Transfer Agreement with Littlerock Creek Irrigation District. (No Budget Impact for 2021 –Resource and Analytics Director Thompson II/Resource and Facilities Committee)

7.2) Consideration and possible action on authorizing the General Manager to execute Change Order No. 1 to the contract with L.O. Lynch Quality Well & Pumps for additional costs related to changes in the scope of the project for the Well No. 7A Rehabilitation Project. ($119,877.25 – Budgeted – Specification No. 20-601 – Engineering/Grant Manager Rogers)

7.3) Consideration and possible action on authorizing the General Manager to execute a contract with Hazen and Sawyer for professional services for the design, permitting, and construction inspection for the drilling and equipping of Well No. 36 (New Well). ($612,656.00 – Budgeted – Work Order No. 20-622 – Engineering/Grant Manager Rogers)

7.4) Discussion of offering customers an incentive for paperless billings with text notifications. (Director Merino/Finance Manager Williams)

7.5) Discussion of 2021 water supply and anticipated demand. (No Budget Impact – Resource and Analytics Director Thompson II)

7.6) Consideration and possible action on authorization of the following conferences, seminars, and training sessions for Board and staff attendance within budget amounts previously approved in the 2021 Budget:

a) None at This Time.

8) Information Items:

8.1) Reports of Directors:

a) Standing Committees; Organization Appointments; Agency Liaisons:

1) Antelope Valley East Kern Water Agency-AVEK. (Director Dino/Director Mac Laren-Gomez, Alternate)

b) General Meetings Reports of Directors.

8.2) Report of General Manager.

8.3) Report of General Counsel.

9) Board members' requests for future agenda items.

10) Adjournment.

Dennis D. LaMoreaux

DENNIS D. LaMOREAUX,
General Manager

DDL/dd

AGENDA ITEM NO. 6.3

PALMDALE WATER DISTRICT

BOARD MEMORANDUM

DATE:	April 6, 2021	**April 13, 2021**
TO:	BOARD OF DIRECTORS	**Board Meeting**
FROM:	Mynor V. Masaya, Operations Manager	
VIA:	Mr. Adam Ly, Assistant General Manager Mr. Dennis LaMoreaux, General Manager	
RE:	***AGENDA ITEM NO. 6.3 – APPROVAL OF DISTRICT 2021-2022 MEMBERSHIP IN THE WATER RESEARCH FOUNDATION. ($11,029.36 – BUDGETED – BUDGET ITEM NO. 1-02-5070-011, MEMBERSHIPS – OPERATIONS MANAGER MASAYA)***	

Recommendation:

Staff recommends the Board approve renewing the District's membership in the Water Research Foundation for May 2021 to April 2022.

Alternative Options:

The Board could choose to not approve District membership in the Water Research Foundation.

Impact of Taking No Action:

The District's membership in the Water Research Foundation will expire.

Background:

The District has been an American Water Works Association Research Foundation/Water Research Foundation (AwwaRF/WRF) subscriber for many years. In 2004, the District was able to receive $100,000.00 in funds to conduct an AwwaRF Tailored Collaboration Study entitled "DBP Control in High Bromide Water While Using Free Chlorine During Distribution" (Project No. 3075). The project was completed by Carollo Engineering in March of 2005, was reviewed by PWD and AwwaRF staff, and the final report became available in August of 2006. The total cost of the project was $375,392.00.

Information gathered from this study was instrumental to District staff in the decision-making process regarding which technologies would provide the greatest benefit and should be included in upgrades to the District's water treatment plant.

In 2013, the District was a co-funding and participating member in a study to determine the most effective technologies for removing or reducing Chromium VI. The results of this study are helping the water community assess the best available options for treatment in light of the new Chromium VI regulation passed by the California Department of Public Health.

Additionally, between March 2013 and March 2014, District staff utilized a report from WRF to provide guidance resilient business models for water utilities. The research value of this report was $564,088.00.

In 2021-2022, staff plans to request and utilize reports and studies from the following areas: The Water Research Foundation is developing a framework and testing protocol for assessing poly-and perfluoroalkyl PFAS substance treatment techniques in groundwater; Latest research to the virus that causes COVID-19; Lead and copper corrosion control with zinc orthophosphate; Utility Management; NDMA-N-nitrosodimethylamine, Nitrosamine precursors created in the water treatment process and groundwater recharge projects; Cyanotoxins in drinking water caused by algal blooms in surface waters; The impact of pre-chlorination and GAC treatment on DBP formation and overall toxicity in drinking water; Quagga mussel treatment and control practices; Maximizing recovery of recycled water for ground recharge; and Chromium VI.

It is through the combined support of membership agencies like Palmdale Water District that research on the most important and emerging water issues can be carried out. In addition to contributing to the research effort, membership provides the District with the opportunity to influence the direction of research projects and full access to all reports from past and current studies.

Strategic Plan Initiative/Mission Statement:

Membership in this organization relates to the District's Strategic Initiative No. 3 –Systems Efficiency.

This item directly relates to the District's Mission Statement.

Budget:

The Annual Commitment based on total million gallons delivered and population served in 2020 is $11,029.36. (Budgeted under Administration, Memberships, 1-02-5070-011)

Supporting Documents:

- Water Research Foundation 2021 Invoice

2021

THE Water Research FOUNDATION

6666 W Quincy Avenue Denver, CO 80235-3098
P 303.347.6128 F 303.734.0196
pschrader@waterrf.org

	Date March 10, 2021
Subscriber Number 0003981	**Foundation Tax ID** 13-6211384
Subscriber Since 1988	**Invoice Number** 0003981-2021-1

Palmdale Water District
Dennis LaMoreaux
General Manager
2029 East Ave Q
Palmdale, CA 93550-4038

Order No.	Description	Total Commitment
7000166083	WRFMBR - Utility Membership 01-May-2021 to 30-Apr-2022	$11,029.36
	Amount Due:	**$11,029.36**

Detach and return with payment

Please make check payable to: **The Water Research Foundation**

THE Water Research FOUNDATION

6666 W Quincy Avenue Denver, CO 80235-3098
P 303.347.6128 F 303.734.0196
pschrader@waterrf.org

	Date March 10, 2021
Subscriber Number 0003981	**Invoice Number** 0003981-2021-1

Order No.	Description	Amount Due
7000166083	MBRUTILITY	$11,029.36
Revised Invoice Requested? Yes (Received worksheet)		**Amount Enclosed**

Palmdale Water District
Dennis LaMoreaux
General Manager
2029 East Ave Q
Palmdale, CA 93550-4038

P A L M D A L E W A T E R D I S T R I C T

B O A R D M E M O R A N D U M

DATE: April 6, 2021 **April 12, 2021**

TO: BOARD OF DIRECTORS **Board Meeting**

FROM: Mr. Peter Thompson II, Resource and Analytics Director

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: ***AGENDA ITEM NO. 7.1 – CONSIDERATION AND POSSIBLE ACTION ON A PALMDALE WATER DISTRICT LONG-TERM WATER TRANSFER AGREEMENT WITH LITTLEROCK CREEK IRRIGATION DISTRICT. (NO BUDGET IMPACT FOR 2021 – RESOURCE AND ANALYTICS DIRECTOR THOMPSON II/RESOURCE AND FACILITIES COMMITTEE)***

Recommendation:

Staff recommends the approval of a Long-Term Water Transfer Agreement (Agreement) with Littlerock Creek Irrigation District (LCID).

Background:

The approval of the Water Management Tools Amendment to the District's State Water Project (SWP) contract, enables the District to enter into long term transfer agreements with other State Water Contractors. These agreements allow State Water Contractors to set terms that include exchanging funds for water.

Staff has worked on developing an agreement with the LCID that is mutually beneficial to both districts. LCID has limited need for surface water through the SWP for the next fifteen years. The District needs more flexibility in its surface water supply to help cope with the low SWP allocation and variable water from Littlerock Dam. This Agreement allows the District to exchange funds or groundwater for the transfer rights of 75% to 100% of LCID's SWP allocation. PWD benefits from an increase to its base SWP supply, and Littlerock receives funds to help invest in infrastructure and projects to improve its long-term water resiliency.

The fundamentals of the Agreement are as follows:

PWD will pay $400,000 annually to LCID for their full SWP allocation during allocation years greater than 20%. PWD will transfer ground water to LCID in the amount of 250 acre-feet during allocation years of 20% or less. LCID has the option to retain up to 25% of its allocation in any year. If LCID retains a portion of its allocation, it will reduce PWD's cost in either funds or groundwater proportionately for that year.

The District and LCID's staff and attorneys have worked together to develop this final draft of the Agreement that is now before the Board for approval.

Strategic Plan Initiation/Mission Statement:

This work is part of Strategic Initiative 1 – Water Resource Reliability.

This item directly relates to the District's Mission Statement.

Budget:

No cost at this time. As the SWP allocation will not exceed 20% this year, PWD would opt for groundwater transfer as the payment method.

Supporting Documents:

- Water Transfer Agreement-Palmdale Water District and LCID.

WATER TRANSFER AGREEMENT

THIS WATER TRANSFER AGREEMENT ("Agreement") is made and entered into this_____ day of _____, 2021, by and between LITTLEROCK CREEK IRRIGATION DISTRICT, a California Irrigation District ("LCID") and PALMDALE WATER DISTRICT, a California Irrigation District ("PWD"). LCID and PWD are sometimes individually referred to as "Party" or collectively as "Parties."

RECITALS

A. LCID is an irrigation district organized under the Irrigation District Law, codified at Sections 20500 et seq. of the California Water Code.

B. PWD is also an irrigation district organized under the Irrigation District Law, codified at Sections 20500 et seq. of the California Water Code.

C. LCID and PWD seek to enter into a mutually beneficial transfer of a portion of LCID's State Water Project ("SWP") annual Table A water ("Entitlement Water"), to which LCID is entitled pursuant to its water supply contract with the California Department of Water resources ("DWR").

D. The purpose of this Agreement is to set forth financial and other arrangements between LCID and PWD for LCID's transfer of a portion of its annual Entitlement Water to PWD, and to define the roles, obligations, and responsibilities of the Parties with regard to such transfer.

AGREEMENT

Now therefore, in consideration of the mutual covenants and agreements set forth herein, the Parties do contract and agree as follows:

1. Recitals Incorporated.

The foregoing recitals are true and correct and are incorporated herein by reference as if set forth in full.

2. Transfer of LCID Entitlement Water.

(a) Subject to the provisions of Section 3 of this Agreement, and for the term of this Agreement, LCID hereby transfers its right to receive a portion of its State Water Project ("SWP") annual Table A water ("Entitlement Water") to PWD. Subject to Section 3 of this Agreement, PWD shall be entitled to receive an amount not less than 75% of LCID's annual Entitlement Water and not more than 100% of LCID's annual Entitlement Water.

(b) No later than thirty (30) days from the date of DWR's final annual allocation of SWP Table A water, LCID shall notify PWD in writing of the estimated annual amount of LCID's Entitlement Water that is available to PWD for such year. PWD shall, within

twenty (20) days, confirm to LCID its receipt of the notice and the amount of Entitlement Water that PWD will accept that year.

(c) The Parties shall advise DWR of any transfer of annual LCID Entitlement Water from LCID to PWD, and shall satisfy all conditions and guidelines mandated by DWR for the transfer thereof. The delivery of water pursuant to this Agreement shall be contingent on and subject to any necessary DWR approvals and shall be governed by the terms and conditions of such approval(s) and any other applicable federal, state, and local statutes and regulations. PWD shall, at its sole cost and expense, apply for and obtain all necessary approvals, permits, licenses and/or entitlements, if any, from all governmental agencies, including without limitation, DWR, necessary for the transfer of Entitlement Water by LCID to PWD under this Agreement.

3. LCID Retention Option.

(a) LCID shall have an annual option each calendar year during the term of this Agreement to retain up to 25% of its Entitlement Water.

(b) Should LCID exercise its option to retain its Entitlement Water pursuant to Section 3(a) for its own use, LCID shall notify PWD in writing of the same no later than thirty (30) days from the date of DWR's final annual allocation of SWP Table A water. The notice to be provided pursuant to this Section 3(b) shall specify the percentage of the Entitlement Water LCID will retain for the calendar year the option is exercised.

(c) In the event LCID exercises its option pursuant to section 3(a) above, LCID shall have no obligation to deliver to PWD the amount of Entitlement Water it retains for the calendar year in which the option was exercised. PWD shall have no obligation to pay LCID for any Entitlement Water LCID retains for its own use.

(d) Should the Parties agree to revise this Agreement to change the amount of Entitlement Water LCID may retain annually, any such revision may be made pursuant to mutual written agreement of the Parties in the years 2025 and/or 2030.

4. Delivery of Entitlement Water.

(a) LCID, in coordination with PWD shall submit monthly water delivery schedules to DWR for delivery of the water for transfer to PWD.

(b) LCID's point of delivery to PWD shall be San Luis Reservoir.

(c) PWD shall be responsible for paying the DWR Variable charges from the San Luis Reservoir to PWD's chosen point of final delivery.

(d) Deliveries shall be verified using DWR's Monthly Water Delivery Status Reports.

(c) LCID and its officers, agents, and employees shall not be liable to PWD or its officers, agents, employees, or any other interested parties for any direct, indirect, special, incidental, or consequential costs, losses, or damages arising from any failure of DWR to deliver SWP Table A water to LCID. In addition, LCID and its officers, agents, and employees shall not be liable to PWD or its officers, agents, employees, or any other interested parties for any direct,

indirect, special, incidental, or consequential costs, losses, or damages including, but not limited to, any lost profit or revenue, resulting from any water shortage or interruption, any reduction in the amount of LCID's Entitlement Water, and/or other events beyond LCID's reasonable control. PWD shall defend and indemnify LCID, its officers, agents, and employees from and against any and all liability, claims, losses, damages, or expenses, including reasonable attorneys' fees, arising from any acts or omissions to act of LCID, its officers, agents, or employees relating to the receipt and distribution of the Entitlement Water under this Agreement.

5. Payment.

(a) The payment amount owed by PWD to LCID each calendar year shall be a proportional rate calculated by multiplying $400,000 by the total percentage of Entitlement Water transferred by LCID to PWD that year, except as provided in Section 5(c) of this Agreement. By way of example, if PWD were to receive 75% of LCID's Entitlement Water in a calendar year, the payment amount owed to LCID would be $300,000 for that year.

(b) LCID shall prepare monthly billings to PWD for deliveries of LCID Entitlement Water made pursuant to this Agreement. Such billings shall be paid by PWD within thirty (30) calendar days following the date of LCID's invoice, and shall be submitted to the address specified in Section 17 of this Agreement. The cost for water billed by LCID shall be calculated by LCID.

(c) In any calendar year in which LCID receives 20% or less of its full annual SWP Table A water allocation, PWD may choose to make payment to LCID for Entitlement Water transferred to PWD that year by a groundwater transfer to LCID. The payment by groundwater transfer would be in lieu of any financial payment. The amount of groundwater transfer payment for receiving 100% of the LCID's Entitlement Water in that year shall be 250 acre feet (AF), subject to the approval of the Antelope Valley Watermaster. If any such groundwater transfer is approved by the Antelope Valley Watermaster, the groundwater shall be transferred by PWD to LCID no later than August 1st of the year in which payment is to be made by PWD pursuant to this Section 5(c). The Antelope Valley Watermaster's approval of any such groundwater transfer is a condition precedent to the payment arrangement authorized by this Section 5(c). If any such groundwater transfer is not approved by the Antelope Valley Watermaster, payments for Entitlement Water transferred by LCID to PWD shall be calculated pursuant to Section 5(a).

6. Term. This Agreement shall be effective upon the date it is fully executed by the Parties hereto and shall remain in effect through December 31, 2035, unless earlier terminated as provided herein. This Agreement may be extended by mutual written agreement of the Parties through written amendment only if the Parties' SWP water supply contracts with DWR are extended past 2035.

7. Headings. The Section headings contained in this Agreement are inserted for convenience only and shall not affect in any way, and shall not be considered in, the meaning or interpretation of this Agreement.

8. Integration. This Agreement represents the entire understanding of the Parties. No prior oral or written understanding shall be of any force or effect with respect to those matters

covered by this Agreement.

9. Assignment. Neither Party may assign either this Agreement or any of its rights, interests, or obligations hereunder without the prior written approval of the other Party.

10. Third Parties. This Agreement shall not be binding upon, inure to the benefit of, or confer rights upon any person or entity that is not a party to this Agreement.

11. Amendments. This Agreement may be amended or modified only in writing signed by the Parties.

12. Termination. This Agreement may be terminated with the mutual written consent of both Parties, or in the event of a breach, this Agreement may be terminated at the election of the non-defaulting party.

13. Force Majeure. Any prevention, delay, nonperformance, or stoppage due to any of the following causes shall excuse nonperformance for a period equal to the duration of the force majeure event. The causes referred to above are strikes, fires, earthquakes, floods, epidemics, quarantine restrictions, walkouts, labor disputes, failure of power, irresistible superhuman cause, acts of public enemies of the State or United States, riots, insurrections, civil commotion, governmental restrictions or regulations or controls (except those reasonably foreseeable in connection with the uses contemplated by this Agreement), or other causes beyond the reasonable control of the Party obligated to perform.

14. Partial Invalidity. If any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions will nevertheless continue in full force and effect without being impaired or invalidated.

15. Applicable Law. This Agreement shall be construed in accordance with and governed by the laws of the State of California.

16. Attorney's Fees. If any action is instituted to enforce this Agreement, the prevailing party shall be reimbursed all reasonable attorneys' fees, costs of collection, as well as any other costs and expenses incurred in connection with the enforcement effort.

17. Notices. Any notice required by this Agreement to be given or delivered to any Party shall be deemed to have been received when personally delivered or mailed in the United States mail addressed as follows:

Littlerock: Littlerock Creek Irrigation District
35141 87th St E
Littlerock, CA 93543
Attn: General Manager

Palmdale: Palmdale Water District

2029 E Ave Q
Palmdale, CA 93550
Attn: General Manager

18. Execution and Counterparts. This Agreement may be executed in one or more counterparts, and all the counterparts shall constitute but one and the same agreement, notwithstanding that all Parties hereto are not signatories to the same or original counterpart. The counterparts of this Agreement may be executed and delivered by electronic signature by any or all of the Parties and the Parties may rely on the electronic signature as if it were an original signature.

19. Limitation of Waiver. Except as may be expressly provided in a writing signed by the Parties, the failure or delay of either Party to insist in any instance on strict performance of any provision of this Agreement shall not be construed as a waiver of any such provision or the relinquishment of any rights under that provision in the future, but the same shall continue and remain in full force and effect.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of the date of the latest signature below.

LITTLEROCK CREEK IRRIGATION DISTRICT

By:_____
James Chaisson, General Manager

Dated: _____

PALMDALE WATER DISTRICT

By:_____
Dennis D. LaMoreaux, General Manager

Dated: _____

P A L M D A L E W A T E R D I S T R I C T

B O A R D M E M O R A N D U M

DATE: April 6, 2021 **April 12, 2021**

TO: BOARD OF DIRECTORS **Board Meeting**

FROM: Mr. Scott Rogers, Engineering Manager

VIA: Mr. Adam Ly, Assistant General Manager
Mr. Dennis LaMoreaux, General Manager

RE: ***AGENDA ITEM NO. 7.2 – CONSIDERATION AND POSSIBLE ACTION ON AUTHORIZING THE GENERAL MANAGER TO EXECUTE CHANGE ORDER NO. 1 TO THE CONTRACT WITH L.O. LYNCH QUALITY WELL & PUMPS FOR ADDITIONAL COSTS RELATED TO CHANGES IN THE SCOPE OF THE PROJECT FOR THE WELL NO. 7A REHABILITATION PROJECT. ($119,877.25 – BUDGETED – SPECIFICATION NO. 20-601 – ENGINEERING/GRANT MANAGER ROGERS)***

Recommendation:

Staff recommends that the Board approve and authorize the General Manager to execute Change Order No. 1 to the contract with L.O. Lynch Quality Well & Pumps in the amount of $119,877.25.

Alternative Options:

There is no alternative option.

Impact of Taking No Action:

Financial harm to the contractor would result from taking no action.

Background:

L.O. Lynch Quality Well & Pumps successfully completed the Well No. 7A Rehabilitation Project in January 2021. Kyle Groundwater was the inspector for the project and produced the Aquifer Pump Test Results and Recommendations for Well No. 7A. Between District Engineering staff and the report, new design parameters were recommended which were used to size a new pump for the rehabilitated well. District staff sought three quotes from Bakersfield Pumps, Tri-County Pumps, and L.O. Lynch. L.O. Lynch provided the low, most qualified quote for a new pump and installation.

The quotes received:

1. L.O. Lynch: $119,877.25
2. Bakersfield Pumps: $153,970.68
3. Tri-County Pumps: No Bid

Change Order No. 1 includes the labor, materials and equipment necessary to accommodate those changes to the project.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 1- Water Resource Reliability.

This item directly relates to the District's Mission Statement.

Budget:

This item is under Specification 20-601.

Supporting Documents:

- Attachment A: Change Order No. 1
- Attachment B: L.O. Lynch Quality Well & Pumps Quote

CHANGE ORDER NO. 1

DATE OF ISSUANCE	April 6, 2021
EFFECTIVE DATE	Upon Execution
OWNER's Contract No.	Specification No. 20-601
CONTRACTOR:	L.O. Lynch Quality Well & Pumps
OWNER:	Palmdale Water District
ENGINEER:	N.A.

Contractor is directed to make the following changes in the Contract Documents.

Description: L*abor, materials and equipment needed to install a new pump at Well 7A.*

Reason for Change Order: *L.O. Lynch completed the Well 7A Rehabilitation project, and based off design recommendations, a new pump and equipment need to be installed.*

Attachments: *Contractor's Cost Proposals dated March 19, 2021.*

CHANGE IN CONTRACT PRICE: Original Contract Price	CHANGE IN CONTRACT TIMES: Original Contract Times
$188,920.00	**90 Days**
Net Changes from previous Change Orders	Net Changes from previous Change Orders
$0.00	**0**
Contract Price prior to this Change Order	Contract Times prior to this Change order
$188,920.00	**0**
Contract Price prior to this Change Order:	Contract Times prior to this Change order
$188,920.00	**0**
Net Increase (decrease of this Change Order)	Net Increase (decrease of this Change Order)
$119,877.25	**60**
Contract Price with all approved Change Orders	Contract Times with all approved Change Orders
$308,797.25	**150 days**

RECOMMENDED	APPROVED	ACCEPTED
By:_____	By:_____	By:_____
Engineering Manager	PWD, General Manager	Contractor, President
Date:_____	Date:_____	Date:_____

ATTACHMENT B

Pump Estimate

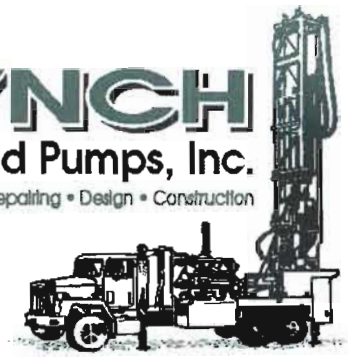
Date	Estimate #
3/3/2021	16624

L.O.LYNCH
Quality Wells and Pumps, Inc.
Mud & Air Drilling • Well Cleaning • Repairing • Design • Construction

Contractors License
No. 740156

856 W. Seventh St.
San Jacinto, CA 92582

951-654-7724 Toll Free 888-654-7724 Fax 951-654-2060



Customer Phone	Customer Fax
661-456-5319	

Ship To

Name / Address

Palmdale Water District
Scott Rogers, PE
2029 East Avenue Q
Palmdale, CA 93550

Terms

Item	Description	Qty	U/M	Cost	Total
CONDITION4	SCOPE OF WORK TO BE DONE: PRICING FOR WELL 7 PUMP EQUIPMENT WITHOUT LABOR			0.00	0.00
DESIGN	GPM 700 TDH 880' IMP TRIM FULL	1	ea	0.00	0.00
10VT700-17	BERKELEY 10VT700 17 STAGE OIL LUBE TURBINE WITH 17/4PH SHAFTING, 316SS IMPELLERS AND 416SS COLLETS	1	ea	19,555.00	19,555.00
CTS8X2.5X1.6...	8" X 2-1/2" X 1-11/16" COLUMN,TUBE, AND SHAFT ASSEMBLY / WITH RUBBER SPIDERS	33.5	ea	1,340.00	44,890.00
DH20X12CUS...	20" BD X 12" DISCHARGE HEAD WITH CUSTOM FITTED SOLE PLATE AND MOUNTING HOLES COMPLETE WITH HEAD SHAFT AND OIL POT	1	ea	11,266.00	11,266.00
COL6X20PLT...	COLUMN PIPE 6" X 20' PRODUCT LUBE TAPER BOTH ENDS THREAD T & C / WITH S/S CONE STRAINER	2	ea	660.00	1,320.00
HO300V2SLHX	300HP US PREMIUM EFF MOTOR WITH 300% EHT	1	ea	37,410.00	37,410.00
AIRLINE	1/4" S/S AIRLINE	675	ft	2.10	1,417.50
FT0750	10' X .75" FLUSH THREAD PIPE	675	ea	2.25	1,518.75
DISINFECTION	DISINFECTION	1	ea	2,500.00	2,500.00
	** PUMP HAS A LEAD TIME OF 2-3 WEEKS ** ** DISCHARGE HEAD HAS A LEAD TIME OF 1-2 WEEKS ** ** COLUMN PIPE AND SUCTION PIPE HAS A 1-2 WEEK LEAD TIME ** ** MOTOR HAS A LEAD TIME OF 7-10 WEEKS ** ** AIR LINE IS IN STOCK ** ** FLUSH THREAD PIPE IS IN STOCK **				

THE FOLLOWING APPLIES UNLESS OTHERWISE STATED: Any item not specifically mentioned is not included nor was it intended. Delivery/shipment is estimated and L.O. Lynch is not responsible for delays beyond their reasonable control. Prices DO NOT include special equipment (if required) or freight. This quote is firm for 30 days from above date. L.O. Lynch takes complete and total exception to any requirements, plans and/or specifications not provided to company for review.

Total

Signature

Interest will begin to accrue 10 days after date of Invoice at a rate of 1-1/2% per month. If any legal action or proceeding arising out of or relating to this Contract is brought by either party to this Contract, the prevailing party will be entitled to receive from the other party, in addition to any other relief that may be granted, the reasonable attorney's fee, costs and expenses incurred in the action or proceeding by the prevailing party.

Pump Estimate

L.O.LYNCH
Quality Wells and Pumps, Inc.
Mud & Air Drilling • Well Cleaning • Repairing • Design • Construction

Contractors License
No. 740156

856 W. Seventh St.
San Jacinto, CA 92582

951-654-7724 Toll Free 888-654-7724 Fax 951-654-2060

Date	Estimate #
3/3/2021	16624

Customer Phone	Customer Fax
661-456-5319	

Ship To

Name / Address

Palmdale Water District
Scott Rogers, PE
2029 East Avenue Q
Palmdale, CA 93550

Terms

Item	Description	Qty	U/M	Cost	Total
PREPAREDBY	Respectfully, Phil Lucas Sales Manager 951-858-0181 plucas@lynchwells.com	1	ea	0.00	0.00

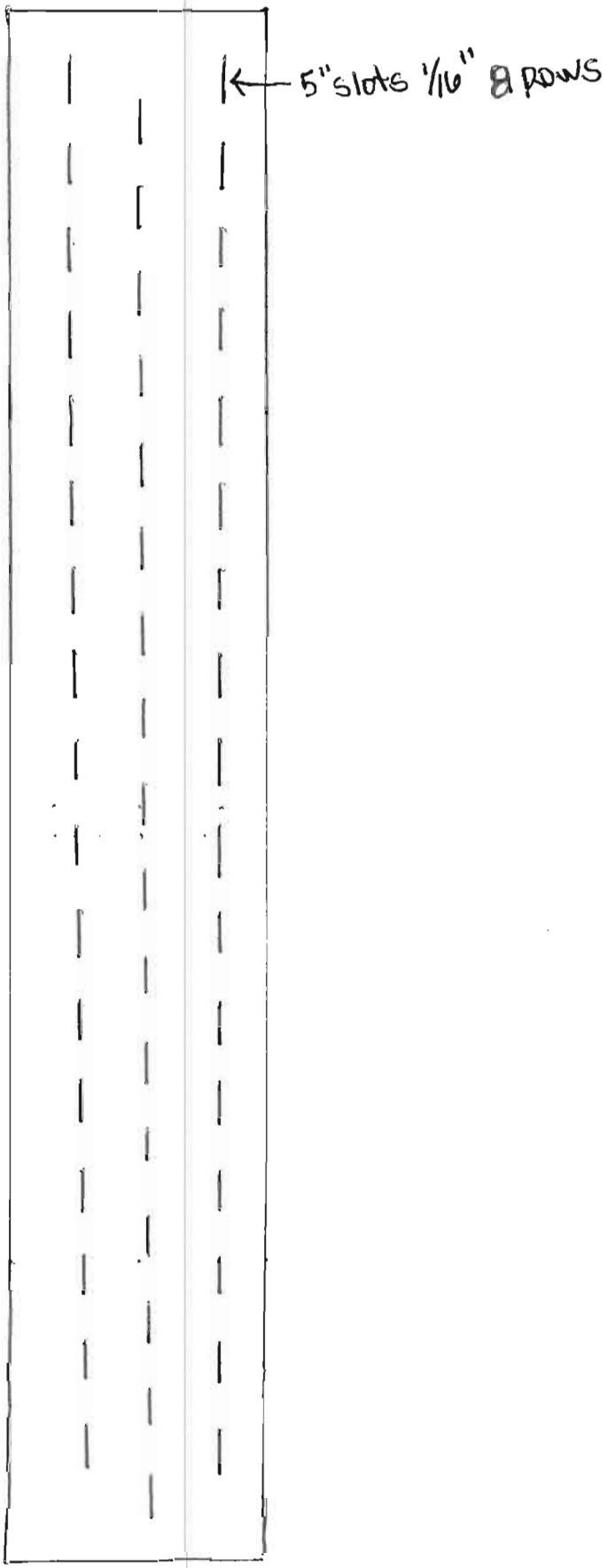
THE FOLLOWING APPLIES UNLESS OTHERWISE STATED: Any item not specifically mentioned is not included nor was it intended. Delivery/shipment is estimated and L.O. Lynch is not responsible for delays beyond their reasonable control. Prices DO NOT include special equipment (if required) or freight. This quote is firm for 30 days from above date. L.O. Lynch takes complete and total exception to any requirements, plans and/or specifications not provided to company for review.

Total $119,877.25

Signature

Interest will begin to accrue 10 days after date of Invoice at a rate of 1-1/2% per month. If any legal action or proceeding arising out of or relating to this Contract is brought by either party to this Contract, the prevailing party will be entitled to receive from the other party, in addition to any other relief that may be granted, the reasonable attorney's fee, costs and expenses incurred in the action or proceeding by the prevailing party.

Suction Pipe on Bottom of Pump.



P A L M D A L E W A T E R D I S T R I C T

B O A R D M E M O R A N D U M

DATE: April 6, 2021 **April 12, 2021**

TO: BOARD OF DIRECTORS **Board Meeting**

FROM: Mr. Scott Rogers, Engineering Manager

VIA: Mr. Adam Ly, Assistant General Manager
Mr. Dennis LaMoreaux, General Manager

RE: ***AGENDA ITEM NO. 7.3 – CONSIDERATION AND POSSIBLE ACTION ON AUTHORIZING THE GENERAL MANAGER TO EXECUTE A CONTRACT WITH HAZEN AND SAWYER FOR PROFESSIONAL SERVICES FOR THE DESIGN, PERMITTING, AND CONSTRUCTION INSPECTION FOR THE DRILLING AND EQUIPPING OF WELL NO. 36 (NEW WELL). ($612,656.00 – BUDGETED – WORK ORDER NO. 20-622 – ENGINEERING/GRANT MANAGER ROGERS)***

Recommendation:

Staff recommends that the Board approve and authorize the General Manager to execute a contract in a not-to exceed amount of $612,656.00 with Hazen and Sawyer for professional services for the design, permitting, and construction inspection for the drilling and equipping of Well No. 36. (New Well). The current budget for Work Order 20-622 is $612,656.00.

Alternative Options:

There is no alternative option.

Impact of Taking No Action:

The District would benefit from beginning to plan and design a new groundwater supply well. The impact of taking no action would result in not adding a new supply well to the water system.

Background:

Staff accepted proposals from qualified consultants for geohydrologic and engineering design services for Well No. 36. A well site assessment was completed by Kyle Groundwater, Inc. in 2020 for two proposed wells northeast of the intersection of E. Rancho Vista Road and 10th Street East in Palmdale, California. Based off the assessment, staff is proceeding to design and construct one well that was recommended and most feasible based off the assessment.

To supply existing production facilities, staff proposed to design, drill and equip an approximately 1,500 GPM municipal well. Therefore, staff sought a consultant that is qualified to perform and provide all hydrologic and hydrogeological, architectural, civil, structural, mechanical, electrical, instrumentation, plumbing, design calculations, environmental, specifications, and construction support to achieve construction and installation of a fully functional facility.

Staff received two qualified proposals from Civiltec Engineering, Inc. and Hazen and Sawyer, P.C with two firms, Stantec and Kennedy Jenks, not submitting proposals. Both proposals were evaluated and scored based on the requirements set forth in the RFP. Hazen and Sawyer, P.C. was selected based on their experience, availability, and low proposed fee to complete the work requested by the District.

The quotes received:

1. Hazen and Sawyer, P.C.: $612,656.00
2. Civiltec Engineering, Inc.: $612,904.00

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 1- Water Resource Reliability.
This item directly relates to the District's Mission Statement.

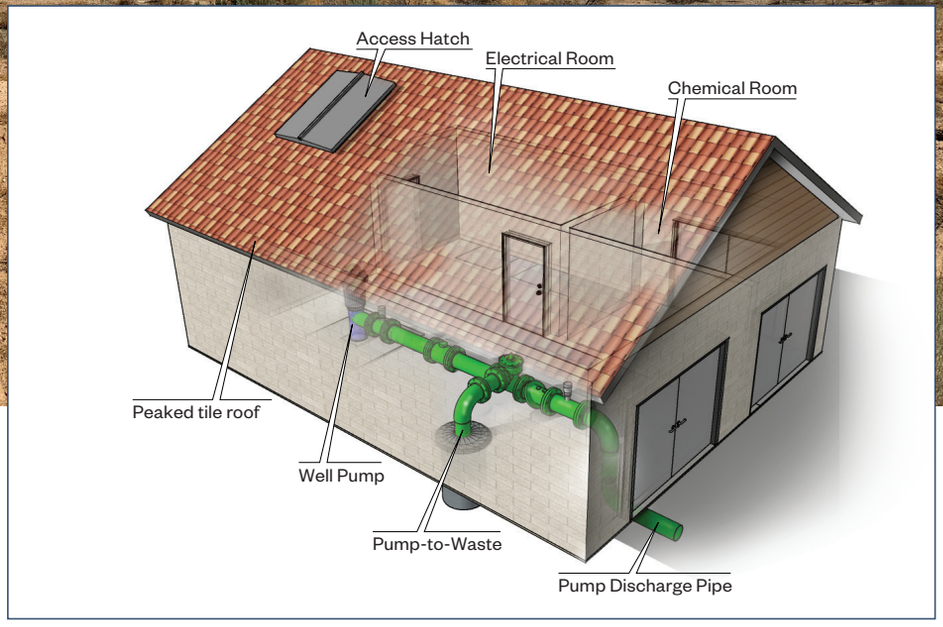
Budget:

This item is under Specification 20-622.

Supporting Documents:

- Attachment A: Hazen and Sawyer, P.C. Proposal and Fee Schedule
- Attachment B: Professional Services Agreement-Hazen and Sawyer, P.C.

Hazen



PALMDALE WATER DISTRICT
A CENTURY OF SERVICE

Proposal for

Well 36 Drilling, Equipping Design, and Construction Services

April 2, 2021

Table of Contents

Hazen and Sawyer
800 W. 6th Street, Suite 400
Los Angeles, CA 90017 • 213.234.1080

April 2, 2021

Palmdale Water District
Scott Rogers
Engineering/Grants Manager
2029 East Avenue Q
Palmdale, CA 93550

Re: Well 36 Drilling, Equipping Design, and Construction Services

Dear Mr. Rogers:

Hazen is pleased to submit this proposal for the subject solicitation to the Palmdale Water District. We are excited about this opportunity to serve on our first project for the District. We have assembled a highly qualified team to deliver your project. Our team includes Kyle Groundwater who completed the 2020 Well Site Assessment that analyzed alternative sites for Well 36 and provides a strong technical foundation for our team specific to your project. Hazen and Kyle Groundwater have a well-established productive working relationship that we will leverage to successfully complete your project.

Your project will be managed by Steve Conner, PE, who brings over 26 years of experience in pump design and construction including over 35 wellhead facilities projects. We will be supported by an in-house engineering design team that covers all necessary disciplines for your project.

Again, we are excited about this opportunity to be of service to the Palmdale Water District. If you have any questions or require further information, please contact Dave Jones at (916) 769-8753 or via email at DRJones@HazenandSawyer.com. Thank you for your consideration and we look forward to working with you.

Sincerely,

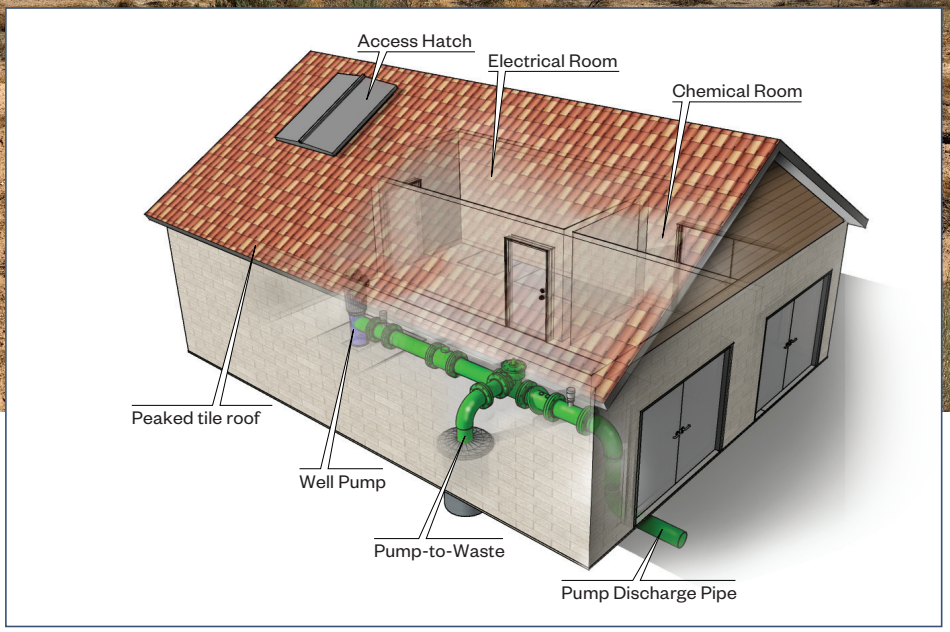
Dave Jones

Dave Jones, PE
Vice President

1014-064

Section 1

Profile of Firm



Section No. 1

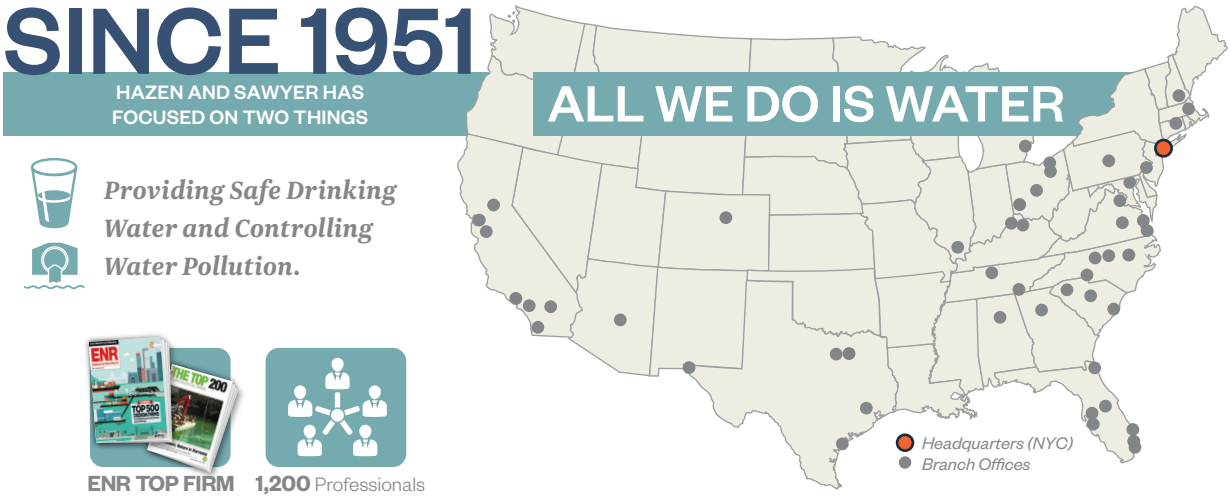
Profile of Firm

Hazen is a nationally-recognized environmental engineering and consulting firm. Hazen is one of the largest firms in the U.S. providing exclusively water engineering services with 1,200 professionals and support staff in 67 offices throughout the U.S. We have three local offices in Southern California devoted to serving agencies such as Palmdale Water District.

Founded in 1951, Hazen developed a reputation for the technical quality and timeliness of our work. The integration of talent and resources with our singular focus exclusively water engineering services greatly benefits our clients by providing access to the best resources for your assignments and enables us to structure the most effective project teams for assignments for PWD. Our team will be managed out of our Los Angeles office, which consists of 16 staff members, with expert support from our other California offices.

