

Board of Directors

ROBERT E. ALVARADO Division 1 JOE ESTES Division 2 MARCO HENRIQUEZ Division 3 KATHY MAC LAREN Division 4 VINCENT DINO Division 5 ALESHIRE & WYNDER LLP Attorneys

PALMDALE WATER DISTRICT

2029 East Avenue Q • Palmdale, California 93550 • Telephone (661) 947-4111

Fax (661) 947-8604 www.palmdalewater.org Facebook: palmdalewaterdistrict Twitter: @palmdaleH20

June 16, 2016

Agenda for Regular Meeting of the Board of Directors of the Palmdale Water District to be held at the District's office at 2029 East Avenue Q, Palmdale

Wednesday, June 22, 2016

7:00 p.m.

<u>NOTES</u>: To comply with the Americans with Disabilities Act, to participate in any Board meeting please contact Dawn Deans at $661-947-4111 \times 1003$ at least 48 hours prior to a Board meeting to inform us of your needs and to determine if accommodation is feasible.

Additionally, a Spanish interpreter will be made available to assist the public in making comments during the meeting if requested at least 48 hours before the meeting. This was authorized by Board action on May 11, 2016 as a temporary measure while a long-term policy is developed.

Adicionalmente, un intérprete en español estará disponible para ayudar al público a hacer comentarios durante la reunión, siempre y cuando se solicite con 48 horas de anticipación de la junta directiva. Esto fué autorizado por la mesa directiva en la junta del 11 de mayo del 2016 como una medida temporal mientras se desarrolla una poliza a largo plazo.

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.

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

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

- 1) Pledge of Allegiance.
- 2) Roll Call.
- 3) Adoption of Agenda.
- 4) Public comments for non-agenda items.
- 5) Presentations:





- 5.1) Drought Report-Review of "Water Conservation and Reduction in Water Demand Efforts Report as of May, 2016." (PIO/Conservation Director McNutt)
- 6) Action Items Consent Calendar (The public shall have an opportunity to comment on any action item on the Consent Calendar as the Consent Calendar is considered collectively by the Board of Directors prior to action being taken.)
 - 6.1) Approval of minutes of special meeting held June 1, 2016.
 - 6.2) Approval of minutes of regular meeting held June 8, 2016.
 - 6.3) Payment of bills for June 22, 2016.
 - 6.4) Approval of Statement of Work between the District and Ernst & Young for 2016-2017 State Water Project Procedures to be performed in relation to the Department of Water Resources' Statement of Charges. (\$7,714.00 Budgeted General Manager LaMoreaux)
- 7) Action Items Action Calendar (The public shall have an opportunity to comment on any action item as each item is considered by the Board of Directors prior to action being taken.)
 - 7.1) Public hearing on adoption of 2016 Public Health Goal Report. (Water Quality/Regulatory Affairs Supervisor Thompson)
 - 7.2) Consideration and possible action on adoption of 2016 Public Health Goal Report. (Water Quality/Regulatory Affairs Supervisor Thompson)
 - 7.3) Consideration and possible action on California Special Districts Association 2016 Board elections. (General Manager LaMoreaux)
 - 7.4) Consideration and possible action on lease options for the District's lighter duty vehicles. (\$10,000.00 Non-budgeted Finance Manager Williams/Facilities Manager Moore/Facilities Committee)
 - 7.5) Consideration and possible action on approval of organizational changes. (Assistant General Manager Knudson/Human Resources Director Emery/Personnel Committee)
 - 7.6) Consideration and possible action on Outreach activities. (PIO/Conservation Director McNutt)
 - a) Strategic Initative Review.
 - b) Long-term vision for financial and water sustainability:
 - 1) Palmdale Regional Groundwater Recharge and Recovery Project
 - 2) Littlerock Dam Sediment Removal Project
 - c) Calendar of upcoming events
 - d) AguaPalooza Music Contest
 - e) Rebates/Cash for Grass Program
 - f) Board media training
 - g) Outreach Board input

- 7.7) Consideration and possible action on authorization of the following conferences, seminars, and training sessions for Board and staff attendance within budget amounts previously approved in the 2016 Budget:
 - a) None at this time.
- 8) Information Items:
 - 8.1) Reports of Directors:
 - a) Meetings/General Report.
 - b) Standing Committee/Assignment Reports (Chair):
 - 1) Antelope Valley State Water Contractors Association
 - 2) Facilities Committee
 - 3) Personnel Committee
 - 8.2) Report of General Manager.
 - a) June, 2016 written report of activities through May, 2016.
 - 8.3) Report of General Counsel.
- 9) Public comments on closed session agenda matters.
- 10) Break prior to closed session.
- 11) Closed session under:
 - 11.1) Conference with Legal Counsel Existing Litigation: A closed session will be held, pursuant to Government Code §54956.9 (d)(1), to confer with Special Litigation Counsel regarding pending litigation to which the District is a party. The title of such litigation is as follows: *Antelope Valley Ground Water Cases*.
 - 11.2) Conference with Legal Counsel Potential Litigation: A closed session will be held, pursuant to Government Code §54956.9 (d)(4), to confer with District General Counsel to consider whether to initiate litigation, one case.
- 12) Public report of any action taken in closed session.
- 13) Board members' requests for future agenda items.
- 14) Adjournment.

Linis D. La Mincourx

DENNIS D. LaMOREAUX, General Manager

DDL/dd

Water Conservation May 2016

- ♦ 12 Appeal letters submitted
- ♦ 41 Citations issued in May (123 Total)
- ♦ Citation breakdown:

CHG	Water Waste 1 st Notice	\$50.00	\$6,100.00
CHG	Water Waste 2 nd Notice	\$250.00	\$250.00
CHG	Water Waste 3 rd Notice	\$500.00	\$0.00
CHG	Water Waste 4 th Notice	\$1,000.00	\$0.00
		Grand Total	\$6,350.00

- \Rightarrow Water savings for May = 26.6%
- ♦ Gallons per capita per day for May = 108.26
- ♦ May Drought Surcharge Revenue = \$85,568.00
- ♦ Cumulative water savings since June 1, 2015 = 24.7%



PALMDALE WATER DISTRICT BOARD MEMORANDUM

DATE:	June 16, 2016	June 22, 2016
TO:	BOARD OF DIRECTORS	Board Meeting
FROM:	Mr. Dennis D. LaMoreaux, General Manager	
RE:	AGENDA ITEM NO. 6.4 – APPROVAL OF STA BETWEEN THE DISTRICT AND ERNST & YO STATE WATER PROJECT PROCEDURES TO A RELATION TO THE DEPARTMENT OF WA STATEMENT OF CHARGES.	UNG FOR 2016-2017 BE PERFORMED IN

Recommendation:

Staff recommends approval of the Statement of Work between the District and Ernst & Young for 2016-2017 State Water Project procedures to be performed in relation to the Department of Water Resources' Statement of Charges in the not-to-exceed amount of \$7,714.00.

Background:

The Palmdale Water District is a member of the State Water Contractors Independent Audit Association (IAA) and has been involved in these auditing activities for a number of years. The IAA hires an accounting/auditing firm on an annual basis to review the billings and financial statements prepared by the Department of Water Resources for State Water Project costs. The IAA has reviewed Ernst & Young's audit procedures and recommends IAA members approve the 2016-2017 Statement of Work.

The cost to the District will range from \$6,171.00 to \$7,714.00 depending upon how many members of the IAA approve the Statement of Work.

Strategic Plan Initiative:

Strategic Initiative No. 1 – Water Resource Reliability

Budget:

These services are under Administration budget line item 1-02-4150-000 – Accounting Services.

Supporting Documents:

• Ernst & Young Statement of Work for FY 2016-2017



Ernst & Young LLP Suite 300 2901 Douglas Boulevard Roseville, CA 95661 Tel: +1 916 218 1900 Fax: +1 916 218 1999

May 30, 2016

RECEIVED

JUN 1 3 2016

Mr. Dennis Lamoreaux Palmdale Water District 2029 East Avenue "Q" Palmdale, California 93550

Dear Mr. Lamoreaux:

In coordination with the Independent Audit Association (IAA), we have developed the Statement of Work (SOW) for the 2016-2017 Procedures to be performed related to the 2017 Statement of Charges. This SOW is pursuant to the Master Services Agreement (MSA) by and between EY and Palmdale Water District dated July 27, 2012, which describes the annual approval process of each SOW performed under the MSA.

Enclosed are two copies of our SOW, one for your records and another to be signed and returned to EY in the self-addressed, stamped return envelope provided. We have also enclosed your copy of the support letter from Tamara Baptista, IAA Secretary, recommending the approval of the SOW by Palmdale Water District.

If you have any questions about the enclosed SOW, please feel free to call me at (916) 218-1960.

Very truly yours,

Joe Pirnik Executive Director

Enclosures

INDEPENDENT AUDIT ASSOCIATION

MEMORANDUM

Date:May 5, 2016To:Members of the Independent Audit Association (IAA)From:Tamara Baptista, IAA SecretarySubject:Ernst and Young 2016/17 State Water Project Professional Services Contract –
Recommended Approval and Execution

Enclosed is the 2016/17 Statement of Work (SOW) which includes the State Water Project procedures to be performed in relation to the Department of Water Resources' (DWR) Statement of Charges. In 2012, IAA Members approved the Master Services Agreement (MSA) with Ernst and Young which spans a period of 5 years, although, may be extended if mutually agreed upon. This is the fifth year of the MSA.

Each year the IAA coordinates with Ernst and Young to develop a SOW for professional services to be provided in that year per the MSA. The SOW is included by reference in the MSA, but it does not constitute an amendment to the MSA. To provide a more efficient annual approval process only the SOW will be addressed for approval each year.

The Exhibit B budget limit is only billed by Ernst and Young if additional work is reviewed and approved by the IAA and remains at \$50,000. Exhibit C allows individual IAA Members to request Ernst and Young to undertake additional services beyond those included in Exhibit A of the SOW.

The IAA team has reviewed Ernst and Young's proposed procedures and recommends that IAA Members approve and execute the 2016/17 SOW. If you have any questions, please contact me at (925) 454-5011 or <u>tbaptista@zone7water.com</u>.

Sincerely,

Tamara Baptista

Tamara Baptista Zone 7 Water Agency CC: Joe Pirnik, EY



Statement of Work

This Statement of Work with the attached Exhibits, dated May 30, 2016 (this SOW) is made by Ernst & Young LLP ("we" or "EY") and Palmdale Water District on behalf of itself ("you" or "Client"), pursuant to the Master Services Agreement, dated July 27, 2012 (MSA), between EY and Palmdale Water District (the Agency).

The additional terms and conditions of this SOW shall apply only to the Services covered by this SOW and not to Services covered by any other Statement of Work pursuant to the MSA. Capitalized terms used, but not otherwise defined, in this SOW shall have the meanings defined in the MSA, including references in the Agreement to "you" or "Client" shall be deemed references to you.

Scope of services

Except as otherwise set forth in this SOW, this SOW incorporates by reference, and is deemed to be a part of, the MSA. This SOW sets forth the terms and conditions on which EY will perform certain professional services as described in Exhibit A (the Services) for Agency, a member of the State Water Contractors Independent Audit Association (IAA), for the twelve months ending June 30, 2017. With the exception of paragraph 25 of the MSA, which is replaced in its entirety by the following:

Unless prohibited by applicable law, we may provide Client Information to other EY Firms (which are listed at <u>www.ey.com</u>) and EY Persons, as well as external third parties providing services on our or their behalf, who may collect, use, transfer, store or otherwise process (collectively, "Process") it in various jurisdictions in which they operate in order to facilitate performance of the Services, to comply with regulatory requirements, to check conflicts, to provide financial accounting and other administrative support services or for quality and risk management purposes. We shall be responsible to you for maintaining the confidentiality of Client Information, regardless of where or by whom such information is Processed on our behalf.

Any changes to the above scope of work will be agreed upon in writing and signed by both parties and will amend this original SOW.

The Services are advisory in nature and will not constitute an audit performed in accordance with Generally Accepted Accounting Principles. EY will perform the Services in accordance with the Statement of Standards for Consulting Services (CS100) of the American Institute for Certified Public Accountants (AICPA). As part of your review of the terms of this Agreement, please refer to the enclosed letter from Ms. Tamara Baptista of the IAA Audit Contract Negotiating Committee dated May 5, 2016.

Your specific obligations

You will not, and you will not permit others to, quote or refer to the Reports, any portion, summary or abstract thereof, or to EY or any other EY Firm, in any document filed or distributed in connection with (i) a purchase or sale of securities to which the United States or state securities laws (Securities Laws) are

applicable, or (ii) periodic reporting obligations under Securities Laws. You will not contend that any provisions of Securities Laws could invalidate any provision of this agreement.

We also draw your attention to the reservations set out in paragraph 5 of the General Terms and Conditions of the MSA, as well as your management responsibilities under paragraph 6, your obligations under paragraphs 11 and 12, and your representation, as of the date hereof, under paragraph 26 thereof.

Specific additional terms and conditions

The Services are advisory in nature. EY will not render an assurance report or opinion under the Agreement, nor will the Services constitute an audit, review, examination, or other form of attestation as those terms are defined by the American Institute of Certified Public Accountants. None of the Services or any Reports will constitute any legal opinion or advice. We will not conduct a review to detect fraud or illegal acts.

Notwithstanding anything to the contrary in the Agreement or this SOW, we do not assume any responsibility for any third-party products, programs or services, their performance or compliance with your specifications or otherwise.

We will base any comments or recommendations as to the functional or technical capabilities of any products in use or being considered by you solely on information provided by your vendors, directly or through you. We are not responsible for the completeness or accuracy of any such information or for confirming any of it.

Where our written consent under the MSA is required for you to disclose to a third party any of our Reports (other than Tax Advice), we will also require that third party to execute a letter substantially in the form of Exhibit D to this SOW. To the extent the Agency is permitted to disclose any written Report as set forth herein, it shall disclose such Report only in the original, complete and unaltered form provided by EY, with all restrictive legends and other agreements intact.

Unless prohibited by applicable law, we may provide Client Information to other EY firms, EY Persons and external third parties, who may collect, use, transfer, store or otherwise process such information in various jurisdictions in which they operate in order to provide support services to any EY Firm and/or assist in the performance of the Services.

After the Services under this SOW have been completed, we may disclose or present to prospective clients, or otherwise in our marketing materials, that we have performed the Services for you, and we may use your name solely for that purpose, in accordance with applicable professional obligations. In addition, we may use your name, trademark, service mark and logo as reasonably necessary to perform the Services and in correspondence, including proposals, from us to you.

You shall not, while we are performing the Services hereunder and for a period of 12 months after they are completed, solicit for employment, or hire, any EY personnel involved in the performance of the Services, provided, that you may generally advertise available positions and hire EY personnel who either respond to such advertisements or who come to you on their own initiative without direct or indirect encouragement from you.

The Agency shall, among other responsibilities with respect to the Services, (i) make all management decisions and perform all management functions, including applying independent business judgment to EY work products, making implementation decisions and determining further courses of action in connection with any Services; (ii) assign a competent employee within senior management to make all management decisions with respect to the Services, oversee the Services and evaluate their adequacy and results; and (iii) accept responsibility for the implementation of the results or recommendations contained in the Reports or otherwise in connection with the Services. The Agency hereby confirms that management of the Agency accepts responsibility for the sufficiency of the Services. In performing the Services neither EY nor EY's partners or employees will act as an employee of the Agency.

The Agency represents and warrants to EY that the Agency's execution and delivery of this Agreement has been authorized by all requisite corporate or other applicable entity action and the person signing this Agreement is expressly authorized to execute it on behalf of, and to bind, the Agency.

The performance of the Services and the parties' obligations in connection therewith are subject to the additional terms and conditions set forth in the MSA.

It is understood that the Agency is not bound by our findings in any controversy or disagreement between the Agency and the Department of Water Resources should the Agency disagree with our findings.

We would also request that, if any IAA member discovers discrepancies in billings or other financial statements relative to their State Water Project costs, in addition to your working with the Department to correct the error, please notify EY for potential future inclusion as part of their procedures related to all IAA members.

Fees and billing

The General Terms and Conditions of the Agreement address our fees and expenses generally.

The total fees for these Services to be rendered to the Agency, as well as an allocation of the total fees for each member agency of the IAA, appear in Exhibits A and B attached (no procedures or fees have been allocated to Exhibit B in this contract). Our total fees pursuant to Exhibit A to be charged to all members of the IAA entering into agreements with us shall not exceed \$480,000 for the twelve months ending June 30, 2017. This agreement will not be effective unless, in addition to the Agency, a sufficient number of other IAA agencies enter into agreements with us for such Services whose combined allocated fee would represent not less than 80% of \$480,000 based on the 100% participation fee allocation (see column 2 at A-4). If all agencies who are presently participating in the Services rendered by our firm enter into agreements with us for this twelve-month period, the maximum fees for our Services to your Agency will not exceed \$6,171 for Exhibit A. However, if not all of the participating agencies enter into agreements with us for services during the twelve-month period ending June 30, 2017, the maximum fees to your Agency will vary between the above-mentioned amount and \$7,714, which represents the maximum fees should sufficient agencies enter into agreements with us with a combined allocated fee of not less than 80%, as stated above.

In addition to the maximum fees under Exhibit A, maximum fees under Exhibit B shall not exceed a total of \$50,000 or \$643 for the Agency unless agreed to by the IAA. As noted above, no procedures have been allocated to Exhibit B. Prior to any expenditures under Exhibit B, said work must be specifically

requested in writing in advance of any work being performed. Areas of potential focus for Exhibit B projects could include procedures agreed to by EY and the IAA in advance related to one or more of the items identified in Exhibit A. In prior years Exhibit B special projects have included projects such as assessing implementation and billing issues relating to the new SAP-based Cost Allocation and Repayment Analysis System (CARA), and studies to evaluate a pay-as-you-go system for funding conservation related operating costs incurred by the Department.

We have also included Exhibit C as part of this contract, which provides the opportunity for individual Contractors to enter into separate agreements for additional services with EY. There are currently no fees related to Exhibit C included herein.

The results of our procedures will include a presentation of our findings, observations and recommendations to be held in Sacramento, California for any interested Contractors. Any presentations requested at individual Contractor locations will be negotiated with the individual Contractor under Exhibit C and will be paid for by that Contractor.

Invoices for time and expenses will be billed monthly and are due upon receipt.

In witness whereof, the parties have executed this SOW as of the date set forth above.

Palmdale Water District

Ernst & Young, LLP

Representative

~ ^

×

Representative

Gos R.C

Signature	Signature
Printed Name	Joe Pirnik Printed Name
	Executive Director
Title	Title
	Ernst & Young LLP
	Suite 300
	2901 Douglas Boulevard
	Roseville, CA 95661
Address	Address
	May 30, 2016
Date	Date

EXHIBIT A

I. SCOPE OF ENGAGEMENT

A-1 EY will work with the IAA, the State Water Contractors (SWC) Audit/Finance Committee, and any subcommittees thereof, and the Department of Water Resources (the Department) during the twelve months ending June 30, 2017 relating to matters currently being discussed between the SWC and the Department.

EY's Services to be rendered as described in this Exhibit shall be determined by the IAA at its discretion. These Services shall include:

- 1. Completion of the 2016/2017 procedures as outlined further below
- Participation in all meetings of the SWC Audit/Finance Committee, which is a basic forum for communications between the State Water Project Contractors and the Department's staff on financial and accounting matters.
- 3. Cooperation with any subcommittees of the IAA assigned to study and resolve specific problem areas.
- 4. Review of reports and other documents prepared by the Department and disseminated at these meetings.
- 5. Provide an annual report setting forth the findings, comments, and recommendations related to our Services.

Report definitions

The assessment of risk of future occurrence, included in the findings summary tables in the report, provides the IAA with a meaningful measurement of the likelihood of similar findings in subsequent years if this issue is not addressed by the appropriate parties. This assessment of risk of future occurrence is based on knowledge obtained during discussions with Department of Water Resources personnel and performance of procedures under this Exhibit A. Below are the definitions used in the report of findings and recommendations for the twelve months ending June 30, 2017 and we concur with these definitions.

Risk of Future Occurrence:

- A. High it is highly likely (or probable) that the error or process failure will be repeated
- B. Medium it is more likely than not that the error or process failure will be repeated
- C. Low it is possible that the error or process failure will be repeated

During the twelve months ending June 30, 2017, the Services will include the following procedures.

2016/2017 Procedures

The procedures for the fiscal year ended June 30, 2017 were designed using estimated budgeted hours of 3,000. We will perform all procedures included in items 1-6 below. We will perform the procedures in items 7-8 if time permits. As a part of these procedures, we will regularly meet with the IAA to discuss the progress under this engagement. We will also submit the Report to each agency setting forth the findings, observations, and recommendations related to our Services.

The following items represent the risks, risk factors, and procedures requested and determined by the Independent Audit Association (IAA) for the State Water Contractors (the Contractors) to be performed for the 2017 Statement of Charges (SOC) engagement:

Primary Procedures (Items 1-6)

1. Statement of Charges Testing

Risk:

• Incorrect amounts billed to Contractors for each component by the Department.

Risk Factors:

- Manual adjustments made to SAP data to arrive at amounts billed. Manual processes create opportunities for errors.
- Actual costs reported in the bills can be misstated.
- High importance on accurate Contractor bills.

- Determine that all SOC amounts are internally consistent and agree to the Bulletin 132-16 for five Contractors selected for testing (to be provided by the IAA).
- Agree the debt service amounts in the SOC Attachments to the appropriate debt service schedule.
- Comparison of the current year SOC Attachments to the prior year SOC Attachments.
- Reasonableness of manual adjustments.
- Assess the appropriateness of actual costs charged to various areas of the project.
- Assess the factors for distributing reach capital and minimum costs among the Contractors.
- Determine the funding source for California WaterFix costs in SAP.

2. Debt Service Procedures

Risk:

• Incorrect bond debt service charged to the Contractors.

Risk Factors:

- Amount billed could be different than amount due for principal and interest.
- WSRB Surcharge calculation is a manual process. Manual processes create opportunities for errors.
- WSRB Surcharge does not reflect the results of the debt reconciliation project.

