

Since 1918



PALMDALE WATER DISTRICT

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Attorneys

October 1, 2015

***Agenda for a Meeting
of the Water Supply & Reliability Committee of the Palmdale Water District
Committee Members: Gloria Dizmang-Chair, Vincent Dino
to be held at the District's office at 2029 East Avenue Q, Palmdale***

Monday, October 5, 2015

10:30 a.m.

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.
- 4) Action Items: (The public shall have an opportunity to comment on any action item as each item is considered by the Committee prior to action being taken.)



- 4.1) Consideration and possible action on approval of minutes of meeting held September 14, 2015.
- 4.2) Presentation of monthly water demand and supply status. (Water & Energy Resources Director Pernula)
- 4.3) Status on the operations of the State Water Project. (Water & Energy Resources Director Pernula)
- 4.4) Consideration and possible action on selection of consultant for preparation of 2015 Urban Water Management Plan. (\$40,000.00 – Budgeted – Water & Energy Resources Director Pernula)
- 5) Project updates.
 - 5.1) Drought Management Task Force and status as of August 31, 2015. (Water & Energy Resources Director Pernula)
 - a) Summary of enforcement actions. (PIO/Conservation Director McNutt)
 - 5.2) Littlerock Dam Sediment Removal Project. (Assistant General Manager Knudson)
 - 5.3) Palmdale Recycled Water Authority. (General Manager LaMoreaux)
 - 5.4) City of Palmdale's Upper Amargosa Recharge Project. (Assistant General Manager Knudson)
 - 5.5) Palmdale Regional Groundwater Recharge and Recovery Project. (Assistant General Manager Knudson)
- 6) Information items.
 - 6.1) Water purchase opportunities. (Water & Energy Resources Director Pernula)
 - 6.2) Other.
- 7) Board members' requests for future agenda items.
- 8) Adjournment.



DENNIS D. LaMOREAUX,
General Manager

DDL/dd

This iteration of the UWMP comes in the midst of statewide concerns over the drought and the California Water Fix. Also, the California state legislature passed significant amendments to the UWMP Act in 2014 impacting reporting criteria for the District's Plan update. These issues have played a role in altering the scope and rules for completing the UWMP.

October 1, 2015

Staff reviewed and compared proposals and found that the proposed costs were reasonable and close between the two firms. The cost, including all optional tasks, was \$99,380 from Kennedy/Jenks Consultants and \$102,040 from RMC Water & Environment. After reviewing and comparing proposals, it is staff's opinion that at this time and for this project, Kennedy/Jenks Consultants provides the best value to the District for development of this important document in the face of these statewide issues.

Strategic Plan Initiative:

This work is part of Strategic Initiative No. 1 – Strategic Water Management.

Budget:

\$40,000 was budgeted for beginning work on UWMP in 2015. Costs during 2015 should remain at or below the budgeted amount. The remaining costs for the completion of the project will be included in the 2016 budget. Total costs between 2015 and 2016 will not exceed \$99,380.

Supporting Documents:

- UWMP Proposal from RMC Water & Environment
- UWMP Proposal from Kennedy/Jenks Consultants



September 29, 2015

Jon M. Pernula
Palmdale Water District
2029 East Avenue Q
Palmdale, CA 93550

RE: 2015 Urban Water Management Plan, RFQ No. 01-15

Dear Mr. Pernula:

On behalf of RMC Water and Environment (RMC), we are pleased to provide the Palmdale Water District (District) with this proposal to prepare your 2015 Urban Water Management Plan (UWMP). Since the 2010 UWMPs were completed, RMC has tracked ongoing legislative changes and proposed modifications to UWMP requirements. We are well versed in the particulars of the draft 2015 UWMP Guidebook and reporting requirements resulting from Senate Bills (SB) x7-7, SB 1420, SB 1036, and Assembly Bill (AB) 2067. The District's 2015 UWMP will build upon its 2010 UWMP, and incorporate updated information about the region's water system, water use, supply diversification, and relevant emerging regulations.

This submittal includes our proposed scope of work, fee estimate, and project schedule to prepare a 2015 UWMP that meets the basic requirements established by the California Department of Water Resources (DWR). In addition, our scope includes several optional tasks that could be included to prepare an enhanced UWMP. These optional tasks include additional technical analyses for long-term supply and demand planning, and they include additional coordination tasks to facilitate the final adoption process with PWD's Board of Directors and stakeholders.

RMC is deeply involved in the implementation of water recycling, conservation, groundwater storage and supply projects and in the integration of these strategies to meet larger regional needs. Our experience with Urban Water Management Plans includes the coordination, preparation and successful submittal to DWR of 2000, 2005 and 2010 UWMPs. Our experience also includes water supply analyses prepared in accordance with SB610 and SB221 and conservation planning in accordance with AB1420. RMC's extensive experience with UWMPs, as well as conservation, groundwater, and water supply master planning, has given us a focused understanding of water resources planning in California.

Thank you for the opportunity to submit our proposal to work with you on this important project. We have no conflict of interest if awarded the preparation of the District's 2015 UWMP. If you have any questions or would like additional information, please contact me at 310.566.6479 or bdietrick@rmcwater.com.

Sincerely,

A handwritten signature in black ink that reads "Brian N. Dietrick". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Brian N. Dietrick, P.E.
Principal-in-Charge/Project Manager



Scope of Work

Palmdale Water District

2015 Urban Water Management Plan

RMC proposes to complete the following scope of work in order to create a 2015 Urban Water Management Plan (UWMP) that meets Department of Water Resources' new requirements and provides consistency with other State Water Project contractors. RMC will develop a streamlined strategy for interfacing with stakeholders in Palmdale Water District's (PWD's) service area and will work closely with PWD staff to effectively update the information in the UWMP and ensure the UWMP delivers the right messages. Brian Dietrick, the proposed Project Manager for RMC's completion of the 2015 UWMP, led the RMC team that developed the 2010 UWMP for PWD. The knowledge, background and experience of the 2010 effort will allow our team to begin immediately preparing the 2015 UWMP without spending additional time and effort to understand PWD's service area and system.

Task 1: Data Collection and Management

Subtask 1.1: Kickoff and Data Collection

Following the 2015 UWMP Guidebook release (anticipated October 2015), RMC will prepare a table of data needs. RMC will provide the table of data needs to PWD staff, as well as guidance on collecting and/or developing any data that is not readily available. This task assumes that PWD will provide RMC with adequate water use, supply, water loss, and other data necessary to complete the 2015 UWMP and that RMC will not be responsible for extensive data collection and data verification beyond evaluating what is provided by PWD.