Hazen is best suited to provide the services requested in this solicitation because of our wide breadth of engineering capabilities that covers all the services in your RFP. Hazen is a firm with technical competence to provide full-service engineering: civil, mechanical, water treatment and conveyance systems, water supply planning services, groundwater facilities, structural, architectural, mechanical, instrumentation and electrical for treatment, conveyance and storage facilities.

Hazen has been a sound and reliable fixture in Southern California for nearly 10 years. The company is growing in California and beyond and is fully capable to provide services to PWD for many years to come.



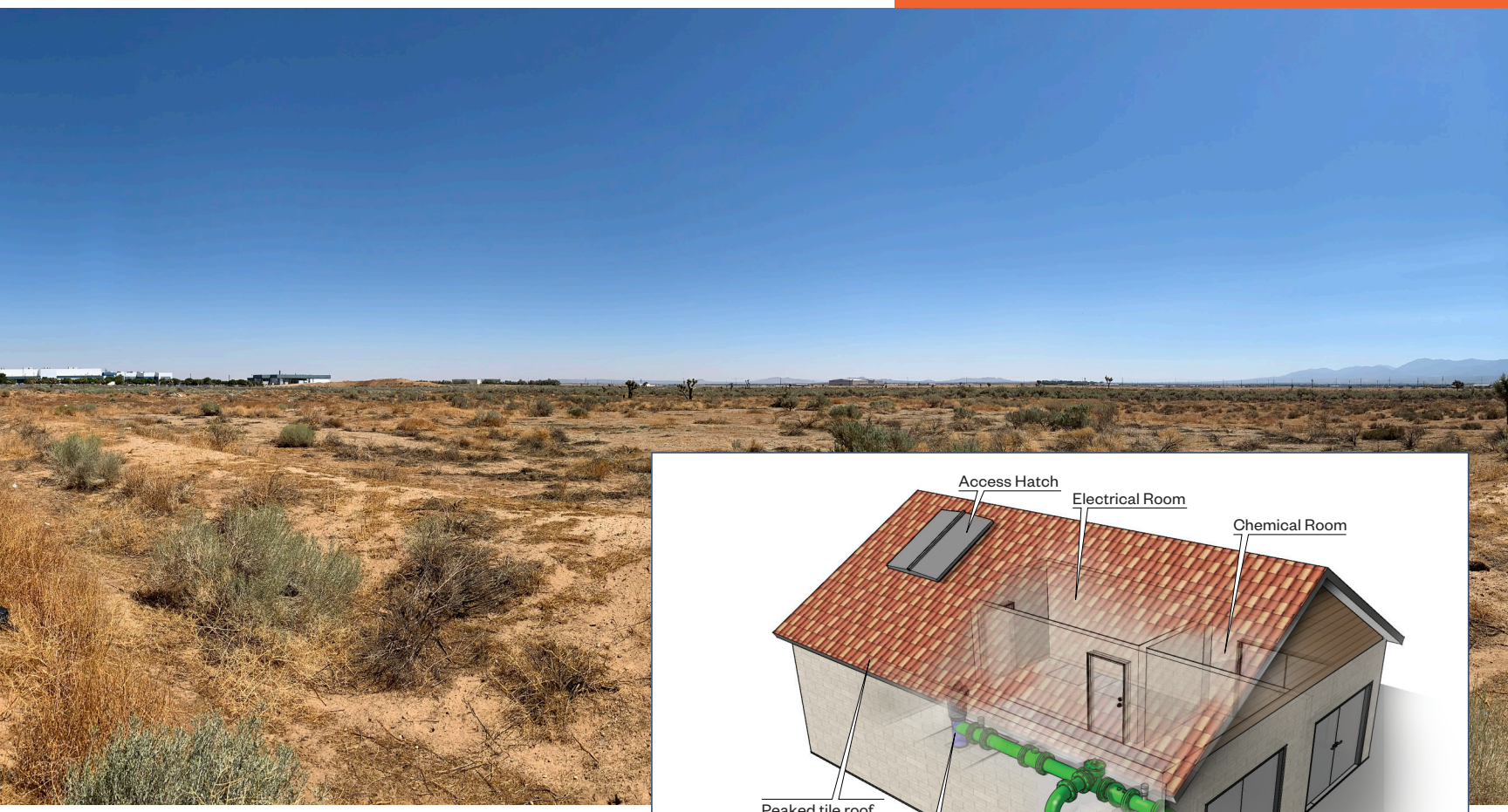
Current and Past Litigation

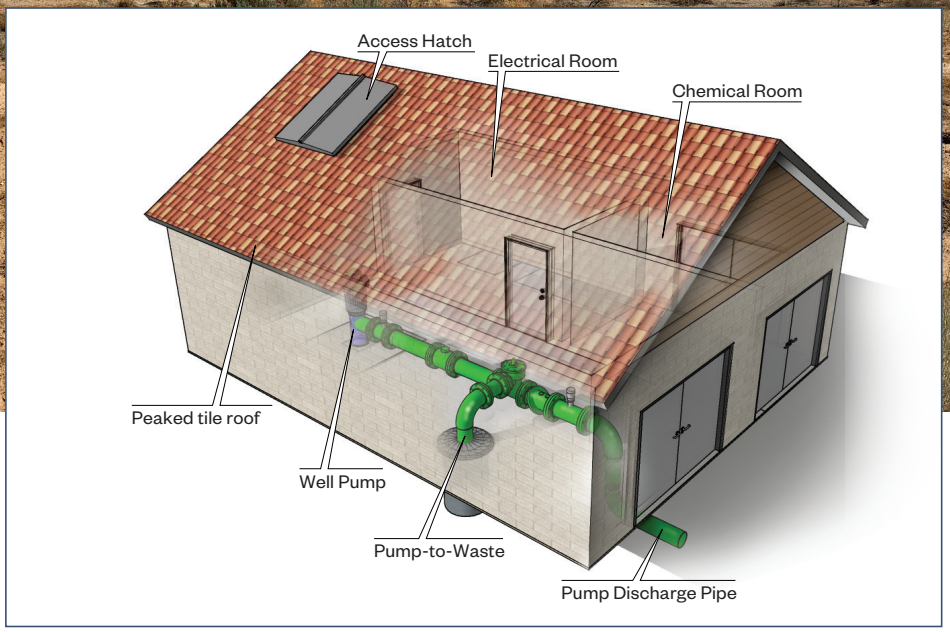
Over the last five years there have not been any claims pending or asserted against Hazen and Sawyer by any of its clients, including claims related to errors and omissions, percent of change order values to project bid costs.

1014-064

Section 2

Qualification of Firm





Section No. 2

Qualification of Firm

Hazen is pleased to have Kyle Groundwater as our hydrogeological subconsultant. Led by Russ Kyle, they bring recent relevant experience to this project including the preparation of the 2020 Palmdale Water District's Well Site Assessment Report that sets the stage for this project.

The Hazen Team has the experience and expertise to deliver the engineering services needed for this project. The following selection of the Hazen Team's reference projects demonstrates a proven track record with project-relevant experience. In fact, our key team members proposed for this work had significant roles in these project tasks. The client references listed in this section can attest to the quality of our services, delivery capabilities, and the level of ownership. Others can attest to our local commitment to the communities we serve.

Below is our team's well equipping design experience. Our team has worked together on numerous projects as shown below. Below are representative equipping projects by our team.

Client	Project	Role	Year	Notes
Banning	Well C-8 Design Services	Design	Current	One (1) well
*CDA	Phase 3 Expansion	Program Mgmt	Current	Eight (8) wells, 1 in const.
Goodyear, AZ	Well 26	Design	Current	One (1) well
Kingman, AZ	Well 10 Equipping	Design	Current	One (1) well
Modesto	Well 274 Replacement	Design	2020	One (1) well
Beverly Hills	Maple Yard Wells	Start-up, DDW	2018	Two (2) wells
RCWD	Well 309 Building Analysis	Prelim. Study	2018	Well building retrofit evaluation
Beverly Hills	La Brea Groundwater Project	Prelim. Design	2017	Three (3) wells
Santa Ana	Well 29 Analysis	Prelim. Study	2017	One (1) well
Coachella Valley	Cr6 Treatment Facilities	Design	2016	Thirty (30) well sites
*Bellflower	High Capacity Well	Design	2015	One (1) well
*Riverside	Raub 4-R and Raub 5-R	Design	2015	Two (2) wells
South Coast	GRF Well #2	Design	2014	One (1) well
Hi-Desert	Well 20w	Design	2014	One (1) well
*Mojave Water	R3 Project	Design	2013	Six (6) wells
IRWD	Wells 21 and Wells 22	Design	2012	Two (2) wells

* Project team experience

1014-064

Kyle Groundwater Experience

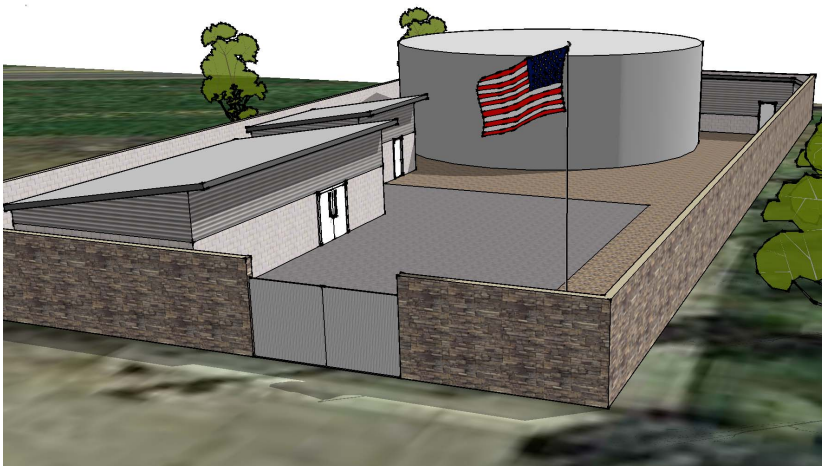
Below is a sampling of Russ' experience designing and constructing wells. He has worked as part of and with our team on a variety of well projects. Our experience with Russ provides efficiencies to PWD in terms of his first-hand knowledge of PWD's needs with regard to well installation and permitting, and in particular, with siting and permitting of Well 36.

Kyle Groundwater Experience

Client	Project	Role	Year	Notes
*Banning	Well C-8 Design Services	Design / Permitting / CMI	Current	One (1) well
*Riverside PU	Raub 4-R and Raub 5-R	Design / Permitting / CMI	2015	Two (2) wells
*Bellflower	High Capacity Well 1	Design / Permitting / CMI	2015	One (1) well
LBWD	Alamitos Wells 9A & 14	Design / Permitting / CMI	Current	Two (2) wells
City of San Jacinto	New Grand Well	Design / Permitting / CMI	Current	One (2) well
Montebello Land & Water	Well 15	Design / Permitting / CMI	Current	One (1) well
Lake Arrowhead CSD	Blue Jay Well	Design / Permitting / CMI	Current	One (1) well
PWD	Well Rehabilitation Prioritization Program	Condition Assessment / Wellfield Evaluation	Current	Twenty two (22) wells
PWD	Repair, Rehabilitation, and Redevelopment of Well 7A	Condition Assessment / Design / CMI	Current	One (1) well
PWD	Well 36	Preliminary Design	2020	One (1) well
City of Tustin	Beneta Well Replacement	Preliminary Design	2020	One (1) well
BSMWC	Artesia Well	Preliminary Design	2020	One (1) well
CWSC	Well LAS 20-01	Preliminary Design	2020	One (1) well
CWSC	Well DOM 300-01	Design / Permitting / CMI	2020	One (1) well
South Montebello	Well 8	Design / Permitting / CMI	2020	One (1) well
JCSD	Well 29	Design / Permitting	2019	One (1) well
LBWD	West Coast Basin Well 1	Design / Permitting / CMI	2017	One (1) well
LBWD	Well 22A	Design / Permitting	2017	One (1) well
CWSC	Well DOM 216-02	Design / Permitting / CMI	2017	One (1) well
Hemet	Well 10A	Design / Permitting / CMI	2017	One (1) well
CWSC	Well ELA 62-02	Design / Permitting / CMI	2016	One (1) well

* Joint project experience with Hazen staff

1014-064



Installation of Replacement Well to Improve Water Quality Using In-Well Blending

Modesto, CA

Hazen is currently designing a replacement well operated by the City of Modesto on behalf of the City of Grayson. The existing Well 69 was installed in 1967 and is one of two wells that are the only source of municipal water for the City of Grayson's approximately one thousand residents. The sand production and degree of encrustation indicate that existing Well 69 is near the end of its useful life. In addition, existing Well 69 is shallow and extracts groundwater from the upper portion of the aquifer system degraded by nitrate at concentrations exceeding the MCL. The intent of this project is to design and install a deeper well as a replacement for the existing Well 69 using modern design and materials to reduce nitrate concentrations and increase water production reliability. The Project starts with a new on site monitoring well for use in evaluating water quality and production capacity of both the shallow aquifer and deep aquifer. This data will be used to complete the final design of replacement Well 69 with the goal of optimizing water quality while meeting production capacity goals.

The production goals for the Project are to support water supply and fire flow requirements and increase system reliability. This project evaluates in-well blending of ground water from two aquifer zones with differing water qualitiies. In-well blending of groundwater derived from the shallow and deep well screens could decrease nitrate concentrations in the distributed water to below the MCL. The Project also includes consideration of space and utility upgrades for a future treatment system and / or storage tank. The concept-level design considers a future Reverse Osmosis (RO) treatment plant or application of emerging technology for the biological treatment of nitrate.

Project Relevance

- Well Site Layout Design
- Well Design
- Water Quality
- Process Controls
- Well Equipping Design

Percentage of Work Hazen Responsible for

85%

Total Project Cost

Design: $293K
Construction: $2.43M

Project Dates

2016-2020

Schedule and Budget

The budget was maintained but the schedule was delayed. COVID issues stretched out design review cycles between Hazen and the Client.

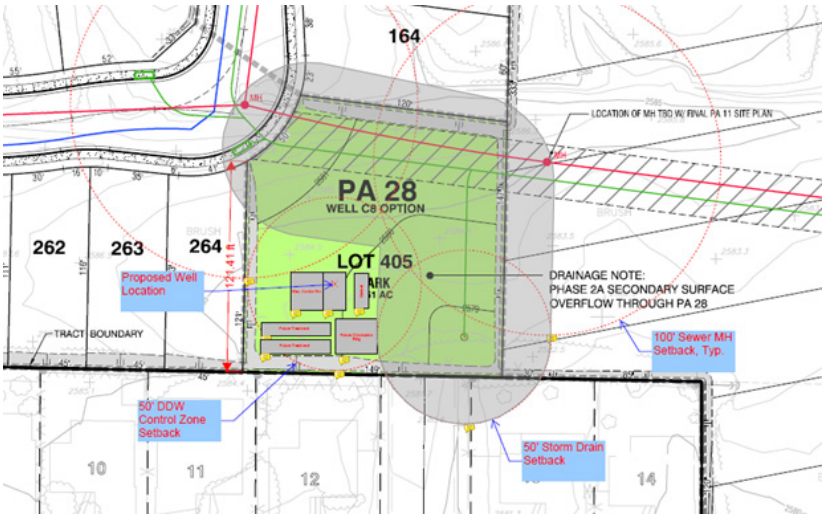
Project Team

Steve Conner

Reference

Miguel Alvarez, PE
Associate Engineer
City of Modesto
209-577-5348

1014-064



Well C-8 Geohydrologic and Engineering Design Services

City of Banning, CA

The City of Banning's potable water distribution system is comprised of 21 active groundwater wells and 3 wells co-owned with Beaumont Cherry Valley Water District (BCVWD) with a total nominal production capacity of 39,199 acre-feet per year (AFY). With the uncertainty of well capacity, chromium-6 MCL, and the need for additional supply capacity to meet future demands, the City retained Hazen to provide design, development, and construction management of Well C-8 to produce a flow rate of approximately 2,000 gpm. Initially, the City was planning on installing Well C-8 upon a property adjacent to Roosevelt Williams Park in the northeast portion of the City. However, this site was ultimately deemed to be unsuitable as the Cabazon hydrologic storage unit within which the well was to be located is showing signs of significant overdraft. Following a series of alternate site evaluations, a potential site was selected at the location of a future housing development within the Beaumont storage unit. Preliminary design efforts suggested that the site is feasible in terms of permitting, construction, end engineering.

Hazen is now tasked with fully permitting the well, providing final design, preparation of technical specifications and bidding documents, and construction management and inspection. Site design includes analysis of alternative site layout options to optimize accessibility for maintenance with consideration of sensitive receptors, existing utilities, code compliance, and constructability. Hazen's tasks also include design of a backup generator, sodium hypochlorite disinfection equipment, concrete block building enclosure, surge analysis, an on-site detention pond for pump-to-waste, and design of all offsite improvements including water mains, sewer connection, pump-to-waste piping, and electrical service.

Project Relevance

- Well siting
- Preliminary and final design
- Permitting
- Technical specifications
- Bid support and evaluation
- Construction management and inspection

Percentage of Work Hazen Responsible for

77%

Total Project Cost

Design: $713K
Construction: N/A

Project Dates

2018-Current

Schedule and Budget

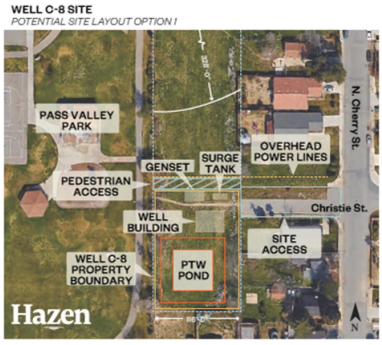
Project is within budget. The project schedule was modified due to significant changes to scope.

Project Team

Steve Conner
Russ Kyle

Reference

Mr. Luis Cardenas, PE
City of Banning
Public Works Department
951-922-3143
lcardenas@ci.banning.ca.us



1014-064

Bellflower High Capacity Well

City of Bellflower, CA

The Bellflower High Capacity Well project included preparation of a siting study, preliminary design report, final engineering design, and construction management and inspection services for the well drilling and equipping of the City's new high-capacity groundwater well. The well was designed to produce 3,500 gpm. The well is equipped with a 400 HP variable frequency drive-driven vertical turbine well pump enclosed in a building for noise mitigation and well security. The project included design of a sodium hypochlorite disinfection system, backup generator, and HVAC. Noise mitigation was a key issue for this project, with sound dampening design for the building and emergency backup generator.

Project Relevance

- Detailed siting study and site constraint analysis
- Drilling, equipping, and construction management
- Noise study and mitigation incorporated into design
- Included NaOCl disinfection system
- High capacity well

Percentage of Work Hazen Responsible for

0%. Team members completed this project with another firm.

Total Project Cost

Design: $550K
Construction: $2.2M

Project Dates

2009-2012

Schedule and Budget

Budget and schedule for project were adjusted to accommodate additional work (added building, generator, DWSAP, geotechnical and sound study), but original scope items were completed within budget and time scheduled.

Project Team

Steve Conner
Russ Kyle

Reference

Steve Bucknam
Program Manager
City of Bellflower
(949) 363-6461
steve@bucknam.net

1014-064

Raub 4-R and Raub 5-R Well Replacement Project

City of Riverside | San Bernardino, CA

Provided engineering design and construction management services for the Raub 4-R and Raub 5-R Well Replacement Project. The project included the drilling, equipping, and testing of two groundwater extraction wells (Raub 4-R and Raub 5-R) with disinfection of both wells; installation of discharge and pump-to-waste pipelines for two new wells and existing Raub 7; and installation of a pre-lube system, abandonment of three wells, and demolition of two wells. In addition, electrical improvements, approximately 4,400 linear feet of 12", 20", and 24" DIP pipelines, approximately 1,300 linear feet of 20" CML&CMC bypass line, conduits, and equipment to handle or carry raw water to a nearby treatment facility was also provided. Portable emergency generator receptacles were installed at each well.

Project Relevance

- Siting study, pipe alignment study, and electrical service study.
- Drilling, equipping, and construction management
- Phased design and construction of two wells for expedited schedule.
- Pre-fabricated roll-apart buildings

Percentage of Work Hazen Responsible for

0%. Team members completed this project with another firm.

Total Project Cost

Design: $919K
Construction: $5.7M

Project Dates

2014-2016

Schedule and Budget

Project was completed ahead of schedule and on budget.

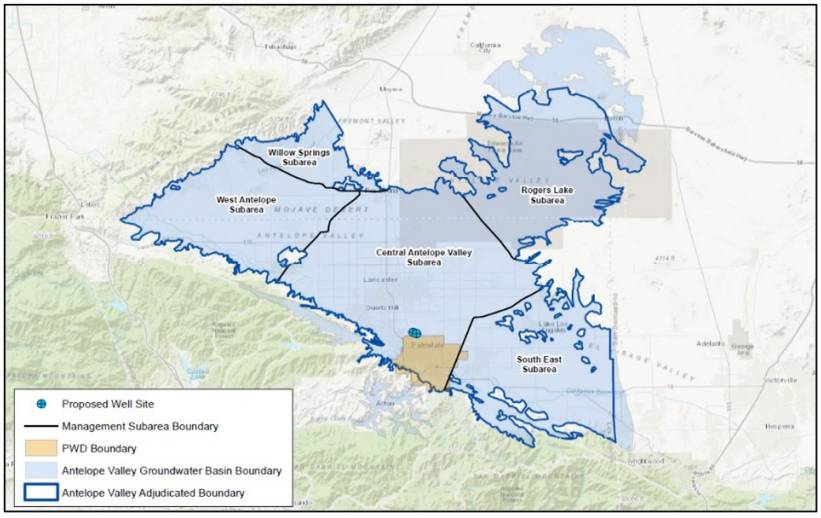
Project Team

Steve Conner
Russ Kyle

Reference

Ned Sciortino, VP Development Hillwood Investment Properties
(909) 382-21631
Ned.Sciortino@hillwood.com

1014-064



Palmdale Water District Well Site Assessment – Well Nos. 36 & 37

City of Palmdale, CA

The Palmdale Water District (PWD) is seeking to develop one or more sources of potable groundwater supply within the vicinity of the planned solar energy farm within the north wellfield area of Palmdale, California. PWD currently owns two (2) parcels of land within the area of the planned solar energy farm, in addition to the parcel of land occupied by an existing well. An initial hydrogeologic review of the area was conducted in 2008 that resulted in recommendations for a standalone exploratory drilling program. However, given the wealth of available knowledge in this area, it has been decided to forgo the exploratory drilling program in favor of proceeding with a two-pass production well drilling program. KGI was tasked with conducting a detailed evaluation of the two proposed well sites shown to determine suitability and feasibility for one or more production wells, and lay the groundwork for construction. This evaluation included an assessment of aquifer production potential, historical groundwater elevations and quality, nearby sites of environmental concern, and potential for wellfield interference. Findings served as a basis of production well design, including an evaluation of construction constraints, discharge considerations, and permitting considerations. Detailed engineer's estimates were prepared for well drilling and construction, well equipping, and pipeline installation.

Project Relevance

- Detailed well siting study and site feasibility
- Construction constraints
- Regulatory constraints
- Preliminary well design
- Preliminary engineers estimates for well construction, equipping, and pipeline

Percentage of Work Hazen Responsible for

0%. Work performed by Kyle Groundwater (Russ Kyle)

Total Project Cost

Design: $14K

Construction: NA

Project Dates

2020

Schedule and Budget

KGI completed the project within budget and in a timely manner. There was no set schedule for completion.

Project Team

Russ Kyle

Reference

Mr. Scott Rogers, PE
Palmdale Water District
661-456-1020
srogers@palmdalewater.org

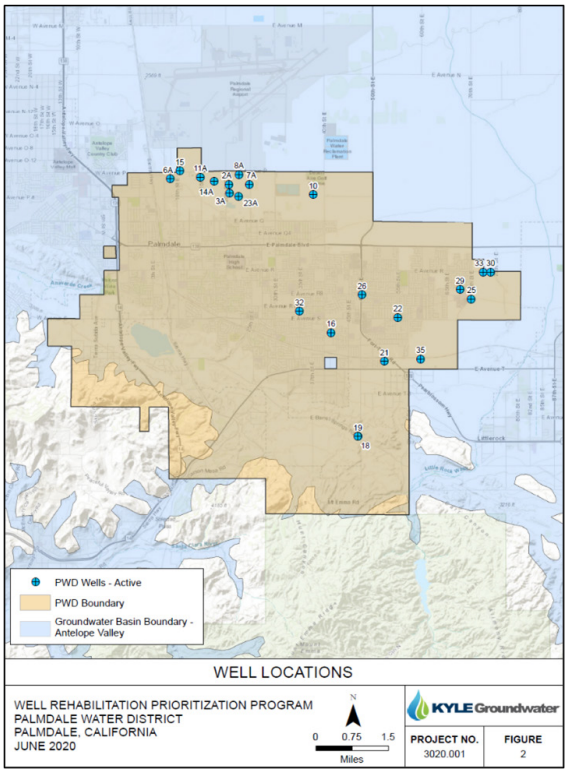
1014-064

Palmdale Water District Well Rehabilitation Prioritization Program

City of Palmdale, CA

Palmdale Water District (PWD) meets the water demand of its almost 28,000 service connections through a combination of treated surface water from the State Water Project (SWP), and groundwater pumped from water supply wells. PWD's twenty two (22) active groundwater production wells account for approximately 40 percent of water supplied to its customers, the majority of which is pumped directly into the distribution system following disinfection. PWD's primary goal for this project is to prepare a roadmap to maximize local water supply sources and reduce reliance on costly imported water. This planning document will guide PWD in decision making for future well maintenance and well replacement projects designed to optimize and maintain production capacity. It will identify those wells that are in most need of rehabilitation and that offer the best chance for success at the lowest cost. It will also identify wells that should be operated to failure while planning for replacement.

KGI developed a rehabilitation and replacement prioritization plan for the PWD well field, consisting of the previously mentioned 22 active groundwater production wells. This project involved a thorough evaluation and ranking of each well as to overall condition, rehabilitation feasibility and estimated remaining well life. Additional components of the project included development of modular technical specifications for well rehabilitation, and rehabilitation of up to three wells, including technical specifications and bid support.



Project Relevance

- Detailed well field condition assessment
- Preparation of detailed well histories
- Estimated useful well life
- Prioritized list of well replacements
- Prioritized list of well

Percentage of Work Hazen Responsible for

0%. Work performed by Kyle Groundwater (Russ Kyle)

Total Project Cost

Design: $140K
Construction: NA

Project Dates

2020 - 2021

Schedule and Budget

Give a brief statement of the firm's adherence to the schedule and budget for each project.

Project Team

Russ Kyle

Reference

Mr. Scott Rogers, PE
Palmdale Water District
661-456-1020
srogers@palmdalewater.org

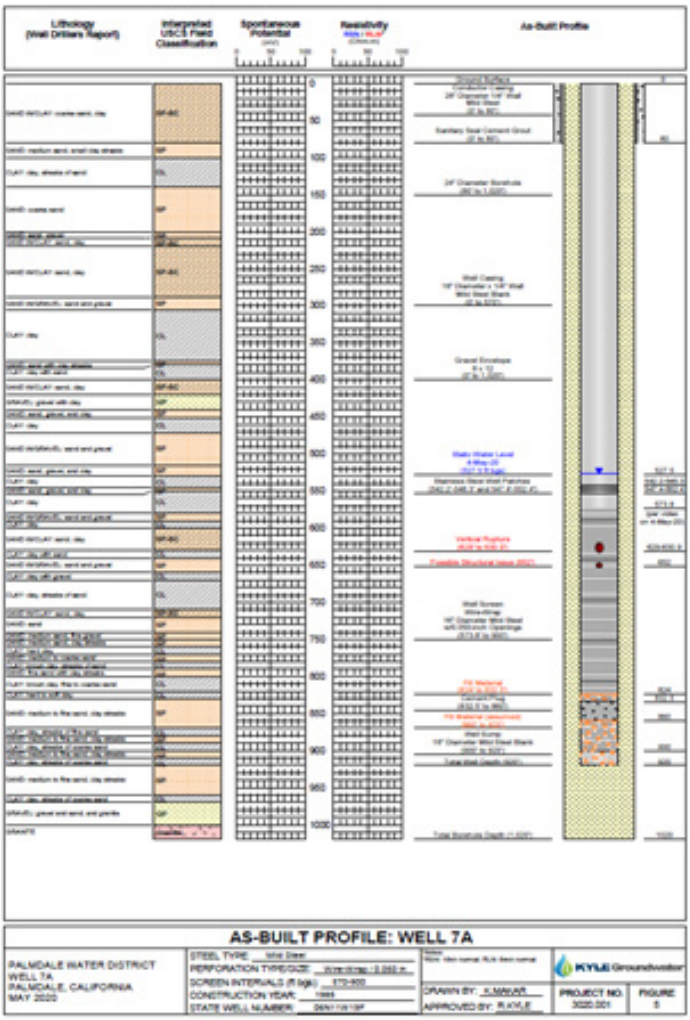
1014-064

Palmdale Water District Repair, Rehabilitation, and Redevelopment of Well 7A

City of Palmdale, CA

The Palmdale Water District (PWD) discovered severe structural issues within Well No. 7A during pump maintenance and requested KGI to evaluate the condition of the well and provide recommendations as to possible actions that could be undertaken to extend the remaining life of the well. Following downhole video and CITM surveys of the well, the wire-wrap well screen was observed to be in relatively poor condition, exhibiting some heavily corroded rods, and appearing moderately to heavily clogged with corrosion byproducts and bacterial growth. A large vertical rupture was evident within the well screen along with several other holes and structural abnormalities.

KGI recommended installation of a well liner, gravel envelope, and annular seal, followed by vigorous well redevelopment in an effort to provide additional operational life and enable advanced planning for an ultimate well replacement. KGI is currently providing construction management and inspection services during installation of the liner.



Project Relevance

- Well condition assessment
- Design
- Technical specifications
- Bid support and evaluation
- Construction management and inspection

Percentage of Work Hazen Responsible for

0%. Work performed by Kyle Groundwater (Russ Kyle)

Total Project Cost

Design: $38K
Construction: $193K

Project Dates

2020 - 2021

Schedule and Budget

KGI completed the project within budget and in a timely manner. There was no set schedule for completion.

Project Team

Russ Kyle

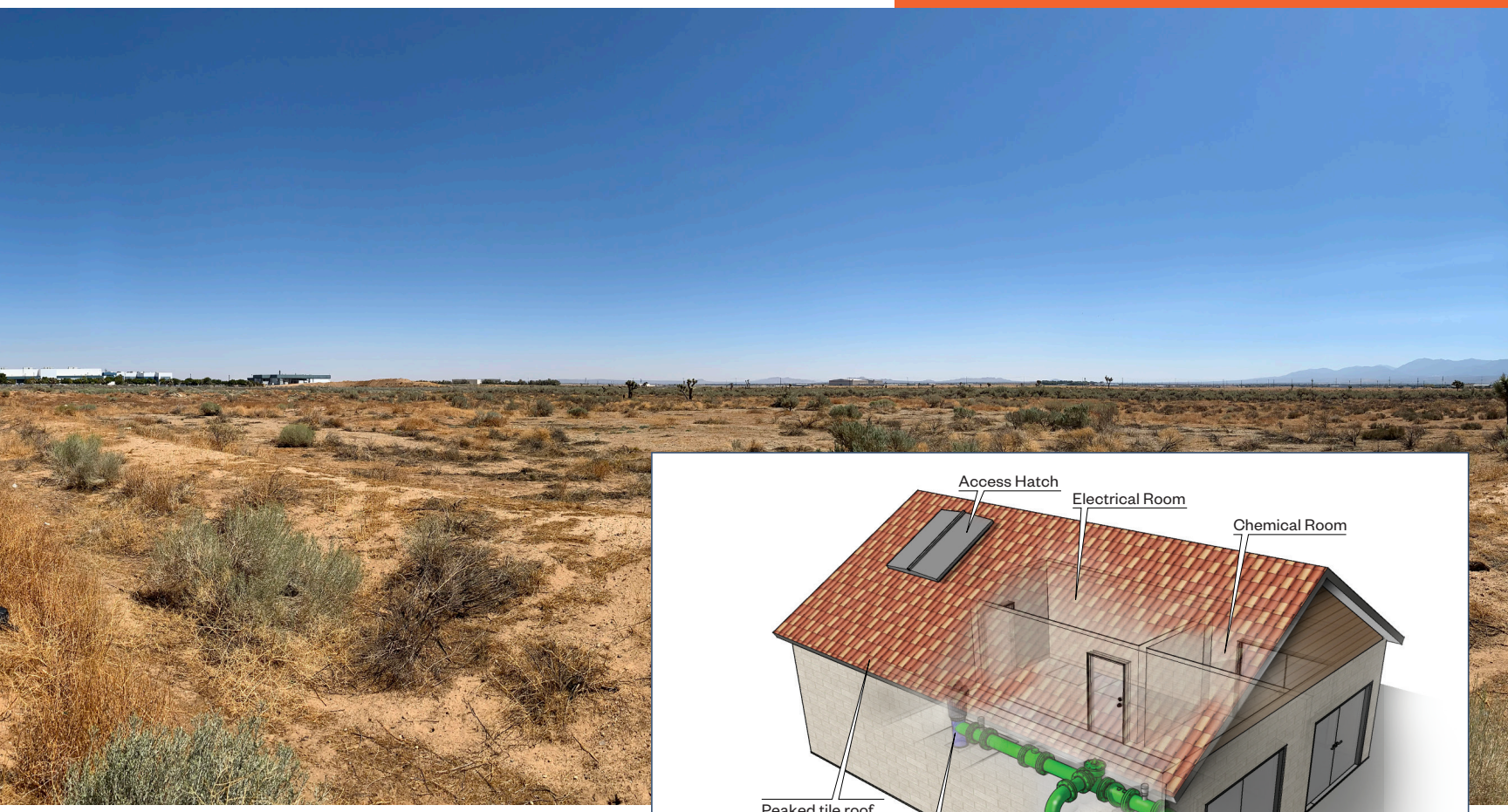
Reference

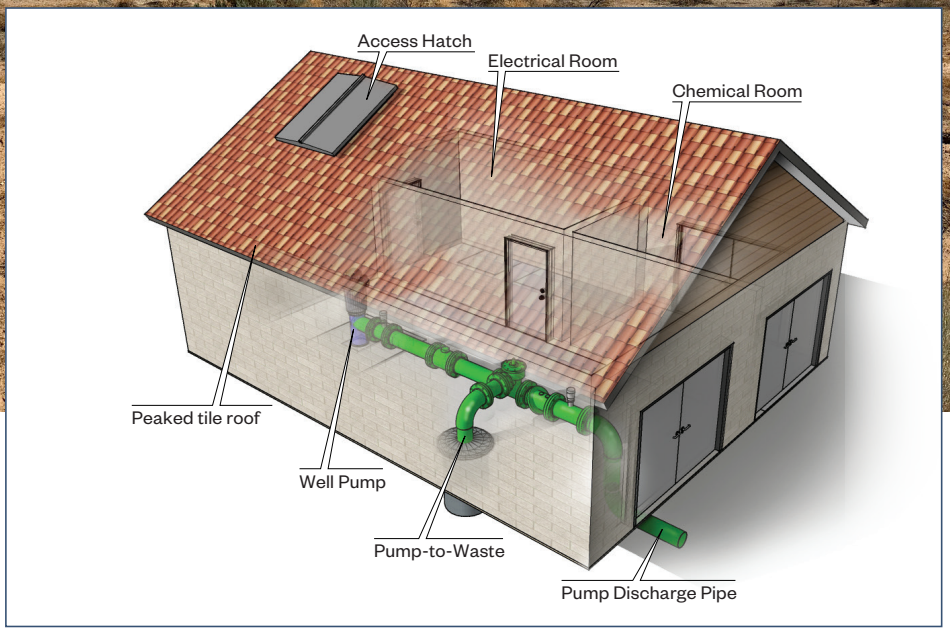
Mr. Scott Rogers, PE
Palmdale Water District
661-456-1020
srogers@palmdalewater.org

1014-064

Section 3

Project Understanding

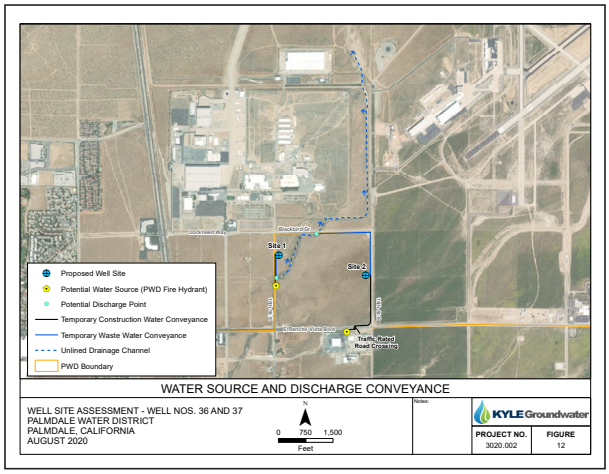




Section No. 3

Project Understanding

With our team members already have performed the preliminary study recommending this project, we have an intimate understanding of the project including the District's objectives and potential challenges that we will address and mitigate.



In accordance with the Well Rehabilitation Prioritization Plan prepared by Kyle Groundwater, the Palmdale Water District (PWD) has selected Well 36 as the next well to be developed to expand PWD's potable groundwater supply. In the Well Site Assessment Report, Kyle Groundwater investigated two potential sites for Well 36 to be located in the vicinity of a proposed solar energy farm. In their report, Kyle Groundwater recommended Site 1 on the western side of the parcel primarily due to a nearby source of construction water from an existing hydrant and a nearby stormwater runoff drainage channel for disposal of water from well development and future pump-to-waste activities. However, the soils at Site 2 located to the east are likely to result in higher aquifer transmissivity that may lead to a higher yield well. In addition, Site 1 is located directly in the flight path of the Palmdale Airport which could be a permitting challenge with the Los Angeles World Airports to conduct drilling activities.

At Site 2, there are two options for discharge of waste fluids generated during well development and future pump-to-waste operations:

- Into a dry well or open lot adjacent to the site. This will require permission from adjacent landowners and construction of temporary conveyance infrastructure.
- Into the unlined drainage channel located to the northwest side of the solar farm parcel. This would require installation of 2,800 feet of pipe.

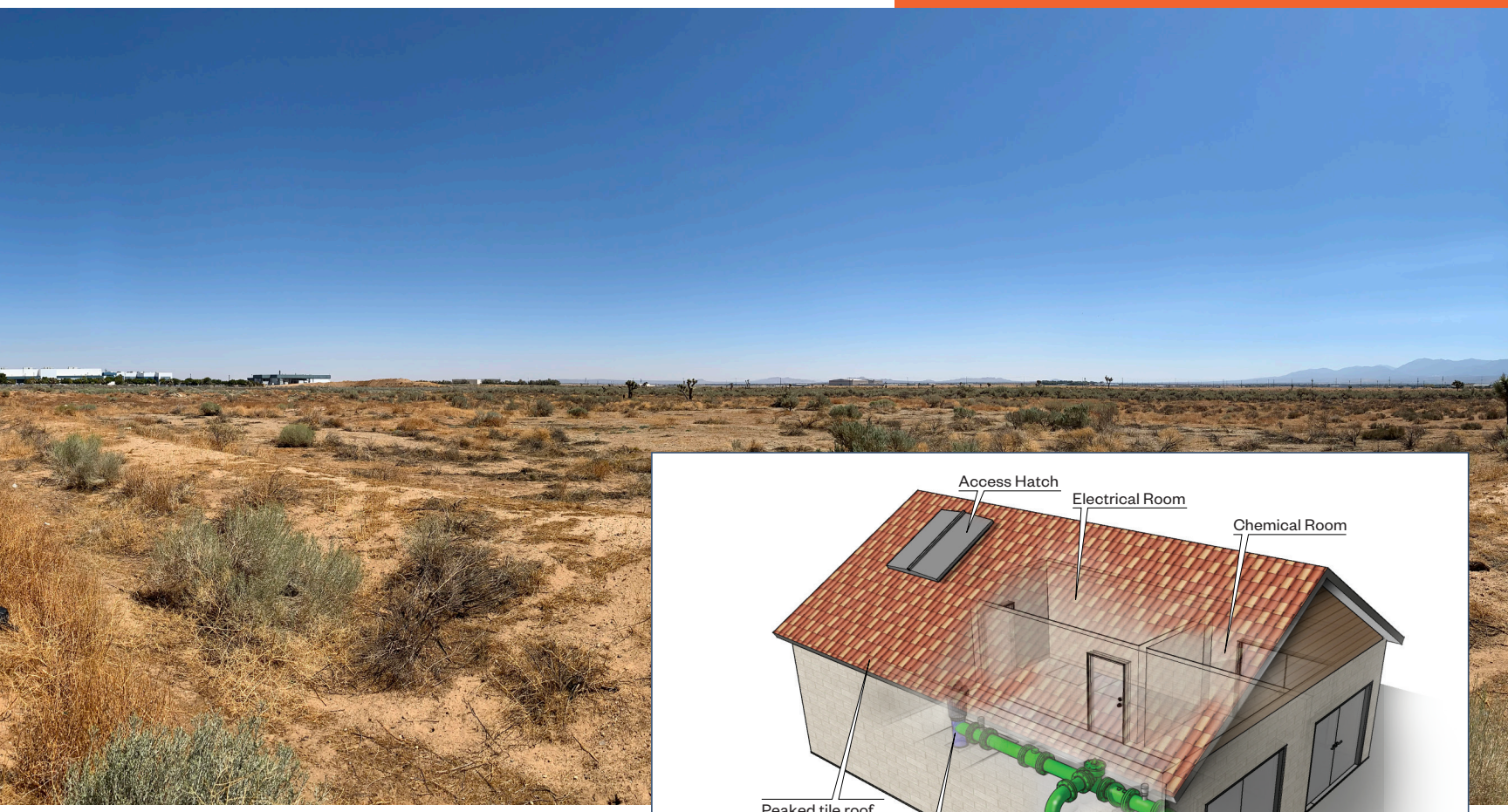
In either option, permitting requirements for NPDES, encroachment and right-of-entry will need to be met. In addition, the drainage channel runs adjacent to Air Force Plant 42 operated by Lockheed. The channel terminates at a percolation basin also located near the base. Therefore, any potential approvals from Lockheed would need to be verified.