- Debt Reconciliation Procedures:
 - Test Pre-SAP, first wave of SAP, and next wave of SAP cost data included in the capital raw data file by agreeing to source data included in the SAP system.
 - Test the reconciliation between the capital raw data file to the Bulletin 132 Table B-10, Capital Costs of Each Aqueduct Reach to be Reimbursed through Capital Cost Component of Transportation Charge and Table B-13 and Capital and Operating Costs of Project Conservation Facilities to be Reimbursed through Delta Water Charge.
 - Test the mapping of the capital raw data file to the cost column included in the debt reconciliation.
 - Test the mapping of the Water System Revenue Bonds schedule to the debt column included in the debt reconciliation.
 - Test the reconciling items identified comparing the cost column to the debt column in the debt reconciliation. Gain an understanding of the reconciling items and "judgment calls" from Matthew Carleson and Pedro Villalobos.
 - Test the debt reconciliation results between the projects included in the analysis (Coastal Branch Extension, South Bay Enlargement and Improvement, Tehachapi East Afterbay, East Branch Extension, East Branch Enlargement, and Water System Revenue Bonds).

3. System Power Costs – Variable Transportation

Risk:

• Incorrect Contractor charged and/or incorrect allocation of costs between Contractors.

Risk Factors:

- Calculation of allocation factors is a manual process. Manual processes create opportunities for errors.
- Potential for high dollar impact of errors (\$153M net system power costs in 2014).
- Estimated Table 2 projected costs (invoicing rate) may not reflect actual costs incurred.

- Vouch power costs and power revenues from SAP greater than \$500K and test the appropriate classification of costs.
- Reconcile the PALPOC to UCABS (SAP). Recalculate appropriate inputs to the PALPOC (e.g., VORG credits, direct-to-plant transmission, etc.).
- Recalculate the 2015 calendar year power allocation factors used in UCABS (SAP) to allocate net power costs.
- Recalculate the billed amounts for the transportation variable cost components for 2015 for the five Contractors selected (to be provided by the IAA).

4. Conservation and Transportation Future Estimates

Risk:

- Costs or credits in the Delta Water Charge may be inappropriate, incomplete or miscalculated.
- Incorrect amounts charged to Contractors for transportation costs based on estimates.

Risk Factors:

- Budgeted amounts reflected in the future estimates may differ materially from actual charges.
- Calculation is a manual process. Manual processes create opportunities for errors.
- Questionable budgeting process.

- Gain an understanding from the Department of the process for calculating the future estimates.
- Obtain support for the future estimates and reconcile support to the SOC.
- Recalculate the component using the future estimates tested.
- Test the future estimates by agreeing the estimates to supporting schedules, budgets, etc.
- Obtain support for any extraordinary projects included in the future estimates and assess their appropriateness.
- Understand the Department's method for incorporating identified variances in prior period's budget vs. actual costs into the current year estimates.

5. Reconciliation between PR5 and UCABS for Actual Costs

Risk:

• Incorrect amounts charged to Contractors for actual costs.

Risk Factors:

- Manual adjustments within UCABS do not agree to amounts within PR5 which is the source of the costs to be allocated to the Contractors.
- New costs may not be recovered from the Contractors.
- Currently the Department does not have a formal periodic reconciliation process.

Areas of Focus:

- Determine accounts that were SWRDS accounts (SWP related) and designated in PR5 as items that should be included in the UCABS system.
- Compare the amount by account or functional area from the PR5 system to the amount included in the UCABS system.
- For differences identified between systems, evaluate significant reconciling items.
- Investigate reconciling items.

6. Rate Management Calculation Including Revenue and Cost Data

Risk:

• Rate Management Credits are improperly calculated based on the revenue and expenditure data in the funds available for rate management credits statement prepared by the Department.

Risk Factors:

- Calculation of Rate Management Credits is a manual process.
- Lack of review and approval of calculation.
- Outdated information used to calculate credits due to the Contractors.

- Obtain the rate management allocation schedule used for the Statement of Charges Rebill and review the allocation methodology for sample selected.
- Obtain the most recent funds available data schedule for the rate management credits and perform detailed testing of a sample of the largest amounts.
- Compare the figures selected for testing to the future forecasts, and investigate any significant differences.
- Perform testing of revenues including systems revenue and 51e.
- Perform testing of revenues and related cash funds.

Other Procedures (Items 7-8)

These procedures will only be performed as time permits after completion of items 1-6 above and consideration of the estimated 3,000 hour time budget.

7. Alpha Allocation Cycles

Risk:

• Incorrect Contractor charged and/or incorrect allocation of costs between Contractors.

Risk Factors:

- Department is in the process of standardizing and reallocating costs for phase 2 and 3. The revised estimated completion date is sometime after the new contract extension is signed which is expected to occur within the next five years.
- New alpha allocation cycles being created each year.
- Potential for high dollar impact (\$247M allocated by alpha allocation cycles in 2014).

- Review the current year alpha standardization activity performed by the Department.
- Review the current year alpha update performed by the Department.
- Testing the S series and F series update performed by the Department by using SAP.

8. New and Changed Master Data

Risk:

- Incorrect allocation of costs (based on functional area selected).
- Incorrect recovery of costs (recovery determines Statement of Charges component).
- Incorrect funding source is used (capital fund versus operating funds).

Risk Factors:

- Historical lack of review and communication between Project Manager and SWPAO.
- Potential impact (initial setup of master data determines posting of costs in future periods).
- Project Managers' possible lack of understanding of allocation cycle when allocating costs.

- Use SAP to determine functional areas created and changed in the current year.
- Determine how costs are being allocated among and recovered from Contractors.
- Based on activities being performed and the analysis of costs posted to Internal Orders or Work Breakdown Structures, determine if functional area, recovery, and funding are appropriate.

II. FEES FOR EY SERVICES

A-2. Total fees for Exhibit A services performed by EY will not exceed \$480,000, including reasonable and necessary out-of-pocket expenses, which represent an estimated 3,000 hours to be incurred.

III. ALLOCATION OF FEES

A-3. The maximum aggregate fee set forth in paragraph A-2 shall be apportioned among the agencies named in paragraph A-4 based on a basis consistent with prior years.

,

IV. MAXIMUM AGGREGATE FEE FOR EACH AGENCY

A-4.

The portion of the maximum aggregate fee set forth in paragraph A-2 applicable to each agency in conformity with the methodology set forth in paragraph A-3 is shown below:

Agency	Maximum fee for each agency, provided all agencies listed below enter into agreements with EY	Maximum fee for each agency, provided 80% of agencies listed below enter into agreements with EY	Percent of total
Alameda County Flood Control and			
Water Conservation District, Zone No. 7	\$ 23,356	\$ 29,194	4.9%
Alameda County Water District	12,167	15,208	2.5
Antelope Valley-East Kern Water Agency	41,962	52,452	8.7
Casitas Municipal Water District	5,794	7,243	1.2
Castaic Lake Water Agency	27,580	34,475	5.7
Central Coast Water Authority	13,177	16,471	2.7
City of Yuba City	2,781	3,476	0.6
Coachella Valley Water District	40,080	50,100	8.4
County of Kings	2,696	3,370	0.6
Crestline-Lake Arrowhead Water Agency	1,680	2,100	0.4
Desert Water Agency	16,151	20,189	3.4
Dudley Ridge Water District	13,138	16,423	2.7
Empire West Side Irrigation District	869	1,086	0.2
Kern County Water Agency	120,000	150,000	25.0
Littlerock Creek Irrigation District	666	833	0.1
Mojave Water Agency	24,856	31,070	5.2
Napa County Flood Control and Water Conservation District	8,409	10,511	1.8
Palmdale Water District	6,171	7,714	1.3
San Bernardino Valley Municipal Water District	29,723	37,154	6.2
San Gabriel Valley Municipal Water District	8,343	10,429	1.7
San Gorgonio Pass Water Agency	5,012	6,265	1.0
San Luis Obispo County Flood Control and Water Conservation District	7,243	9,054	1.5
Santa Clara Valley Water District	28,970	36,213	6.0
Solano County Water Agency	13,835	17,294	2.9
Tulare Lake Basin Water Storage District	25,341	31,676	5.3
Total	\$ 480,000		<u>100</u> %

V. PAYMENT SCHEDULE

July 15, 2016 Billing	August 15, 2016 Billing	September 15, 2016 Billing	October 15, 2016 Billing	November 15, 2016 Billing	Total Billing
\$1,851	\$1,234	\$1,234	\$1,234	\$618	\$6,171

This is the payment schedule for the Agency.

ι, ι

EXHIBIT B

I. OTHER CONSULTING SERVICES

EY shall, during the twelve months ending June 30, 2017, perform other services if requested by the IAA. No such work shall be performed unless specifically authorized by the IAA in writing. Areas of potential focus for Exhibit B projects could include in depth procedures agreed to by EY and the IAA in advance related to one or more of the items identified in Exhibit A.

Total fees for such other consulting services shall 1) be agreed to prior to commencement of work, 2) be allocated among the agencies based on the same procedures included in the Exhibit A allocation, and 3) shall not exceed \$50,000, which represents an estimated 310 hours to be incurred, unless agreed to by the IAA, for the year ended June 30, 2017. Any part of the \$50,000 which is unused shall not be billed.

	Maximum fee for each agency, provided all agencies listed below enter into agreements with	Percent of
Agency	EY	total
Alameda County Flood Control and Water Conservation District, Zone No.7	\$ 2,433	4.9%
Alameda County Water District	1,267	2.5
Antelope Valley-East Kern Water Agency	4,371	8.7
Casitas Municipal Water District	604	1.2
Castaic Lake Water Agency	2,873	5.7
Central Coast Water Authority	1,373	2.7
City of Yuba City	290	0.6
Coachella Valley Water District	4,175	8.4
County of Kings	281	0.6
Crestline-Lake Arrowhead Water Agency	175	0.4
Desert Water Agency	1,681	3.4
Dudley Ridge Water District	1,369	2.7
Empire West Side Irrigation District	91	0.2
Kern County Water Agency	12,500	25.0
Littlerock Creek Irrigation District	69	0.1
Mojave Water Agency	2,589	5.2
Napa County Flood Control and Water Conservation District Palmdale Water District	876 643	1.8 1.3
San Bernardino Valley Municipal	0.12	
Water District	3,096	6.2
San Gabriel Valley Municipal	869	1.7
Water District San Gorgonio Pass Water Agency	522	1.7
San Luis Obispo County Flood Control	522	1.0
and Water Conservation District	754	1.5
Santa Clara Valley Water District	3,018	6.0
Solano County Water Agency	1,441	2.9
Tulare Lake Basin Water Storage District	2,640	5.3
Total	\$ 50,000	<u>100</u> %

EXHIBIT C

I. INDIVIDUAL CONTRACTOR AGREEMENTS

EY may, during the twelve months ending June 30, 2017, perform other consulting services as requested by individual Contractors. These services will be performed and billed separately from the services outlined in Exhibits A and B.

The terms and conditions of any procedures performed under Exhibit C, including payment terms, will be outlined in a separate Statement of Work (SOW). These services, which will be agreed to by EY and the requesting Contractor in advance, will be documented in the example SOW attached to herein as Exhibit C-1. An Exhibit C-1 statement of work will be made available to any Contractor upon request. All other provisions of the Contractor's signed contract with EY for the twelve months ending June 30, 2017 will continue to be in effect.

Total fees for such other consulting services shall be agreed to with the individual Contractor prior to commencement of work. The fees for services provided under Exhibit C will be outside of those referenced in Exhibits A and B, and will be paid for directly by the requesting Contractor.

EXHIBIT C-1

Statement of Work

This Statement of Work with the attached Exhibit, dated May 30, 2016 (this SOW) is made by Ernst & Young LLP ("we" or "EY") and Palmdale Water District on behalf of itself ("you" or "Client"), pursuant to the Agreement, dated May 30, 2016 (the Agreement), between EY and Palmdale Water District (the Agency).

Except as otherwise set forth in this SOW, this SOW incorporates by reference, and is deemed to be a part of, the Agreement. The additional terms and conditions of this SOW shall apply only to the Services covered by this SOW and not to Services covered by any other Statement of Work pursuant to the Master Services Agreement (MSA) by and between EY and the Agency dated July 27, 2012. Capitalized terms used, but not otherwise defined, in this SOW shall have the meanings defined in the MSA, including references in the Agreement to "you" or "Client" shall be deemed references to you.

Scope of services

Except as otherwise set forth in this SOW, this SOW incorporates by reference, and is deemed to be a part of, the Agreement. This SOW sets forth the terms and conditions on which EY will perform certain professional services as described [INSERT DEFINITION OF SERVICES] (the Services) for Agency, a member of the State Water Contractors Independent Audit Association (IAA), for the twelve months ending June 30, 2017. With the exception of paragraph 25 of the MSA, which is replaced in its entirety by the following:

Unless prohibited by applicable law, we may provide Client Information to other EY Firms (which are listed at <u>www.ey.com</u>) and EY Persons, as well as external third parties providing services on our or their behalf, who may collect, use, transfer, store or otherwise process (collectively, "Process") it in various jurisdictions in which they operate in order to facilitate performance of the Services, to comply with regulatory requirements, to check conflicts, to provide financial accounting and other administrative support services or for quality and risk management purposes. We shall be responsible to you for maintaining the confidentiality of Client Information, regardless of where or by whom such information is processed on our behalf.

Any changes to the above scope of work will be agreed upon in writing and signed by both parties and will amend this original SOW.

The Services are advisory in nature and will not constitute an audit performed in accordance with Generally Accepted Accounting Principles. EY will perform the Services in accordance with the Statement of Standards for Consulting Services (CS100) of the American Institute for Certified Public Accountants (AICPA).

Your specific obligations

You will not, and you will not permit others to, quote or refer to the Reports, any portion, summary or abstract thereof, or to EY or any other EY Firm, in any document filed or distributed in connection with (i) a purchase or sale of securities to which the United States or state securities laws (Securities Laws) are applicable, or (ii) periodic reporting obligations under Securities Laws. You will not contend that any provisions of Securities Laws could invalidate any provision of this agreement.

We also draw your attention to the reservations set out in paragraph 5 of the General Terms and Conditions of the MSA, as well as your management responsibilities under paragraph 6, your obligations under paragraphs 11 and 12, and your representation, as of the date hereof, under paragraph 26 thereof.

Specific additional terms and conditions

The Services are advisory in nature. EY will not render an assurance report or opinion under the Agreement, nor will the Services constitute an audit, review, examination, or other form of attestation as those terms are defined by the American Institute of Certified Public Accountants. None of the Services or any Reports will constitute any legal opinion or advice. We will not conduct a review to detect fraud or illegal acts.

Notwithstanding anything to the contrary in the Agreement or this SOW, we do not assume any responsibility for any third-party products, programs or services, their performance or compliance with your specifications or otherwise.

We will base any comments or recommendations as to the functional or technical capabilities of any products in use or being considered by you solely on information provided by your vendors, directly or through you. We are not responsible for the completeness or accuracy of any such information or for confirming any of it.

Where our written consent under the MSA is required for you to disclose to a third party any of our Reports (other than Tax Advice), we will also require that third party to execute a letter substantially in the form of Exhibit D to the Agreement. To the extent the Agency is permitted to disclose any written Report as set forth herein, it shall disclose such Report only in the original, complete and unaltered form provided by EY, with all restrictive legends and other agreements intact.

Unless prohibited by applicable law, we may provide Client Information to other EY firms, EY Persons and external third parties, who may collect, use, transfer, store or otherwise process such information in various jurisdictions in which they operate in order to provide support services to any EY Firm and/or assist in the performance of the Services.

After the Services under this SOW have been completed, we may disclose or present to prospective clients, or otherwise in our marketing materials, that we have performed the Services for you, and we may use your name solely for that purpose, in accordance with applicable professional obligations. In addition, we may use your name, trademark, service mark and logo as reasonably necessary to perform the Services and in correspondence, including proposals, from us to you.

You shall not, while we are performing the Services hereunder and for a period of 12 months after they are completed, solicit for employment, or hire, any EY personnel involved in the performance of the Services, provided, that you may generally advertise available positions and hire EY personnel who either respond to such advertisements or who come to you on their own initiative without direct or indirect encouragement from you.

The Agency shall, among other responsibilities with respect to the Services, (i) make all management decisions and perform all management functions, including applying independent business judgment to EY work products, making implementation decisions and determining further courses of action in connection with any Services; (ii) assign a competent employee within senior management to make all management decisions with respect to the Services, oversee the Services and evaluate their adequacy and results; and (iii) accept responsibility for the implementation of the results or recommendations contained in the Reports or otherwise in connection with the Services. The Agency hereby confirms that management of the Agency accepts responsibility for the sufficiency of the Services. In performing the Services neither EY nor EY's partners or employees will act as an employee of the Agency.

The Agency represents and warrants to EY that the Agency's execution and delivery of this Agreement has been authorized by all requisite corporate or other applicable entity action and the person signing this Agreement is expressly authorized to execute it on behalf of, and to bind, the Agency.

The performance of the Services and the parties' obligations in connection therewith are subject to the additional terms and conditions set forth in the MSA.

It is understood that the Agency is not bound by our findings in any controversy or disagreement between the Agency and the Department of Water Resources should the Agency disagree with our findings.

We would also request that, if any IAA member discovers discrepancies in billings or other financial statements relative to their State Water Project costs, in addition to your working with the Department to correct the error, please notify EY for potential future inclusion as part of their procedures related to all IAA members.

Project deliverables

The matrix below lists the specific deliverables and related timelines that EY will provide to (insert Contractor).

Deliverable	Timeline	Comments	

Additional responsibilities

EY will provide (insert Contractor) with a timeline/schedule related to all project deliverables prior to the start of work on the project.

EY will notify (insert Contractor) in writing of any incremental changes to the original project estimate.

Production of all elements described in the "Project deliverables" section of this SOW is to be included in the cost breakdown under the "Pricing and payment terms" section below, agreed upon by (insert Contractor) and EY for this project.

Fees and billing

Below is a summary of the current cost estimates for this SOW. Due to the complexities and variable nature of this project, actual costs could vary from these estimates. In the event costs are expected to exceed the estimate, EY will contact (insert Contractor) before performing any additional work.

Out-of-pocket expenses incurred during this contract are not included in the above SOW estimated cost. Expenses include such items as travel, meals, accommodations, and other administrative expenses based on actual amounts incurred.

Invoices for time and expenses will be billed monthly and are due upon receipt.

IN WITNESS WHEREOF, the parties hereto have executed this SOW as of the day and year written below.

Palmdale Water District	Ernst & Young, LLP	
Representative	Representative	
Signature	Signature	
Printed Name	Printed Name	
Title	Title	
Address	Address	
Date	Date	

EXHIBIT D

FORM OF ACCESS LETTER

[Letterhead of EY]

[Addressee (e.g., third party seeking access to EY Report)] [Street Address] [City, State Zip] [Month XX, 20XX]

Dear [____]:

[Client] (the "Client") has informed Ernst & Young LLP ("EY") that it wishes to disclose to [party seeking access] (the "Recipient") EY's[describe report(s)], dated [_____], relating to [describe subject] (the "Report(s)"). EY has not placed any limitations on the Client's ability to disclose any contents of the Report relating to the tax aspects or structure of any transaction proposed by the Client.

EY performed Services only for the Client. EY did not undertake the Services on behalf of, or to serve the needs of, the Recipient or any other third party. As part of such services, EY did not audit the Client's financial statements, subsequent to the date(s) of the Report(s).

EY prepared the Report(s) solely for the Client. The Report(s) address[es] only the issues identified by the Client, and [is/are] based solely on information obtained by EY using the procedures specified by the Client or otherwise provided by or on behalf of the Client. The Report(s) [is/are] subject to many limitations and [do/does] not provide any form of assurance with respect to any of the information referred to therein. The Recipient understands and accepts the scope and limitations of the Report(s).

Except (1) where compelled by legal process (of which the Recipient will immediately notify EY and tender to EY, if it so elects, the defense thereof), (2) with respect to any contents of the Report relating to the tax treatment and tax structure of the proposed transaction (including any facts that may be relevant to understanding the proposed tax treatment of the proposed transaction), or (3) with EY's prior written consent, the Recipient will not, circulate, quote, disclose or distribute any of the Report(s) or any information contained therein, or any summary or abstract thereof, or make any reference thereto or to EY, to anyone other than the Recipient's directors, officers or employees or legal advisors who, in each case, need to know its contents in order to ______, and who have agreed to be bound by the terms and conditions of this agreement to the same extent as the Recipient.

The Recipient further agrees that it will not, and will not permit others to, quote or refer to the Report, any portion, summary or abstract thereof, or to EY, in any document filed or distributed in connection with (a) a purchase or sale of securities to which the United States or state securities laws ("Securities Laws") are applicable or (b) periodic reporting obligations under Securities Laws. The Recipient will not contend that any provisions of Securities Laws could invalidate any provision of this agreement.

In further consideration of EY allowing the Recipient access to the Report(s) and the information contained therein, the Recipient agrees that:

- 1. It does not acquire any rights against EY, and EY does not assume any duties or obligations to the Recipient or otherwise, as a result of such access.
- 2. It will not rely on the Report(s) or any portion thereof and will make no claim that it has done so.
- 3. It will make no claim against EY, its partners, employees or affiliates, or other members of the global Ernst & Young network (collectively, the "EY Parties" that relates in any way to the Report(s), any information contained therein, or the Recipient's access to the Report(s).
- 4. To the fullest extent permitted by applicable law, it will indemnify, defend and hold harmless the EY Parties from and against any claim or expense, including reasonable attorneys' fees, suffered or incurred by any EY Party relating to any breach by the Recipient of any of its representations or agreements contained herein or the use or disclosure of the Report(s) or any portion thereof by anyone who received it directly or indirectly from or at the request of the Recipient.