RMC will also provide PWD staff with a detailed outline for the 2015 UWMP with all required chapters, tables, and sections clearly outlined. This detailed outline will be used by PWD staff and RMC when developing the 2015 UWMP document to ensure that all required analysis is included. A Kickoff meeting will be held to review the project schedule, detailed outline, and data needs.

Subtask 1.1 Deliverables:

- Data needs table (electronic)
- 2015 Guidebook requirements table (electronic)
- Agenda and summary action items for Kickoff meeting (electronic and hard copy)

Subtask 1.2: Project Management

This subtask includes ongoing communication and cooperation between RMC and PWD staff to ensure that the project is completed in a timely fashion and within the budget presented. RMC will coordinate with PWD staff and DWR, as necessary, and provide monthly progress monitoring, reporting, and invoicing. RMC has a Quality Assurance/Quality Control (QA/QC) program that will be used throughout the entire project to ensure quality work products are presented to PWD and DWR.

Subtask 1.2 Deliverables:

- Monthly progress reports and invoices

Task 2: Demand and Supply Analysis

Subtask 2.1: Demand Analysis

RMC will prepare the *System Description*, *System Demands*, and *Baselines and Targets* chapters of the 2015 UWMP. RMC will update PWD's system description in terms of its current and projected population, climate, housing density, development, income levels, etc. RMC will work with PWD to update population projections using planned future land use and growth rates for Los Angeles County determined by the Southern California Association of Governments (SCAG). Past, current, and projected water demands will be developed for the following in 5-year increments: residential, commercial, industrial, institutional, landscape/recreation, agricultural, and groundwater recharge. To ensure a complete demand forecast, RMC will work with PWD to quantify demands from both permanent and seasonal populations, distribution system water losses, and water savings from municipal codes and standards. All calculations shall be in compliance with DWR's UWMP Advisory Committee recommendations on quantifying demands. RMC's demand analysis will also consider substantial water use reductions that have taken place as a result of the recent drought, and will include projections for additional conservation that is anticipated as PWD continues to implement water conservation programs. This task assumes that PWD will coordinate directly with SCAG, the City of Palmdale, the Antelope Valley-East Kern Water Agency, and other entities with which population and demand data will be required to ensure consistency and accuracy.

SB x7-7 requires an evaluation of baseline per capita water use and identification of interim and 2020 urban per capita water use targets in accordance with specified requirements. RMC will confirm (and update, if needed) PWD's baseline per capita water use in gallons per capita per day (GPCD) and demand projections for a 25-year timeframe (2015 through 2040). RMC will update the urban water supply use targets in GPCD, based on the baseline, as well as develop narrative explaining PWD's compliance with the 2015 interim target.

RMC will prepare a summary describing current and future water demands and provide it to PWD for review. Based on PWD's comments, RMC will finalize the document for later use in analyzing future water gaps and ultimately in developing the 2015 UWMP.

Subtask 2.1 Deliverables:

- Draft and final Demand Analysis (electronic)

Subtask 2.2: Water Supply Analysis

RMC will prepare the *System Supplies* and *Water Supply Reliability* chapters of the 2015 UWMP. RMC will use new descriptions and analyses conducted in recent planning efforts to update those sections as written in the 2010 UWMP. Any missing analysis that would calculate changes in supply estimates relative to implementing these plans are assumed to be provided by PWD. This task assumes that PWD will provide RMC with water loss information about its system, prepared pursuant to standards set forth by the American Water Works Association's (AWWA) Manual 36 (Manual of Water Supply Practices).

RMC will conduct a water supply analysis and, based on the results of Subtask 2.1, compare supply and demand for 25 years, including under normal year, single dry year, and multiple dry year scenarios. All calculations shall be in compliance with DWR's UWMP Advisory Committee recommendations on quantifying supply.

RMC will summarize the results of the water supply analysis and provide a draft document to PWD for review. RMC will prepare a final document based on the comments received from PWD.

Subtask 2.2 Deliverables:

- Draft and final Water Supply Analysis (electronic)

Subtask 2.3: Demand Management Measures

RMC will review the *Demand Management Measures* (DMMs) chapter in the 2010 UWMP and revise the section to address the streamlined DMMs specified by AB 2067 (only 7 DMMs). RMC will rely on PWD staff for specific data, such as the number of low flow toilets provided to the public or the number of water audits conducted each year. As a signatory to the California Urban Water Conservation Council (CUWCC) Memorandum of Understanding, PWD's reports can be used as a basis for documenting implementation of the DMMs. This task assumes that PWD will provide RMC with its CUWCC reports for the last five years, which will provide the basis of evaluating and documenting implementation of DMMs.

RMC will prepare a summary of work completed in this subtask. PWD will review the summary, provide comments to RMC, and RMC will finalize the document for later incorporation into the 2015 UWMP.

Subtask 2.3 Deliverables:

- Draft and final DMMs to achieve targets (electronic)

Subtask 2.4: Water Shortage Contingency Plan

RMC will work with PWD staff to update the *Water Shortage Contingency Plan* from the 2010 UWMP to reflect current programs and any changes PWD plans to make based on current experience. RMC will work with PWD staff to develop a description of revenue impacts in water shortage periods and potential water rate adjustments per the anticipated 2015 Guidebook. RMC will prepare a summary of its findings and the modified Water Shortage Contingency Plan. The assessment will address future water supplies, including recycled water and potable reuse, which could meet potential shortfalls.

RMC will prepare a summary of work completed in this subtask. PWD will review the summary, provide comments to RMC, and RMC will finalize the document for later incorporation into the 2015 UWMP.

Subtask 2.4 Deliverables:

- Draft and final Water Shortage Contingency Plan (electronic)

Task 3: Prepare and Submit 2015 UWMP

Subtask 3.1: Administrative Draft 2015 UWMP

Following the first round of PWD review of the deliverables from Tasks 2.1-2.5, RMC will incorporate comments and produce a complete Administrative Draft 2015 UWMP for PWD review. All requirements for a 2015 UWMP will be identified on DWR-approved checklists. RMC will submit the Administrative Draft in PDF format for PWD staff review. RMC assumes comments will be provided within 3 weeks. This task assumes one progress meeting with PWD staff to discuss and receive comments on the compiled Administrative Draft 2015 UWMP.