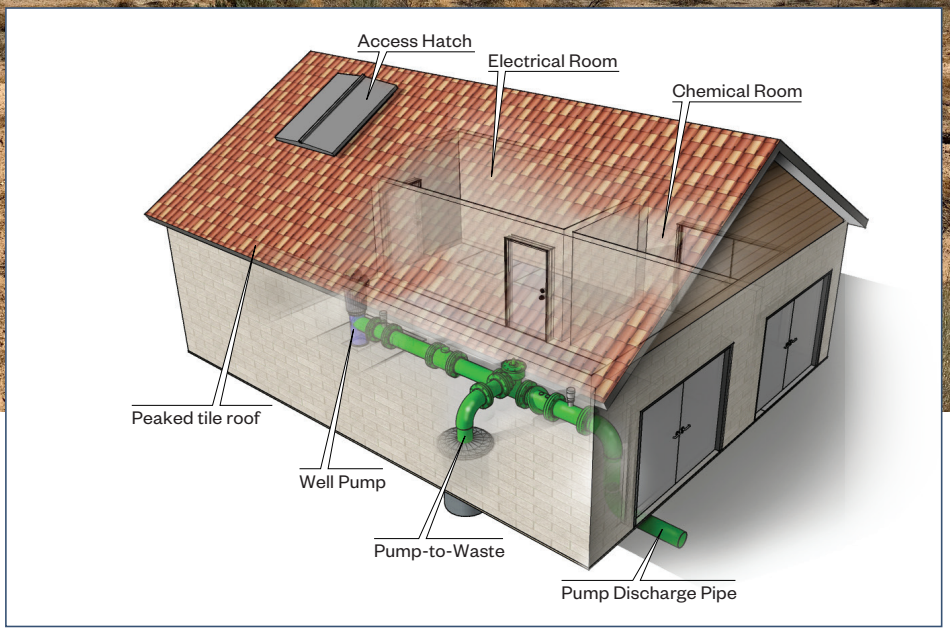
For construction water, the closest hydrant is over 2,000 feet to the south. Either a temporary pipeline would need to be installed or PWD may opt to install a hydrant adjacent to the site.

Finally, due to the proximity to the Palmdale Airport, permits may be needed from LAWA for the construction and drilling activities including flags and warning lights.

Section 4

Project Staffing and Availability



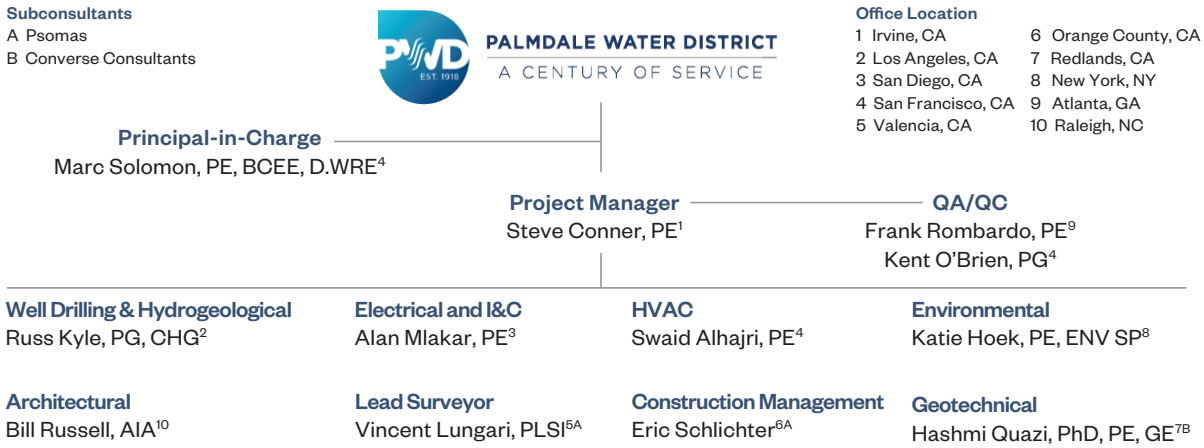


Section No. 4

Project Staffing and Availability

Our proposed team organizational chart is presented below.

The primary point of contact to administer this as-needed contract is Dave Jones, Vice President in our LA Office. He has been managing and overseeing water engineering contracts and projects in Southern California for nearly 20 years. Dave will be responsible for making sure that the specific project managers assigned to task orders under this contract exceed the expectations of the District. As Principal-in-Charge, Marc Solomon provides an independent executive level contact to PWD to make sure that Hazen is delivering top quality and responsive engineering service.



Marc Solomon, PE, BCEE, D.WRE

Principal in Charge

Mr. Solomon's broad project experience has exposed him to all phases of project planning, environmental documentation, permitting, design, construction management, and operational reliability. Marc's diverse educational background and experience has allowed him to be involved in a wide range of projects encompassing water, environment, transportation, buildings, and energy markets. This unique and diverse experience enhances his project management abilities and his ability to work effectively with project teams and externally with elected officials, engineers, operators, contractors, and the general public.

Steve Conner, PE

Project Manager

Mr. Conner is a professional civil engineer with 26 years of experience in the planning and design of water and wastewater infrastructure including production wells, storage tanks, treatment systems, pipelines, booster stations, lift stations, and sewer facilities. Mr. Conner is responsible for project management, design supervision, contract administration, client interaction and development, and personnel management. His expertise includes complex pumping and piping system layout, hydraulic design, groundwater supply and treatment design, and construction phase assistance including start-up and operation of pumping and treatment facilities. Mr. Conner coordinates all engineering support disciplines (civil, architectural, structural, process, mechanical, electrical, and I&C) during project design and construction phases.

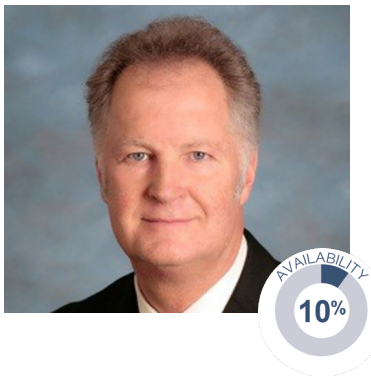
Frank Rombardo, PE

QA/QC

Mr. Rombardo is a process engineer whose responsibilities include performing water and wastewater treatment design and evaluations. He has served as project manager, process technical advisor and lead process engineer on several large design projects, treatability studies, plant evaluations, as well as plant upgrade/improvement projects. He also has experience with bench-scale, pilot-scale and full-scale testing at water treatment plants. In addition he has worked on process evaluations, planning studies, master plans, permitting, regulatory reviews and coordinating with regulatory agencies.

Mr. Rombardo has performed numerous water treatment plant process evaluations and has designed both new treatment plant and upgrades to existing facilities. He offers specialized expertise in water treatment plant optimization, evaluations and advanced technologies, including alternatives to chlorine gas disinfection and membrane filtration.

Mr. Rombardo's typically follows projects from infancy through construction completion by serving as project manager and lead process designer during design and serving as construction manager and/or lead design engineer during construction. This experience provides a unique perspective to design and brings value to projects by tying engineering and construction together for overall successful projects.

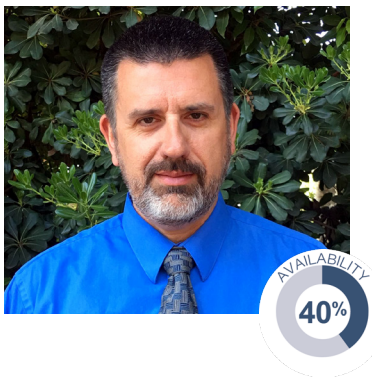


Kent O'Brien, PG, CEG

QA/QC

Mr. O'Brien is a Senior Associate with over 28 years' professional experience. He specializes in the planning and implementation of strategies to resolve groundwater supply problems. He combines hands-on experience in design and construction to cost effectively implement groundwater production systems and evaluate treatment options to improve water quality. He applies his experience with groundwater production and treatment systems in his preparation of geology, hydrogeology and water quality reports developed to support water supply environmental and permitting documents.

He has extensive experience in field operating procedures and data collection programs required for aquifer testing and water treatment pilot testing. He also has comprehensive knowledge of drilling techniques, well design, well installation, aquifer tests, groundwater monitoring programs, and sampling procedures. He has extensive experience in the collection and interpretation of hydrogeological data used for well siting analyses. In order to obtain reasonable permit conditions he works closely with the regulatory agencies at the City / County level in addition to the State agencies including the State Water Resource Control Board Division of Drinking Water (SWRCB-DDW) and the Regional Water Quality Control Boards (RWQCB).



Russ Kyle, PG, CHG

Well Drilling & Hydrogeological

Mr. Kyle has 23 years of experience with a wide variety of groundwater resource related projects for public clients within the western United States with a focus on groundwater resources development in Southern California. The scope of his technical experience includes groundwater basin evaluations, water supply studies, well siting investigations, artificial recharge feasibility evaluations, well field condition assessments, and well rehabilitation. He has been responsible for siting and installation of more than 150 water supply wells and 70 monitoring wells and exploratory borings, including management of field inspectors, coordination with drilling contractors and regulatory agencies, permitting, well design, and construction management. Mr. Kyle is currently working on three projects for Palmdale Water District, including a well rehabilitation and redevelopment prioritization planning document, a well site assessment and preliminary design study, and assessment, repair, and redevelopment of Well 7A.

Alan Mlakar, PE

Electrical and I&C

Mr. Mlakar serves as a Senior Principal Electrical and Instrumentation Engineer out of the San Diego, CA office. He has over 9 years in the Water/ Wastewater industry. He specializes in electrical and instrumentation design, electrical system studies, and engineering services during construction. This encompasses knowledge of electrical distribution systems, motor control centers, programmable logic control (PLC), process control related to water, wastewater and power projects.

Swaid Alhajri, PE

HVAC

Mr. Alhajri is a Senior Associate and Discipline Lead in the western region. He has a strong background in planning, design, and construction coordination. His experience includes treatment systems in the water and wastewater industry with a special emphasis on infrastructure improvements. Mr. Alhajri is also the firm's Western Region Building Mechanical Discipline Lead. He has a solid understanding of HVAC, plumbing, and fire-protection design systems within the water and wastewater industry. He is very knowledgeable in planning, construction document preparation, and construction support coordination.

Katie Hoek, PE, ENV SP

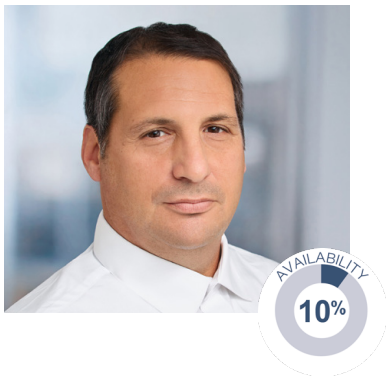
Environmental

Ms. Hoek's experience in environmental review and permitting spans over a decade. Her work focuses on identifying potential environmental impacts and working with the design team to minimize or mitigate these impacts. She has led complex permitting efforts through large-scale multi-phased projects and obtained fast-track permit updates due to unforeseen events on sites where permits had already been received. Ms. Hoek understands which permits to prioritize to keep projects on track. She has served in a number of key permitting and environmental roles for high profile water and wastewater projects.

Bill Russell, AIA

Architecture

Mr. Russell has extensive experience in the architectural design of water and wastewater treatment plants, maintenance buildings, laboratories, and other industrial facilities. As Architect, his responsibilities include preliminary and final design, technical specifications, cost estimation and project administration during construction. Mr. Russell utilizes computer applications during all phases of design.



Vincent Lungari, PLS

Lead Surveyor

Vincent Lungari, PLS has 31 years of experience providing professional land surveying services on residential and commercial construction projects. Prior to joining Psomas, Vincent was the sole proprietor of a land surveying company in New Jersey. He was responsible for business development, management of the office and field survey crews, and oversight of calculations and client deliverables. In his current role as Senior Project Surveyor, Vincent is responsible for managing and overseeing all phases of construction assignments including supervision of field and office support staff.

Eric Schlichter

Construction Management

Eric has 39 years of experience providing construction management, lead inspection, public relations, and office administrative services on major projects in the Southern California region, including roadways, public infrastructure and buildings, and highway and bridge construction. He is highly experienced in the oversight of numerous operations on large project sites and has excellent communication and documentation skills required for complex and multiple discipline operations. Eric has provided construction management and inspection services for numerous high profile projects. His extensive experience encompasses roadway, Caltrans, and various utility projects.

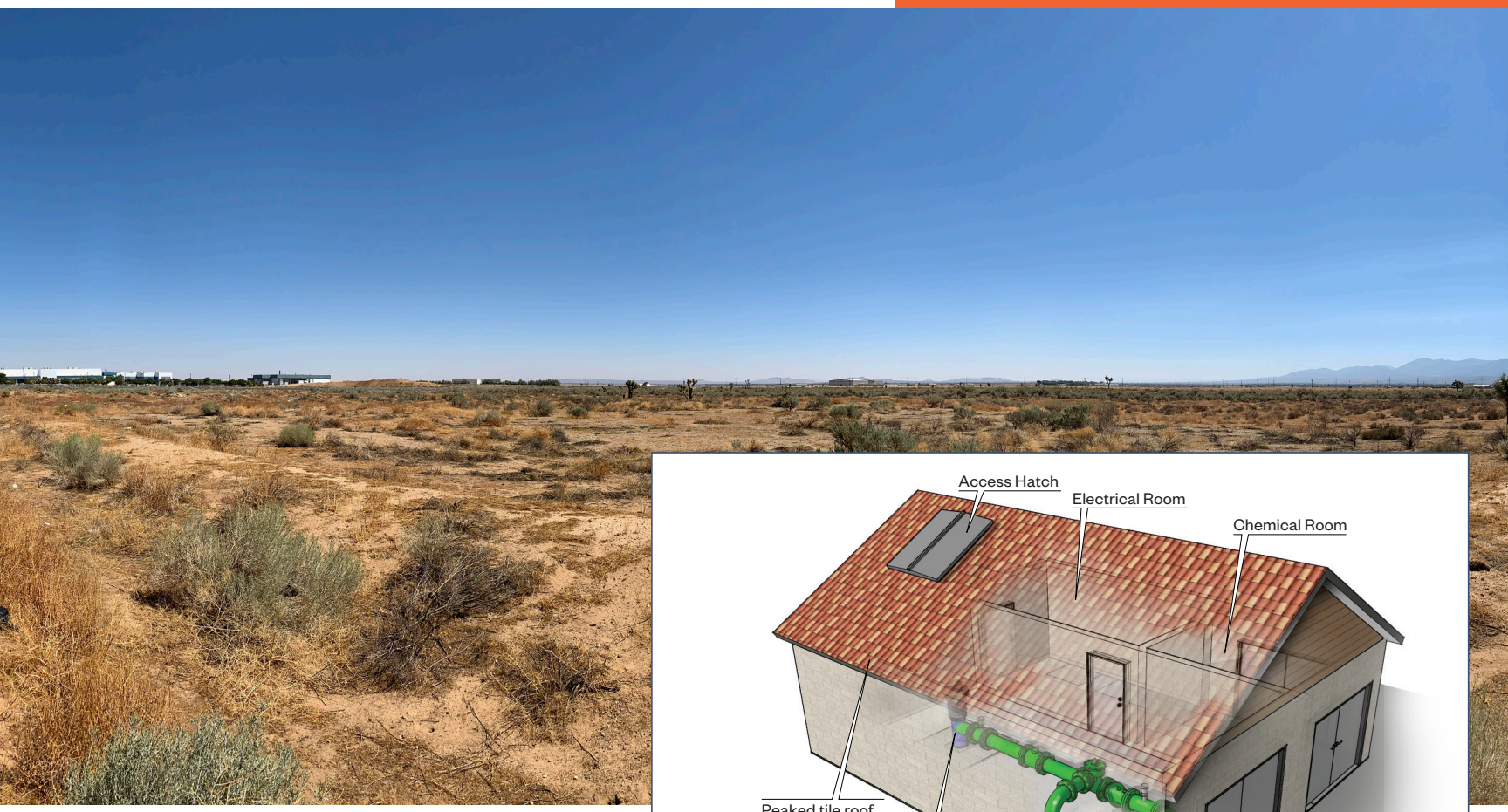
Hashmi Quazi, PhD, PE, GE

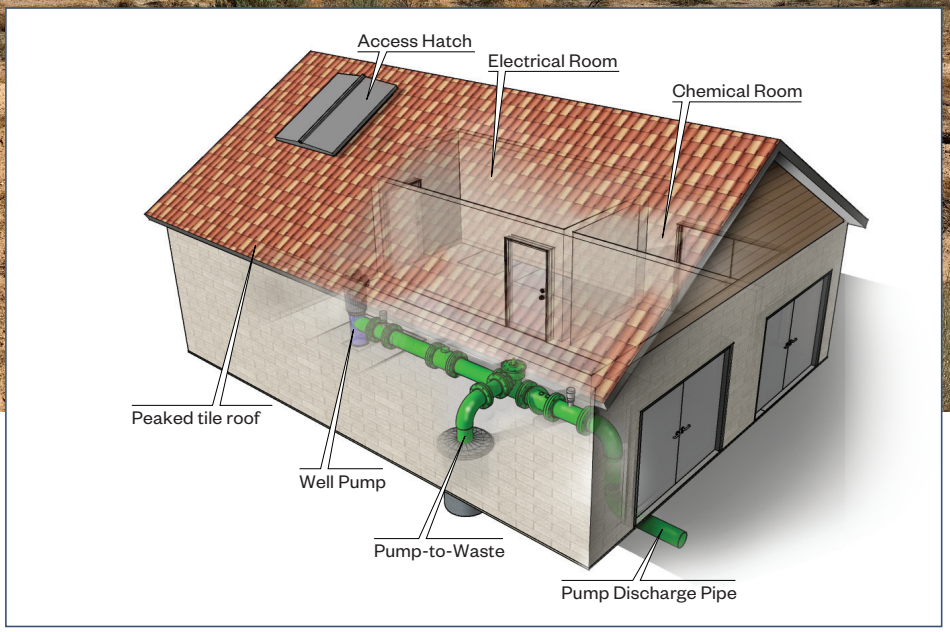
Geotechnical

Dr. Quazi has 34 years of experience providing geotechnical engineering services and has earned a reputation for providing quality work in an honest and ethical manner, on time and within budget. Dr. Quazi provides quality control, budget oversight, and technical assistance on various types of projects, including pipelines, water treatment plants, wells, reservoirs, booster pump station and other project types.

Section 5

Work Plan





Section No. 5

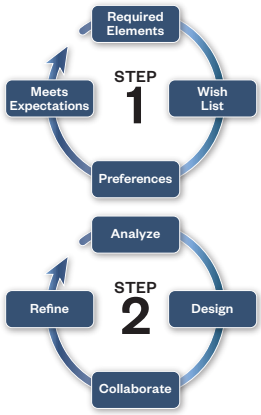
Work Plan

The Hazen Team understands the District's objectives of expanding the groundwater supply by installing new high-quality wells to provide reliable service for many years. This section presents our approach to the design and construction of Well 36. We will comply with the Scope of Services included in the RFP and have no exceptions.

Engaging the District in the Design Process

The design process involves two facets. One facet deals with meeting the requirements for proper equipment sizing, safety, operability, and code compliance. In a well design and equipping project, these items include proper sizing and selection of the well casing, pump, and motor; design of discharge and pump-to-waste piping to ensure the pump is operating on its curve within the preferred operating range; and required equipment clearances and adequate accessibility.

We will engage and work side-by-side with the District throughout the duration of this project.

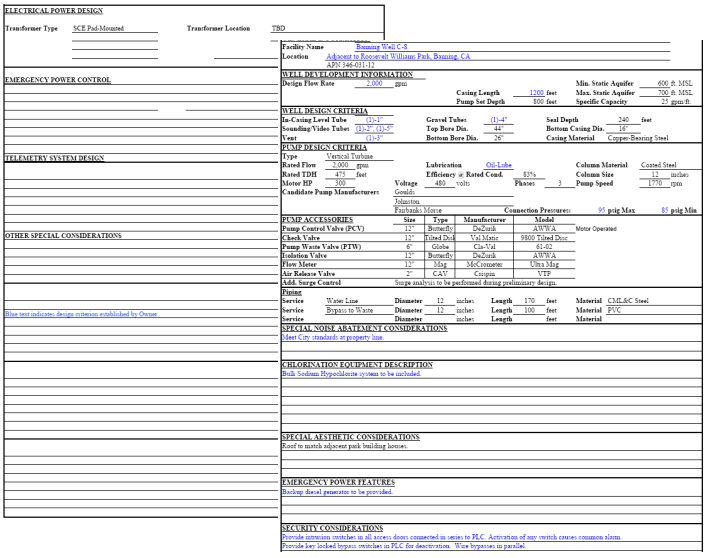


The other facet of design is the preferential one. Preferential items could include piping material, pump-to-waste valve type, pump start-up sequence and check valve type, pump lubrication system, isolation valve type, flow meter type and location, and building type.

The first step in our technical approach involves following an iterative process of identifying the required elements for the project, then working with District staff to identify wish list and preference items. We then make sure each of the project components we have identified fully meet the expectations of the District and the requirements of the project. For example, if the District is planning on upgrading their SCADA system in the near future, this can be incorporated into the well control design.

Once we have identified all of the components for the project (both required and preference items), we then proceed into analysis and design. The second step begins in preliminary design and continues into final design.

In order to ensure that all require-ments and District preferences are captured early during design, Hazen will summarize the well design criteria and equipment preferences in a Project Data Sheet that has been developed from past projects. The data sheet will be substantially filled out prior to and discussed during the kick-off meeting as the starting point of collaboration with District staff.



ELECTRICAL POWER DESIGN
Transformer Type: SCE Pad-Mounted — Transformer Location: TBD
EMERGENCY POWER CONTROL
TELEMETRY SYSTEM DESIGN
OTHER SPECIAL CONSIDERATIONS
Blue text indicates design criterion established by Owner.

Facility Name: Banning Well C-8
Location: Adjacent to Roosevelt Williams Park, Banning, CA
APN 346-031-12

WELL DEVELOPMENT INFORMATION
Design Flow Rate: 3,000 gpm
Casing Length: 1200 feet — Pump Set Depth: 800 feet
Min. Static Aquifer: 600 ft MSL — Max. Static Aquifer: 700 ft MSL — Specific Capacity: 25 gpm/ft

WELL DESIGN CRITERIA
In-Casing Level Tube: (1)-1" — Sounding/Video Tubes: (1)-2", (1)-5" — Vent: (1)-3"
Gravel Tubes: (1)-4" — Top Bore Dia.: 44" — Bottom Bore Dia.: 26"
Seal Depth: 240 feet — Bottom Casing Dia.: 16" — Casing Material: Copper-Bearing Steel

PUMP DESIGN CRITERIA
Type: Vertical Turbine
Rated Flow: 3,000 gpm — Rated TDH: 475 feet — Motor HP: 300
Candidate Pump Manufacturers: Goulds; Johnston; Fairbanks Morse
Lubrication: Oil-Lube — Efficiency @ Rated Cond.: 85% — Voltage: 480 volts — Phases: 3
Column Material: Coated Steel — Column Size: 12 inches — Pump Speed: 1770 rpm
Connection Pressures: 95 psig Max — 85 psig Min

PUMP ACCESSORIES	Size	Type	Manufacturer	Model	
Pump Control Valve (PCV)	12"	Butterfly	DeZurik	AWWA	Motor Operated
Check Valve	12"	Tilted Disk	Val Matic	9800 Tilted Disc	
Pump Waste Valve (PTW)	6"	Globe	Cla-Val	61-02	
Isolation Valve	12"	Butterfly	DeZurik	AWWA	
Flow Meter	12"	Mag	McCrometer	Ultra Mag	
Air Release Valve	2"	CAV	Crispin	VTP	
Add. Surge Control	Surge analysis to be performed during preliminary design.				

Piping
Service: Water Line — Diameter: 12 inches — Length: 170 feet — Material: CML&C Steel
Service: Bypass to Waste — Diameter: 12 inches — Length: 100 feet — Material: PVC
Service: — Diameter: inches — Length: feet — Material:

SPECIAL NOISE ABATEMENT CONSIDERATIONS
Meet City standards at property line.

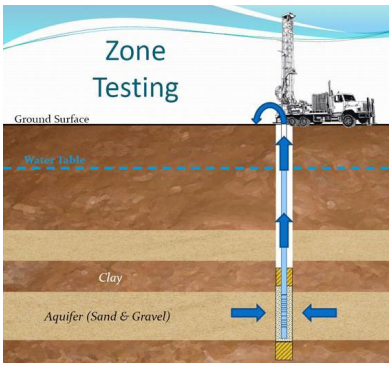
CHLORINATION EQUIPMENT DESCRIPTION
Bulk Sodium Hypochlorite system to be included.

SPECIAL AESTHETIC CONSIDERATIONS
Roof to match adjacent park building house.

EMERGENCY POWER FEATURES
Backup diesel generator to be provided.

SECURITY CONSIDERATIONS
Provide intrusion switches in all access doors connected in series to PLC. Activation of any switch causes common alarm.
Provide key locked bypass switches in PLC for deactivation. Wire bypasses in parallel.

Improving water quality adds to the considerations for pump placement and well design. During well development, variations in water quality within the different aquifer zones will be evaluated. The design to the well and position of the pump intake will be used to balance the best water quality with the pumping rate requirements. Hazen will also consider more advanced options for control of water quality such as inflatable packers to selectively pump from aquifer zones with the best water quality. Hazen's hydrogeologists have significant local experience with the water quality issues in the Palmdale area.

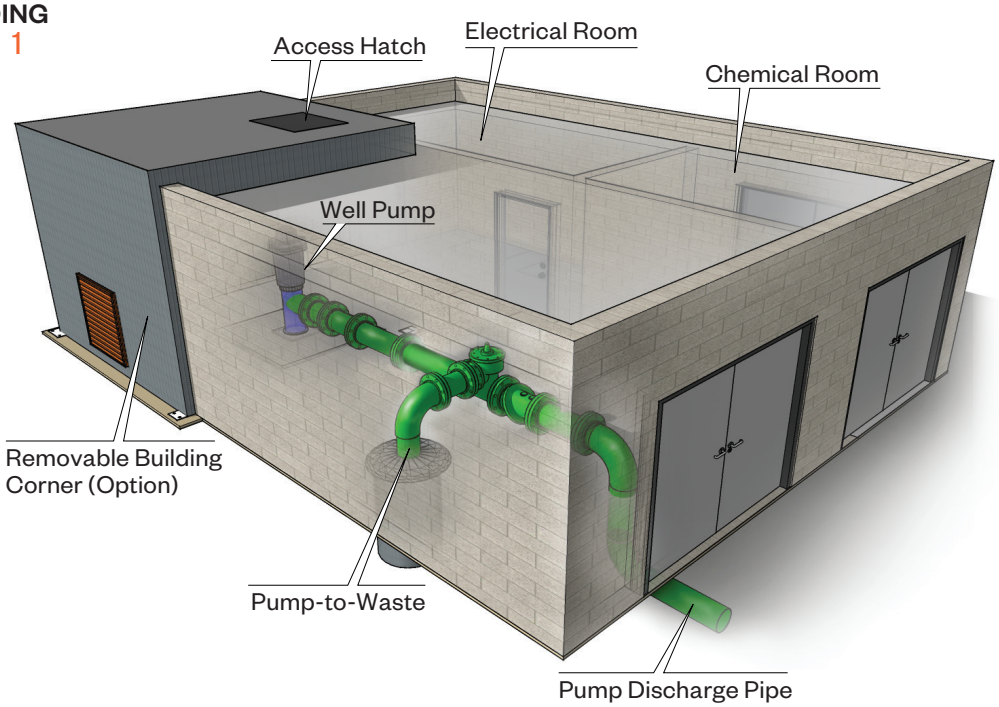


Two potential well building concepts have been developed as shown in the following figures below. The ultimate building configuration will be developed based on District preferences for cost, accessibility, and impact to the surrounding community.

Well Building Objectives

- Protect equipment from elements
- Provide security
- Provide accessibility for well maintenance
- Maintain equipment spacing requirements
- Minimize sound and visual impacts to community

WELL BUILDING
OPTION 1



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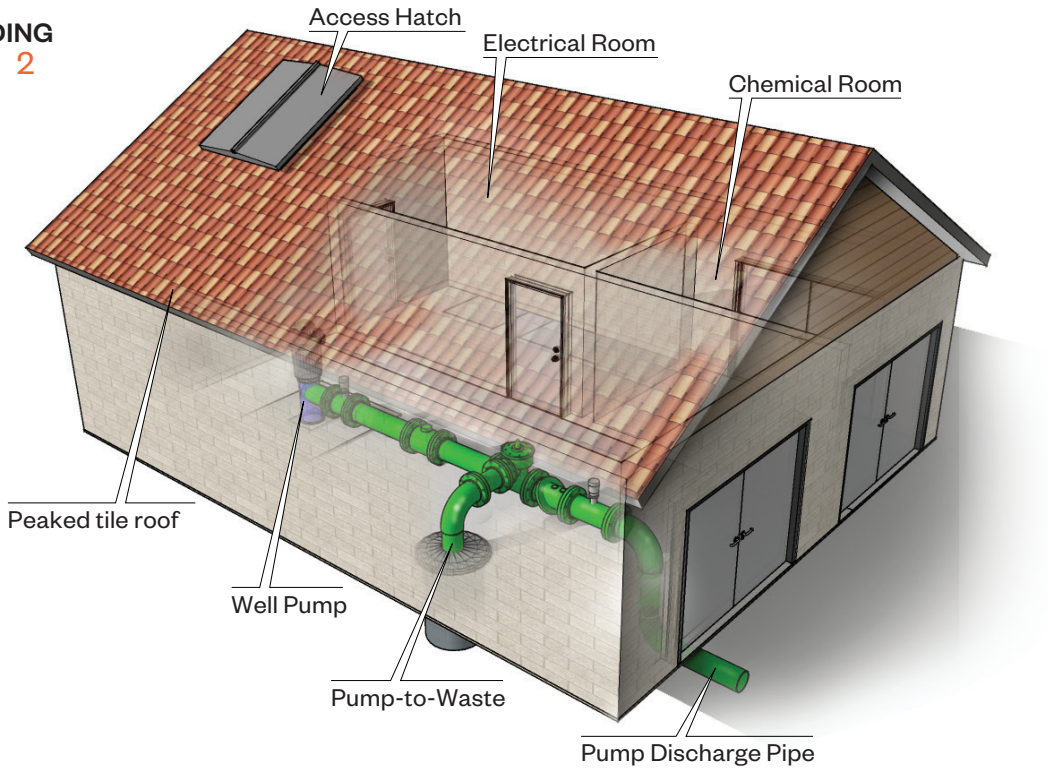
WELL BUILDING
OPTION 2



Well Operational Considerations

How will Well 36 operate during periods of low demand?

A key to project success is to ensure proper design of equipment and controls for pumping into a system with multiple wells. Operating a high capacity well within a system that contains multiple sources of water can present challenges that need to be addressed to prevent:

- Over pressurization
- Pressure surges
- Well operating too far right on the curve
  - Low efficiency
  - Cavitation
  - Air Entrainment
- Well operation too far left on curve
  - Low Efficiency
  - Bearing Damage
  - Impeller Damage

1014-064

Overall system hydraulic capacity, length of distribution pipe to storage, and variability of number of other wells operating can greatly affect the operating conditions for the new high capacity well. Pump selection needs to consider the entire operating range to maximize the efficiency, but operational controls may be required to keep the pump operating within its most efficient operating range. During preliminary design, the Hazen Team will work with the District to identify and provide solutions for the design challenges. The following table identifies challenges and solutions associated with operating a high capacity well during periods of low demand.

Challenge	Solution
Over Pressurization	• Install pressure relief valve that discharges to the percolation pond. • Install variable frequency drive to allow pump to adjust to changing demands. • Install a surge tank or hydropneumatic tank to give more time for variable frequency drive to adjust to a rapid change in demand.
Pressure surges	• Install surge tank to mitigate surges during pump trips. • Install variable frequency drive or solid-state controller with torque controlled starting and stopping to prevent surges during pump startup and shutdown.
Well operation too far left on curve	• Ensure pump selection is designed to accommodate maximum system pressures with an allowance for future increased drawdown
Well operation too far right on curve	• Install variable frequency drive to allow pump to better match system demand. • Install throttling valve to keep pump from over-pumping.

Potential Cost Saving Measures and Project Enhancements

This project presents some opportunities for capital cost saving measures.

Hazen will evaluate these value engineering items with District staff to ensure that the District's performance expectations are in line with the District's budget for construction. Operational efficiencies will be realized with proper system curve development and pump selection as well as the possible use of variable frequency drive control.

Potential Capital Cost Saving Measures

- Dual casing material
- Pre-cast concrete vs. CMU block building
- On-site pump-to-waste pond
- Temporary development water pond

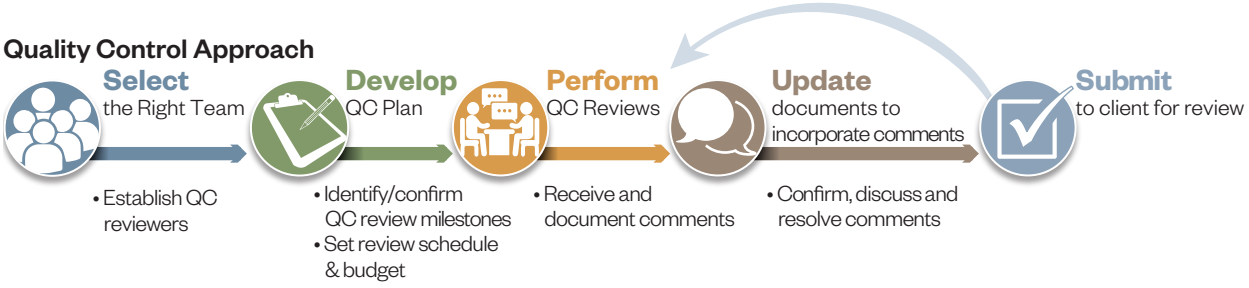
Implementation

Project Management and Communication. Hazen utilizes a team approach for project delivery with Steve Conner as Hazen's Project Manager who will be your day-to-day point of contact for this project. Steve will also be responsible for overseeing the project delivery and coordination of assigned tasks to the team. Marc Solomon will be our Principal-in-Charge, who is directly responsible to the client for the performance of the office and firm. We maintain close communication with our clients throughout our projects, not only discussing technical issues, but making sure we are on track with deliverables and budget. We use a variety of project management tools to track budgets, schedules, and to ensure effective communication throughout the duration of the project.

Progress Reporting. Proper reporting of progress is essential to maintaining the project schedule and cost as well as early identification of any issues which may lead to scope, cost, or schedule variances. Steve will track the schedule and budget of the work. We utilize several management tools including critical path scheduling, budget projections, and monthly project budget updates, to ensure that high quality deliverables are submitted on time and within budget. For this project, Hazen proposes the following approach to progress reporting:

- **Monthly Progress Reporting** - A monthly Progress Report will be submitted by Hazen. The Progress Report will include information related to work completed that month, work expected for the next month, important up-coming milestones and updates on schedule and budget. The actual percent complete, budget expended and any scope, budget or schedule issues for each task will be included.
- **Monthly Progress Meeting** – Monthly progress meetings will be attended by Steve, Russ amd other team members as required. The meetings will include discussion of work completed, work planned, and any variances in schedule or cost and potential mitigation efforts.

During the design, Hazen proposes monthly meetings with District staff including Engineering and Operations to discuss project progress either in-person or via conference calls utilizing screen sharing software. Meeting minutes will be circulated for concurrence. Hazen also utilizes Share-Point, a web-based application that can integrate with Microsoft Office and can also be used simply for file storage and transfer. It allows for live file editing by multiple parties for more dynamic interaction between the District and Hazen.



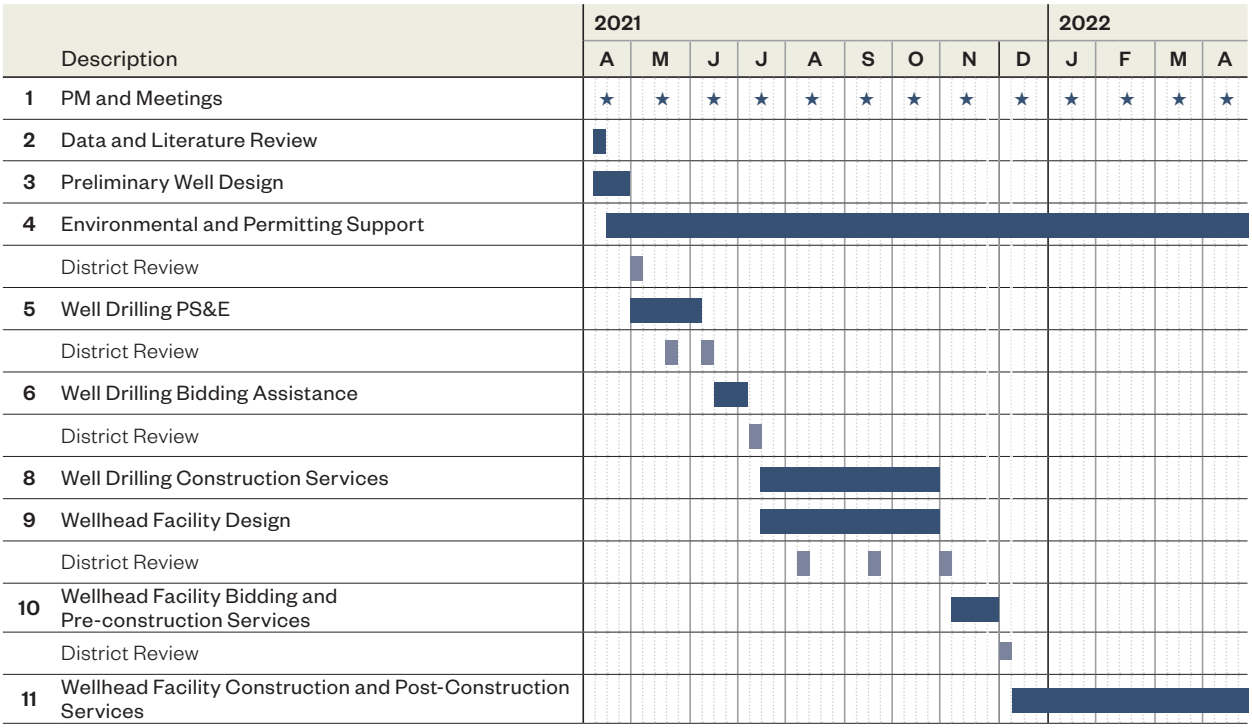
Quality Assurance. Hazen adheres to corporate Project Quality Assurance guidelines that outline policies and procedures required for execution of all projects. However, quality doesn't enter our projects simply as a result of any company procedures; it is an attitude within each of our staff about providing the highest quality work to our clients while remaining within our budgetary constraints. To support this commitment, Hazen has developed a Quality Assurance Policy Manual to provide guidance to staff during the execution of projects undertaken by the Firm. The Manual defines our corporate Project Quality Control Program. In accordance with Hazen's QA Policy Manual, QC reviewers should be independent of the design process, so that reviews have a broad perspective. Hazen performs internal QC reviews prior to each submittal to ensure quality deliverables to the District's satisfaction. Hazen also conducts constructability reviews along with safety reviews in accordance with Cal/OSHA standards. Designs will be done in accordance with District Standard Specifications, Standard Specifications for Public Works Construction (Greenbook), and in accordance with local, state, and federal requirements. Built into each budget and schedule is time to complete a quality assurance and quality control review for each project deliverable.

Schedule

Hazen's proposed schedule is shown below. This schedule is very aggressive in response to the District's desire to have the well operational in the Spring of 2022. Based on our past experience delivering similar types of projects, a project like this would normally take 16 months. However, it can be compressed to 12 months assuming the following:

- Notice to proceed will be on April 12, 2021.
- Design of the wellhead facilities will begin early based on an assumed flow capacity of the well pumps. Should the well development result in a different capacity, then there will be a change order to correct the size of the pumps.
- The District will be able to expedite the bid and award phases of the well drilling and wellhead facility construction contracts as shown in the schedule.
- District review periods will be limited to one-week.

Project Schedule ■ Main Task Duration ■ District Review ★ Meetings



Hazen Team Roles

Hazen has assembled a highly qualified team with extensive experience in working with the District and the Palmdale area. The following presents a breakdown of the work assigned to Hazen as prime and our subconsultants:

- Project Management (Task 1) - Hazen
- Well Design and Drilling – Kyle Groundwater
- Full-Time Construction Management - Psomas
- Site Survey - Psomas
- Geotechnical Investigation - Converse

Our fee estimate included in our proposal presents a detailed breakdown of the estimated hours and cost by firm to complete the Scope of Services.

