



# PALMDALE WATER DISTRICT

## A CENTURY OF SERVICE

### BOARD OF DIRECTORS

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July 2, 2020

## AGENDA FOR A MEETING OF THE RESOURCE AND FACILITIES COMMITTEE OF THE PALMDALE WATER DISTRICT

**Committee Members: Kathy Mac Laren-Chair, Robert Alvarado**

### **TO BE HELD VIA TELECONFERENCE ONLY**

**DIAL-IN NUMBER: 571-748-4021 ATTENDEE PIN: 529-664-092#**

**Submit Public Comments at: <https://www.gomeet.com/529-664-092>**

**WEDNESDAY, JULY 8, 2020**

**10:00 a.m.**

DENNIS D. LaMOREAUX  
General Manager

ALESHIRE & WYNDER LLP  
Attorneys

**NOTE:** 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.

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) Roll call.
- 2) Adoption of agenda.
- 3) 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.)



RESOURCE AND FACILITIES COMMITTEE  
PALMDALE WATER DISTRICT

-2-

July 2, 2020

- 4.1) Consideration and possible action on approval of minutes of meeting held February 11, 2020.
- 4.2) Consideration and possible action on a recommendation to authorize staff to enter into an agreement with Kennedy-Jenks Consultants for the preparation of the 2020 Urban Water Management Plan. (\$145,605.00 – Budgeted – Budget Item No. 1-02-5070-007 – Resource and Analytics Director Thompson II)
- 4.3) Consideration and possible action to authorize staff to enter into a contract with Kyle Groundwater for the Well No. 36 Pre-Design Report. (\$13,994.00 – Budgeted – Budget Item No. 1-02-5070-007 – Engineering/Grant Manager Rogers)
- 4.4) Consideration and possible action to authorize staff to enter into a contract with Stantec Consulting Services, Inc. for a Surface Water Augmentation Feasibility Study. (\$13,015.00 – Budgeted – Budget Item No. 1-02-5070-007 – Engineering/Grant Manager Rogers)
- 4.5) Consideration and possible action to authorize the General Manager to execute Change Order No. 2 to the contract with Stevens Construction for the remodel of the District's buildings. (Additional costs related to changes in scope of the project – Budgeted – Work Order No. 20-613 – Engineering/Grant Manager Rogers)
- 4.6) Discussion and review of 2020 planned projects. (Assistant General Manager Ly)
- 5) Reports.
  - 5.1) Resource and Analytics Director Thompson II:
    - a) 2020 State Water Project allocation use.
    - b) Water Conservation and Education Garden.
  - 5.2) Engineering/Grant Manager Rogers:
    - a) Littlerock Reservoir Sediment Removal Project.
    - b) Palmdale Regional Groundwater Recharge and Recovery Project.
  - 5.3) Facilities Manager Bligh:
    - a) Water Truck.
- 6) Board members' requests for future agenda items.
- 7) Date of next Committee meeting.
- 8) Adjournment.



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DENNIS D. LaMOREAUX,  
General Manager

DDL/dd

**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:** July 1, 2020 **July 8, 2020**  
**TO:** RESOURCE AND FACILITES COMMITTEE **Committee Meeting**  
**FROM:** Mr. Peter Thompson II, Resource and Analytics Director  
**VIA:** Mr. Dennis D. LaMoreaux, General Manager  
**RE:** ***AGENDA ITEM NO. 4.2 – CONSIDERATION AND POSSIBLE ACTION ON A RECOMMENDATION TO AUTHORIZE STAFF TO ENTER INTO AN AGREEMENT WITH KENNEDY-JENKS CONSULTANTS FOR THE PREPARATION OF THE 2020 URBAN WATER MANAGEMENT PLAN. (\$145,605.00 – BUDGETED – BUDGET ITEM NO. 1-02-5070-007 – RESOURCE AND ANALYTICS DIRECTOR THOMPSON II)***

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**Recommendation:**

Staff recommends that the Committee recommend to the full Board the authorization for staff to enter into an agreement with Kennedy-Jenks Consultants for the preparation, completion, and submission of the 2020 Urban Water Management Plan.

**Alternative Options:**

Enter into an agreement with the alternative consultant, Stantec Consulting Services, Inc.

**Impact of Taking No Action:**

The law requires water suppliers in California providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet per year (AFY) of water to prepare and adopt an Urban Water Management Plan every five years.

**Background:**

The Urban Water Management Planning Act was established by Assembly Bill 797 (AB 797) on September 21, 1983. With this Assembly Bill, the District must comply with adopting an updated Urban Water Management Plan (UWMP) every five years.

On April 3, 2020, PWD staff issued a Request for Qualifications (RFQ) for the preparation of the 2020 UWMP. The District received three qualifications; of those three, staff requested a Scope of Work (SOW) and fee from two firms.

RESOURCE AND FACILITIES COMMITTEE  
PALMDALE WATER DISTRICT  
VIA: Mr. Dennis D. LaMoreaux, General Manager

July 1, 2020

Of the two consultants that submitted their SOW proposals, Kennedy-Jenks demonstrated the fullest understanding of the upcoming 2020 UWMP. They included in their SOW tasks that were changed, added and anticipated, such as the Energy Intensity calculations, enhancements to the Water Shortage Contingency Plan, and the new Seismic component. Because of the thoroughness and demonstrated knowledge of the upcoming requirements, staff recommends Kennedy-Jenks Consultants as the most qualified firm to complete the 2020 UWMP.

Consultant	Full Seismic plus Optional Tasks	Reduced Seismic plus Optional Tasks	Full Seismic	Reduced Seismic	No Seismic
Kennedy-Jenks	\$145,605.00	\$132,065	\$122,605	\$109,065	N/A
Stantec	N/A				\$54,850
Carollo	N/A				

Kennedy-Jenks Consultants' optional tasks include an estimate of water conservation needs, 2024 UWMP required supplement report, and additional budget for items that may come up in the final guidelines given by DWR.

**Strategic Plan Initiative/Mission Statement:**

This item is under Strategic Initiative No. 3 – Systems Efficiency.  
This item directly relates to the District's Mission Statement.

**Budget:**

This item is budgeted under the Administration Budget, Budget Item No. 1-02-5070-007 – Consultants.

**Supporting Documents:**

- Kennedy-Jenks Proposal
- Stantec Proposal

June 12, 2020

Peter Thompson, II  
Resource and Analytics Director  
Palmdale Water District  
2029 East Avenue Q  
Palmdale, CA 93550

Subject: Proposal to Provide Professional Services for the Development of Palmdale Water District's  
2020 Urban Water Management Plan Update

Dear Peter:

Kennedy Jenks (KJ) is pleased to submit our proposed scope of work, updated schedule, and fee schedule to assist in the development of Palmdale Water District's 2020 Urban Water Management Plan (UWMP) Update. As mentioned in our Statement of Qualifications, our approach to updating your UWMP is to focus on the key sections of demand projections and water supply reliability, realizing that the 2020 UWMP brings new requirements, just as it did in 2015. Therefore, our team will also focus on Making Conservation a California Way of Life requirements, enhanced water shortage contingency planning, seismic risk assessments, drought planning, and reporting on water loss standards and water demand reduction targets.

Thank you for considering us for this work. We look forward to discussing this important project with you and answering any questions you may have about our qualifications, experience and approach to serving your needs.

We look forward to providing assistance to Palmdale Water District on this important compliance project. Please contact Lauren Everett Smith at (805) 973-5723 if you have any questions.

Very truly yours,

KENNEDY/JENKS CONSULTANTS

	
Lauren Everett Smith Project Manager	David Ferguson, PhD, P.E. Principal-In-Charge

## Scope of Work

The following Scope of Work is proposed to develop your 2020 UWMP Update.

### Task 1 – Project Management, QA/QC and Meetings

The following project management activities are proposed:

#### Task 1.1 – Project Management and QA/QC

Lauren Everett Smith, KJ's Project Manager, will coordinate resources and staff dedicated to this project to complete the 2020 UWMP Update by the required deadline. KJ's project manager will also implement and enforce internal Quality Assurance and Quality Control (QA/QC) programs and prepare and submit invoices on a monthly basis.

Meredith Clement sits on the DWR Guidebook Committee and she will provide overall QA/QC to ensure all efforts are consistent with the DWR 2020 Guidebook (anticipated in late-summer early Fall 2020) for urban plans including voluntary items. Additionally, both Meredith and Lauren are very familiar with other related planning activities that may impact the 2020 UWMP planning effort and particularly planning efforts that may impact the eligibility and competitiveness of future grant opportunities. Therefore, our team will also anticipate, and convey to Palmdale Water District (District) any new policies and/or regulations throughout the UWMP development that may require additional effort or discussion.

#### Task 1.2 – Project Kick-off Meeting

KJ proposes a kick-off meeting to discuss the District's expectations for the project, review District provided information, request additional information, review timelines, and establish communication protocols for the project. The meeting will also be used to establish procedures for communication with District staff and neighboring water agencies as appropriate. KJ will prepare an agenda for the kick-off meeting. After the kick-off meeting, KJ will prepare meeting notes, which will be provided to the District for review. District's comments will be incorporated, and the notes will be finalized.

#### Task 1.3 – Attend Meetings and Public Hearing

KJ shall attend up to three (3) meetings with the District Board of Directors and/or District staff to review the 2020 UWMP Update. Two (2) meetings are anticipated to be coordination meetings and the third (3) is the required public hearing.

##### Task 1 Assumptions:

- The kick-off meeting is budgeted as a face-to-face meeting for attendance by one KJ staff but may be conducted by conference call/webcast as may be required by travel restrictions from public health concerns due to COVID-19.
- Three (3) meetings are budgeted. Attendance at additional meetings may require additional budget.
- Invoices will be submitted on a monthly basis.

##### Task 1 Deliverables:

- Monthly invoices in electronic (PDF) format.

- Agenda and notes for meetings and calls in MS Word format to facilitate review and comment. After each meeting and call, meeting notes, which will be provided to District for review. District's comments will be incorporated, and the notes will be finalized.
- Presentation slides for the Public Hearing

## **Task 2 – Data Collection and Background Information**

KJ will review background information regarding the District's service area, water supply, water demand, and water policies. The objective of this task is to gather available data necessary to satisfy the known requirements of the 2020 UWMP as well as to update information from the 2015 UWMP. Much of these data are already available from the work we have done with the District (e.g. 2015 UWMP), as well as provided within the Antelope Valley Integrated Regional Water Management Plan (IRWMP). KJ will review this information, identify gaps in what is needed to meet the 2020 UWMP requirements, and will provide a list of the data necessary to complete this effort.

### Task 2 Assumptions:

- The information to be collected will be a combination of files KJ already has access too, and the requested readily available information from District.
- District will provide the information noted in electronic form (mpk for GIS, .doc, .xls, or PDF).

### Task 2 Deliverables:

- Data Collection Form in electronic MS Word format

## **Task 3 Water Shortage Contingency Plan**

As required under the new UWMP guidelines, a Water Shortage Contingency Plan (WSCP) will be prepared as a separate document and incorporated into the 2020 UWMP. KJ will prepare the District's WSCP integrating components from relevant sections of the 2015 UWMP, information updates, and the new State requirements to produce a separate plan document. The purpose of the WSCP is to prepare for drought, water supply reductions, failure of a water distribution system, other emergencies, or regulatory statutes, rules, regulations or policies reducing water supplies by state and federal agencies. The WSCP also provides the basis for the Water Shortage Assessment Report, due annually beginning on June 1, 2022.

The WSCP is anticipated to include the following main elements:

- Description of plan coordination with local and regional suppliers and other planning.
- Authorization/criteria for water shortage stages
- Annual water budget forecast process and assessment, consisting of a methodology, process, and timeline for conducting the District's required Annual Water Budget. The proposed water budget will use a list of indicators that should be reviewed to determine if a water supply shortage is anticipated in any given year, the severity of the shortage, and the necessary level of response.
- Evaluation of six (6) water supply shortage stages, representing the actual shortage, or predicted shortage determined by the Annual Water Budget Forecast.
- Shortage response actions, including short-term supply augmentation actions and operational

changes, voluntary and mandatory conservation actions, enforcement and variance, fines, allocation surcharges and monetary assessments, and appeals and variances

- Revenue and rate impacts
- Monitoring and reporting requirements
- Implementation resources including authorities, communications plan, public outreach, ordinances, and enforcement

Utilizing the information developed above, KJ will prepare an electronic copy of the Administrative Draft of the Water Shortage Contingency Plan for review and comment by the District. We have assumed there will be one, consolidated set of comments from the District on the Administrative Draft. Following review and incorporation of comments, KJ will prepare a Draft Plan. The Draft Plan will be provided in electronic and hardcopy format.

KJ will work with the District to determine appropriate revisions to the Draft Plan based on comments received. It is assumed the Draft Plan will undergo only one round of revisions to create a Final Plan.

**Task 3 Assumptions:**

- District comments will be consolidated into a single set of comments for each Draft.
- District will adopt the WSCP before submittal of the UWMP to DWR in compliance with the UWMP Act.

**Task 3 Deliverables:**

- Administrative Draft and Draft Water Shortage Contingency Plan in Word and PDF format
- Final Water Shortage Contingency Plan in PDF format

**Task 4 — Seismic Risk Assessment and Mitigation Plan**

The California Water Code, Section 10632.5, states that all UWMPs submitted after January 1, 2020 must include a seismic risk assessment and mitigation plan for all facilities noted in the plan. A seismic risk assessment and mitigation plan in accordance with the UWMP requirements assesses the vulnerability of an urban water suppliers' water system facilities and develops measures to mitigate those vulnerabilities. Such a plan would include:

- Evaluate seismic risk zone for the water supplier
- Identify best practices to reduce seismic risk at critical water facilities (e.g. tie tanks to foundations, flex couplings at tanks, equipment anchoring at pump stations and treatment plants)
- Inventory major equipment at pump stations (including wells), treatment plants and most critical facilities
- Confirm best practices are implemented by the water supplier at the facilities
- Identify facilities that are most at-risk and the relative impact of that facility on water delivery and develop plan to reduce the risk at these facilities.

The SB 664 legislation also stipulates that if an urban water supplier has an adopted local hazard mitigation plan or multi-hazard mitigation plan that addresses seismic risk to its infrastructure, this requirement may be met by submitting a copy of the plan with the UWMP. The City of Palmdale does have a Local Hazard Mitigation Plan, last updated in 2015. It identifies the District and identifies the



District's infrastructure (water storage tanks and water treatments plans) as critical infrastructure, however there is no detail to specific facilities, severity of vulnerabilities, or mitigation to address the vulnerabilities. Therefore, we assume that this is not a sufficient evaluation of the District's infrastructure based on the language in the current legislation.

It is important to note that at the time of this proposal, the Draft DWR UWMP Guidebook has not been released, and DWR has not provided any guidance as to the specifics of the required seismic analysis for the UWMP. The scope proposed herein provides a detailed assessment of the District's facilities, should that end up being the level of detail needed for the UWMP. When the Guidelines are released, should they indicate that a much lesser analysis is appropriate for the UWMP, we will work with the District to reduce the scope and fee as necessary. Similarly, the City of Palmdale's Local Hazard Mitigation Plan suggests that it will be updated on a 5-year cycle, with the next update due in 2021. We suggest the District coordinate with the City to include an evaluation of its infrastructure in that update, which also may negate the need to do an additional seismic evaluation.

#### **Task 4.1 - Data Gathering and Field visit Planning**

Kennedy Jenks will compile a list of information needs and submit those to the District to facilitate further study and analysis, including:

- Record drawings
- Information about modifications or use of facilities
- Digital maps of pipe networks and routing in CAD or GIS formats
- Existing Geotechnical information for sites.

Kennedy Jenks will prepare a field evaluation schedule and template forms for field evaluation including a health and safety plan for field work. Kennedy Jenks will prepare a schedule for review and district support for field visits.

#### **Task 4.2 – Field visits**

Kennedy Jenks will conduct rapid screening field assessments at treatment, wellhead, pump station and reservoir sites noted above, consisting of rapid screening of buildings, mechanical equipment connections, piping and other elements for potential structural hazards in a seismic event. This will correspond to ASCE rapid screening checklists and is intended as a step to sort and categorize properties and facilities into levels of priority based on potential risks. Conveyance facilities and pipelines will not be surveyed. Kennedy Jenks will document our field notes in an appendix to the risk mitigation plan.

#### **Task 4.3 – Desktop Study and Analysis**

Kennedy Jenks will compile the information gathered in Tasks 4.1 and 4.2 and will conduct an analysis to identify potential repairs based on likelihood and consequence of failure. Repairs will be identified conceptually but without complete detail, and costs will be presented conceptually. Kennedy Jenks will prepare a final plan listing key repairs which are needed to high consequence facilities and are high likelihood failures, as well as conceptual costs for such mitigation.

Kennedy Jenks will also list potential other mitigation measures which could be taken for lower consequence or lower likelihood failures.

**Task 4 Assumptions:**

- It is assumed that the City of Palmdale Local Hazard Mitigation Plan (2015) does not meet the requirements for a seismic analysis for the UWMP.
- When the 2020 UWMP Guidelines are released and additional guidance on the seismic analysis requirements for the UWMP are either reduced from the scope proposed in this task, or if the regional hazard mitigation plans can be submitted with the UWMP to satisfy this requirement, the scope will be modified as appropriate.

**Task 4 Deliverables:**

Preparation and review of the Administrative, Draft, and Final Seismic Risk Assessment and Mitigation Plan will be prepared as identified in Task 6.

**Task 5 – Prepare 2020 UWMP Update**

The District's 2020 UWMP will be prepared to meet the applicable State requirements. The adopted UWMP is due to DWR by 1 July 2021. The State is expected to issue guidelines by the end of 2020. The following subject areas have traditionally been included in the UWMP but may be modified by the expanded requirements as described in DWR's 2020 UWMP Guidelines which are expected later this summer:

**Task 5.1 Service Area and System Water Use**

KJ will update the existing description of the District's service area to satisfy the requirements of the Urban Water Management Planning Act and subsequent amendments. Land use, population and water use estimates by sector and projections (including those for low-income residential demands), and service area mapping will be updated based on District-provided information, as well as land use and population data collected and calculated by the KJ Team. Population projections will be based on the District's 2016 Water System Master Plan Final Report. Demand projections will assume similar growth as the population. In addition, the demand projections will display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area. We assume that the District has data to support water use efficiency implementation of demand management measures which will aid in this analysis. Population and water demand projections will be presented in 5- year increments for a 25-year period (2020 to 2045).

Included in the 2020 UWMP will be the reporting of distribution system water loss for each of the five years preceding the plan update. It is assumed that District staff will provide the 2016 – 2020 water audit/loss reports to meet the distribution system water loss audit reporting requirement. KJ will review the audit information, provide comments as needed, and incorporate it into the Plan.

In previous UWMPs, the District was required to establish a baseline water use and set target water use goals for 2015 and 2020. In the 2020 UWMP the District must demonstrate its actual water use, as

compared to the previously established 2020 target. Based on information provided by the District, KJ will review, update, and document the data and methods used to establish baseline, target, and actual gallons per capita per day use within the framework of the SB X7-7 Verification Form. Based on the analysis in the 2020 Water Demand Factors Analysis and the 2015 UWMP, it appears the District will meet the 2020 target.

### **Task 5.2 Water Resources and Supply Outlook**

KJ will work with District staff to collect, review, update, and format information related to the existing description of the District's system water supplies, including State Water Project (SWP) water, local groundwater, recycled water and surface water.

The description of existing and future supplies will come from the 2015 UWMP with District updates and will be updated to include calendar year 2020 production projected through 2045.

The supply reliability analysis will compare the District's projects supply and demands for the average water year, single dry water year, and multiple dry water years (defined for the 2020 UWMP as a 5-year period) through 2045. KJ will review and update this section as needed using available information such as the DWR SWP reliability report to describe constraints on the District's water sources.