Very truly yours,

Ernst & Young LLP

Accepted by:

[Addressee]

By:

PALMDALE WATER DISTRICT BOARD MEMORANDUM

DATE:	June 15, 2016	June 22, 2016
TO:	BOARD OF DIRECTORS	Board Meeting
FROM:	Amanda Thompson, Water Quality & Regulatory Affairs Supervisor	
VIA:	Mr. Mynor Masaya, Operations Manager Mr. Matt Knudson, Assistant General Manager Mr. Dennis D. LaMoreaux, General Manager	
RE:	AGENDA ITEM NO. 7.1 AND 7.2 – PUBLIC CONSIDERATION AND POSSIBLE ACTION ON A PUBLIC HEALTH GOAL REPORT.	

Recommendation:

Staff recommends the Board approve and adopt the 2016 Public Health Goal Report.

Background:

Attached for your approval is the final draft of a report prepared by staff comparing our District's drinking water quality with Public Health Goals (PHGs) adopted by California's EPA's Office of Environmental Health Hazard Assessment (OEHHA) and with Maximum Contaminant Level Goals (MCLGs) adopted by the USEPA. PHGs and MCLGs are not enforceable standards, and no action to meet them is mandated.

SB 1307 (Calderone-Sher; effective 1-1-97) added new provisions to the California Health and Safety Code which mandate that a report be prepared by July 1, 1998 and every three years thereafter. The attached report is intended to provide information to the public in addition to the annual Consumer Confidence Report (CCR) provided to each customer.

Our water system complies with all of the health-based drinking water standards and maximum contaminant levels (MCLs) required by the California Division of Drinking Water and the USEPA. No additional actions are recommended.

The new law requires that a public hearing be held (which can be part of a regularly scheduled public meeting) for the purpose of accepting and responding to public comment on the report. This public hearing will be scheduled as part of our regular board meeting scheduled for June 22, 2016 and will be noticed as required for public hearing.

Supporting Documents:

- PowerPoint presentation on 2015 Consumer Confidence Report and 2016 Public Health Goal Report
- 2016 Public Health Goal Report
- 2015 Consumer Confidence Report



CONSUMER CONFIDENCE REPORT

AMANDA THOMPSON



WATER QUALITY AND REGULATORY AFFAIRS SUPERVISOR

PALMDALE WATER DISTRICT PALMDALE, CA 93550

BACKGROUND

- The California Safe Drinking Water Act of 1996
 - Requires PWSs to provide a brief annual water quality report to consumers
 - Report due by July 1st of each year
- Must include:
 - Information on source water
 - Levels of any detected contaminants
 - Compliance with drinking water regulations

WATER QUALITY DATA CONSIDERED

- CCRs are based on all regulatory water quality data collected during, or prior to, the previous calendar year (e.g. 2015).
- Only includes contaminants that are detected at or above its detection level for purposes of reporting (DLR).
2015 CONSUMER CONFIDENCE REPORT

- 100% Compliance for all regulatory water quality data
- Electronic copies of the CCR are posted: English:

http://palmdalewater.wpengine.com/wp-content/uploads/2016/06/CCR_2016.pdf Spanish:

http://palmdalewater.wpengine.com/wp-content/uploads/2016/06/CCR_2016_SPAN.pdf

 Postcards sent out to all consumers (property owners, tenants, business owners, etc.)



PUBLIC HEALTH GOAL REPORT

AMANDA THOMPSON



WATER QUALITY AND REGULATORY AFFAIRS SUPERVISOR

PALMDALE WATER DISTRICT PALMDALE, CA 93550

BACKGROUND

- The California Safe Drinking Water Act of 1996
 - Required the establishment of Public Health Goals for drinking water contaminants
 - PHG's are established by the Office of Environmental Health Hazard Assessment (OEHHA)
- Health and Safety Code Section 116470
 - Requires a PHG report every three (3) years
 - In addition to the annual Water Quality Report

WHAT ARE PUBLIC HEALTH GOALS?

"...estimates the level of the chemical in drinking water that would pose no significant health risk to individuals, including sensitive populations, consuming the water on a daily basis over a lifetime. PHGs represent health-protective goals based solely on public health considerations and are developed based on the best available data in the scientific literature."

WHAT PUBLIC HEALTH GOALS ARE NOT

- <u>NOT</u> regulatory Maximum Contaminant Levels (MCL)
 However, they are the scientific basis for establishing the maximum contaminant levels
- **NOT** enforceable under the Safe Drinking Water Act
- **NOT** contaminant levels requiring any further action

WATER QUALITY DATA CONSIDERED

- All regulatory water quality data collected between 2013 and 2015
- All wells and surface water sources
- Same data used to produce the Consumer
 Confidence Reports made available to all customers
 by July 1st of each year



	PHG (MCLG)	MCL	Result
Arsenic	0.004 µg/L	10 µg/L	6.8 µg/L
Copper	0.17 mg/L	1.3 mg/L	0.37 mg/L
Chromium VI	0.02 µg/L	10 µg/L	8.8 µg/L
Gross Alpha	(0 pCi/L)	15 pCi/L	5.7 pCi/L
Gross Beta	(0 pCi/L)	50 pCi/L	5.6 pCi/L

TOTAL COMPLIANCE

- Palmdale Water District has been 100% in compliance with all primary drinking water standards during the years 2013 – 2015.
- Palmdale Water District continues to produce high quality drinking water which is in compliance for the first half of 2016.





ANY QUESTIONS?



Palmdale Water District • 2029 East Avenue Q • Palmdale, CA 93550 • 661-456-1041 "Providing High Quality Water To Our Current and Future Customers At A Reasonable Cost"



Public Health Goal Report 2016

Background:

Provisions of the California Health and Safety Code (Attachment No. 1) specify that larger (>10,000 service connections) water utilities prepare a special report by July 1, 2016 if their water quality measurements have exceeded any Public Health Goals (PHGs). PHGs are non-enforceable goals established by the Cal-EPA's Office of Environmental Health Hazard Assessment (OEHHA). The law also requires that where OEHHA has not adopted a PHG for a constituent, the water suppliers are to use the Maximum Contaminant Level Goal (MCLG) adopted by United States Environmental Protection Agency (USEPA). Only constituents which have a California primary drinking water standard and for which either a PHG or MCLG has been set are to be addressed. (Attachment No. 2 is a list of all regulated constituents with Maximum Contaminant Level (MCL), PHG or MCLG.)

Few constituents exist that are routinely detected in water systems at levels usually well below the drinking water standards for which neither PHG nor MCLG have been adopted by OEHHA or USEPA, including Total Trihalomethanes (TTHM). These will be addressed in a future required report after a PHG has been adopted.

The new law specifies what information is to be provided in the report. (See Attachment No. 1)

If a constituent was detected in the District's water supply between 2013 and 2015 at a level exceeding an applicable PHG or MCLG, this report provides the information required by the law. Included is the numerical public health risk associated with the MCL and the PHG or MCLG, the category or type of risk to health that could be associated with each constituent (Attachment No. 2), the best treatment technology available that could be used to reduce the constituent level (Attachment No. 1), and an estimate of the cost to install that treatment if it is appropriate and feasible (Attachment No. 3).

What Are PHGs?

PHGs are set by the California Office of Environmental Health Hazard Assessment (OEHHA) which is part of Cal-EPA and are based solely on public health risk considerations. None of the practical risk-management factors that are considered by the USEPA or the State Water Resources Control Board (SWRCB) in setting drinking water standards (MCLs) are considered in setting the PHGs. These factors include analytical detection capability, treatment technology available, benefits and costs. The PHGs are not enforceable and are not required to be met by any public water system. MCLGs are the federal equivalent to PHGs.

Water Quality Data Considered:

All of the water quality data collected by our water system between 2013 and 2015 for purposes of determining compliance with drinking water standards was considered. This data was all summarized in our 2013, 2014, and 2015 Annual Water Quality Reports which were made available to all of our customers by July 1^{st.} of each year (Attachment No. 4).

Guidelines Followed:

The Association of California Water Agencies (ACWA) formed a workgroup which prepared guidelines for water utilities to use in preparing these newly required reports. The ACWA guidelines were used in the preparation of our report. No guidance was available from state regulatory agencies.

Best Available Treatment Technology and Cost Estimates:

Both the USEPA and SWRCB adopt what are known as Best Available Technologies (BATs) which are the best known methods of reducing contaminant levels to the MCL. Costs have been estimated for such technologies (Attachment No.3). However, since many PHGs and all MCLGs are set much lower than the MCL, it is not always possible or feasible to determine what treatment is needed to further reduce a constituent downward to or near the PHG or MCLG, many of which are set at zero. Estimating the costs to reduce a constituent to zero is difficult, if not impossible, because it is not possible to verify by analytical means that the level has been lowered to zero. In some cases, installing treatment to try and further reduce very low levels of one constituent may have adverse effects on other aspects of water quality.

Constituents Detected That Exceed a PHG or a MCLG:

The following is a discussion of constituents that were detected in one or more of our drinking water sources between 2013 and 2015 at levels above the PHG, or if no PHG, above the MCLG.

Arsenic:

In 2013, arsenic was detected in Well 15 at 2.0 μ g/L. Additionally, arsenic was detected in the State Water Project (Aqueduct) at a level of 2.5 μ g/L and 5.9 μ g/L in 2013 and 2014, respectively. In 2015, arsenic levels in the State Water Project (Aqueduct) and Palmdale Lake were detected at 6.8 μ g/L and 2.8 μ g/L, respectively.

The USEPA and California State MCL for Arsenic is 10 μ g/L. California PHG is 0.004 μ g/L and USEPA MCLG is zero.

The major sources of arsenic in drinking water are erosion of natural deposits; runoff from orchards; glass and electronics production wastes. Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer. Cancer risk at the PHG is 1×10^{-6} and at California MCL it is 1×10^{-2} . Cancer risk is stated in terms of excess cancer cases per million (or fewer) population, e.g., 1×10^{-6} means one excess cancer case per million people; 1×10^{-2} means one excess cancer case per hundred people.

Our water system is in full compliance with the Federal and State arsenic MCL. BATs for arsenic removal (Attachment 1 - CA Title 22 CCRs 64447.2 Table 64447.2-A) is listed as Activated Alumina, Coagulation/Filtration, Ion Exchange, Lime Softening and Reverse Osmosis. Where the PHG or MCLG is set at zero, there may not be commercially available technology to reach that

Arsenic (continued):

level. Since there is little data readily available to estimate the cost of treatment to achieve absolute zero levels, "BAT" will not necessarily achieve the PHG or MCLG and the actual costs may be relatively higher than the estimate especially when detection is substantially below the MCL or already close to the PHG or MCLG.

Estimated cost for arsenic removal using Reverse Osmosis, the most efficient technology is listed in Attachment No.3.

Lead and/or Copper:

There is no MCL for Lead or Copper. Instead the 90th percentile value of all samples from household taps in the distribution system cannot exceed an Action Level of 0.015 mg/l for lead and 1.3 mg/l for copper. The PHG for lead is 0.0002 mg/L. The PHG for copper is 0.17 mg/l.

Based on the triennial sampling of residences within our distribution system in 2015, our 90th percentile value for copper was 0.370 mg/L which exceeded the PHG. The 90th percentile value for lead was below the DLR and therefore considered to be non-detect, or zero.

The category of health risk for copper is acute toxicity (gastrointestinal effects in children/human data). Numerical health risk data on copper have not yet been provided by OEHHA, the State agency responsible for providing that information.

Our water system is in full compliance with the Federal and State Lead and Copper Rule. To reduce the potential that lead or copper values at consumer taps would exceed the PHG, corrosion control treatment was installed at our treated surface water source.

Based on our extensive sampling, it was determined that according to State Regulatory Requirements, we meet the Action Levels for Lead and Copper. Therefore, we are deemed by SWRCB to have "optimized corrosion control" for our system.

In general, optimizing corrosion control is considered to be the best available technology to deal with corrosion issues and with any lead or copper findings.

We continue to monitor our water quality parameters that relate to corrosiveness, such as the pH, hardness, alkalinity, total dissolved solids, and will take action if necessary to maintain our system in an "optimized corrosion control" condition.

Since we are meeting the "optimized corrosion control" requirements, additional corrosion control treatment is not necessary. Therefore, no estimate of cost is included in this report.

While our system did not exceed the Lead PHG or Lead Action Level, it is possible that there may be high lead levels in your home as a result of materials in your home plumbing. Lead can cause serious health problems, especially for pregnant women and children 6 and under. If you are concerned about high lead levels in your home's water, run your water for 30 seconds to 2 minutes before using tap water and have your water tested. Additional information is available from the National Lead Information Center at 1–800–424–LEAD.

Gross Alpha Particle Activity:

In 2013, gross alpha particle activity was detected in Littlerock Dam and Palmdale Lake at a level of 3.1 pCi/L and 3.2 pCi/L, respectively. In 2015, gross alpha particle activity was detected in Well 15 at a level of 5.7 pCi/L. There is not a PHG for gross alpha particle activity, however the USEPA has set the MCLG at 0 pCi/L.

The major source of alpha particle activity in drinking water is from the erosion of natural deposits. Certain minerals are radioactive and may emit alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

The Palmdale Water District is in full compliance with the State MCL for Gross Alpha Particle activity which is 15 pCi/L. BATs for gross alpha particle activity removal (Attachment 1 - CA Title 22 CCRs 64447.3 Table 64447.3-A) is listed as Reverse Osmosis. Where the PHG or MCLG is set at zero, there may not be commercially available technology to reach that level. Since there is little data readily available to estimate the cost of treatment to achieve absolute zero levels, "BAT" will not necessarily achieve the PHG or MCLG and the actual costs may be relatively higher than the estimate especially when detection is substantially below the MCL or already close to the PHG or MCLG.

Estimated cost for gross alpha particle activity removal using Reverse Osmosis technology is listed in Attachment No.3.

Gross Beta Particle Activity:

In 2015, gross beta particle activity was detected in Littlerock Dam. Results were found in the range from 5.1 pCi/L to 7.0 pCi/L, with an average level of 5.6 pCi/L. There is not a PHG for gross beta particle activity, however the USEPA has set the MCLG at 0 pCi/L.

The major source of beta particle activity in drinking water is from decay of natural and manmade deposits. Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.

The Palmdale Water District is in full compliance with the State MCL for Gross Beta Particle activity which is 50 pCi/L. BATs for gross beta particle activity removal (Attachment 1 - CA Title 22 CCRs 64447.3 Table 64447.3-A) is listed as Reverse Osmosis and Ion Exchange. Where the PHG or MCLG is set at zero, there may not be commercially available technology to reach that level. Since there is little data readily available to estimate the cost of treatment to achieve absolute zero levels, "BAT" will not necessarily achieve the PHG or MCLG and the actual costs may be relatively higher than the estimate especially when detection is substantially below the MCL or already close to the PHG or MCLG.

Estimated cost for gross beta particle activity removal using Reverse Osmosis, the most efficient technology, is listed in Attachment No.3.

Chromium VI (Hexavalent Chromium):

In 2011, the state of California established a Public Health Goal for Chromium VI which was set at $0.02 \mu g/L$. Of the 22 active wells sampled, all had Chromium VI levels that exceeded the newly established PHG. Likewise, the 10 representative samples collected from the distribution system revealed that the PHG was exceeded in all of the distribution system samples as well.

The average Chromium VI level among all wells monitored between 2013 and 2015 is 4.0 μ g/L and results ranged from ND to 12 μ g/L. The highest levels were found in Well 4 with a running annual average (RAA) of 9.9 μ g/L. In the distribution system, the average level is 4.6 μ g/L and results ranged from 1.3 μ g/L to 7.4 μ g/L. The highest concentrations are in areas nearest the North well field.

The California State MCL for Chromium VI is $10 \mu g/L$ and the California PHG is $0.02 \mu g/L$. There is currently no USEPA MCL, though, one is expected in the next few years.

The major sources of Chromium VI in drinking water are discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits. Some people who drink water containing Chromium VI in excess of the MCL over many years may have an increased risk of getting cancer. Cancer risk at the PHG is $1 \times 10-6$ and at California MCL it is $5 \times 10-4$. Cancer risk is stated in terms of excess cancer cases per million (or fewer) population, e.g., $1 \times 10-6$ means one excess cancer case per million people; $5 \times 10-4$ means five excess cancer cases per ten thousand people.

Our water system is in full compliance with the State hexavalent chromium MCL. BATs for hexavalent chromium removal (Attachment 1 - CA Title 22 CCRs 64447.2 Table 64447.2-A) is listed as reduction/coagulation/filtration, weak base anion exchange and strong base anion exchange. Where the PHG or MCLG is set at zero, there may not be commercially available technology to reach that level. Since there is little data readily available to estimate the cost of treatment to achieve absolute zero levels, "BAT" will not necessarily achieve the PHG or MCLG and the actual costs may be relatively higher than the estimate especially when detection is substantially below the MCL or already close to the PHG or MCLG.

Estimated cost for hexavalent chromium removal using Ion Exchange (Weak Base Anion Resin), the most efficient technology is listed in Attachment No.3.

RECOMMENDATIONS FOR FURTHER ACTION:

The drinking water quality of the Palmdale Water District meets all State Water Resources Control Board (SWRCB) and USEPA drinking water standards set to protect public health. To further reduce the levels of the constituents identified in this report that are already significantly below the health-based Maximum Contaminant Levels established to provide "safe drinking water", additional costly treatment processes would be required. The effectiveness of the treatment processes to provide any significant reductions in constituent levels at these already low values is uncertain. The health protection benefits of these further hypothetical reductions are not at all clear and may not be quantifiable. Therefore, no action is proposed.

ATTACHMENTS:

- No.1 Table of Regulated Constituents with MCLs, PHGs or MCLGs and Health Risk Information
- No.2 Health Risk Information for Public Health Goal Exceedance Reports
- No.3 Cost Estimates for Treatment Technologies
- No.4 Palmdale Water District's 2013, 2014 and 2015 Water Quality Data
- No.5 Glossary of terms and abbreviations used in the report



2016 PHG Triennial Report: Calendar Years 2013-2014-2015

MCLs, DLRs, and PHGs for Regulated Drinking Water Contaminants

(Units are in milligrams per liter (mg/L), unless otherwise noted.)

Last Update: December 29, 2015

(Reference last update 9/23/2015: http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/MCLsandPHGs.shtml)

This table includes:

- DDW's maximum contaminant levels (MCLs)
- DDW's detection limits for purposes of reporting (DLRs)

• Public health goals (PHGs) from the Office of Environmental Health Hazard Assessment (OEHHA)

• PHGs for NDMA and 1,2,3-Trichloropropane (both are unregulated) are at the bottom of this table

• The federal MCLG for chemicals without a PHG, microbial contaminants, and the DLR for 1,2,3-TCP

Constituent	MCL	DLR	PHG or (MCLG)	Date of PHG				
Chemicals with MCLs in 22 CCR §64431—Inorganic Chemicals								
Aluminum	1	0.05	0.6	2001				
Antimony	0.006	0.006	0.02	1997				
Antimony			0.0007	2009 draft				
Arsenic	0.010	0.002	0.000004	2004				
Asbestos (MFL = million fibers per liter; for fibers >10 microns long)	7 MFL	0.2 MFL	7 MFL	2003				
Barium	1	0.1	2	2003				
Beryllium	0.004	0.001	0.001	2003				
Cadmium	0.005	0.001	0.00004	2006				
Chromium, Total - OEHHA withdrew the 1999 0.0025 mg/L PHG in Nov 2001	0.05	0.01	(0.100)					
Chromium, Hexavalent (Chromium-6)	0.01	0.001	0.00002	2011				
Cyanide	0.15	0.1	0.15	1997				
Fluoride	2	0.1	1	1997				
Mercury (inorganic)	0.002	0.001	0.0012	1999 (rev2005)*				
Nickel	0.1	0.01	0.012	2001				
Nitrate (as N)	10 as N	0.4	45 as NO3 (=10 as N)	1997				
Nitrite (as N)	1 as N	0.4	1 as N	1997				
Nitrate + Nitrite (as N)	10 as N	0.4	10 as N	1997				
Perchlorate	0.006	0.004	0.001	2015				
Selenium	0.05	0.005	0.03	2010				
Thallium	0.002	0.001	0.0001	1999 (rev2004)				
Сорре	er and Lead, 22 CO	CR §64672.3						
Values referred to as MCLs for lead and copper are not actually MCLs; instead, they are called "Action Levels" under the lead and copper rule								
Copper	1.3	0.05	0.3	2008				
Lead	0.015	0.005	0.0002	2009				

Constituent	MCL	DLR	PHG or (MCLG)	Date of PHG				
Radionuclides with MC	Radionuclides with MCLs in 22 CCR §64441 and §64443—Radioactivity							
[units are picocuries per liter (pCi/L), unless otherwise stated; n/a = not applicable]								
Gross alpha particle activity - OEHHA concluded in 2003 that a PHG was not practical	15	3	(zero)	n/a				
Gross beta particle activity - OEHHA concluded in 2003 that a PHG was not practical	4 mrem/yr	4	(zero)	n/a				
Radium-226		1	0.05	2006				
Radium-228		1	0.019	2006				
Radium-226 + Radium-228	5		(zero)					
Strontium-90	8	2	0.35	2006				
Tritium	20,000	1,000	400	2006				
Uranium	20	1	0.43	2001				
Chemicals with MC	Ls in 22 CCR §644	144—Organic Che	micals					
(a) Vola	atile Organic Chem	icals (VOCs)						
Benzene	0.001	0.0005	0.00015	2001				
Carbon tetrachloride	0.0005	0.0005	0.0001	2000				
1,2-Dichlorobenzene	0.6	0.0005	0.6	1997 (rev2009)				
1,4-Dichlorobenzene (p-DCB)	0.005	0.0005	0.006	1997				
1,1-Dichloroethane (1,1-DCA)	0.005	0.0005	0.003	2003				
1,2-Dichloroethane (1,2-DCA)	0.0005	0.0005	0.0004	1999 (rev2005)				
1,1-Dichloroethylene (1,1-DCE)	0.006	0.0005	0.01	1999				
cis-1,2-Dichloroethylene	0.006	0.0005	0.1	2006				
trans-1,2-Dichloroethylene	0.01	0.0005	0.06	2006				
Dichloromethane (Methylene chloride)	0.005	0.0005	0.004	2000				
1,2-Dichloropropane	0.005	0.0005	0.0005	1999				
1,3-Dichloropropene	0.0005	0.0005	0.0002	1999 (rev2006)				
Ethylbenzene	0.3	0.0005	0.3	1997				
Methyl tertiary butyl ether (MTBE)	0.013	0.003	0.013	1999				
Monochlorobenzene	0.07	0.0005	0.07	2014				
Styrene	0.1	0.0005	0.0005	2010				
1,1,2,2-Tetrachloroethane	0.001	0.0005	0.0001	2003				
Tetrachloroethylene (PCE)	0.005	0.0005	0.00006	2001				
Toluene	0.15	0.0005	0.15	1999				
1,2,4-Trichlorobenzene	0.005	0.0005	0.005	1999				
1,1,1-Trichloroethane (1,1,1-TCA)	0.2	0.0005	1	2006				
1,1,2-Trichloroethane (1,1,2-TCA)	0.005	0.0005	0.0003	2006				
Trichloroethylene (TCE)	0.005	0.0005	0.0017	2009				
Trichlorofluoromethane (Freon 11)	0.15	0.005	1.3	2014				
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1.2	0.01	4	1997 (rev2011)				
Vinyl chloride	0.0005	0.0005	0.00005	2000				
Xylenes	1.75	0.0005	1.8	1997				