Subtask 3.1 Deliverables:

- Administrative Draft 2015 UWMP and DWR forms (electronic)
- Agenda and summary action items for progress meeting

Subtask 3.2: Public Draft 2015 UWMP

Following PWD review of the Administrative Draft 2015 UWMP, RMC will incorporate comments and produce a complete Public Draft 2015 UWMP. RMC will submit the Public Draft in PDF format for public review. It is assumed the public review period will be 30 days based on the

2010 UWMP process.

RMC will also prepare and deliver a presentation to the PWD Board of Directors and public on the contents of the 2015 UWMP, including a review of the DWR Guidebook and electronic forms.

Subtask 3.2 Deliverables:

- Public Draft 2015 UWMP and DWR forms (electronic)
- Presentation to PWD Board on Public Draft 2015 UWMP

Subtask 3.3: Final 2015 UWMP

Following review of the Public Draft 2015 UWMP, RMC will incorporate comments and produce a Final 2015 UWMP. Upon completion, RMC will submit the Final Report in PDF format, MS Word format, and three (3) hard copies to PWD.

This task assumes that PWD will be responsible for compiling and uploading the Final 2015 UWMP to DWR. After the Final UWMP is submitted to DWR and DWR reviews and comments on the Plan, RMC will provide PWD with all source files and other project-specific information necessary to respond to comments from DWR.

Subtask 3.3 Deliverables:

- Final 2015 UWMP and DWR forms (electronic and 3 hard copies)

Optional Tasks

Work detailed above in Tasks 1-3 demonstrates work necessary to complete a DWR-compliant 2015 UWMP. The following are optional tasks, which would expand the scope to include analyses, meetings, coordination efforts, and other additional items to address specific needs.

Optional Task 1: Demand Forecast

As an optional task, RMC will update existing projections using a combination of planned future land use (based on the General Plan), growth rates for the area determined by the California Department of Finance and/or the Southern California Association of Governments, and PWD water meter and billing data.

RMC will develop a baseline residential per capita water use in gallons per capita per day (GPCD) for the general categories of Single Family and Multi-Family and will use the new General Plan to project residential demands. In developing this GPCD, RMC will consider the baseline demand projections in the 2010 UWMP and the GPCD that is currently being reported to the State Water Quality Control Board as part of mandatory water use reduction regulations. Additionally, RMC will consider, and discuss with PWD, the Conservation Act of 2009 – Executive Order B-29-15 in defining its potential impact observed in recent records, and potential impacts in future use. An additional consideration in defining GPCD for forecasts will be the economic slowdown from 2008 until the recent recovery (see below for normalization methodology as part of UWMP Guidebook).

For the non-residential sector, RMC will use the existing land use and water use and the future land use in the new General Plan to determine the City-wide demand for the commercial, industrial, institutional/governmental, agricultural and landscape/recreation classes.

RMC will develop a method to identify the variability in water demands triggered by weather and conservation measures. It is expected that the 2015 UWMP Guidebook will include a methodology to normalize the 2010 demand baselines based on weather (and potentially, economic factors). RMC will

therefore use a methodology consistent with DWR's suggested (or required, if the Guidebook establishes it as a requirement) methods.

Passive conservation will be considered in the forecast using a method based on IWR-MAIN's (demand model) method and approach. RMC will define the savings based on the plumbing code and the demographic projections and general plan. The key elements in the methodology are the "mechanical efficiency" of the devices, the intensity of usage of those devices (per account), fractions of end uses in the sector that are nonconserving (not impacted yet by plumbing code) and conserving (impacted by plumbing code), and the rate of shift from nonconserving to conserving. This analysis will also account for California Green Code measures.

The demand projections described above will be completed without the use of an econometric model, even though some elements of econometric models are part of the proposed scope. Given the schedule available for the completion of the administrative draft UWMP, completing a comprehensive forecast using an econometric model would not be feasible. However, the resulting demand forecast applying the method described above (based on per capita rates, demographic projections, land use in the General Plan, and accounting for conservation and economy) can help meet both DWR and PWD needs. RMC will apply the weather and conservation factors to the residential and non-residential demands forecasted to develop demand projections.

For water losses, the UWMP requirement is that it needs to be computed based on the most recent 12-month period available. DWR has released a specific methodology, based on the American Water Works Association, third edition of Water Audits and Loss Control Programs, Manual M36 and the Free Water Audit Software, version 5.0.

Optional Task 1 Deliverables:

- Draft Demand Forecasts (electronic)

Optional Task 2: Water Loss Analysis

This optional task includes data analysis and application of the water audit and loss control program methodology per the standards set forth by AWWA Manual 36 (Manual of Water Supply Practices). Major specific tasks include:

- 1) Perform a top-down water audit for the water system utilizing AWWA methodology and the latest version of AWWA's audit software;
- 2) RMC will provide a draft report to PWD that will contain the findings and water loss to use in the UWMP;
- 3) RMC assumes PWD will review the draft report and provide feedback within 3 weeks;
- 4) RMC will provide a final report that incorporates any PWD comments;
- 5) RMC assumes we will provide three (3) hardcopies and the electronic copy of the draft and final reports.

Optional Task 2 Deliverables:

- Draft and Final Water Loss Analysis Report (electronic and 3 hard copies)

Optional Task 3: Revised Administrative Draft

As an optional task, following PWD's review of the Administrative Draft, RMC will incorporate comments and produce a Revised Administrative Draft 2015 UWMP for review by other departments as

necessary, outside the core PWD UWMP staff team. RMC assumes comments will be provided within 4 weeks.

Optional Task 3 Deliverables:

- Revised Administrative Draft 2015 UWMP and DWR forms (electronic)

Optional Task 4: Addressing DWR's Comments

As an optional task, RMC will address DWR's comments on the UWMP for comments received within 12 months of the 2015 UWMP submittal.

Optional Task 4 Deliverables:

- Revised UWMP Files
- Record of Communications with DWR

Optional Task 5: Meetings with PWD or Stakeholders

As an optional task, RMC will hold an additional meeting with PWD or stakeholders to discuss items of importance or to resolve stakeholder-related concerns as appropriate.

Optional Task 5 Deliverables:

- Agenda and summary action items for meeting (electronic and hard copy)

Optional Task 6: Climate Change and Water-Energy

As an optional task, RMC will prepare *Climate Change* and *Water-Energy* chapters in accordance with the 2015 UWMP Guidebook. DWR guidance will be used to quantify the impact of climate change and weather normalization on PWD's supplies and calculate the energy intensity of PWD's conveyance, storage, and distribution. These sections are a likely precursor to State grants and loans, and are therefore valuable to have included in the 2015 UWMP. All calculations shall be in compliance with DWR's UWMP Advisory Committee recommendations.