### **Task 5.3 Climate Change Impacts and Drought Risk Assessment**

DWR encourages UWMPs to consider the impacts of climate change and including a discussion of climate change will increase the District's competitiveness in grant programs. KJ proposes working in coordination with District staff to provide a summary of climate change impact analyses performed by DWR in its Accessory Climate Change Guidance for Integrated Regional Water Management (IRWM), and the Climate Change Vulnerability Checklist prepared in the Antelope Valley IRWM. We understand that the City is currently updating its General Plan and where possible, current updates relating to climate change will be incorporated from that effort.

This discussion of climate change impacts will be used as part of the required Drought Risk Assessment. As in the past, water suppliers will be required to include an assessment of the reliability of water supplies during normal, dry, and multiple dry water years as compared to demand. UWMPs are now to include a comparison of supplies and demands for a drought lasting five consecutive water years. KJ proposes using historical drought hydrology (e.g. past changes in supplies and demands during drought), and plausible changes due to climate change conditions, as well as any anticipated regulatory changes, to evaluate supplies and demands over a 5-year drought.

### **Task 5.4 Report Water Demand Management Measures Implementation**

UWMP legislation no longer allows water suppliers that are members of the California Water Efficiency Partnership (formerly California Urban Water Conservation Council) to submit its annual reports to comply with this section of the UWMP Act. Therefore, KJ will work with District staff to update the demand management measures implementation narrative to summarize the water demand management goals, programs implemented to date, overall progress, and effectiveness of the current program. This information can also inform the demand projections prepared in Task 5.1.

### **Task 5.5 – Incorporate Water Shortage Contingency Plan**

The adopted WSCP, developed as part of Task 3, will be incorporated into the UWMP as well as provided as an appendix to the UWMP.

### **Task 5.6 – Incorporate Seismic Risk Assessment and Mitigation Plan**

The adopted WSCP, developed as part of Task 4, will be incorporated into the UWMP as well as provided as an appendix to the UWMP.

### **Task 5.7 – Calculate Energy Intensity of Water**

KJ will calculate the energy intensity for the water management operations within the District's control. Pending final guidelines, it is anticipated that the analysis will only apply to the potable water system and only evaluate energy use once water enters the District's system. For this assessment, water entering the District's distribution system will be compared to energy consumed over a selected one-year timeframe. Energy consumption will be calculated based on electricity and gas expenditures during the timeframe as reported in the District budget records and related per unit costs for each energy source.

Task 5 Deliverables: (provided electronically unless otherwise noted):

- Draft Annual Water Shortage Assessment Methodology
- Draft DWR Standardized Tables

### **Task 6 - Document UWMP, WSCP, and Seismic Plan**

#### **Task 6.1 – Prepare Administrative and Drafts of the UWMP, WSCP, and Seismic Plan**

KJ will document the work of Tasks 2 through 5 in an administrative draft and a public draft of the UWMP, WSCP, and Seismic Plan.

The Administrative Draft UWMP, WSCP, and Seismic Plan will be submitted for the District's review. As part of the Administrative Draft KJ will prepare (1) draft public hearing notice to interested parties (cities, counties, and agencies); (2) newspaper notice of public hearing, (3) notice of plan adoption to the State Library, DWR, and land use agencies; and (4) draft adoption resolution.

Comments on the Administrative Draft documents will be used to create the Public Draft UWMP (including the Seismic Plan) and WSCP.

#### **Task 6.2 – Prepare Final UWMP and WSCP**

Following public review, KJ will propose text revisions to the Public Draft UWMP (including the Seismic Plan) and WSCP for review and comment by the District. After the District has reviewed the proposed text revisions, KJ will prepare the Final documents.

Based on District comments, KJ will prepare a Draft Final UWMP and WSCP for presentation to the District's Board of Directors. The presentation on the Final Draft UWMP will be updated to reflect any input received at the public hearing. After the hearing, the plan shall be adopted as prepared or as modified at the Board's direction.

Following adoption, KJ will upload the Final UWMP and WSCP via the online DWR portal prior to the deadline of 1 July 2021.

#### **Task 6.4 - Addressing DWR Comments**

Following DWR review, KJ will work with District staff to revise (if necessary) the 2020 UWMP. Clarifications and minor changes do not require that an UWMP be "re-adopted", but more significant changes would require that the proposed changes be given public notice, recirculated for public review, and re-adopted.

##### Task 6 Assumptions:

- KJ will work with the District to develop the public noticing recipient list.
- The Seismic Plan will be incorporated into the UWMP (as an appendix and summarized).
- It is assumed that the District will circulate the drafts internally for comment and summarize any comments received prior to submitting to KJ.
- The District will pay any filing and newspaper noticing fees.
- The District will adopt the UWMP before submittal to DWR in compliance with the UWMP Act.
- The District will make the DWR Submittal UWMP available to the public and land use agencies.
- The District will submit the UWMP to DWR.
- KJ will prepare the UWMP required data tables and upload them into DWR's database.
- If DWR comments on the Final UWMP require significant edits that would trigger re-adoption and recirculation, additional scope and budget would need to be provided.

##### Task 6 Deliverables (provided electronically unless otherwise noted):

- Notice of update of Public Draft UWMP (including the Seismic Plan) and WSCP
- Administrative Draft UWMP (including the Seismic Plan) and WSCP (electronic copy)
- Public Draft UWMP (including the Seismic Plan) and WSCP
- Draft Final UWMP and WSCP
- Presentation on Draft Final UWMP and WSCP to the Board of Directors
- Draft and Final public hearing notices to interested parties
- Draft and Final newspaper notice of public hearing on the UWMP and WSCP
- Draft and Final UWMP and WSCP adoption resolution
- Draft and Final Notice of Plan Adoption to State Library, DWR, and land use agencies
- Final UWMP and WSCP (provided in Word, PDF, and 5 hardcopies)
- Proof of submission to DWR.

## **Reduced Task 4 – Seismic Risk Assessment and Mitigation Plan**

At the request of the District we are including a reduced analysis for the seismic risk assessment and mitigation plan as we are aware, as described in Task 4 above, that the requirements for the seismic evaluation for the purpose of the UWMP is somewhat of an unknown without guidance from DWR at the time of this proposal. Therefore, we are removing the recommended field visits to focus this analysis on a desk top evaluation of the District's infrastructure. This reduced scope would include Data Gathering, less the field visit planning effort, and the Desktop Study and Analysis.

### **Task 4.1 - Data Gathering**

Kennedy Jenks will compile a list of information needs and submit those to the District to facilitate further study and analysis, including:

- Record drawings
- Information about modifications or use of facilities
- Digital maps of pipe networks and routing in CAD or GIS formats
- Existing Geotechnical information for sites.

### **Task 4.2 – Desktop Study and Analysis**

Kennedy Jenks will compile the information gathered in Task 4.1 and will conduct an analysis to identify potential repairs based on likelihood and consequence of failure. Repairs will be identified conceptually but without complete detail, and costs will be presented conceptually. Kennedy Jenks will prepare a final plan listing key repairs which are needed to high consequence facilities and are high likelihood failures, as well as conceptual costs for such mitigation.

Kennedy Jenks will also list potential other mitigation measures which could be taken for lower consequence or lower likelihood failures.

## **Optional Task 7 – Additional UWMP Support**

### **Optional Task 7.1 – As-Needed Services**

This optional task is provided to address scope not identified above including additional drafts, additional calls/meetings, addressing requirements from the final Guidelines expected in Fall 2020, to provide support to the District to address DWR comments on the 2020 UWMP, A budget of \$10,000 is included which would only be authorized by the District when and if it is needed.

### **Optional Task 7.2 – Estimate Water Conservation Needed to Comply with Making Water Conservation a California Way of Life**

There are existing laws with pending regulations targeting indoor water demand and affecting the need for additional water use efficiency in the District. Of particular importance is Executive Order (EO) B-37-16 and its enabling legislation Senate Bill (SB) 606 and Assembly Bill (AB) 1668 (collectively "Making Water Conservation a California Way of Life"). Some of requirements of this legislation are reflected in the 2020 UWMP while other requirements will occur after submittal of the 2020 UWMP. There are four



(4) key components to Making Water Conservation a California Way of Life that affect urban water suppliers after 2020 UWMP submittal:

- Requirement to eliminate water waste.
- Requirement to comply with new water use targets.
- New permanent reporting requirement.
- Requirement to take actions to minimize water loss.

The standards will result in a water budget for each water supplier rather than each water customer. Suppliers are to report their progress on meeting their urban water use objectives by November 1, 2023. Suppliers will be required to meet their targets by January 1, 2027. Water suppliers that are not in compliance with the new standards-based water use targets may be provided with additional compliance assistance and/or face enforcement actions from the SWRCB. The full regulations have not yet been promulgated. However, in late 2021 the necessary data and recommendations should be available to estimate water use reductions needed to comply with Making Water Conservation a California Water of Life.

KJ can assist the District in estimating the water use targets that will apply and assess progress on meeting those targets to fulfill reporting requirements by the November 1, 2023 deadline.

Optional Task 7.2 Deliverables:

Memorandum summarizing anticipated water use targets, targets applicable to the District, and comparison of current water use and targeted water use.

**Optional Task 7.3 – 2024 Supplement to the 2020 UWMP**

KJ shall prepare the required supplement to the 2020 UWMP, expected to be submitted to DWR by January 1, 2024. The supplement will address the District's plan to implement demand measures to achieve the water use objective as established by Making Water Conservation a California Way of Life.

This Task also includes general project management and QA/QC activities.

Optional Task 7.3 Deliverables:

Administrative Draft, Public Draft, Public Draft Supplement, and Final 2024 UWMP Supplement in Word and PDF format

## **Budget and Terms**

KJ proposes to provide the scope of these services on a time and expense reimbursement basis. The scope of work for Tasks 1 through 6 is proposed for an estimated fee of \$122,605. With the three (3) proposed optional tasks the fee is \$145,605.

The District also requested that we provide an estimate that includes a lesser examination of the seismic risk assessment and mitigation plan given the unknowns in the level of detail required for the UWMP. This is described in the reduced Task 4 above. With this revised task, the scope of work for

Tasks 1 through 6 is proposed for an estimated fee of \$109,065. With the three (3) proposed optional tasks the fee is \$132,065.

A summary of the cost breakdown for Tasks 1 through 6 is shown below. An estimate for Optional Task 7 is also provided below. Budget estimates for all other optional tasks can be provided upon request. A fee spreadsheet with cost details is attached hereto.

### Proposed Fee

Task	Description	Proposed Fee
Task 1	Project Management, QA/QC and Meetings	\$19,465
Task 2	Data Collection and Background Information Review	\$1,200
Task 3	Water Shortage Contingency Plan	\$17,720
Task 4	Seismic Risk Assessment and Mitigation Plan	\$40,700
<i>Reduced Task 4</i>	<i>Seismic Risk Assessment and Mitigation Plan</i>	<i>\$27,160</i>
Task 5	Prepare 2020 UWMP Update	\$23,540
Task 6	Document UWMP, WSCP, and Seismic Plan	\$19,980
<b>Tasks 1 through 6 w/ full seismic evaluation</b>		<b>\$122,605</b>
<b><i>Tasks 1 through 6 w/ reduced seismic evaluation</i></b>		<b><i>\$109,065</i></b>
Optional Task 7.1	As-Needed Services	\$10,000
Optional Task 7.2	Estimate Water Conservation Needed	\$4,860
Optional Task 7.3	2024 UWMP Supplement	\$8,140
<b>Total for Tasks 1 through 7 w/ full seismic evaluation</b>		<b>\$145,605</b>
<b><i>Total for Tasks 1 through 7 w/ reduced seismic evaluation</i></b>		<b><i>\$132,065</i></b>

### Schedule

KJ recommends having the Public draft 2020 UWMP completed by May 2021 to allow for agency notifications, public review, and District adoption. The schedule from the Statement of Qualifications submitted in May has been updated and is provided below based on receipt of a Notice to Proceed by July 1, 2020.

Task	Estimated Timeframe
Notice to Proceed	July 1, 2020
Project Management	July 2020 – July 2021
Data Collection and Background Information	July 2020 – July 2020
Prepare Water Shortage Contingency Plan	Aug 2020 – Oct 2020
Prepare Seismic Risk Assessment and Mitigation Plan	Aug 2020 – Oct 2020
Prepare Administrative Draft 2020 UWMP, WSCP, Seismic Plan	Sept 2020 – Dec 2020
Prepare Public Draft/Final 2020 UWMP, WSCP, Seismic Plan	Jan 2021 – Mar 2021
Public Notification	Mar 2021 – May 2021
DWR Submittal UWMP	June 2021
UWMP Board Adoption	June 2021



Mr. Peter Thompson II  
Palmdale Water District  
June 12, 2020  
Page 13

<i>Potential Optional Task – As-Needed Services</i>	<i>As-Needed</i>
<i>Potential Optional Task – Estimate Water Conservation Needed</i>	<i>Nov 2021 – Feb 2022</i>
<i>Potential Optional Task – 2024 UWMP Supplement</i>	<i>Mar 2023 – Dec 2023</i>

Proposal Fee Estimate

Kennedy Jenks

CLIENT Name: Palmdale Water District

PROJECT Description: 2020 UWMP Update

Proposal/Job Number: Date: 6/7/2020

	Eng-Sci-9	Eng-Sci-8	Eng-Sci-7	Eng-Sci-6	Eng-Sci-5	Eng-Sci-4	Eng-Sci-3	Eng-Sci-2	Project Administrator	Admin. Assist.		KJ	KJ	KJ	KJ	KJ			
Classification:											Total	Labor	Escalation	Sub-Markup	ODCs	ODCs Markup	Total Labor	Total Expenses	Total Labor + Subs + Expenses
Hourly Rate:	\$290	\$270	\$240	\$220	\$210	\$190	\$170	\$150	\$120	\$100	Hours	Fees	0%	10%	Fees	10%			Fees
Task 1 - Project Management and Meetings																			
Project Management				24		8			6	6	44	\$8,120	\$0	\$0		\$0	\$8,120	\$0	\$8,120
QA/QC			10								10	\$2,400	\$0	\$0		\$0	\$2,400	\$0	\$2,400
Meetings (3 plus kick-off)				24		6					30	\$6,420	\$0	\$0	\$350	\$35	\$6,420	\$385	\$6,805
Hearing				8		2					10	\$2,140	\$0	\$0		\$0	\$2,140	\$0	\$2,140
Task 1 - Subtotal	0	0	10	56	0	16	0	0	6	6	94	\$19,080	\$0	\$0	\$350	\$35	\$19,080	\$385	\$19,465
Task 2. Data Collection and Background Information																			
Data Collection				2		4					6	\$1,200	\$0	\$0		\$0	\$1,200	\$0	\$1,200
Task 2 - Subtotal	0	0	0	2	0	4	0	0	0	0	6	\$1,200	\$0	\$0	\$0	\$0	\$1,200	\$0	\$1,200
Task 3. Water Shortage Contingency Plan																			
Annual Water Budget				2	4	8		4			18	\$3,480	\$0	\$0		\$0	\$3,480	\$0	\$3,480
Supply Shortage Stages				2	10	4		6			22	\$4,340	\$0	\$0		\$0	\$4,340	\$0	\$4,340
Shortage Response Actions				2	8	4		6			20	\$3,900	\$0	\$0		\$0	\$3,900	\$0	\$3,900
Revenue and Rate Impacts				2	4	4					10	\$2,120	\$0	\$0		\$0	\$2,120	\$0	\$2,120
Monitoring and Reporting Requirements					4	4		4			12	\$2,240	\$0	\$0		\$0	\$2,240	\$0	\$2,240
Implementation Resources				4		4					8	\$1,640	\$0	\$0		\$0	\$1,640	\$0	\$1,640
Task 3 - Subtotal	0	0	8	34	0	28	0	20	0	0	90	\$17,720	\$0	\$0	\$0	\$0	\$17,720	\$0	\$17,720
Task 4. Seismic Risk Assessment and Mitigation Plan																			
4.1 - Data Gathering and Field Visit Planning				18	8		16				42	\$8,360	\$0	\$0		\$0	\$8,360	\$0	\$8,360
4.2 - Field Visits				24			24				48	\$9,360	\$0	\$0	\$3,000	\$300	\$9,360	\$3,300	\$12,660
4.3 - Desktop Study and Analysis				24	16		48		24		112	\$19,680	\$0	\$0		\$0	\$19,680	\$0	\$19,680
Task 4 - Subtotal	0	0	0	66	24	0	88	0	24	0	202	\$37,400	\$0	\$0	\$3,000	\$300	\$37,400	\$3,300	\$40,700
Task 5. Prepare 2020 UWMP Update																			
5.1 Service Area and System Water Use			2	12	4			6			24	\$4,860	\$0	\$0		\$0	\$4,860	\$0	\$4,860
5.2 Water Resources and Supply Outlook			2	12		4		8			26	\$5,080	\$0	\$0		\$0	\$5,080	\$0	\$5,080
5.3 Climate Change and Drought Risk Assessment			2	8		8		6			24	\$4,660	\$0	\$0		\$0	\$4,660	\$0	\$4,660
5.4 Report Water Demand Management Measues				4		12					16	\$3,160	\$0	\$0		\$0	\$3,160	\$0	\$3,160
5.5 Incorporate WSCP				2		2					4	\$820	\$0	\$0		\$0	\$820	\$0	\$820
5.6 Incorporate Seismic Risk Plan				2		2					4	\$820	\$0	\$0		\$0	\$820	\$0	\$820
5.7 Calculate Energy Intensity of Water			2	4		2		16			24	\$4,140	\$0	\$0		\$0	\$4,140	\$0	\$4,140
Task 5 - Subtotal	0	0	8	44	4	30	0	36	0	0	122	\$23,540	\$0	\$0	\$0	\$0	\$23,540	\$0	\$23,540
Task 6. Document UWMP, WSCP, and Seismic Plan																			
Administrative Draft				12	2	20		14		4	52	\$9,360	\$0	\$0		\$0	\$9,360	\$0	\$9,360
Public Draft				8	2	12		6		4	32	\$5,760	\$0	\$0		\$0	\$5,760	\$0	\$5,760
Final Draft				4		8		8			20	\$3,600	\$0	\$0		\$0	\$3,600	\$0	\$3,600
Addressing DWR Comments				4		2					6	\$1,260	\$0	\$0		\$0	\$1,260	\$0	\$1,260
Task 6 - Subtotal	0	0	0	28	4	42	0	28	0	8	110	\$19,980	\$0	\$0	\$0	\$0	\$19,980	\$0	\$19,980
Minimum Task 4 - Seismic Risk Assessment and Mitigation Plan																			
4.1 - Data Gathering				14	8		16				38	\$7,480	\$0	\$0		\$0	\$7,480	\$0	\$7,480
4.2 - Desktop Study and Analysis				24	16		48		24		112	\$19,680	\$0	\$0		\$0	\$19,680	\$0	\$19,680
Minimal Task 4 - Subtotal	0	0	0	38	24	0	64	0	24	0	150	\$27,160	\$0	\$0	\$0	\$0	\$27,160	\$0	\$27,160

Proposal Fee Estimate

Kennedy Jenks

CLIENT Name: Palmdale Water District

PROJECT Description: 2020 UWMP Update

Proposal/Job Number: Date: 6/7/2020

	Eng-Sci-9	Eng-Sci-8	Eng-Sci-7	Eng-Sci-6	Eng-Sci-5	Eng-Sci-4	Eng-Sci-3	Eng-Sci-2	Project Administrator	Admin. Assist.		KJ	KJ	KJ	KJ	KJ			
Classification:											Total	Labor	Escalation	Sub-Markup	ODCs	ODCs Markup	Total Labor	Total Expenses	Total Labor + Subs + Expenses
Hourly Rate:	\$290	\$270	\$240	\$220	\$210	\$190	\$170	\$150	\$120	\$100	Hours	Fees	0%	10%	Fees	10%			Fees
All Tasks Total w/ full Seismic Evaluation	0	0	26	230	32	120	88	84	30	14	624	\$ 118,920	\$ -	\$ -	\$ 3,350	\$ 335	\$ 118,920	\$ 3,685	\$ 122,605
All Tasks Total w/ minimum Seismic Evaluation	0	0	26	202	32	120	64	84	30	14	572	\$ 108,680	\$ -	\$ -	\$ 350	\$ 35	\$ 108,680	\$ 385	\$ 109,065
Optional Task 7 - Additional UWMP Support																			
7.1 As-Needed Services		2	8	10		10		20		4	54	\$9,960	\$0	\$0	\$36	\$4	\$9,960	\$40	\$10,000
7.2 Estimate Water Conservation Needed			2	16		4				1	23	\$4,860	\$0	\$0		\$0	\$4,860	\$0	\$4,860
7.3 2024 Supplement to the 2020 UWMP			2	24		12				1	39	\$8,140	\$0	\$0		\$0	\$8,140	\$0	\$8,140
Optional Task 7 - Subtotal	0	2	12	50	0	26	0	20	0	6	116	\$22,960	\$0	\$0	\$36	\$4	\$22,960	\$40	\$23,000
Total w/ full seismic and with Optional Tasks	0	2	38	280	32	146	88	104	30	20	740	\$ 141,880	\$ -	\$ -	\$ 3,386	\$ 339	\$ 141,880	\$ 3,725	\$ 145,605
Total w/ minimum seismic and Optional Tasks	0	2	38	252	32	146	64	104	30	20	688	\$ 131,640	\$ -	\$ -	\$ 386	\$ 39	\$ 131,640	\$ 425	\$ 132,065

June 15, 2020

**Attention: Mr. Peter Thompson II, Resource and Analytics Director**

Palmdale Water District  
2029 E. Avenue Q Street  
Palmdale, CA 93550

**Reference: Statement of Qualifications for Preparation of Palmdale Water District's  
2020 Urban Water Management Plan (UWMP)**


Dear Mr. Thompson,

Successful completion of Palmdale Water District's (PWD) UWMP requires a team that can work collaboratively with PWD Staff, has experience in developing UWMP's, and has staff with attention to detail and accountability to meet critical deadlines. As demonstrated in our previously submitted Statement of Qualifications, Stantec Consulting Services (Stantec) offers that team.