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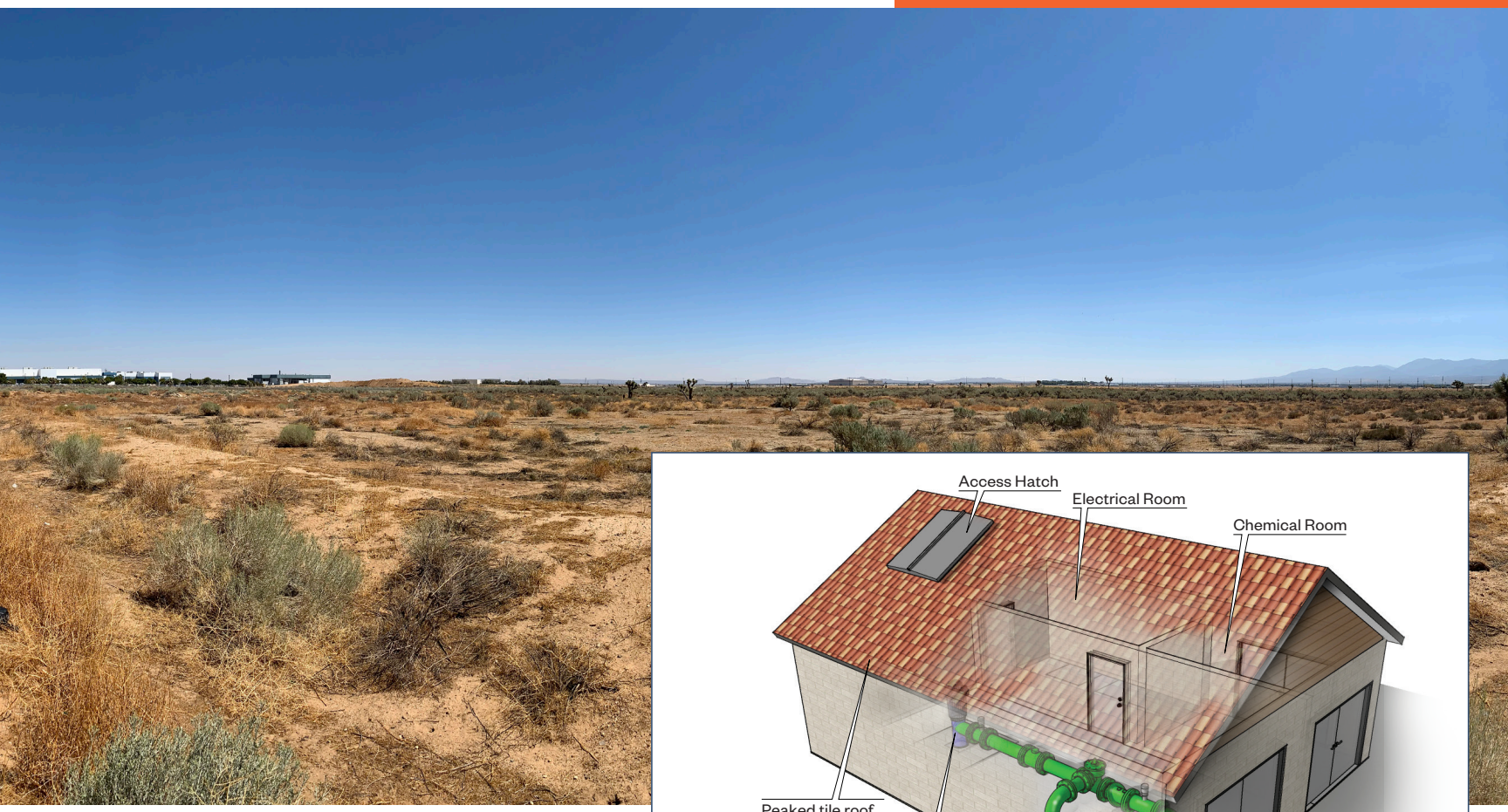
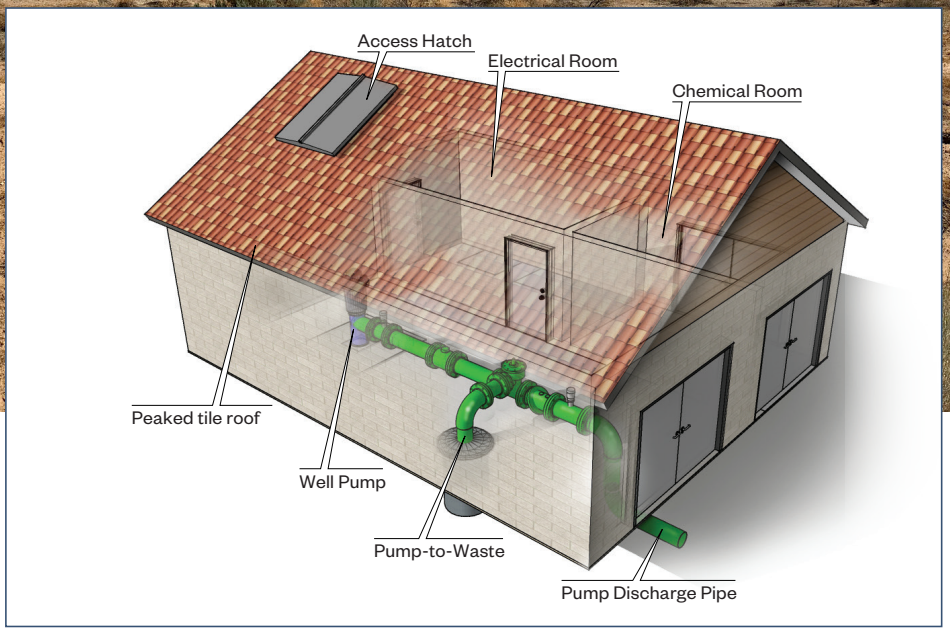
Section 6

Unique Qualities or Qualifications





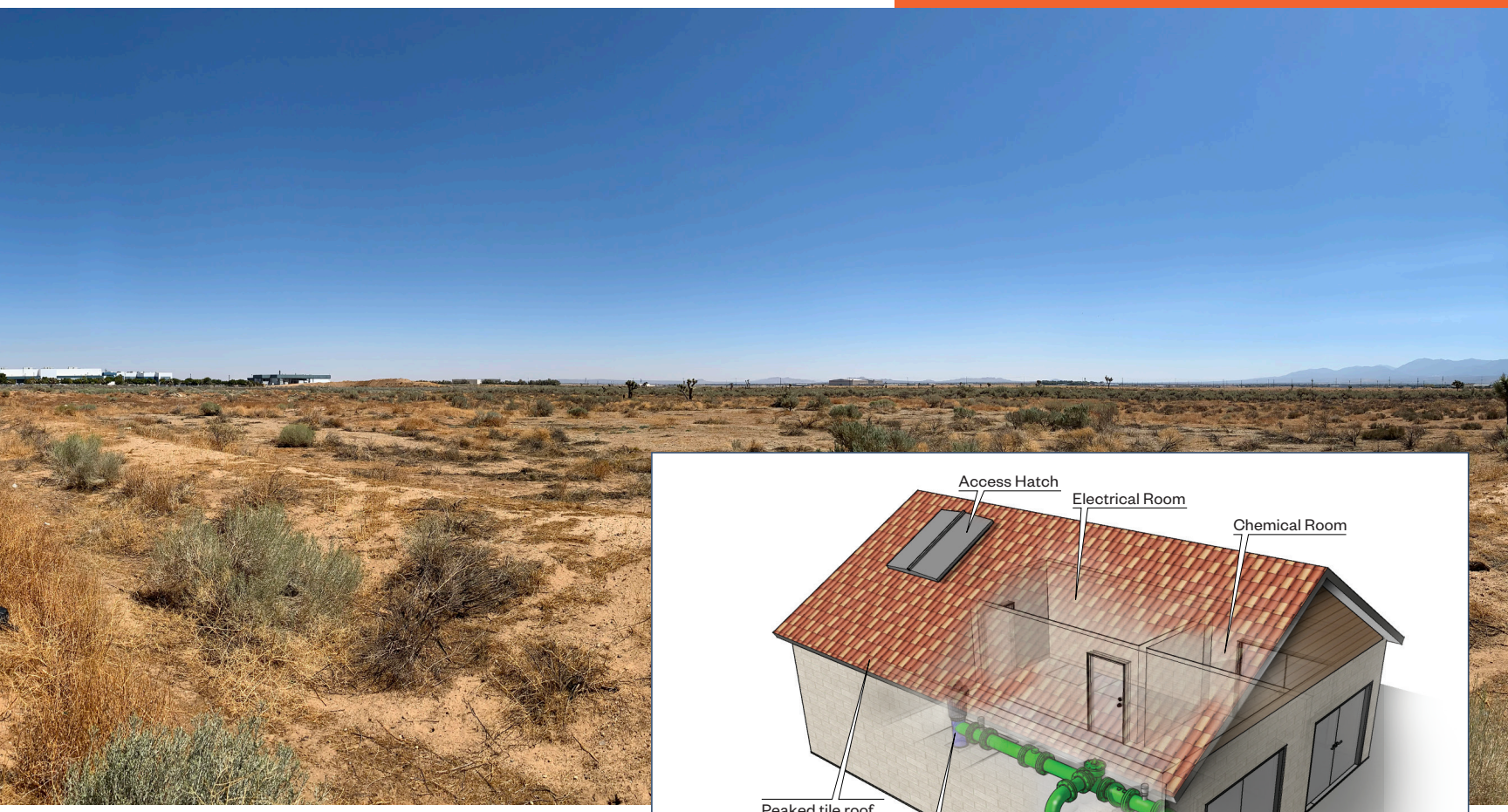
Section No. 6

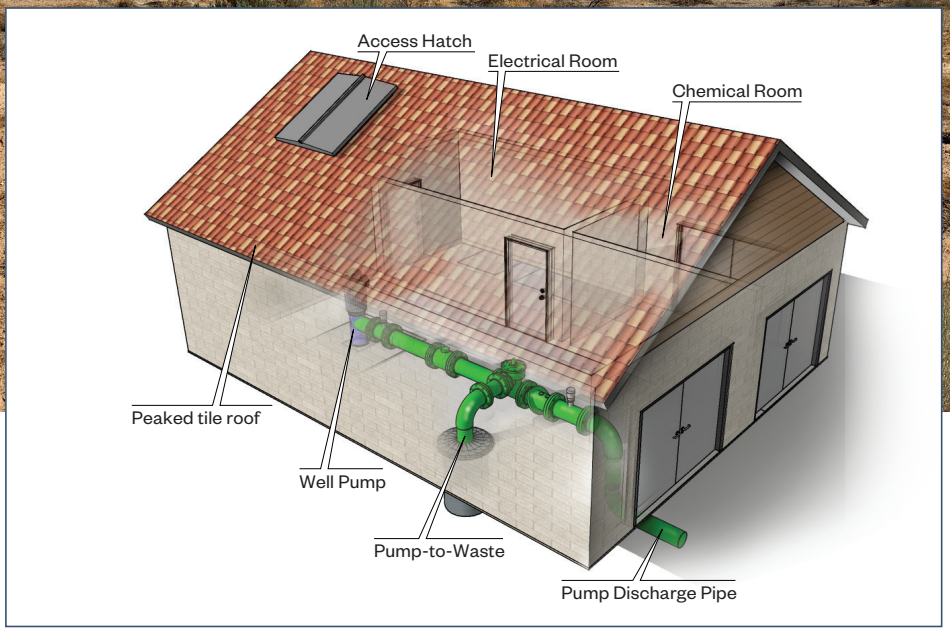
Unique Qualities or Qualifications

Our team is unique because it includes Kyle Groundwater who completed the 2020 PWD Well Site Assessment for Wells 36 and 37. The work that Kyle Groundwater performed for the assessment provides a strong technical foundation for this project including hydrogeological analysis, groundwater quality analysis, preliminary well design criteria, and construction logistics analysis. In addition, Hazen and Kyle Groundwater have a well-established productive working relationship based on similar projects as shown in Section 2 – Qualifications of Firm of this proposal.

Section 7

References





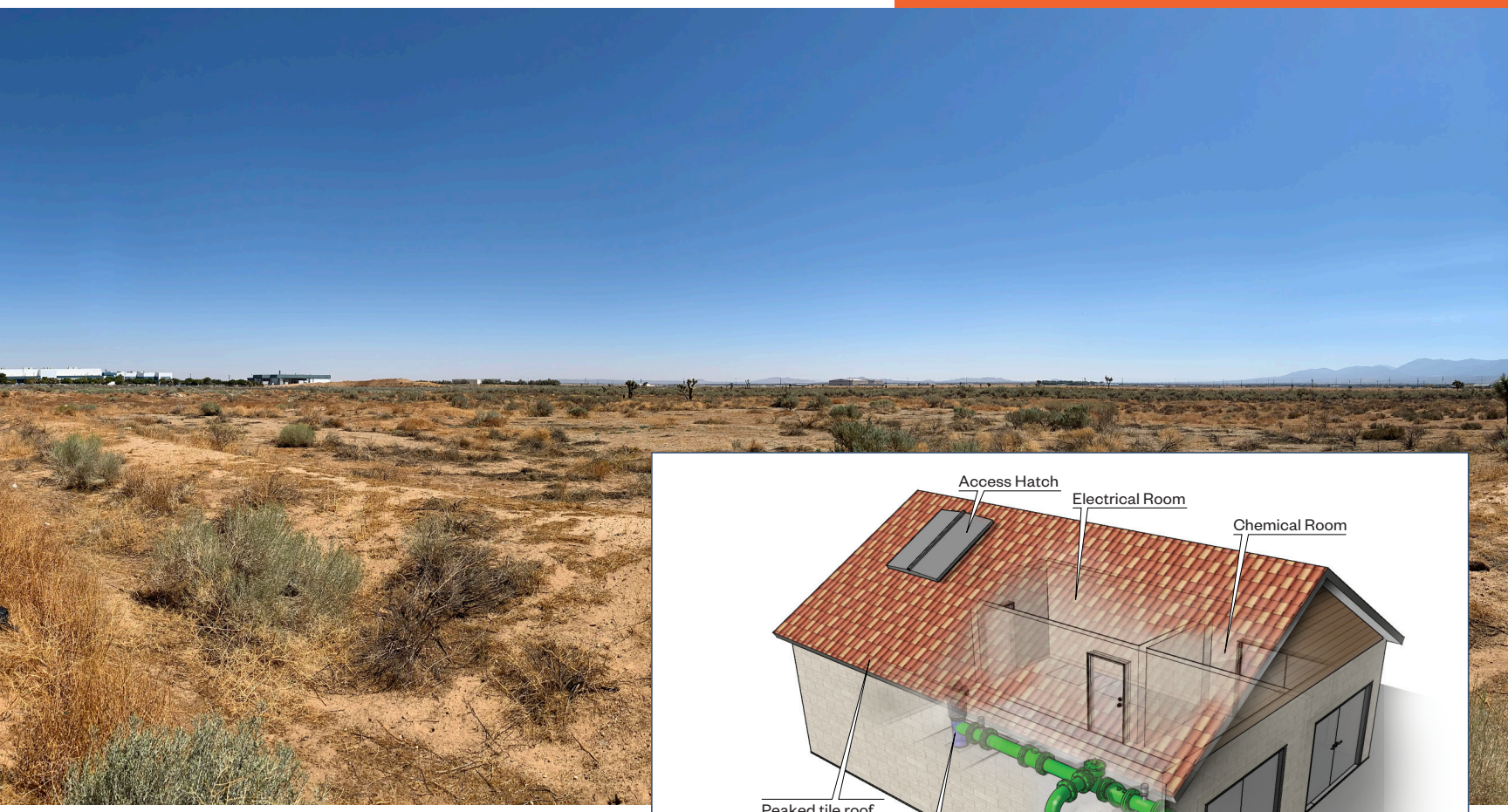
Section No. 6

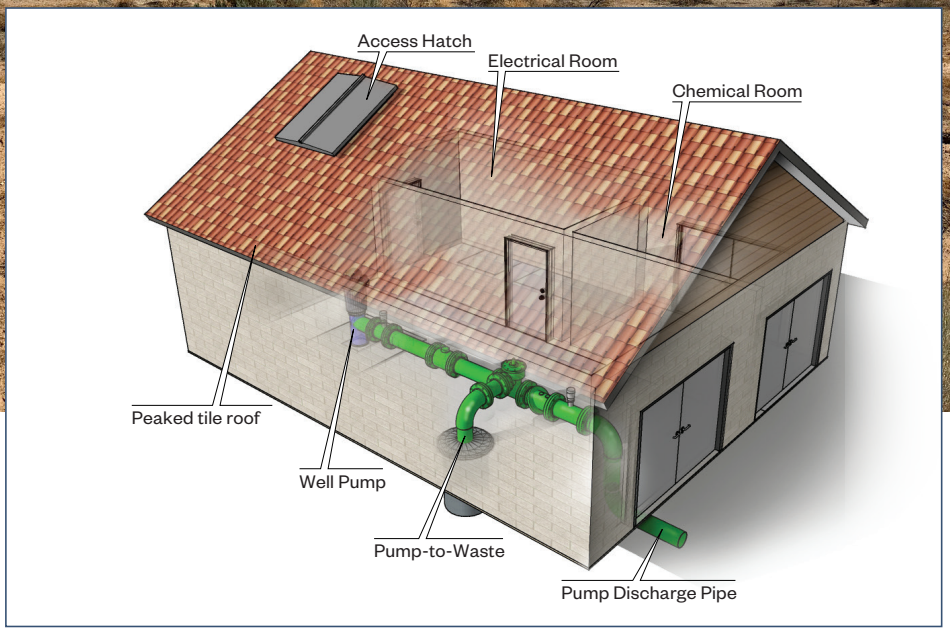
References

Please refer to the related project descriptions provided in Section 2 – Qualifications of Firm in this proposal. For each project, we list the client reference and contact information.

Section 8

Accept the District's Professional Services Agreement





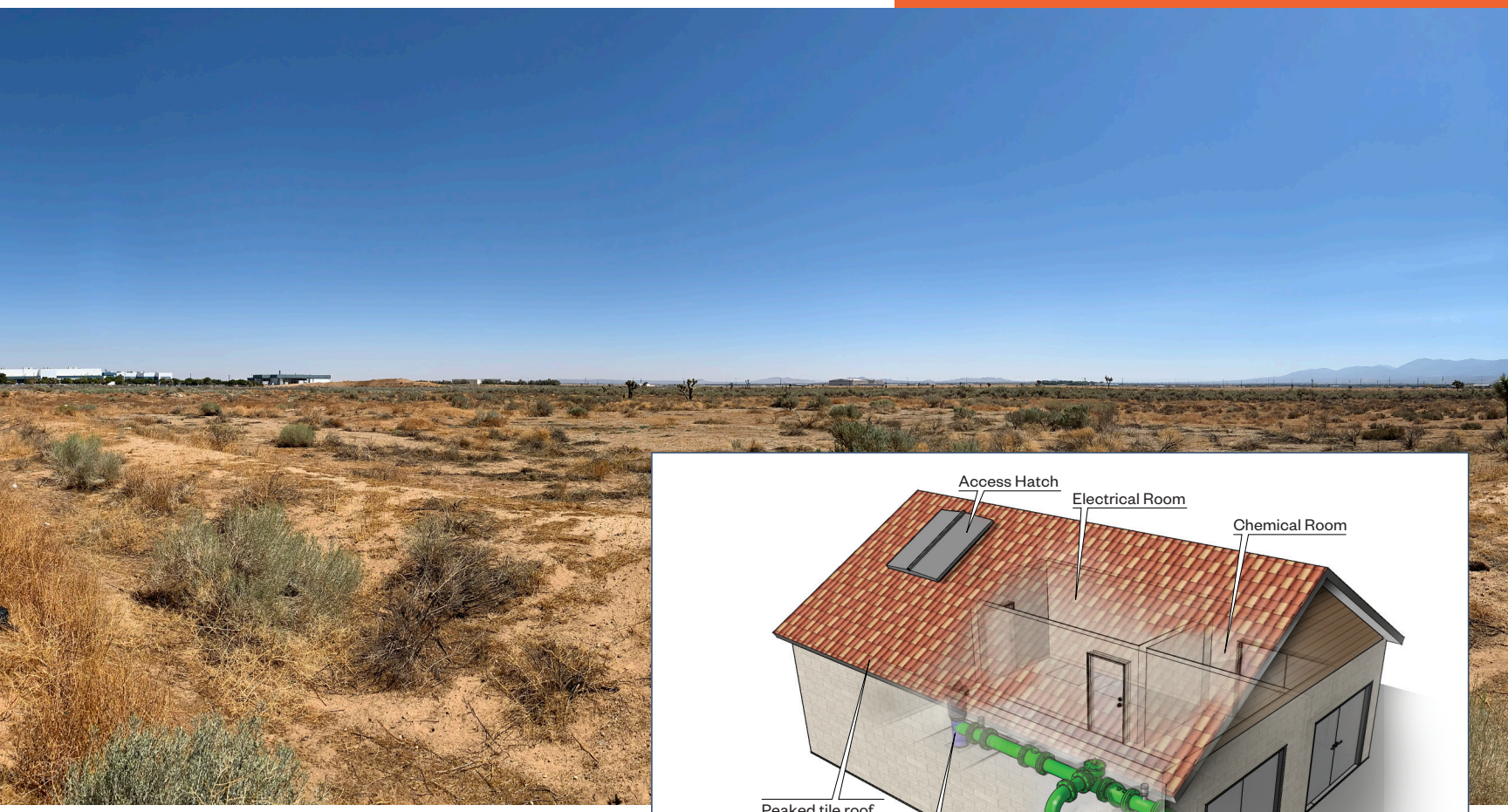
Section No. 6

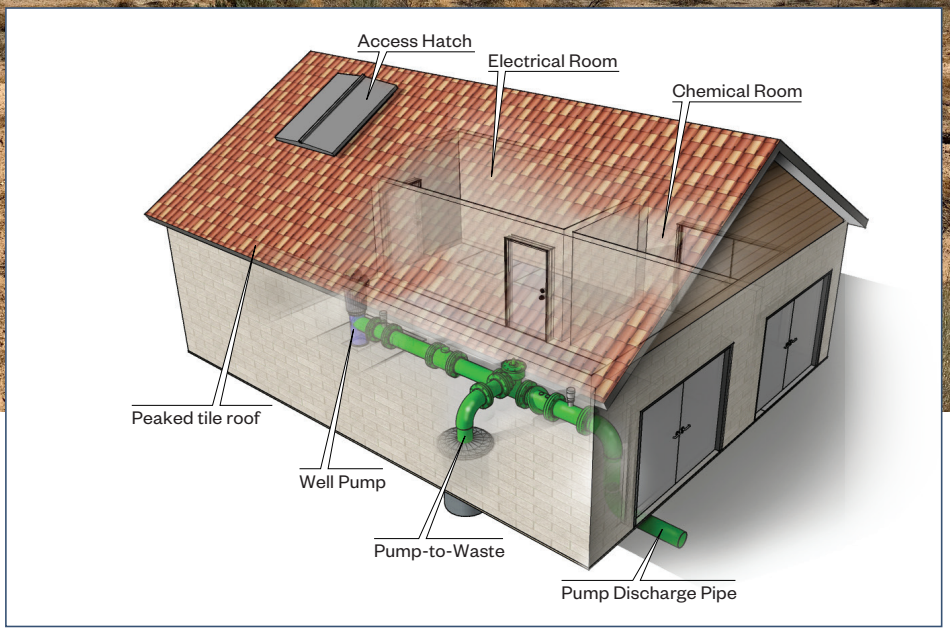
Accept the District's Professional Services Agreement

As part of the procurement process for the As-needed Professional Engineering Services Agreement, Hazen has consummated a fully-executed agreement with the District that we will abide by.

Appendix A

Resumes





Marc S. Solomon, PE, BCEE, D.WRE

Principal in Charge

Mr. Solomon has over 38 years of experience in the planning, design and O&M consulting. His broad project experience has exposed him to all phases of project planning, design, system modeling, system controls, construction management and operational reliability.

Education

BS, Civil Engineering, Duke University, North Carolina

MS, Public Health, Tulane University, Louisiana

Certification/License

Professional Engineer

Water Treatment Plant Operator

Water Distribution System Operator

Diplomat, Water Resource Engineer

Board Certified Environmental Engineer

Value Engineering Certification

8-Hour OSHA Training

Areas of Expertise

- Managing complex water, wastewater, and recycled water projects
- Design of mechanical and electrical systems
- Permit Consulting
- O&M consulting
- Workshop Facilitation using Multi-Complex Decision Analysis

Professional Activities

AWWA, WEF, CWEA, ASCE, AAEE, Adjunct Teacher Santa Rosa JC

Mr. Solomon's diverse educational background and experience has allowed him to be involved in a wide range of projects encompassing water, transportation, environment, buildings, and energy markets. This unique and diverse experience enhances his project management abilities, as he is able to work effectively with engineers, operators and the general public. Projects in which Mr. Solomon participated include:

Water Well, Banning, CA. CEQA Plus Mitigated Negative Declaration, City of Banning, CA
The project includes an Initial Study and Mitigated Negative Declaration for a new drinking water well in the City of Banning.

Well Development, Water Quality Testing and Treatment Feasibility Study, Town of Windsor, CA
Principal in Charge for the redevelopment and treatment evaluation for an existing Town well that had unexpectedly low production and very high concentrations of arsenic and manganese. This well was installed ten years prior and was never brought into production because of the unexpectedly poor test results. Evaluated the economic feasibility of well modification or wellhead treatment for this unused asset. Services included design well development techniques that increased the well production by 27% and removed residual drilling mud remaining from the initial well installation, as well as, pumping evaluations to determine the feasibility of extracting water from isolated zones to improve water quality.

Esposti Well Water Quality Testing and Treatment Feasibility Study, Town of Windsor, CA
The project included the redevelopment and treatment evaluation for an existing Town well that had low production and very high concentra¬tions of arsenic and manganese. Well pumping evaluation indicated that extracting water from isolated zones can significantly simplify and reduce costs of water treatment. Additional pilot testing and design of improvements is underway to verify operation and implement treatment concepts.

Hazen

Publications

Contributing Author, "WEF MOP8, Design of Municipal Wastewater Treatment Plants, Centrifuge Dewatering"

Contributing Author, "WEF MOP11, Operation of Municipal Wastewater Treatment Plants"

"Soil Filter Beds: The West Coast Experience, WEF"

Co-author, Bringing Recycled Water to Town – The City of Santa Rosa's Urban Reuse Project"

Co-author, "Video and Sonar Inspection Guides Coronado Transbay Force Main Rehabilitation"

Co-author, "Recycled Water-The Chile Experience"

Chromium 6 Removal Project, Coachella Valley Water District, Palm Desert, CA

This $250MM project included a CEQA Plus Environmental Impact Report to address the new treatment systems for the removal of Chromium 6 from the potable water system. Marc also led the AB52 Consultation process with 12 Native American Tribes. Additionally, Marc led the permitting effort with over 20 agencies.

Chromium 6 Removal Project, Coachella Water Authority, Coachella, CA

The project included an Initial Study/Mitigated Negative Declaration, AB52 Consultation, and permitting for the new treatment systems for the removal of Chromium 6 from the potable water system.

Disinfection System, Regional Water Reuse Facility, Santa Rosa, CA

Mr. Solomon was project manager for the initial CEQA effort, AB 52 Consultation and permitting for a new UV Disinfection system at the Regional Water Reuse Facility.

Kitty Hawk Recycled Water Transmission Main, Livermore, CA

The project included an Initial Study and Mitigated Negative Declaration for a new 24-inch diameter recycled water transmission main from the Water Reclamation Facility crossing CA State Highway I-580 to the north portion of the City.

West College Utility Facility, Santa Rosa, CA

The project included an Initial Study and Mitigated Negative Declaration for a new $30MM City operations and maintenance facility including new emergency operations center.

Geysers Recharge Project, Santa Rosa, CA

The project included an Environmental Impact Report for a new $350MM recycled water system including 40-miles of 42-inch diameter pressure pipe and 4 pump stations.

Skyfarm 'A' and Hansford Court Lift Station Reconstruction, City of Santa Rosa, CA

Hazen was selected to provide a condition assessment, alternative analysis, detailed design and design services during construction for reconstruction of two of the City of Santa Rosa's wastewater lift stations. The lift stations were destroyed in the 2017 Tubbs fire. The reconstruction included replacement of existing lift station structures, pumps, electrical service, and associated electrical, mechanical and control components along with provisions for temporary pumping and power to ensure uninterrupted wastewater service to the surrounding residents. Since these lift stations were destroyed as part of a natural disaster, the design also required collaboration and coordination with the City and FEMA to comply with federal funding requirements.

Steven Conner, PE

Project Manager

Mr. Conner is Hazen's West Region Pump Station Practice Lead, with over 26 years of experience planning and designing water, recycled water, stormwater and sewage pump stations, and more than 35 production wells.

Education

B.S., Civil Engineering/Water Resources, University of California, Irvine

Certification/License

Professional Engineer

Transportation Worker Identification Credential (TWIC), California

Areas of Expertise

- Well equipping design
- Pump station design
- In-depth evaluation of system requirements for proposed new facilities as well as for rehabilitation, upgrade, or replacement of existing pump stations
- Pipeline Design
- Trenchless Pipeline Rehabilitation and Installation
- Planning and design of major waterand wastewater facilities

Professional Activities

North American Society for Trenchless Technology, Member

Hydraulic Institute – Effective Pump Intake Design and Troubleshooting Problem Intakes

AWWA

Steel Tank Institute – AWWA D100 Water Storage Tank Seminar

Mr. Conner has been the lead pump station engineer for numerous potable water pump station projects, including the Sterling Pump Station for Western Municipal Water District that is getting ready to be commissioned, the Mojave Water Agency R3 Pump Station, and most recently the Ridgeline Booster Pump Station Retrofit project for Trabuco Canyon Water District. Mr. Conner has expertise in vertical turbine as well as horizontal centrifugal pump design, is well versed in Hydraulic Institute design standards, and has designed many pump stations that have been outfitted with electric motors, natural gas driven engines, VFDs (including watercooled VFDs), and backup generators. Mr. Conner has in-depth technical expertise in pump station hydraulic analyses, system curves development, pump selection evaluation, and surge analyses. Mr. Conner coordinates the technical project aspects of all engineering support disciplines (civil, architectural, structure, chemical process, mechanical, electrical, and I&C) during project planning, design and construction phases.

Installation of Replacement Well to Improve Water Quality Using In-Well Blending for Small Disadvantaged Community, Modesto, CA
Well Equipping Lead. Designing a replacement well for the City of Modesto on behalf of the City of Grayson. The existing Well 274 is one of two wells that are the only source of municipal water for the City of Grayson's approximately one thousand residents. The existing Well 274 is shallow and extracts groundwater from the upper portion of the aquifer system degraded by nitrate at concentrations exceeding the MCL. The intent of this project is to design and install a well with two screen sections to extract and blend contaminated and uncontaminated water to meet MCL requirements. The Project also includes consideration of space and utility upgrades for a future treatment system and / or storage tank. To this end, the concept-level design considers a future Reverse Osmosis (RO) treatment plant or application of emerging technology for the biological treatment of nitrate.

Bellflower High Capacity Well, City of Bellflower, CA
Project Manager. Project included preparation of a siting study, preliminary design report, and final engineering design and construction management

and inspection services for the well drilling and equipping of the city's new high-capacity groundwater well. The well is designed to produce 3,500 gallons per minute of high-quality groundwater to replace a large portion of the city's water supplies. The well is equipped with a 400 HP variable frequency drive-driven vertical turbine well pump enclosed in a building for noise mitigation and well security. The project included design of a sodium hypochlorite disinfection system, backup generator, and HVAC. Noise mitigation was a key issue for this project, with sound dampening design for the building, HVAC equipment, and emergency backup generator. Provided engineering support during testing and start-up of the well.

Raub 4-R and Raub 5-R Well Replacement Project, Hillwood Properties, San Bernardino, CA

Project Manager. Provided engineering design and construction phasing for the Raub 4-R and Raub 5-R Well Replacement Project, which involved relocation of two existing production wells to make way for construction of a large warehouse. This time-critical project involved construction of two new wells prior to destruction of the existing wells, all of which occurred under clear and immovable deadlines on the part of the developer. The project included the drilling, equipping, and testing two ground water extraction wells, disinfection of both wells, installation of discharge and pump-to-waste pipelines for Raub 4-R, Raub 5-R, and existing Raub 7, to carry raw water to a nearby treatment facility and detention pond; approximately 4,400 linear feet of 12-inch, 20-inch, and 24-inch DIP pipelines; approximately 1,300 linear feet of 20-inch CML and CMC bypass line; installation of a gravity pre-lube system; abandonment of three wells; demolition of two wells; electrical improvements; conduits and wiring; and emergency generator connections at each well.

Wells 21 and 22 Wellhead Facilities and Pipelines, Irvine Ranch Water District, Tustin, CA

Task Manager. Task manager responsible for the design of the wellhead facilities and untreated water pipeline. Consultant was responsible for engineering services necessary to support the final design, bidding, and construction of the wellhead facilities, untreated water, product water and brine disposal pipelines. Deliverables included plans, specifications and engineers estimates of probable construction costs for each the wellhead facilities and all pipelines. Well 21 and Well 22, with capacities of 3,300 gpm and 1,600 gpm respectively, are submersible turbine pump / motor assemblies, installed within vaults, and one well is equipped with a bladder-type surge tank. Project included 7,000 ft. of 24-inch steel untreated water pipeline, 13,000 feet of 36-inch steel product water pipeline and 1,700 LF of 10-inch HDPE brine concentrate pipeline. The pipelines required jack-and-bores to cross the OCTA Metrolink train tracks, an Orange County Flood Control District channel, BNSF train tracks, a box culvert, and Peter's Canyon Channel. Consultant was responsible for processing Orange County Flood Control encroachment and discharge permits, cities of Tustin and Irvine encroachment permits, OCSD class 1 wastewater discharge and trunk sewer connection permits, SCRRA/OCTA Metrolink right of entry/crossing agreements, an OSHA tunneling permit, a Caltrans encroachment permit, and a BNSF - right of entry/crossing agreement.

Downey Wells, Geoscience, Downey, CA

Project Manager. As part of a consultant team, provided engineering services for the design, installation, and equipping of two new groundwater wells for the city's water system. The goal was to design, drill, develop, and equip two new deep, high-capacity groundwater wells that will enhance the city's ability to provide reliable, high-quality, cost-effective water service to its current and future customers. With each well anticipated to supply 2,500 gallons of water per minute to the city's distribution potable system, the combined total well production could account for 25 percent of the city's future potable water needs. The project began with a comprehensive geohydrological, engineering, and hydraulic assessment of six alternative well sites. This assessment addressed site-specific needs, evaluated site suitability for well construction and operation, and identified required off-site pipeline facilities. Two preferred sites were selected, preliminary layouts were developed, and CEQA documents prepared.

Frank Rombardo, PE

QA/QC

Mr. Rombardo has performed numerous water treatment plant process evaluations and has designed both new treatment plant and upgrades to existing facilities. He offers specialized expertise in water treatment plant optimization and pumping plants.

Education

MS, Enviornmental Engineering and Sciences, Clemson University

BSEnvE, University of Central Florida

Certification/License

Professional Engineer

Areas of Expertise

- Water treatment plant design
- Plant hydraulics
- Process optimization
- Chemical feed systems
- On-site generation of sodium hypochlorite

Professional Activities

American Water Works Association

Water Environment Federation

American Membrane Technology Association

Georgia Association of Water Professionals

American Society of Civil Engineers

James E. Quarles Plant 1 Replacement Project, Cobb County-Marietta Water Authority, GA

Lead Process Engineer. Responsible for replacement of an existing water treatment plant with a new 33-mgd conventional water treatment plant. The design includes provisions allowing for a future expansion of 66 mgd. The project includes new raw water piping, rapid mix, coagulated water splitter box, baffled flocculation basins, sedimentation basins (with stainless settling plates), dual media filters, high-service pump station, and alum system. The project involves significant sequencing to keep half of the existing plant in operation during construction. Mr. Rombardo's responsibilities included developing the PER for regulatory approval and performing process detailed design.

Riverside Drive WTP PAC System, Gainesville, GA

Project Manager and Lead Process Engineer. This project was undertaken to combat periodic taste and odor episodes. The scope included evaluation of five different types of PAC systems, including dry silo, SuperSacks, in-ground slurry tank, slurry system provided by Burnett Lime, and portable hopper and feed system. Design and construction phase services were performed for a new PAC silo feed system for this 25-mgd WTP.

Water Treatment Comprehensive Master Plan, Gainesville, GA

Lead Process Engineer. Gainesville operates two water treatment plants – Riverside Drive WTP (25 mgd) and Lakeside (10 mgd). The project includes developing a long-range master plan (through year 2050) for the two water treatment plants, as well as a comprehensive plan that considers major transmission mains within the system. For each treatment plant, the project scope includes performing background and source water assessments, facility evaluations, and alternative evaluations to characterize current and anticipated future raw water conditions and evaluate facility unit processes to determine their capacity and their ability to achieve finished water goals for both quantity and quality. Mr. Rombardo was responsible for leading the evaluations of the Lakeside WTP, which included performing a treatability study to optimize the coagulation process.

Hazen

Riverside Drive Water Treatment Plant Chemical System Improvements, Department of Water Resources, City of Gainesville, GA

Lead Process Engineer. Design of a new chemical facility for a 25-mgd conventional WTP. The chemical facility was designed to house bulk sodium hypochlorite, alum, liquid lime, and chlorine dioxide. Provisions were built into the design to add a fluoride storage and feed system. The post flash mix basin at the plant was replaced with two new post flash mix basins. The project involved sequencing to keep the existing plant in operation during construction. Mr. Rombardo's responsibilities included developing the PER for regulatory approval, detailed design, bid response and design engineer during construction for the project. Mr. Rombardo also served as the design engineer during construction of the project.

NCWRF Bulk Chemical, Electrical Grid & Lightning Protection Project, Columbus Water Works, Columbus, GA

Lead Process Engineer, Project Manager and Design Engineer during construction. The project included demolishing an existing lime storage and feed system and replacing the system with two liquid lime storage and feed systems. An existing fluoride tank was demolished and replaced with a new 5,000-gallon bulk storage tank. Electrical improvements included replacing two sets of 2.4 KV switchgear lineups, replacing electrical distribution switchboards and panels and providing lightning protection and surge protective devices. Instrumentation and control system upgrades were also included in the project. Mr. Rombardo's responsibilities included developing the process design and managing the design portion of the project. The project bid at approximately $4 million with construction expected to begin in early 2018. Mr. Rombardo was the design engineer during construction.

Knox Chapman WTP, Knox Chapman Utility District, Knoxville, TN

Project Manager / Technical Process Advisor. Design of a new 8-mgd expandable to 12-mgd ultrafiltration membrane WTP for Knox Chapman Utility District in Knoxville, TN. The objective of the project was to treat raw water from the French Broad River by direct coagulating prior to membrane filtration to reduce Total Organic Carbon (TOC) and turbidity so the Knox Chapman Utility District would comply with future regulations while providing water treatment capacity to meet the needs of the surrounding area. The new ultrafiltration WTP was constructed to replace the existing conventional WTP. The existing raw water intake structure was used to convey raw water to the new ultrafiltration WTP. The new ultrafiltration WTP was connected to the existing clearwell to provide disinfection and storage of treated water. Pilot-scale testing was performed to proof test the manufacturers proposed membrane system. Responsibilities included managing the project and serving as a technical lead during design of the WTP. Chemical feed system at the WTP included sodium bisulfite, citric acid, sodium hydroxide, hydrofluorosilicic acid, chlorine dioxide (sulfuric acid and Purate), hydrochloric acid, liquid lime, coagulant (polyaluminum chloride), corrosion inhibitor, and 12-percent sodium hypochlorite.

Yahoola Creek Reservoir Water Treatment Plant, City of Dahlonega, GA

Lead Process Engineer / Construction Manager. Responsible for design, construction and startup of a new 4-mgd (expandable to 10 mgd) microfiltration membrane WTP. Mr. Rombardo was involved in this project from cradle to grave with responsibilities including performing bench and pilot-scale studies, serving as lead process engineer, and managing construction administration and startup of the WTP. Mr. Rombardo was on site for construction administration and startup of the WTP.

Water Treatment Plant Expansion, Anderson Regional Joint Water Authority, Anderson, SC

Lead Process Engineer. Responsible for the upgrade/improvement of a 13-mgd WTP expansion project that included new raw water pumps, expanding the raw water pump header, installing a parallel raw water transmission line, installing a ROF controller, installing an additional solids flocculating clarifier, installing transfer pump capacity, a chlorine leak detection and scrubbing system and an additional standby power generator. Responsibilities included lead process engineer, writing PER, developing contact documents, and preparing permit applications.

Kent O'Brien, PG, CEG

QA/QC

Kent is a Senior Hydrogeologist with over 28 years of professional experience. He specializes in the planning and implementation of strategies to resolve groundwater supply problems.

Education

BS, Geological Science, San Diego State University, San Diego CA

MS, Geology/Hydrogeology, San Diego State University, San Diego, CA

Certification/License

Registered Geologist: CA (6846)

Certified Engineering Geologist: CA (2132)

8-Hour HAZWOPER Annual Courses

Areas of Expertise

- Groundwater Planning
- Groundwater Treatment
- Well Design and Construction
- Well Rehabilitation
- Groundwater CEQA Analysis
- Water Resource Management
- Litigation Support

Professional Activities

CA-NV AWWA

- Water Well Technology Committee

Groundwater Resource Association (GRA).