RMC will prepare a summary of work completed in this subtask. PWD will review the summary, provide comments to RMC, and RMC will finalize the document for later incorporation into the 2015 UWMP.

Optional Task 6 Deliverables:

- Draft and final Climate Change and Water-Energy (electronic)

Optional Task 7: Board Presentation

As an optional task, RMC will present the content of the updated UWMP to the PWD Board prior to final adoption of the 2015 UWMP.

Optional Task 7 Deliverables:

- Presentation slides and materials (electronic and hard copy)



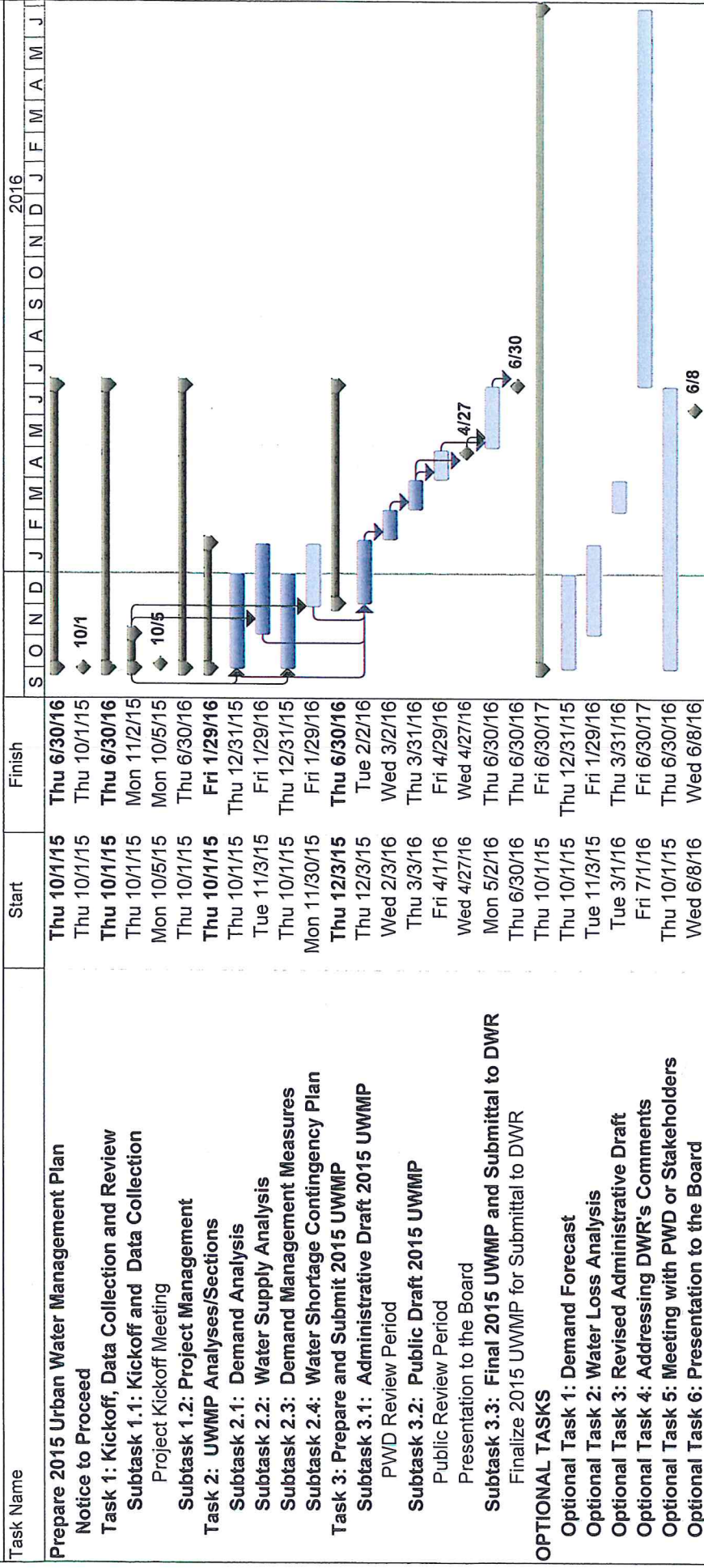
Fee Estimate

Palmdale Water District 2015 Urban Water Management Plan

Tasks			Labor					Outside			ODCs		Total
			Brian Dietrick	Crystal Bonham	Enrique Lopez-Revelva	Lila Spring	Admin.	Total Hours	Total Labor Costs (1)	Sub Consultant Total Cost (2)	ODCs	Total ODCs (2)	Total Fee
			Principal/Project Manager	Deputy Project Manager	Technical Advisor	Planning Support	Support						
Task 1: Data Collection and Management			\$244	\$199	\$274	\$146	\$107						
1.1 Kickoff and Data Collection			4	8	0	4	0	16	\$3,152	\$0	\$266	\$293	\$3,445
1.2 Project Management			2	6	0	0	6	14	\$2,324	\$0	\$0	\$0	\$2,324
Subtotal Task 1:			6	14	0	4	6	30	\$5,476	\$0	\$266	\$293	\$5,769
Task 2: UWMP Analyses/Sections													
2.1 Demand Analysis			2	8	0	16	0	26	\$4,416	\$0	\$0	\$0	\$4,416
2.2 Water Supply Analysis			2	2	6	12	0	22	\$4,282	\$0	\$0	\$0	\$4,282
2.3 Demand Management Measures			2	2	0	12	0	16	\$2,638	\$0	\$0	\$0	\$2,638
2.4 Water Shortage Contingency Plan			1	2	6	8	0	17	\$3,454	\$0	\$0	\$0	\$3,454
Subtotal Task 2:			7	14	12	48	0	81	\$14,790	\$0	\$0	\$0	\$14,790
Task 3: Prepare and Submit 2015 UWMP													
3.1 Administrative Draft 2015 UWMP			6	8	0	16	8	38	\$6,248	\$0	\$400	\$440	\$6,688
3.2 Public Draft 2015 UWMP			6	6	0	8	8	28	\$4,682	\$0	\$469	\$516	\$5,198
3.3 Final 2015 UWMP and Submittal to DWR			2	4	0	6	2	14	\$2,374	\$0	\$400	\$440	\$2,814
Subtotal Task 3:			14	18	0	30	18	80	\$13,304	\$0	\$1,269	\$1,396	\$14,700
Total			27	46	12	82	24	191	\$33,670	\$0	\$3,184	\$1,988	\$35,259
OPTIONAL TASKS													
O-1 Demand Forecast			12	40	0	48	0	100	\$17,896	\$0	\$0	\$0	\$17,896
O-2 Water Loss Analysis			6	24	8	180	0	218	\$34,712	\$0	\$0	\$0	\$34,712
O-3 Revised Administrative Draft			2	4	0	4	8	18	\$2,724	\$0	\$0	\$0	\$2,724
O-4 Addressing DWR's Comments			2	4	0	4	0	10	\$1,868	\$0	\$0	\$0	\$1,868
O-5 Meeting with PWD or Stakeholders			4	8	0	0	0	12	\$2,568	\$0	\$266	\$531	\$3,631
O-6 Climate Change and Water-Energy			1	0	12	6	0	19	\$4,408	\$0	\$0	\$0	\$4,408
O-7 Board Presentation			4	0	0	2	0	6	\$1,268	\$0	\$69	\$137	\$1,542
Total OPTIONAL TASKS			31	80	20	244	8	0	\$55,444	\$0	\$334	\$668	\$56,831