Enclosed as requested, is Stantec's Scope of Work, Fee Estimate and Schedule to complete PWD's 2020 UWMP. Following release of the Department of Water Resources Guidebook in the Fall of 2020, the scope of work and fee will be reviewed to ensure we have captured what will be needed to submit an approved 2020 UWMP update. We are available to discuss at your convenience. Should you have any questions or need additional information, please feel free to contact me.

Regards,

**Stantec Consulting Services Inc.**



**Tama Snow, PE**

Senior Principal, Engineer  
Phone: 949-533-7736  
tama.snow@stantec.com

## **Scope of Work**

Palmdale Water District's 2020 Urban Water Management Plan (UWMP) will be compiled in accordance with Division 6, Part 2.6 of the CWC §10610-10656 and §10608. The Guidelines for the 2020 UWMP have not yet been released by the California Department of Water Resources (DWR). The following scope of work represents our best estimate of effort and cost based on previous UWMP guidelines. When DWR guidelines are released in the Fall of 2020, Stantec will review the scope and fees proposed herein and adjust as necessary to define a 2020 UWMP that meets DWR guidelines and requirements. Any changes to this scope and fee will be discussed with PWD staff in advance of work proceeding. Our proposed Scope of Work is as follows:

### **1.0 REVIEW PREVIOUS STUDIES AND RELEVANT DATA**

The following data will be collected and reviewed at the outset of the UWMP preparation:

- Historical weather data (temperature, precipitation, ETo) for the previous 10 years on record
- Most recent projections from the Southern California Association of Governments (SCAG)
- Current development status list (will-serve letters)
- Current land use maps, general plans and specific plans
- Updated timing of proposed developments
- Historical metered water consumption records by customer class (monthly consumption, number of meters) for the previous 10 years of record.
- Historical monthly water production by source for the previous 10 years of record.
- Water supply capacity by source
- Documentation of water rights and supply entitlements

In addition, Stantec will review the following relevant reports and supporting data:

- 2015 UWMP
- 2010 Strategic Water Resources Plan
- 2015 Recycled Water Facilities Master Plan
- Final EIR for the Palmdale Regional Groundwater Recharge and Recovery Program and other relevant documents

## **2.0 ESTABLISH AGENCY AND STAKEHOLDER COORDINATION**

The UWMP Act contains several provisions related to agency coordination during the preparation of UWMPs. Specifically, §10620(c) provides that wholesale water agencies may not include planning information applicable to their retail agencies without the consent of the retail agencies. Section 10620(d) requires water suppliers to coordinate the preparation of their UWMP with other appropriate agencies, and §10642 requires water suppliers to encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area. Stantec will work with PWD staff to develop public and agency outreach to coordinate the preparation of the UWMP as outlined below.

Stantec will develop an outreach program pursuant to the requirements of §10620 (d) and §10642. As part of the program, Stantec will notify the stakeholders by letter that PWD is updating the UWMP and is requesting information for inclusion into the plan.

Stantec will maintain a list of stakeholders and will distribute meeting agendas, notes, and other notices in accordance with the UWMP requirements to the stakeholders. If additional effort is desired by PWD above and beyond what has been budgeted in this proposal, budget adjustments will need to be agreed upon between Stantec and PWD.

### **3.0 2020 UWMP UPDATE**

Water Code §10631 (b) requires water suppliers to identify and quantify existing and planned water sources available over the next 20 years in their UWMP updates. Stantec will complete the following tasks as well as the necessary subtasks leading to a 2020 UWMP report.

#### **3.1 Evaluate Existing Water Supplies**

Stantec will prepare the following descriptions of each existing water source:

- Historical monthly and annual usage (2010-2019)
- Projected supply over the next 20 years in normal, single dry and multiple dry years
- Contracts, water rights or other proof for the expected supply
- Supply reliability and vulnerability to seasonal or climatic shortage
- Water quality summary
- Cost of purchased and produced water

#### **3.2 Evaluate Future Water Supply Opportunities**

Water Code §10631 (b) requires the water supplier to identify and quantify planned sources of water. This task will revisit, and update options presented in the 2015 UWMP and identify additional supply options to be considered in meeting future demands for the next 20 years provided by PWD. Stantec will prepare descriptions of the currently planned water supply projects as provided by PWD and discuss opportunities for short-or long-term water transfers or exchanges.

#### **3.3 Develop 20-Year Demand Projections**

Water Code §10631(e) requires water suppliers to quantify past, current and projected water use in five-year increments for the next 20 years. Stantec will document historical usage and prepare updated water usage projections through year 2040. The subtasks to be performed will include:

### **3.3.1 Document Population Growth Projections**

Stantec will document the historical population for the past 20 years and the projected population, housing and employment growth for the Palmdale Water District's service area through 2040. The projections will be based on the most current Southern California Association of Governments (SCAG) projections and will be adjusted to match the PWD service area. Growth projections will be tabulated in the report.

### **3.3.2 Document Land Use Plans**

Stantec will review the current general plans and relevant specific plan for neighboring cities to update the current demand projections and timing for these plans. The timing of projected developments will be based on PWD's current development status reports and readily available information from neighboring City and County planning departments as relevant.

### **3.3.3 Document Historical Water Usage by User Class**

Stantec will update the historical water billing data from the previous UWMP using monthly billing data from 2015 through 2019. Water consumption statistics per meter by user class (such as mean, median standard deviation, percentiles) will be updated for use in later tasks.

### **3.3.4 Update Indoor/Outdoor and Seasonal Demand Analysis**

Stantec will use updated climate and water usage data to update the indoor/outdoor and seasonal water demand analysis presented in the previous UWMP. These data will be used to estimate water conservation potential.

### **3.3.5 Develop Water Demand Factors**

Stantec will review existing water demand factors used in previous planning documents and compare with the recent water usage data. These demand factors will be revised if needed to reflect current usage trends.



### **3.3.6 Prepare 25-Yr Water Demand Projections**

Using growth projections, the land use plans and planned development information, Stantec will prepare an updated water demand projection for the period of 2020-2040 using the water demand factors developed in Task 3.3.5.

## **3.4 Document Existing Water Conservation Measures**

Water Code §10631 (f) requires water suppliers to provide a description of their water demand management measures (DMMs) including a description of each DMM currently implemented or scheduled for implementation; a schedule for implementing DMM's; a description of the methods used to evaluate the effectiveness of DMMs; and an estimate of existing conservation savings and the effect of the savings on the supplier's ability to further reduce demand. Section 10631(j) allows suppliers that are members of the California Urban Water Conservation Council (CUWCC) to submit their annual reports to meet the requirements of §10631(f). The following subtasks will be performed:

### **3.4.1 Review SB X7-7 Baseline and Target Per Capita Urban Water Use**

SB X7-7 requires all public water agencies to implement appropriate conservation measures to reduce their water demands by 20 percent by year 2020. Stantec will review that per capita water use and report PWD's progress in achieving SB X7-7 goals established in the previous UWMP.

### **3.4.2 Discuss Existing Water Conservation Program**

Stantec will meet with PWD staff and obtain the current Best Management Practices (BMP) reporting filed with the CUWCC. Stantec will work with PWD staff to obtain the required information on BMP implementation.

### **3.4.3 Document Water Savings from Existing Measures Using CUWCC BMP Activity**

Stantec will prepare a summary of the current BMP implementation. Stantec will review the BMPs and make general recommendations to PWD for future BMP implementation.

## **3.5 Evaluate Demand Management Measures**

Stantec will review current demand measurement measures and make general recommendations for additional measures that may be implemented by PWD.

### **3.6 Summarize Recycled Water Plans**

Water Code §10633 (a-g) requires water suppliers to provide information on recycled water and its potential use in the service area. Stantec will extract relevant information from previous recycled water plans and supporting planning documents and incorporate the necessary information into the UWMP report. At a minimum it will include:

- Description of the wastewater collection and treatment systems in PWD's service area.
- Amount of wastewater collected and treated and the methods of wastewater disposal.
- Quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.
- Description of the type, place, and quantity of recycled water currently being used in PWD's service area.
- Description and quantification of the potential uses of recycled water and a determination of the technical and economic feasibility of serving those uses.
- Projected use of recycled water within PWD's service area at the end of 5, 10, 15, 20 and 25 years and a description of the actual use.
- Description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and projected results of these actions in terms of acre-feet of recycled water used per year.
- Description of any plans for optimizing the use of recycled water.

### **3.7 Summarize Current and Projected Water Supply Plans**

Water Code §10635 requires a water supplier to assess water supply reliability during normal, dry and multiple dry years. This assessment compares the total water supplies available to PWD with the total projected demand over the next 25 years. Stantec will perform the following subtasks to prepare this assessment and develop a recommended plan.

### **3.7.1 Compare Water Demand Projects and Existing Supplies**

Stantec will prepare tables and text comparing the existing water supplies with the projected water demands to indicate the need and timing for additional supplies. This comparison will be made in five-year increments between 2020 and 2040 in normal, single dry and multiple dry years. Stantec will identify the timing and magnitude of PWD's water supply needs.

### **3.7.2 Describe Water Quality Impacts on Reliability**

Water Code §10634 requires that an UWMP include information related to the quality of existing water sources and the manner in which quality affects water management strategies and supply reliability. Stantec will prepare a discussion of important water quality factors that affect or could affect existing water supplies and will quantify, to the extent practicable, the potential effect that quality degradation could have on supply reliability.

### **3.7.3 Describe Overall Water Supply Reliability for Planning Period**

Stantec will summarize the preferred water supply plan and will document the projected supply reliability for normal, single dry year and multiple dry years in five-year increments from 2020 through 2040.

## **3.8 Review and Update Water Shortage Contingency Plan**

Water Code §10632 requires water suppliers to provide an urban water shortage contingency analysis that consists of:

- Stages of action in response to water supply shortages of up to 50 percent
- An estimate of the minimum available water supply in the next three years based on the driest three-year historical sequence
- Actions to be taken to prepare for and implement during catastrophic water supply interruptions
- Mandatory water use prohibitions during shortages
- Consumption reduction methods in the most restrictive stages
- Penalties or charges for excess usage
- An analysis of revenue impacts of each action including measures to overcome those impacts.

Stantec will review the existing water shortage contingency plan and make appropriate revisions consistent with PWD.

#### **4.0 UWMP REPORT**

Stantec will prepare the 2020 UWMP for PWD summarizing the results of the items above. The report will be consistent with DWR's 2020 UWMP guidelines. Supplemental information developed as part of the water supply update will be documented in the appendices to the UWMP report.

##### **4.1 Prepare Administrative Draft Report**

Stantec will prepare an administrative draft report and submit an electronic copy (MS Word) to PWD for review. Upon receipt of review comments from PWD, Stantec will schedule a teleconference to discuss PWD's comments on the administrative draft.

##### **4.2 Prepare Public Draft**

Stantec will incorporate comments received on the administrative draft report and prepare a public draft 2020 UWMP Update. Five printed copies and one electronic (PDF) copy will be provided for the draft report. It is anticipated that the public draft report will be made available for review at PWD's office, on PWD's web site, and through e-mail to interested parties. At a minimum, letters and/or copies of the draft UWMP will be sent to the necessary stakeholders for review and comment.

##### **4.3 Prepare and Submit Final Report**

Following a public hearing on the draft 2020 UWMP update, Stantec will make revisions as appropriate and prepare the Final 2020 UWMP update addressing issues described on DWR's UWMP "Review for Completeness" form. Stantec will also append the "Review for Completeness" to the Final 2020 UWMP report.

**Task 4 Deliverables:**

Five printed copies and one electronic (PDF) copy will be provided for the final report. Stantec will also provide individual electronic files for report text, figures, tables and graphics (MS Word, Excel, or another appropriate format).

**5.0 PROJECT MANAGEMENT, QUALITY ASSURANCE/QUALITY CONTROL AND MEETINGS**

Stantec will conduct project management activities to verify adherence to scope, schedule, and budget; promote efficient communication between Stantec Staff and PWD Staff and stakeholders; and implement an effective quality assurance/quality control (QA/QC) program.

**5.1 Preparation of Project Status Reports**

Stantec will prepare monthly status reports. Each month, Stantec will prepare a status report to the PWD Project Manager consisting of a brief one to two paragraph email summarizing the activities accomplished during the previous month, the activities anticipated to be accomplished during the upcoming week and critical items and/or decisions that need to be concluded to maintain the progression of the Project. Monthly status reports will provide more details summarizing the work completed and review of work status as it relates to budget, schedule and items of work. The monthly status report will accompany the monthly invoicing of the Project to PWD.

**5.2 Project Administration**

Stantec's project manager will be the main point of contact for PWD and will manage the day to day activities of the Project team. Our Project Manager will coordinate directly with PWD on planning updates, meetings, and schedule. She will provide updated project schedules monthly during the Project duration.

**5.3 Meetings and Workshops**

Stantec will organize, attend and conduct the required meetings and workshops as described below. Stantec will prepare required meeting agendas and materials that will be provided to PWD a minimum of five working days prior to the meeting. Stantec will prepare and circulate

draft meeting minutes within five working days after each meeting to PWD for review and comment. Meeting minutes will be considered final after five working days from the initial distribution for review.

**Table 1 – Proposed Meetings Included in Scope of Services**

Meeting / Workshop	Description	Number of Meetings /Duration Each
1. Project Kick-Off Meeting	The initial meeting will discuss the Project approach, schedule and initiation of the Project. Stantec will prepare initial Request for Information (RFI) pertaining to existing information. Stantec's PM and Project Engineer will attend in-person.	1 meeting Two hours, at the PWD office
2. Project Meetings	Stantec's PM will attend two in-person meetings at PWD office to discuss comments on the administrative draft report and public comments; In addition, Stantec's PM will attend three conference calls. Additional staff may attend in person or conference calls, as needed.	2 in-person meetings & 3 conference calls Each meeting one hour, at PWD office or conference call

## 5.4 Quality Assurance /Quality Control

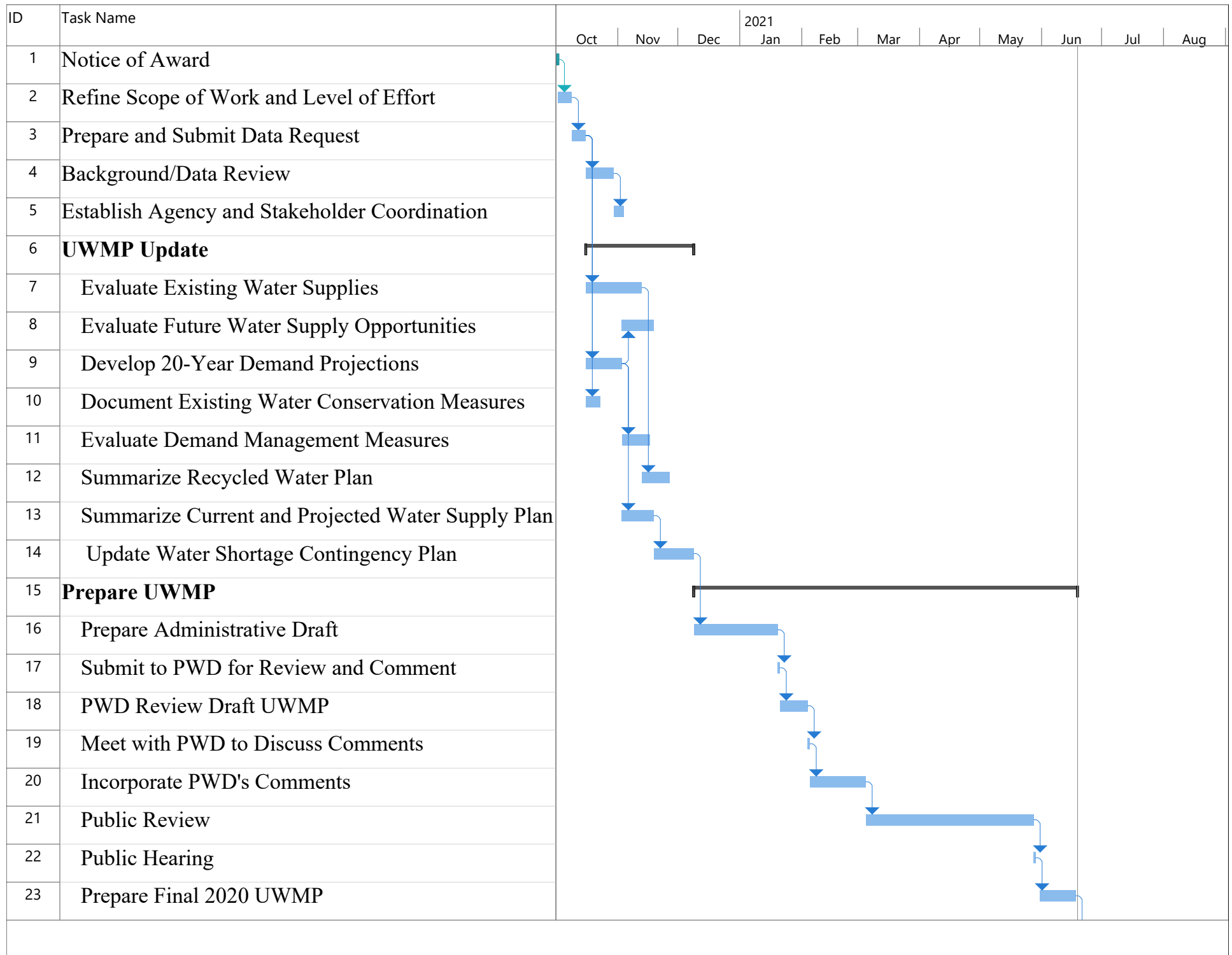
The Stantec planning team will implement a Quality Assurance / Quality Control (QA/QC) plan to provide a review of all deliverable materials associated with the Project. Our QA/QC will be performed by internal staff with specific expertise in the subject matter being reviewed. Written comments will be provided to the Project team. Quality review documents will be developed to provide records of review and resolution of internal comments prior to delivery to PWD.