Constituent MCL DLR PHG or (MCLG) Date of PHG (b) Non-Volatile Synthetic Organic Chemicals (SOCs) Alachlor 0.002 0.001 0.004 1997 Atrazine 0.001 0.0005 0.00015 1999 0.018 0.002 0.2 1999 (rev2009) Bentazon Benzo(a)pyrene 0.0002 0.0001 0.000007 2010 Carbofuran 0.018 0.005 0.0017 2000 Carbofuran 0.0007 2015 draft ------0.0001 0.00003 Chlordane 0.0001 1997 (rev2006) 1997 (rev2009) 0.2 0.01 0.79 Dalapon 1,2-Dibromo-3-chloropropane (DBCP) 0.0002 0.00001 0.0000017 1999 2009 2,4-Dichlorophenoxyacetic acid (2,4-D) 0.07 0.01 0.02 0.4 Di(2-ethylhexyl)adipate 0.005 0.2 2003 Di(2-ethylhexyl)phthalate (DEHP) 0.004 0.003 0.012 1997 0.007 Dinoseb 0.002 0.014 1997 (rev2010) 0.02 0.004 0.015 2000 Diquat Diquat 0.006 2015 draft ------Endrin 0.002 1999 (rev2008) 0.0001 0.0018 2015 draft Endrin ------0.0003 Endothal 0.1 0.045 0.094 2014 Ethylene dibromide (EDB) 0.00005 0.00002 0.00001 2003 Glyphosate 0.7 0.025 0.9 2007 0.000008 Heptachlor 0.00001 0.00001 1999 1999 Heptachlor epoxide 0.00001 0.00001 0.000006 Hexachlorobenzene 0.001 0.0005 0.00003 2003 Hexachlorocyclopentadiene 0.05 0.001 0.002 2014 Lindane 0.0002 0.0002 0.000032 1999 (rev2005) 0.03 0.01 0.00009 2010 Methoxychlor Molinate 0.02 0.002 0.001 2008 Oxamyl 0.05 0.02 0.026 2009 0.001 0.0002 0.0003 2009 Pentachlorophenol Picloram 0.5 0.001 0.5 1997 Picloram ------0.166 2015 draft Polychlorinated biphenyls (PCBs) 0.0005 0.0005 0.00009 2007 0.001 0.004 2001 Simazine 0.004 2,4,5-TP (Silvex) 0.05 0.001 0.003 2014 3x10⁻⁸ 5x10⁻⁹ 5x10⁻¹¹ 2,3,7,8-TCDD (dioxin) 2010 Thiobencarb 0.07 0.001 0.07 2000 Thiobencarb 2015 draft --------0.042 Toxaphene 0.003 0.001 0.00003 2003

ATTACHMENT NO. 1

	ATT	ACH	MEN	T NO	. 1
--	-----	-----	-----	------	-----

Constituent	MCL	DLR	PHG or (MCLG)	Date of PHG				
Chemicals with MCLs in 22 CCR §64533—Disinfection Byproducts								
Total Trihalomethanes 0.080								
Total Trihalomethanes			0.0008	2010 draft				
Bromodichloromethane		0.0010	(zero)					
Bromoform		0.0010	(zero)					
Chloroform		0.0010	(0.07)					
Dibromochloromethane		0.0010	(0.06)					
Haloacetic Acids (five) (HAA5)	0.060							
Monochloroacetic Acid		0.0020	(0.07)					
Dichloroacetic Adic		0.0010	(zero)					
Trichloroacetic Acid		0.0010	(0.02)					
Monobromoacetic Acid		0.0010						
Dibromoacetic Acid		0.0010						
Bromate	0.010	0.0050 or 0.0010 ^a	0.0001	2009				
Chlorite	1.0	0.020	0.05	2009				
Microbiological C	Contaminants (TT	= Treatment Techn	ique)					
Coliform % positive samples	%	5	(zero)					
Cryptosporidium**		TT	(zero)					
Giardia lamblia**		TT	(zero)					
Legionella**		TT	(zero)					
Viruses**		TT	(zero)					
Chemicals with PHGs established in response to DDW requests. These are not currently regulated drinking water contaminants.								
N-Nitrosodimethylamine (NDMA)			0.000003	2006				
1,2,3-Trichloropropane		0.000005	0.000007	2009				

Notes:

^a DDW will maintain a 0.0050 mg/L DLR for bromate to accommodate laboratories that are using EPA Method 300.1. However, laboratories using EPA Methods 317.0 Revision 2.0, 321.8, or 326.0 must meet a 0.0010 mg/L MRL for bromate and should report results with a DLR of 0.0010 mg/L per Federal requirements.

*OEHHA's review of this chemical during the year indicated (rev20XX) resulted in no change in the PHG

** Surface water treatment = TT



Health and Safety Code §116470

(a) As a condition of its operating permit, every public water system shall annually prepare a consumer confidence report and mail or deliver a copy of that report to each customer, other than an occupant, as defined in Section 799.28 of the Civil Code, of a recreational vehicle park. A public water system in a recreational vehicle park with occupants as defined in Section 799.28 of the Civil Code shall prominently display on a bulletin board at the entrance to or in the office of the park, and make available upon request, a copy of the report. The report shall include all of the following information:

(1) The source of the water purveyed by the public water system.

(2) A brief and plainly worded definition of the terms "maximum contaminant level," "primary drinking water standard," and "public health goal."

(3) If any regulated contaminant is detected in public drinking water supplied by the system during the past year, the report shall include all of the following information:

(A) The level of the contaminant found in the drinking water, and the corresponding public health goal and primary drinking water standard for that contaminant.

(B) Any violations of the primary drinking water standard that have occurred as a result of the presence of the contaminant in the drinking water and a brief and plainly worded statement of health concerns that resulted in the regulation of that contaminant.

(C) The public water system's address and phone number to enable customers to obtain further information concerning contaminants and potential health effects.

(4) Information on the levels of unregulated contaminants, if any, for which monitoring is required pursuant to state or federal law or regulation.

(5) Disclosure of any variances or exemptions from primary drinking water standards granted to the system and the basis therefor.

(b) On or before July 1, 1998, and every three years thereafter, public water systems serving more than 10,000 service connections that detect one or more contaminants in drinking water that exceed the applicable public health goal, shall prepare a brief written report in plain language that does all of the following:

(1) Identifies each contaminant detected in drinking water that exceeds the applicable public health goal.

(2) Discloses the numerical public health risk, determined by the office, associated with the maximum contaminant level for each contaminant identified in paragraph (1) and the numerical public health risk determined by the office associated with the public health goal for that contaminant.

(3) Identifies the category of risk to public health, including, but not limited to, carcinogenic, mutagenic, teratogenic, and acute toxicity, associated with exposure to the contaminant in drinking water, and includes a brief plainly worded description of these terms.

(4) Describes the best available technology, if any is then available on a commercial basis, to remove the contaminant or reduce the concentration of the contaminant. The public water system may, solely at its own discretion, briefly describe actions that have been taken on its own, or by other entities, to prevent the introduction of the contaminant into drinking water supplies.

(5) Estimates the aggregate cost and the cost per customer of utilizing the technology described in paragraph (4), if any, to reduce the concentration of that contaminant in drinking water to a level at or below the public health goal.

(6) Briefly describes what action, if any, the local water purveyor intends to take to reduce the concentration of the contaminant in public drinking water supplies and the basis for that decision.

(c) Public water systems required to prepare a report pursuant to subdivision (b) shall hold a public hearing for the purpose of accepting and responding to public comment on the report. Public water systems may hold the public hearing as part of any regularly scheduled meeting.

(d) The department shall not require a public water system to take any action to reduce or eliminate any exceedance of a public health goal.

(e) Enforcement of this section does not require the department to amend a public water system's operating permit.

(f) Pending adoption of a public health goal by the Office of Environmental Health Hazard Assessment pursuant to subdivision (c) of Section 116365, and in lieu thereof, public water systems shall use the national maximum contaminant level goal adopted by the United States Environmental Protection Agency for the corresponding contaminant for purposes of complying with the notice and hearing requirements of this section.

(g) This section is intended to provide an alternative form for the federally required consumer confidence report as authorized by 42 U.S.C. Section 300g-3(c).

Available at: http://oehha.ca.gov/water/phg/pdf/2016phgexceedancereport012816.pdf

Health Risk Information for Public Health Goal Exceedance Reports

Prepared by

Office of Environmental Health Hazard Assessment California Environmental Protection Agency

February 2016

Under the Calderon-Sher Safe Drinking Water Act of 1996 (the Act), water utilities are required to prepare a report every three years for contaminants that exceed public health goals (PHGs) (Health and Safety Code Section 116470 (b)(2)). The numerical health risk for a contaminant is to be presented with the category of health risk, along with a plainly worded description of these terms. The cancer health risk is to be calculated at the PHG and at the California maximum contaminant level (MCL). This report is prepared by the Office of Environmental Health Hazard Assessment (OEHHA) to assist the water utilities in meeting their requirements.

PHGs are concentrations of contaminants in drinking water that pose no significant health risk if consumed for a lifetime. PHGs are developed and published by OEHHA (Health and Safety Code Section 116365) using current risk assessment principles, practices and methods.

Numerical health risks. Table 1 presents health risk categories and cancer risk values for chemical contaminants in drinking water that have PHGs.

The Act requires that OEHHA publish PHGs based on health risk assessments using the most current scientific methods. As defined in statute, PHGs for non-carcinogenic chemicals in drinking water are set at a concentration "at which no known or anticipated adverse health effects will occur, with an adequate margin of safety." For carcinogens, PHGs are set at a concentration that "does not pose any significant risk to health." PHGs provide one basis for revising MCLs, along with cost and technological feasibility. OEHHA has been publishing PHGs since 1997 and the entire list published to date is shown in Table 1.

Table 2 presents health risk information for contaminants that do not have PHGs but have state or federal regulatory standards. The Act requires that, for chemical contaminants with California MCLs that do not yet have PHGs, water utilities use the federal maximum contaminant level goal (MCLG) for the purpose of complying with the requirement of public notification. MCLGs, like PHGs, are strictly health based and include a margin of safety. One difference, however, is that the MCLGs for carcinogens are set at zero because the US Environmental Protection Agency (US EPA) assumes there is no absolutely safe level of exposure to such chemicals. PHGs, on the other hand, are set at a level considered to pose no *significant* risk of cancer; this is usually a no more than one-in-one-million excess cancer risk (1×10^{-6}) level for a lifetime of exposure. In Table 2, the cancer risks shown are based on the US EPA's evaluations.

For more information on health risks: The adverse health effects for each chemical with a PHG are summarized in a PHG technical support document. These documents are available on the OEHHA Web site (<u>http://www.oehha.ca.gov</u>). Also, technical fact sheets on most of the chemicals having federal MCLs can be found at <u>http://www.epa.gov/your-drinking-water/table-regulated-drinking-water-contaminants</u>.

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
<u>Alachlor</u>	carcinogenicity (causes cancer)	0.004	NA ⁵	0.002	NA
<u>Aluminum</u>	neurotoxicity and immunotoxicity (harms the nervous and immune systems)	0.6	NA	1	NA
<u>Antimony</u>	digestive system toxicity (causes vomiting)	0.02	NA	0.006	NA
<u>Arsenic</u>	carcinogenicity (causes cancer)	0.000004 (4×10 ⁻⁶)	1×10 ⁻⁶ (one per million)	0.01	2.5×10 ⁻³ (2.5 per thousand)
<u>Asbestos</u>	carcinogenicity (causes cancer)	7 MFL ⁶ (fibers >10 microns in length)	1×10 ⁻⁶	7 MFL (fibers >10 microns in length)	1×10 ⁻⁶ (one per million)
<u>Atrazine</u>	carcinogenicity (causes cancer)	0.00015	1×10 ⁻⁶	0.001	7×10 ⁻⁶ (seven per million)

 $\frac{\text{http://oehha.ca.gov/multimedia/green/pdf/GC}{\text{mg/L} = \text{milligrams per liter of water or parts per million (ppm)}^{3}$ Cancer Risk = Upper estimate of excess cancer risk from lifetime exposure. Actual cancer risk may be lower or zero. 1×10^{-6} means one excess cancer case per million people exposed.

⁴ MCL = maximum contaminant level.

⁵ NA = not applicable. Risk cannot be calculated. The PHG is set at a level that is believed to be without any significant public health risk to individuals exposed to the chemical over a lifetime. ⁶ MFL = million fibers per liter of water.

¹ Based on the OEHHA PHG technical support document unless otherwise specified. The categories are the hazard traits defined by OEHHA for California's Toxics Information Clearinghouse (online at:

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
<u>Barium</u>	cardiovascular toxicity (causes high blood pressure)	2	NA	1	NA
<u>Bentazon</u>	hepatotoxicity and digestive system toxicity (harms the liver, intestine, and causes body weight effects ⁷)	0.2	NA	0.018	NA
<u>Benzene</u>	carcinogenicity (causes leukemia)	0.00015	1×10 ⁻⁶	0.001	7×10 ⁻⁶ (seven per million)
<u>Benzo[a]pyrene</u>	carcinogenicity (causes cancer)	0.000007 (7×10 ⁻⁶)	1×10 ⁻⁶	0.0002	3×10 ⁻⁵ (three per hundred thousand)
<u>Beryllium</u>	digestive system toxicity (harms the stomach or intestine)	0.001	NA	0.004	NA
<u>Bromate</u>	carcinogenicity (causes cancer)	0.0001	1×10 ⁻⁶	0.01	1×10 ⁻⁴ (one per ten thousand)
<u>Cadmium</u>	nephrotoxicity (harms the kidney)	0.00004	NA	0.005	NA
<u>Carbofuran</u>	reproductive toxicity (harms the testis)	0.0017	NA	0.018	NA

⁷ Body weight effects are an indicator of general toxicity in animal studies.

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
<u>Carbon</u> <u>tetrachloride</u>	carcinogenicity (causes cancer)	0.0001	1×10 ⁻⁶	0.0005	5×10 ⁻⁶ (five per million)
<u>Chlordane</u>	carcinogenicity (causes cancer)	0.00003	1×10 ⁻⁶	0.0001	3×10 ⁻⁶ (three per million)
<u>Chlorite</u>	hematotoxicity (causes anemia) neurotoxicity (causes neurobehavioral effects)	0.05	NA	1	NA
<u>Chromium,</u> <u>hexavalent</u>	carcinogenicity (causes cancer)	0.00002	1×10 ⁻⁶	0.01	5×10 ⁻⁴ (five per ten thousand)
<u>Copper</u>	digestive system toxicity (causes nausea, vomiting, diarrhea)	0.3	NA	1.3 (AL ⁸)	NA
<u>Cyanide</u>	neurotoxicity (damages nerves) endocrine toxicity (affects the thyroid)	0.15	NA	0.15	NA
<u>Dalapon</u>	nephrotoxicity (harms the kidney)	0.79	NA	0.2	NA

⁸ AL = action level. The action levels for copper and lead refer to a concentration measured at the tap. Much of the copper and lead in drinking water is derived from household plumbing (The Lead and Copper Rule, Title 22, California Code of Regulations [CCR] section 64672.3).

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
<u>1,2-Dibromo-3-</u> <u>chloropropane</u> <u>(DBCP)</u>	carcinogenicity (causes cancer)	0.0000017 (1.7x10 ⁻⁶)	1×10 ⁻⁶	0.0002	1×10 ⁻⁴ (one per ten thousand)
<u>1,2-Dichloro-</u> benzene (o- DCB)	hepatotoxicity (harms the liver)	0.6	NA	0.6	NA
<u>1,4-Dichloro-</u> <u>benzene (p-</u> <u>DCB)</u>	carcinogenicity (causes cancer)	0.006	1×10 ⁻⁶	0.005	8×10 ⁻⁷ (eight per ten million)
<u>1,1-Dichloro-</u> ethane (1,1- DCA)	carcinogenicity (causes cancer)	0.003	1×10 ⁻⁶	0.005	2×10 ⁻⁶ (two per million)
<u>1,2-Dichloro-</u> ethane (1,2- DCA)	carcinogenicity (causes cancer)	0.0004	1×10 ⁻⁶	0.0005	1×10 ⁻⁶ (one per million)
<u>1,1-Dichloro-</u> <u>ethylene</u> (1,1-DCE)	hepatotoxicity (harms the liver)	0.01	NA	0.006	NA
<u>1,2-Dichloro-</u> ethylene, cis	nephrotoxicity (harms the kidney)	0.1	NA	0.006	NA
<u>1,2-Dichloro-</u> ethylene, trans	hepatotoxicity (harms the liver)	0.06	NA	0.01	NA
<u>Dichloromethane</u> (methylene chloride)	carcinogenicity (causes cancer)	0.004	1×10 ⁻⁶	0.005	1×10 ⁻⁶ (one per million)
2,4-Dichloro- phenoxyacetic acid (2,4-D)	hepatotoxicity and nephrotoxicity (harms the liver and kidney)	0.02	NA	0.07	NA

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
<u>1,2-Dichloro-</u> propane (propylene dichloride)	carcinogenicity (causes cancer)	0.0005	1×10⁻ ⁶	0.005	1×10 ⁻⁵ (one per hundred thousand)
<u>1,3-Dichloro-</u> propene (Telone II®)	carcinogenicity (causes cancer)	0.0002	1×10 ⁻⁶	0.0005	2×10 ⁻⁶ (two per million)
Di(2-ethylhexyl) adipate (DEHA)	developmental toxicity (disrupts development)	0.2	NA	0.4	NA
<u>Diethylhexyl-</u> phthalate (DEHP)	carcinogenicity (causes cancer)	0.012	1×10 ⁻⁶	0.004	3×10 ⁻⁷ (three per ten million)
<u>Dinoseb</u>	reproductive toxicity (harms the uterus and testis)	0.014	NA	0.007	NA
<u>Dioxin (2,3,7,8-</u> TCDD)	carcinogenicity (causes cancer)	5×10 ⁻¹¹	1×10 ⁻⁶	3×10 ⁻⁸	6×10 ⁻⁴ (six per ten thousand)
<u>Diquat</u>	ocular toxicity (harms the eye) developmental toxicity (causes malformation)	0.015	NA	0.02	NA
<u>Endothall</u>	digestive system toxicity (harms the stomach or intestine)	0.094	NA	0.1	NA
<u>Endrin</u>	hepatotoxicity (harms the liver) neurotoxicity (causes convulsions)	0.0018	NA	0.002	NA

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
<u>Ethylbenzene</u> (phenylethane)	hepatotoxicity (harms the liver)	0.3	NA	0.3	NA
<u>Ethylene</u> <u>dibromide</u>	carcinogenicity (causes cancer)	0.00001	1×10 ⁻⁶	0.00005	5×10 ⁻⁶ (five per million)
<u>Fluoride</u>	musculoskeletal toxicity (causes tooth mottling)	1	NA	2	NA
<u>Glyphosate</u>	nephrotoxicity (harms the kidney)	0.9	NA	0.7	NA
<u>Heptachlor</u>	carcinogenicity (causes cancer)	0.000008 (8×10 ⁻⁶)	1×10 ⁻⁶	0.00001	1×10 ⁻⁶ (one per million)
<u>Heptachlor</u> <u>epoxide</u>	carcinogenicity (causes cancer)	0.000006 (6×10 ⁻⁶)	1×10 ⁻⁶	0.00001	2×10 ⁻⁶ (two per million)
<u>Hexachloroben-</u> <u>zene</u>	carcinogenicity (causes cancer)	0.00003	1×10 ⁻⁶	0.001	3×10 ⁻⁵ (three per hundred thousand)
<u>Hexachloro-</u> cyclopentadiene (HCCPD)	digestive system toxicity (causes stomach lesions)	0.002	NA	0.05	NA
<u>Lead</u>	developmental neurotoxicity (causes neurobehavioral effects in children) cardiovascular toxicity (causes high blood pressure) carcinogenicity (causes cancer)	0.0002	<1×10 ⁻⁶ (PHG is not based on this effect)	0.015 (AL [®])	2×10 ⁻⁶ (two per million)