- The individual hourly rates include salary, overhead and profit.
- Other direct costs (ODCs) such as reproduction, delivery, mileage (rates will be those allowed by current IRS guidelines), and travel expenses, will be billed at actual cost plus 10%.
- RMC reserves the right to adjust its hourly rate structure and ODC markup at the beginning of the calendar year for all ongoing contracts.

Palmdale Water District 2015 Urban Water Management Plan Schedule



Palmdale Water District 2015 Urban Water Management Plan Update

As requested, Kennedy/Jenks Consultants (Consultant) is pleased to provide a proposal for preparation of the 2015 Urban Water Management Plan Update for the Palmdale Water District (District). The Scope of Work defined below is based on our understanding of the project requirements, our familiarity with District water supplies and facilities, our experience with the applicable regulations and guidance documents, and our experience on similar projects.

Introduction

Section 10610 et seq. of the California Water Code (Water Code) requires the preparation of an Urban Water Management Plan (UWMP, Plan) and periodic updates. The Water Code also specifies the contents and procedures for adoption of the Plan. Plans must be adopted and submitted to the California Department of Water Resources (DWR) before December 31 for years ending in 5 or 0; recent legislation (Assembly Bill 2067) has mandated that the 2015 UWMP Updates be due July 1, 2016. Consequently, the District's Plan Update must be adopted and submitted to DWR prior to 1 July 2016.

Please note that as of the date of this proposal, significant amendments have been made by the Legislature to the UWMP Act during 2014. New UWMP legislation includes the following revisions:

- Changes in the way that the Demand Management Measures (DMMs) are reported;
- Reporting of quantified distribution system water loss utilizing American Water Works Association (AWWA) water

system balance methodology (retail water suppliers);

- Description of distribution system asset management programs (wholesale water suppliers);
- Estimation of the effects of codes, standards and ordinances on demand, if information is available and applicable to a water supplier;
- Guidelines for voluntary reporting of embedded energy costs;
- Electronic online submittal of the UWMP on standardized DWR forms, and
- 2015 UWMPs are due for submittal to DWR by 1 July 2016. Please note that this will require the UWMP to be completed, provided for public review, and adopted by the Districts Board at least 30 days prior to the 1 July submittal date. Please see the "Schedule" section of this Scope of Work for more detail and recommendations regarding this revision to the UWMP Act.

DWR has produced a draft "Guidebook to Assist Water Suppliers in the Preparation of a 2015 Urban Water Management Plan", with the final Guidebook anticipated to be available in October 2015. Amendments legislated to date have been incorporated into this proposal.

Additionally, there are significant additions that pertain to SWP Contractors, such as Palmdale Water District. Therefore, the UWMP Update will also include the following:

1. Analysis of SWP water supply reliability based on the results of the 2015 DWR SWP Delivery Capability Report, which includes climate change assumptions;
2. Qualitative description of a minimum SWP supply allocation of 5% for shortage contingency planning purposes;
3. Narrative description of the potential water supply improvements of the Bay Delta Conservation Plan;
4. Updated description of status of relevant endangered species Biological Opinions;
5. Description of updated SWP emergency outage scenarios;
6. Language describing the extension of the SWP water supply contracts to 2085; and
7. Discussion of reduced reliance on the Delta.

Scope of Services

Based on our discussions with District staff, the following scope of work has been developed for preparation of the 2015 Urban Water Management Plan Update.

Task 1 - Collect and Review Background Information

Consultant shall review background information collected for the District's service area, water supply and demand, and water policies. The objective of this task is to gather available data necessary to prepare the 2015 UWMP update. Information to be collected and reviewed includes the following:

- Current and proposed land uses within the District service area
- Population estimates and projections (retail water suppliers) Note: that DWR plans to include in the 2015 UWMP Guidebook a revised methodology for determining population, inclusive of consideration of transient populations and vacation communities. *(the UWMP Planning Act requires a 20-year planning horizon; Kennedy/Jenks recommends 25 years, which in this case would be 2040)*
- Historical, current, and projected (to the year 2035) water consumption by user sector, including recycled water consumption, if applicable *(the UWMP Planning Act requires a 20-year planning horizon; Kennedy/Jenks recommends 25 years, which in this case would be 2040)*
- Current seasonal water consumption by user sector
- Water sources, including reliability, with specific information required for groundwater supplies
- Water quality issues, including known contaminants
- Saline intrusion
- Current water rate structure
- Water demand management programs over the last five years (note that significant legislation amending Section 10631 of the UWMP Act takes effect 1 January 2015)
- Conservation and No-Waste ordinances currently or previously adopted by the District
- Water shortage contingency plans
- Planned modifications to the District's water system and available supply (such as addition of new wells and/or water treatment facilities)
- Progress towards meeting SBX7-7 legislative goals (20x2020 reductions in per capita water use in gallons per capita per day, GPCD) (retail water suppliers). Note: if "significant changes" in population and/or or water demands have occurred since the baseline GPCD calculations were prepared for the 2010 UWMP, a retailer may revise its 2020 GPCD target. DWR will develop guidance regarding the criteria for such a revision.

| Scope of Work

- Distribution system water losses, utilizing AWWA protocols (retail water suppliers)

Consultant assumes the above information is readily available from District staff, and will provide District staff with a Data Collection Form to assist them in collection of the data. Additional effort required by Consultant to collect data for this task, including information for GPCD target calculation adjustment and distribution system water losses, will require additional scope and budget.

Task 2 - Update Service Area and Demand Characteristics

Consultant shall 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 consumption estimates and projections will be updated based on information provided by the District, City of Palmdale, or County of Los Angeles. Population and water demand projections will be presented in 5-year increments for a 25-year period, through 2040.