### Task 5 Deliverables:

- Meeting Agendas
- Meeting Minutes
- Monthly Status Report and Invoices

## **SCHEDULE**

We have provided a draft schedule for preparing PWD's UWMP for your review. Following notice to proceed and the release of DWR's Urban Water Management Plan Guidebook Update 2020, a revised project schedule will be prepared that meets your schedule to adopt the plan and DWR's deadline for submitting. We anticipate the final guidebook to be available by October 2020.





## **ESTIMATE OF EFFORT**

We have prepared the attached fee estimate based on our experience preparing Urban Water Management Plans. Following release of the Guidebook from the California Department of Water Resources, we will revisit the fee to ensure that it accurately captures the effort necessary to complete PWD's 2020 UWMP update.



**Stantec**

## FEE ESTIMATE - Palmdale Water District 2020 UWMP Update

	Project Manager	QA/QC	Senior Project Engineer, QA/QC	Senior Project Engineer	Project Engineer	GIS				
Name	Snow, Tama	Cathcart, Jim	Dunn, Jeff	Pirijanyan, Adelina	Hernandez, Kevin	Whelan, Chisa	Project Summary			
Project Billing Rate	\$250.00	\$250.00	\$235.00	\$235.00	\$175.00	\$165.00	Labour	Expense	Total	
Total Units	60	8	6	64	92	20	Fixed Fee	\$0.00	\$0.00	\$0.00
Fee	\$15,000.00	\$2,000.00	\$1,410.00	\$15,040.00	\$16,100.00	\$3,300.00	Time and Material	\$52,850.00	\$2,000.00	\$54,850.00
							Total	\$52,850.00	\$0.00	\$54,850.00

WBS Code	Task Name	Hours						Total Hours	Labour	Expense	Total
1	Review Previous Studies and Relevant Data	2			8	12		22	\$4,480.00	\$0.00	\$4,480.00
2	Establish Agency and Stakeholder Coordination	2						2	\$500.00	\$0.00	\$500.00
3	2020 UWMP Update	8		6	24	48		86	\$17,450.00	\$0.00	\$17,450.00
4	2020 UWMP Report	16			24	24	20	84	\$17,140.00	\$500.00	\$17,640.00
5	Project Management, QA/QC, Meetings	32	8		8	8		56	\$13,280.00	\$1,500.00	\$14,780.00

**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:** July 1, 2020 **July 8, 2020**  
**TO:** RESOURCE AND FACILITIES COMMITTEE **Committee Meeting**  
**FROM:** Mr. Scott L. Rogers, Engineering/Grant Manager  
**VIA:** Mr. Adam Ly, Assistant General Manager  
Mr. Dennis D. LaMoreaux, General Manager  
**RE:** ***AGENDA ITEM NO. 4.3 – CONSIDERATION AND POSSIBLE ACTION TO AUTHORIZE STAFF TO ENTER INTO A CONTRACT WITH KYLE GROUNDWATER FOR THE WELL NO. 36 PRE-DESIGN REPORT. (\$13,994.00 – BUDGETED – BUDGET ITEM NO. 1-02-5070-007 – ENGINEERING/GRANT MANAGER ROGERS)***

---

**Recommendation:**

Staff recommends that the Committee authorize staff to enter into a contract with Kyle Groundwater for the hydrogeological services related to the pre-design report for the siting, design and engineering cost estimates for a new well to be identified as Well No. 36.

**Alternative Options:**

Do not start preliminary design of new well.

**Impact of Taking No Action:**

Delaying the project has the potential to impact the ability to provide the necessary supply to meet the District's water demands.

**Background:**

The District has historically pursued a well site on Lockheed property located north of Avenue P and between 10<sup>th</sup> and 15<sup>th</sup> Streets East. Lockheed is currently in the process of permitting and installing a large solar farm on the property. During the land use permitting process, the District staff was notified of the project and engaged Lockheed staff to determine if the District has an opportunity to install a test well on the property. The test well location was previously identified back in 2004 and was rejected by Lockheed. Additionally, the future well site was studied back in 2008, Lockheed was notified, no further action was taken by the District after discussions with Lockheed stalled, and it was not pursued further.

Most recently, District staff and Lockheed discussed the possibility of locating a well on the property. Lockheed indicated that the equipment for the solar farm has been designed and purchased, and they do not want to re-design the solar farm to accommodate the location of the proposed test well.

RESOURCE AND FACILITIES COMMITTEE  
PALMDALE WATER DISTRICT

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

July 1, 2020

Due to Kyle Groundwater already starting the evaluation of the District's existing wells as part of the Well Prioritization Plan, District staff initiated discussions with Kyle Groundwater on the potential of locating a well on the property. After reviewing the well siting study, Kyle Groundwater recommended that two of the District's existing properties be evaluated as a location for a new well.

**Strategic Plan Initiative/Mission Statement:**

This work is part of Strategic Initiative No. 1 – Water Resource Reliability and No. 3 – Systems Efficiency.

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

**Budget:**

The project costs will be under Budget Item No. 1-02-5070-007.

**Supporting Documents:**

- Kyle Groundwater Scope of Work and Fee Estimate dated June 16, 2020



June 16, 2020

Mr. Scott L. Rogers, PE  
Engineering Manager  
Palmdale Water District  
2029 East Avenue Q  
Palmdale, CA 93550

**Subject: Proposal for Professional Hydrogeological Support Services  
Siting of Palmdale Water District Well Nos. 36 and 37**

Dear Mr. Rogers:

KYLE Groundwater, Inc., (KGI) is pleased to present this proposal to Palmdale Water District (PWD) for professional hydrogeological services to assess potential well sites at the location of the planned solar energy farm northeast of the intersection of E. Rancho Vista Road and 10<sup>th</sup> Street East, in Palmdale, California. It is our understanding that PWD owns two (2) parcels of land within the vicinity of the planned solar farm in addition to the parcel of land occupied by Well 15, and that PWD would like to assess the feasibility of installing one or more wells upon these properties. Our detailed scope of work and cost proposal is provided on the following pages.

#### **SCOPE OF WORK**

##### **Task 1.0 – Project Management and Meetings**

KGI will provide general project management and will prepare for and attend up to two (2) meetings as the need arises during the project, one of which will include field reconnaissance of the proposed well sites to identify and assess site logistics. Meeting agendas will be prepared for all project meetings and meeting minutes will be provided as necessary.

##### **Task 2.0 – Well Site Assessment and Preliminary Design**

KGI will assess the proposed well sites in terms of logistical and regulatory feasibility and constraints. This information will be incorporated into a preliminary well design report (PDR) for the proposed wells that will serve as a planning document prior to entering the design phase. The PDR will provide a summary of hydrogeologic setting, anticipated groundwater quality, nearby sites of environmental concern, groundwater elevations, production potential, construction constraints, logistics and conflicts, regulatory issues, and permitting constraints. A water level interference analysis will be included to assess

KYLE Groundwater, Inc.  
557 E. Pasadena Street, Suite 2  
Pomona, CA 91767  
(626) 379-7569

Mr. Scott L. Rogers, PE  
June 16, 2020

Proposal for Professional Hydrogeological Support Services  
Siting of Palmdale Water District Well Nos. 36 and 37

the estimated magnitude of water level interference between existing Well 15, and the addition of one or two new wells. A preliminary production well design will be prepared based on existing information, including a basis of design and planning-level estimate of contractor costs. PWD design preferences will be incorporated into the preliminary well design.

Logistical constraints will be identified, assessed, and summarized, including site access, available space for drilling, overhead obstructions, above ground and underground utilities, location of the construction water source, potential waste water discharge options, noise constraints, and potential permitting constraints (including possible permitting with the Palmdale Regional Airport to address flight path hazards and interference).

KGI will submit an electronic copy of the PDR to PWD at the 100% DRAFT stage for review and comment. Upon incorporation of comments, KGI will submit an electronic copy of the 100% FINAL PDR in addition to three (3) bound hard copies.

Thank you for considering our proposal and please do not hesitate to contact me at 626.379.7569 or russell.kyle@kylegroundwater.com should you have any questions or concerns. We welcome the opportunity to continue our mutually beneficial working relationship with PWD.

Sincerely,



Russell John Kyle, PG, CHG  
President / Principal Hydrogeologist

**PALMDALE WATER DISTRICT**  
**Proposal to Provide Professional Hydrogeological Services - Siting of Palmdale Water District Well Nos. 36 and 37**

		Principal Hydrogeologist	Project Hydrogeologist	Staff Hydrogeologist	GIS Technician	Clerical	Labor	Direct Costs	Total Cost
<i>Hourly Rate:</i>		\$165	\$135	\$125	\$115	\$75			
1.0	Conduct Project Management and Attendance at Two (2) Project Meetings, Including Field Reconnaissance of Proposed Well Sites.	8					\$ 1,320	\$ 234	\$ 1,554
2.0	Prepare well siting technical memorandum, including preliminary design, assessment of well interference, hydrogeology, production potential, anticipated groundwater quality, logistics, permitting, and planning-level cost estimates of well construction.	18	24	36	12	2	\$ 12,240	\$ 200	\$ 12,440
<b>TOTAL HOURS AND COST:</b>		<b>26</b>	<b>24</b>	<b>36</b>	<b>12</b>	<b>2</b>	<b>\$ 13,560</b>	<b>\$ 434</b>	<b>\$ 13,994</b>

**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:** July 1, 2020 **July 8, 2020**  
**TO:** RESOURCE AND FACILITIES COMMITTEE **Committee Meeting**  
**FROM:** Mr. Scott L. Rogers, Engineering/Grant Manager  
**VIA:** Mr. Adam Ly, Assistant General Manager  
Mr. Dennis D. LaMoreaux, General Manager  
**RE:** ***AGENDA ITEM NO. 4.4 – CONSIDERATION AND POSSIBLE ACTION TO AUTHORIZE STAFF TO ENTER INTO A CONTRACT WITH STANTEC CONSULTING SERVICES INC. FOR A SURFACE WATER AUGMENTATION FEASIBILITY STUDY. (\$13,015.00 – BUDGETED – BUDGET ITEM NO. 1-02-5070-007 – ENGINEERING/GRANT MANAGER ROGERS)***

---

**Recommendation:**

Staff recommends that the Committee authorize staff to enter into a contract with Stantec Consulting Services, Inc for professional engineering services related to the Feasibility Study of Surface Water Augmentation.

**Alternative Options:**

Do not determine the feasibility of surface water augmentation.

**Impact of Taking No Action:**

Delaying the project has the potential to impact the ability to meet the District's future water demands.

**Background:**

In 2010, the District developed a Strategic Water Resources Plan for the purpose of developing a sound water supply strategy to meet both current and future customer demands through 2035. The plan outlines development of a strategy to address the following elements: imported water, groundwater, recycled water, water banking, conservation, and Littlerock Reservoir. Surface augmentation was not the focus of the plan due to limited scientific study and the potentially lengthy regulatory process.

Since 2010, the District has had limited success in implementing the elements identified above. The District has banked some State Water Project (SWP) water, the Antelope Valley groundwater basin has been adjudicated in 2016, recycled water use has been limited to City parks, conservation has yielded some decreases in demand, and Littlerock Reservoir has been hampered by environmental compliance.



RESOURCE AND FACILITIES COMMITTEE  
PALMDALE WATER DISTRICT

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

July 1, 2020

With changing environmental regulations, surface water augmentation is another viable water supply. Advanced treatment is necessary for surface water augmentation. Regulation on nutrient loading in natural waters necessitates the evaluation of advance treatment to be implemented to meet those requirements. The Feasibility Study of Surface Water Augmentation provides the District the additional option for implementing a solution to the District's future water supply and expanded interest in the project by others.

**Strategic Plan Initiative/Mission Statement:**

This work is part of Strategic Initiative No. 1 – Water Resource Reliability and No. 3 – Systems Efficiency.

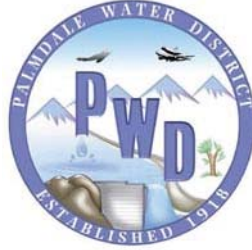
This item directly relates to the District's Mission Statement.

**Budget:**

This item is budgeted under Budget Item No. 1-02-5070-007 - Consultants

**Supporting Documents:**

- Strategic Water Resources Plan Final Report dated March 2010
- Stantec Consulting Scope of Work and Fee Estimate dated May 29, 2020



# **Strategic Water Resources Plan Final Report**

**Prepared by:**  
**RMC**  
*Water and Environment*

In Association with:  
**A&N Technical Services**  
**Wildermuth Environmental**

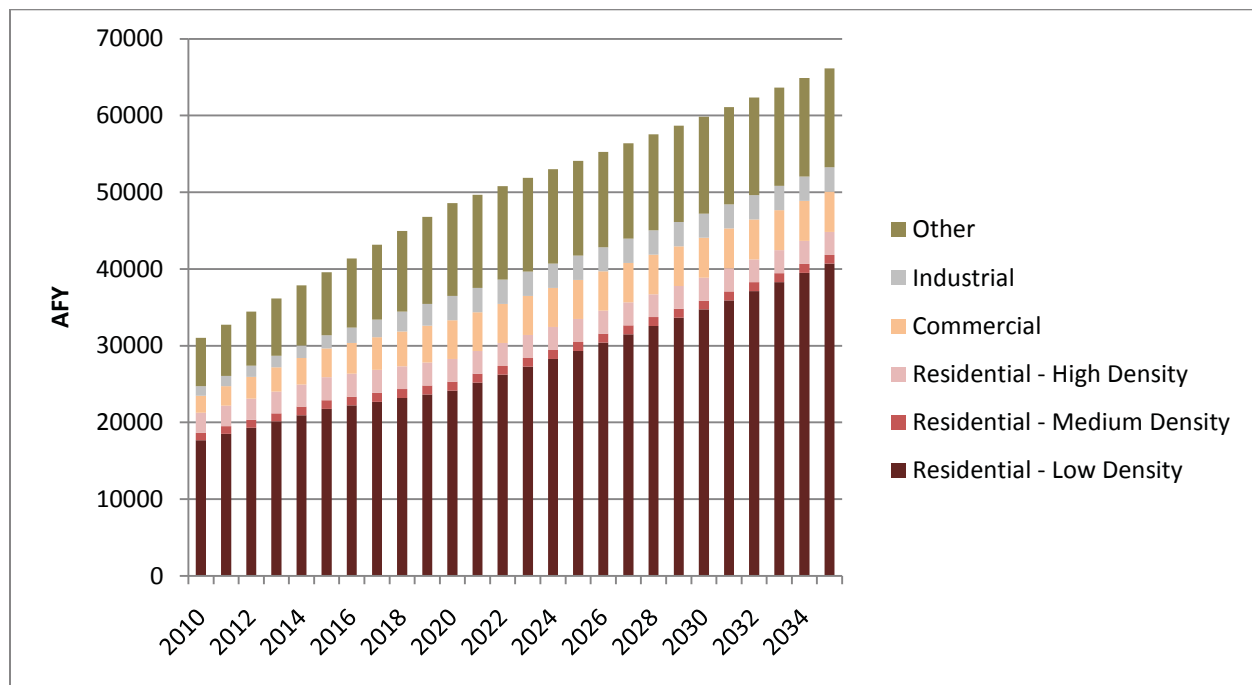
**March 2010**

## Executive Summary

### ES-1 Overview

Palmdale Water District (PWD) has prepared this Strategic Water Resources Plan (SWRP) to establish guiding objectives and identify necessary steps in order to meet the projected future needs of its customers. Over the next 25 years, the population residing within PWD's current service area is expected to more than double. Correspondingly, anticipated supply needs to meet the water demands of these customers is expected to more than double as illustrated in **Figure ES-1** below.

**Figure ES-1-1: Projected PWD Supply Needs from 2010 to 2035**



Palmdale Water District has a number of water resource options available to it in order to meet these needs as illustrated in **Figure ES-2**. These include imported water, groundwater, local runoff, recycled water, conservation and water banking. To understand where PWD should be placing its emphasis, PWD has developed this plan that considered all the different options available to it, evaluated these options with respect to a variety of factors including cost, reliability, flexibility, implementability and sustainability. Through this evaluation process, PWD has developed the following recommended water resource strategy.

**Figure ES-1-2: Mixture of Water Resource Options for Palmdale Water District**

## ES-2 Recommended Strategy

The recommended strategy for the SWRP is summarized as follows:

- Acquire and/or develop new imported supplies
- Create a combination of local surface spreading facilities to percolate untreated State Water Project (SWP) water and Aquifer Storage Recovery (ASR) wells to inject potable water
- Add additional pumping capacity to achieve a target of delivering 70 percent of supply to customers through groundwater pumping.
- Pursue a recycled water exchange program with nearby agriculture in-lieu of groundwater pumping

In addition, PWD will begin to embark on a strategy to diversify its supplies and provide for near-term drought reliability with the following steps:

- Expand conservation programs
- Recover storage capacity in Littlerock Reservoir through sediment removal
- Implement a recycled water system for non-potable uses (e.g. primarily irrigation but possibly some industrial uses)
- Further research using treated recycled water to replenish the groundwater basin as is now being done in Orange County through advanced water treatment processes, blending with SWP water, and surface spreading and percolation

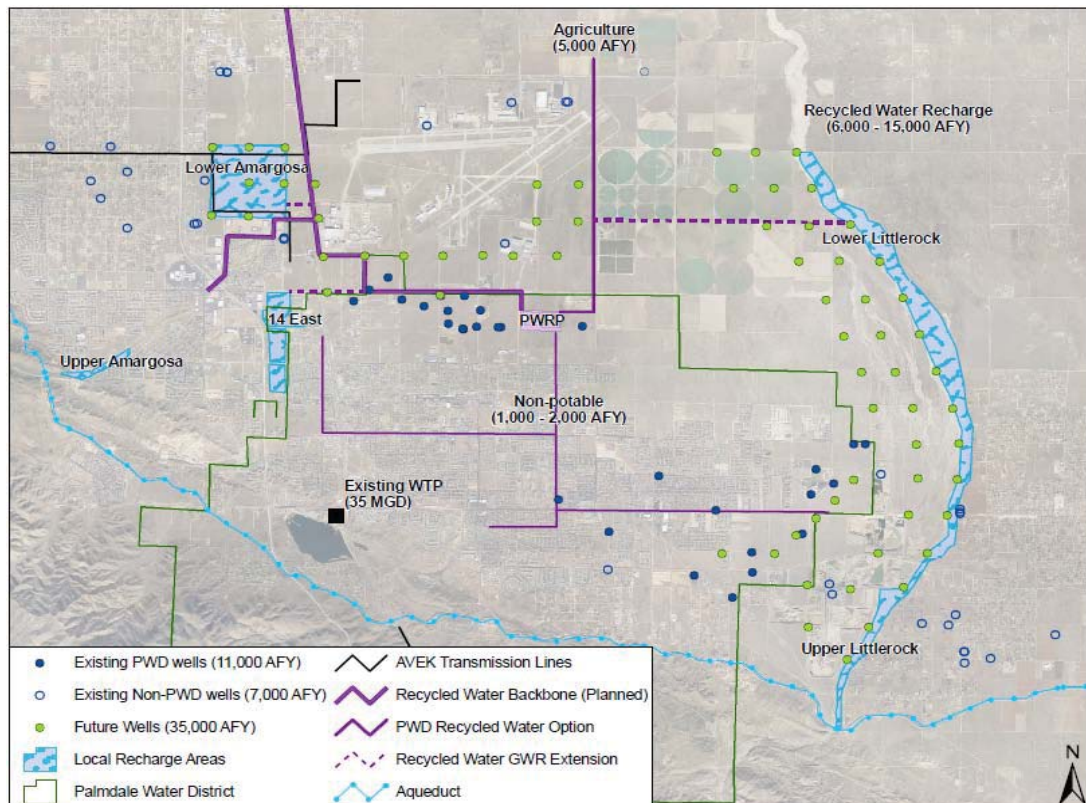
The specific targets for which PWD should strive are summarized in **Table ES-1**. **Figure ES-2** illustrates what future facilities may look like under this recommended strategy.