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
<u>Lindane</u> <u>(γ-BHC)</u>	carcinogenicity (causes cancer)	0.000032	1×10 ⁻⁶	0.0002	6×10 ⁻⁶ (six per million)
<u>Mercury</u> (inorganic)	nephrotoxicity (harms the kidney)	0.0012	NA	0.002	NA
<u>Methoxychlor</u>	endocrine toxicity (causes hormone effects)	0.00009	NA	0.03	NA
<u>Methyl tertiary-</u> <u>butyl ether</u> (MTBE)	carcinogenicity (causes cancer)	0.013	1×10 ⁻⁶	0.013	1×10 ⁻⁶ (one per million)
<u>Molinate</u>	carcinogenicity (causes cancer)	0.001	1×10 ⁻⁶	0.02	2×10 ⁻⁵ (two per hundred thousand)
<u>Monochloro-</u> <u>benzene</u> (chlorobenzene)	nephrotoxicity (harms the kidney)	0.07	NA	0.07	NA
<u>Nickel</u>	developmental toxicity (causes increased neonatal deaths)	0.012	NA	0.1	NA
<u>Nitrate</u>	hematotoxicity (causes methemoglobinemia)	45 as nitrate	NA	10 as nitrogen (=45 as nitrate)	NA
<u>Nitrite</u>	hematotoxicity (causes methemoglobinemia)	1 as nitrogen	NA	1 as nitrogen	NA

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
<u>Nitrate and</u> <u>Nitrite</u>	hematotoxicity (causes methemoglobinemia)	10 as nitrogen	NA	10 as nitrogen	NA
<u>N-nitroso-</u> <u>dimethyl-amine</u> <u>(NDMA)</u>	carcinogenicity (causes cancer)	0.000003 (3×10 ⁻⁶)	1×10 ⁻⁶	none	NA
<u>Oxamyl</u>	general toxicity (causes body weight effects)	0.026	NA	0.05	NA
Pentachloro- phenol (PCP)	carcinogenicity (causes cancer)	0.0003	1×10 ⁻⁶	0.001	3×10 ⁻⁶ (three per million)
Perchlorate	endocrine toxicity (affects the thyroid) developmental toxicity (causes neurodevelop- mental deficits)	0.001	NA	0.006	NA
<u>Picloram</u>	hepatotoxicity (harms the liver)	0.5	NA	0.5	NA
<u>Polychlorinated</u> <u>biphenyls</u> (PCBs)	carcinogenicity (causes cancer)	0.00009	1×10 ⁻⁶	0.0005	6×10 ⁻⁶ (six per million)
Radium-226	carcinogenicity (causes cancer)	0.05 pCi/L	1×10 ⁻⁶	5 pCi/L (combined Ra ²²⁶⁺²²⁸)	1×10 ⁻⁴ (one per ten thousand)
Radium-228	carcinogenicity (causes cancer)	0.019 pCi/L	1×10 ⁻⁶	5 pCi/L (combined Ra ²²⁶⁺²²⁸)	3×10 ⁻⁴ (three per ten thousand)

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
<u>Selenium</u>	integumentary toxicity (causes hair loss and nail damage)	0.03	NA	0.05	NA
<u>Silvex (2,4,5-TP)</u>	hepatotoxicity (harms the liver)	0.003	NA	0.05	NA
<u>Simazine</u>	general toxicity (causes body weight effects)	0.004	NA	0.004	NA
<u>Strontium-90</u>	carcinogenicity (causes cancer)	0.35 pCi/L	1×10 ⁻⁶	8 pCi/L	2×10 ⁻⁵ (two per hundred thousand)
<u>Styrene</u> (vinylbenzene)	carcinogenicity (causes cancer)	0.0005	1×10 ⁻⁶	0.1	2×10 ⁻⁴ (two per ten thousand)
<u>1,1,2,2-</u> <u>Tetrachloro-</u> <u>ethane</u>	carcinogenicity (causes cancer)	0.0001	1×10 ⁻⁶	0.001	1×10 ⁻⁵ (one per hundred thousand)
<u>Tetrachloro-</u> <u>ethylene</u> (perchloro- ethylene, or PCE)	carcinogenicity (causes cancer)	0.00006	1×10 ⁻⁶	0.005	8×10 ⁻⁵ (eight per hundred thousand)
<u>Thallium</u>	integumentary toxicity (causes hair loss)	0.0001	NA	0.002	NA
<u>Thiobencarb</u>	general toxicity (causes body weight effects) hematotoxicity (affects red blood cells)	0.07	NA	0.07	NA

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
<u>Toluene</u> (methylbenzene)	hepatotoxicity (harms the liver) endocrine toxicity (harms the thymus)	0.15	NA	0.15	NA
<u>Toxaphene</u>	carcinogenicity (causes cancer)	0.00003	1×10 ⁻⁶	0.003	1×10 ⁻⁴ (one per ten thousand)
<u>1,2,4-Trichloro-</u> benzene	endocrine toxicity (harms adrenal glands)	0.005	NA	0.005	NA
<u>1,1,1-Trichloro-</u> <u>ethane</u>	neurotoxicity (harms the nervous system), reproductive toxicity (causes fewer offspring) hepatotoxicity (harms the liver) hematotoxicity (causes blood effects)	1	NA	0.2	NA
<u>1,1,2-Trichloro-</u> ethane	carcinogenicity (causes cancer)	0.0003	1x10 ⁻⁶	0.005	2×10 ⁻⁵ (two per hundred thousand)
<u>Trichloro-</u> ethylene (TCE)	carcinogenicity (causes cancer)	0.0017	1×10 ⁻⁶	0.005	3×10 ⁻⁶ (three per million)
<u>Trichlorofluoro-</u> <u>methane</u> (Freon 11)	accelerated mortality (increase in early death)	1.3	NA	0.15	NA
Table 1: Health Risk Categories and Cancer Risk Values for Chemicals with California Public Health Goals (PHGs)

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
<u>1,2,3-Trichloro-</u> propane (1,2,3-TCP)	carcinogenicity (causes cancer)	0.0000007 (7×10⁻ ⁷)	1x10 ⁻⁶	none	NA
<u>1,1,2-Trichloro-</u> <u>1,2,2-trifluoro-</u> <u>ethane</u> (Freon 113)	hepatotoxicity (harms the liver)	4	NA	1.2	NA
<u>Tritium</u>	carcinogenicity (causes cancer)	400 pCi/L	1x10 ⁻⁶	20,000 pCi/L	5x10 ⁻⁵ (five per hundred thousand)
<u>Uranium</u>	carcinogenicity (causes cancer)	0.43 pCi/L	1×10 ⁻⁶	20 pCi/L	5×10 ⁻⁵ (five per hundred thousand)
Vinyl chloride	carcinogenicity (causes cancer)	0.00005	1×10 ⁻⁶	0.0005	1×10 ⁻⁵ (one per hundred thousand)
<u>Xylene</u>	neurotoxicity (affects the senses, mood, and motor control)	1.8 (single isomer or sum of isomers)	NA	1.75 (single isomer or sum of isomers)	NA

Chemical	Health Risk Category ¹	U.S. EPA MCLG ² (mg/L)	Cancer Risk ³ @ MCLG	California MCL ⁴ (mg/L)	Cancer Risk @ California MCL				
Disinfection byproducts (DBPS)									
Chloramines	acute toxicity (causes irritation) digestive system toxicity (harms the stomach) hematotoxicity (causes anemia)	4 ^{5,6}	NA ⁷	none	NA				
Chlorine	acute toxicity (causes irritation) digestive system toxicity (harms the stomach)	4 ^{5,6}	NA	none	NA				
Chlorine dioxide hematotoxicity (causes anemia) neurotoxicity (harms the nervous system)		0.8 ^{5,6}	NA	none	NA				
Disinfection byproducts: haloacetic acids (HAA5)									
Chloroacetic acid	general toxicity (causes body and organ weight changes ⁸)	0.07	NA	none	NA				

Table 2: Health Risk Categories and Cancer Risk Values for Chemicalswithout California Public Health Goals

¹ Health risk category based on the U.S. EPA MCLG document or California MCL document unless otherwise specified.

² MCLG = maximum contaminant level goal established by U.S. EPA.

³ Cancer Risk = Upper estimate of excess cancer risk from lifetime exposure. Actual cancer risk may be lower or zero. 1×10^{-6} means one excess cancer case per million people exposed.

⁴ California MCL = maximum contaminant level established by California.

⁵ Maximum Residual Disinfectant Level Goal, or MRDLG.

⁶ The federal Maximum Residual Disinfectant Level (MRDL), or highest level of disinfectant allowed in drinking water, is the same value for this chemical.

⁷ NA = not available.

⁸ Body weight effects are an indicator of general toxicity in animal studies.

Office of Environmental Health Hazard Assessment Water Toxicology Section February 2016

Table 2: Health Risk Categories and Cancer Risk Values for Chemicals
without California Public Health Goals

Chemical	Health Risk Category ¹	U.S. EPA MCLG ² (mg/L)	Cancer Risk ³ @ MCLG	California MCL ⁴ (mg/L)	Cancer Risk @ California MCL
Dichloroacetic acid	carcinogenicity (causes cancer)	0	0	none	NA
Trichloroacetic acid	hepatotoxicity (harms the liver)	0.02	0	none	NA
Bromoacetic acid	NA	none	NA	none	NA
Dibromoacetic acid	NA	none	NA	none	NA
Total haloacetic acids	carcinogenicity (causes cancer)	none	NA	0.06	NA
Disinfection bypro	oducts: trihalomethanes (THMs)			
Bromodichloro- methane (BDCM)	carcinogenicity (causes cancer)	0	0	none	NA
Bromoform	carcinogenicity (causes cancer)	0	0	none	NA
Chloroform	hepatotoxicity and nephrotoxicity (harms the liver and kidney)	phrotoxicity s the liver and		none	NA
Dibromo- chloromethane (DBCM)	hepatotoxicity, nephrotoxicity, and neurotoxicity (harms the liver, kidney, and nervous system)	0.06	NA	none	NA
Total trihalomethanes (sum of BDCM, bromoform, chloroform and DBCM)	carcinogenicity (causes cancer), hepatotoxicity, nephrotoxicity, and neurotoxicity (harms the liver, kidney, and nervous system)	none	NA	0.08	NA

Office of Environmental Health Hazard Assessment Water Toxicology Section February 2016

Chemical	Health Risk Category ¹ U.S. EPA Cance MCLG ² Risk (mg/L) @ MCLC			California MCL ⁴ (mg/L)	Cancer Risk @ California MCL
Radionuclides					
Gross alpha particles ⁹	carcinogenicity (causes cancer)	0 (²¹⁰ Po included)	0	15 pCi/L ¹⁰ (includes ²²⁶ Ra but not radon and uranium)	up to 1x10 ⁻³ (for ²¹⁰ Po, the most potent alpha emitter
Beta particles and photon emitters ⁹	carcinogenicity (causes cancer)	0 (²¹⁰ Pb included)	0	50 pCi/L (judged equiv. to 4 mrem/yr)	up to 2x10 ⁻³ (for ²¹⁰ Pb, the most potent beta- emitter)

Table 2: Health Risk Categories and Cancer Risk Values for Chemicalswithout California Public Health Goals

⁹ MCLs for gross alpha and beta particles are screening standards for a group of radionuclides. Corresponding PHGs were not developed for gross alpha and beta particles. See the OEHHA memoranda discussing the cancer risks at these MCLs at <u>http://oehha.studio-weeren.com/media/downloads/water/chemicals/phg/grossalphahealth.pdf</u>. ¹⁰ pCi/L = picocuries per liter of water.

Office of Environmental Health Hazard Assessment Water Toxicology Section February 2016



ATTACHMENT NO. 3

ATTACHMENT NO. 3 Table 1 Reference: 2012 ACWA PHG Survey

COST ESTIMATES FOR TREATMENT TECHNOLOGIES

(INCLUDES ANNUALIZED CAPITAL AND O&M COSTS)

No.	Treatment Technology	Source of Information	Estimated Unit Cost 2012 ACWA Survey Indexed to 2015* (\$/1,000 gallons treated)
1	Ion Exchange	Coachella Valley WD, for GW, to reduce Arsenic concentrations. 2011 costs.	1.99
2	lon Exchange	City of Riverside Public Utilities, for GW, for Perchlorate treatment.	0.96
3	Ion Exchange	Carollo Engineers, anonymous utility, 2012 costs for treating GW source for Nitrates. Design souce water concentration: 88 mg/L NO ₃ . Design finished water concentration: 45 mg/L NO ₃ . Does not include concentrate disposal or land cost.	0.72
4	Granular Activated Carbon	City of Riverside Public Utilities, GW sources, for TCE, DBCP (VOC, SOC) treatment.	0.48
5	Granular Activated Carbon	Carollo Engineers, anonymous utility, 2012 costs for treating SW source for TTHMs. Design souce water concentration: 0.135 mg/L. Design finished water concentration: 0.07 mg/L. Does not include concentrate disposal or land cost.	0.34
6	Granular Activated Carbon, Liquid Phase	LADWP, Liquid Phase GAC treatment at Tujunga Well field. Costs for treating 2 wells. Treament for 1,1 DCE (VOC). 2011-2012 costs.	1.47
7	Reverse Osmosis	Carollo Engineers, anonymous utility, 2012 costs for treating GW source for Nitrates. Design souce water concentration: 88 mg/L NO ₃ . Design finished water concentration: 45 mg/L NO ₃ . Does not include concentrate disposal or land cost.	0.78
8	Packed Tower Aeration	City of Monrovia, treatment to reduce TCE, PCE concentrations. 2011-12 costs.	0.42
9	Ozonation+ Chemical addition	SCVWD, STWTP treatment plant includes chemical addition + ozone generation costs to reduce THM/HAAs concentrations. 2009-2012 costs.	0.09

COST ESTIMATES FOR TREATMENT TECHNOLOGIES (INCLUDES ANNUALIZED CAPITAL AND 0&M COSTS)

No.	Treatment Technology	Source of Information	Estimated Unit Cost 2012 ACWA Survey Indexed to 2015* (\$/1,000 gallons treated)
10	Ozonation+ Chemical addition	SCVWD, PWTP treatment plant includes chemical addition + ozone generation costs to reduce THM/HAAs concentrations, 2009-2012 costs.	0.19
11	Coagulation/Filtra tion	Soquel WD, treatment to reduce manganese concentrations in GW. 2011 costs.	0.73
12	Coagulation/Filtra tion Optimization	San Diego WA, costs to reduce THM/Bromate, Turbidity concentrations, raw SW a blend of State Water Project water and Colorado River water, treated at Twin Oaks Valley WTP.	0.83
13	Blending (Well)	Rancho California WD, GW blending well, 1150 gpm, to reduce fluoride concentrations.	0.69
14	Blending (Wells)	Rancho California WD, GW blending wells, to reduce arsenic concentrations, 2012 costs.	0.56
15	Blending	Rancho California WD, using MWD water to blend with GW to reduce arsenic concentrations. 2012 costs.	0.67
16	Corrosion Inhibition	Atascadero Mutual WC, corrosion inhibitor addition to control aggressive water. 2011 costs.	0.09

*Costs were adjusted from date of original estimates to present, where appropriate, using the Engineering News Record (ENR) annual average building costs of 2015 and 2012. The adjustment factor was derived from the ratio of 2015 Index/2012 Index.

ATTACHMENT NO. 3 Table 2 Reference: Other Agencies

COST ESTIMATES FOR TREATMENT TECHNOLOGIES

(INCLUDES ANNUALIZED CAPITAL AND O&M COSTS)

No.	Treatment Technology	Source of Information	Estimated Unit Cost 2012 Other References Indexed to 2015* (\$/1,000 gallons treated)
1	Reduction - Coagulation- Filtration	Reference: February 28, 2013, Final Report Chromium Removal Research, City of Glendale, CA. 100-2000 gpm. Reduce Hexavalent Chromium to 1 ppb.	1.58 - 9.95
2	IX - Weak Base Anion Resin	Reference: February 28, 2013, Final Report Chromium Removal Research, City of Glendale, CA. 100-2000 gpm. Reduce Hexavalent Chromium to 1 ppb.	1.62 - 6.78
3	IX	Golden State Water Co., IX w/disposable resin, 1 MGD, Perchlorate removal, built in 2010.	0.50
4	IX	Golden State Water Co., IX w/disposable resin, 1000 gpm, perchlorate removal (Proposed; O&M estimated).	1.08
5	IX	Golden State Water Co., IX with brine regeneration, 500 gpm for Selenium removal, built in 2007.	7.08
6	GFO/Adsorption	Golden State Water Co., Granular Ferric Oxide Resin, Arsenic removal, 600 gpm, 2 facilities, built in 2006.	1.85 -1.98
7	RO	Reference: Inland Empire Utilities Agency : Chino Basin Desalter. RO cost to reduce 800 ppm TDS, 150 ppm Nitrate (as NO3); approx. 7 mgd.	2.43
8	IX	Reference: Inland Empire Utilities Agency : Chino Basin Desalter. IX cost to reduce 150 ppm Nitrate (as NO3); approx. 2.6 mgd.	1.35

9	Packed Tower Aeration	Reference: Inland Empire Utilities Agency : Chino Basin Desalter. PTA-VOC air stripping, typical treated flow of approx. 1.6 mgd.	0.41
10	IX	Reference: West Valley WD Report, for Water Recycling Funding Program, for 2.88 mgd treatment facility. IX to remove Perchlorate, Perchlorate levels 6- 10 ppb. 2008 costs.	0.56 - 0.80
11	Coagulation Filtration	Reference: West Valley WD, includes capital, O&M costs for 2.88 mgd treatment facility- Layne Christensen packaged coagulation Arsenic removal system. 2009-2012 costs.	0.37
12	FBR	Reference: West Valley WD/Envirogen design data for the O&M + actual capitol costs, 2.88 mgd fluidized bed reactor (FBR) treatment system, Perchlorate and Nitrate removal, followed by multimedia filtration & chlorination, 2012. NOTE: The capitol cost for the treatment facility for the first 2,000 gpm is \$23 million annualized over 20 years with ability to expand to 4,000 gpm with minimal costs in the future. \$17 million funded through state and federal grants with the remainder funded by WVWD and the City of Rialto.	1.67 - 1.76

*Costs were adjusted from date of original estimates to present, where appropriate, using the Engineering News Record (ENR) annual average building costs of 2015 and 2012. The adjustment factor was derived from the ratio of 2015 Index/2012 Index.

ATTACHMENT NO. 3 Table 3 Reference: Updated 2012 ACWA Cost of Treatment Table

COST ESTIMATES FOR TREATMENT TECHNOLOGIES

(INCLUDES ANNUALIZED CAPITAL AND O&M COSTS)

No.	Treatment Technology	Source of Information	Estimated 2012 Unit Cost Indexed to 2015* (\$/1,000 gallons treated)				
1	Granular Activated Carbon	Reference: Malcolm Pirnie estimate for California Urban Water Agencies, large surface water treatment plants treating water from the State Water Project to meet Stage 2 D/DBP and bromate regulation, 1998	0.57-1.08				
2	Granular Activated Carbon	Reference: Carollo Engineers, estimate for VOC treatment (PCE), 95% removal of PCE, Oct. 1994,1900 gpm design capacity	0.26				
3	Granular Activated Carbon	Reference: Carollo Engineers, est. for a large No. Calif. surf. water treatment plant (90 mgd capacity) treating water from the State Water Project, to reduce THM precursors, ENR construction cost index = 6262 (San Francisco area) - 1992	1.25				
4	Granular Activated Carbon	Reference: CH2M Hill study on San Gabriel Basin, for 135 mgd central treatment facility for VOC and SOC removal by GAC, 1990	0.49-0.71				
5	Granular Activated Carbon	Reference: Southern California Water Co actual data for "rented" GAC to remove VOCs (1,1-DCE), 1.5 mgd capacity facility. 1998	2.24				
6	Granular Activated Carbon	Activated Reference: Southern California Water Co actual data for					
7	Reverse Osmosis	rse Osmosis Reference: Malcolm Pirnie estimate for California Urban Water Agencies, large surface water treatment plants treating water from the State Water Project to meet Stage 2 D/DBP and bromate regulation, 1998					
8	Reverse Osmosis	3.98					
9	Reverse Osmosis	Reference: Boyle Engineering, RO cost to reduce 1000 ppm TDS in brackish groundwater in So. Calif., 1.0 mgd plant operated at 100% of design flow, high brine line cost, May 1991	2.45				
10	Reverse Osmosis	Reference: Boyle Engineering, RO cost to reduce 1000 ppm TDS in brackish groundwater in So. Calif., 10.0 mgd plant operated at 40% of design flow, high brine line cost, May 1991	2.65				
11		everse Osmosis Reference: Boyle Engineering, RO cost to reduce 1000 ppm TDS in brackish groundwater in So. Calif., 10.0 mgd plant operated at 100% of design flow, high brine line cost, May 1991					
12	Reverse Osmosis	Reference: Arsenic Removal Study, City of Scottsdale, AZ - CH2M Hill, for a 1.0 mgd plant operated at 40% of design capacity, Oct. 1991	6.65				

COST ESTIMATES FOR TREATMENT TECHNOLOGIES (INCLUDES ANNUALIZED CAPITAL AND 0&M COSTS)

No.	Treatment Technology	Source of Information	Estimated 2012 Unit Cost Indexed to 2015* (\$/1,000 gallons treated)
13	Reverse Osmosis	Reference: Arsenic Removal Study, City of Scottsdale, AZ - CH2M Hill, for a 1.0 mgd plant operated at 100% of design capacity, Oct. 1991	3.92
14	Reverse Osmosis	Reference: Arsenic Removal Study, City of Scottsdale, AZ - CH2M Hill, for a 10.0 mgd plant operated at 40% of design capacity, Oct. 1991	2.94
15	Reverse Osmosis	Reference: Arsenic Removal Study, City of Scottsdale, AZ - CH2M Hill, for a 10.0 mgd plant operated at 100% of design capacity, Oct. 1991	1.82
16	Reverse Osmosis	Reference: CH2M Hill study on San Gabriel Basin, for 135 mgd central treatment facility with RO to remove nitrate, 1990	1.83-3.22
17	Packed Tower Aeration	Reference: Analysis of Costs for Radon Removal (AWWARF publication), Kennedy/Jenks, for a 1.4 mgd facility operating at 40% of design capacity, Oct. 1991	1.06
18	Packed Tower Aeration	Reference: Analysis of Costs for Radon Removal (AWWARF publication), Kennedy/Jenks, for a 14.0 mgd facility operating at 40% of design capacity, Oct. 1991	0.56
19	Packed Tower Aeration	Reference: Carollo Engineers, estimate for VOC treatment (PCE) by packed tower aeration, without off-gas treatment, O&M costs based on operation during 329 days/year at 10% downtime, 16 hr/day air stripping operation, 1900 gpm design capacity, Oct. 1994	0.28
20	Packed Tower Aeration	Reference: Carollo Engineers, for PCE treatment by Ecolo-Flo Enviro-Tower air stripping, without off-gas treatment, O&M costs based on operation during 329 days/year at 10% downtime, 16 hr/day air stripping operation, 1900 gpm design capacity, Oct. 1994	0.29
21	Packed Tower Aeration	Reference: CH2M Hill study on San Gabriel Basin, for 135 mgd central treatment facility - packed tower aeration for VOC and radon removal, 1990	0.45-0.74
22	Advanced Oxidation Processes	Reference: Carollo Engineers, estimate for VOC treatment (PCE) by UV Light, Ozone, Hydrogen Peroxide, O&M costs based on operation during 329 days/year at 10% downtime, 24 hr/day AOP operation, 1900 gpm capacity, Oct. 1994	0.55
23	Ozonation	Reference: Malcolm Pirnie estimate for CUWA, large surface water treatment plants using ozone to treat water from the State Water Project to meet Stage 2 D/DBP and bromate regulation, <i>Cryptosporidium</i> inactivation requirements,1998	0.13-0.26
24	lon Exchange	Reference: CH2M Hill study on San Gabriel Basin, for 135 mgd central treatment facility - ion exchange to remove nitrate, 1990	0.61-0.80

*Costs were adjusted from date of original estimates to present, where appropriate, using the Engineering News Record (ENR) annual average building costs of 2015 and 2012. The adjustment factor was derived from the ratio of 2015 Index/2012 Index.