Recent legislation provides that "if available and applicable" to the District, water use projections may 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. If such information is reported, the assessment will provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections. The Plan will indicate the extent that the

water use projections consider savings from codes, standards, ordinances, or transportation and land use plans.

Note: water use projections that do not account for these water savings shall be noted of that fact in the 2015 UWMP.

Per the enacted legislation this analysis is voluntary. DWR will develop guidance on this legislative amendment, to be incorporated in the 2015 UWMP Guidebook. (See Optional Task 4).

Task 3 – Update Water Resources and Supply Outlook

Consultant shall update the existing description of District water sources, including local water supplies, imported water supplies, potential for exchanges or transfers, and other potential water supplies. Consultant shall update the description of water quality, including any known contamination that may impact water resources. Consultant shall evaluate the adequacy of the existing supply to meet the projected water demands as well as assess the frequency and magnitude of supply deficiencies. Based on recent legislation, included in the analysis for the 2015 UWMP will be the reporting of distribution system water loss for the most recent 12-month period available. (For all subsequent UWMP updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.)

The supply reliability analysis will include the average water year, single dry water year, and multiple dry water years (the UWMP Planning Act requires a 20-year planning horizon; Kennedy/Jenks recommends 25 years, which in this case would be 2040). In

the case of the District, data and information from the 2015 DWR Delivery Capability Report will be utilized for the reliability analysis.

Consultant shall also include the specific information required by Section 10631 (b) regarding groundwater supplies. Note: significant legislation regarding groundwater management was enacted in 2014 (Senate Bills 1168 and 1319 and Assembly Bill 1739). Consultant assumes information about groundwater supplies relevant to the District is readily available from District staff, and will provide District staff with a Data Collection Form to assist them in collection of the data. Additional effort required by Consultant to collect data for this task will require additional budget.

In its guidance, DWR encourages UWMPs to consider the impacts of climate change, and suggests that a means of doing so is to append the Climate Change Vulnerability Assessment from the local Integrated Regional Water Management Plan. Consultant recommends utilizing this approach in the District's 2015 UWMP update (also see Optional Task).

Task 4 – Evaluate Water Recycling

Consultant shall describe the availability of recycled water and its potential for use as a water source by the District. This will include analysis of the District's current and future recycled water plans. Consultant assumes information about recycled water supplies relevant to the District's service area is readily available from the District, and will provide District staff with a Data Collection Form to assist them in collection of the data. It is assumed that District will provide to Consultant any and all existing

information about the availability of recycled water so that the DWR UWMP checklist requirements can be met. If research by Consultant of such information is necessary, additional scope and budget will be required.

Task 5 – Review Water Shortage Contingency Plan

As a result of Governor Brown's January 2014 drought proclamation and April 2014 emergency declaration, urban water suppliers were called upon to implement their local water shortage contingency plans. Consultant shall review the District's existing water shortage contingency plan to determine compliance with provisions identified in the Water Code. Consultant shall provide the District with applicable revisions to the existing Water Shortage Contingency Plan so that it can be implemented according to the drought and emergency proclamations. The plan shall include the following elements.

1. Description of plan coordination with local and regional suppliers.
2. Highest historic total annual water demand and predicted highest water demand at the end of 12, 24, and 36 months.
3. Estimate of worst-case water supply at the end of 12, 24, and 36 months.
4. Description of stages of rationing and associated triggers.
5. Description of mandatory prohibitions and consumption limits.
6. Description of adopted penalties and charges for excessive use.

| Scope of Work

7. Revenue and expenditure analysis (includes evaluation of impacts and proposed measures to overcome the impacts, such as the development of reserves and rate adjustments.)
8. Implementation resolution or ordinance.
9. Description of monitoring mechanisms.
10. Description of public noticing and plan adoption.

The water shortage contingency plan must be adopted and incorporated into District municipal code. DWR will make status of these updates publicly available.

The Water Shortage Contingency Plan may be updated and adopted as part of the 2015 UWMP, or it may be updated and adopted separately and provided as an appendix to the UWMP.

Task 6 – Report Water Demand Management Measures Implementation

The Governor's April 2014 emergency declaration requires that all state agencies that distribute funding for projects that impact water resources, including groundwater resources, will require recipients of future financial assistance to have appropriate conservation and efficiency programs in place.

Recent UWMP legislation significantly revises the demand management measures (DMM) reporting requirements.

- 1) Since the District is a member of the California Urban Water

Conservation Council (CUWCC) it may continue to submit its annual reports as required by Section 6.2 of the Memorandum of Understanding Regarding Urban Water Conservation in California in order to comply with this section of the UWMP Act. District staff will provide Consultant with the appropriate CUWCC annual reports (2013-14), to be appended to the 2015 UWMP in compliance with this part.

- 2) The new legislation allows a narrative description, comporting with the guidance provided in the DWR 2015 UWMP Guidebook, of specific Foundational DMMs, and including those DMMs the retailer plans to implement to achieve its SBX7-7 water use target (Optional Task).

Task 7 - Prepare Draft and Final Plans

Consultant shall document the findings in a Draft UWMP Update for the District. An electronic version of the draft 2015 UWMP will be submitted to the District for review. Consultant will incorporate District staff comments on the electronic draft and submit three (3) hard copies of the Final Plan Update to the District. Consultant will also provide the District with the final UWMP on compact disk (CD). Additional deliverables and copies may require a budget augmentation.

It should be noted that recent legislation requires electronic UWMP submittal to DWR via email and CD in PDF format. DWR will no longer accept hard copies of UWMPs.

New legislation also requires 2015 UWMPs to be provided to DWR via an

| Scope of Work

online database on preexisting standardized forms, to be made available by DWR during 2016.

Consultant will assist District staff in the preparation of and uploading of the online submittal. (If the District wishes Consultant to prepare the online submittal forms in the course of preparing the 2015 UWMP and upload the submittal to DWR, additional scope and budget will be required. Since the forms and online system are not yet developed by DWR, at this time an estimate cannot be made as to cost impact.)

Task 8 - Attend Public Hearing

Consultant shall attend the required public hearing and support District staff providing conclusions and recommendations of the plan. Attendance at additional hearings or meetings will require additional budget.

Task 9 - Project Management

Consultant's project manager shall assure that proper resources and staff are dedicated to this project to assure a timely completion of the 2015 UWMP Update. Consultant's Project Manager shall also implement and enforce internal Quality Assurance and Quality Control programs. Consultant anticipates a minimum of bi-weekly communication with the District's Project Manager.