**Table ES-1-1: Water Resource Targets for Recommended Local Storage Strategy**

Water Supply Elements	Current	Target for 2035
Imported Water	12,000 afy (average)	36,000 to 47,000 afy (average) <sup>1</sup>
Groundwater Pumping	12,000 afy (average)	47,000 afy (average)
Surface Water Treatment Capacity	35 mgd	35 mgd
ASR Injection Capacity	None	6,000 gpm (800 AF/month)
Surface Recharge Capacity	None	35,000 afy (average)
Local Storage Capacity	None	120,000 af
Recycled Water		1,800 afy
- Non-potable	None	0 to 5,000 afy <sup>1</sup>
- Exchange with agriculture	None	0 to 5,000 afy <sup>1</sup>
- Groundwater recharge	None	0 to 15,000 afy <sup>1</sup>
Active Conservation Programs	250 afy	2,600 afy
Passive Conservation Programs	None <sup>2</sup>	3,600 afy
Littlerock Reservoir	4,000 afy (average)	4,500 afy (average)
External Water Banking	None	Consider on an opportunistic basis

<sup>1</sup> The volume of imported water used will depend on how much recycled water is used for in-lieu groundwater exchange with agriculture and/or groundwater recharge.

<sup>2</sup> Prior passive conservation measures (e.g. plumbing code changes) were not evaluated but have been taken into account in future demand projections.

**Figure ES-1-3: Proposed Future Facilities**

To help guide PWD in achieving these targets, the following strategic objectives have been established. (Table ES-2).

**Table ES-1-2: Recommended Strategic Objectives for PWD**

Water Resource Element	Strategic Objective
Imported Water	<ul style="list-style-type: none"> <li>• Firm up existing Table A supplies so that imported water is available at historical average levels</li> <li>• Create and maintain options for future acquisition of imported water as need arises</li> <li>• Protect both existing supplies and future opportunities by being proactive and a leader as operation and management of the SWP system continues to evolve</li> </ul>
Groundwater Pumping and Recharge	<ul style="list-style-type: none"> <li>• Be able to meet 70 percent of demands through pumping within ten years (i.e. by 2020).</li> <li>• Do not further draft the local groundwater basin</li> <li>• Establish and operate recharge facilities to offset both proposed pumping increases and potential loss of groundwater pumping due to adjudication</li> </ul>
Water Banking	<ul style="list-style-type: none"> <li>• Establish ability to bank available imported water as soon as possible</li> <li>• Focus first on developing storage within the groundwater basin local to PWD</li> <li>• Pursue partners to participate in developing PWD storage facilities including other AVSWCA members and other entities (e.g. MWD, LADWP)</li> <li>• Consider water banking in locations outside PWD if cost effective AND the project produces a value-added benefit (such as additional aqueduct delivery capacity)</li> </ul>
Recycled Water	<ul style="list-style-type: none"> <li>• Maximize the use of recycled water within PWD's service area to limit the need for more imported water</li> <li>• Develop a non-potable distribution system to be able to deliver tertiary treated recycled water for irrigation and, where feasible, industrial and commercial uses.</li> <li>• Develop and implement ways to use recycled water to increase available groundwater supply</li> </ul>
Littlerock Reservoir	<ul style="list-style-type: none"> <li>• Create and maintain additional storage capacity for water resource and recreational benefit through sediment removal</li> <li>• Maintain the quality of water in Littlerock Reservoir</li> <li>• Continue to explore ways to use Littlerock Reservoir for water supply reliability, power generation, and other benefits</li> </ul>
Conservation	<ul style="list-style-type: none"> <li>• Implement conservation programs to achieve savings that at least match the cost offset of acquiring, transporting and treating new supplies</li> <li>• Continue to expand conservation efforts on a regular basis (e.g. every 3-5 years), attracting outside funding to help expand programs</li> <li>• Achieve the conservation targets that are expected to be established through the proposed "20 x 2020" program (i.e. 20 percent per capita reduction in water use statewide by 2020)</li> <li>• Maintain and update policies as needed to reduce water waste and preserve PWD's ability to achieve sufficient conservation savings in the event of a water shortage emergency</li> <li>• Provide leadership to other Antelope Valley water purveyors in crafting consistent regional conservation programs and messaging</li> </ul>

## ES-3 Recommended Implementation Plan

For each water resource element, implementation actions have been identified and are summarized in **Table ES-3**. The full schedule for implementation is outlined in detail in Chapter 3.

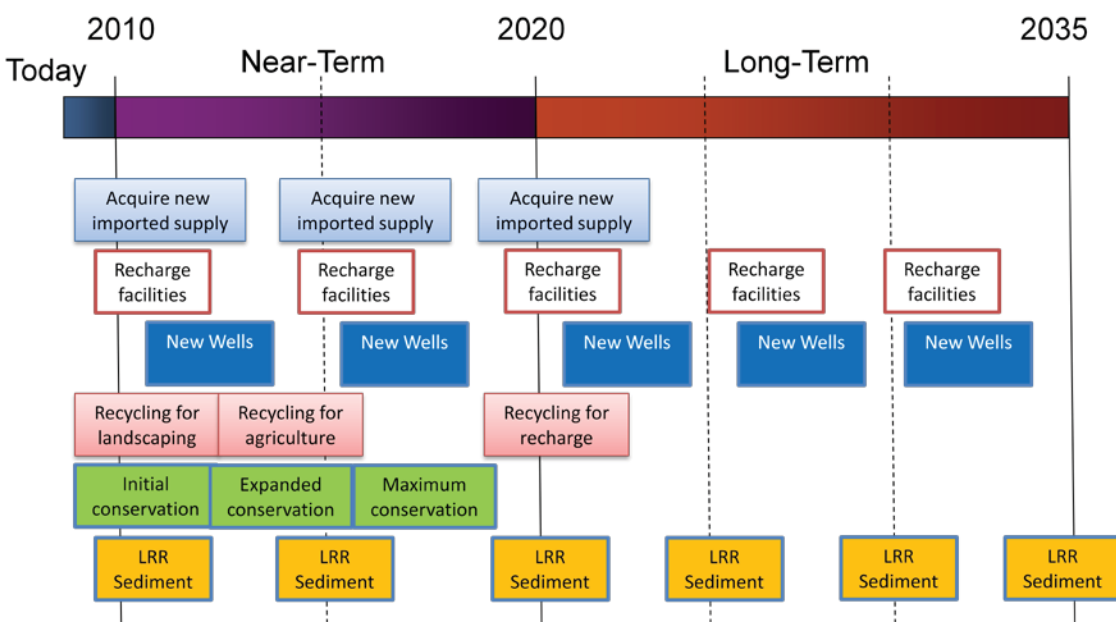
**Table ES-1-3: Implementation Actions by Water Resource Element**

Water Resource Element	Implementation Actions
Imported Water	<ol style="list-style-type: none"> <li>1. Acquire new imported supplies</li> <li>2. Be proactive with State Water Project system management and operation</li> <li>3. Negotiate for additional conveyance capacity</li> <li>4. Maintain flexibility for future water treatment facilities</li> </ol>
Groundwater Pumping and Recharge	<ol style="list-style-type: none"> <li>1. Install new wells, including ASR wells in the North Well Field area</li> <li>2. Install surface recharge facilities</li> </ol>
Water Banking	<ol style="list-style-type: none"> <li>1. Develop local recharge and recovery capabilities</li> <li>2. Develop partnership strategy</li> <li>3. Explore added benefits of outside banking opportunities</li> </ol>
Recycled Water	<ol style="list-style-type: none"> <li>1. Secure recycled water agreement</li> <li>2. Participate in developing a salt and nutrient management plan</li> <li>3. Implement non-potable recycled water system</li> <li>4. Implement agriculture reuse/groundwater exchange project</li> <li>5. Conduct further research for using recycled water for groundwater recharge</li> </ol>
Littlerock Reservoir	<ol style="list-style-type: none"> <li>1. Remove sediments as previously evaluated</li> <li>2. Take measures to prevent Quagga mussel infestation</li> <li>3. Further evaluation of storage and power options</li> </ol>
Conservation	<ol style="list-style-type: none"> <li>1. Implement and consistently expand targeted conservation programs</li> <li>2. Continue program of water budgets for customers</li> <li>3. Monitor and report effectiveness of conservation programs</li> <li>4. Regularly review and coordinate PWD and City of Palmdale ordinances and policies</li> <li>5. Coordinate communications with other Antelope Valley water purveyors</li> <li>6. Pursue grant funding to improve program cost effectiveness</li> </ol>



**Figure ES-4** below summarizes the proposed implementation schedule for the recommended strategy. In general, the bulk of new activity is expected to take place between 2010 and 2020 as a means to shore up existing supplies, meet projected near-term future demands, and lay the groundwork for meeting long-term demands.

**Figure ES-1-4: Summarized Implementation Schedule**



Note: PWD has the option to either acquire new imported supplies in 2021 or to implement groundwater recharge with recycled water.

In addition to these specific implementation actions, PWD should undertake a series of global action items including:

1. Prepare a programmatic Environmental Impact Report (EIR) for the Strategic Water Resources Plan
2. Implement a water resource developer fee to fund capital development costs of new supplies
3. Update water rates in five years to incorporate changes in O&M costs

## ES-4 Costs and Financing

**Table ES-4** below summarizes the costs associated with the proposed facilities. These costs are based on use of imported water for groundwater recharge rather than recycled water. If recycled water is to be used instead, for planning purposes the costs could be considered the same.



**Table ES 1-4: Summary of Costs for Recommended Strategy by Water Resource Element**

Water Resource Element	Capital Costs	O&M Costs	Total Costs	Net Present Value
Imported Water	\$347 million	\$12-19 million/yr	\$757 million	\$426 million
Groundwater Pumping	\$109 million	\$1-6 million/yr	\$227 million	\$119 million
Groundwater Recharge	\$34 million	\$0.2-1 million/yr	\$49 million	\$32 million
Recycled Water	\$49 million	\$0.4-0.9 million/yr	\$66 million	\$42 million
Conservation	\$0	\$0.5-1.1 million/yr	\$11 million	\$4.1 million
Littlerock Reservoir	\$6 million	\$0.5-\$1.4 million/yr	\$23 million	\$14 million
Total	\$545 million	\$14-29 million/yr	\$1,130 million	\$665 million

Notes: Costs are in 2008 dollars. Costs are based upon strategy IW70 which relies largely on new imported supplies. Overall costs are similar if utilizing recycled water instead. O&M costs shown illustrate the range of costs between 2011 and 2035. NPV is based upon a 5% annual discount rate.

In order to fund the costs of facilities and acquisitions of new water supplies, the principles followed by this plan are as follows:

- New customers establishing new connections must pay for new supplies and the infrastructure to deliver those supplies. This includes funding new imported water acquisition, recharge and recovery facilities, and recycled water facilities.
- Current and future customers must pay for reliability of current supply up to budgeted allotments for indoor and outdoor usage. This would include the costs of improvements to maintain Littlerock Reservoir, of PWD's share of improvements to the Delta, and of improvements needed to meet water quality standards.
- Those customers choosing to use more than their allotment need to contribute more to help fund water reliability projects including conservation and recycling.
- Current and future customers are to pay for all O&M costs as well as fixed costs of existing systems.
- Other system enhancements, such as possible hydropower generation from Littlerock Reservoir, need to be able to pay for themselves without subsidy from other revenue sources.
- Financing strategy needs to provide for supply reliability assuming no future development or delayed future development.

Based on these principles, the recommended financing strategy includes the following elements:

- Implement a water supply connection fee for new connections of \$16,005 to \$17,607 beginning as soon as possible and escalated every year by the rate of inflation.
- Use a combination of municipal debt financing, SRF loans, and collected water supply connection fees to fund capital projects identified in the SWRP.

- Continue to maintain current approach to setting water rates in order to continue to cover O&M expenses associated with the SWRP.
- Further evaluate using property tax assessment(s) to fund potential future fixed costs associated with SWP improvements if and when the improvements become more likely.
- Pursue grant funding for conservation, water recycling, and groundwater storage projects.
- Further evaluate partnership opportunities and engage with potential partners for recycling and groundwater storage projects as these projects evolve.



**Stantec Consulting Services Inc.**  
9665 Granite Ridge Drive Suite 220, San Diego CA 92123-2636

May 29, 2020

**Attention: Scott Rogers**  
Palmdale Water District  
2029 East Avenue Q  
Palmdale, CA 93550

**Reference: Surface Water Augmentation Feasibility Study**

Dear Mr. Rogers:

It is our understanding that the Palmdale Water District (PWD) would like to evaluate the feasibility of surface water augmentation at Palmdale Lake. Presented below, for your consideration is a brief scope of work, schedule and estimate of effort.

## Scope of Work

### 1.0 Project Management, QA/QC

Stantec will conduct project management activities to verify adherence to scope of work, schedule and budget; promote efficient communication between Stantec and PWD and implement an effective quality assurance/quality control (QA/QC) program. It is assumed that there will be two meetings (kickoff meeting and meeting to discuss draft technical memorandum) to be held via conference call during the duration of the project.

### 2.0 Background Document Review

Stantec will review the necessary background documents provided by Palmdale Water District. At a minimum, the following documents will be reviewed:

- Agreement for Purchase and Sale of Recycled Water between Sanitation District No. 20 of Los Angeles County and Palmdale Water District, October 2016
- Palmdale Recycled Water Authority Recycled Water Facilities Master Plan, January 2015
- Palmdale Regional Groundwater Recharge and Recovery Project, Final Environmental Impact Report, June 2016
- As-built drawings for Sanitation District No. 20 of Los Angeles County's recycled water treatment plant
- Water quality data for Sanitation District No. 20 of Los Angeles County's recycled water treatment plant for the past 5 years.

Reference: Surface Water Augmentation Feasibility Study

### 3.0 Regulatory Requirements

Stantec will review the current surface water augmentation (SWA) using recycled water regulations SBDDW-16-02 as they pertain to PWD and summarize the requirements and necessary steps to obtain ultimate approval for surface water augmentation in Palmdale Lake. Stantec shall discuss requirements including retention time, dilution and response time.

### 4.0 Treatment and Infrastructure Requirements

Stantec will review the as-built drawings to determine the current treatment being utilized to produce recycled water at the Sanitation Districts of Los Angeles County No. 20 and water quality data to determine the type of treatment that will be necessary to meet the current surface water augmentation with recycled water regulations. In addition, Stantec will evaluate various recycled water pipeline alignments and infrastructure requirements to convey recycled water to Palmdale Lake.

### 5.0 Engineer's Estimate of Probable Construction Costs

Stantec will prepare an engineer's estimate of probable construction costs. The estimate will be a Class 4 cost estimate as defined by the Association for the Advancement of Cost Engineering (AACE) which is appropriate for a feasibility level of study.

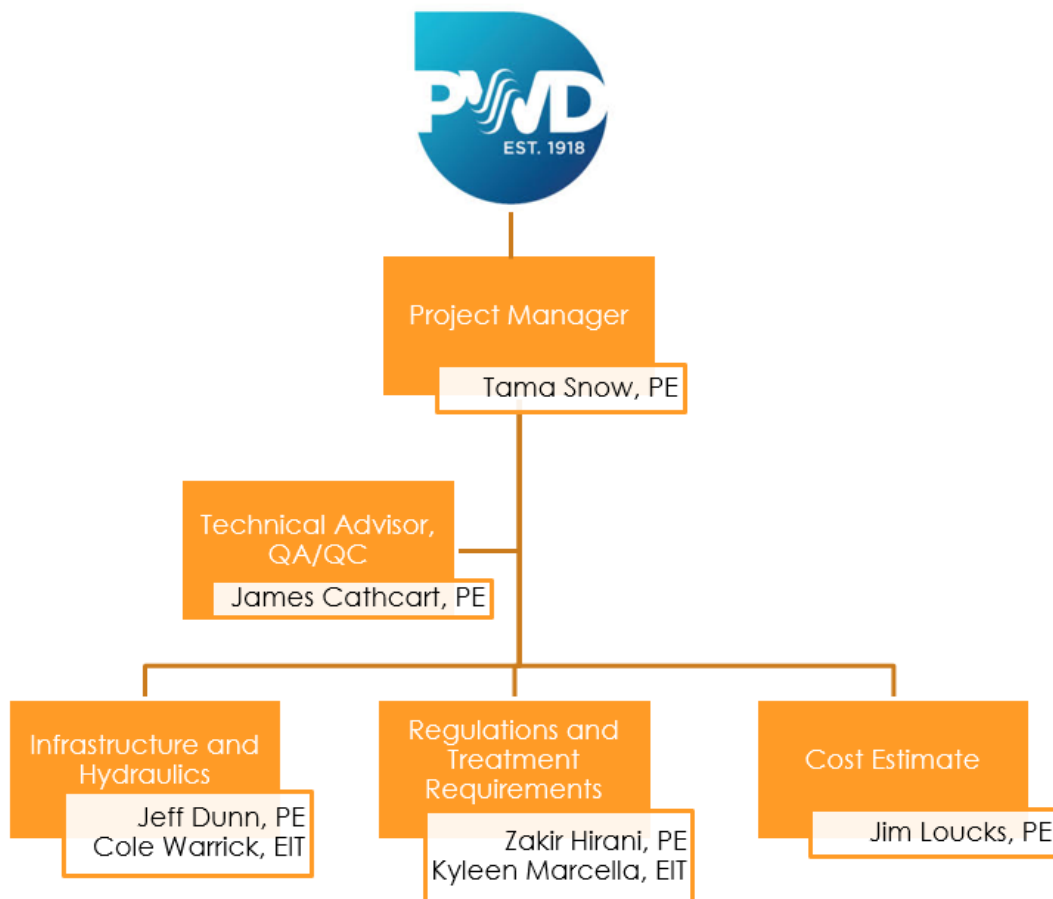
### 6.0 Technical Memorandum

Stantec will prepare a technical memorandum that documents and summarizes items 2 through 5 above complete with relevant figures. Stantec will submit a draft technical memorandum for PWD's review. Following PWD's review, Stantec will coordinate a conference call to review PWD's comments. PWD's comments will be incorporated as appropriate and a final technical memorandum will be submitted.