ATTACHMENT NO. 4

Parameter	MCL or MRDL (units)	Meets Standard?	DLR	Sample Frequency*	Treated Surfa	Sampled	*Ground Sampled		EPA (MCLG)	Typical Source of Contaminant
						1/10/2013	Sampleu	12013	PHG	
Primary Standards			ELS S	Surface Water/Groundwater	Range	or Average Effluent	Danas		or	
Furbidity (Water Clarity)	TT = 1 NTU				0.04 - 0.22	0.07	Range	Average	MRDLG	
					0.04 - 0.22	0.07		-		
Turbidity is a measure of the cloudiness of the water. We										
measure it because it is a good indicator of the	TT = 95% of monthly samples ≤0.3 NTU	Y	NA	Continuous/Once in 3yrs.	100%	100%	<0.2 - 2.6	0.25	NA	Soil Runoff
effectiveness of our filtration system. Treated Surface Water Range and Average are of Daily										4
Maximum										_
Dist. System Microbiological	A state of the second se	Children and an and	P. Contraction of the				ALC NO. OF CALLSREED,	CONTRACTOR OF	PROPERTY OF STREET	
	For systems that collect less than 40 samples	and the second se	a source to prove the	for the second se				and the second	1000 000 000 0000	
	per month: More than 1 positive sample									
Total Coliform Bacteria	For systems that collect 40 or more samples	Y	NA	Weekly	NA	0%	NA	NA	(0)	
(Total Coliform Rule)	per month: No more than 5.0% of monthly		143	TTCCKI)		0.0		INA I	(0)	Naturally present in the environment
	samples are positive									
E. coli										
(Federal Ground Water Rule)	0	Y	NA	Weekly	NA	0	NA	0	(0)	Human and animal fecal waste
Organic Chemicals					A STATISTICS AND A STATIST	I STATE ST	the second second	S MANY SCHOOLS	C.D.C. YELEY	
Disinfection By-products					Stage 2 D	DBP				
TTHMs	80				All Sample Range					
HAA5	80 µg/L 60 µg/L		NA NA	Monthly/NA Monthly/NA	3 - 82 ND - 27	50 9.9	NA	NA	NA	By-product of drinking water disinfection
Disinfectant Residual	oo pgre		- 110	Monuny/NA	System RAA from				NA	By-product of drinking water disinfection
Chlorine Residual	4.0 (mg/L as Cl ₂)	Y	NA	Weekly/NA	0.20-3.90	0.9	NA	NA	4	Drinking water disinfectant added for treatment
Disinfectant By-product Precursors			- 10/3		0.20-3.50	0.0	INA	NA	141	Dinking water disinfectant added for treatment
Control of DBP Precursor (Total Organic Carbon, TOC) -	TT = ratio of actual TOC removal to required				N 6					
see explanation on the next page	TOC removal shall be ≥ 1	Y	0.3	Monthly/NA	0.3 - 1.2	0.9	NA	NA	NA	Various natural and manmade sources
Inorganic Chemicals										
Arsenic	10 µg/L	Y	2	Yearly/Once in 3yrs.	NA	ND	ND 0	ND	0.004	
Barium	1000 µg/L	Y	100	Yearly/Once in 3yrs.	NA	ND	ND - 2 ND - 120	ND	0.004 2000	Erosion of natural deposits; runoff from orchards; plass and electronics production wastes Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Fluoride	2 mg/L	Y	0.1	Quarterly/Quarterly	0.10 - 0.19	0.14	ND - 0.55	0.18	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from ferbilizer and aluminum factories
Nitrate (as N03)	45 mg/L	Y	2	Quarterly/Quarterly	ND - 3,4	2.6	ND - 28.2	8.4	45	Runoff and leaching from ferbilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Chromium	50 µg/L	Y	10	Yearly/Once in 3yrs.	NA	ND	ND-10	ND	(100)	Steel and pulp mill discharges, chrome plating, natural erosion
Radioactivity			in station	THE SHOP NEWS TRUE	and the second s		No.	and the second	Contractory	
Gross Alpha Activity**	15 pCi/L	Y	3	**See comment below	NA	ND	ND - 6.1	ND	(0)	Erosion of natural deposits
Uranium*** Tap Monitoring Lead & Copper	20 pC/L	Y	1	NA/Quaterly	NA	ND	1.9 - 9.5	5.6	0.43	Erosion of natural deposits
	Action Level		1001000000	No. of samples in 2012	90th Percentile		xceeded AL	a subscription of the		
Lead	15 µg/L	Y	5	50	ND		1	NA	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper	1.3 mg/L	Y	0.05	50	0.370	N	DNE	NA	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Secondary Standards	THE SHEET HERE DESIGNATION OF	E STAR ROAD			E SET N MUSE		Martine - Loro	- HE CHAN	DONT-E	
Inorganic Chemicals Aluminum	200 µg/L	×	50	Monthly/Once in 3yrs.	ND - 64	ND	R Contraction		10.20	
Color	15 units	r v	NA	Weekly/Once in 3yrs.	ND - 64 NA	<5 ND	NA ND - 3	ND	600	Erosion of natural deposits; residual from some surface water treatment processes
Odor-Threshold	3 units	Y	1	Weekly/Once in 3yrs.	ND-2	2	ND - 3	<5 ND	NA NA	Naturally occurring organic materials Naturally occurring organic materials
Chloride	500 mg/L	Y	NA	Quarterly/Quarterly	104 - 117	110	5.5 - 87.9	23.0	NA	Runoff/leaching from natural deposits; seawater influence
Copper	1.0 mg/L	Y	0.05	Yearly/Once in 3yrs.	NA	ND	NA	ND	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Iron	300 µg/L	Y	100	Monthly/Once in 3yrs.	ND	ND	ND - 220	ND	NA	Leaching from natural deposits; industrial wastes
Manganese Sulfate	50 µg/L 500 mg/L	Y	20	Monthly/Once in 3yrs. Quarterly/Quarterly	ND 36.6 - 50.3	ND 43.8	NA	ND	NA	Leaching from natural deposits
Zinc	5000 µg/L	Y Y	50	Monthly/Once in 3yrs.	36.6 - 50.3 ND - 50	43.8 ND	18.3 - 95.7 NA	37.3 ND	NA NA	Runoff/leaching of natural deposits; industrial wastes
Total Dissolved Solids	1000 mg/L	Y	NA	Yearly/Once in 3yrs.	NA	310	150 - 490	251	NA	Runoff/leaching of natural deposits, industrial wastes, corrosion control Ruonoff/leaching of natural deposits
Specific Conductance	1600 µmhos/cm	Y	NA	Yearly/Once in 3yrs.	NA	590	240 - 810	414	NA	Substances that form ions when in water; seawater influence
Additional Constituents Analyzed		Participation of the state	1 10 7 61	- Sectional Provide Main Leave In	Est. Martin	Participant in the second	The Article of the		SUSALES	
рн	NA (Units)	NA	NA	Continuous/Once in 3yrs.	6.9 - 8.4	7.2	7.8 - 8.3	8.0	NA	Leaching from natural deposits
Hardness Alkalinity	NA(mg/L)	NA	NA	Weekly/Once in 3yrs.	104 - 144	123	27 - 300	124	NA	Sum of polyvalent cations present in the water, generally magnesium and calcuim. The cations are usually naturally-occuring.
Sodium	NA(mg/L) NA(mg/L)	NA NA	NA	Weekly/Once in 3yrs.	60 - 92 NA	75	79-220	116	NA	Dissolved as water passes through limestone deposits
Calcium	NA(mg/L)	NA	NA	Yearly/Once in 3yrs. Yearly/Once in 3yrs.	NA NA	23	<u>17 - 69</u> 9 - 78	38	NA NA	Generally naturally-occurring salt present in water Dissolved as water passes through limestone deposits
Potassium	NA(mg/L)	NA	NA	Yearly/Once in 3yrs.	NA	3	ND - 2.7	1.4	NA	Leaching from natural deposits
Magnesium	NA(mg/L)	NA	NA	Yearly/Once in 3yrs.	NA	14	1 - 24	7.1	NA	Dissolved as water passes through magnesium-bearing minerals
Special Testing Radium 228	5pCi/L	NA	1	4 Quarters by 12/31/2007	NA	ND		115	0.016	
UCMR	59672	N/A		- Quarters by 12/31/2007	NA	ND	NA	ND	0.019	Erosion of natural deposits
Chromium VI	No Standard		1	Yearly/Yearly	NA	NA	ND - 11	4.0	NA	Steel and pulp mill discharges, chrome plating, natural erosion
* Wells are sampled once/3yrs except for Fluoride, Chlorid	de, Sulfate, & Nitrate which are sampled quarterly									
** Sampled between 2010 and 2013. Individual sites are s *** Sample collected only when quarterly average of Gros	sampled once/byrs or once/byrs. Range is from in s Alpha exceeds 5pCi/L.	dividual sample resu	iits.							
,,,						1		1	1	
								-		1

Parameter	MCL or MRDL (units)	Meets Standard?	DLR	Sample	Treated Surfa		*Ground W		EPA	Typical Source of Contaminant
		State of the second	22.2	Frequency*	S REPENDENCES	Sampled 4/17/2014	Sampled In	2013	(MCLG)	
		State State	A state of the	Surface Water/Groundwater	The second second	or Average	SAN BE B	19 10 10	PHG	
Primary Standards		N. T. S.		Sandoo Fratenorounanater	Range	Effluent	Range	Average	IMRDLG	
Turbidity (Water Clarity)	TT = 1 NTU				0.05 - 0.14	0.07	<0.2 - 2.6	0.25	Interol	
								0.20		
Turbidity is a measure of the cloudiness of the water. We										
measure it because it is a good indicator of the	TT = 95% of monthly samples ≤0.3 NTU	Y	NA	Continuous/Once in 3yrs.	100%	100%	NA	NA	NA	Soil Runoff
effectiveness of our filtration system.										
Treated Surface Water Range and Average are of Daily										
Maximum Dist. System Microbiological										
Dist. System microbiological	For sustame that collect less than 40 seconds	C. S.					State State of the			
	For systems that collect less than 40 samples per month: More than 1 positive sample									
Total Coliform Bacteria	For systems that collect 40 or more samples									
(Total Coliform Rule)	per month: No more than 5.0% of monthly	Y	NA	Weekly	NA	0%	NA	NA	(0)	Naturally present in the environment
	samples are positive									
	sumples are positive									
E. coli			1000	1250 C 2014						
(Federal Ground Water Rule)	0	Y	NA	Weekly	NA	0	NA	0	(0)	Human and animal fecal waste
Organic Chemicals		A COLUMN TO A COLUMN	-		the second second second					
Disinfection By-products		A REAL PROPERTY AND A REAL	NO CONSTRAINT	Soft in the state of the state	Ch	1000		A CONTRACT		
					Stage 2 D All Sample Range		4			
TTHMs	80 µg/L	Y	NA	Monthly/NA	1 - 128	50		1000	NA	By-product of drinking water disinfection
HAA5	60 µg/L	Ý	NA	Quarterly/NA	ND - 14	7.0	NA	NA	NA	By-product of drinking water disinfection
Disinfectant Residual				additioninini	System RAA fro					By-product of drinking water disinfection
Chlorine Residual	4.0 (mg/L as Cl ₂)	Y	NA	Weekly/NA	0.04 - 1.96	1.0	NA	NA	1.00	
Disinfectant By-product Precursors		n î	11/4	rectaji tr	0.04 - 1.00	1.0		NA	141	Drinking water disinfectant added for treatment
Control of DBP Precursor (Total Organic Carbon, TOC) -	TT = ratio of actual TOC removal to required								1	
see explanation on the next page	TOC removal shall be ≥ 1	Y Y	1	Monthly/NA	2.4 - 3.1	2.7	NA	NA		
				Monuny/NA	Provide Carlos Carlos		NA	NA	NA	Various natural and manmade sources
Total Organic Carbon Inorganic Chemicals	Reported as mg/L		0.3		0.6 - 1.4	1.1				
Arsenic	10	Y	16		A REAL PROPERTY AND	A CONTRACTOR OF THE	CHER STREET	A States	The Island	
Barium	10 μg/L 1000 μg/L	Y	2	Yearly/Once in 3yrs.	NA	ND	ND — 2	ND	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride	2 mg/L	Ý	100 0.1	Yearly/Once in 3yrs.	NA	ND	ND — 120	ND	2000	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Nitrate (as N03)	45 mg/L	Ý	2	Quarterly/Quarterly	0.13 - 0.20	0.17	ND — 0.53	0.18	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Chromium	50 µg/L	Ý		Quarterly/Quarterly	ND - 2.7	ND	ND - 28.4	6.7	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Hexavalent Chromium	10 µg/L	Y Y	10	Yearly/Once in 3yrs. Quarterly/Quarterly	NA	ND	ND — 10	ND	(100)	Steel and pulp mill discharges, chrome plating, natural erosion
Radioactivity	торус	T	Conception in the local division of the loca	Quarterly/Quarterly	NA	ND	ND — 7.9	3.9	0.02	Steel and pulp mill discharges, chrome plating, natural erosion
Gross Alpha Activity**	15 pCi/L	Y	3	**See comment below	NA	ND	ND - 6.1		101	
Uranium***	20 pCi/L	Ý	1	NA/Quaterly	NA	ND	1.9 - 9.5	ND 5.7	(0) 0.43	Erosion of natural deposits Erosion of natural deposits
Tap Monitoring Lead & Copper	Action Level	- Construction of the	ACCR, Manager 1	No. of samples in 2012	90th Percentile		s exceeded AL	5.7	0.43	Erosion or natural deposits
Lead	15 μg/L	Y	-			140, 510	B CAUCCUCU AL	and the first post of the	areas and a second	
Lead		· · ·	5	50	ND		1	NA	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper	1.3 mg/L	Y	0.05	50	0.370		NONE	NA	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Secondary Standards			BAR I	In the Academic State Providence	- Contraction of the	CHI PART SPARTS	State	Para taking		
Inorganic Chemicals			(Parala Pa	and the second states of the second		here is a shall	10- 10- 10- 10- 10- 10- 10- 10- 10- 10-			
Color Odor-Threshold	15 units	Y	NA	Weekly/Once in 3yrs.	NA	<5	ND — 3	0.3	NA	Naturally occurring organic materials
Odor-Threshold Chloride	3 units	Ŷ	1	Weekly/Once in 3yrs.	NA	1	ND — 2	ND	NA	Naturally occurring organic materials
Iron	500 mg/L 300 μg/L	Ŷ	NA 100	Quarterly/Quarterly	70 - 121	103	5.7 - 110	24.4	NA	Runoff/leaching from natural deposits; seawater influence
Sulfate	500 µg/L	Ý	100	Monthly/Once in 3yrs. Quarterly/Quarterly	ND 43 — 68	ND 56.0	ND - 220	ND	NA	Leaching from natural deposits; industrial wastes
Total Dissolved Solids	1000 mg/L	Ý	NA	Yearly/Once in 3yrs.	43 — 68 NA	56.0	17 — 175 150 — 490	41.3	NA	Runoff/leaching of natural deposits; industrial wastes
Specific Conductance	1600 µmhos/cm	Ý	NA	Yearly/Once in 3yrs.	NA	680	240 - 810	251 414	NA NA	Ruonoff/leaching of natural deposits Substances that form ions when in water; seawater influence
Additional Constituents Analyzed		Participation of the second	11/1	really/once in syls.	- INA	000	240 - 010	414	NA	Substances that form ions when in water; seawater influence
pH	NA (Units)	NA	NA	Continuous/Once in 3yrs.	7.0 - 7.4	7.2	7.8 - 8.3	8.0	NA	Leaching from natural deposits
Hardness	NA(mg/L)	NA	NA	Weekly/Once in 3yrs.	74 - 140	123	27 - 300	124	NA	Sum of polyvalent cations present in the water, generally magnesium and calcuim. The cations are usually naturally-occuring.
Alkalinity	NA(mg/L)	NA	NA	Weekly/Once in 3yrs.	55 - 87	75	79 - 220	116	NA	Dissolved as water passes through limestone deposits
Sodium	NA(mg/L)	NA	NA	Yearly/Once in 3yrs.	NA	81	17 - 69	38	NA	Generally naturally-occurring salt present in water
Calcium	NA(mg/L)	NA	NA	Yearly/Once in 3yrs.	NA	30	9.4 - 78	38	NA	Dissolved as water passes through limestone deposits
Potassium	NA(mg/L)	NA	NA	Yearly/Once in 3yrs.	NA	2.9	ND - 2.7	1.4	NA	Leaching from natural deposits
	NA(mg/L)	NA	NA	Yearly/Once in 3yrs.	NA	12	0.9 - 24	7.1	NA	Dissolved as water passes through magnesium-bearing minerals
Magnesium Special Testing	Tu ((ingre)	1973								