Geohydrologic and Engineering Design Services for the City of Banning Well C-8, Banning, CA
QA/QC. Well C-8 is going to be a new well for increased supply for the City of Banning. Services include well siting study, planning and design for both the well drilling and equipping, and construction services. (Design: 2018-2019)

Installation of Replacement Well to Improve Water Quality Using In-Well Blending for Small Disadvantaged Community, Modesto, CA
Project Manager and Geohydrologist. Designing a replacement well for the City of Modesto on behalf of the City of Grayson. The existing Well 274 is one of two wells that are the only source of municipal water for the City of Grayson's approximately one thousand residents. The existing Well 274 is shallow and extracts groundwater from the upper portion of the aquifer system degraded by nitrate at concentrations exceeding the MCL. The intent of this project is to design and install a well with two screen sections to extract and blend contaminated and uncontaminated water to meet MCL requirements. The Project also includes consideration of space and utility upgrades for a future treatment system and / or storage tank. To this end, the concept-level design considers a future Reverse Osmosis (RO) treatment plant or application of emerging technology for the biological treatment of nitrate. (Design: 2017)

New Well Installation and Replacement of Existing Well, Ukiah, CA
Mr. O'Brien was the project manager for fast-track project to install two municipal wells in response to drought conditions. The drought had resulted in the severe reduction in surface water supplies and a sharp increase in the use of groundwater. In addition, the project required the simultaneous evaluation of an existing well that has been losing production capacity and had elevated bacteria. Both wells were designed concurrently and include the installation of multi-zone monitoring wells.

Hazen

Optimization of Carbon Treatment for PCE and Cost Recovery, Well 4, Sebastopol, CA
Mr. O'Brien is the lead hydrogeologist for a 900-gpm municipal well equipped with duel carbon beds for the treatment of chlorinated solvents cause by a hazardous materials release. Well 4 has been in operation since 1958 and is the primary water production source for the City. Contamination of the groundwater occurred in the 1970's and the plume has been migrating to Well 4 during the last 20 years due to a change in groundwater flow conditions. Treatment by carbon will continue for an additional 30 years. Replacement of the aging Well 4 is required to maintain both plume containment and water supply for the City. Mr. O'Brien is providing litigation support for additional cost recovery from the parties responsible for the contamination to replace Well 4 at the same location and maintain the carbon system in operation.

Design and Permitting of Injection Wells, US Marine Corp, Camp Pendleton, San Diego, CA
Mr. O'Brien completed the design of 16 injection wells and related groundwater monitoring wells for the injection of 870 acre-ft/year of tertiary treated wastewater into the aquifer along the coast north of San Diego, CA. The purpose of the project is to protect the drinking water aquifer from seawater intrusion caused by inland groundwater well pumping and to manage the salt and nutrient loading in the groundwater basin. Mr. O'Brien is also completing the Waste Discharge Requirements technical report and developing a strategy for managing salinity changes in the injection area.

New Well Installation and Replacement of Existing Well, Ukiah, CA
Mr. O'Brien was the project manager for fast-track project to install two municipal wells in response to drought conditions. The drought had resulted in the severe reduction in surface water supplies and a sharp increase in the use of groundwater. In addition, the project required the simultaneous evaluation of an existing well that has been losing production capacity and had elevated bacteria. Both wells were designed concurrently and include the installation of multi-zone monitoring wells.

Groundwater Storage and Recovery Project EIR, City and County of San Francisco, CA
Mr. O'Brien's role was developing the hydrogeologic section for the project level CEQA document related to the aquifer storage and recovery (ASR) project proposed by the San Francisco Public Utilities Commission (SFPUC). The SFPUC proposes to provide surface water to Partner Agencies (the cities of San Bruno, Daly City and Cal Water) to be used in lieu of the agencies pumping groundwater during normal and wet rainfall years. The reduction of pumping by Partner Agencies would ultimately increase groundwater storage within the South Westside Groundwater Basin. Stored groundwater would be utilized by pumping 16 new Project wells during periods of insufficient surface water supplies (i.e., dry years). The EIR is approved and the project is under development.

Power Efficiency Evaluation 19 Municipal Wells, City of Redlands, CA
Mr. O'Brien was the lead hydrogeologist in citywide evaluation of operational efficiency. The broad reaching study evaluated the City's operations to identify cost savings. A focus of the study was the power consumption of the water supply system, half of which consists of 16 operating municipal wells with flow rates up to 2,000 gpm. Mr. O'Brien developed a program to use existing data to identify the most cost effective wells to operate and which to redeveloped or used only for backup.

Well Construction Litigation Expert, City of Davis, Davis, CA
Mr. O'Brien provided litigation support as a technical expert in well construction standards and standards of municipal well operation on behalf of the City of Davis. The City of Davis was subject to litigation related the construction and operation of their well field and the spread of chlorinated solvent contamination from a hazardous waste site. The case settled out of court in on terms beneficial to the City of Davis.

Russ Kyle, PG, CHG

Well Drilling & Hydrogeological

Mr. Kyle has more than 20 years of experience with a wide variety of groundwater resource related projects for public and private clients within the western United States, Mexico, and Africa, with a focus on groundwater resources development in Southern California.

Education

MS Geological Sciences, California State University - Los Angeles

BS Geology, California State Polytechnic University - Pomona

Certification/License

Registered Professional Geologist

Certified Hydrogeologist

Areas of Expertise

- Groundwater Resource Development
- Groundwater Planning
- Well Design and Construction
- Well Rehabilitation
- Well Field Condition Assessments
- Permitting
- Regulatory Compliance

Professional Activities

American Water Works Association – Chair of CA/NV Water Well Technology Committee

American Water Works Association National Well Standards Committee

The scope of his technical experience includes groundwater basin evaluations, water supply studies, well siting investigations, artificial recharge feasibility evaluations, well field condition assessments, well rehabilitation, desalination feedwater supply studies, and geophysical surveys. Over the course of his career he has been responsible for installation of more than 150 water supply wells and 70 monitoring wells and exploratory borings, including management of a team of field inspectors, coordination with drilling contractors and regulatory agencies, well design, and construction management. Recent notable projects include installation of a potable water supply wells for California Water Service Company, South Montebello Irrigation District, and Long Beach Water Department, and development of water supply planning documents for the Long Beach Water Department, Palmdale Water District, California Water Service Company, and City of Riverside. He is also active within the water resources community and is currently a member and past-Chair to the AWWA CA-NV Water Well Technology Committee, and a voting member of the AWWA National Well Standards Committee. He has also been asked to lend his expertise to the newly convened TAC responsible for developing revisions to the California Department of Water Resources Well Standards.

Collection Main and New Well Site Study – Long Beach Water Department – Long Beach, California

The Long Beach Water Department (LBWD) currently owns and operates 28 groundwater supply wells located throughout the city, in addition to a new well currently being equipped, and a second well recently constructed. LBWD's goal is to optimize local water supply sources and maintain a production well field with suitable capacity through the year 2032. Mr. Kyle served as Principal-in-Charge for a well siting study to evaluate areas favorable for installation of new production wells within the Central and West Coast Basins, and within relative proximity to the existing collection main pipeline. Sites were ranked based upon a scientific approach and weighted decision matrix. Potential well sites were further assessed by incorporating anticipated well locations and capacities into LBWD's hydraulic model to assess the ability of the existing collection main system to accommodate additional flow from the new wells, including minimum and maximum capacity scenarios.

Hazen

Preliminary Design for City of Banning Well C-7, City of Banning, CA
Mr. Kyle prepared a site assessment and preliminary design for proposed well C-7 to be located at in the north-eastern portion of the City's service area at the future home of a planned industrial business park. Mr. Kyle provided an assessment of the proposed well site, including anticipated well capacity and groundwater quality, preliminary design, construction logistics, and identification of construction constraints and required permits.

East Los Angeles Well 62-02 – California Water Service Company - Commerce, California
Mr. Kyle provided design and construction inspection services for a new high-capacity water supply well in Commerce to augment the District's groundwater supply. Deep aquifer units in the area are impacted with various constituents of concern, including methane, ammonia, and sulfides, while the shallow aquifers are impacted by manganese and local industrial contaminants. The well has been successfully constructed within both aquifer regimes and plans are in place to temporarily backfill the lower well screen with the goal of treating groundwater from those aquifers at a future date.

Development of a Well Rehabilitation Master Plan – Long Beach Water Department – Long Beach, California
Mr. Kyle served as project manager and technical lead during development of a regional-scale well rehabilitation master plan which included condition assessment and prioritization ranking LBWD's production well field, consisting of 31 active wells. This project identified those wells that were most likely to respond favorably to well rehabilitation at the least cost, in addition to identifying production wells that were at the end of their useful life and in need of replacement. This project was integral to a subsequent regional-scale well siting study and identification of well sites needed for replacement wells.

West Coast Basin Well 1 – Long Beach Water Department – Long Beach, California
The Long Beach Water Department (LBWD) installed a new potable water supply well in the West Coast Basin. This well will be the only well within the system which will not be treated by the District's centralized water treatment facility, and as such, water quality was of paramount import. Mr. Kyle served as project manager to provide design, permitting, construction management, and inspection services during the project. The well was successfully competed despite significant logistical challenges and was tested at 2,000 gpm with a specific capacity of approximately 100 gpm/ft.

Dominguez District Well 300-01 – California Water Service Company - Compton, California
Mr. Kyle provided an assessment of the proposed well site, including anticipated well capacity and groundwater quality, environmental risks, preliminary design, construction logistics, and identification of construction constraints and required permits. Mr. Kyle served as principal in charge and project manager during design, construction management, and inspection of the well, completed in June 2020.

Rehabilitation and Redevelopment of City of Lynwood Wells 11 and 19 – Lynwood, California
Provided consulting services and technical support to the City of Lynwood during evaluation, rehabilitation and redevelopment of two wells that were exhibiting a variety of issues, including structural failure, decreased yield, and entrained sand/gravel pack. Both wells were successfully redeveloped and are being placed back in to service.

Downey Wells 2, 8, 11, 17, 18, and 29 Condition Assessment – City of Downey – Downey, California
Mr. Kyle performed condition assessments for three water supply wells and developed tailored well rehabilitation and retrofit programs. The evaluation included a review of well construction details, video surveys, performance characteristics, hydrogeological conditions, and well and pumping plant efficiency testing. Well rehabilitation consisted of mechanical and chemical cleaning followed by redevelopment and testing, for which field inspection was provided for three (3) of the wells. In particular, Well 11 responded well and demonstrated a significant increase in plant efficiency and an estimated annual electrical savings of $69,000 per year.

Alan Mlakar, PE

Electrical and I&C

Mr. Mlakar has over 10 years of experience in the wastewater and water industry and specializes in electrical and instrumentation design, electrical system studies, and engineering services during construction. His knowledge encompasses electrical distribution systems, motor control centers; programmable logic control; and process control related to water, wastewater, and power projects.

Education

BS, Electrical Engineering, California Polytechnic State University

Certification/License

Professional Engineer

Areas of Expertise

- Electrical system studies
- Electrical/Instrumentation and control systems
- Water and waste water facility design
- Engineering services during construction

Professional Activities

Institute of Electrical and Electronics Engineers

Whittier PFAS Treatment Support, Suburban Water System, Covina, CA

Electrical and I&C Lead. Suburban Water System's Whittier and La Mirada Systems required engineering design services to remove PFAS compounds from 5 drinking water wells, comprising 10,600 gpm. Hazen is leading the preliminary design and treatment approach evaluation, sharing process mechanical design with the prime consultant, and leading electrical and I&C. Hazen is also providing support on the design of RSSCT bench-scale testing, and is leading the facility permitting.

Santa Clara and Honby Wells PFAS Groundwater Treatment Improvements, Santa Clarita Valley Water Agency, Santa Clarita, CA

Electrical and I&C Support for the preliminary and final design of the Ion Exchange (IX) treatment system (3.5 MGD) for removal of PFOS/PFOA from Santa Clara and Honby Wells. The project includes preparation of final design documents, 3D model of the treatment system, hydraulic analysis of well pumps, cost estimates, permitting, bid assistance, and engineering services during construction.

E-Wells PFAS Groundwater Treatment Improvements, Santa Clarita Valley Water Agency, Santa Clarita, CA

Electrical and I&C Support for the preliminary of the Ion Exchange (IX) treatment system (7.0 MGD) for removal of PFOS/PFOA from E-Wells (E-14, E-15, E-16, and E-17). The project includes preparation of preliminary design of the treatment system, site layouts, 3D model of the treatment system, hydraulic analysis of well pumps, and cost estimates.

Hazen

Well #26 and Raw Water Transmission Main Design, City of Goodyear, Goodyear, AZ
Lead Electrical and Instrumentation Engineer for the City of Goodyear Well #26 and Raw Water Transmission and Main design project. This $1.9M project is a design-build project for the installation and equipping of Well #26, raw water transmission main, and design modifications to the 3 MGD Bullard Water Campus to treat an additional 1.5 MGD of flow.

Rio Hondo Recycled Water Pump Station Condition Assessment and Risk Failure Analysis, Central Basin Municipal Water District Commerce, CA
Electrical Engineer for the project which entailed a condition assessment, risk of failure analysis, determination of remaining useful life and recommendations for rehabilitation or replacement of a critical recycled water pump station.

Glenoaks Pump No. 1 Replacement Project, City of Glendale, CA
Electrical Engineer for the replacement of Pump No. 1, a 125hp, 4160 volt, 875 gpm centrifugal pump that outlived its useful life. The pump was replaced in kind at the Glenoaks Pump Station. The pump serves the 1290 pressure zone in the Glenoaks Canyon area. Pump No. 1 serves the daily flow condition for the 1290 pressure zone. Pump No. , a 250 hp, 4160 volt, 2,000 gpm centrifugal pump, which was recently replaced, will serve as the high demand pump. The work included a hydraulic analysis Technical Memorandum used for pump selection and review of the hydraulic performance of the pumping station.

Moreno Valley Solids Handling MCC Replacement, East Municipal Water District, Riverside County, CA
Lead Electrical for the Solids Handling MCC Replacement Project which includes the replacement of two motor control centers that have exceeded their rated useful life. The project also included a condition assessment of the existing motor control centers which required a shutdown of the plant equipment during non-peak hours and also a detailed maintenance of plant operations plan to minimize plant distributions during construction.

Adele Pump Station Arc Flash Study, Los Angeles Department of Water and Power, LA
Lead Electrical for the Adele Pump Station Arc Flash project. Performed load flow, short-circuit, protective device coordination, and arc flash analyses using ETAP electrical modeling software. Additionally, updated record single line drawings based on field conditions.

Water Treatment Plants for Stations 7 and 11, City of Lemoore, CA
Lead Instrumentation and Control for the City of Lemoore Stations 7 and 11 Water Treatment Plants. Hazen, in partnership with Filanc Construction, was selected by the City of Lemoore to provide progressive design build services for two groundwater treatment plants. The groundwater has been impacted by iron, manganese, ammonia, sulfides, color, turbidity, arsenic and high TOC concentrations forming elevated DBPs in the presence of chlorination. Sixty percent design was completed in sixty days in order to assist Filanc with preparing the guaranteed maximum price (GMP). Final design proceeded in August 2019 with construction scheduled to commence in the spring of 2021. Hazen is providing engineering design and services during construction and startup.

City of San Diego Stormwater DV-2 Project, CA
Lead Electrical and Instrumentation Engineer for the City of San Diego Stormwater DV-2 Project. Hazen provided electrical and instrumentation services associated with the design of a stormwater diversion valve for the City of San Diego. This included the design of a control panel exterior and interior layout, control panel sche-

Swaid Alhajri, PE

HVAC

Lead Building Mechanical Engineer with strong background in the design of HVAC, Plumbing, and Fire Protection systems in water and wastewater facilities. Knowledgeable in planning, construction documents preparation, and construction coordination.

Education

M.S., Business Administration, University of San Francisco, San Francisco, CA

B.S., Mechanical Engineering, University of Missouri, Columbia, MO

Certification/License

Professional Engineer

Areas of Expertise

- Building Mechanical design for water/wastewater facilities (HVAC, plumbing, and fire protection)
- Heavy mechanical; high pressure/high temperature system design and modeling (ex. steam and hot water systems)
- AutoCAD and Revit 3D (MEP)

Professional Activities

Professional Member, WEF

Professional Member, CWEA

Plant 30 Wellhead Treatment Design, Monte Vista, Water District, Montclair, CA

Hazen is providing planning and design of a 4,000 gpm treatment system for Monte Vista Water District. Treatment includes GAC for 1,2,3-TCP and regenerable ion exchange for nitrate and perchlorate. The design includes treatment of two out of three wells and pipelines from two wells to the third well site. Future expansion for treating all 3 wells is a design consideration.

Blower Electrification Project, Eastern Municipal Water District, CA

Lead HVAC Engineer for the Blower Electrification Project which includes the replacement of gas driven blowers with high speed turbo blowers at three different water reclamation facilities: Moreno Valley RWRF, San Jacinto Valley RWRF, and Temecula Valley RWRF. The HVAC improvements include design of new supply and exhaust ventilation systems that are interlocked with blower operations to provide process air as well as maintain climate control within each space.

Owners Agent San Fernando Basin Groundwater Remediation, City of Los Angeles Department of Water and Power, Los Angeles, CA

As owner's agent, Hazen is providing a full range of expert professional engineering and consulting services to assist in the initiation, planning, design, permitting, procurement planning, alternative delivery, construction, commission, close out and operations of the San Fernando Groundwater Remediation Facilities in accordance with LADWP design requirements. Lead Building Mechanical Engineer for the water treatment facilities project which included the design HVAC, plumbing, and fire protection systems. Designed air-conditioning and ventilation systems to serve office space, control rooms, and electrical rooms. Also designed ventilation systems to serve the UV/AOP treatment building. Plumbing scope included the design of piping system serving laboratory area, eyewash/shower stations, restrooms, and utility stations. Designed fire protection systems serving chemical storage facilities and dosing building.

Garfield Reservoir and Pump Station Replacement Project, South Pasadena, CA
The project included the demolition of the existing reservoir and pump station, construction of two new partially-buried cast-in-place concrete reservoirs (total 6.5 million gallons), new pump station, and 2-story admin building. Responsibilities included hydraulic analysis and design of 6 mgd pump station, as well as design of HVAC, plumbing, and fire protection systems for the admin building.

Estrella Mountain Ranch Southern Solutions Water Supply Project (Phase I), Newland Communities, Goodyear, AZ
Lead Mechanical Engineer: Served as building mechanical lead for master planning of a new RO treatment plant. As the building mechanical lead for the Phase 2, will lead the design of the HVAC, plumbing, and fire protection effort for the RO WTP facilities.

Coastal Treatment Plant Facility Improvements, South Orange County Wastewater Authority, Dana Point, CA
Lead HVAC Engineer for the facility improvements project, which includes replacement of the ferric chloride chemical storage and feed system, replacement of the secondary clarifier equipment (sludge and scum collection), new Drainage Pump Station, repair of damage to concrete structures throughout the plant and installation of fall protection (safety) features. HVAC scope included the condition assessment and design of air-conditioning and ventilation systems to maintain temperature control at process buildings, electrical rooms, and storage facilities.

West Napa Pump Station Project, Napa, CA
Mechanical Engineer in charge of increasing the firm capacity of the pump station to 15.4 mgd, and address the aging infrastructure such as the seismic condition of the 40-year old existing facility. The existing pump station was congested with little to no room for expansion of pumping capacity. Project elements include a new submersible pump station, new electrical building and infrastructure, chemical injection for corrosion control, odor control, solar panels, demo of the existing pump station and site civil improvements.

Dale Avenue Pump Station Generator Improvement Project, San Mateo, CA
Project Engineer, Lead the improvement design for the Dale Avenue Pump Station Standby Generator. The project included the design to connect an outdoor portable generator to the existing indoor generator system. The project also connected the portable generator to the existing automatic transfer switch to provide reliable power from either utility power, permanent generator power or the portable generator.

AB Diffusers, Instrumentation and Controls Project, Napa Sanitation District, Napa, CA
Project Engineer for the AB Diffusers, Instrumentation and Controls Project. The project included evaluation of diffuser technologies to provide a recommendation for aeration basin diffuser replacement and the detailed design for the replacement of the aeration basin diffusers and upgrade the aeration basin control system to include ammonia based DO control. The project required pre-purchase of the diffusers to meet to project schedule.

Lake of the Pines Waste Water Treatment Plant, Nevada County Sanitation Dist. No. 1, Nevada City, CA
Generated required specs and drawings for design of the plumbing, HVAC and utility systems for support buildings. Served as the construction coordinator for facility upgrades and plant expansion from 0.7-MGD to 3.7-MGDserving the northern Sacramento region

Rio Vista Water Treatment Plant Expansion, Castaic Lake Water Agency, Santa Clarita, CA
The project entailed plant expansion and increase of source water pump station capacities from 30 to 60 MGD. Responsibilities included the preparation of drawings and specification for the HVAC, plumbing, fire protection systems and the installation of a 2,000 kW power generator system. Also, developed construction documents to install a 1,000 gallon above grade fuel storage tank and its appurtenances.

Katie Hoek, PE, ENV SP

Environmental Compliance Documents

Ms. Hoek's experience in environmental review and permitting spans over a decade. Her work focuses on identifying potential environmental impacts and working with the design team to minimize or mitigate these impacts.

She has led complex permitting efforts through large-scale multi-phased projects and obtained fast-track permit updates due to unforeseen events on sites where permits had already been received. Ms. Hoek understands which permits to prioritize to keep projects on track. She has served in a number of key permitting and environmental roles for high profile water and wastewater projects.

City of Banning, Water Well, Banning, CA. CEQA Plus Mitigated Negative Declaration
The project includes an Initial Study and Mitigated Negative Declaration for a new drinking water well in the City of Banning.

Union Sanitary District, Wastewater Treatment Plant, Union City, CA. CEQA Plus Program-level Mitigated Negative Declaration
This project included a Program-level Initial Study/Mitigated Negative Declaration for a $350M wastewater treatment plant upgrade. Because of the potential for Federal funding, a CEQA Plus document was prepared. As part of the work, a project-specific document was prepared for the first phase of the overall program.

Seeley Water District, Wastewater Treatment Plant, Seeley, CA. CEQA Plus Mitigated Negative Declaration
The project included an Initial Study and Mitigated Negative Declaration to upgrade an existing wastewater treatment plant. The project is expected to receive Federal funding so a CEQA Plus document was prepared.

City of Santa Rosa, Rehabilitation of Lift Stations, Santa Rosa, CA. CEQA Categorically Exemption
As a result of the 2017 wildfires, two of the City's lift stations were badly damaged. FEMA funding was secured to rehabilitate the lift stations. Hazen provided CEQA consultation and preparation of the Notice of Determination.

Education

MS, Civil/Environmental Engineering, Stanford University

BS, St. Lawrence University

Certification/License

Professional Engineer

Areas of Expertise

- Permitting
- EIS/EA
- Water Quality Studies/Reports

Professional Activities

NYSAWWA

- Membership Chair

NYWEA

- Watershed Technical Conference Program Committee Member

Technical Publications

"*FEMA All-Hazards Mitigation Plan for the Village of Ellenville, NY.*"

"*What You Always Wanted to Know about Chloramine Disinfection: A Survey of 13 Major Water Utilities*" AWWA ACE 10: Chicago, 2006 and AWWA Opflow, Volume 36, No. 11, November 2010

Hazen

San Diego County Water Authority Aqueduct Flow Control, San Diego, CA. CEQA Plus Document
The project includes improvements to San Diego County Water Authority aqueduct flow control facilities. Some of the facilities are located near sensitive receptors and the entire project is within a habitat conservation plan area. Hazen is developing the initial analysis to determine the appropriate level of CEQA. Following the concept phase, Hazen will prepare the CEQA document.

Chromium 6 Removal Project, Coachella Valley Water District, Palm Desert, CA
This $250MM project included a CEQA Plus Environmental Impact Report to address the new treatment systems for the removal of Chromium 6 from the potable water system. Ms. Hoek provided guidance and support to development of the EIR.

Program Management for CSO Long-Term Control Plan, Lowell Regional Wastewater Utility, MA
Provided permitting assistance with a future/proposed capital project that includes an underground storage facility to reduce sewer surcharging. An Environmental Notification Form was developed, taking into account the characteristics of the proposed facility, a property transfer, and an evaluation of potential environmental impacts using the MEPA checklist.

Nut Island Headworks Odor Control and HVAC Upgrades, Massachusetts Water Resources Authority (MWRA), Quincy, MA
Provided permitting assistance to MWRA in obtaining permits from the local conservations commission, the U.S. Army Corps of Engineers, and MassDEP. Permits included an updated air permit and NPDES permits for general and construction dewatering.

Aqueduct Connection Environmental Support (ACES), NYCDEP, All boroughs, New York, NY
Program and Portfolio Coordinator. Hazen Project Manager for the ACES contract, which provided permitting and environmental support for several design contracts associated with DEP's Water for the Future priority program. Through this role, Ms. Hoek served as the technical liaison between the design and environmental contracts to ensure design assumptions are well established, identified and communicated. She also shepherded SEQRA reviews (EAS and EIS submittals) and permits through the regulatory process to keep the distinct source augmentation projects on track, which will allow DEP to remove the Delaware Aqueduct from service for the first time in a century and make critical repairs.

New York City Department of Environmental Protection, Bureau of Water Supply (NYCDEP, BWS), On-Call Contract, New York, NY
Ms. Hoek serves as the Technical Permit Resource Coordinator/Lead for on-call task order contracts for New York City DEP projects. The on-call projects include design and implementation of activities to address dam safety items and improvements to water supply infrastructure. The environ¬mental aspect of this work includes preparation and submittal of applicable federal, State, and local permits as well as Environmental Assessment under SEQRA/CEQR. Ms. Hoek is responsible for permit reviews associated with the on-call projects and provides environmental support and oversight for several projects under the on-call contract.

Catalum SPDES Permit Modification EIS, Ulster County, NY, NYC
For the Catalum EIS, Ms. Hoek is serving as a technical resource and also as liaison to the ARWG, a task force of state and local governments, NYCDEP, and stakeholder and citizen groups working to protect and manage the lower Esopus Creek. The Catalum EIS will evaluate potential impacts to the environment from alum addition under an existing SPDES permit at DEP's Kensico Reservoir, and from releases to lower Esopus Creek made by NYCDEP to manage downstream flows and redirect turbid water out of the City's water supply system.

William H. Russell, AIA, LEED AP BD+C, NCARB

Architecture

Mr. Russell has extensive experience in the architectural design of wastewater and water treatment plants, maintenance buildings, laboratories, and other industrial facilities.

Personal Reference

Larry Underwood
Architect
Jacobs
(919) 859-5068
LarryUnderwood@jacobs.com

Education

BA, Clemson University, Design

Certification/License

Registered Architect

NCARB Certificate # 90806

Areas of Expertise

- Programming and design of water, wastewater, laboratories, and industrial facilities
- Sustainable design of water and wastewater facilities
- Utilization of computer applications in the design of water, wastewater, and industrial facilities

Professional Activities

American Institute of Architects

The Society for Protective Coatings

International Code Congress

National Fire Protection Association

Technical Publications

Lab Remodeling: Considerations and Pitfalls; Lab Technology Day;

Eastside Water Treatment Facility Expansion Project, City of Chino, Chino, CA
Project Architect for 3,500 gpm treatment expansion for the Eastside Facility. The building utilized factory insulated wall and wall panels. The building housed treatment equipment and a electrical room.

Plant 30 Wellhead Treatment Design, Monte Vista Water District, Montclair, CA
Project Architect for the design of the 4,000 gpm treatment facility. The building design housed GAC for 1,2,3-TCP and regenerable ion exchange for nitrate and perchlorate.

Treatment for San Fernando Groundwater Basin, Los Angeles Department of Water and Power, Los Angeles, CA
Project Architect for process related buildings and structures related to groundwater remediation.

Ridgeline Booster Pump Station, Trabuco Canyon Water District, Lake Forest, CA
Project Architect for the Ridgeline Booster Pump Station improvements including architectural upgrades to accommodate the mechanical and electrical improvements at the site.

Wellhead No. 9 NF Treatment System, City of Signal Hill, CA
Project Architect for the design of the facilities which included a control and electrical building. A canopy was provided over treatment vessels and related chemicals and pumps.

Cr6 Treatment Design for Wells 13A, AA, and 1E, Indio Water Authority, Indio, CA
Project Architect for canopies and related structures at each of the well sites.

Hazen

Oxygen Plant Demolition at Plant No. 2, Orange County Sanitation District, CA
Provided architectural design and code compliance assistance associated with the demolition and safe removal of redundant oxygen generation equipment and associated piping.

Chromium 6 Treatment Facilities and Pipelines, Coachella Valley Water District, CA
Project Architect for a 40,000 square foot central regeneration facility and several additional buildings and canopies. The buildings were designed to bend and compliment the adjacent residential and resort architectural.

West Basin Municipal Water District, CRWRF Phase II Expansion, Carson, CA
Project Architect for structures associated with the 2.0 MGD tertiary membrane bioreactor system including a masonry blower building housing blowers and electrical equipment. A MF System was housed below a canopy.

Equipping of La Cienega Well No. 1, City of Beverly Hills, CA
Project Architect for a new well building housing the well head and electrical equipment. Building is designed to mimic addition residential architecture. The roof and walls surrounding the well are removable.

1110.2 Resultant Projects – Blower Building – Unit 1, City of San Bernardino, CA
Project Architect for a new Blower Building. The building is a pre-engineered metal building with factory insulated metal wall and roof panels. The building houses five blowers and associated electrical room.

Skyfarm A and Hansford Court Lift Station Reconstruction, City of Santa Rosa, CA
Project Architect for the reconstruction of the lift stations. Project included a pump building with six pumps, electrical equipment, and toilet. The building was a masonry structure with a metal roofing system.

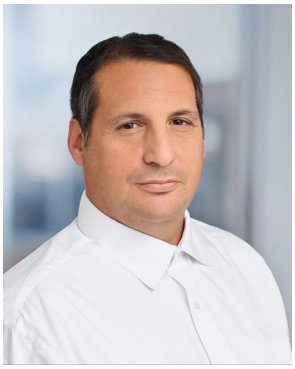
Twelve Mile Creek WWTP Expansion, Union County, NC
Project Architect for grit facility, electrical building, blower building, and dewatering building. The buildings were designed to harmonize with the adjacent residential neighborhoods including standing seam metal roofing.

Swift Demonstration Facility, Hampton Roads Sanitation District, Suffolk, VA
Project Architect for a building housing advanced treatment system. The building houses treatment systems, laboratory, and educational areas. Water is being treated and used to augment the aquafer.

CSO Facility, City of Nashua, NH
Project Architect for for below grade screening and CSO tanks and an above ground disinfection facility. Disinfection facility was required to harmonize with a planned development where the disinfection facility was located.

Lower Howards Creek WWTP, Winchester Municipal Utilities, Winchester, Kentucky
Provided design assistance and QA/QC services for treatment facilities. Structures include administration, influent pump station, RAS-WAS and NPW pump stations, effluent facility, sludge storage facilities and sludge dewatering.

Columbia Metropolitan WWTP -Digester Renovations, Columbia, SC
Provided design services for the rehabilitation of the anaerobic digester steel floating gas covers including a new insulated spray foam roof. The project included the repair and alterations to masonry wall and up roof system.



REGISTRATION

2017/CA/Professional Land Surveyor/9437

1994/NJ/Professional Land Surveyor/GS38603

EDUCATION

1985/AS/Survey Technology/ Mercer County College, West Windsor, New Jersey

PROFESSIONAL AFFILIATIONS

California Land Surveyors Association, Los Angeles Chapter

EXPERIENCE

With Psomas for 4 years; with other firms for 27 years

Vincent Lungari, PLS

Project Manager/Team Leader

Vincent Lungari, PLS has 31 years of experience providing professional land surveying services on residential and commercial construction projects. Prior to joining Psomas, Vincent was the sole proprietor of a land surveying company in New Jersey. He was responsible for business development, management of the office and field survey crews, and oversight of calculations and client deliverables. In his current role as Senior Project Surveyor, Vincent is responsible for managing and overseeing all phases of construction assignments including supervision of field and office support staff.

Experience

City of Ojai, Pedestrian and Bicycle Safety Improvements – Ojai, CA: Project Manager responsible for organizing project research, ties notes, city provided information, and developing schedules to provide surveying of the centerline and right of way along Highway 150 and Hwy 33 in Ojai. Also responsible for developing a GPS control network extended from previous Caltrans work, and to execute topographical design surveys to supplement the existing data set provided for the project design team.

City of Santa Clarita, Central Park Build Out – Santa Clarita, CA: Survey Manager for the Central Park project which includes eight acres of area development to include four additional multi-purpose fields, complete with lighting, restrooms, concessions and additional passive and active recreational opportunities. Responsible for establishing survey control, calculating the record boundary, collecting existing ground visible utilities, topographical design survey of the existing field, existing dog park and walkways, surrounding asphalt parking areas, and hillsides areas for future park installations.

City of West Hollywood, 500-foot and 1000-foot Radial Maps – West Hollywood, CA: Project Manager for 500-foot Radius Map and a separate 1000-foot Radius Map of 30 single properties furnished by the City of West Hollywood. The radius maps showed the individual's property and all surrounding properties within the radius measurement, as well as nearby properties. The radius map showed all property lines of the parcels, as well as, their identification and address. Any property within the radius, or any property that the radius line crosses, was identified differently from the adjacent properties. A tabulation in excel format of all such parcels and their addresses was created. The maps were produced from the most current survey records, Tract Maps, Parcels Maps, Record of Surveys, recorded with the County of Los Angeles.

Vincent Lungari, PLS (Continued)

Courtyard by Marriott at 5th Street and Colorado Avenue – Santa Monica, CA: Senior Project Surveyor for the design development of a stormwater treatment concept to treat and infiltrate stormwater tributary to the proposed hotel. The 136 room hotel is a 6-story building with 2-levels of underground parking. Surveying services included the preparation of Final As-Built Surveys.

Flat Top ALTA/NSPS Land Title Survey Project (TOS 51) – Los Angeles, CA: Project Surveyor provided ALTA/NSPS Land Title Survey over the subject site and plotted easements improvement locations. A Record of Survey was filed and recorded with the County of Los Angeles perpetuating the method of boundary establishment and the placement of property corners and Witness Posts.

Honeywell/Allied Signal Aerospace, Torrance Sites – Torrance, CA: Project Manager for numerous ALTA surveys, Lot Line Adjustments, design survey support and an Industrial Parcel Map of the Torrance sites.

UPS Distribution Center – Van Nuys, CA: Senior Project Surveyor for upgrade improvements to the existing UPS Distribution Center located at 16000 Arminita Street. Psomas provided a design survey of the site's two parking lots.

City of Palmdale, 45th Street East Extension Trunk Sewer Project (Agreement #A-6797) – Palmedale, CA: Surveyor Manager for the upsize of existing public sewer mainlines within 45th Street East, from Avenue R to Avenue S (approximately one square mile), increasing the capacity to handle existing and future development flows. This project replaced existing public sewer mainlines, constructed a new VCP relief sewer mainline, and connected to the Los Angeles County Sanitation District (LACSD) No. 20 trunk line. Psomas performed final design engineering, geotechnical, and surveying services. Surveying services included topographic survey, base mapping, and right-of-way survey

CERTIFICATIONS

Qualified SWPPP Practitioner/California Stormwater Quality Association

EXPERIENCE

With Psomas for 3 years; with other firms for 36 years

Eric Schlichter – Psomas

Lead Construction Inspector

Eric has 39 years of experience providing construction management, lead inspection, public relations, and office administrative services on major projects in the Southern California region, including roadways, public infrastructure and buildings, and highway and bridge construction. He is highly experienced in the oversight of numerous operations on large project sites and has excellent communication and documentation skills required for complex and multiple discipline operations. Eric has provided construction management and inspection services for numerous high profile projects. His extensive experience encompasses roadway, Caltrans, and various utility projects.

Experience

City of Pomona, Construction Management Inspection and Testing Services FY 08/09 Water and Sewer CIP Program – Pomona, CA: Construction Manager and Inspector responsible for the installation of approximately 10,000 LF of 16" drains, soil embankment and excavation, landscaping, and traffic control. Inspection services included coordination with survey crews, testing oversight, and daily inspection reports to the City.

City of San Diego, Water and Sewer Group 929 – San Diego, CA: Part time Resident Engineer for this $350,000 project located in downtown San Diego, 1st Avenue to 5th Avenue from Elm to Juniper. Work included replacing existing water and sewer with PVC and the construction of 99 ADA curb ramps. In order to avoid retrenching in the same streets, the project also replaced 2,000 LF of old concrete sewer mains with new PVC sewer mains. Complete street resurfacing and/or slurry seal was conducted after completion of the trench caps and acceptance of the mains and laterals. Located in a busy downtown community, Eric was responsible for coordinating traffic control and worked with residents and local businesses to minimize impacts to the community.

City of San Diego, Harbor Drive Sewer Replacement – San Diego, CA: Construction Manager/Inspector for this 4.4 mile replacement of16-inch cast iron water pipeline from the Harbor Drive Bridge to the Point Loma Reservoir.

City of Del Mar, Sewer and Water Group 1 – Del Mar, CA: Construction Manager and Inspector for this $1.75M replacement of existing VCP sewer main and laterals with PVC. The project also included citywide manhole rehabilitation and CIPP.

City of San Diego, Balboa Golf Course HDPE Irrigation System – San Diego, CA: Construction Manager/Inspector services for the new $2.3 million HDPE pipe irrigation system and pump station. The project replaced the existing system with a new efficient system at the 18-hole and 9-hole courses. A state-of-the-art computerized satellite controller was installed and integrated to a local weather station. The new system assisted the City in conserving water and reduce watering costs. A total of over 11,500 LF of 8- and 10-inch HDPE main line pipe was installed and 16,000 LF of 6-inch HDPE pipe. In addition, over 120,000 LF of HDPE lateral piping was installed. Services included weekly progress meeting oversight, document control and tracking using web-based

Eric Schlichter (Continued)

contract manager, on-site inspection, material testing coordination, change order request review and entitlement determination, monthly contractor payment review, schedule review, and project closeout.

City of Carlsbad, 2015 Slurry Seal and Asphalt Overlay Project – Carlsbad, CA: Construction Manager and Inspector for the City's annual slurry seal and AC overlay project. Responsible for oversight of daily operations of the contractor and delivering a quality end project. (6/2015-12/2015)

Redondo Beach Pier Improvements – Redondo Beach, CA: Construction Inspector for removing and replacing existing brick pavement surface and considering existing and improved drainage features. Special consideration was given to existing constraints, such as stairs, entrance, and access doorways and other join elevations. Existing drainage patterns and elevations were reviewed based on a survey, also reviewed existing utility and drainage as-built plans, performed a site evaluation and developed precise grading and drainage plans based on an approved design concept.

Main Promenade Parking Structure Improvements – Huntington Beach, CA: Construction inspector responsible for the oversight of the repairs and improvements to the existing parking structure including concrete repairs, waterproofing, mechanical improvements, painting, traffic markings, stair replacements and other miscellaneous repairs.

Redondo Beach Pier Improvements – Redondo Beach, CA: Construction Inspector for this project which included removing and replacing the existing brick pavement surface and considering existing and improved drainage features. Special consideration was given to existing constraints such as stairs, entrance and access doorways and other join elevations. Reviewed existing drainage patterns and elevations based on a survey, reviewed existing utility and drainage as-built plans, performed a site evaluation and developed precise grading and drainage plans based on an approved design concept.

Metrolink Station – Buena Park, CA: Construction Inspector on this $9 million Metrolink Station which included a 680-foot passenger platforms on each side of the track, passenger waiting area canopies, security and station lighting, automated ticket vending machines, restrooms, water and sewer service, a fire protection system, landscaping, a 300-space parking lot, a large gazebo, and a passenger overpass with towers and elevators. Conveniently situated between a Cal State Fullerton housing complex and a new town house development, the Buena Park station is part of a growing trend toward transit-oriented development. Provided construction management and inspection services for this project.

Hashmi Quazi, PhD, PE, GE

Principal in Charge/Project Manager

Dr. Quazi has 34 years of experience providing geotechnical engineering services and has earned a reputation for providing quality work in an honest and ethical manner, on time and within budget.

In his capacity as Principal in Charge / Project Manager, Dr. Quazi provides quality control, budget oversight, and technical assistance on various types of projects, including pipelines, wastewater treatment plants, reservoirs, and other related studies. He has supervised site investigations and prepared technical reports for facilities located in areas of high liquefaction potential and difficult subsurface conditions.

Dr. Quazi is also responsible for the operation and management of our offices in Palmdale, Redlands, Monrovia, Costa Mesa, and Palm Desert.

EDUCATION

- PhD, Civil Engineering, University of Arizona, 1987
- MS, Civil Engineering, Arizona State University, 1982
- BS, Bangladesh Engineering University, 1978

REGISTRATIONS/CERTIFICATIONS

- California, Civil Engineer, #46651
- California, Geotechnical Engineer, #2517

PROFESSIONAL MEMBERSHIPS

- American Society of Civil Engineers
- American Water Works Association
- American Council of Engineering Companies

Relevant Experience

Perris Valley Pipeline, Metropolitan Water District, *Perris, Riverside County, CA*. Principal in Charge. Provided technical and budget oversight, resource allocation and contract management for the geotechnical investigation. The project involved construction of a 96-inch diameter water pipeline with a total length of 3.0 miles; turnout structure No. 2 and 3; manhole; and meter vault.