Reference: Surface Water Augmentation Feasibility Study

## Organization Chart

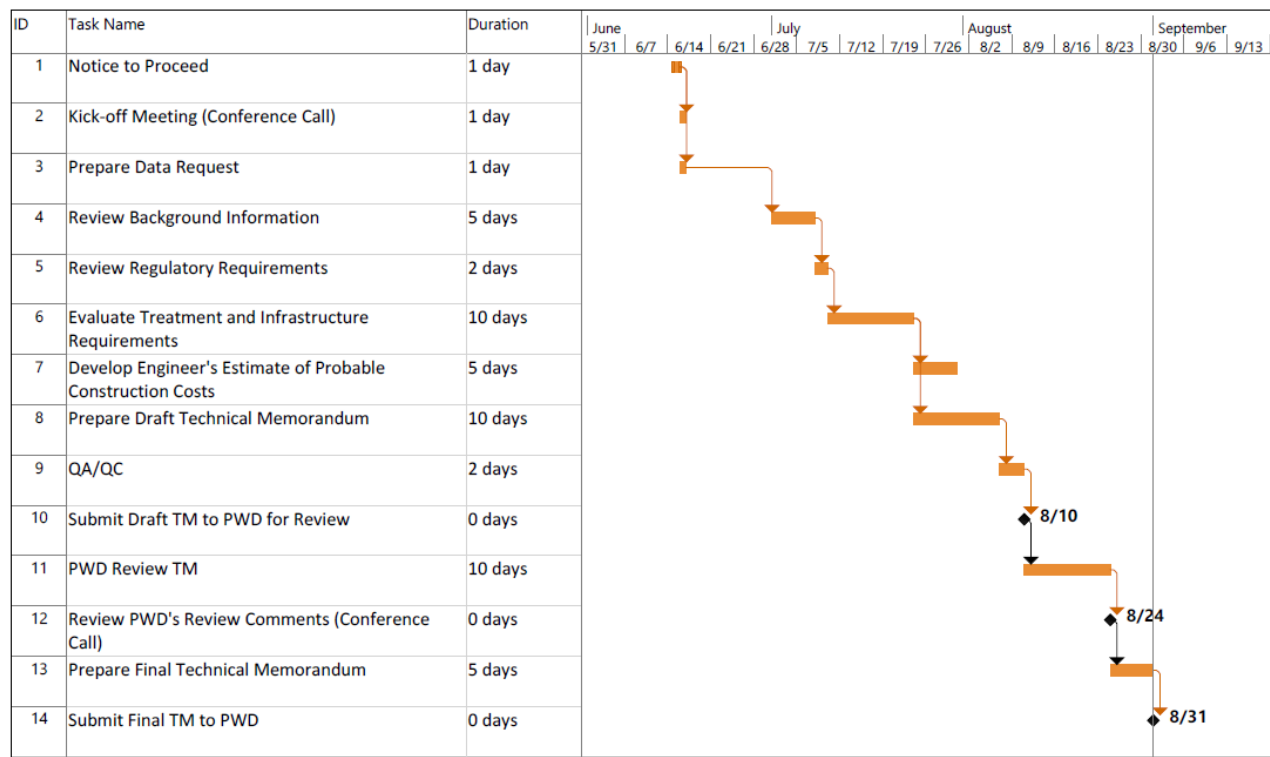
The key to a successful project is an experienced and cohesive team. We have assembled a team of professionals with a high level of commitment, enthusiasm, and experience on similar projects. Our team members bring diverse water resources planning and advanced water treatment experience. Our organization chart demonstrates how our team members are organized and managed to help ensure tasks are delivered smoothly and efficiently. The resumes for the key team members are included as an attachment to this proposal.



Reference: Surface Water Augmentation Feasibility Study

## Schedule

We anticipate we can complete this study within approximately 8-10 weeks from notice to proceed. This is dependent on getting the background information that is necessary to prepare the treatment analysis.



## Level of Effort

Our level of effort is shown on the attached Table.

May 29, 2020  
Scott Rogers  
Page 5 of 5

**Reference:**     **Surface Water Augmentation Feasibility Study**

We appreciate the opportunity to submit this proposal for your consideration. Should you have any questions or concerns, please don't hesitate to contact me at the number below or on my cell phone at 949-533-7736.

Regards,

**Stantec Consulting Services Inc.**

A handwritten signature in blue ink, appearing to read "Tama Snow", with a stylized flourish extending to the right.

**Tama Snow, PE**  
Senior Principal Engineer  
Phone: 858-633-4231  
Tama.Snow@stantec.com



## Tama Snow PE

Project Manager  
29 years of experience · San Diego, California

Successful water projects have two things in common – great engineers and great communicators. Tama is both. For over 25 years she has been planning and executing projects that improve water resources management capabilities for public, private, and regulatory clients. Well respected in the industry, she is known as someone who pays close attention to details, is responsive to client needs and doesn't lose sight of the big picture. Tama seeks to improve the balance between human and environmental water needs—to serve the greater good. She loves helping clients develop strategic and sustainable solutions to their challenges.

### EDUCATION

Masters of Engineering, Cal-Poly Pomona, Pomona, CA

Bachelor of Science in Civil Engineering, University of California at Irvine, Irvine

Bachelor of Arts in Mathematics, University of California Riverside, Riverside, CA

### REGISTRATIONS

Engineer #C056934, State of California

### PROJECT EXPERIENCE

Port of Long Beach Recycled Water Study | Port of Long Beach | Long Beach, California | Quality Assurance/Quality Control Review

Stantec was retained by the Port of Long Beach to prepare a storm water harvesting study and recycled water feasibility study. The recycled water feasibility study included identifying and evaluating alternative sources of recycled water that could be available to supply the POLB customers, evaluating the feasibility of constructing a wastewater treatment plant to be owned and operated by the POLB, as well as identifying potential recycled water customers, identifying acceptable recycled water uses and preparing an engineer's estimate of probable construction costs for the various identified alternatives.

Recycled Water Program Development Feasibility Study\* | City of Coachella Valley | Coachella, California | Project Manager

Tama developed a recycled water program feasibility study for the participating agencies that included Coachella Water Authority, Mission Springs Water District, Indio Water Authority and Valley Sanitation District. Evaluation of project alternatives included identifying best use of recycled water for groundwater recharge, groundwater injection, industrial reuse and landscape irrigation. Evaluated modifications to four existing wastewater treatment plants for each recycled water application. Prepared a Pilot Test Protocol and conducted a bench scale pilot test utilizing an ultrafiltration membrane as a pretreatment to reverse osmosis. Objectives of the pilot study were to determine filterability of the effluent, permeability to determine fouling potential, Fluorescence Excitation Emissions Matrix (FEEMs) was measured to compare and correlate fouling propensity of the wastewater process and the effective removal of the membrane before and after filtration, temperature, pH, Conductivity, BOD, TSS, particle size, and turbidity before and after filtration were measured to verify the differences in wastewater effluents and determine filterability. Grant and loan opportunities were identified that matched project alternatives to priority projects identified in the study. An AACEI Class 4 cost estimate for each alternative was also developed.

Feasibility Study to Develop the Simi Valley Basin as a Potable Water Resource\* | City of Simi Valley | Simi Valley, CA | Project Manager

Tama evaluated utilizing groundwater from the Simi Valley Basin, which is of naturally poor quality, high in salinity, and requires treatment or blending with imported water to make it suitable for use as a potable water supply. The Study presented three alternatives to develop the Simi Valley Basin as a potable water supply. The alternatives evaluated well locations, treatment plant locations, treatment requirements, distribution system requirements, brine discharge requirements, and the capital, engineering and annual operations and maintenance (O&M) costs. Tama assisted the District with preparing and obtaining a grant from the United States Bureau of Reclamation to cover fifty percent of the costs of the Study.

*\* denotes projects completed with other firms*



**Johnson Utilities Comprehensive Planning Study\* |  
EPCOR/Johnson Utilities | San Tan Valley, Arizona |  
Project Manager**

Tama prepared an Integrated Water, Wastewater, Reclaimed Water and Water Resources Comprehensive Planning Study (CPS) to provide the utility with a capital improvement plan to address the numerous pressing and immediate needs, including water quality and water pressure issues and sanitary sewer overflows and determining best reuse of the recycled water of different qualities produced at three wastewater treatment plants. Improvements needed to the water, wastewater and recycled water systems were identified to address current issues, as well as prepare the Utility for future growth over 3-year, 5-year, 10-year, and build-out planning horizons. Best use of recycled water included groundwater recharge, identifying recycled water customers and conducting a cost feasibility analyses.

**Lake Forest Zone B to C Pump Station | Irvine Ranch  
Water District | Lake Forest, California | Design Manager**

Stantec has been retained by the Irvine Ranch Water District to prepare construction plans and specifications for a new recycled water pump station. The project includes preparing a surged analysis, preparing plans and specifications for decommissioning an existing recycled water pump station and abandoning an existing groundwater well as well as preparing a preliminary design report, 60%, 90%, and 100% plans and specifications for a new recycled water pump station.

**Otay Water District Hydraulic Modeling On-Call Services\*  
| Otay Water District | Spring Valley, California | Project  
Manager**

Utilizing Otay Water District's (OWD) existing hydraulic model and data from OWD's GIS and SCADA systems, steady state and extended period dynamic modeling analyses of the existing and future potable water and recycled water systems were performed. Over 30 fire flow analyses were conducted for new developments, system deficiencies were identified and improvements recommended.



## James Cathcart PE

Technical Advisor/QA/QC  
43 years of experience · Irvine, California

Jim has 43 years of experience in water supply and development in California. Jim has been responsible for 14 well equipping and/or wellhead treatment design projects, as well as numerous pipeline and pump station designs. He has also conducted several groundwater treatment studies for wellhead water quality compliance. He specializes in the planning, design, and construction management of water, wastewater, and reclamation infrastructure; master planning; ground- and surface water treatment; pumping and storage; and pipeline design. Jim has provided expert witness services for water system design and groundwater contamination issues.

### EDUCATION

MS, Civil Engineering, California State University at Long Beach, Long Beach, California

BS, Civil Engineering, State University of New York at Buffalo, Buffalo, New York

### REGISTRATIONS

Professional Engineer #C31518, State of California

### PROJECT EXPERIENCE

Water Systems Study\* | Metropolitan Water District of Southern California | Los Angeles, California | Project Manager

Jim managed a study of MWD's small water systems along the Colorado Aqueduct. Colorado River water quality and Surface Water Treatment Rule compliance requirements were reviewed for all five MWD domestic water treatment plants and the U. S. Bureau of Reclamation's domestic treatment plant at Parker Dam. Study recommendations for pilot testing membrane filter systems were conducted by MWD and the filter systems subsequently were installed at the District's plants.

Water Treatment Plant Upgrade | Mammoth Community Water District | Mammoth Lakes, California | Project Manager

Jim managed the study, design and construction management services for Surface Water Treatment Rule compliance for the District's Lake Mary plant. Jar testing and full scale filter performance testing were conducted to assess polymer effectiveness in cold, low-turbidity water. Design modifications included adding a rapid mix stage with chemical coagulant to provide an enhanced filtration process.

Water Treatment Plant Start Up | Mammoth Community Water District | Mammoth Lakes, California | Principal-in-Charge

Jim assisted the District with start-up, and O&M manual preparation for its 3-mgd water treatment plant, designed to meet current Surface Water Treatment Rule requirements.

Lake Mary Water Treatment Plant Expansion\* | Mammoth Community Water District | Mammoth Lakes, California | Principal-in-Charge

Jim oversaw a study of alternatives to expand surface water treatment plant capacity from a DHS-imposed limit of 2.0 MGD to a 3.2-MGD rated capacity. Various treatment processes and disinfection alternatives were evaluated. Final recommendations included additional pressure filters, a chlorine scrubber, and various chemical feed system modifications. He also oversaw the final design as part of a modified design-build effort.

Performance Monitoring\* | Mammoth Community Water District | Mammoth Lakes, California | Project Manager

Jim assisted the District to comply with performance monitoring requirements for alternative treatment technologies for its surface water treatment plant. Work included conducting a particle count analysis, year-long process performance monitoring, and preparing an engineering report for DHS review.

Hydraulic Network Analysis and Water Quality Network Analysis\* | City of Torrance | Torrance, California | Principal-in-Charge

Jim supervised hydraulic and water quality model studies for the City. These projects included analyzing effects of various operational changes on the water system as well as analyzing water distribution patterns and modeling water residence time throughout the system under various operating parameters.

Recycled Water Model Update\* | Walnut Valley Water District | Walnut, California | Principal-in-Charge/Project Manager

Jim oversaw the modeling efforts to combine several local existing and proposed recycled water system models into a regional recycled system model to determine the economic and hydraulic feasibility of a regional system. The modeling effort identified \$55.5 million of improvements required for the regional system. A benefit/cost analysis determined that the regional system concept was cost-effective.



## **Zakir Hirani** PE, BCEE

Regulations and Treatment Requirements  
16 years of experience · Pasadena, California

Zakir is a licensed process engineer with expertise in physiochemical and biological treatment of water and wastewater. He is experienced in several aspects of water and wastewater treatment including pilot studies, conceptual process design, modeling, detailed design, engineering services during construction, start-up/commissioning and process troubleshooting. Zakir has process design experience with microfiltration and ultrafiltration (MF/UF), membrane bioreactors (MBR), reverse osmosis (RO), ozone, ultra-violet disinfection (UV), advanced oxidation processes (AOP including UV/H<sub>2</sub>O<sub>2</sub> and Ozone/H<sub>2</sub>O<sub>2</sub>). Zakir has worked on numerous advanced water treatment (AWT) projects including MWD's AWT Demonstration Facility, City of LA's Hyperion Advanced Water Purification Facility, and the City of San Diego's Pure Water Program.

### **EDUCATION**

Master of Science, Environmental Engineering,  
University of Southern California, Los Angeles, California  
B.Eng., Civil Engineering, The Maharaja Sayajirao  
University of Baroda, Vadodara, Gujarat

### **REGISTRATIONS**

Registered Civil Engineer #77284, State of California

### **PROJECT EXPERIENCE**

Water Reuse Study | City of San Diego | San Diego, California | Project Engineer

The study consisted of three separate projects that evaluated performance of UF-RO-UV+H<sub>2</sub>O<sub>2</sub> process train. The project was conducted in conjunction with the City's Water Reuse 2005 program which identified a 16 mgd AWT indirect potable reuse (IPR) application as the most feasible option to supplement City's potable water supply.

Design and Operation of Demonstration Facility, Potential Regional Recycled Water Supply Program | Metropolitan Water District of Southern California | Carson, California, United States | 2016-2019 | Lead Process Engineer

Zakir led the process design of the Advanced Water Treatment (AWT) Demonstration facility, consisting of MBR, RO and AOP (UV/H<sub>2</sub>O<sub>2</sub>) process train that will be utilized to collect sufficient operational and water quality data for design of a 150-MGD AWT facility at the Joint Water Pollution Control Plant in Carson, California. While using MBR as a pretreatment to RO, the facility will be first of its kind to seek approval of the MBR-RO-AOP process train for indirect potable reuse. Zakir also led the conceptual design of a 150-MGD AWT facility consisting of an MBR-RO-AOP process train.

Western Corridor Water Project (WCWP) | Southeast Queensland, Australia | Project Engineer

Zakir evaluated the advanced water treatment of secondary effluent from the Gibson Island Wastewater Treatment Plant. The project objectives included characterizing the secondary effluent, evaluating the performance of the MF/UF and RO, assessing chemical phosphorus removal, evaluating RO to achieve low nitrogen limits and assessing formation potential of NDMA and sister compounds.

Conceptual Design of Advanced Water Treatment (AWT) Facilities, LASAN | City of Los Angeles, Bureau of Sanitation | Los Angeles, California | Process Lead

Zakir Led the conceptual design of a 1.5-MGD AWT Production Facility and a 0.75-MGD AWT Demonstration Facility. Both facilities included MBR-RO-AOP process train. The Demonstration Facility is intended to collect sufficient operational data for future modification of the high-purity oxygen Hyperion WWTP into a 70-MGD MBR facility and the Production Facility is intended to produce high quality effluent for use at the Los Angeles World Airport (LAWA), Scattergood Power Plant and on-site plant use.

Conceptual Study for Advanced Water Treatment (AWT) Facility, LVMWD | Las Virgenes Municipal Water District | California | Lead Process Engineer

Zakir led the conceptual design of a 1.5-MGD AWT Facility intended to achieve effluent total nitrogen and total phosphorus limits of 1.0 and 0.1 mg/L, respectively for augmenting flow to Malibu Creek. Two treatment trains were evaluated during the study – MBR-RO and MF-RO-IX, for treatment of secondary effluent from Tapia Water Reclamation Facility.



## Jeffrey Dunn PE

Infrastructure and Hydraulics  
26 years of experience · Irvine, California

Jeff has 26 years of experience in water resource planning and engineering involving domestic water, reclaimed water, and sewer facilities. His planning experience includes more than 24 facility master-planning projects, as well as 30 hydraulic studies for domestic, reclaimed, and sewer systems. Ranging in size, he has designed over 2,700 pipe networks and modeling projects and 45 miles of pipeline for domestic, reclaimed, and sewer systems. He has provided sewer capacity evaluations and designs of sewer mains from 8-inch to 30-inch-diameter pipe for various pipe materials.

### EDUCATION

BS in Civil Engineering, California Polytechnic University, Pomona, California

### REGISTRATIONS

Professional Engineer #58455, State of California

### PROJECT EXPERIENCE

Regional Recycled Water System Analysis | Irvine Ranch Water District | Irvine, California | Project Manager

Jeff prepared a hydraulic model analysis and pump station feasibility analyses for the IRWD's northern recycled water distribution system. The District's calibrated model, of their whole system was utilized for the analysis. Several alternatives for a pump station layout were evaluated, with recommendations and project costs provided.

On-Call Hydraulic Modeling | Inland Empire Utilities Agency | California | Project Manager

Jeff managed and performed hydraulic modeling services for the Agency's recycled water model using the InfoWater software. Hydraulic modeling was performed to support the Recycled Water Program Strategy and preparation of technical memorandums.

Groundwater Replenishment System (GWRS) Hydraulic Modeling Services and La Palma Basin Analysis, Orange County Water District | Anaheim, California | Project Manager

Jeff performed the services to create a complete calibrated model InfoWater of the GWRS pump station, pipeline, and pipeline facilities. The model was combined with their barrier well pump and system for source water considerations. The modeling was calibrated and analyzed to help ensure minimum pressures are maintained at Anaheim's power plant under several operating and future flow conditions to their basins.

On-Call Planning Support and Hydraulic Modeling Services | Irvine Ranch Water District | Irvine, California | Project Manager

Jeff prepared model analysis, technical memorandums evaluating facility planning studies, document reviews, and plan check support services. Jeff also helped IRWD staff prepare the potable and non-potable water master plans, including recycled water system expansion studies.

Southwest Distribution System Hydraulic Model | Golden State Water Company | Various Locations, California | 2016-Ongoing | Project Manager

Jeff updated and calibrated Golden State Water Company's (GSWC) Southwest Distribution System hydraulic model in InfoWater. The existing model, which was previously created for only steady-state analyses, was updated and calibrated as an extended period simulation (EPS) model with high level accuracy for subsequent water quality analyses to be performed by Stantec. The model itself consists of three pressure zones, with close to 9,000 pipe links and several pumps and pressure reducing valves. The project also required using GIS Gateway to update InfoWater model with GIS features.

NRW and System Wide Sewer Hydraulic Evaluations | Inland Empire Utilities Agency | Project Manager

Jeff performed engineering and hydraulic analysis services IEUA's replacements of their deteriorated manholes at various locations throughout the existing sewer collection system. The analysis assisted IEUA with the determination as to which manholes will be required to be equipped with this release mechanism.



## James Loucks PMP, CCP

Cost Estimate

42 years of experience · Walnut Creek, California

James has more than four decades of experience in civil and mechanical construction estimating and project management, with an emphasis in large civil works, water treatment, conveyance, and industrial process facilities. He is experienced in several diverse project delivery methods, including design-build, engineer-procure-construct, and traditional design-bid-build or hard-dollar contracting. James is an expert in the use of MC2, Prism, P3e, SureTrak, G2, Roctek, MCACES, MS Office Suites, and Adobe software systems. He oversees systems integration, detailed estimating, conceptual estimating, third party estimate reviews, client services, and quality control reviews for water and wastewater projects.

### EDUCATION

BS, Construction Engineering, Arizona State University, Tempe, Arizona

### REGISTRATIONS

Certified Cost Professional #06226, Association for the Advancement of Cost Engineering International

Project Management Professional (PMP)® #534386, Project Management Institute

### PROJECT EXPERIENCE

#### WASTEWATER

CS-884, As-Needed Water Treatment Design Services | San Francisco Public Utilities Commission | San Francisco, California | Lead Estimator

Under Task Order #12, James led a team of estimators to independently develop cost opinions for the capital elements associated with the Crystal Springs Pump Station and San Andreas Transmission Main project. He developed the Association for the Advancement of Cost Engineering Class 4, 3, and 2 cost estimates to support the detailed design process.