** Sampled abletween 2006 and 2014. Individual sites are sampled once/Byrs. Range is from individual sample results.

Parameter	MCL or MRDL (units)	Meets Standard?	DLR	Sample	Treated Surfa	ce Water	*Ground W	later	EPA	Typical Source of Contaminant
		and and and and a	DER	Frequency*	Treated Surfa	Sampled	Sampled in		(MCLG)	
			1 Level			2/12/2015	1	The state	PHG	· 王子· · · · · · · · · · · · · · · · · ·
Primary Standards	A REAL PROPERTY AND A REAL PROPERTY AND A			Surface Water/Groundwater	Denne	or Average Effluent	Deser		or	
Turbidity (Water Clarity)	TT = 1 NTU				Range 0.05 - 0.24	0.09	Range <0.2 - 2.6	Average 0.25	IMRDLG	
								0.20		
Turbidity is a measure of the cloudiness of the water. We measure it because it is a good indicator of the	TT = 95% of monthly samples ≤0.3 NTU	Y	NA	0	100%	100%	NA			
effectiveness of our filtration system.	11 = 35% of monolity samples 50.5 NTO		NA.	Continuous/Once in 3yrs.	100%	100%	NA	NA	NA	Soil Runoff
Treated Surface Water Range and Average are of Daily										
Maximum										
Dist. System Microbiological		and the second second	a (0. 19)	State of the second	Place and the second	Res (BRITTERNE)	TTRAM COMPANY	a contraction of the	The support	
	For systems that collect less than 40 samples per month: More than 1 positive sample									
Total Coliform Bacteria	For systems that collect 40 or more samples									
(Total Coliform Rule)	per month: No more than 5.0% of monthly	Y	NA	Weekly	NA	0%	NA	NA	(0)	Naturally present in the environment
	samples are positive									
E coli										
(Federal Ground Water Rule)	0	Y	NA	Weekly	NA	0	NA	0	(0)	Human and animal fecal waste
Organic Chemicals		A REAL PROPERTY AND INCOME.	0010400400	and the second se			Contract Contractor			
Disinfection By-products			Contraction of the		Stage 2 D	DBP	President and the second of the	an something		
					All Sample Range	Highest LRAA				
TTHMs HAA5	80 µg/L	¥ I	NA	Monthly/NA	5 - 156	52	NA	NA	NA	By-product of drinking water disinfection
HAA5 Disinfectant Residual	60 µg/L	Y I	NA	Quarterly/NA	ND — 17 System RAA from	6.5			NA	By-product of drinking water disinfection
Chlorine Residual	4.0 (mg/L as Cl ₂)	Y	NA	Weekly/NA	0.02 - 2.07	0.94	NA		141	
Disinfectant By-product Precursors					2.07			NA	4	Drinking water disinfectant added for treatment
Control of DBP Precursor (Total Organic Carbon, TOC) -	TT = ratio of actual TOC removal to required		Ŧ							
see explanation on the next page	TOC removal shall be ≥ 1	Y	8	Monthly/NA	2.51 - 3.10	2.87	NA	NA	NA	Various natural and manmade sources
Total Organic Carbon	Reported as mg/L		0.3	0	0.8 - 1.4	1.1				
Inorganic Chemicals	A Second s	THE FUTURE OF	STEL SOL		and the second second	In the second second	Street Street	1957 - 1950 - 1	10 10 12 12 1	
Arsenic Barium	10 μg/L 1000 μg/L	Y I	2 100	Yearly/Once in 3yrs. Yearly/Once in 3yrs.	NA	ND	ND - 2.0	ND	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride	2 mg/L	Y Y	0.1	Quarterly/Quarterly	NA 0.222 - 0.224	ND 0.223	ND — 120 ND — 0.542	ND 0.175	2000	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Nitrate (as nitrogen)	10 mg/L	Ý	0.4	Quarterly/Quarterly	NA	ND	ND - 5.5	1.2	10	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Chromium	50 µg/L	Y	10	Yearly/Once in 3yrs.	NA	ND	ND - 10	ND	(100)	Steel and pulp mill discharges, chrome plating, natural erosion
Hexavalent Chromium	10 µg/L	Y	1	Quarterly/Quarterly	NA	ND	ND - 8.5	3.8	0.02	Steel and pulp mill discharges, chrome plating, natural erosion
Radioactivity Gross Alpha Activity**	15 pCi/L	Y	3	**See comment below	NA	ND	ND - 6.1	A COLUMN		
Uranium***	20 pCi/L	Y Y	1	NA/Quaterly	NA	ND	ND - 6.1 1.9 - 9.5	ND 5.7	(0) 0.43	Erosion of natural deposits Erosion of natural deposits
Tap Monitoring Lead & Copper	Action Level	Contraction of the second	Bitter Jeller	No. of samples in 2015	90th Percentile		exceeded AL	-	0.40	
Lead	15 µg/L	Y	5	50	0.91	1	NONE	NA	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper	1.3 mg/L	Y	0.05	50	0.37		NONE	NA	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Secondary Standards			and the second		and the state of the state	AND TON AND THE R	THE REAL PROPERTY.	114	0.0	Internar consistent of household planting systems, erosion of hatural deposits, leaching from wood preservatives
Inorganic Chemicals Color					CONCERNING IN		14 346 3 4		1997 H 14	
Odor-Threshold	15 units 3 units	¥.	NA 1	Weekly/Once in 3yrs. Weekly/Once in 3yrs.	NA NA	<5 1.0	ND - 3.0 ND - 2.0	0.3	NA	Naturally occurring organic materials
Chloride	500 mg/L	Ý	NA	Quarterly/Quarterly	113 - 141	1.0	6.1 - 102	ND 25	NA NA	Naturally occurring organic materials Runoff/leaching from natural deposits; seawater influence
Iron	300 µg/L	Y	100	Monthly/Once in 3yrs.	NA	ND	ND - 220	ND	NA	Leaching from natural deposits; industrial wastes
Sulfate Total Dissolved Solids	500 mg/L 1000 mg/L	Y	0.5 NA	Quarterly/Quarterly	70 - 78	74	15 - 156	42	NA	Runoff/leaching of natural deposits; industrial wastes
Specific Conductance	1600 µmhos/cm	Ý	NA	Yearly/Once in 3yrs. Yearly/Once in 3yrs.	NA	410 800	150 — 490 240 — 810	251 414	NA NA	Ruonoff/leaching of natural deposits Substances that form ions when in water; seawater influence
Additional Constituents Analyzed		Harris Charles	12 martin		76				in a	
pH	NA (Units)	NA	NA	Continuous/Once in 3yrs.	6.9 - 8.1	7.2	7.8 - 8.3	8.0	NA	Leaching from natural deposits
Hardness Alkalinity	NA (mg/L) NA (mg/L)	NA NA	NA	Weekly/Once in 3yrs. Weekly/Once in 3yrs.	114 — 152 77 — 95	139 87	27 - 300	124	NA	Sum of polyvalent cations present in the water, generally magnesium and calcuim. The cations are usually naturally-occuring.
Sodium	NA (mg/L)	NA	NA	Yearly/Once in 3yrs. Yearly/Once in 3yrs.	77 — 95 NA	87 84	79 — 220 17 — 69	116 38	NA NA	Dissolved as water passes through limestone deposits Generally naturally-occurring salt present in water
Calcium	NA (mg/L)	NA	NA	Yearly/Once in 3yrs.	NA	32	9.4 - 78	38	NA	Dissolved as water passes through limestone deposits
Potassium Magnesium	NA (mg/L)	NA	NA	Yearly/Once in 3yrs.	NA	2.5	ND - 2.7	1.4	NA	Leaching from natural deposits
Special Testing	NA (mg/L)	NA	NA	Yearly/Once in 3yrs.	NA	9.6	0.9 - 24	7.1	NA	Dissolved as water passes through magnesium-bearing minerals
UCMR 3 (Sampled in 2015)					Range	Average	Contraction of the second		and the second second	
Molybdenum	NA (µg/L)	NA	1.0	Special	ND - 4.4	2.5			NA	
Strontium Vanadium	NA (µg/L)	NA	0.30	Special	140 — 510	382			NA	
Vanadium Chromium (total)	NL = 50 ug/L 50 μg/L	¥ I	0.20	Special	ND - 31	12			NA	Leaching from natural deposits, steel manufacturing, hazardous waste sites
			01700	Special	ND - 6.9	2.9			(100)	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textil
	10 µg/L	Y	0.03	Special	0.09 - 7.7	3.1			0.02	manufacturing facilities; erosion of natural deposits
Chromium -6										
Chromium -6 Chiorate	NA (µg/L)	NA	20	Special	ND - 310	158			NA	
Chromium -6 Chlorate Bromochloromethane	NA (µg/L)	NA	20 0.06	Special Special	ND — 310 ND — 0.28	158 0.10			NA NA	
Chromium -6 Chlorate	NA (µg/L) de, Sulfate, & Nitrate which are sampled quarterly ampled once/6yrs or once/9yrs, Range is from in	NA NA	0.06							



ATTACHMENT NO. 5

GLOSSARY OF TERMS AND ABBREVIATIONS

ACWA:	Association of California Water Agencies
BAT:	Best Available Technology to achieve compliance with an MCL
DLR:	Detection Limit for Reporting Purposes; set by SWRCB
MCL:	Maximum Contaminant Level; set by SWRCB and USEPA
MCLG:	Maximum Contaminant Level Goal; set by USEPA
MGD:	Million Gallons per Day
OEHHA:	Office of Environmental Health Hazard Assessment (State of California)
PHG:	Public Health Goal; set by OEHHA
SWRCB:	State Water Resources Control Board
USEPA:	United States Environmental Protection Agency
mg/l:	milligrams per liter pr parts per million
μg/l:	micrograms per liter or parts per billion



PALMDALE WATER DISTRICT 2015 CONSUMER CONFIDENCE REPORT

Our Mission: To provide high quality water to our current and future customers at a reasonable cost.

Questions or comments on the contents of this report are encouraged:

Call Mynor Masaya, Operations Manager, 661-947-4111 x1185 or Amanda Thompson, Water Quality & Regulatory Affairs Supervisor, 661-947-4111 x1178 Monday through Friday, 7:00 a.m. to 4:30 p.m.

Attencion Residentes!

Que no hablan Ingles: Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien, ó para recibir una version en Espanol sobre este informe, favor de llamar a la oficina de P.W.D. al telefono 661-947-4111.



State of our water

Since 1918, the Palmdale Water District has been providing high quality water at an affordable cost. Over the years we have grown in both capacity and with improvement in water quality by constantly reinvesting into our system to ensure that the community has the best product available.

California's water issues are complex and competition for this precious resource will continue to increase over time. As we have for nearly 100 years, the PWD is always thinking of the future and how to ensure that the community has a reliable source of water long-term.

As we move forward, together as a community, my fellow board members, staff and I are committed to continuing to provide you with the best customer service possible, lowest rates, opportunities to save money through conservation practices, and to responsibly expand our water portfolio to reduce the need for water from the State.

The Board meets regularly with staff to plan and execute short and long term goals to make sure that our water supply and reliability is solid for our existing and future customers. Therefore, we have developed a Strategic Plan that will help us and guide us to achieve our final collective goal of serving you better.

Thank you for all of your efforts to help us conserve water, lead by example to your neighbors, and being a part of making Palmdale stronger.

Robert E. Alvarado (PWD Board President)

Dennis D. LaMoreaux (PWD General Manager)



The Palmdale Water District is proud to announce 100% regulatory compliance in 2015 and is confident its drinking water is of the highest quality.



This Consumer Confidence Report is a snapshot of last year's (2015) water quality and will provide you with a better understanding of the quality of your drinking water. This Report includes details about where your water comes from, what it contains, and how it compares to Drinking Water standards. We are committed to providing you with this information because informed customers are our best allies. Stringent water quality testing is performed before the water is delivered to consumers. Last year, PWD tested

more than 3,000 samples for over 80 regulated contaminants. Only 8 primary standard

contaminants were detected in 2015, but all were at levels below the Maximum Contaminant Level allowed by the State. Please take the time to review this Consumer Confidence Report and Water Quality Data Chart to become an informed consumer. The Water Quality Data Chart is divided into two standards – Primary and Secondary. Primary standards are set to protect public health from contaminants in water that may be immediately harmful to humans or affect their health if consumed for long periods of time.

Secondary standards govern aesthetic qualities of water such as taste, mineral content, odor, color, and turbidity. Please call 661-947-4111 x1178 or x1185 with any questions.

Last year, PWD tested more than 3,000 samples for over 80 regulated contaminants.



Your views are welcome:

- Attend Board of Directors' meetings the second and fourth Wednesday of each month. Board meetings start at 7:00 p.m. and are held at the District office, 2029 East Avenue Q, Palmdale.
- Call 661-947-4111 with questions about the District or to file a water quality complaint.
- Call 661-947-4111 x1041 or x1001 for information on water conservation or water education.

Visit our web site at www.palmdalewater.org.

PWD SOURCES OF WATER SUPPLY:

PWD obtains its water from one of three sources or a combination of these sources.

The first source is surface water from the State Water Project (SWP/CA Aqueduct).

This water source begins in Northern California, flows into the Delta near Sacramento, and is pumped traveling South to Palmdale Lake. The District is entitled to take a maximum of 21,300 acre feet (or 6.9 billion gallons of water) per year. Based on the amount of rain & snowfall that falls in the Sierra Nevada Mountains and the amount of water stored in northern California reservoirs, the District is granted a percentage of the annual entitlement. In 2015 the District received 5,854 acre feet from the SWP. The water is drawn from the SWP aqueduct and stored in Palmdale Lake prior to treatment.

The second source of surface water is from the reservoir created by Littlerock Dam.

Littlerock Dam was originally built in 1922 and, in 1994, it was renovated to strengthen the dam and increase the reservoir capacity to 3,500 acre feet, or 1.1 billion gallons of water. In 2015 the District diverted 572 acre feet from this source. Littlerock Dam Reservoir is fed by natural run-off from snow packs in the local San Gabriel Mountains and from rainfall. The water is then transferred from Littlerock Reservoir to Palmdale Lake through a ditch connecting the two reservoirs for storage prior to treatment.

The third source of water for the District's customers is ground water.

Ground water is pumped from the Antelope Valley ground water basin through 23 wells and in 2015 the District pumped 11,227 acre feet from 22 of these wells. This water is treated with chlorine and pumped directly into the distribution system.

All three sources are constantly tested and treated in compliance with all applicable regulations to ensure high water quality and dependability of the water system. The Palmdale Water District delivered approximately 34% surface water and 66% ground water to its consumers in 2015.

THE SOURCES OF DRINKING WATER

(both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial Contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic Contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come

from gas stations, urban stormwater runoff, agricultural application, and septic systems.

Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

Drinking Water Source Assessment and Protection Program:

The Palmdale Water District's Sanitary Survey, including a Source Water Assessment of surface waters, was updated in 2012 in compliance with State of California regulations. The assessment of surface water sources included Littlerock Reservoir and Palmdale Lake. A Groundwater Assessment and Protection Program was completed in January of 1999, and a Wellhead Protection Plan was completed in November 2000.

The District's drinking water sources are considered most vulnerable to the following activities associated with contaminants detected in the water supply: illegal activities, such as unauthorized dumping;

recreation; highways; railroads; and sewer collection systems. A comprehensive source water protection program can prevent contaminants from entering the public water supply, reduce treatment costs, and increase public confidence in the quality, reliability and safety of drinking water.

You can help prevent water contamination and pollution by properly disposing of trash and waste materials. Remember, many common household products can contaminate surface and ground water supplies. Anything you throw in the trash, dump on the ground, pour down the drain, or wash down the driveway can eventually reach water sources and cause contamination.

The Sanitary Survey, Source Water Assessment, Groundwater Assessment, and Wellhead Protection Plan are available for review on the Districts website (palmdalewater.org) or at the District's office by calling Peter K. Thompson Jr. at 661-947-4111 x1169.



THE WATER QUALITY DATA CHART LISTS ALL DRINKING WATER CONTAMINANTS DETECTED DURING THE 2015 CALENDAR YEAR.

The presence of these contaminants in the water does not necessarily indicate the water poses a health risk. PWD tests for many contaminants in addition to those listed in the chart. Test results for these additional contaminants were all "None Detected (ND)" and are not required to be included in the chart. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not

			Treated Sur	face Water		ound Water	EPA						
Parameter	MCL or MRDL (units)	Meets	DLR	Sample Frequency*		Sampled	Sam	oled in 2013	(MCLG) PHG	Typical Source of			
Primary Standards		Standard?	DEN	Surface Water/ Groundwater	Range	2/12/2015 or Average Effluent	Range	Average	or IMRDLGI	Contaminant			
Turbidity (Water Clarity)	TT = 1 NTU TT = 95% of monthly samples ≤0.3 NTU	Y	NA	Continuous/Once in 3yrs.	0.05 - 0.24 100%	0.09 100%	0.05 - 2.6 NA	0.25 NA	NA	Soil Runoff			
Turbidity is a measure of the clou	diness of the water. We mea	isure it becau	se it is a	good indicator of the e	effectiveness of our fi	Itration system. Tre	ated Surfac	e Water Range ar	d Average are	of Daily Maximum			
Dist. System Microbiological													
Total Coliform Bacteria (Total Coliform Rule)	For systems that collect less than 40 samples per month. More than 1 positive sample. For systems that collect 40 or more samples per month: No more than 5.0% of monthly samples are positive	Y	NA	Weekly	NA	0%	NA	NA	(0)	Naturally present in the environment			
E. coli (Federal Ground Water Rule)	0	Y	NA	Weekly	NA	0	NA	0	(0)	Human and animal fecal waste			
Organic Chemicals													
Disinfection By-products													
TTHMs	80 µg/L	Y	NA	Monthly/NA	All Sample Range 5 - 156	Highest LRAA 52				Du product of dealing water			
HAA5	60 µg/L	Y	NA	Quarterly/NA	ND - 17 '	6.8	NA	NA	NA	By-product of drinking water disinfection			
Disinfectant Residual	1	1	I		System RAA from D	list. Syst.		L	1				
Chlorine Residual	4.0 (mg/L as CI2)	Y	NA	Weekly/NA	0.02 -2.07	0.94	NA	NA	141 ,	Drinking water disinfectant added for treatment			
Disinfectant By-product Precurso	rs												
Control of DBP Precursor (Total Organic Carbon, TOC) - see explanation on the next page	$\begin{array}{l} TT = ratio \mbox{ of actual TOC} \\ removal \mbox{ to required TOC} \\ removal \mbox{ shall } be \geq 1 \end{array}$	Y	1	Monthly/NA	2.51 - 3.10	2.87	NA	NA	NA	Various natural and manmade sources			
Total Organic Carbon	Reported as mg/L		0.3		0.8 - 1.4	1.1	-						
Inorganic Chemicals										-			
Arsenic	10 µg/L	Y	2	Yearly/Once in 3yrs.	NA	ND	ND - 2.0	ND	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes			
Barium	1000 µg/L	Y	100	Yearly/Once in 3yrs.	NA	ND	ND - 120	ND	2000	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits			
Fluoride	2 mg/L	Y	0.1	Quarterly/Quarterly	0.222 - 0.224	0.223	ND - 0.542	0.175	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories			
Nitrate (as nitrogen)	10 mg/L	Y	0.4	Quarterly/Quarterly	NA	ND	ND - 5.5	1.2	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits			
Chromium	50 µg/L	Y	10	Yearly/Once in 3yrs.	NA	ND	ND - 10	Chromium - Ground Water Average = ND	(100)	Steel and pulp mill discharges, chrome plating, natural erosion			
Hexavalent Chromium	10 µg/L	Y	1	Quarterly/Quarterly	NA	ND	ND - 8.5	3.8	0.02				
Radioactivity		i duanaes						Cross Alaba					
Gross Alpha Activity**	15 pCi/L	Y	3	**See comment below	NA	ND	ND - 6.1	Gross Alpha Activity - Ground Water Average = ND	(0)	Erosion of natural deposits			
Uranium***	20 pCi/L	Y	1	NA/Quaterly	NA	ND	1.9 - 9.5	5.7	0.43				
Tap Monitoring Lead & Copper	Action Level			No. of samples in 2015	90th Percentile	No. sites excee							
Lead	15 µg/L	Y	5	50	ND	NONE		NA	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits			
Copper	1.3 mg/L	Ŷ.	0.05	50	0.370	NONE		NA	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives			

change frequently. As a result, some of the data, though representative of the water quality, is more than one year old. Unless otherwise noted, the data presented in this chart is from testing performed January 1 to December 31, 2015. Unregulated contaminant monitoring helps USEPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated.

				Sample	Treated Su	rface Water		round Water mpled in 2013	EPA	
Parameter Secondary Standards	MCL or MRDL (units)	Meets Standard?	DLR	Frequency* Surface Water/ Groundwater	Range	Sampled 2/12/2015 or Average Effluent	Range	Average	(MCLG) PHG or IMRDLGI	Typical Source of Contaminant
Color	15 units	Y	NA	Weekly/Once in 3yrs.	NA	<5	ND - 3	0.3	NA	- Naturally occurring organic materials
Odor-Threshold	3 units	Y	1	Weekly/Once in 3yrs.	NA	1.0	ND - 2	ND	NA	- Naturally occurring organic materials
Chloride	500 mg/L	Y	NA	Quarterly/Quarterly	113 - 141	127	6.1 - 102	25	NA	Runoff/leaching from natural deposits; seawater influence
Iron	300 µg/L	Y	100	Monthly/Once in 3yrs.	NA	ND	ND - 220	ND	NA	Leaching from natural deposits; industrial wastes
Sulfate	500 mg/L	Y	0.5	Quarterly/Quarterly	70 -78	74	15 - 156	42	NA	Runoff/leaching of natural deposits; industrial wastes
Total Dissolved Solids	1000 mg/L	Y	NA	Yearly/Once in 3yrs.	NA	410	150 - 490	251	NA	Runoff/leaching of natural deposits
Specific Conductance	1600 µmhos/cm	Y	NA	Yearly/Once in 3yrs.	NA	710	240 - 810	414	NA	Substances that form ions when in water; seawater influence
Additional Constituents	Analyzed									
рН	NA (Units)	NA	NA	Continuous/Once in 3yrs.	6.9 - 8.1	7.2	7.8 - 8.3	8.0	NA	Leaching from natural deposits
Hardness	NA (mg/L)	NA	NA	Weekly/Once in 3yrs.	114 - 152	139	27 - 300	124	NA	Sum of polyvalent cations present in the water, generally magnesium and calcuim. The cations are usually naturally-occuring.
Alkalinity	NA (mg/L)	NA	NA	Weekly/Once in 3yrs.	77 - 95	87	79 - 220	116	NA	Dissolved as water passes through
Calcium	NA (mg/L)	NA	NA	Yearly/Once in 3yrs.	NA	32	9.4 - 78	38	NA	limestone deposits
Sodium	NA (mg/L)	NA	NA	Yearly/Once in 3yrs.	NA	84	17 - 69	38	NA	Generally naturally-occurring salt present in water
Potassium	NA (mg/L)	NA	NA	Yearly/Once in 3yrs.	NA	2.5	ND - 2.7	1.4	NA	Leaching from natural deposits
Magnesium	NA (mg/L)	NA	NA	Yearly/Once in 3yrs.	NA	9.6	0.9 - 24	7.1	NA	Dissolved as water passes through magnesium-bearing minerals
Special Testing										
UCMR 3 (Sampled in 2015)					Effluent & I	Dist. System	0	Fround Water		
Molybdenum	NA	NA	1.0	Special	2.9 - 4.4	3.4	ND - 2.0	1.6	NA	
Strontium	NA	NA	0.30	Special	320 - 440	391	140 - 510	373	NA	
Vanadium	NL = 50 ug/L	Y	0.20	Special	ND - 22	6.6	7.1 - 31	17	NA	Leaching from natural deposits, steel manufacturing, hazardous waste sites
Chromium (total)	50 µg/L	Y	0.20	Special	ND - 5.8	1.9	1.3 - 6.9	4.0	(100)	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Chromium -6	10 µg/L	Y	0.03	Special	0.09 - 5.9	1.9	1.3 - 7.7	4.2	0.02	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Chlorate	NA	NA	20	Special	120 - 310	215	ND - 200	101	NA	
Bromochloromethane	NA	NA	0.06	Special	0.086 - 0.28	0.18	NA	Bromochloromethane - Ground Water Average = ND	NA	

* Wells are sampled once/3yrs except for Fluoride, Chloride, Sulfate, & Nitrate which are sampled quarterly. ** Sampled between 2006 and 2015. Individual sites are sampled once/6yrs or once/9yrs. Range is from individual sample results. *** Sample collected only when quarterly average of Gross Alpha exceeds 5pCi/L.

Lead And Copper:

The tap samples for Lead and Copper were taken in the year 2015 (50 samples). The 90th percentile results of none-detected for lead and 0.370 ppm for copper are well within the AL of 15 ppb lead and the AL of 1.3 ppm for copper. The District is required to draw new sample sets every 3 years. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Palmdale Water District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. [Optional: If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.] If you are concerned about lead in your drinking water, you

DEFINITIONS:

The following definitions of key terms are provided to help you understand the data used in this report. **Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

Public Health Goal (PHG): The level of a contaminant in

drinking water below which there is no known or expected risk to health. PHGs are set by OEHHA (Office of Environmental Health Hazard Assessment) a division of the California Environmental Protection Agency (CEPA).

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Running Annual Average (RAA): The running annual arithmetic average, computed quarterly, of quarterly arithmetic averages of all samples collected.