Optional Tasks

Optional Task 1: Demand Management Measures Narrative

Consultant shall develop a narrative description, comporting with the guidance provided in the DWR 2015 UWMP Guidebook, of each of the following DMMs, and including those DMMs the District plans to implement to achieve its SBX7-7 water use target:

1. Implementation of the Foundational DMMs implemented over the last five years, which include:
 - A. Water waste prevention ordinances
 - B. Metering
 - C. Conservation pricing
 - D. Public education and outreach
 - E. Programs to assess and manage distribution system real loss
 - F. Water conservation program coordination and staffing support
2. A description of other DMMs implemented in the previous five years that have a significant effect on water use as measured in gallons per capita per day, including innovative measures if implemented.

Based on the District's previous UWMP and discussions with District personnel, Consultant shall summarize the water demand management goals, programs implemented to date, overall progress and effectiveness of the current program. This narrative section will also describe future programs anticipated by Agency staff. *Estimated budget: \$5,000*

Optional Task 2: Climate Change Analysis

In its guidance, DWR encourages UWMPs to consider the impacts of climate change, using as guidance the DWR Climate Change Guidance ("Climate Change Handbook for Regional Water Planning," December 2011). DWR is also encouraging inclusion of an Integrated Regional Water Management Plan (IRWMP) Vulnerability Assessment to meet this guidance.

Kennedy/Jenks Consultants proposes to use the Vulnerability Assessment created for the 2013 Antelope Valley IRWMP Update and include it in the 2015 UWMP. In addition, since the DWR SWP Delivery Capability Report contains climate change scenarios, the language developed for all SWP contractors also will be included in the UWMP for this purpose.

Estimated budget: no charge

Optional Task 3: Embedded Energy Calculations

Recent UWMP legislation allows agencies to voluntarily calculate the embedded energy of water supplies, in various categories, for inclusion in the 2015 UWMP. DWR is in the process of developing a methodology for calculating the embedded energy of water supplies. If the District wishes to include this analysis in the 2015 UWMP, Consultant can undertake these calculations, which comport with the current Draft DWR Methodology, as follows.

This effort will create a high-level energy and baseline and forecast for the

District's entire system. Energy is defined as electricity (purchased and generated) and natural gas.

Subtask 1 – Data Collection

Kennedy/Jenks will submit to the District a detailed request for information (RFI) that asks the District for a list of all its major facilities. Once received and reviewed Kennedy/Jenks will submit an RFI for the monthly (or if not monthly, then yearly) energy use and cost by major facility to the extent information is available. The District will supply the information in Excel spreadsheet format. Kennedy/Jenks will customize and modify its existing Excel Baseline & Forecast spreadsheet tools to be able to account for all of the District's major equipment/facilities and energy types. The Excel spreadsheet tools will be user friendly, with assumptions clearly identified and capable of being modified by the user.

- Deliverable: Kennedy/Jenks RFI.
- District Responsibilities: Provide all data requested by Kennedy/Jenks in the format requested.

Subtask 2 – Develop Baselines and Forecasts

After consultation with the District, Kennedy/Jenks will determine the rates of growth for major facilities (if available), and rates of cost escalation for energy types. Kennedy/Jenks will create forecasts of energy use and cost over the next 20 years.

Subtask 3 – Draft Technical Memorandum

Kennedy/Jenks will prepare Draft Technical Memorandum for the Energy

Baseline and Forecast incorporating the information compiled and analyzed in Subtasks 1 and 2. Kennedy/Jenks will submit an electronic copy by email to the District's Project Manager. The District will have up to three (3) weeks to review and submit to Kennedy/Jenks one consolidated set of comments in redline format.

- Deliverables: Draft Technical Memorandum – Energy Baseline and Forecast.
- District Responsibilities: Review Draft Technical Memorandum and provide one set of consolidated set of comments to Kennedy/Jenks in redline format.

Subtask 4 – Final Technical Memorandum

After receiving the comments, Kennedy/Jenks will hold a conference call with District staff to discuss and address any concerns that staff may have. Kennedy/Jenks will then incorporate District comments and issue one electronic copy of Final Technical Memorandum and a final spreadsheet model to the District.

- Deliverables: Final Technical Memorandum on Energy Baseline, and Forecast and Energy Baseline & Forecast spreadsheet.
- Meetings: Review of Draft Technical Memorandum (via conference call).

Subtask 5 – Project Management

Task 5 will include project management work during Task 1 to ensure fulfillment of the project scope of services within budget and on schedule, including: Project Management, Project Management Meetings, Budget and Schedule Control and Invoices.

Estimated Budget: \$25,000

Optional Task 4: Estimating Future Water Savings from Codes, Standards, Ordinances or Transportation and Land Use Plans

Recent legislation allows agencies to voluntarily calculate future water savings; demand projections may 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. If undertaken, a UWMP will indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. If not undertaken, the UWMP must indicate as such.

DWR is in the process of developing a methodology for estimating these future water savings. If the District wishes to include this analysis in its 2015 UWMP, Consultant will utilize DWR's methodology, which in draft form appears to give significant flexibility to UWMP preparers in terms of data sources and assumptions, based on local service area characteristics. At this time it is not possible to estimate the cost of this additional scope since the final methodology is not available. However, because Kennedy/Jenks is

| Scope of Work

familiar with local land use data sources, as well as statewide water conservation policies and practice, it is assumed that the additional budget to perform this task would not be significant.

Estimated budget: \$5,000

| Budget and Schedule

Budget

The budget for the 2015 UWMP scope of work described above is \$64,380 (without Optional Tasks). A breakdown of the fee estimate is presented in the attached spreadsheet. This budget will not be exceeded without prior authorization by the District.

Consultant proposes to provide the scope of services on a time and materials basis under the terms and conditions of our Agreement for Professional Services with the District.

Schedule

Consultant is prepared to initiate work on this project immediately following receipt of a notice to proceed. Based on discussions with District staff, our experience on other similar projects, the Scope of Services as outlined, and the depth, experience and availability of the project team participants, Consultant will submit the draft subject Plan within six months from receipt of Notice to Proceed and the initial District staff-provided data. The final Plan will be completed within six weeks following receipt of written District staff comments.

Consultant recommends having the final UWMP completed by 1 April, 2016 to allow for District/county notifications, public review, and District Board adoption. Please note that the UWMP Act requires the following:

1) "...any District or county within which the supplier provides water supplies" was notified at least 60 days prior to the UWMP public hearing that the plan was being reviewed and changes were being considered, and 2) provide

documentation that within 30 days of submitting the UWMP to DWR, the adopted UWMP has been or will be available for public review during normal business hours.