Waterman WTP | City of Fairfield | Fairfield, California | Principal Estimator

Jim was the principal estimator for plant expansion work and submitted cost opinions at the PDR and 30, 60, and 90 percent design stages. The project involved a doubling in capacity of an existing conventional filtration process, including flocculation and sedimentation facilities at a working WTP. Phasing constraints and inclusion of costs to keep the existing plant operational during the construction period were analyzed and included in the various estimate iterations.

Bon Tempe and San Geronimo Water Treatment Plants Master Plan and Filter Rehabilitation | Marin Municipal Water District | Corte Madera, California, United States | 2017 | Cost Estimator

The first of these two projects that were completed for MMWD was a Master Plan to help ensure reliable, cost-effective operation of the two drinking water treatment plants for the next 50+ years. The Master Plan, completed by the end of 2014, found that major seismic rehabilitation of filters and other structures is required to achieve code compliance and meet the District's reliability goal of producing water within 24 hours of a major earthquake. To address these issues, Stantec began the Filter Rehabilitation Project in 2015. Jim is providing cost estimating services for the project, which includes performing seismic/structural analysis, evaluating upgrade options, preparing cost-effective designs, managing bid documents, and providing construction support for the necessary improvements at both plants.

RP-5 Recycled Water Pump Station Expansion | Inland Empire Utilities Agency (IEUA) | Ontario, California | Estimator

Jim was involved in the development of the Class 4-2 opinions of probable construction cost. Stantec helped upgrade IEUA's existing recycled water pump station at RP-5. The existing pump station included five pumps with a total capacity of 3,100-GPM with a total dynamic head (TDH) of 208 feet. To maximize the amount of recycled water produced by RP-5 to supply customers in their 800-pressure zone, IEUA needed to increase the capacity of the pump station to more closely match the peak effluent flows from the plant.

Peck Reservoir and Pump Station | City of Manhattan Beach | Manhattan Beach, California | Estimator

Jim was involved in the development of the Class 4-2 opinions of probable construction cost. Stantec is leading the technical design for a new eight-MG cast-in-place concrete reservoir, new 10,000-GPM pump station, and new green-sand treatment system. The new reservoir will provide superior water storage capacity to meet peak demand conditions and fire flow requirements; and utilize better mixing characteristics to improve water quality and provide a long-last reservoir according to modern design standards.



# Kyleen Marcella EIT

Regulations and Treatment Requirements  
5 years of experience · Pasadena, California

Kyleen has experience in a variety of multidisciplinary projects including alternatives evaluation, process modeling, potable/nonpotable water distribution systems, energy management, and advanced treatment. She is experienced in feasibility assessments, conceptual studies, preliminary design, design drawings, and final design. Her computer skills include BioWin, AutoCAD, Microstation, and ArcGIS.

## EDUCATION

MS and BS, Environmental Engineering, University of Southern California, California

## REGISTRATIONS

Engineer-In-Training #157431, California Board for Professional Engineers, Land Surveyors, and Geologists

## PROJECT EXPERIENCE

Advanced Water Treatment Plant Demonstration Facility | Metropolitan Water District of Southern California | Project Engineer

The Metropolitan Water District of Southern California and the Los Angeles County Sanitation Districts are partnering for one on the largest proposed water reuse projects in the world. This project will treat water from the Joint Water Pollution Control Plant to potable reuse quality for groundwater replenishment. The 0.5-mgd AWT Demonstration facility, consisting of MBR, RO and AOP (UV/H<sub>2</sub>O<sub>2</sub>) process train, will be utilized to collect sufficient operational and water quality data for design of a 150-mgd AWT facility at the Joint Water Pollution Control Plant in Carson, California. While using MBR as a pretreatment to RO, the facility will be first of its kind to seek approval of the MBR-RO- AOP process train for indirect potable reuse. Kyleen assisted with project coordination during the design, bidding and construction phases, and is now supporting start-up and commissioning.

Nitrogen Management Evaluation for Full-Scale Advanced Water Treatment Facility | Metropolitan Water District of Southern California | Carson, California | Project Engineer

The Metropolitan Water District of Southern California and the Los Angeles County Sanitation Districts are partnering for one on the largest proposed water reuse projects in the world. This project will treat water from the Joint Water Pollution Control Plant (JWPCP) to potable reuse quality for groundwater replenishment. Nitrogen management in an advanced water treatment (AWT) facility at the JWPCP will be crucial for potable reuse to meet water quality objectives. This study identified and evaluated alternatives to manage nitrogen for the proposed AWT Facility. Kyleen developed conceptual design criteria, including process modeling with BioWin, and associated cost estimates for seventeen process trains to provide recommendations for future planning efforts.

Advanced Water Treatment Facility Phasing Alternatives | Metropolitan Water District of Southern California | Carson, California | Project Engineer

The MWD of Southern California and the LACSD are partnering for one on the largest proposed water reuse projects (150 mgd) in the world. Due to the size and complexity of implementing the full-scale project, Stantec was tasked with assessing various phasing alternatives to match production capabilities with projected product water customer demand. Kyleen developed and evaluated Class 4 cost estimates, site layouts and staging plans for the phasing alternatives

Pure Water San Diego Program | Public Utilities Department | San Diego, California, United States | Project Engineer

The PureWater San Diego Program is an ambitious program to create a safe, sustainable water supply through potable reuse. This program includes the North City Advanced Water Purification Facility (AWPF), which will treat tertiary effluent and deliver high-purity reuse water to one of the City's reservoirs. Kyleen assisted with the preliminary design and layout of the AWPF's chemical system and stabilization.

West Long Beach Advanced Treated Recycled Water Feasibility Study | Long Beach Water Department | Long Beach, California | Project Engineer

Kyleen is serving as the Project Engineer on this Feasibility Study which is a forwardlooking planning effort conducted by Stantec on behalf of LBWD. Stantec is assessing the feasibility of contractually using highly treated water from nearby facilities that are being planned by LACSD and MWD.



## Cole Warrick EIT

Infrastructure and Hydraulics  
3 years of experience · Irvine, California

Cole is an engineer-in-training with experience preparing project specific specifications, drawings, cost estimates, and permitting for civil, mechanical, electrical, and instrumentation disciplines in municipal water and wastewater improvement projects. He is well-versed in project management and prepares design services proposals, fee adjustment requests, and monthly billing progress reports.

### EDUCATION

BS, Civil Engineering, California State Polytechnic University, Pomona, Pomona, California

### REGISTRATIONS

Engineer-In-Training #161056, California Board for Professional Engineers, Land Surveyors, and Geologists

### MEMBERSHIPS

Member, California Water Environment Association

### PROJECT EXPERIENCE

42-Inch Phase 4 & 5 Magic Mountain Pipeline Extension\* | Santa Clarita Valley Water Agency | Santa Clarita, CA | USD 3M | 2019 | Project Engineer

Cole designed 5,500 linear feet of 42-inch potable water main, the isolation valve vaults mechanical layout, client correspondence, DDW crossings exception permit applications, specification preparation, drawing preparation, and construction cost estimates for this project. Performed calculations to determine the minimum steel cylinder thickness requirements, blow-off requirements, and air-vac requirements. The scope of this project included design services for the 42-inch potable water main, isolation valve vaults, vault electrical and instrumentation, a 24" and 30" lateral for future emergency connections, and cathodic test stations. The pipeline extension consisted of approximately 5,500 linear feet of 42" welded steel pipe CML&C, 200 linear feet of 24" welded steel pipe CML&C, 200 linear feet of 30" welded steel pipe CML&C, two 18-foot-deep cast-in-place 20 feet by 11 feet concrete isolation valve vaults, one 18 feet deep 20 foot by 20 foot isolation valve vault, one precast isolation valve vault, and 60 utility crossings along Magic Mountain Parkway. The total construction cost for the pipeline extension was \$6 million.

Water Reclamation Plant 7 PLC Replacements Project\* | Coachella Valley Water District | Indio, California | USD 3M | Associate Engineer

Cole designed nine field PLCs, the Master PLC, 2 LCPs, and the redundant Fiber Optic network. Also responsible for performing field investigations, updating P&IDs with as-built information, reviewing submittals and RFIs, and Client Correspondence. Performed HVAC unit sizing for all outdoor PLC enclosures, UPS unit sizing for all PLCs, and control circuit raceway sizing. Treatment processes at the Coachella Valley Water District (CVWD) WRP 7 are controlled by individual programmable logic controllers (PLCs). The existing PLCs were manufactured by Toshiba and were outdated and inadequately documented CVWD contracted LEE & RO to replace them with new GE RX3i PLCs and new cabinets. The scope of work included assessing the control system, identifying the existing as-built conditions, identifying exactly what I/O is terminated in each PLC and where all the wiring within each PLC cabinet comes from and goes to, assessing the existing fiber optic network to determine the necessary steps to connect all the new PLCs to the fiber optic network through ethernet was also performed. The estimated construction cost for the project is \$2.6 million.

Philadelphia Pump Station VFD Three Improvements\* | Inland Empire Utilities Agency | California | Associate Engineer

Cole prepared the preliminary design and selection of a 100HP VFD, and for preparing three technical memorandums for the VFD, HVAC, and miscellaneous electrical equipment. He performed HVAC cooling load calculations, static pressure calculations, power conductor sizing, and conduit fill calculations. This project was postponed after the preliminary design.

Lake Forest Zone B to C Recycled Water Pump Station | Irvine Ranch Water District | Irvine, California | Project Engineer

Cole prepared the construction drawings and assisted in the preparation of technical specifications for the destruction of Well No. 5 to make room for the Lake Forest Zone B to C Recycled Water Pump Station. Cole also gathered record drawings and utility information, calculated the system curve, selected pumps for alternative pumping scenarios, designed the preliminary building mechanical layout, designed the preliminary site layout, and wrote the Draft Preliminary Design Report. The pump station converts Zone C from an open system floating on the Upper Oso Reservoir to a close loop system. The flow range of the pump station is 0 to 1,700 GPM. Estimated construction cost is \$4.5 million.

\* denotes projects completed with other firms



## FEE ESTIMATE - Surface Water Augmentation Feasibility Study

	<i>Project Manager</i>	<i>QA/QC</i>	<i>SWA and Treatment Technical Advisor</i>	<i>Hydraulics</i>	<i>Cost Estimating</i>	<i>Pipeline Alignment / Hydraulics</i>	<i>Treatment Evaluation</i>	<i>GIS / AutoCAD</i>				
Name	Snow, Tama	Cathcart, Jim	Hirani, Zakir	Dunn, Jeff	Loucks, James	Warrick, Cole	Marcella, Kyleen	Whelan, Chisa	Project Summary			
Project Billing Rate	\$250.00	\$250.00	\$225.00	\$180.00	\$170.00	\$150.00	\$150.00	\$130.00	Total Hours	Labour	ODC's	Total
Total Hours	16	2	5	2	3	12	28	4				
Fee	\$4,000.00	\$500.00	\$1,125.00	\$360.00	\$510.00	\$1,800.00	\$4,200.00	\$520.00	72	\$13,015.00	\$0.00	\$13,015.00

Task No.	Task Name	Estimate of Hours								Total Hours	Labour	Expense	Total
1	Project Management, QA/QC	8	2							10	\$2,500.00	\$0.00	\$2,500.00
2	Background	4						4		8	\$1,600.00	\$0.00	\$1,600.00
3	Regulatory Requirements			3				6		9	\$1,575.00	\$0.00	\$1,575.00
4	Treatment and Infrastructure Requirements			2	2		8	14	4	30	\$4,630.00	\$0.00	\$4,630.00
5	Engineer's Estimate of Probable Construction Costs					3				3	\$510.00	\$0.00	\$510.00
6	Technical Memorandum	4					4	4		12	\$2,200.00	\$0.00	\$2,200.00



**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:** July 1, 2020 **July 8, 2020**  
**TO:** RESOURCE AND FACILITIES COMMITTEE **Committee Meeting**  
**FROM:** Mr. Scott Rogers, Engineering/Grant Manager  
**VIA:** Mr. Adam Ly, Assistant General Manager  
Mr. Dennis LaMoreaux, General Manager  
**RE:** ***AGENDA ITEM NO. 4.5 – CONSIDERATION AND POSSIBLE ACTION TO AUTHORIZE THE GENERAL MANAGER TO EXECUTE CHANGE ORDER NO. 2 TO THE CONTRACT WITH STEVENS CONSTRUCTION FOR THE REMODEL OF THE DISTRICT’S BUILDINGS. (ADDITIONAL COSTS RELATED TO CHANGES IN SCOPE OF THE PROJECT – BUDGETED – WORK ORDER NO. 20-613 – ENGINEERING/GRANT MANAGER ROGERS)***

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**Recommendation:**

Staff recommends that the Board approve and authorize the General Manager to execute Change Order No. 2 to the contract with Stevens Construction.

**Alternative Options:**

There is no alternative option.

**Impact of Taking No Action:**

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

**Background:**

During the construction, the need to provide consistency and complete remaining rooms became apparent during the process. Change Order No. 1 was approved by the General Manager in the amount of \$7,319.47 as allowed per District policy. This Change Order covers the carpet in the finance room and renovation of the Board Office.

During renovation, the initial conceptual design of leaving the customer service counter cabinets in place to provide support underneath for the safety glass was not feasible. Previous construction left glass blocks underneath the cabinets that caused the cabinets to become unstable, and they would not provide the necessary structure to support the customer service safety glass. It was recommended that the cabinets be replaced.

RESOURCE AND FACILITIES COMMITTEE  
PALMDALE WATER DISTRICT

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

July 1, 2020

Additionally, several areas were added to the scope of the project to completely renovate the spaces on the first floor – the east employee entrance area and room 99. Furthermore, there was a need for more porcelain tile, which was not included in the original bid items. Finally, the second floor is not level and has a drop over one-inch in the middle that required additional cove base to cover the drop in the floor to provide a more finished look. All of the costs and a more detailed description are provided in Change Order No. 2 for a total amount of \$22,816.00. As required by the District's Bid Procurement and Change Order Policy, any change order totaling over \$25,000.00 requires Board approval.

**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 Work Order No. 20-613

**Supporting Documents:**

- Stevens Construction Material Summary
- Change Order No. 2
- Change Order No. 1

June 29, 2020

Palmdale Water District  
Attn: Scott Rogers  
2069 East Avenue Q  
Palmdale, CA 93550

**RE: Change Order Requests (Updated 06/29/2020)**

Please accept the following change for additional labor and materials as follows:

**Porcelain Installation:** The original scope project quantities for this item was listed as 2,150 sf. However, the actual field measured quantities are 2,535 sf, a 385sf. increase. Change order amount is listed below with no charges for supervision. This change order request is based solely on materials and labor. This includes the additional tile for the elevator. Quantities deducted for elimination of porcelain tile front entry.

- Original Change Order Amount: **\$12,472.00**
- New Change Order Amount: **\$6,831.00**
- Net Change **-\$6,091.00**

REF NO.	BID ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	UNIT AMOUNT	BID
1	1.000	Material (Additional 385SF of Porcelain Tile)	385	\$ 1.99	\$ 766.15	
2	2.000	Labor (Installation of Additional 385SF of Porcelain Tile)	56	\$ 90.00	\$ 5,040.00	
TOTAL BASE BID					\$	5,806.15
Overhead & Profit			15.00%		\$	1,024.61
Estimated Bid Amount					\$	6,830.76
Actual Bid Amount					\$	6,831.00

**Carpet & Painting Hallway:** The original scope did not call out for any carpeting/painting of the hallway north of Office 137. This was added at the request of Palmdale Water District and this change order request breakdown includes only subcontracted pricing with no charges for supervision.

- Original Change Order Amount: **\$3,303.00**
- New Change Order Amount: **\$3,108.00**
- Net Change: **-\$195.00**

REF NO.	BID ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	UNIT AMOUNT	BID
1	1.000	Exit Hall East Carpet Tiles/Cove Base 16 SY	1	\$ 1,290.00	\$ 1,290.00	
2	2.000	Exit Hall East Painting 500SF	1	\$ 1,352.00	\$ 1,352.00	
TOTAL BASE BID					\$	2,642.00
Overhead & Profit			15.00%		\$	466.24
Estimated Bid Amount					\$	3,108.24
Actual Bid Amount					\$	3,108.00

**Carpet Room 99:** The original scope did not call out for any carpeting of Office 99. This was added at the request of Palmdale Water District and this change order request breakdown includes only subcontracted pricing with no charges for supervision.

- Original Change Order Amount: **\$1,400.00**
- New Change Order Amount: **\$1,318.00**
- Net Change: **-\$82.00**

REF NO.	BID ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	UNIT AMOUNT	BID
1	1.000	Room 99 Carpet Tiles/Cove Base 18.67 SY	1	\$ 1,120.00	\$ 1,120.00	
TOTAL BASE BID					\$	1,120.00
Overhead & Profit			15.00%		\$	197.65
Estimated Bid Amount					\$	1,317.65
Actual Bid Amount					\$	1,318.00

**Security Glass Removal and Reinstallation:** Under the original scope of work, this countertop was to be designed to butt up against the existing Lexan bullet proof window system. However, during the development, it was discovered that the Lexan was installed without any type of support from the existing cabinets and countertop. Dismantling the cabinet to install the new cabinet would cause this glass to be unsecured and potentially be damaged. In order to accomplish this cabinet install, it became necessary to remove & reinstall bullet resistant Lexan, service windows, door & hardware at counter to allow for countertop and support structure manufacturing and installation. As such, Stevens Construction had to contract with Meldon Glass to accomplish this phase of the project. This cost was not incorporated into our base proposal.

- Original Change Order Amount: **\$11,606.00**
- New Change Order Amount: **\$10,924.00**
- Net Change: **-\$682.00**

REF NO.	BID ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	UNIT AMOUNT	BID
1	1.000	Removal and Reinstallation of Lexan Security Glass	1	\$ 9,285.00	\$ 9,285.00	\$ 9,285.00
TOTAL BASE BID					\$	9,285.00
Overhead & Profit			15.00%		\$	1,638.53
					\$	10,923.53
Actual Bid Amount					\$	10,924.00

**Installation of Cove Base 2<sup>nd</sup> Floor Counter:** With the installation of the 2<sup>nd</sup> floor counter, it was initially discovered the floor is significantly unlevelled throughout the open area. As such, Stevens Construction installed Burke 4" Rubber Cove Base throughout the entire cabinet surface to eliminate any visual imperfections resulting from the unlevelled floor surface.

- Original Change Order Amount: **\$792.00**
- New Change Order Amount: **\$635.00**
- Net Change: **-\$157.00**

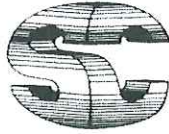
REF NO.	BID ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	UNIT AMOUNT	BID
1	1.000	Installation of Cove Base 2nd Floor Counter (Labor)	6	\$ 90.00	\$ 540.00	\$ 540.00
2	2.000	Installation of Cove Base 2nd Floor Counter (Material)	1	\$ 93.07	\$ 93.07	\$ 93.07
<b>TOTAL BASE BID</b>					\$	<b>540.00</b>
<b>Overhead &amp; Profit</b>			15.00%		\$	<b>95.29</b>
					\$	<b>635.29</b>
<b>Actual Bid Amount</b>					\$	<b>635.00</b>

Thank you again for the opportunity to provide professional services to the Palmdale Water District. Please let me know if you have any questions.

Respectfully Submitted,

*Steven J. Navarro*

Steven J. Navarro  
Project Manager  
661-916-4539



STEVENS CONSTRUCTION, INC.