Jurupa Community Services District (JCSD) Water Pipeline Improvements, *Riverside County, CA.* Principal in Charge. Provided technical oversight and budget allocation for the construction phase of the project. The Jurupa Community Services District (JCSD) Capital Improvement Projects construction sites were located in Riverside County, California. The water pipeline construction took place on various streets in the Riverside area with a variety of pipe sizes, and invert depths. These locations were Limonite Boulevard, Kenneth Street, Hastings Boulevard and Foxtail Lane.

San Bernardino Valley Municipal Water District, Baseline Feeder Vault Lids, *San Bernardino, CA* Principal in Charge. Provided technical oversight and budget control for geotechnical observation and material testing. The project included the replacement of 19 vault lids within the Baseline Feeder in various location throughout San Bernardino.

Hi-Desert Water District (HDWD) Wastewater Collection System, *Yucca Valley, CA*. Principal in Charge. Provided technical and budget oversight, resource allocation and contract management for the geotechnical investigation. The project consisted of the design and construction of the wastewater collection system for the Hi-Desert Water District in Yucca Valley. The Sewer Master Plan phase of the project included design of 77 miles of 8" to 36" pipeline, including 12 bore-and-jack crossings under Caltrans highways. Three new pump stations were designed to convey flow to the planned treatment plant site.

Hashmi Quazi, PhD, PE, GE

Principal in Charge/Project Manager

HDWD Wastewater Reclamation Facility, *Yucca Valley, CA*. Principal in Charge. Provided technical and budget oversight, resource allocation and contract management for the geotechnical investigation. The Hi-Desert Water District Wastewater Reclamation Facility (WRF) was located on a 16.4-acre site northeast of Sunnyslope Drive and Indio Avenue in Yucca Valley. The project included ponds, basins, pump stations, aeration tank, maintenance/operations building, electrical building, aboveground and underground utilities, asphalt and concrete pavement, and open spaces. The facility has the capacity of processing 1.0 million gallons per day.

JCSD Capital Replacement of Sewer Pipelines, *Jurupa Valley, CA*. Principal in Charge. Provided technical and budget oversight, resource allocation and contract management for the geotechnical investigation. The project included design and construction of approximately 3,224 linear feet of 8 to 12-inch polyvinyl chloride (PVC) sewer pipelines. The pipe invert depth was approximately 4 to 12 feet below existing ground surface (bgs). The pipeline was installed mostly using the open cut-and-cover technique. Bore and jack method will be utilized at Van Buren/UPRR crossing at 56th Street and Van Buren/UPRR crossing at 63rd Street.

Morongo Basin Water Pipeline Project, Mojave Water Agency, *High Desert Area, CA*. Principal in Charge. Provided technical and budget oversight, resource allocation and contract management for the geotechnical investigation. The project consisted of 70 miles of pipeline, a turnout structure, pump stations, and water reservoirs.

Hesperia Interceptor Sewer, Victor Valley Wastewater Reclamation Authority, *Hesperia, CA*. Principal in Charge. Provided technical and budget oversight, resource allocation and contract management for the geotechnical investigation for the project, consisting of the construction of approximately 10,800 linear feet 18-inch diameter sewer pipeline in Hesperia.

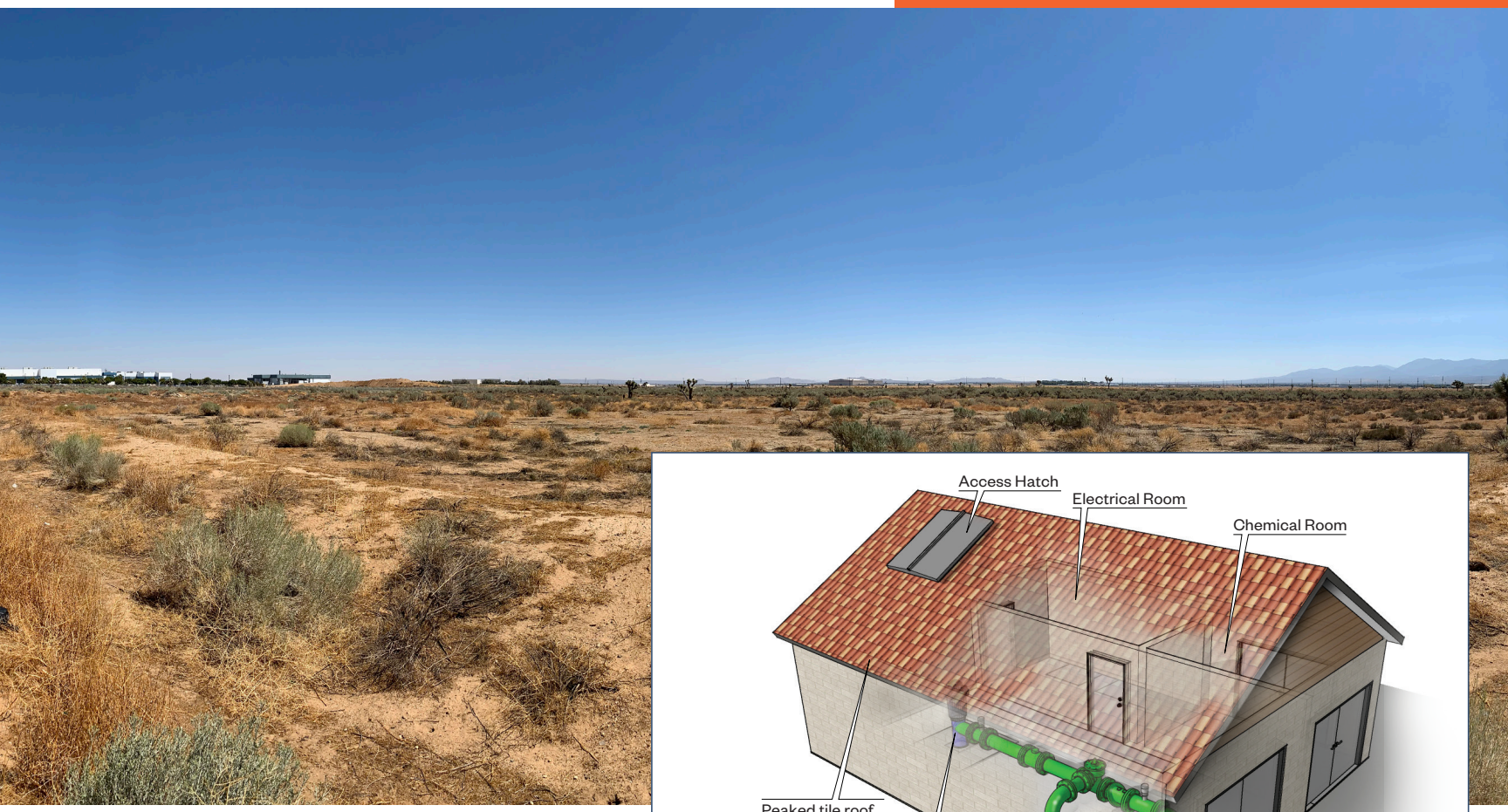
Chino Basin Desalter Authority Water Pipeline, *Ontario, CA*. Principal in Charge. Provided technical and budget oversight, resource allocation, and contract management for the geotechnical investigation. The project included the design of a 12-inch diameter PVC C-905 raw waterline extending from the Chino Basin Desalter Authority's Well I-11 site to a connection point with its proposed waterline at the intersection of Archibald Avenue and Remington Avenue in Ontario. The depth to pipe invert will be about 5 feet below existing ground surface, except at the gas line crossings where it will be about 8 feet deep. Cut and cover technique was used for installation of the pipeline.

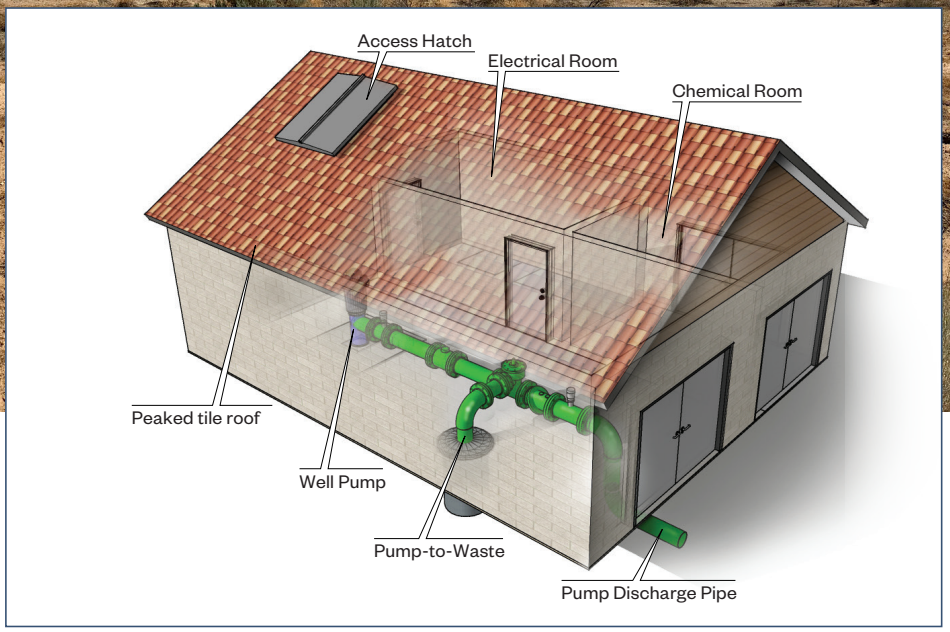
Haun Road Sewer Pipeline, Eastern Municipal Water District, *Perris, CA.* Principal in Charge. Provided technical and budget oversight, resource allocation and contract management for the geotechnical investigation. The project consisted of approximately 15,000 linear feet of pipeline.

Edgemont Community Services District Sewer Pipeline Replacement, *Moreno Valley, CA*. Principal in Charge. Provided technical and budget oversight, resource allocation and contract management for the construction phase of the project. It included construction of approximately 3,245 linear feet of 8-inch diameter vitrified clay pipe sewer pipeline, including all manholes, and 952 feet of 4-inch diameter sewer service laterals, including all connections to existing manholes and sewer lines. The pipelines were installed using the open cut-and-cover method.

Appendix B

Vendor Questionnaire





X. VENDOR QUESTIONNAIRE

X.A Proposer's Acknowledgment*

By submitting a Proposal, the Proposer represents that it has thoroughly examined and become familiar with the work required under this RFP, and that it is capable of performing quality work to achieve the District's objectives.

☒ Please confirm
*Response required

X.B Proposal Documents (No Cost)*

Please upload your COMPLETED proposal documents, not including the Fee Estimate, which is required as a separate attachment, as one (1) PDF file here.

*Response required Completed

X.C Proposal Documents - Fee Estimate*

Please upload your COMPLETED Fee Estimate documents here.

*Response required Completed

X.D Required Insurance *

By confirming, the proposer understands that if they are the successful proposer, they are required to submit Insurance Documents upon execution of their contract.

☒ Please confirm
*Response required

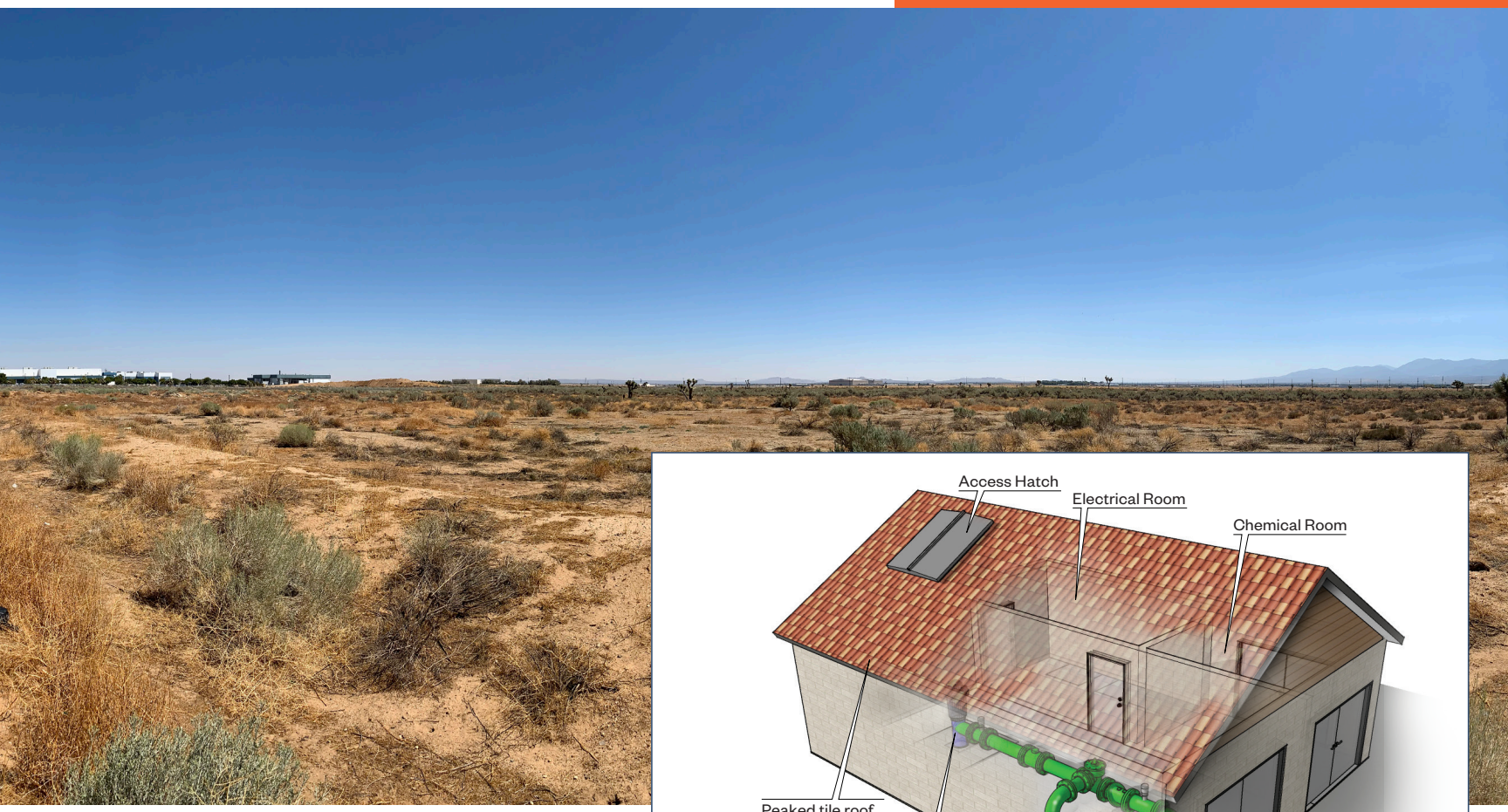
X.E Proposer's Recommended Additional Insurance*

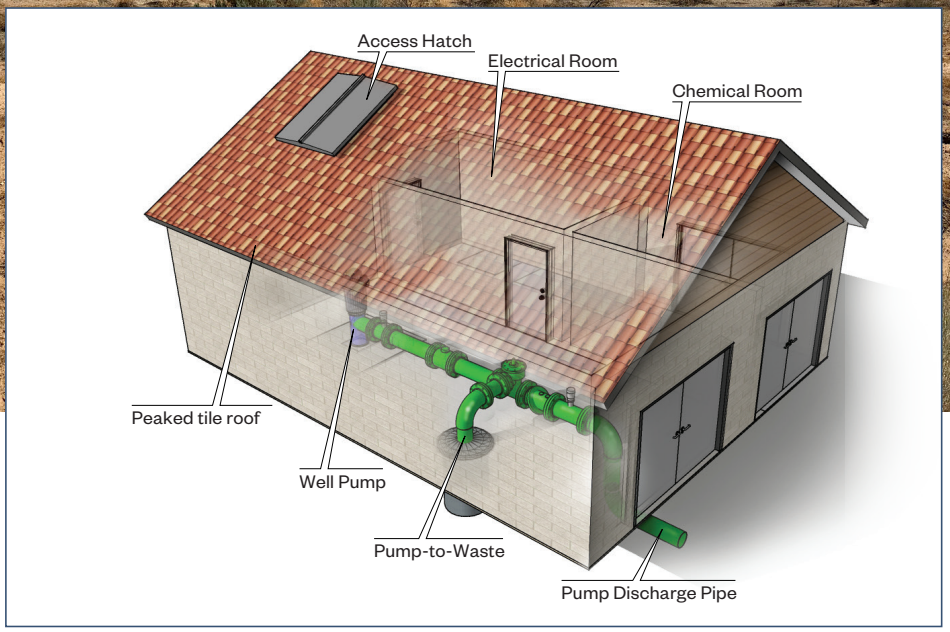
Proposer shall identify additional insurance needed for this project based on its own judgment which may be necessary for its proper protection and prosecution of the work. If not needed, please enter "**None**".

☐ Please confirm None
*Response required

Appendix 3

Insurance Documents





HAZE&SA-01 KSANCHEZ

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 3/4/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
Ames & Gough 8300 Greensboro Drive Suite 980 McLean, VA 22102	PHONE (A/C, No, Ext): (703) 827-2277	FAX (A/C, No): (703) 827-2279
	E-MAIL ADDRESS: admin@amesgough.com	

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
Hazen and Sawyer 498 Seventh Avenue New York, NY 10018	INSURER A : Hartford Fire Insurance Company A+ (XV)	19682
	INSURER B : Hartford Casualty Insurance Company A+ (XV)	29424
	INSURER C : Travelers Indemnity Company of Connecticut A++ (Superior)	25682
	INSURER D : Twin City Fire Insurance Company A+ (XV)	29459
	INSURER E : Continental Casualty Company (CNA) A, XV	20443
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE / X OCCUR X Contractual Liab. GEN'L AGGREGATE LIMIT APPLIES PER: POLICY / X PRO-JECT / X LOC OTHER:			42UUNBH8062	3/29/2020	3/29/2021	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 1,000,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
B	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY / SCHEDULED AUTOS HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY			42UENBH7997	3/29/2020	3/29/2021	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Comp./Coll. Ded	$ 2,000,000 $ $ $ $ 1,000
C	X UMBRELLA LIAB / X OCCUR EXCESS LIAB / CLAIMS-MADE DED / X RETENTION $ 10,000			ZUP31N1064A20NF	3/29/2020	3/29/2021	EACH OCCURRENCE AGGREGATE	$ 2,000,000 $ 2,000,000
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N: N If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		42WBAD0SYE	3/29/2020	3/29/2021	X PER STATUTE / OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
E	Professional Liab.			AEH008231489	3/29/2020	3/29/2021	Per Claim/Aggregate	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: RFP - WELL 36 DRILLING, EQUIPPING DESIGN, AND CONSTRUCTION SERVICES

Palmdale Water District is included as additional insured with respect to General Liability, Automobile Liability and Umbrella Liability when required by written contract. General Liability includes Additional Insured coverage for On-Going & Completed Operations as required by written contract. General Liability, Automobile Liability and Umbrella Liability are primary and non-contributory over any existing insurance and limited to liability arising out of the operations of the named insured and when required by written contract. General Liability, Automobile Liability, Umbrella Liability and Workers Compensation policies include a waiver of subrogation in favor of the additional insureds where permissible by state law and when required by written contract. 30-day Notice of
SEE ATTACHED ACORD 101

CERTIFICATE HOLDER

Palmdale Water District
2029 E Avenue Q
Palmdale, CA 93550

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

AGENCY CUSTOMER ID: HAZE&SA-01 KSANCHEZ

LOC #: 0

ADDITIONAL REMARKS SCHEDULE

AGENCY	NAMED INSURED
Ames & Gough	Hazen and Sawyer 498 Seventh Avenue New York, NY 10018
POLICY NUMBER SEE PAGE 1	
CARRIER: SEE PAGE 1 / NAIC CODE: SEE P 1	EFFECTIVE DATE: SEE PAGE 1

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance

Description of Operations/Locations/Vehicles:
Cancellation will be issued for the General Liability, Automobile Liability, Umbrella Liability, Workers Compensation and Professional Liability policies in accordance with policy terms and conditions. Umbrella Liability coverage sits excess over General Liability, Automobile Liability and Employers Liability coverage.

PALMDALE WATER DISTRICT
A CENTURY OF SERVICE

Hazen

Hazen and Sawyer
800 West Sixth Street, Suite 400 • Los Angeles, CA, 90017

Fee Estimate

The table below presents our fee estimate. Our estimated labor and fees are based on the following assumptions:

- Construction management and inspection for the well drilling will be provided by Kyle Groundwater.
- Construction management for the wellhead facilities will be provided by the District. Inspection will be provided by Psomas at a rate of $170/hr.
- Geotechnical investigation will be limited to the Site 2 parcel. Borings can be made along the proposed pipeline alignments at an additional cost of $2,500.
- The topographical survey is limited to the Site 2 parcel. Survey can be expanded to include the proposed pipeline alignments (construction water and development water discharge) for a total cost of $25,120. Acquiring a title report is not included.

Palmdale WD - Well 36 Drilling and Equipping	Hazen and Sawyer											Kyle Groundwater				Total - Hazen and KGI			Surveying	Geotechnical	CM and Inspection	TOTAL
	Principal	Principal	Project Manager II	Principal Engineer I	Principal Engineer I	Principal Engineer I	Sr. Project Engineer	Engineer I	CAD Technician II	Total Hours	Labor	Principal	Project	Staff	GIS							
	Solomon	Rombardo	Conner	Hoek	DuPuis	Makar	Portner	Maari	Molina			Kyle	Makar	Dykstra	Makar				Psomas	Converse	Psomas	
	$295	$295	$270	$210	$210	$210	$190	$135	$125			$190	$145	$135	$115							
																Labor	ODC	Total				
TASK 1 - Project Management																						
1.1 Kickoff meeting			2		2	2	2	4		12	$ 2,300	4				$3,060	$90	$3,150				
1.2 Progress meetings (assume 15 monthly virtual)	8		20					16		44	$ 9,920	8				$11,440	$180	$11,620				
1.3 Monitoring of budget and schedule			40							40	$ 10,800					$10,800	$0	$10,800				
1.4 Project coordination, including subs			60							60	$ 16,200					$16,200	$0	$16,200				
1.5 Quality control and assurance	4	24	8							36	$ 10,420					$10,420	$0	$10,420				
SUBTOTAL TASK 1	**12**	**24**	**130**	**0**	**2**	**2**	**2**	**20**	**0**	**192**	**$ 49,640**	**12**	**0**	**0**	**0**	**$51,920**	**$270**	**$52,190**				**$52,190**
TASK 2 - Data and Literature Review																						
2.1 Previous well driller logs										0	$ -	2				$380	$0	$380				
2.2 Previous well equipping design			4		2	2		4		12	$ 2,460					$2,460	$0	$2,460				
2.3 Technical memorandum verifying site feasibility			4					4		8	$ 1,620	8		4	4	$4,140	$0	$4,140				
2.4 Conceptual plan of well building and equipping			16		8	8		32	40	104	$ 17,000					$17,000	$0	$17,000				
SUBTOTAL TASK 2	**0**	**0**	**16**	**0**	**8**	**8**	**0**	**32**	**40**	**104**	**$ 21,080**	**2**	**0**	**0**	**0**	**$23,980**	**$0**	**$23,980**	**$ -**	**$ -**	**$ -**	**$23,980**
TASK 3 - Preliminary Well Design																						
3.1 Preliminary design drawings for well			1							1	$ 270	2			2	$880	$0	$880				
3.2 Preliminary specifications for well			2							2	$ 540	4			2	$1,530	$0	$1,530				
3.3 Prepare preliminary well design report (incl. prod. capac., ID contam., cost & sched.)			2							2	$ 540	8	12	12	4	$5,880	$200	$6,080				
SUBTOTAL TASK 3	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**$ 1,350**	**14**	**12**	**12**	**8**	**$8,290**	**$200**	**$8,490**	**0**	**0**	**0**	**$8,490**
TASK 4 - Environmental and Permitting Support																						
4.1 Preparation of Finding of Fact under EIR	2			16						18	$ 3,950					$3,950	$0	$3,950				
4.2 Coordination of public review and filing				8						8	$ 1,680					$1,680	$0	$1,680				
4.3 Preparation of preliminary and final DWSAP documents										0	$ -	8	8	24	8	$6,840	$0	$6,840				
4.4 Drilling permit application assistance										0	$ -	6				$1,140	$90	$1,230				
4.5 Preparation of application for extraction well from water master										0	$ -	8		12	4	$3,600	$0	$3,600				
4.6 Amendment to PWD's drinking water permit										0	$ -	8		16	4	$4,140	$90	$4,230				
SUBTOTAL TASK 4	**2**	**0**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**26**	**$ 5,630**	**30**	**8**	**52**	**16**	**$21,350**	**$180**	**$21,530**	**0**	**0**	**0**	**$21,530**
TASK 5 - Well Drilling Technical Plans, Specifications and Cost Estimates																						
5.1 50% PS&E			2					2		4	$ 810	12	24	8	4	$8,110	$0	$8,110				
5.2 90% PS&E			2					2		4	$ 810	8	12	8	2	$5,380	$0	$5,380				
5.3 100% PS&E			2					2		4	$ 810	4	4	4	1	$2,805	$200	$3,005				
SUBTOTAL TASK 5	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**6**	**0**	**12**	**$ 2,430**	**24**	**40**	**20**	**7**	**$16,295**	**$200**	**$16,495**	**0**	**0**	**0**	**$16,495**
TASK 6 - Drilling Bidding Assistance																						
6.1 Finalization of bid documents										0	$ -	8	8	4	2	$3,450	$0	$3,450				
6.2 Bid phase services incl. pre-bid meeting, responding to questions and bid evaluation			4							4	$ 1,080	6	4			$2,800	$90	$2,890				
6.3 Review of RFIs										0	$ -	4				$760	$0	$760				
6.4 Pre-construction meeting facilitation			2							2	$ 540	6				$1,680	$90	$1,770				
SUBTOTAL TASK 6	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**$ 1,620**	**24**	**12**	**4**	**2**	**$8,690**	**$180**	**$8,870**	**0**	**0**	**0**	**$8,870**
TASK 7 - CM and Inspection of Well and Wellhead Facilities																						
7.1 Quality control including monthly status reports										0	$ -	24				$4,560	$0	$4,560			$ 12,000	
7.2 As-needed inspection services										0	$ -	24	24			$8,040	$0	$8,040			$ 19,000	
SUBTOTAL TASK 7	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**48**	**24**	**0**	**0**	**$12,600**	**$0**	**$12,600**	**0**	**0**	**$ 31,000**	**$43,600**
TASK 8 - Drilling Inspection, Hydrogeological Services and Water Quality Testing																						
8.1 Inspection during conductor borehole drilling and insallation of sanitary seal										0	$ -	1		12		$1,810	$120	$1,930				
8.2 Inspection during pilot borehole drilling and logging of formation samples										0	$ -	3	4	40		$6,550	$480	$7,030				
8.3 Inspection during geophysical borehole logging										0	$ -	1	1	8		$1,415	$120	$1,535				
8.4 Evaluate lithology and geophysical logs and select isolated aquifer zone test intervals										0	$ -	2		4		$920	$0	$920				
8.5 Inspection during isolated aquifer zone testing (assumes four [4] zones)										0	$ -	6	16	96		$16,420	$960	$17,380				
8.6 Mechanical grading analysis (assumes [8] formation samples)										0	$ -	1		3		$595	$60	$655				
8.7 Review borehole lithology and geophysical logs, provide final well design, including design meeting										0	$ -	10	16		6	$4,910	$0	$4,910				
8.8 Inspection of reaming of pilot borehole and caliper survey										0	$ -	4	4	40		$6,740	$480	$7,220				
8.9 Inspection during well construction, including well casing, screen, gravel pack and annular seal										0	$ -	4	4	120		$17,540	$960	$18,500				
8.10 Inspection during initial well development (assumes 120 hours of development)										0	$ -	2		40		$5,780	$600	$6,380				
8.11 Inspection during final development (assumes 60 hours of development)										0	$ -	4		42		$6,430	$720	$7,150				
8.12 Inspection during aquifer pumping tests and Title 22 sampling										0	$ -	3		42		$6,240	$360	$6,600				
8.13 Inspection during downhole video and gyroscopic alignment surveys										0	$ -	1	1	12		$1,955	$120	$2,075				
8.14 Inspection during well disinfection										0	$ -	1	1	10		$1,685	$120	$1,805				
8.15 Inspection of post-construction site condition and wellhead completion										0	$ -	3		8		$1,650	$240	$1,890				
8.16 Analyze aquifer pumping test data and provide recommendations										0	$ -	3	8	12		$3,350	$0	$3,350				
8.17 Provide construction coordination and support (change order review, schedule review, contractor invoice review, construction updates)										0	$ -	6	8			$2,300	$0	$2,300				
8.18 Shop drawing review (assume 5)										0	$ -	3				$570	$0	$570				
8.19 RFI review (assume 5)										0	$ -	4				$760	$0	$760				
8.20 Final well construction summary report										0	$ -	10	12	24	20	$9,180	$200	$9,380				
SUBTOTAL TASK 8	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**72**	**75**	**513**	**26**	**$96,800**	**$5,540**	**$102,340**	**0**	**0**	**0**	**$102,340**
TASK 9 - Wellhead Facility Improvements																						
9.1 Preliminary design			16		8	8	8	16	24	80	$ 14,360					$14,360	$500	$14,860	$ 13,180	$ 16,450		
9.2 50% PS&E			46		64	65	72	120	280	647	$ 104,285					$104,285	$300	$104,585				
9.3 90% PS&E			37		51	52	60	96	226	522	$ 84,184					$84,184	$300	$84,484				
9.4 100% PS&E			9		13	13	18	26	57	136	$ 21,962					$21,962	$300	$22,262				
9.5 Permit acquisition	2			16						18	$ 3,950					$3,950	$0	$3,950				
9.6 Surge analysis			24					100		124	$ 19,980					$19,980	$0	$19,980				
SUBTOTAL TASK 9	**2**	**0**	**132**	**16**	**136**	**137**	**158**	**358**	**587**	**1526**	**$ 248,721**	**0**	**0**	**0**	**0**	**$248,721**	**$1,400**	**$250,121**	**$13,180**	**$16,450**	**$0**	**$279,751**
TASK 10 - Wellhead Facility Bidding and Pre-Construction																						
10.1 Bid document finalization			4		2	2		8	8	24	$ 4,000					$4,000	$200	$4,200				
10.2 Bid phase services incl. pre-bid meeting, responding to questions and bid evaluation			12		2	2		4		20	$ 4,620					$4,620	$0	$4,620				
10.3 Review of RFIs			8		6	6		12		32	$ 6,300					$6,300	$0	$6,300				
10.4 Pre-construction meeting facilitation			4					8		12	$ 2,160					$2,160	$200	$2,360				
SUBTOTAL TASK 10	**0**	**0**	**28**	**0**	**10**	**10**	**0**	**32**	**8**	**88**	**$ 17,080**	**0**	**0**	**0**	**0**	**$ 17,080**	**$400**	**$17,480**				**$17,480**
TASK 11 - Wellhead Facility Construction and Post-Construction Support Services																						
11.1 Specialty inspections and reports					16					16	$ 3,360					$3,360	$200	$3,560				
11.2 Attendance at meetings			16			8		16		40	$ 8,160					$8,160	$200	$8,360				
11.3 As-built drawings and final recommendations for well pump operations			8		6	6			32	52	$ 8,680					$8,680	$0	$8,680				
11.4 Shop drawing review (assume 30)			30		20	30		60		140	$ 26,700					$26,700	$0	$26,700				
11.5 RFI responses (assume 15)			8		6	8		15		37	$ 7,125					$7,125	$0	$7,125				
SUBTOTAL TASK 11	**0**	**0**	**62**	**0**	**48**	**52**	**0**	**91**	**32**	**285**	**$ 54,025**	**0**	**0**	**0**	**0**	**$ 54,025**	**$ 400**	**$54,425**				**$54,425**
TOTAL	**16**	**24**	**385**	**40**	**204**	**209**	**160**	**539**	**667**	**2244**	**$ 401,576**	**226**	**171**	**601**	**59**	**$ 559,751**	**$ 8,770**	**$ 568,521**	**$ 13,180**	**$ 16,450**	**$ 31,000**	**$ 612,656**

CONTRACT SERVICES AGREEMENT

By and Between

PALMDALE WATER DISTRICT

and

HAZEN AND SAWYER, P.C.

AGREEMENT FOR CONTRACT SERVICES
BETWEEN THE PALMDALE WATER DISTRICT AND
HAZEN AND SAWYER, P.C.

THIS AGREEMENT FOR CONTRACT SERVICES (herein "Agreement") is made and entered into this ____ day of _____, 2021, by and between the Palmdale Water District, a California public agency organized and existing under the provisions of the California Water Code ("District") and Hazen and Sawyer, P.C., a New York Corporation ("Consultant"). District and Consultant may be referred to, individually or collectively, as "Party" or "Parties."

RECITALS

A. The District has sought, by issuance of a Request for Proposals or Invitation for Bids, the performance of the services defined and described particularly in Article 1 of this Agreement.

B. Consultant, following submission of a proposal or bid for the performance of the services defined and described particularly in Article 1 titled "Services of Consultant" of this Agreement, was selected by the District to perform those services.

C. The District has authority to enter into and execute this Agreement.

D. The Parties desire to formalize the selection of Consultant for performance of those services defined and described particularly in Article 1 of this Agreement and desire that the terms of that performance be as particularly defined and described herein.

OPERATIVE PROVISIONS

NOW, THEREFORE, in consideration of the mutual promises and covenants made by the Parties and contained herein and other consideration, the value and adequacy of which are hereby acknowledged, the parties agree as follows:

ARTICLE 1. SERVICES OF CONSULTANT

1.1 Scope of Services.

In compliance with all terms and conditions of this Agreement, the Consultant shall provide those services specified in the "Scope of Services" attached hereto as Exhibit "A" and incorporated herein by this reference, which may be referred to herein as the "services" or "work" hereunder. As a material inducement to the District entering into this Agreement, Consultant represents and warrants that it has the qualifications, experience, and facilities necessary to properly perform the services required under this Agreement in a thorough, competent, and professional manner, and is experienced in performing the work and services contemplated herein. Consultant shall at all times faithfully, competently and to the best of its ability, experience and talent, perform all services described herein. Consultant covenants that it shall follow the highest professional standards in performing the work and services required hereunder and that all materials will be both of good quality as well as fit for the purpose

intended. For purposes of this Agreement, the phrase "highest professional standards" shall mean those standards of practice recognized by one or more first-class firms performing similar work under similar circumstances.

1.2 Consultant's Proposal.

The Scope of Services shall include the Consultant's scope of work or bid which shall be incorporated herein by this reference as though fully set forth herein. In the event of any inconsistency between the terms of such proposal and this Agreement, the terms of this Agreement shall govern.

1.3 Compliance with Law.

Consultant shall keep itself informed concerning, and shall render all services hereunder in accordance with, all ordinances, resolutions, statutes, rules, and regulations of the District and any Federal, State or local governmental entity having jurisdiction in effect at the time service is rendered.

1.4 Licenses, Permits, Fees and Assessments.

Consultant shall obtain at its sole cost and expense such licenses, permits and approvals as may be required by law for the performance of the services required by this Agreement. Consultant shall have the sole obligation to pay for any fees, assessments and taxes, plus applicable penalties and interest, which may be imposed by law and arise from or are necessary for the Consultant's performance of the services required by this Agreement, and shall indemnify, defend and hold harmless the District, its officers, employees or agents of the District, against any such fees, assessments, taxes, penalties or interest levied, assessed or imposed against the District hereunder.

1.5 Familiarity with Work.

By executing this Agreement, Consultant warrants that Consultant (i) has thoroughly investigated and considered the scope of services to be performed, (ii) has carefully considered how the services should be performed, and (iii) fully understands the facilities, difficulties and restrictions attending performance of the services under this Agreement. If the services involve work upon any site, Consultant warrants that Consultant has or will investigate the site and is or will be fully acquainted with the conditions there existing, prior to commencement of services hereunder. Should the Consultant discover any latent or unknown conditions, which will materially affect the performance of the services hereunder, Consultant shall immediately inform the District of such fact and shall not proceed except at Consultant's risk until written instructions are received from the Contract Officer.

1.6 Care of Work.

The Consultant shall adopt reasonable methods during the life of the Agreement to furnish continuous protection to the work, and the equipment, materials, papers, documents, plans, studies and/or other components thereof to prevent losses or damages, and shall be

responsible for all such damages, to persons or property, until acceptance of the work by District, except such losses or damages as may be caused by the District's own negligence.

1.7 Further Responsibilities of Parties.

Both parties agree to use reasonable care and diligence to perform their respective obligations under this Agreement. Both parties agree to act in good faith to execute all instruments, prepare all documents and take all actions as may be reasonably necessary to carry out the purposes of this Agreement. Unless hereafter specified, neither party shall be responsible for the service of the other.

1.8 Additional Services.

District shall have the right at any time during the performance of the services, without invalidating this Agreement, to order extra work beyond that specified in the Scope of Services or make changes by altering, adding to or deducting from said work. No such extra work may be undertaken unless a written order is first given by the Contract Officer to the Consultant, incorporating therein any adjustment in (i) the Contract Sum for the actual costs of the extra work, and/or (ii) the time to perform this Agreement, which said adjustments are subject to the written approval of the Consultant. Any increase in compensation of up to ten percent (10%) of the Contract Sum or $25,000, whichever is less; or, in the time to perform of up to one hundred eighty (180) days, may be approved by the Contract Officer. Any greater increases, taken either separately or cumulatively, must be approved by the District's Board of Directors. It is expressly understood by Consultant that the provisions of this Section shall not apply to services specifically set forth in the Scope of Services. Consultant hereby acknowledges that it accepts the risk that the services to be provided pursuant to the Scope of Services may be more costly or time consuming than Consultant anticipates and that Consultant shall not be entitled to additional compensation therefor. District may in its sole and absolute discretion have similar work done by other Consultants. No claims for an increase in the Contract Sum or time for performance shall be valid unless the procedures established in this Section are followed.

1.9 Special Requirements.

Additional terms and conditions of this Agreement, if any, which are made a part hereof are set forth in the "Special Requirements" attached hereto as Exhibit "B" and incorporated herein by this reference. In the event of a conflict between the provisions of Exhibit "B" and any other provisions of this Agreement, the provisions of Exhibit "B" shall govern.

ARTICLE 2. COMPENSATION AND METHOD OF PAYMENT.

2.1 Contract Sum.

Subject to any limitations set forth in this Agreement, District agrees to pay Consultant the amounts specified in the "Schedule of Compensation" attached hereto as Exhibit "C" and incorporated herein by this reference. The total compensation, including reimbursement for actual expenses, shall not exceed **Six Hundred Twelve Thousand Six Hundred Fifty-Six Dollars** (**$612,656.00**) (the "Contract Sum"), unless additional compensation is approved

pursuant to subsection entitled SPECIAL REQUIREMENTS of the Services of Consultant section.

2.2 Method of Compensation.

The method of compensation may include: (i) a lump sum payment upon completion; (ii) payment in accordance with specified tasks or the percentage of completion of the services, less contract retention; (iii) payment for time and materials based upon the Consultant's rates as specified in the Schedule of Compensation, provided that (a) time estimates are provided for the performance of sub tasks, (b) contract retention is maintained, and (c) the Contract Sum is not exceeded; or (iv) such other methods as may be specified in the Schedule of Compensation.

2.3 Reimbursable Expenses.

Compensation may include reimbursement for actual and necessary expenditures for reproduction costs, telephone expenses, and travel expenses approved by the Contract Officer in advance, or actual subcontractor expenses of an approved subcontractor pursuant to subsection PROHIBITION AGAINST SUBCONTRACTING OR ASSIGNMENT of the Coordination of Work section, and only if specified in the Schedule of Compensation. The Contract Sum shall include the attendance of Consultant at all project meetings reasonably deemed necessary by the District. Coordination of the performance of the work with District is a critical component of the services. If Consultant is required to attend additional meetings to facilitate such coordination, Consultant shall not be entitled to any additional compensation for attending said meetings.

2.4 Invoices.

Each month Consultant shall furnish to District an original invoice for all work performed and expenses incurred during the preceding month in a form approved by the District's Director of Finance. By submitting an invoice for payment under this Agreement, Consultant is certifying compliance with all provisions of the Agreement. The invoice shall contain all information specified in Exhibit "C", and shall detail charges for all necessary and actual expenses by the following categories: labor (by sub-category), travel, materials, equipment, supplies, and sub-contractor contracts. Sub-contractor charges shall also be detailed by such categories. Consultant shall not invoice District for any duplicate services performed by more than one person.

District shall independently review each invoice submitted by the Consultant to determine whether the work performed and expenses incurred are in compliance with the provisions of this Agreement. Except as to any charges for work performed or expenses incurred by Consultant which are disputed by District, or as provided in subsection entitled RETENTION OF FUNDS of the Enforcement of Agreement and Termination section, District will use its best efforts to cause Consultant to be paid within forty-five (45) days of receipt of Consultant's correct and undisputed invoice; however, Consultant acknowledges and agrees that due to District warrant run procedures, the District cannot guarantee that payment will occur within this time period. In the event any charges or expenses are disputed by the District, the original invoice shall be returned by District to Consultant for correction and resubmission. Review and

payment by the District for any invoice provided by the Consultant shall not constitute a waiver of any rights or remedies provided herein or any applicable law.

2.5 Waiver.

Payment to Consultant for work performed pursuant to this Agreement shall not be deemed to waive any defects in work performed by Consultant.

ARTICLE 3. PERFORMANCE SCHEDULE

3.1 Time of Essence.

Time is of the essence in the performance of this Agreement.