Consultant strongly recommends that the District Counsel review the UWMP Act and Government Code Section 6066 notification requirements. Consultant will not be responsible for public notifications.

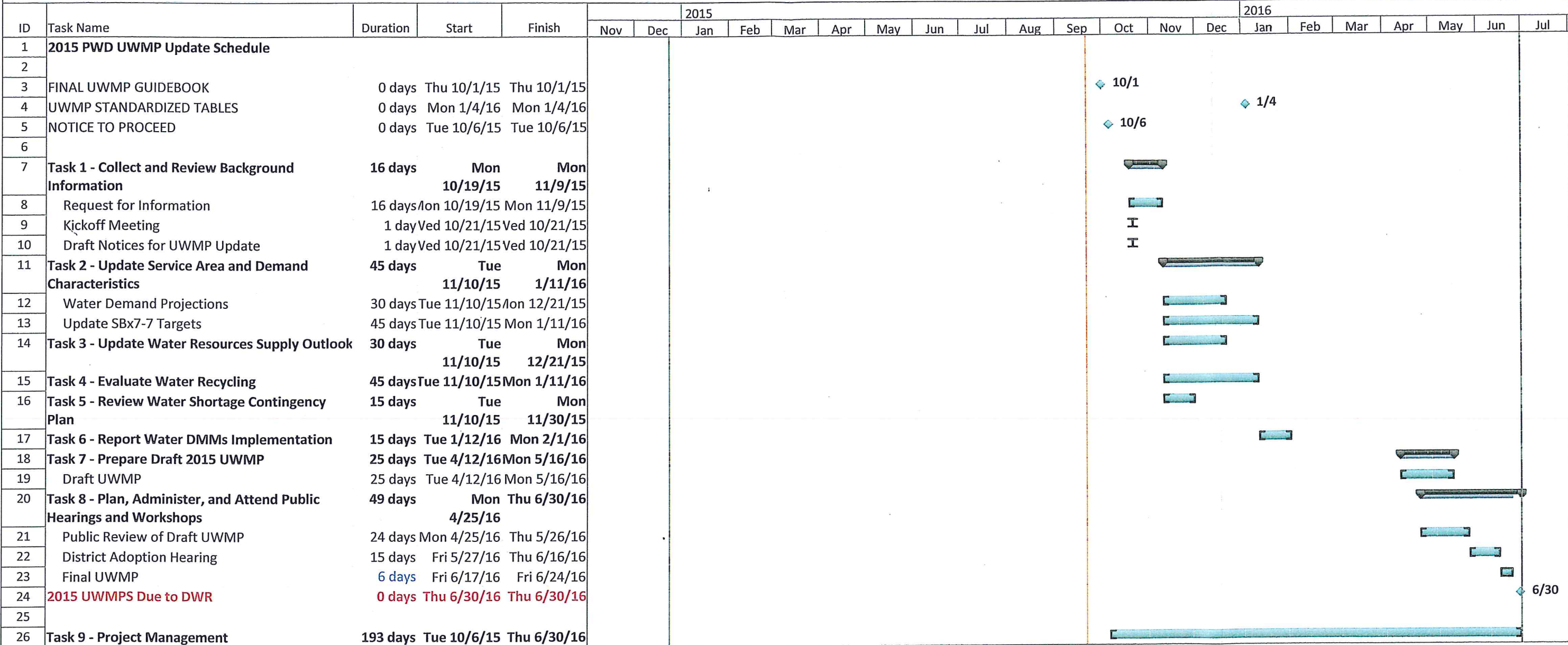
Proposal Fee Estimate

Kennedy/Jenks Consultants

CLIENT Name: Palmdale Water District
 PROJECT Description: 2015 UWMP Update
 Proposal/Job Number: _____ Date: 9/29/2015

January 1, 2014 Rates		Eng-Sc1-8	Eng-Sc1-6	Eng-Sc1-4	Eng-Sc1-1	Alde	Total Hours	KJ Fees	KJ Comm. Charges	KJ ODCs Fees	KJ ODCs Markup	Total Labor	Total Expenses	Total Labor + Subs + Expenses
Classification:	Hourly Rate:	\$235	\$200	\$165	\$100	\$65					5%			
Scope Tasks														
Task 1 - Collect and Review Background Information			12		60		72	\$8,400	\$0	\$100	\$5	\$8,400	\$105	\$8,505
Task 2 - Update Service Area and Demand Characteristics		2	8	6	20		36	\$5,060	\$0		\$0	\$5,060	\$0	\$5,060
Task 3 - Update Water Resources and Supply Outlook		2	4	6	30		42	\$5,260	\$0		\$0	\$5,260	\$0	\$5,260
Task 4 - Evaluate Water Recycling		1	8	12	24		45	\$6,215	\$0		\$0	\$6,215	\$0	\$6,215
Task 5 - Review Water Shortage Contingency Plan		1	8		12		21	\$3,035	\$0		\$0	\$3,035	\$0	\$3,035
Task 6 - Report Water DMM Implementation			16		20		36	\$5,200	\$0		\$0	\$5,200	\$0	\$5,200
Task 7 - Prepare Draft and Final Plans		8	22		62	12	104	\$13,260	\$0	\$100	\$5	\$13,260	\$105	\$13,365
Task 8 - Attend Meetings and Public Hearing		8	12				20	\$4,280	\$0	\$100	\$5	\$4,280	\$105	\$4,385
Task 9 - Project Management		2	60			12	74	\$13,250	\$0	\$100	\$5	\$13,250	\$105	\$13,355
							0	\$0	\$0		\$0	\$0	\$0	\$0
Subtotal		24	150	24	228	24	450	\$63,960	\$0	\$400	\$20	\$63,960	\$420	\$64,380
Optional Scope Tasks														
Demand Management Measures Narrative							0	\$5,000			\$0	\$5,000	\$0	\$5,000
Climate Change Analysis							0	\$0			\$0	\$0	\$0	\$0
Embedded Energy Calculations							0	\$25,000			\$0	\$25,000	\$0	\$25,000
Estimate Future Water Savings from Codes, Standards, etc.							0	\$5,000			\$0	\$5,000	\$0	\$5,000

PWD 2015 UWMP Update
Draft Project Schedule



Project: 2015 PWD UWMP Update
Date: Mon 9/21/15

Task

Split

Milestone

Summary

Project Summary

External Tasks

External Milestone

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

Deadline

Progress