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# Porcelain Installation

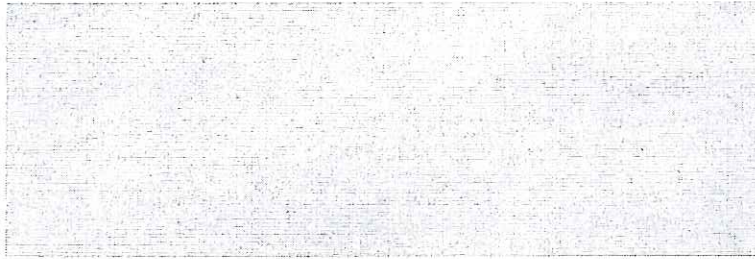
## 2 Pages

As of June 1, 2020

1st FLOOR	ft	inches	X	ft	inches	SF	
Elevator	5	7		6	7	36.8	Completed
96 hall to board room	19	5		6	10	132.7	Completed
96 bathroom hall	4	5		20	11	92.4	Completed
break area	4	6		3	2	14.3	Completed
break area fridge	2	0		2	0	4.0	Completed
96 main	4	6		3	7	16.1	Completed
	17	6		7	0	122.5	Completed
	40	1		18	10	754.9	Completed
Fountain 1	3	0		8	0	24.0	Completed
	3	2		8	0	25.3	Completed
Fountain 2	3	2		8	0	25.3	Completed
	3	0		8	0	24.0	Completed
	1	5		3	2	4.5	Completed
Outside Entrance	19	10		14	6	287.6	Deducted
	127	55		114	55	1564.3	
Subtotal	131	7		118	7	1564.3	SF
						100.9	Boxes 101
2nd FLOOR	ft	inches	X	ft	inches	SF	
Cabinet area	7	0		7	0	49.0	Completed
	17	2		4	0	68.7	Completed
	15	11		7	10	124.7	Completed
	12	2		6	4	77.1	Completed
	8	1		4	10	39.1	Completed
	6	3		3	0	18.8	Completed
Men's Bathroom	9	9		4	10	47.1	Completed
	8	9		7	10	68.5	Completed
Kitchen	19	2		20	1	384.9	Completed
	4	10		2	11	14.1	Completed
Fountain 1	3	0		8	0	24.0	Completed
	3	5		7	0	23.9	Completed
Fountain 2	3	0		7	0	21.0	Completed
	3	5		7	0	23.9	Completed
	117	59		93	56		
Subtotal	121	11		97	8	984.8	SF
						63.5	Boxes 64
	252	18		215	15		
Totals	253	6		216	3		
	253.5			216.25		Floor SF 2549.1	Base SF 263.5
						164.5	Total 2812.58
						Boxes 165.0	17 182
						SQ FT Bxs 2557.5	264 2821.5
						TRUE SF	2822
						CHANGE ORDER INFO	Original SF 2150

[Home](#) / [Flooring](#) / [Tile](#) / [Porcelain Tile](#)

Internet #308736405    Model # 610010002399    Store SKU #1004139674

**Lancaster**

✓ 9 in stock

Aisle: 08 Bay: 001

[Text to Me](#)[Save to Favorites](#)**Corso Italia**

Alpe Graphite 12 in. x 24 in. Porcelain Floor and Wall Tile (15.5 sq. ft. / case)

(55)    [Write a Review](#)**\$1.99** /sq. ft.

Covers 15.50 sq. ft.

**\$30.84** /case

Save up to \$100\* on your qualifying purchase.  
Apply for a Home Depot Consumer Card

**How much product will you need?**

*Please Note: Calculations are estimates. Calculations can only be made using whole numbers.*

[Calculate by Square Footage](#)

Length (ft.)

Width (ft.)





STEVENS CONSTRUCTION, INC.

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# Exit Hall East Carpet & Paint 1 Page

As of June 1, 2020

530 West Avenue L, LANCASTER, CALIFORNIA 93534

Phone (661) 948-1674 FAX (661) 948-5450

*LICENSE 429298 A, B, C-10, C-20*

Licence #279468

Date	Quote #
5/12/2020	PWD/ADDS

Name / Address
Stevens Construction, Inc. Attn: Steven Navarro 530 West Avenue L Lancaster, CA 93534

Ship To
Palmdale Water District 2029 East Avenue Q Palmdale, CA 93550

		Rep	Project
		PF	
Description	Qty	Total	
CHANGE ORDER - ADDS : Provide new carpet tiles and Cove base as per project spec.'s.			
Exit Hall East/ 1st Floor . 16 yds. cpt. tiles & Optiscaler = \$ 504.00/ Sales tax \$ 47.88 / CA Stew. \$ 5.60 / Labor \$ 732.52.		1,290.00	
<del>10 yds. cpt. tiles &amp; Optiscaler = \$ 600.00 / Sales tax \$ 57.00 / CA Stew. \$ 6.00 / Labor \$ 900.00</del>		<del>1,563.00</del>	
Partition Office #33/ 1st Floor. 18.67 yds. cpt. & Optiscaler = \$ 557.42 / Sales Tax \$ 52.95 / CA Stew. \$ 6.53 / Labor \$ 503.10.		1,120.00	
Terms: 50% Deposit/ Balance ROI This quote good for thirty days. 4% Service Charge on Credit Cards		Sales Tax (9.5%) \$0.00 <b>Total</b> <del>1,563.00</del>	

Signature

Phone #	Fax #
310-473-8988	310-473-3909



STEVENS CONSTRUCTION, INC.

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Room 99

Carpet

1 Page

As of June 1, 2020

530 West Avenue L, LANCASTER, CALIFORNIA 93534

Phone (661) 948-1674 FAX (661) 948-5450

*LICENSE 429298 A, B, C-10, C-20*

Licence #279468

Date	Quote #
5/12/2020	PWD/ADDS

Name / Address
Stevens Construction, Inc. Attn: Steven Navarro 530 West Avenue L Lancaster, CA 93534

Ship To
Palmdale Water District 2029 East Avenue Q Palmdale, CA 93550

Rep	Project
PF	

Description	Qty	Total
<p>CHANGE ORDER - ADDS : Provide new carpet tiles and Cove base as per project spec.'s.</p> <p>Exit Hall East/ 1st Floor .</p> <p>16 yds. cpt. tiles &amp; Optiscaler = \$ 504.00/ Sales tax \$ 47.88 / CA Stew. \$ 5.60 / Labor \$ 732.52.</p> <p><del>Office #133/ 1st Floor - cutting up to existing wall desk units</del></p> <p><del>13.3 yds. cpt. &amp; Optiscaler = \$ 609.36 / Sales tax \$ 57.00 / CA Stew. \$ 6.07 / Labor \$ 1,032.59</del></p>		<p>1,290.00</p> <p><del>1,032.59</del></p>
<p>Partition Office #33/ 1st Floor.</p> <p>18.67 yds. cpt. &amp; Optiscaler = \$ 557.42 / Sales Tax \$ 52.95 / CA Stew. \$ 6.53 / Labor \$ 503.10.</p>		<p>1,120.00</p>

Terms: 50% Deposit/ Balance ROI  
This quote good for thirty days.  
4% Service Charge on Credit Cards

Sales Tax (9.5%)	\$0.00
<b>Total</b>	<b>\$4,096.00</b>

Signature

Phone #	Fax #
310-473-8988	310-473-3909



STEVENS CONSTRUCTION, INC.

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# Security Glass Removal and Reinstallation 1 Page

Revised (Credit) As of June 11, 2020

530 West Avenue L, LANCASTER, CALIFORNIA 93534

Phone (661) 948-1674 FAX (661) 948-5450

*LICENSE 429298 A, B, C-10, C-20*

Meldon Glass Inc  
203 Ovington ST  
Lancaster, CA 93534-3635

# Invoice

**Date** 6/3/2020  
**Invoice #** 15492

**Bill To**

Stevens Construction  
530 W. Ave L  
Lancaster CA 93534  
661-948-1674  
661-948-5450 fx

**Ship To**

**P.O. #**

**Terms** 30

**Ship Date** 6/3/2020

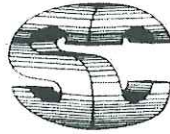
**Due Date** 7/3/2020

**Other**

Description	Qty	Rate	Amount
ATTN: HAROLD  JOB: PALMDALE WATER DISTRICT 2029 EAST AVE. Q, PALMDALE, CA 93550  SCOPE OF WORK  REMOVE & REINSTALL BULLET RESISTANT LEXAN, SERVICE WINDOWS DOOR & HARDWARE AT COUNTER DEMO ON 5-4-20 STORE AT JOB SITE  TOTAL AMOUNT OF INVOICE AMENDMENT CREDIT PROVIDED DUE TO SHORT 1 LABORER			
		12,500.00	12,500.00
		-3,215.00	-3,215.00
		<b>Subtotal</b>	\$9,285.00
		<b>Sales Tax (0.0%)</b>	\$0.00
		<b>Total</b>	\$9,285.00
		<b>Payments/Credits</b>	\$0.00
		<b>Balance Due</b>	\$9,285.00

meldonglass@yahoo.com 661-945-1213 661-945-9543





STEVENS CONSTRUCTION, INC.

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# 2<sup>nd</sup> Floor Counter Cove Base Installation

## 1 Page

As of June 11, 2020



# Invoice

Page: 1

\*\*\* Reprint \*\*\*

Date printed: 6/11/20

DeSoto Sales, Inc. - Lancaster  
229 E Avenue K-8  
Lancaster, CA 93535  
Phone: 661-948-5224  
Fax: 661-948-8116

Invoice #: 14-T1309518  
Invoice Date: 6/5/20  
Station: 142  
User: JA

Sold to: STEVENS CONSTRUCTION INC  
530 WEST AVE L  
LANCASTER, CA 93534

Ship to:

P/U By: Tom

S/M: 75585

Original Quote #:

Customer #: L-STEVENS

Ship date:

Ship-via code:

Sales Rep: SS

Location: 14

Terms: N30

Customer PO# 75585

Quantity	Unit	Item # / Description	Ship-From	Price	Ext prc
100	FT	701P BURKE RUBBER TS BASE 4" BLACK 100 FT 4CV-701P		0.85	85.00

\* Material Safety Data Sheets (MSDS) available upon request.

Total line items: 1.000

Sale subtotal:

85.00

\* All claims to be made within 5 days from date of delivery.

\* 20% handling fee charged on all returns.

\* A service charge of 1.5% per month (18% annual charge)

Tax:

8.07

will be added to past due invoice + attorney fees.

Total:

93.07

Tender:

Accounts Receivable

93.07

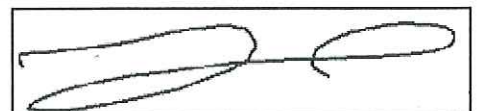
Net tender:

93.07

!!! THANK YOU !!!



Visit us at: [www.DeSotoSales.com](http://www.DeSotoSales.com)





## CHANGE ORDER NO. 2

DATE OF ISSUANCE July 8, 2020  
EFFECTIVE DATE Upon Execution  
OWNER's Contract No. Specification No. 20-613  
CONTRACTOR: Stevens Construction, Inc.  
OWNER: Palmdale Water District  
ENGINEER: N.A.

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

**Description:** Additional work scope and additional costs for the addition of Room 99, as defined by proposal from contractor proposing cost increases as follows: Price includes all materials and labor for the demolition of the existing carpeting, baseboard, wallpaper and the refinishing the walls, paint, carpeting, and baseboards. Change in scope of work and costs associated with changing from vinyl composition tiles to porcelain tile for employee breakroom, addition of porcelain tile in the elevator as defined by proposal from the contractor proposing costs for the increased of the cost for installation of porcelain. Removal and re-installation of the customer service glass. Addition of base cover around the 2<sup>nd</sup> floor counter.

**Reason for Change Order:** Addition of Room 99 to remodeling scope from original contract and change from vinyl composition tile to porcelain tile to in the employee breakroom. Addition of the customer service glass was due to unknown construction of the existing cabinet and countertop did not adequately support the weight of the customer service glass. Addition of cover base around the 2<sup>nd</sup> floor counter was necessary due to floor being unlevel over one inch.

**Attachments:** Contractor's Cost Proposals dated May 11, 2020 and May 19, 2020.

CHANGE IN CONTRACT PRICE: Original Contract Price	CHANGE IN CONTRACT TIMES: Original Contract Times
<b>\$335,224.25</b>	<b>60 Days</b>
Net Changes from previous Change Orders	Net Changes from previous Change Orders
<b>\$7,319.47</b>	<b>0</b>
Contract Price prior to this Change Order	Contract Times prior to this Change order
<b>\$342,543.72</b>	<b>0</b>
Contract Price prior to this Change Order:	Contract Times prior to this Change order
<b>\$342,543.72</b>	<b>0</b>
Net Increase (decrease of this Change Order)	Net Increase (decrease of this Change Order)
<b>\$22,816.00</b>	<b>0</b>
Contract Price with all approved Change Orders	Contract Times with all approved Change Orders
<b>\$365,359.72</b>	<b>60 days</b>

Signatures on next page

CHANGE ORDER NO. 2

RECOMMENDED

APPROVED

ACCEPTED

By: \_\_\_\_\_  
Engineering Manager

By: \_\_\_\_\_  
PWD, General Manager

By: \_\_\_\_\_  
Contractor, President

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

## CHANGE ORDER NO. 2

### Breakdown Total of Change Order No 2

Description	Amount
Additional Porcelain Tile	\$6,091.00
Carpet and Painting East Entryway	\$3,108.00
Carpet Room 99	\$1,318.00
Customer Service Glass Removal and Reinstallation	\$10,924.00
Cove Base 2 <sup>nd</sup> Floor Counters	\$635.00
<b>Total</b>	<b>\$22,076</b>

CHANGE ORDER NO. 1

DATE OF ISSUANCE May 11, 2020  
EFFECTIVE DATE Upon Execution  
OWNER's Contract No. Specification No. 20-613  
CONTRACTOR: Stevens Construction, Inc.  
OWNER: Palmdale Water District  
ENGINEER: N.A.

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

**Description:**

Additional work scope and additional costs for the addition of Room 137 as defined by proposal from contractor proposing cost increases as follows: Price includes all materials and labor for the demolition of the existing carpeting, baseboard, wallpaper and the refinishing the walls, paint, carpeting, and baseboards. Change in scope of work and costs associated with changing from vinyl composition tiles to carpet for Rooms 135 and 136 as defined by proposal from the contractor proposing cost deduction for the vinyl composition tile and the cost for providing the materials for installation of carpeting in both rooms

**Reason for Change Order:**

Addition of Room 137 to remodeling scope from original contract and change from vinyl composition tile to carpet in Rooms 135 and 136.

**Attachments:**

Contractor's Cost Proposals dated May 11, 2020 and May 19, 2020.

**CHANGE IN CONTRACT PRICE:**

Original Contract Price  
\$335,224.25

Net Changes from previous Change Orders  
\$0

Contract Price prior to this Change Order  
\$335,224.25

Contract Price prior to this Change Order:  
\$335,224.25

Net Increase (decrease of this Change Order)  
\$7,319.47

Contract Price with all approved Change Orders  
\$342,543.72

**CHANGE IN CONTRACT TIMES:**

Original Contract Times  
60 Days

Net Changes from previous Change Orders  
0 Days

Contract Times prior to this Change order  
60 Days

Contract Times prior to this Change order  
60 Days

Net Increase (decrease of this Change Order)  
0 Days


Contract Times with all approved Change Orders  
60 Days

**RECOMMENDED**

By:   
Engineering Manager

Date: 5-21-2020

**APPROVED**

By:   
PWD, General Manager

Date: 5/21/2020

**ACCEPTED**

By:   
Contractor, President

Date: 5-21-2020



STEVENS CONSTRUCTION, INC.  
GENERAL CONTRACTOR

May 11, 2020

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

RE: Room 137 Carpet and Painting

We propose to provide materials, labor, and equipment to complete the following scope of work:

1. New Office Wall

- a. Demolition of 126 sf of existing carpeting/padding.
- b. Preparation of 500 sf of walls
- c. Installation of 126 sf of carpet tiles (to match new installation)
- d. Installation of 48 lf of 4" Burke rubber cove base (to match new installation)
- e. Paint of 542 sf of walls, door and frame (to match new installation)
- f. Final cleanup, visual inspection, and disposal of materials.
- g. Work performed during regular business hours.

Total Cost \$3,811.00

ITEM NO.	BID ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	UNIT AMOUNT	BID
1	02-410	Demolition (Wall Prep/Carpet Removal)	4.0	\$	96.00	\$ 384.00
2	09-680	Carpet Installation 126 SF	1.0	\$	1,439.40	\$ 1,439.40
3	09-910	Painting (Material) 500 SF	1.0	\$	200.00	\$ 200.00
3	09-910	Painting (Labor) 500 SF	12.0	\$	96.00	\$ 1,152.00
TOTAL BASE BID:					\$	3,175.40
Insurance and Bonds			20.00%		\$	635.08
Actual Bid Amount:					\$	3,810.48

Respectfully,

Steven J. Navarro  
Project Manager



STEVENS CONSTRUCTION, INC.  
GENERAL CONTRACTOR

May 19, 2020

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

RE: Room 135 & 136 Flooring Change

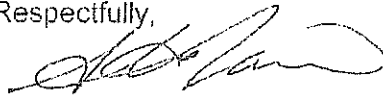
We propose to provide materials, labor, and equipment to complete the following scope of work:

1. Room 135 & 136 Flooring Change
  - a. Deduct 720 SF of VCT tile
  - b. Addition of 104 SY of carpet tiles (to match new installation)
  - c. Final cleanup, visual inspection, and disposal of materials.
  - d. Work performed during regular business hours.

Total Cost \$3,509.00

BIDDING/UNIT PRICE					ESTIMATE		
REF. NO.	BID ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	UNIT AMOUNT	BID	
1	09-680	Deduction of 720 SF VCT Tile	1.00		\$ (1,897.23)	\$ (1,897.23)	
2	09-680	Addition of 140 SY of Carpet Tiles	1		\$ 4,821.39	\$ 4,821.39	
TOTAL BASE BID					\$	292416	
GMP					20.00%	\$	46483
Actual Bid Amount					\$	338899	

Respectfully,

  
Steven J. Navarro  
Project Manager

Carpentercraft, Inc.  
2318 Pontius Avenue  
Los Angeles, CA 90064

Licence #279468

## Quote

Date	Quote #
5/19/2020	PWD/CO

Name / Address
Stevens Construction, Inc. Attn: Steven Navarro 530 West Avenue L Lancaster, CA 93534

Ship To
Palmdale Water District

Rep	Project
PF	

Description	Qty	Total
CHANGE ORDER : Change flooring for 1st Floor areas #135 & #136 from VCT to carpet tiles.		
VCT Credit : 720 sq. ft./tax/labor/Re-stock fee.		-1,897.23
Carpet tiles : 104 sq. yds./Mill freight/Sales tax/Labor/Optisealer.		4,821.39

Terms: 50% Deposit/ Balance ROI  
This quote good for thirty days.  
4% Service Charge on Credit Cards

Sales Tax (9.5%)	\$0.00
<b>Total</b>	<b>\$2,924.16</b>

Signature \_\_\_\_\_

Phone #	Fax #
310-473-8988	310-473-3909

Carpetcraft, Inc.  
 2318 Pontius Avenue  
 Los Angeles, CA 90064

Licence #279468

## Quote

Date	Quote #
5/19/2020	PWD/CO

Name / Address
Stevens Construction, Inc. Attn: Steven Navarro 530 West Avenue L Lancaster, CA 93534

Ship To
Palmdale Water District

Rep	Project
PF	

Description	Qty	Total
CHANGE ORDER : Change flooring for 1st Floor areas #135 & #136 from VCT to carpet tiles.		
VCT Credit : 720 sq. ft. @ \$ 1.17 + Sales Tax = \$ 923.23		-1,897.23
Labor = \$ 1,200.00		
Re-stock Fee = < 226.00>		
Carpet tiles : 104 sq. yds. @ \$ 23.00 + Optiscaler = \$ 2,674.88		4,821.39
Sales Tax = \$ 254.11		
CA Stewardship Fee = \$ 36.40		
Labor = \$ 1,856.00		

Terms: 50% Deposit/ Balance ROI  
 This quote good for thirty days.  
 4% Service Charge on Credit Cards

Sales Tax (9.5%)	\$0.00
<b>Total</b>	<b>\$2,924.16</b>

Signature \_\_\_\_\_

Phone #	Fax #
310-473-8988	310-473-3909