3.2 Schedule of Performance.

Consultant shall commence the services pursuant to this Agreement upon receipt of a written notice to proceed and shall perform all services within the time period(s) established in the "Schedule of Performance" attached hereto as Exhibit "D" and incorporated herein by this reference. When requested by the Consultant, extensions to the time period(s) specified in the Schedule of Performance may be approved in writing by the Contract Officer but not exceeding one hundred eighty (180) days cumulatively.

3.3 Force Majeure.

The time period(s) specified in the Schedule of Performance for performance of the services rendered pursuant to this Agreement shall be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of the Consultant, including, but not restricted to, acts of God or of the public enemy, unusually severe weather, fires, earthquakes, floods, epidemics, quarantine restrictions, riots, strikes, freight embargoes, wars, litigation, and/or acts of any governmental agency, including the District, if the Consultant shall within ten (10) days of the commencement of such delay notify the Contract Officer in writing of the causes of the delay. The Contract Officer shall ascertain the facts and the extent of delay, and extend the time for performing the services for the period of the enforced delay when and if in the judgment of the Contract Officer such delay is justified. The Contract Officer's determination shall be final and conclusive upon the parties to this Agreement. In no event shall Consultant be entitled to recover damages against the District for any delay in the performance of this Agreement, however caused, Consultant's sole remedy being extension of the Agreement pursuant to this Section.

3.4 Term.

Unless earlier terminated in accordance with Article 7 of this Agreement, this Agreement shall continue in full force and effect until completion of the services but not exceeding two years from the date hereof, except as otherwise provided in the Schedule of Performance (Exhibit "D").

ARTICLE 4. COORDINATION OF WORK

4.1 Representatives and Personnel of Consultant.

The following principals of Consultant ("Principals") are hereby designated as being the principals and representatives of Consultant authorized to act in its behalf with respect to the work specified herein and make all decisions in connection therewith:

(Name)	(Title)
(Name)	(Title)

It is expressly understood that the experience, knowledge, capability and reputation of the foregoing principals were a substantial inducement for District to enter into this Agreement. Therefore, the foregoing principals shall be responsible during the term of this Agreement for directing all activities of Consultant and devoting sufficient time to personally supervise the services hereunder. All personnel of Consultant, and any authorized agents, shall at all times be under the exclusive direction and control of the Principals. For purposes of this Agreement, the foregoing Principals may not be replaced nor may their responsibilities be substantially reduced by Consultant without the express written approval of the District. Additionally, Consultant shall utilize only competent personnel to perform services pursuant to this Agreement. Consultant shall make every reasonable effort to maintain the stability and continuity of Consultant's staff and subcontractors, if any, assigned to perform the services required under this Agreement. Consultant shall notify District of any changes in Consultant's staff and subcontractors, if any, assigned to perform the services required under this Agreement, prior to and during any such performance.

4.2 Status of Consultant.

Consultant shall have no authority to bind District in any manner, or to incur any obligation, debt or liability of any kind on behalf of or against District, whether by contract or otherwise, unless such authority is expressly conferred under this Agreement or is otherwise expressly conferred in writing by District. Consultant shall not at any time or in any manner represent that Consultant or any of Consultant's officers, employees, or agents are in any manner officials, officers, employees or agents of the District. Neither Consultant, nor any of Consultant's officers, employees or agents, shall obtain any rights to retirement, health care or any other benefits which may otherwise accrue to the District's employees. Consultant expressly waives any claim Consultant may have to any such rights.

4.3 Contract Officer.

The Contract Officer shall be Scott Rogers or such person as may be designated by the General Manager. It shall be the Consultant's responsibility to assure that the Contract Officer is kept informed of the progress of the performance of the services and the Consultant shall refer any decisions which must be made by District to the Contract Officer. Unless otherwise specified

herein, any approval of District required hereunder shall mean the approval of the Contract Officer. The Contract Officer shall have authority, if specified in writing by the General Manager, to sign all documents on behalf of the District required hereunder to carry out the terms of this Agreement.

4.4 Independent Consultant.

Neither the District nor any of its employees shall have any control over the manner, mode or means by which Consultant, its agents or employees, perform the services required herein, except as otherwise set forth herein. The District shall have no voice in the selection, discharge, supervision or control of Consultant's employees, servants, representatives or agents, or in fixing their number, compensation or hours of service. Consultant shall perform all services required herein as an independent contractor of District and shall remain at all times as to District a wholly independent contractor with only such obligations as are consistent with that role. Consultant shall not at any time or in any manner represent that it or any of its agents or employees are agents or employees of District. District shall not in any way or for any purpose become or be deemed to be a partner of Consultant in its business or otherwise or a joint venturer or a member of any joint enterprise with Consultant.

4.5 Prohibition Against Subcontracting or Assignment.

The experience, knowledge, capability and reputation of Consultant, its principals and employees were a substantial inducement for the District to enter into this Agreement. Therefore, Consultant shall not contract with any other entity to perform in whole or in part the services required hereunder without the express written approval of the District. In addition, neither this Agreement nor any interest herein may be transferred, assigned, conveyed, hypothecated or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior written approval of the District. Transfers restricted hereunder shall include the transfer to any person or group of persons acting in concert of more than twenty five percent (25%) of the present ownership and/or control of Consultant, taking all transfers into account on a cumulative basis. In the event of any such unapproved transfer, including any bankruptcy proceeding, this Agreement shall be void. No approved transfer shall release the Consultant or any surety of Consultant of any liability hereunder without the express consent of the District.

ARTICLE 5. INSURANCE AND INDEMNIFICATION

5.1 Insurance Coverages.

Without limiting Consultant's indemnification of District, and prior to commencement of any services under this Agreement, Consultant shall obtain, provide and maintain at its own expense during the term of this Agreement, policies of insurance of the type and amounts described below and in a form satisfactory to District.

(a) General liability insurance. Consultant shall maintain commercial general liability insurance with coverage at least as broad as Insurance Services Office form CG 00 01, in an amount not less than $2,000,000 per occurrence, $4,000,000 general aggregate, for bodily injury, personal injury, and property damage. The policy must include contractual liability that

has not been amended. Any endorsement restricting standard ISO "insured contract" language will not be accepted.

(b) Automobile liability insurance. Consultant shall maintain automobile insurance at least as broad as Insurance Services Office form CA 00 01 covering bodily injury and property damage for all activities of the Consultant arising out of or in connection with Services to be performed under this Agreement, including coverage for any owned, hired, non-owned or rented vehicles, in an amount not less than $1,000,000 combined single limit for each accident.

(c) Professional liability (errors & omissions) insurance. Consultant shall maintain professional liability insurance that covers the Services to be performed in connection with this Agreement, in the minimum amount of $1,000,000 per claim and in the aggregate. Any policy inception date, continuity date, or retroactive date must be before the effective date of this Agreement and Consultant agrees to maintain continuous coverage through a period no less than three (3) years after completion of the services required by this Agreement.

(d) Workers' compensation insurance. Consultant shall maintain Workers' Compensation Insurance (Statutory Limits) and Employer's Liability Insurance (with limits of at least $1,000,000).

(e) Subcontractors. Consultant shall include all subcontractors as insureds under its policies or shall furnish separate certificates and certified endorsements for each subcontractor. All coverages for subcontractors shall include all of the requirements stated herein.

(f) Additional Insurance. Policies of such other insurance, as may be required in the Special Requirements in Exhibit "B".

5.2 General Insurance Requirements.

(a) Proof of insurance. Consultant shall provide certificates of insurance to District as evidence of the insurance coverage required herein, along with a waiver of subrogation endorsement for workers' compensation. Insurance certificates and endorsements must be approved by the District's General Manager prior to commencement of performance. Current certification of insurance shall be kept on file with the District at all times during the term of this Agreement. District reserves the right to require complete, certified copies of all required insurance policies, at any time.

(b) Duration of coverage. Consultant shall procure and maintain for the duration of this Agreement insurance against claims for injuries to persons or damages to property, which may arise from or in connection with the performance of the Services hereunder by Consultant, its agents, representatives, employees or subconsultants.

(c) Primary/noncontributing. Coverage provided by Consultant shall be primary and any insurance or self-insurance procured or maintained by District shall not be required to contribute with it. The limits of insurance required herein may be satisfied by a

combination of primary and umbrella or excess insurance. Any umbrella or excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of District before the District's own insurance or self-insurance shall be called upon to protect it as a named insured.

(d) District's rights of enforcement. In the event any policy of insurance required under this Agreement does not comply with these specifications or is canceled and not replaced, District has the right but not the duty to obtain the insurance it deems necessary and any premium paid by District will be promptly reimbursed by Consultant or District will withhold amounts sufficient to pay premium from Consultant payments. In the alternative, District may cancel this Agreement.

(e) Acceptable insurers. All insurance policies shall be issued by an insurance company currently authorized by the Insurance Commissioner to transact business of insurance or that is on the List of Approved Surplus Line Insurers in the State of California, with an assigned policyholders' Rating of A- (or higher) and Financial Size Category Class VI (or larger) in accordance with the latest edition of Best's Key Rating Guide, unless otherwise approved by the District's General Manager.

(f) Waiver of subrogation. All insurance coverage maintained or procured pursuant to this agreement shall be endorsed to waive subrogation against District, its elected or appointed officers, agents, officials, employees and volunteers or shall specifically allow Consultant or others providing insurance evidence in compliance with these specifications to waive their right of recovery prior to a loss. Consultant hereby waives its own right of recovery against District, and shall require similar written express waivers and insurance clauses from each of its subconsultants.

(g) Enforcement of contract provisions (non-estoppel). Consultant acknowledges and agrees that any actual or alleged failure on the part of the District to inform Consultant of non-compliance with any requirement imposes no additional obligations on the District nor does it waive any rights hereunder.

(h) Requirements not limiting. Requirements of specific coverage features or limits contained in this section are not intended as a limitation on coverage, limits or other requirements, or a waiver of any coverage normally provided by any insurance. Specific reference to a given coverage feature is for purposes of clarification only as it pertains to a given issue and is not intended by any party or insured to be all inclusive, or to the exclusion of other coverage, or a waiver of any type. If the Consultant maintains higher limits than the minimums shown above, the District requires and shall be entitled to coverage for the higher limits maintained by the Consultant. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the District.

(i) Notice of cancellation. Consultant agrees to oblige its insurance agent or broker and insurers to provide to District with a thirty (30) day notice of cancellation (except for nonpayment for which a ten (10) day notice is required) or nonrenewal of coverage for each required coverage.

(j) Additional insured status. General liability policies shall provide or be endorsed to provide that District and its officers, officials, employees, and agents, and volunteers shall be additional insureds under such policies. This provision shall also apply to any excess/umbrella liability policies.

(k) Prohibition of undisclosed coverage limitations. None of the coverages required herein will be in compliance with these requirements if they include any limiting endorsement of any kind that has not been first submitted to District and approved of in writing.

(l) Separation of insureds. A severability of interests provision must apply for all additional insureds ensuring that Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the insurer's limits of liability. The policy(ies) shall not contain any cross-liability exclusions.

(m) Pass through clause. Consultant agrees to ensure that its subconsultants, subcontractors, and any other party involved with the project who is brought onto or involved in the project by Consultant, provide the same minimum insurance coverage and endorsements required of Consultant. Consultant agrees to monitor and review all such coverage and assumes all responsibility for ensuring that such coverage is provided in conformity with the requirements of this section. Consultant agrees that upon request, all agreements with consultants, subcontractors, and others engaged in the project will be submitted to District for review.

(n) Agency's right to revise specifications. The District reserves the right at any time during the term of the contract to change the amounts and types of insurance required by giving the Consultant ninety (90) days advance written notice of such change. If such change results in substantial additional cost to the Consultant, the District and Consultant may renegotiate Consultant's compensation.

(o) Self-insured retentions. Any self-insured retentions must be declared to and approved by District. District reserves the right to require that self-insured retentions be eliminated, lowered, or replaced by a deductible. Self-insurance will not be considered to comply with these specifications unless approved by District.

(p) Timely notice of claims. Consultant shall give District prompt and timely notice of claims made or suits instituted that arise out of or result from Consultant's performance under this Agreement, and that involve or may involve coverage under any of the required liability policies.

(q) Additional insurance. Consultant shall also procure and maintain, at its own cost and expense, any additional kinds of insurance, which in its own judgment may be necessary for its proper protection and prosecution of the work.

5.3 Indemnification.

To the full extent permitted by law, Consultant agrees to indemnify, defend and hold harmless the District, its officers, employees and agents ("Indemnified Parties") against, and will hold and save them and each of them harmless from, any and all actions, either judicial,

administrative, arbitration or regulatory claims, damages to persons or property, losses, costs, penalties, obligations, errors, omissions or liabilities whether actual or threatened (herein "claims or liabilities") that may be asserted or claimed by any person, firm or entity arising out of or in connection with the negligent performance of the work, operations or activities provided herein of Consultant, its officers, employees, agents, subcontractors, or invitees, or any individual or entity for which Consultant is legally liable ("indemnitors"), or arising from Consultant's or indemnitors' reckless or willful misconduct, or arising from Consultant's or indemnitors' negligent performance of or failure to perform any term, provision, covenant or condition of this Agreement, and in connection therewith:

(a) Consultant will defend any action or actions filed in connection with any of said claims or liabilities and will pay all costs and expenses, including legal costs and attorneys' fees incurred in connection therewith;

(b) Consultant will promptly pay any judgment rendered against the District, its officers, agents or employees for any such claims or liabilities arising out of or in connection with the negligent performance of or failure to perform such work, operations or activities of Consultant hereunder; and Consultant agrees to save and hold the District, its officers, agents, and employees harmless therefrom;

(c) In the event the District, its officers, agents or employees is made a party to any action or proceeding filed or prosecuted against Consultant for such damages or other claims arising out of or in connection with the negligent performance of or failure to perform the work, operation or activities of Consultant hereunder, Consultant agrees to pay to the District, its officers, agents or employees, any and all costs and expenses incurred by the District, its officers, agents or employees in such action or proceeding, including but not limited to, legal costs and attorneys' fees.

Consultant shall incorporate similar indemnity agreements with its subcontractors and if it fails to do so Consultant shall be fully responsible to indemnify District hereunder therefore, and failure of District to monitor compliance with these provisions shall not be a waiver hereof. This indemnification includes claims or liabilities arising from any negligent or wrongful act, error or omission, or reckless or willful misconduct of Consultant in the performance of professional services hereunder. The provisions of this Section do not apply to claims or liabilities occurring as a result of District's sole negligence or willful acts or omissions, but, to the fullest extent permitted by law, shall apply to claims and liabilities resulting in part from District's negligence, except that design professionals' indemnity hereunder shall be limited to claims and liabilities arising out of the negligence, recklessness or willful misconduct of the design professional. The indemnity obligation shall be binding on successors and assigns of Consultant and shall survive termination of this Agreement.

ARTICLE 6. RECORDS, REPORTS, AND RELEASE OF INFORMATION

6.1 Records.

Consultant shall keep, and require subcontractors to keep, such ledgers, books of accounts, invoices, vouchers, canceled checks, reports, studies or other documents relating to the disbursements charged to District and services performed hereunder (the "books and records"),

as shall be necessary to perform the services required by this Agreement and enable the Contract Officer to evaluate the performance of such services. Any and all such documents shall be maintained in accordance with generally accepted accounting principles and shall be complete and detailed. The Contract Officer shall have full and free access to such books and records at all times during normal business hours of District, including the right to inspect, copy, audit and make records and transcripts from such records. Such records shall be maintained for a period of three (3) years following completion of the services hereunder, and the District shall have access to such records in the event any audit is required. In the event of dissolution of Consultant's business, custody of the books and records may be given to the District, and access shall be provided by Consultant's successor in interest. Notwithstanding the above, the Consultant shall fully cooperate with the District in providing access to the books and records if a public records request is made and disclosure is required by law including but not limited to the California Public Records Act.

6.2 Reports.

Consultant shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the services required by this Agreement as the Contract Officer shall require. Consultant hereby acknowledges that the District is greatly concerned about the cost of work and services to be performed pursuant to this Agreement. For this reason, Consultant agrees that if Consultant becomes aware of any facts, circumstances, techniques, or events that may or will materially increase or decrease the cost of the work or services contemplated herein or, if Consultant is providing design services, the cost of the project being designed, Consultant shall promptly notify the Contract Officer of said fact, circumstance, technique or event and the estimated increased or decreased cost related thereto and, if Consultant is providing design services, the estimated increased or decreased cost estimate for the project being designed.

6.3 Ownership of Documents.

All drawings, specifications, maps, designs, photographs, studies, surveys, data, notes, computer files, reports, records, documents and other materials (the "documents and materials") prepared by Consultant, its employees, subcontractors and agents in the performance of this Agreement shall be the property of District and shall be delivered to District upon request of the Contract Officer or upon the termination of this Agreement, and Consultant shall have no claim for further employment or additional compensation as a result of the exercise by District of its full rights of ownership use, reuse, or assignment of the documents and materials hereunder. Any use, reuse or assignment of such completed documents for other projects and/or use of uncompleted documents without specific written authorization by the Consultant will be at the District's sole risk and without liability to Consultant, and Consultant's guarantee and warranties shall not extend to such use, reuse or assignment. Consultant may retain copies of such documents for its own use. Consultant shall have the right to use the concepts embodied therein. All subcontractors shall provide for assignment to District of any documents or materials prepared by them, and in the event Consultant fails to secure such assignment, Consultant shall indemnify District for all damages resulting therefrom. Moreover, Consultant with respect to any

documents and materials that may qualify as "works made for hire" as defined in 17 U.S.C. § 101, such documents and materials are hereby deemed "works made for hire" for the District.

6.4 Confidentiality and Release of Information.

(a) All information gained or work product produced by Consultant in performance of this Agreement shall be considered confidential, unless such information is in the public domain or already known to Consultant. Consultant shall not release or disclose any such information or work product to persons or entities other than District without prior written authorization from the Contract Officer.

(b) Consultant, its officers, employees, agents or subcontractors, shall not, without prior written authorization from the Contract Officer or unless requested by the District's General Counsel, voluntarily provide documents, declarations, letters of support, testimony at depositions, response to interrogatories or other information concerning the work performed under this Agreement. Response to a subpoena or court order shall not be considered "voluntary" provided Consultant gives District notice of such court order or subpoena.

(c) If Consultant, or any officer, employee, agent or subcontractor of Consultant, provides any information or work product in violation of this Agreement, then District shall have the right to reimbursement and indemnity from Consultant for any damages, costs and fees, including attorney's fees, caused by or incurred as a result of Consultant's conduct.

(d) Consultant shall promptly notify District should Consultant, its officers, employees, agents or subcontractors be served with any summons, complaint, subpoena, notice of deposition, request for documents, interrogatories, request for admissions or other discovery request, court order or subpoena from any party regarding this Agreement and the work performed there under. District retains the right, but has no obligation, to represent Consultant or be present at any deposition, hearing or similar proceeding. Consultant agrees to cooperate fully with District and to provide District with the opportunity to review any response to discovery requests provided by Consultant. However, this right to review any such response does not imply or mean the right by District to control, direct, or rewrite said response.

ARTICLE 7. ENFORCEMENT OF AGREEMENT AND TERMINATION

7.1 California Law.

This Agreement shall be interpreted, construed and governed both as to validity and to performance of the parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Los Angeles, State of California, or any other appropriate court in such county, and Consultant covenants and agrees to submit to the personal jurisdiction of such court in the event of such action. In the event of litigation in a U.S. District Court, venue shall lie exclusively in the Central District of California, in the County of Los Angeles, State of California.

7.2 Disputes; Default.

In the event that Consultant is in default under the terms of this Agreement, the District shall not have any obligation or duty to continue compensating Consultant for any work performed after the date of default. Instead, the District may give notice to Consultant of the default and the reasons for the default. The notice shall include the timeframe in which Consultant may cure the default. This timeframe is presumptively thirty (30) days, but may be extended, though not reduced, if circumstances warrant. During the period of time that Consultant is in default, the District shall hold all invoices and shall, when the default is cured, proceed with payment on the invoices. In the alternative, the District may, in its sole discretion, elect to pay some or all of the outstanding invoices during the period of default. If Consultant does not cure the default, the District may take necessary steps to terminate this Agreement under this Article. Any failure on the part of the District to give notice of the Consultant's default shall not be deemed to result in a waiver of the District's legal rights or any rights arising out of any provision of this Agreement.

7.3 Retention of Funds.

Consultant hereby authorizes District to deduct from any amount payable to Consultant (whether or not arising out of this Agreement) (i) any amounts the payment of which may be in dispute hereunder or which are necessary to compensate District for any losses, costs, liabilities, or damages suffered by District, and (ii) all amounts for which District may be liable to third parties, by reason of Consultant's acts or omissions in performing or failing to perform Consultant's obligation under this Agreement. In the event that any claim is made by a third party, the amount or validity of which is disputed by Consultant, or any indebtedness shall exist which shall appear to be the basis for a claim of lien, District may withhold from any payment due, without liability for interest because of such withholding, an amount sufficient to cover such claim. The failure of District to exercise such right to deduct or to withhold shall not, however, affect the obligations of the Consultant to insure, indemnify, and protect the District as elsewhere provided herein.

7.4 Waiver.

Waiver by any party to this Agreement of any term, condition, or covenant of this Agreement shall not constitute a waiver of any other term, condition, or covenant. Waiver by any party of any breach of the provisions of this Agreement shall not constitute a waiver of any other provision or a waiver of any subsequent breach or violation of any provision of this Agreement. Acceptance by District of any work or services by Consultant shall not constitute a waiver of any of the provisions of this Agreement. No delay or omission in the exercise of any right or remedy by a non-defaulting party on any default shall impair such right or remedy or be construed as a waiver. Any waiver by either party of any default must be in writing and shall not be a waiver of any other default concerning the same or any other provision of this Agreement.

7.5 Rights and Remedies are Cumulative.

Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the parties are cumulative and the exercise by either party

of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

7.6 Legal Action.

In addition to any other rights or remedies, either party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement. Notwithstanding any contrary provision herein, Consultant shall file a statutory claim pursuant to Government Code Sections 905 et seq. and 910 et seq., in order to pursue a legal action under this Agreement.

7.7 Termination Prior to Expiration of Term.

This Section shall govern any termination of this Contract except as specifically provided in the following Section for termination for cause. The District reserves the right to terminate this Contract at any time, with or without cause, upon thirty (30) days' written notice to Consultant, except that where termination is due to the fault of the Consultant, the period of notice may be such shorter time as may be determined by the Contract Officer. In addition, the Consultant reserves the right to terminate this Contract at any time, with or without cause, upon sixty (60) days' written notice to District, except that where termination is due to the fault of the District, the period of notice may be such shorter time as the Consultant may determine. Upon receipt of any notice of termination, Consultant shall immediately cease all services hereunder except such as may be specifically approved by the Contract Officer. Except where the Consultant has initiated termination, the Consultant shall be entitled to compensation for all services rendered prior to the effective date of the notice of termination and for any services authorized by the Contract Officer thereafter in accordance with the Schedule of Compensation or such as may be approved by the Contract Officer, except as provided in subsection entitled RETENTION OF FUNDS herein the Enforcement of Agreement and Termination section. In the event the Consultant has initiated termination, the Consultant shall be entitled to compensation only for the reasonable value of the work product actually produced hereunder. In the event of termination without cause pursuant to this Section, the terminating party need not provide the non-terminating party with the opportunity to cure pursuant to subsection entitled DISPUTES; DEFAULTS herein the Enforcement of Agreement and Termination section.

7.8 Termination for Default of Consultant.

If termination is due to the failure of the Consultant to fulfill its obligations under this Agreement, District may, after compliance with the provisions of the subsection entitled DISPUTES; DEFAULTS herein the Enforcement of Agreement and Termination section, take over the work and prosecute the same to completion by contract or otherwise, and the Consultant shall be liable to the extent that the total cost for completion of the services required hereunder exceeds the compensation herein stipulated (provided that the District shall use reasonable efforts to mitigate such damages), and District may withhold any payments to the Consultant for the purpose of set-off or partial payment of the amounts owed the District as previously stated.

7.9 Attorneys' Fees.

If either party to this Agreement is required to initiate or defend or made a party to any action or proceeding in any way connected with this Agreement, the prevailing party in such action or proceeding, in addition to any other relief which may be granted, whether legal or equitable, shall be entitled to reasonable attorney's fees. Attorney's fees shall include attorney's fees on any appeal, and in addition a party entitled to attorney's fees shall be entitled to all other reasonable costs for investigating such action, taking depositions and discovery and all other necessary costs the court allows which are incurred in such litigation. All such fees shall be deemed to have accrued on commencement of such action and shall be enforceable whether or not such action is prosecuted to judgment.

ARTICLE 8. DISTRICT OFFICERS AND EMPLOYEES: NON-DISCRIMINATION

8.1 Non-liability of District Officers and Employees.

No officer or employee of the District shall be personally liable to the Consultant, or any successor in interest, in the event of any default or breach by the District or for any amount which may become due to the Consultant or to its successor, or for breach of any obligation of the terms of this Agreement.

8.2 Conflict of Interest.

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

No officer or employee of the District shall have any financial interest, direct or indirect, in this Agreement nor shall any such officer or employee participate in any decision relating to the Agreement which affects her/his financial interest or the financial interest of any corporation, partnership or association in which (s)he is, directly or indirectly, interested, in violation of any State statute or regulation. The Consultant warrants that it has not paid or given and will not pay or give any third party any money or other consideration for obtaining this Agreement.

8.3 Covenant Against Discrimination.

Consultant covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on account of race, color, creed, religion, sex, gender, sexual orientation, marital status, national origin, ancestry or other protected class in the performance of this Agreement. Consultant shall take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, color, creed,

religion, sex, gender, sexual orientation, marital status, national origin, ancestry or other protected class.

8.4 Unauthorized Aliens.

Consultant hereby promises and agrees to comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C. § 1101 *et seq.*, as amended, and in connection therewith, shall not employ unauthorized aliens as defined therein. Should Consultant so employ such unauthorized aliens for the performance of work and/or services covered by this Agreement, and should any liability or sanctions be imposed against District for such use of unauthorized aliens, Consultant hereby agrees to and shall reimburse District for the cost of all such liabilities or sanctions imposed, together with any and all costs, including attorneys' fees, incurred by District.

ARTICLE 9. MISCELLANEOUS PROVISIONS

9.1 Notices.

Any notice, demand, request, document, consent, approval, or communication either party desires or is required to give to the other party or any other person shall be in writing and either served personally or sent by prepaid, first-class mail, in the case of the District, to the General Manager and to the attention of the Contract Officer (with her/his name and District title), Palmdale Water District, 2029 East Avenue Q, Palmdale, CA 93550 and in the case of the Consultant, to the person(s) at the address designated on the execution page of this Agreement. Either party may change its address by notifying the other party of the change of address in writing. Notice shall be deemed communicated at the time personally delivered or in seventy-two (72) hours from the time of mailing if mailed as provided in this Section.

9.2 Interpretation.

The terms of this Agreement shall be construed in accordance with the meaning of the language used and shall not be construed for or against either party by reason of the authorship of this Agreement or any other rule of construction which might otherwise apply.

9.3 Counterparts.

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, and such counterparts shall constitute one and the same instrument.

9.4 Integration; Amendment.

This Agreement including the attachments hereto is the entire, complete and exclusive expression of the understanding of the parties. It is understood that there are no oral agreements between the parties hereto affecting this Agreement and this Agreement supersedes and cancels any and all previous negotiations, arrangements, agreements and understandings, if any, between the parties, and none shall be used to interpret this Agreement. No amendment to or modification of this Agreement shall be valid unless made in writing and approved by the Consultant and by

the District's Board of Directors. The parties agree that this requirement for written modifications cannot be waived and that any attempted waiver shall be void.

9.5 Severability.

In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by a valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement which are hereby declared as severable and shall be interpreted to carry out the intent of the parties hereunder unless the invalid provision is so material that its invalidity deprives either party of the basic benefit of their bargain or renders this Agreement meaningless.

9.6 Warranty & Representation of Non-Collusion.

No official, officer, or employee of the District has any financial interest, direct or indirect, in this Agreement, nor shall any official, officer, or employee of the District participate in any decision relating to this Agreement which may affect his/her financial interest or the financial interest of any corporation, partnership, or association in which (s)he is directly or indirectly interested, or in violation of any corporation, partnership, or association in which (s)he is directly or indirectly interested, or in violation of any State or municipal statute or regulation. The determination of "financial interest" shall be consistent with State law and shall not include interests found to be "remote" or "noninterests" pursuant to Government Code Sections 1091 or 1091.5. Consultant warrants and represents that it has not paid or given, and will not pay or give, to any third party including, but not limited to, any District official, officer, or employee, any money, consideration, or other thing of value as a result or consequence of obtaining or being awarded any agreement. Consultant further warrants and represents that (s)he/it has not engaged in any act(s), omission(s), or other conduct or collusion that would result in the payment of any money, consideration, or other thing of value to any third party including, but not limited to, any District official, officer, or employee, as a result of consequence of obtaining or being awarded any agreement. Consultant is aware of and understands that any such act(s), omission(s) or other conduct resulting in such payment of money, consideration, or other thing of value will render this Agreement void and of no force or effect.

Consultant's Authorized Initials _____

9.7 Corporate Authority.

The persons executing this Agreement on behalf of the parties hereto warrant that (i) such party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of said party, (iii) by so executing this Agreement, such party is formally bound to the provisions of this Agreement, and (iv) that entering into this Agreement does not violate any provision of any other Agreement to which said party is bound. This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the parties.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date and year first-above written.

DISTRICT:

PALMDALE WATER DISTRICT, a California public agency

_____
Dennis LaMoreaux, General Manager

ATTEST:

_____
Dawn Deans, Executive Assistant

APPROVED AS TO FORM:
ALESHIRE & WYNDER, LLP

_____
Eric Dunn, General Counsel

CONSULTANT:

_____

By:_____
Name: _____
Title:_____

By:_____
Name: _____
Title:_____

Address:_____
_____
_____

Two corporate officer signatures required when Consultant is a corporation, with one signature required from each of the following groups: 1) Chairman of the Board, President or any Vice President; and 2) Secretary, any Assistant Secretary, Chief Financial Officer or any Assistant Treasurer**. CONSULTANT'S SIGNATURES SHALL BE DULY NOTARIZED, AND APPROPRIATE ATTESTATIONS SHALL BE INCLUDED AS MAY BE REQUIRED BY THE BYLAWS, ARTICLES OF INCORPORATION, OR OTHER RULES OR REGULATIONS APPLICABLE TO CONSULTANT'S BUSINESS ENTITY.**

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy or validity of that document.

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

On _____, 2021 before me, _____, personally appeared _____, proved to me on the basis of satisfactory evidence to be the person(s) whose names(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: _____

OPTIONAL

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form

CAPACITY CLAIMED BY SIGNER

☐ INDIVIDUAL
☐ CORPORATE OFFICER

_____
TITLE(S)

☐ PARTNER(S) ☐ LIMITED
☐ GENERAL
☐ ATTORNEY-IN-FACT
☐ TRUSTEE(S)
☐ GUARDIAN/CONSERVATOR
☐ OTHER_____

_____

SIGNER IS REPRESENTING:
(NAME OF PERSON(S) OR ENTITY(IES))

_____
_____

DESCRIPTION OF ATTACHED DOCUMENT

_____
TITLE OR TYPE OF DOCUMENT

_____
NUMBER OF PAGES

_____
DATE OF DOCUMENT

_____
SIGNER(S) OTHER THAN NAMED ABOVE

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy or validity of that document.

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

On _____, 2021 before me, _____, personally appeared _____, proved to me on the basis of satisfactory evidence to be the person(s) whose names(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: _____

OPTIONAL

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

CAPACITY CLAIMED BY SIGNER

☐ INDIVIDUAL
☐ CORPORATE OFFICER

_____
TITLE(S)

☐ PARTNER(S) ☐ LIMITED
☐ GENERAL
☐ ATTORNEY-IN-FACT
☐ TRUSTEE(S)
☐ GUARDIAN/CONSERVATOR
☐ OTHER_____

_____

SIGNER IS REPRESENTING:
(NAME OF PERSON(S) OR ENTITY(IES))

_____
_____

DESCRIPTION OF ATTACHED DOCUMENT

_____
TITLE OR TYPE OF DOCUMENT

_____
NUMBER OF PAGES

_____
DATE OF DOCUMENT

_____
SIGNER(S) OTHER THAN NAMED ABOVE

EXHIBIT "A"

SCOPE OF SERVICES

I. Consultant will perform the following Services:

A. Project Management

- Project Kick-off and progress meetings (monthly)
- District representation as required (assume two meetings)
- Monitoring of project budget and schedule
- Project Coordination, including coordination of consultant's sub-consultants
- Quality control and assurance
- Invoicing

Deliverables:

- Schedule and timelines
- Monthly Invoices
- Conference calls
- Agenda and meeting minutes for in-person meetings

B. Data and Literature Review

District shall provide the following requested ideas for review:

- Previous well driller logs for close proximity wells
- Previous well equipping design
- 2020 PWD Well Assessment Report

Deliverables:

- Memo verifying the viability of the Well 36 project at the proposed site
- Conceptual plan of well building and equipping

C. Preliminary Well Design

- Draft technical specifications and drawings.
- Estimated production capacity (gallons per minute).

- Identify contaminants with the potential to be above applicable drinking water standards. Include mitigation strategies that can be implemented by casing design.
- Project cost estimate, schedules and timelines.
- Identify any logistical issues, site access, available space for drilling, overhead obstructions, above ground and underground utilities, location of water source, potential discharge options, and noise constraints.

Deliverables:

- Preliminary Design Report for Well 36
- Preliminary Drawings
- Engineering Calculations

D. Environmental and Permitting Support

- Prepare "Finding of Fact" under an EIR should complete CEQA compliance for the actual work. Well projects are covered in the EIR's for the Strategic Water Resources Plan and the 2016 Master Plan Update
- Coordinate Public Review and Filing with District, State of California Clearinghouse
- Prepare Drinking Water Source Assessment Program (DWSAP) documents and coordinate with the California State Water Resources Control Board, Division of Drinking Water
- Assist with the drilling permit application with Los Angeles County Environmental Health (lwell drilling contractor responsibility but Consultant shall assist)
- Prepare application for extraction well with the Antelope Valley WaterMaster
- Amend the District’s existing Drinking Water Permit
- Prepare and assist with the NPDES permits as necesary

Deliverables:

- Antelope Valley WaterMaster Extraction Well Application
- Draft and final DWSAP document
- Draft and final Amended Drinking Water Permit
- Draft NPDES permit

E. Technical Plans, Specifications and Cost Estimates (PS&E) for Drilling

- Develop 50%, 90%, and 100% PS&E
- Coordinate necessary permits

Deliverables:

- 50%, 90%, and 100% PS&E
- Summary of permits obtained
- Final stamped project documents and specifications

F. Drilling Bidding Assistance

- Finalize bid documents
- Provide bid phase services that includes facilitating a pre-bid meeting, responding to bidder questions, and assisting with bid evaluations
- Review Requests for Information (RFIs)
- Facilitate pre-construction meeting

G. Drilling Construction Management

- Identify and describe key challenges associated with the project and the firm's approach to overcoming these challenges.
- Outline processes or steps that the firm will take to ensure quality deliverables. The process shall include a monthly work status summary report (1-2 pages) where the project status and schedule adherence shall be reported and challenges identified.
- Full-time CM is required

H. Drilling Inspection, Hydrogeological Services and Well Water Quality Testing

- Inspect Conductor Borehole Drilling, Casing Installation, and Sanitary Seal
- Inspect Pilot Borehole Drilling, Sampling of Cuttings, and Geophysical Borehole Logging
- Evaluate Geophysical Borehole Logs, Select Zones for Isolated Aquifer Zone Testing
- Review Lithology and Perform Mechanical Grading Analyses
- Prepare Design of Casing, Screen, Filter Pack, and Annular Seal
- Inspect Reaming (Enlargement) of Pilot Borehole and Caliper Survey

- Inspect Installation of Casing, Screen, Filter Pack, and Annular Seal
- Inspect Initial Development by Swabbing and Airlifting, or other methods
- Inspect Final Development by Pumping and Surging, or other methods
- Inspect Aquifer Pumping Tests, Collect Title 22 Water Quality Samples
- District will send samples to a State certified lab under a separate contract
- Inspect Downhole Video Survey, Plumbness and Alignment Surveys, and Final Disinfection
- Evaluate Aquifer Pumping Test Analyses and Prepare Letter Presenting Recommendations for Pump Setting, Design Discharge Rate, and Estimated Drawdown Conditions
- Shop drawings (assume 5)
- RFI review (assume 5)

Deliverables:

- Hydrogeologic analysis, water well design, and construction support
- Summary of well water testing results and findings

I. Wellhead Facility: Improvements

Wellhead will be in an enclosed building, with provisions for disinfection facilities (NaOCl) and Soft Starters. Well may need a surge tank if identified during preliminary design. Site work requirements to include paving, perimeter fencing and site security.

- Develop 50%, 90%, and 100% PS&E
- Coordinate necessary permits
- Building enclosure type
- Surge Analysis
- Power Quality Monitoring
- Pump selection
- Well equipping

Deliverables:

- 50%, 90%, and 100% PS&E
- Summary of permits obtained

J. Wellhead Facility: Bidding and Pre-Construction Activities

- Finalize bid documents
- Provide bid phase services that includes facilitating a pre-bid meeting, responding to bidder questions, and assisting with bid evaluations
- Review Requests for Information (RFIs)
- Facilitate pre-construction meeting

K. Wellhead Facility: Construction and Post-Construction Support Services

- Provide project oversight for construction. Full-time CM and inspection are required
- Attend construction progress meetings
- Inspect site conditions during construction for compliance with contract requirements
- Provide general assistance as needed to help ensure work is completed in compliance with contract documents
- Prepare construction inspection reports following each site visit
- Review contractor's pay requests, assist with contract change orders, and compile final construction documents
- Provide post-construction services, including as-built drawings and final recommendations for well pump specification
- Shop drawings (assume 30 submittals)
- RFIs (assume 15 submittals)

Deliverables:

- Construction reports, contract change orders, as-built drawings, and final recommendations for well pump operations

L. Electrical Service- Service and Electrical

- Assist with the application for service with SCE.
- Prepare the onsite plans for the distribution panel.

II. As part of the Services, Consultant will prepare and deliver the following tangible work products to the District:

See Scope of Work Deliverables

III. In addition to the requirements of subsection REPORTS of the Records, Reports, and Release of Information section, during performance of the Services, Consultant will keep the District appraised of the status of performance by delivering the following status reports:

Hazen and Sawyer, P.C. will at minimum provide the District with monthly status reports.

IV. All work product is subject to review and acceptance by the District, and must be revised by the Consultant without additional charge to the District until found satisfactory and accepted by District.

V. Consultant will utilize the following personnel to accomplish the Services:

1. Marc Solomon, PE, BCEE, D.WRE-Principal-in-Charge
2. Steve Connor, PE- Project Manager
3. Frank Rombardo, PE- QA/QC
4. Kent O'Brien, PG-QA/QC
5. Russ Kyle, PG, CHG-Well Drilling & Hydrogeological
6. Alan Mlakar, PE-Electrical and I&C
7. Swaid Alharjri, PE- HVAC
8. Katie Hoek, PE, ENVP SP-Environmental
9. Bill Russell, AIA-Architectural
10. Vincent Lungari, PLSI-Lead Surveyor
11. Eric Schlichter-Construction Management
12. Hashmi Quazi, PhD, PE, GE-Geotechnical

EXHIBIT "B"

SPECIAL REQUIREMENTS

(Superseding Contract Boilerplate)

(added text is indicated in ***bold italics***, deleted text is indicated in ~~strikethrough~~)

I. Section 5.3, "Indemnification," is hereby amended and shall now read as follows:

"To the full extent permitted by law, Consultant agrees to indemnify, defend and hold harmless the District, its officers, employees and agents ("Indemnified Parties") against, and ~~will hold and save them and each of them harmless~~ from, ~~any and all~~ actions, either judicial, administrative, arbitration or regulatory claims, damages to persons or property, losses, costs, penalties, obligations, errors, omissions or liabilities ~~whether actual or threatened~~ (herein "claims or liabilities") that may be asserted or claimed by any person, firm or entity arising out of or in connection with the negligent performance of the work, ~~operations or activities provided herein~~ of Consultant, its officers, employees, agents, subcontractors, or invitees, or any individual or entity for which Consultant is legally liable ("indemnitors"), or arising from Consultant's or indemnitors' reckless or willful misconduct, or arising from Consultant's or indemnitors' negligent performance of or failure to perform any term, provision, covenant or condition of this Agreement, and in connection therewith:"

II. Section 5.3(b), "Indemnification," is hereby amended and shall now read as follows:

"(b) Consultant will promptly pay any judgment rendered against the District, its officers, agents or employees for any such claims or liabilities arising out of or in connection with the negligent performance of or failure to perform such work~~, operations or activities~~ of Consultant hereunder; ~~and Consultant agrees to save and hold the District, its officers, agents, and employees harmless therefrom;~~"

III. Section 5.3(c), "Indemnification," is hereby amended and shall now read as follows:

"(c) In the event the District, its officers, agents or employees is made a party to any action or proceeding filed or prosecuted against Consultant for such damages or other claims arising out of or in connection with the negligent performance of or failure to perform the work, ~~operation or activities~~ of Consultant hereunder, Consultant agrees to pay to the District, its officers, agents or employees, any and all costs and expenses incurred by the District, its officers, agents or employees in such action or proceeding, including but not limited to, legal costs and attorneys' fees.

Consultant shall incorporate similar indemnity agreements with its subcontractors and if it fails to do so Consultant shall be fully responsible to indemnify District hereunder therefore, and failure of District to monitor compliance with these provisions shall not be a waiver hereof. This indemnification includes claims or liabilities arising from any negligent ~~or wrongful~~ act, error or omission, or reckless or willful misconduct of Consultant in the performance of professional services hereunder. The provisions of this Section do not apply to claims or liabilities occurring as a result of District's sole negligence or willful acts or omissions, but, to the fullest extent permitted by law, shall apply to claims and liabilities resulting in part from District's negligence, except that design professionals' indemnity hereunder shall be limited to claims and liabilities arising out of the negligence, recklessness or willful misconduct of the design professional. The indemnity obligation shall be binding on successors and assigns of Consultant and shall survive termination of this Agreement."

IV. Section 6.3, "Ownership of Documents," is hereby amended and shall now read as follows:

"All drawings, specifications, maps, designs, photographs, studies, surveys, data, notes, computer files, reports, records, documents and other materials (the "documents and materials") prepared by Consultant, its employees, subcontractors and agents in the performance of this Agreement shall be the property of District and shall be delivered to District upon request of the Contract Officer or upon the termination of this Agreement, and Consultant shall have no claim for further employment or additional compensation as a result of the exercise by District of its full rights of ownership use, reuse, or assignment of the documents and materials hereunder. Any use, reuse or assignment of such completed documents for other projects and/or use of uncompleted documents without specific written authorization by the Consultant will be at the District's sole risk and without liability to Consultant, and Consultant's guarantee and warranties shall not extend to such use, reuse or assignment. Consultant may retain copies of such documents for its own use. Consultant shall have the right to use the concepts embodied therein. All subcontractors shall provide for assignment to District of any documents or materials prepared by them, ~~and in the event Consultant fails to secure such assignment, Consultant shall indemnify District for all damages resulting therefrom~~. Moreover, Consultant with respect to any documents and materials that may qualify as "works made for hire" as defined in 17 U.S.C. § 101, such documents and materials are hereby deemed "works made for hire" for the District."

EXHIBIT "C"

SCHEDULE OF COMPENSATION

I. Consultant shall perform the following tasks at the following rates:

See Hazen and Sawyer's Fee Estimate for detailed breakdown.

		RATE	TIME	SUB-BUDGET
A.	**Task 1-Project Management**	**$52,190.00**	**204 Hours**	**-**
B.	**Task 2- Data and Literature Review**	**$23,980.00**	**106 Hours**	**-**
C.	**Task 3- Preliminary Well Design**	**$8,490.00**	**43 Hours**	**-**
D.	**Task 4- Environmental and Permitting Support**	**$21,530.00**	**132 Hours**	**-**
E.	**Task 5-Well Drilling Technical Plans, Specifications and Cost Estimates**	**$16,495.00**	**103 Hours**	**-**
F.	**Task 6-Drilling Bidding Assistance**	**$8,870.00**	**48 Hours**	**-**
G.	**Task 7- Construction Management and Inspection of Well and Wellhead Facilities**	**$43,600.00**	**72 Hours**	**-**
H.	**Task 8-Drilling Inspection,**	**$102,340.00**	**686 Hours**	

	Hydrogeological Services and Water Quality Testing			
I.	**Task 9- Wellhead Facility Improvements**	**$279,751.00**	**1526 Hours**	**-**
J.	**Task 10- Wellhead Facility Bidding and Pre-Construction**	**$17,480.00**	**88 Hours**	**-**
K.	**Task 11- Wellhead Facility Construction and Post-Construction Support Services**	**$54,425.00**	**285 Hours**	**-**

II. A retention of ten percent (10%) shall be held from each payment as a contract retention to be paid as part of the final payment upon satisfactory completion of services.

III. Within the budgeted amounts for each Task, and with the approval of the Contract Officer, funds may be shifted from one Task subbudget to another so long as the Contract Sum is not exceeded per subsection entitled CONTRACT SUM of the Compensation and Method of Payment section, unless Additional Services are approved per subsection entitled SPECIAL REQUIREMENTS of the Services of Consultant section .

IV. The District will compensate Consultant for the Services performed upon submission of a valid invoice. Each invoice is to include:

A. Line items for all personnel describing the work performed, the number of hours worked, and the hourly rate.

B. Line items for all materials and equipment properly charged to the Services.

C. Line items for all other approved reimbursable expenses claimed, with supporting documentation.

D. Line items for all approved subcontractor labor, supplies, equipment, materials, and travel properly charged to the Services.

V. The total compensation for the Services shall not exceed the Contract Sum as provided in subsection entitled CONTRACT SUM of the Compensation and Method of Payment section of this Agreement.

VI. The Consultant's billing rates for all personnel are attached as Exhibit C-4.

Fee Estimate

The table below presents our fee estimate. Our estimated labor and fees are based on the following assumptions:

- Construction management and inspection for the well drilling will be provided by Kyle Groundwater.
- Construction management for the wellhead facilities will be provided by the District. Inspection will be provided by Psomas at a rate of $170/hr.
- Geotechnical investigation will be limited to the Site 2 parcel. Borings can be made along the proposed pipeline alignments at an additional cost of $2,500.
- The topographical survey is limited to the Site 2 parcel. Survey can be expanded to include the proposed pipeline alignments (construction water and development water discharge) for a total cost of $25,120. Acquiring a title report is not included.

Palmdale WD - Well 36 Drilling and Equipping	Hazen and Sawyer											Kyle Groundwater				Total - Hazen and KGI			Surveying	Geotechnical	CM and Inspection	TOTAL
	Principal	Principal	Project Manager II	Principal Engineer I	Principal Engineer I	Principal Engineer I	Sr. Project Engineer	Engineer I	CAD Technician II	Total Hours	Labor	Principal	Project	Staff	GIS							
	Solomon	Rombardo	Conner	Hoek	DuPuis	Makar	Portner	Maari	Molina			Kyle	Makar	Dykstra	Makar				Psomas	Converse	Psomas	
	$295	$295	$270	$210	$210	$210	$190	$135	$125			$190	$145	$135	$115							
																Labor	ODC	Total				
TASK 1 - Project Management																						
1.1 Kickoff meeting			2		2	2	2	4		12	$ 2,300	4				$3,060	$90	$3,150				
1.2 Progress meetings (assume 15 monthly virtual)	8		20					16		44	$ 9,920	8				$11,440	$180	$11,620				
1.3 Monitoring of budget and schedule			40							40	$ 10,800					$10,800	$0	$10,800				
1.4 Project coordination, including subs			60							60	$ 16,200					$16,200	$0	$16,200				
1.5 Quality control and assurance	4	24	8							36	$ 10,420					$10,420	$0	$10,420				
SUBTOTAL TASK 1	**12**	**24**	**130**	**0**	**2**	**2**	**2**	**20**	**0**	**192**	**$ 49,640**	**12**	**0**	**0**	**0**	**$51,920**	**$270**	**$52,190**				**$52,190**
TASK 2 - Data and Literature Review																						
2.1 Previous well driller logs										0	$ -	2				$380	$0	$380				
2.2 Previous well equipping design			4		2	2		4		12	$ 2,460					$2,460	$0	$2,460				
2.3 Technical memorandum verifying site feasibility			4					4		8	$ 1,620	8		4	4	$4,140	$0	$4,140				
2.4 Conceptual plan of well building and equipping			16		8	8		32	40	104	$ 17,000					$17,000	$0	$17,000				
SUBTOTAL TASK 2	**0**	**0**	**16**	**0**	**8**	**8**	**0**	**32**	**40**	**104**	**$ 21,080**	**2**	**0**	**0**	**0**	**$23,980**	**$0**	**$23,980**	**$ -**	**$ -**	**$ -**	**$23,980**
TASK 3 - Preliminary Well Design																						
3.1 Preliminary design drawings for well			1							1	$ 270	2			2	$880	$0	$880				
3.2 Preliminary specifications for well			2							2	$ 540	4			2	$1,530	$0	$1,530				
3.3 Prepare preliminary well design report (incl. prod. capac., ID contam., cost & sched.)			2							2	$ 540	8	12	12	4	$5,880	$200	$6,080				
SUBTOTAL TASK 3	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**$ 1,350**	**14**	**12**	**12**	**8**	**$8,290**	**$200**	**$8,490**	**0**	**0**	**0**	**$8,490**
TASK 4 - Environmental and Permitting Support																						
4.1 Preparation of Finding of Fact under EIR	2			16						18	$ 3,950					$3,950	$0	$3,950				
4.2 Coordination of public review and filing				8						8	$ 1,680					$1,680	$0	$1,680				
4.3 Preparation of preliminary and final DWSAP documents										0	$ -	8	8	24	8	$6,840	$0	$6,840				
4.4 Drilling permit application assistance										0	$ -	6				$1,140	$90	$1,230				
4.5 Preparation of application for extraction well from water master										0	$ -	8		12	4	$3,600	$0	$3,600				
4.6 Amendment to PWD's drinking water permit										0	$ -	8		16	4	$4,140	$90	$4,230				
SUBTOTAL TASK 4	**2**	**0**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**26**	**$ 5,630**	**30**	**8**	**52**	**16**	**$21,350**	**$180**	**$21,530**	**0**	**0**	**0**	**$21,530**
TASK 5 - Well Drilling Technical Plans, Specifications and Cost Estimates																						
5.1 50% PS&E			2					2		4	$ 810	12	24	8	4	$8,110	$0	$8,110				
5.2 90% PS&E			2					2		4	$ 810	8	12	8	2	$5,380	$0	$5,380				
5.3 100% PS&E			2					2		4	$ 810	4	4	4	1	$2,805	$200	$3,005				
SUBTOTAL TASK 5	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**6**	**0**	**12**	**$ 2,430**	**24**	**40**	**20**	**7**	**$16,295**	**$200**	**$16,495**	**0**	**0**	**0**	**$16,495**
TASK 6 - Drilling Bidding Assistance																						
6.1 Finalization of bid documents										0	$ -	8	8	4	2	$3,450	$0	$3,450				
6.2 Bid phase services incl. pre-bid meeting, responding to questions and bid evaluation			4							4	$ 1,080	6	4			$2,800	$90	$2,890				
6.3 Review of RFIs										0	$ -	4				$760	$0	$760				
6.4 Pre-construction meeting facilitation			2							2	$ 540	6				$1,680	$90	$1,770				
SUBTOTAL TASK 6	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**$ 1,620**	**24**	**12**	**4**	**2**	**$8,690**	**$180**	**$8,870**	**0**	**0**	**0**	**$8,870**
TASK 7 - CM and Inspection of Well and Wellhead Facilities																						
7.1 Quality control including monthly status reports										0	$ -	24				$4,560	$0	$4,560			$ 12,000	
7.2 As-needed inspection services										0	$ -	24	24			$8,040	$0	$8,040			$ 19,000	
SUBTOTAL TASK 7	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**48**	**24**	**0**	**0**	**$12,600**	**$0**	**$12,600**	**0**	**0**	**$ 31,000**	**$43,600**
TASK 8 - Drilling Inspection, Hydrogeological Services and Water Quality Testing																						
8.1 Inspection during conductor borehole drilling and insallation of sanitary seal										0	$ -	1		12		$1,810	$120	$1,930				
8.2 Inspection during pilot borehole drilling and logging of formation samples										0	$ -	3	4	40		$6,550	$480	$7,030				
8.3 Inspection during geophysical borehole logging										0	$ -	1	1	8		$1,415	$120	$1,535				
8.4 Evaluate lithology and geophysical logs and select isolated aquifer zone test intervals										0	$ -	2		4		$920	$0	$920				
8.5 Inspection during isolated aquifer zone testing (assumes four [4] zones)										0	$ -	6	16	96		$16,420	$960	$17,380				
8.6 Mechanical grading analysis (assumes [8] formation samples)										0	$ -	1		3		$595	$60	$655				
8.7 Review borehole lithology and geophysical logs, provide final well design, including design meeting										0	$ -	10	16		6	$4,910	$0	$4,910				
8.8 Inspection of reaming of pilot borehole and caliper survey										0	$ -	4	4	40		$6,740	$480	$7,220				
8.9 Inspection during well construction, including well casing, screen, gravel pack and annular seal										0	$ -	4	4	120		$17,540	$960	$18,500				
8.10 Inspection during initial well development (assumes 120 hours of development)										0	$ -	2		40		$5,780	$600	$6,380				
8.11 Inspection during final development (assumes 60 hours of development)										0	$ -	4		42		$6,430	$720	$7,150				
8.12 Inspection during aquifer pumping tests and Title 22 sampling										0	$ -	3		42		$6,240	$360	$6,600				
8.13 Inspection during downhole video and gyroscopic alignment surveys										0	$ -	1	1	12		$1,955	$120	$2,075				
8.14 Inspection during well disinfection										0	$ -	1	1	10		$1,685	$120	$1,805				
8.15 Inspection of post-construction site condition and wellhead completion										0	$ -	3		8		$1,650	$240	$1,890				
8.16 Analyze aquifer pumping test data and provide recommendations										0	$ -	3	8	12		$3,350	$0	$3,350				
8.17 Provide construction coordination and support (change order review, schedule review, contractor invoice review, construction updates)										0	$ -	6	8			$2,300	$0	$2,300				
8.18 Shop drawing review (assume 5)										0	$ -	3				$570	$0	$570				
8.19 RFI review (assume 5)										0	$ -	4				$760	$0	$760				
8.20 Final well construction summary report										0	$ -	10	12	24	20	$9,180	$200	$9,380				
SUBTOTAL TASK 8	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**72**	**75**	**513**	**26**	**$96,800**	**$5,540**	**$102,340**	**0**	**0**	**0**	**$102,340**
TASK 9 - Wellhead Facility Improvements																						
9.1 Preliminary design			16		8	8	8	16	24	80	$ 14,360					$14,360	$500	$14,860	$ 13,180	$ 16,450		
9.2 50% PS&E			46		64	65	72	120	280	647	$ 104,285					$104,285	$300	$104,585				
9.3 90% PS&E			37		51	52	60	96	226	522	$ 84,184					$84,184	$300	$84,484				
9.4 100% PS&E			9		13	13	18	26	57	136	$ 21,962					$21,962	$300	$22,262				
9.5 Permit acquisition	2			16						18	$ 3,950					$3,950	$0	$3,950				
9.6 Surge analysis			24					100		124	$ 19,980					$19,980	$0	$19,980				
SUBTOTAL TASK 9	**2**	**0**	**132**	**16**	**136**	**137**	**158**	**358**	**587**	**1526**	**$ 248,721**	**0**	**0**	**0**	**0**	**$248,721**	**$1,400**	**$250,121**	**$13,180**	**$16,450**	**$0**	**$279,751**
TASK 10 - Wellhead Facility Bidding and Pre-Construction																						
10.1 Bid document finalization			4		2	2		8	8	24	$ 4,000					$4,000	$200	$4,200				
10.2 Bid phase services incl. pre-bid meeting, responding to questions and bid evaluation			12		2	2		4		20	$ 4,620					$4,620	$0	$4,620				
10.3 Review of RFIs			8		6	6		12		32	$ 6,300					$6,300	$0	$6,300				
10.4 Pre-construction meeting facilitation			4					8		12	$ 2,160					$2,160	$200	$2,360				
SUBTOTAL TASK 10	**0**	**0**	**28**	**0**	**10**	**10**	**0**	**32**	**8**	**88**	**$ 17,080**	**0**	**0**	**0**	**0**	**$ 17,080**	**$400**	**$17,480**				**$17,480**
TASK 11 - Wellhead Facility Construction and Post-Construction Support Services																						
11.1 Specialty inspections and reports					16					16	$ 3,360					$3,360	$200	$3,560				
11.2 Attendance at meetings			16			8		16		40	$ 8,160					$8,160	$200	$8,360				
11.3 As-built drawings and final recommendations for well pump operations			8		6	6			32	52	$ 8,680					$8,680	$0	$8,680				
11.4 Shop drawing review (assume 30)			30		20	30		60		140	$ 26,700					$26,700	$0	$26,700				
11.5 RFI responses (assume 15)			8		6	8		15		37	$ 7,125					$7,125	$0	$7,125				
SUBTOTAL TASK 11	**0**	**0**	**62**	**0**	**48**	**52**	**0**	**91**	**32**	**285**	**$ 54,025**	**0**	**0**	**0**	**0**	**$ 54,025**	**$ 400**	**$54,425**				**$54,425**
TOTAL	**16**	**24**	**385**	**40**	**204**	**209**	**160**	**539**	**667**	**2244**	**$ 401,576**	**226**	**171**	**601**	**59**	**$ 559,751**	**$ 8,770**	**$ 568,521**	**$ 13,180**	**$ 16,450**	**$ 31,000**	**$ 612,656**

EXHIBIT "D"

SCHEDULE OF PERFORMANCE

I. Consultant shall perform all services timely in accordance with the following schedule:

See Hazen and Sawyer's schedule on D-2.

II. Consultant shall deliver the following tangible work products to the District by the following dates.

See Hazen and Sawyer's schedule on D-2.

III. The Contract Officer may approve extensions for performance of the services in accordance with subsection SCHEDULE OF PERFORMANCE of the Performance Schedule section.

D-2: Proposed Schedule

Schedule

Hazen's proposed schedule is shown below. This schedule is very aggressive in response to the District's desire to have the well operational in the Spring of 2022. Based on our past experience delivering similar types of projects, a project like this would normally take 16 months. However, it can be compressed to 12 months assuming the following:

- Notice to proceed will be on April 12, 2021.
- Design of the wellhead facilities will begin early based on an assumed flow capacity of the well pumps. Should the well development result in a different capacity, then there will be a change order to correct the size of the pumps.
- The District will be able to expedite the bid and award phases of the well drilling and wellhead facility construction contracts as shown in the schedule.
- District review periods will be limited to one-week.

Project Schedule ■ Main Task Duration ■ District Review ★ Meetings

	Description	2021 A	M	J	J	A	S	O	N	D	2022 J	F	M	A
1	PM and Meetings	★	★	★	★	★	★	★	★	★	★	★	★	★
2	Data and Literature Review	■												
3	Preliminary Well Design	■	■											
4	Environmental and Permitting Support		■	■	■	■	■	■	■	■	■	■	■	■
	District Review		■											
5	Well Drilling PS&E		■	■										
	District Review			■	■									
6	Well Drilling Bidding Assistance				■	■								
	District Review					■								
8	Well Drilling Construction Services					■	■	■	■					
9	Wellhead Facility Design					■	■	■	■					
	District Review						■		■					
10	Wellhead Facility Bidding and Pre-construction Services								■	■				
	District Review									■				
11	Wellhead Facility Construction and Post-Construction Services									■	■	■	■	■

Hazen Team Roles

Hazen has assembled a highly qualified team with extensive experience in working with the District and the Palmdale area. The following presents a breakdown of the work assigned to Hazen as prime and our subconsultants:

- Project Management (Task 1) - Hazen
- Well Design and Drilling – Kyle Groundwater
- Full-Time Construction Management - Psomas
- Site Survey - Psomas
- Geotechnical Investigation - Converse

Our fee estimate included in our proposal presents a detailed breakdown of the estimated hours and cost by firm to complete the Scope of Services.

1014-094

P A L M D A L E W A T E R D I S T R I C T

B O A R D M E M O R A N D U M

DATE: April 7, 2021 **April 12, 2021**

TO: BOARD OF DIRECTORS **Board Meeting**

FROM: Mr. Michael Williams, Finance Manager/CFO

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: ***AGENDA ITEM NO. 7.4 – DISCUSSION OF OFFERING CUSTOMERS AN INCENTIVE FOR PAPERLESS BILLINGS WITH TEXT NOTIFICATIONS. (DIRECTOR MERINO/FINANCE MANAGER WILLIAMS)***

Recommendation:

Staff does not recommend offering customers an incentive for paperless billing with text notifications.

Alternative Options:

The Board can set a baseline for billing generation that excludes the cost for print, fold and mail and establish a charge for customers who want that service as part of the next Proposition 218 rate study in 2024.

Impact of Taking No Action:

There is no impact from no action.

Background:

The District conducted a Proposition 218 rate study back in 2019 which established the water rates for a five-year period of 2020 through 2024. The cost of operation, including the generation of bills for the customers, was included in determining the rates charged to customers. In a summary of Proposition 218, the District may not charge a customer more for the service than the costs associated to provide the service. If we were to offer an incentive for paperless billing, it would be in violation of Proposition 218 and our rates established in 2019 by treating one set of customers differently than the others.

I requested a legal opinion from our general counsel and below is their response:

California voters approved Proposition 218 ("Prop 218"), which amended the California Constitution by adding articles XIII C ("Article XIII C") and XIII D ("Article XIII D"), which affect the ability of special districts, like the Palmdale Water District, to levy and collect existing and future taxes, assessments, and property-related fees and charges. Article XIII D established a new category of fees and charges, referred to as "property-related fees and charges." A fee subject to Article XIII D is one that is imposed "upon a parcel or upon a person as an incident of property ownership, including a user fee for a property related service." (Cal. Const., art. XIII D, § 2, subd. (e).) Thus, a fee or charge is subject to Proposition 218 if it is imposed:

(a) on a parcel; or (b) on a person;

(1) as an incident of property ownership, or (2) as a user fee for a property-related service.

Services specifically mentioned in Article XIII D, section 6, subdivision (c), water, sewer, and refuse collection services, are most often property-related services if provided by a local agency. (*Richmond v. Shasta Community Services District* (2004) 32 Cal. 4th 409, 428.)

The District must follow both procedural and substantive requirements of Prop 218. Specifically, Article XIII D, section 6, requires the District to comply with the following procedures before imposing or increasing property-related fees or charges:

- Identify the parcels upon which a fee or charge is proposed for imposition;
- Calculate the amount of the fee proposed to be imposed on each parcel;
- Provide written notice by mail to the "record owner of each identified parcel;"
- Conduct a public hearing on the proposed fee not less than 45 days after the mailing;
- Consider "all protests against the proposed fee or charge." If written protests against the fee are presented by a "majority of owners of the identified parcels," the fee cannot be imposed.

The substantive provisions of Article XIII D appear in section 6, subdivisions (b)(1)–(5), which require a property-related fee to satisfy these standards:

- Revenues derived from the fee or charge must not exceed the funds required to provide the property-related service;
- Revenues derived from the fee or charge must not be used for any purpose other than that for which the fee is imposed;
- The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership must not exceed the proportional cost of the service attributable to the parcel;
- The fee or charge may not be imposed for a service unless the service is actually used by, or immediately available to, the owner of the property subject to the fee or charge; fees or charges based on potential or future use of a service are not permitted, and stand-by charges must be classified as assessments subject to the ballot protest and proportionality requirements for assessments; and

- No fee or charge may be imposed for general governmental services, such as police, fire ambulance, or libraries, where the service is available to the public in substantially the same manner as it is to property owners.

In 2019, the District underwent a Prop 218 process in its adoption of the new water rates that satisfy both procedural and substantive requirements of Prop 218. All billing costs are currently being recovered through the adopted water rates. As you indicated, every customer's bill is generated exactly the same regardless of how they receive it. If the District was to adopt an "incentive" or a "reduced fee" for the paperless customers, it could call into question the District's current water rates because nothing has changed. It may appear like the District is shifting the billing cost of those enrolling in paperless billing, on the customers who have not signed up for paperless billing. Even if the cost is not shifted on the other customers, it could appear that the District was overcharging customers before.

In addition, providing an "incentive" or "reduced fee" to a small group of individuals for their private benefit may be perceived as a gift of public funds. The California Constitution provides that the legislature does not have the power to make any gift or authorize the making of any gift, of any public money or thing of value, to any individual, municipal, or other corporation. (Cal. Const., art. XVI, § 6.) There are a number of exceptions, but generally speaking an expenditure which benefits an individual or small class of individuals only, with no benefit to all of the residents of the political entity is prohibited. Here, individuals who enroll for paperless bills are receiving an "gift" that is being enjoyed by them, at the expense of other ratepayers.

To provide some additional information regarding billing:

The District currently bills 26,883 active accounts. Those accounts are distributed into 58 routes, and the routes are then placed into billing route groups. Billing is generated by route group and then uploaded to our print, fold and mail vendor who also provides our Electronic Bill Presentment and Payment (EBPP) platform on our web site. The electronic bills are then injected into the system and available to all customers via the web portal, and the District pays $0.02 per EBPP. For customers who have not selected paperless billing, the bill is then printed, folded and mailed to the customer. The current cost to the District is $0.61 per paper bill (including postage) to print, fold and mail a customer's bill.

Of the 26,883 active accounts, 14,758, or 55%, have registered on the web site to manage their account electronically. Registered customers have the ability to make payments each month or set-up autopay, receive email notification of their bill, and chose paperless billing.

For those 14,758 registered accounts, 5,723, or 39%, have selected paperless billing, and 3,801, or 26%, are set-up for autopay.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 4 – Financial Health and Stability
No. 6 – Customer Care, Advocacy and Outreach

This item directly relates to the District's Mission Statement.

Budget:

This item has no budget impact.

Supporting Documents:

- None.

P A L M D A L E W A T E R D I S T R I C T

B O A R D M E M O R A N D U M

DATE:	April 6, 2021	**April 12, 2021**
TO:	BOARD OF DIRECTORS	**Board Meeting**
FROM:	Mr. Peter Thompson II, Resource and Analytics Director	
VIA:	Mr. Dennis D. LaMoreaux, General Manager	
RE:	***AGENDA ITEM NO. 7.5– DISCUSSION OF 2021 WATER SUPPLY AND ANTICIPATED DEMAND. (NO BUDGET IMPACT – RESOURCE AND ANALYTICS DIRECTOR THOMPSON II)***	

Background:

The District receives its annual water supply from three sources: The State Water Project (SWP), groundwater, and Littlerock Dam. On average 50% comes from the SWP, 40% from groundwater and 10% from Littlerock Dam. We are experiencing our second consecutive year of dry conditions in northern California, where our SWP water originates. Due to these continued dry conditions, the Department of Water Resources is projecting to allocate only 5% of the District's full annual contracted supply through the SWP. In a full (100%) allocation year, the District would receive 21,300 acre feet delivered through the SWP. In a 5% year, the District would receive 1,065 acre feet of water through the SWP. This supply alone would be insufficient to meet the District's system demands. Fortunately, the District has several additional programs and prior agreements that provide a back up supply in the case of continued 5% allocation year.

Supply and Demand Estimates for 2021:

The combination of accessible groundwater and surface water could yield an estimated supply of 22,234 acre feet in 2021. The estimated demand and evaporative losses without extra conservation is 22,200-acre feet. Based on these estimates, the District could meet demand for the year but have no carry over SWP supply for 2022. There are still many variables to be finalized that could add and deduct from both the supply and the demand side of the estimates.

Evaluation and Preparation:

The next few weeks should finalize many of the supply side uncertainties. Staff will be evaluating supply and any State messaging regarding this dry year to determine if additional water conservation measures are needed, including activation of the Water Shortage Contingency Plan.

Supporting Documents:

- Presentation: Water Supply and Demand Overview, April 12, 2021

PALMDALE WATER DISTRICT
A CENTURY OF SERVICE

Water Supply and Demand Overview

April 12th, 2021

Supplies - Surface Water

- 5% allocation
- SWP Carryover 2,449
- SWP Table A 1,065
- Combined other SWP 3,620
- Dry Year programs 400
- Littlerock Dam 1,500
- **Total** **9,034 Acre Feet**

Supplies - Groundwater Water

- Production Right 2,769
- Fed Reserve Right 1,430
- Return Flows 4,176
- Carry Over 9,977
- **Total** **18,352 Acre Feet**

- Pumpable 12,000 AF

Supplies Overview
Total Available

- Surface Water 9,034
- Groundwater (pumpable) 12,000
- AVEK-Acton Supply 1,200
- **Total Available** **22,234**

Demands-Based on Historical Production*

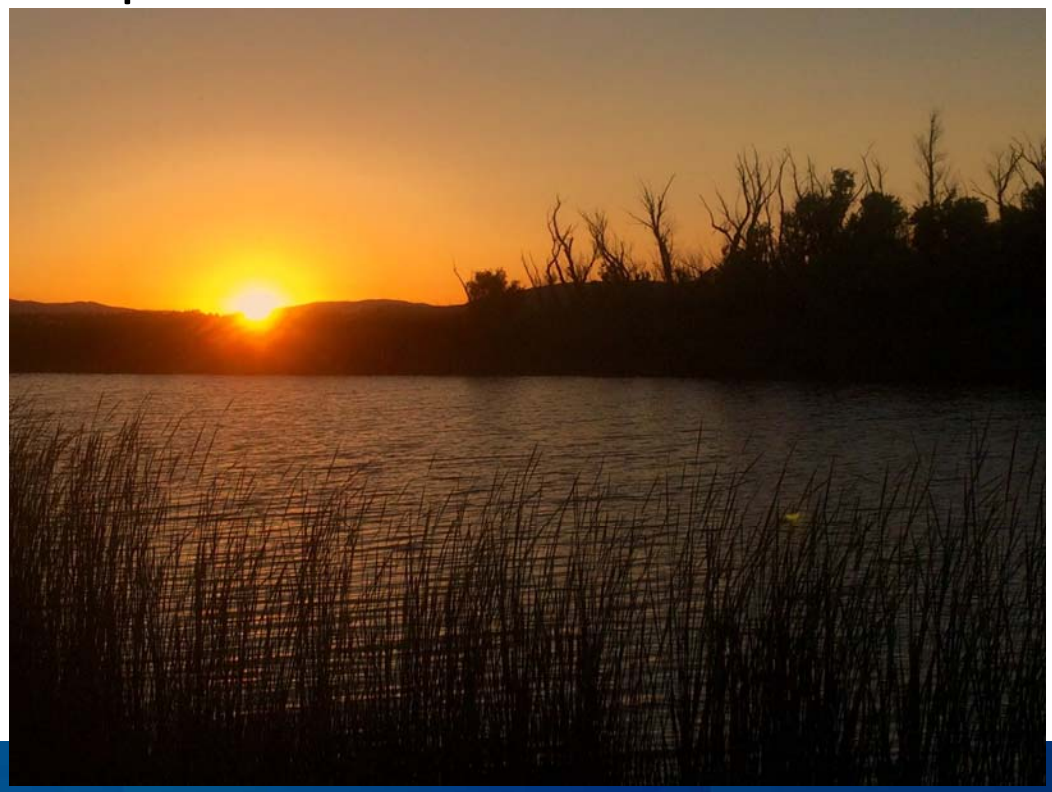
- 2017 18,665 AF
- 2018 19,887 AF
- 2019 18,534 AF
- 2020 20,510 AF
- *2021 21,000 AF (Estimated)*

- *Production figures include supply for Acton.

Production Demand + Evaporation

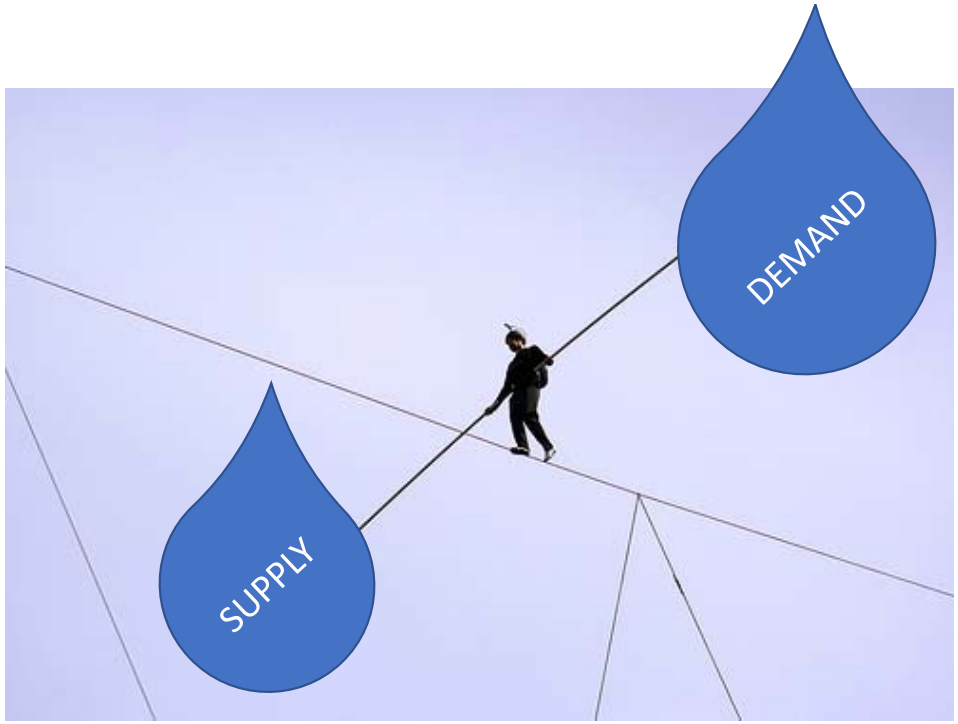
- Evaporative losses from Lake Palmdale are close to 1,200 AF annually and must be factored into supply needs.

- Total estimated demand for 2021 is
  21,000 AF (production demand)
  1,200 AF (Evaporative losses)
  22,200 Total Demand



Supply Vs Demand

- Total Estimated Supply 22,234
- Total Estimated Demand 22,200



- A scenario like this leaves PWD with a nearly full lake but 0 AF SWP carryover for 2022.

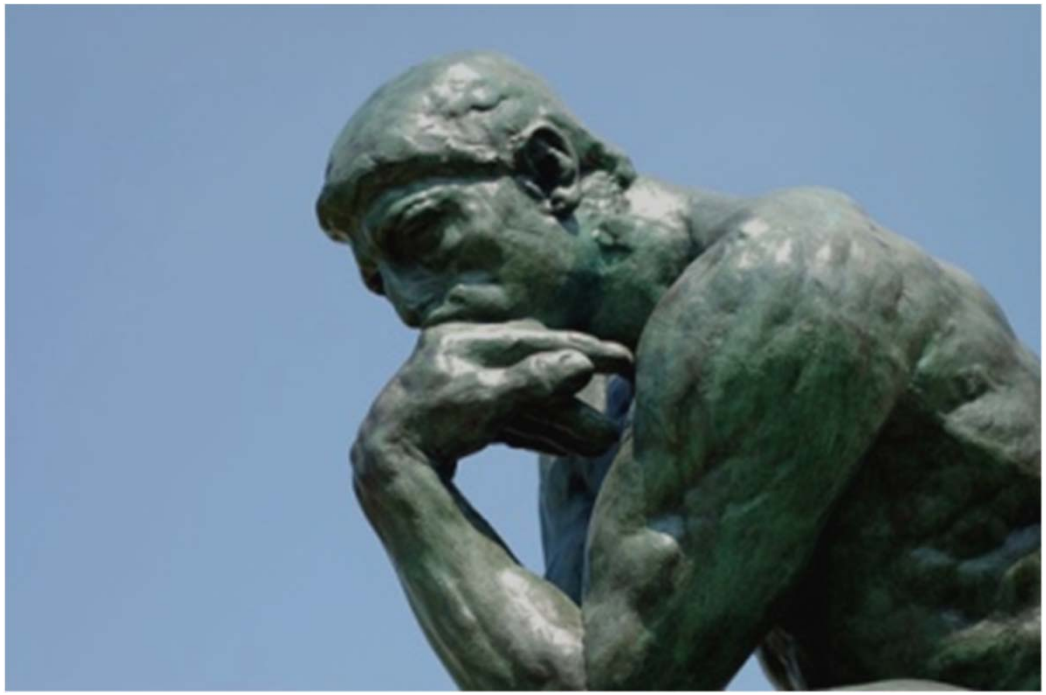
Remaining Variables

Supply

- Weather
- SWP Allocation
- Final SWP Transfer amounts
- Final Littlerock Dam supply
- Groundwater pumping capabilities

Demand

- Actual vs estimated production
- Actual vs estimated evaporation
- Conservation effects



Next Steps

- Receive DWR's final SWP allocation
- Evaluate State messaging
- Evaluate Water Shortage Contingency Plan


PALMDALE WATER DISTRICT
A CENTURY OF SERVICE
EST. 1918
Thank you!

MINUTES OF MEETING OF THE FINANCE COMMITTEE OF THE PALMDALE WATER DISTRICT, NOVEMBER 19, 2020:

A meeting of the Finance Committee of the Palmdale Water District was held Thursday, November 19, 2020, at 2029 East Avenue Q, Palmdale, California, in the Board Room of the District office and via teleconference. Chair Dizmang called the meeting to order at 1:05 p.m.

1) Roll Call.

Attendance:
Committee:
Gloria Dizmang, Chair (via teleconf.)
Don Wilson, Committee Member

Others Present:
Dennis LaMoreaux, General Manager
Adam Ly, Assistant General Manager
Mike Williams, Finance Manager
Judy Shay, Public Affairs Director (via teleconf.)
Dennis Hoffmeyer, Accounting Spvsr. (via teleconf.)
Bob Egan, Financial Advisor (via teleconf.)
Danielle Henry, Management Analyst (via teleconf.)
0 members of the public

2) Adoption of Agenda.

It was moved by Committee Member Wilson, seconded by Chair Dizmang, and unanimously carried by all members of the Committee present at the meeting to adopt the agenda, as written.

3) Public Comments for Non-Agenda Items.

There were no public comments for non-agenda items.

4) Action Items: (The Public Shall Have an Opportunity to Comment on Any Action Item as Each Item is Considered by the Committee Prior to Action Being Taken.)

4.1) Consideration and Possible Action on Approval of Minutes of Meeting Held October 22, 2020.

It was moved by Committee Member Wilson, seconded by Chair Dizmang, and unanimously carried by all members of the Committee present at the meeting to approve the minutes of the Finance Committee meeting held October 22, 2020.

4.2) Discussion and Overview of Cash Flow Statement and Current Cash Balances as of October 2020. (Financial Advisor Egan)

Financial Advisor Egan provided an overview of the October 2020 Major Account Activity Report and Investment Funds Report, including anticipated assessments and maturing CDs, and the Cash Flow Statement, including Capital Improvement Fees received in November, 2020 carryover items, and the projected increase in the year-end balance.

4.3) Discussion and Overview of Financial Statements, Revenue, and Expense and Departmental Budget Reports for October 2020. (Finance Manager Williams)

Finance Manager Williams reviewed in detail the balance sheet, profit and loss statement and trends, and revenue and expense analysis reports for the period ending October 2020 and stated that most departments are operating at or below the targeted expenditure percentage of 83% with very little changes from September to October.

4.4) Discussion and Overview of Committed Contracts Issued. (Finance Manager Williams)

Finance Manager Williams provided an overview of the Contractual Commitments and Needs Report for new and replacement capital projects, consulting and engineering support projects, new and replacement equipment, water quality fee funded projects, committed and projected capital expenditures, and the payout summary for the Water Revenue Bond Series 2018A through October 2020.

4.5) Consideration and Possible Action on a Recommendation Regarding the 2021 Budget. (Finance Manager Williams)

Finance Manager Williams reviewed the draft 2021 Budget, the financial effects of COVID-19, and staff's recommendation for the Committee to recommend approval of the 2021 Budget, as presented, to the full Board at the November 23, 2020 Regular Board Meeting, and after a brief discussion of the importance of maintaining a $10 million year-end balance, it was moved by Committee Member Wilson, seconded by Chair Dizmang, and unanimously carried by all members of the Committee present at the meeting that the Committee concurs with staff's recommendation to approve the 2021 Budget, as presented, and that this item be considered by the full Board at the November 23, 2020 Regular Board Meeting.

4.6) Consideration and Possible Action on a Recommendation Regarding Resolution No. 20-21 Being a Resolution of the Board of Directors of the Palmdale Water District Establishing its Investment Policy. (Financial Advisor Egan/Finance Manager Williams)

Financial Advisor Egan provided an overview of Resolution No. 20-21 after which it was moved by Committee Member Wilson, seconded by Chair Dizmang, and unanimously carried by all members of the Committee present at the meeting that the Committee concurs with staff's recommendation to approve Resolution No. 20-21 being a Resolution of the Board of Directors of the Palmdale Water District Establishing its Investment Policy and that this item be considered by the full Board at the November 23, 2020 Regular Board Meeting.

5) Reports.

5.1) Finance Manager Williams:

a) Effect of COVID-19 Event.

Finance Manager Williams stated that due to COVID-19 events, as of October 31, 2020, there were 1,273 single family accounts with a balance of $50 or more and over sixty days past due with a total past due amount of $562,554 compared to 1,119 accounts at September 30, 2020 with an outstanding balance of $475,744 and 67 accounts at October 31, 2019 with an outstanding balance of $24,552 and that cash received for October 2020 was $126,551 less than September 2020 but $194,892 higher than October 2019 reflective of increased water sales.

General Manager LaMoreaux then stated that the State is collecting data from all larger water agencies to obtain a better understanding of the impact across the state from the moratorium on water shut-offs and that the District has submitted its data.

b) Revenue Projections.

Finance Manager Williams then stated that revenue is ahead of projections by approximately $1.2 million.

c) Status on Refunding 2020A Series Taxable Water Revenue Bonds.

He then stated that regarding the 2020A Series Taxable Water Revenue Bonds, the sale was completed on October 20, 2020 with a net savings of 6.3% and an average annual dollar savings of $67,103.

5.2) Financial Advisor Egan:

a) Debt Service Coverage Status.

Financial Advisor Egan stated that the Debt Service Coverage for the period of November 2019 through October 2020 is 1.91.

6) Board Members' Requests for Future Agenda Items.

There were no requests for future agenda items.

7) Date of Next Committee Meeting.

It was determined that the next Finance Committee meeting will be held in February 2020 to allow staff to prepare 2020 year-end reports but that financial reports for the period ending November 30, 2020 will be provided to the Committee in December with briefings available.

8) Adjournment.

There being no further business to come before the Finance Committee, the meeting was adjourned at 1:46 p.m.

Chair