Detection Limit for purposes of Reporting (DLR): The designated minimum level at or above which any analytical finding of a contaminant in drinking water shall be reported to the Department of Public Health. Unregulated Contaminant Monitoring (UCMN): Unregulated contaminant monitoring helps USEPA and the California Department of Public Health to determine where certain contaminants occur and whether the contaminants need to be regulated.

EDUCATIONAL INFORMATION AND POSSIBLE DRINKING WATER CONTAMINANTS:

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791). PWD tested for cryptosporidium and giardia monthly from April through December in 2015 and results were "none detected."

TOTAL TRIHALOMETHANES (TTHMS): Total Trihalomethanes (TTHMs) are the total of four trihalomethanes of concern in drinking water: chloroform, bromoform, bromodichloromethane, and chlorodibromomethane. In the Primary Standards Disinfection Byproducts section of the Water Quality Chart under Highest LRAA from Distribution System, the highest Locational Running Annual Average (LRAA) for 2015 is 52 µg/L, which is less than and complies with the Federal TTHM MCL of 80 µg/L. The range of monthly sample results from all 8 sampling points in 2015 is 5 - 156 µg/L, indicating that certain sampling points or specific locations within the customer service area have exceeded 80 µg/L. These samples were taken from dedicated sample points within the distribution system and are representative of maximum residence time in the system.

Health effects of Total Trihalomethanes (TTHMs): Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems and may have an increased risk of getting cancer.

TOTAL ORGANIC CARBON (TOC): Total Organic Carbon (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection byproducts. TOC result is based on quarterly RAA of percent removal ratio. Paired samples (one from source and the other from treated water) are collected monthly. The percent removal between source water and treated water is divided by the required monthly TOC percent removal based on certain criteria that all public water systems must follow. The quarterly RAA of these monthly results should be 1.0 or higher. Our quarterly RAA in 2015 ranged from 2.51 to 3.10 and averaged 2.87. Individual TOC sample results for treated water ranged from 0.8 to 1.4 mg/L and averaged 1.1 mg/L.

ARSENIC: In the Primary Standards Inorganic Chemicals section of the chart for Arsenic, the treated surface water sample is None Detected (ND). For groundwater samples (23 total), the range is None Detected (ND) to $2.0 \ \mu$ g/L. The average for all groundwater sources based on 2013 analysis is less than the DLR of 2 μ g/L, MCL = 10 μ g/L.

Health effects of Arsenic: While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The USEPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at http://www.epa.gov/lead.

Health effects of Lead: Infants and children who drink water containing lead in excess of the action level may experience delays in their physical and mental development. Children may show slight deficits in attention span and learning abilities. Adults who drink this water over many years may develop kidney problems or high blood pressure.

Health effects of Copper: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water. Regulatory Action Level (AL) or Notification Level (NL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Primary Drinking Water Standard (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.

Secondary Drinking Water Standard (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SWDSs do not affect the health at the MCL level. Counting Error: The 95% confidence level for the radioactivity analysis.

ABBREVIATIONS USED IN 2015 WATER QUALITY DATA CHART:

ND: Not detectable or None detected at testing limit (DLR)

NA: Not Applicable Nreg: No regulation

< Less Than

> Greater Than

pCi/L: picocuries per liter (a measure of radiation) DBP: Disinfection By-products

Comparison examples are provided for the following measurements to help you better understand the amount of chemical contaminants detected in the water. This does not mean that the amounts are not significant regarding risk of health effects for specific contaminants. **ppm:** parts per million or milligrams per liter (mg/L) = qualitatively, approx. 1 drop in 10 gals.

ppb: parts per billion or micrograms per liter (ug/L) = qualitatively, approx.
1 drop in 10,000 gals.

ppt: parts per trillion or nanograms per liter (ng/L) = qualitatively, approx. 1 drop in 100,000 gals.

effects for specific contaminants.

BARIUM: In the Primary Standards Inorganic Chemicals section of the chart for Barium, treated surface water sample is None Detected (ND). In the groundwater column, the range of barium is ND to120 µg/L and the average is None Detected (ND), which is well under the MCL of 1000 µg/L. Out of 23 wells tested, one well (Well 18) exceeded the DLB for barium. Health effects of Barium: Some people who drink water

containing barium in excess of the MCL over many years may experience an increase in blood pressure. **FLUORIDE:** Fluoride in the treated surface water ranged from 0.222 to 0.224 mg/L and averaged 0.223 mg/L. The groundwater samples ranged from ND to 0.54 mg/L and averaged 0.17 mg/L. The fluoride MCL is 2 mg/L and the DLR is 0.1 mg/L.

Health effects of Fluoride: Some people who drink water containing fluoride in excess of the federal MCL of 4 mg/L over many years may get bone disease, including pain and tenderness of the bones. Children who drink water containing fluoride in excess of the state MCL of 2 mg/L may get mottled teeth.

NITRATE: In the Primary Standards Inorganic Chemicals section of the chart for Nitrate (as Nitrogen), treated surface water sample is None Detected (ND). In the groundwater column, the range of Nitrate (as Nitrogen) is ND to 5.5 mg/L, and the average is 1.2 mg/L. The State Water Resources Control Board requires annual sampling if all results are less than 50% of the MCL. If the result from any one source is greater than 50% of the MCL. If the result from any one source is greater than 50% of the MCL. The District samples all its wells on a quarterly basis (4 times a year) even when they test below 50% of the MCL. The numbers expressed on the chart are derived from quarterly sampling of all District wells, except those that are out of service.

Health effects of Nitrate: Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity.

GROSS ALPHA PARTICLE ACTIVITY: Well 15 and Well 30 were the only sources sampled in 2015 for Gross Alpha with the results being 5.7 pCi/L and None Detected (ND), respectively. The remaining water sources will be monitored in the future during this compliance cycle.

Health effects of Gross Alpha Particle Activity: Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

URANIUM: Samples for Uranium are collected only when the quarterly average of Gross Alpha particle activity exceeds 5 pCi/L. Since the results of Well 15 and Well 30 monitoring were below this level, there were no samples collected for Uranium in 2015.

Health effects of Uranium: Some people who drink water containing uranium in excess of the MCL over many years may have kidney problems or an increased risk of getting cancer.

PALMDALE WATER DISTRICT BOARD MEMORANDUM

DATE:	June 15, 2016	June 22, 2016
то:	BOARD OF DIRECTORS	Board Meeting
FROM:	Mr. Dennis D. LaMoreaux, General Manager	
RE:	AGENDA ITEM NO. 7.3 – CONSIDERATION AND ON CALIFORNIA SPECIAL DISTRICTS ASSOC ELECTIONS	

Information for the California Special Districts Association (CSDA) 2016 election for Seat B of the District's Network is attached for your consideration. The District is asked to vote for only one candidate by August 5, 2016.

The candidates are as follows:

- Bill Nelson (incumbent) Orange County Cemetery District
- John DeMonaco Chino Valley Independent Fire District
- Ronald Coats
 East Valley Water District



JUN 06 2016

CALIFORNIA SPECIAL DISTRICTS ASSOCIATION 2016 BOARD ELECTIONS

MAIL BALLOT INFORMATION

Dear Member:

California Special

Districts Association Districts Stronger Together

A mail ballot has been enclosed for your district's use in voting to elect a representative to the CSDA Board of Directors in your Network for Seat B.

Each of CSDA's six (6) networks has three seats on the Board. Each of the candidates is either a board member or management-level employee of a member district located in your network. Each Regular Member (district) in good standing shall be entitled to vote for one (1) director to represent its network.

We have enclosed the candidate information for each candidate <u>who submitted one.</u> Please vote for <u>only one</u> candidate to represent your network in Seat B and be sure to sign, date and fill in your member district information. If any part of the ballot is not complete, the ballot will not be valid and will not be counted.

Please utilize the enclosed return envelope to return the completed ballot. Ballots must be received at the CSDA office at 1112 I Street, Suite 200, Sacramento, CA 95814 by **5:00pm on Friday, August 5, 2016.**

If you do not use the enclosed envelope, please mail in your ballot to: California Special Districts Association Attn: 2016 Board Elections 1112 I Street, Suite 200 Sacramento, CA 95814

Please contact Charlotte Lowe toll-free at 877.924.CSDA or charlottel@csda.net with any questions.



Re-Elect CSDA President Bill Nelson To CSDA Board of Directors

PROVEN EXPERIENCE LEADING SPECIAL DISTRICTS

I am committed to building on CSDA's present foundation of educational programs and legislative advocacy. My enthusiasm, commitment and comprehensive knowledge of special districts bring years of experience to the CSDA Board. It would be an honor to continue serving special districts in the Southern Network.

EXPERIENCED LEADER COMMITTED TO SPECIAL DISTRICTS FISCALLY RESPONSIBLE DEDICATED

CSDA EXPERIENCE

- CSDA President 2016
- Served on the Board for five years
- Chair of Fiscal Committee 2014
- Membership Committee 2013-16

DISTRICT EXPERIENCE

- Appointed to Board of Trustees Orange County Cemetery District in 2003
- Chair of the Board 2006. 2010 & 2014. Currently Vice Chair
- Chair of Finance Committee 2004 to present

 \checkmark

OTHER LEADERSHIP EXPERIENCE

- Board of Directors California Association of Public Cemeteries 2008 to 2016
- Board of Directors Institute for Local Government 2016 to present
- Board of Directors California Association of Realtors 2004-2012
- Board of Trustees Orange County Mosquito & Vector Control 2016 to present

COMMUNITY INVOLVEMENT-

- Orange County Grand Jury 2002-2003
- Board of Directors Orange County Grand Jurors Association 2005 to 2011
- City of Villa Park Investment Advisory Committee- 2008 to 2014 Chair last two years
- Villa Park Community Services Foundation Treasurer 2010 to 2014
- Villa Park City Council Member 2014 to present

BUSINESS EXPERIENCE

Financial Executive for 25 years with Atlantic Richfield Company (ARCO) & Southern Calif. Gas Co.

EDUCATION

- MBA Finance University of Southern California
- BA Economics California State University Dominguez Hills



2016 CSDA BOARD CANDIDATE INFORMATION SHEET

The following information MUST accompany your nomination form and Resolution/minute order:

Na	me:Bill Nelson
Dis	strict/Company: Orange County Cemetery District
Titl	le: <u>Trustee & Vice Chair of the Board</u>
Ele	ected/Appointed/Staff: <u>Appointed</u>
Lei	ngth of Service with District: 13 Years
1.	Do you have current involvement with CSDA (such as committees, events, workshops, conferences, Governance Academy, etc.):
	CSDA 2016 President. Chair of Fiscal Committee - 2014, Served on the Board for five years, Served on all of CSDA Committees, attended at least 10 CSDA Legislative Days and Annual Conferences, Received Special District Leadership Foundation Recognition in Special District Governance.
2.	Have you ever been associated with any other state-wide associations (CSAC, ACWA, League, etc.):
	Board of Directors - California Association of Public Cemeteries 2008 to 2016
	Board of Directors - Institute For Local Government - 2016 to present
	Board of Directors - California Association of Realtors - 2004 to 2012
3.	-Chaired various Committees List local government involvement (such as LAFCo, Association of Governments, etc.):
	City Council Member - City of Villa Park - 2014 to present
	Trustee - Orange County Mosquito and Vector Control District - 2016 to present
4.	List civic organization involvement:
	Orange County Grand Jury 2002-2003 Board of Directors - Orange County Grand Jurors Association 2005-2011 City of Villa Park Investment Advisory Committee - 2008 to 2014 - Chair last two yesrs Villa Park Community Services Foundation - Treasurer - 2010 to 2014
	Candidate Statement – Although it is not required, each candidate is requested to submit a ndidate statement of no more than 300 words in length. Any statements received in the

CSDA office after June 2, 2016 will not be included with the ballot.

I am seeking election to a seat on the Board of Directors of the California Special Districts Association.

I have served on the Board of Directors of the Chino Valley Independent Fire District for ten years, elected in 2006. I am very proud to state that the Fire District is the <u>first</u> fire district to receive the District of Distinction Accreditation from the Special Districts Leadership Foundation (SDLF). We have been a District of Distinction since 2008. We also hold a District of Transparency Certificate of Excellence. I have completed the SDLF Recognition of Special District Governance.

I serve on the CSDA Legislative and the Fiscal Committees. I have previously served on the CSDA Education and Membership committees.

I am a retired Fire Chief with 33 years of Fire Service experience. I have been involved in city, county, JPAs and special districts in various capacities. I am currently on the Board of Directors of the Fire Districts Association of California and also serve on the Conference Committee. I am a Past President of the Chino Rotary Club and the current Chairman of the Chino Rotary Foundation.

I understand, and I am committed to legislative advocacy for special districts. Special Districts provide one of the most effective, efficient, and accountable forms of local service. It is vital that we continue to work together to influence and monitor policy decisions affecting California special districts.

My commitment and extensive experience, education in public service and as a special district board member & policy-maker, provides me with the ability to effectively serve as a CSDA Board Member representing all California Special Districts. I look forward to your support!

If you would like to speak with me, I can be reached at (909) 816-8396 or at jdemonaco@chofire.org

John DeMonaco



2016 CSDA BOARD CANDIDATE INFORMATION SHEET

The following information MUST accompany your nomination form and Resolution/minute order:

Name: John DeMonaco

District/Company: Chino Valley Independent Fire District

Title: Director

Elected/Appointed/Staff: Elected

Length of Service with District: 10 Years

- 1. Do you have current involvement with CSDA (such as committees, events, workshops, conferences, Governance Academy, etc.):
- I am on the Legislative and Fiscal Committees.

I have also served on the Education and Membership Committees.

2. Have you ever been associated with any other state-wide associations (CSAC, ACWA, League, etc.):

I am on the Board of Directors for the Fire Districts Association of California.

3. List local government involvement (such as LAFCo, Association of Governments, etc.):

N/A

4. List civic organization involvement:

I am a member and past president of the Rotary Club of Chino.

**Candidate Statement – Although it is not required, each candidate is requested to submit a candidate statement of no more than 300 words in length. Any statements received in the CSDA office after June 2, 2016 will not be included with the ballot.

MY FELLOW CSDA MEMBER:

As Chairman of East Valley Water District I take great pride in the opportunity to serve my community. Prior to joining the Governing Board, I was an active public participant, and felt honored when elected in 2014. I firmly believe in the importance of transparent government and public service. With these foundational principles, I look forward to representing this region in a professional manner, as the Southern Network, Seat B, Board of Directors representative for CSDA.

I have had the opportunity to work with a number of organizations through CSDA and believe that we all benefit from interacting and sharing experiences. I am a proud lifetime member of the CSDA Leadership Foundation and have participated in a number of trainings opportunities.

At East Valley Water District, we have made a commitment to good governance and accountability. This is clearly demonstrated through the numerous awards we have received from the Government Finance Officers Association, CAPIO, CaIPERS, and even CSDA. But I am proud to be a part of EVWD for more than the awards, they are an organization that delivers. As a performance based agency, we continue to achieve the impossible. Whether it is constructing a headquarters facility ahead of an already tight schedule, implementing budget based rates to provide customers with rate stability during the drought emergency, or developing a succession plan to prepare for the change in our workforce; we set our sights high to enhance the quality of life of this community.

As a CSDA Director, I will bring that passion for good governance and public service. Thank you for your consideration and for allowing me the opportunity to share my experience and perspective. I look forward to serving as a representative on the CSDA Board of Directors.

Sincerely,

Rom and & Cold

Ronald Coats EVWD Chairman



California Special Districts Association Districts Stronger Together

2016 CSDA BOARD CANDIDATE INFORMATION SHEET

The following information MUST accompany your nomination form and Resolution/minute order:

Name: Ronald L. Coats

District/Company: East Valley Water District

Title: Chairman of the Board

Elected/Appointed/Staff: Elected

Length of Service with District: 2 Years

1. Do you have current involvement with CSDA (such as committees, events, workshops, conferences, Governance Academy, etc.):

1 am proud to be a lifetime member of the CSDA Leadership Foundation. Additionally, I have

completed numerous CSDA webinars, including the CIDAC series on local agency finances and investments. Additionally, I have attended annual CSDA conferences.

 Have you ever been associated with any other state-wide associations (CSAC, ACWA, League, etc.):

I am currently affiliated with ACWA, WateReuse, and AWWA. I have attended every ACWA

conference since my election.

List local government involvement (such as LAFCo, Association of Governments, etc.):

I am a member of the Association of San Bernardino County Special District's, serve on both the

<u>Citizen's Oversight Committee for the San Bernardino Community College District (3 years)</u> and the Citizens Oversight Committee for the San Bernardino Unified School District (7 years). 4. List civic organization involvement:

Arrowhead United Way Planning and Allocations and Community Cabinet (15 years), as a

member and ambassador of the San Bernardino Chamber of Commerce (17 years), Toastmasters International (10 years), American Legion (34 years), and California Sheriff's Association (27 years).

**Candidate Statement – Although it is not required, each candidate is requested to submit a candidate statement of no more than 300 words in length. Any statements received in the CSDA office after June 2, 2016 will not be included with the ballot.

20	16 ELE	DIRECTORS CTION OFFICIAL BALLOT
CISDA	SOUTHERN NETWORK	Bill Nelson* Orange County Cemetery District John DeMonaco
	SEAT B term ends 2019	Chino Valley Independent Fire District Chino Valley Independent Fire District Bonald Coats East Valley Water District
Place	e vote for only one.	

* incumbent running for re	e-election
DATE:	
Total Party of Contract of Con	* incumbent running for re

Must be received by 5pm, August 5, 2016. CSDA, 1112 | Street, Suite 200, Sacramento, CA 95814

PALMDALE WATER DISTRICT BOARD MEMORANDUM

DATE:	June 15, 2016	June 22, 2016
TO:	Board of Directors	Board Meeting
FROM:	Michael Williams, Finance Manager/CFO	
VIA:	Mr. Dennis D. LaMoreaux, General Manager	
RE:	AGENDA ITEM NO. 7.4 – CONSIDERATION ANI LEASE OPTIONS FOR THE DISTRICT'S LIGHTER	

Recommendation:

The Facilities Committee and staff recommend approval and authorization to enter into a Master Lease Agreement with Enterprise Fleet Management for the leasing of our light duty utility fleet vehicles.

Alternative Options:

The alternative is to purchase the vehicle and depreciate over the five year useful life of the vehicle when cash flow and budget considerations permit.

Impact of Taking No Action:

The impact of taking no action will keep the current fleet of light duty utility vehicles as is and call for the District to purchase replacement vehicles as cash flow and budget considerations permit.

Background:

Staff has been exploring alternative ways of replacing its aging light duty utility vehicle fleet that will not have a huge impact on cash flows. The District has 18 vehicles that are 2005 and older or that have exhausted their useful life based on mileage and are in need of replacing. Our normal process of replacing these vehicles is to purchase the vehicles with an outlay of cash and depreciate the vehicles over their useful life, which is usually five years, thus spreading the expense of that purchase over a five year period.

The District's recent budget constraints has not allowed this type of asset replacement since 2007, in which nine vehicles were purchased. Our most recent acquisition of vehicles was in 2015 in which four vehicles were purchased. As you can see, we are falling behind in replacements.

BOARD OF DIRECTORS PALMDALE WATER DISTRICT VIA: Mr. Dennis D. LaMoreaux, General Manager

Enterprise Fleet Management offers a program in which the District can lease replacement vehicles on a five year term for each vehicle and then at the end of the lease return the vehicle and retain the end of term equity to be applied to a replacement lease. This would ultimately allow the District to replace a set number of light duty utility vehicles every five years.

Staff has selected six vehicles that would be perfect candidates for this replacement program. If we were to move forward with the program, the replacement of these vehicles would cost the District just over \$10,000 for the remainder of 2016 and \$31,000 annually for the next four and two-thirds years. It is basically doing the same as depreciating the vehicles over the five year period but without an outlay of \$160,000 cash up front.

The fleet management program also includes the maintenance of the vehicles. This too will be an advantage and savings to the District. Staff has determined that in 2015, the District spent \$3,071 in parts and \$10,926 in labor for maintenance of the six vehicles selected as candidates for the program. Of course the labor costs were in house, but staff's time could have been better utilized elsewhere rather than repairing and maintaining an old asset. The year model vehicles selected are: (1) 1996; (2) 2002; (1) 2005; (2) 2007, all certainly past their useful life.

Strategic Plan Initiative:

This work is part of Strategic Initiative No. 2, Organizational Excellence by optimizing outsourcing opportunities; Strategic Initiative No. 3, Systems Efficiency by replacing aging infrastructure; Strategic Initiative No. 4, Financial Health & Stability by maintaining adequate reserve levels.

Budget:

This is a non-budgeted item for 2016, however, \$10,000 can be allocated from other areas. This will become an expense line item in future budgets in the amount of \$31,000.

Supporting Documents:

- District's current fleet analysis
- Enterprise Open-End Lease Proposal





Palmdale Water District

Fleet Profile

Vehicle Type	# of Type	Average Age (years)	Average Annual Mileage	Average Monthly Maintenance	2016	2017	2018	2019	2020	Under- Utilized
Compact Pickup Ext 4x2	4	9.4	7,000	\$195	discharge as a participation					CAMPLOG
1/2 Ton Pickup Reg 4x2	15	12.2	7,500	\$195	3.	7	4		_	
3/4 Ton Pickup Reg 4x4	7	6.5	8,000	\$195	1	2	4	1	— ,	
1 Ton Pickup Reg 4x2	6	18.0	5,000	\$195	- 4 -	2			4	
3/4 Ton Van Cargo	1	9.4	5,000	\$195			4	1		1
Full-size Sedan	1	14.4	5,500	\$195	1		<mark>-</mark>	_	_	
1 1/2 Ton Cab Chassis	3	8.3	4,000	\$195			-	3		
							-			
Totals/Averages	37	11.4	6,500	\$195	9	9	9	5	4	

Fleet Replacement Schedule

Replacement Criteria:

* Fiscal Year 2016 = Model Year 2002 and older, or odometer over 150,000

* Fiscal Year 2017 = Model Year 2005 and older, or odometer over 143,500

* Fiscal Year 2018 = Model Year 2008 and older, or odometer over 137,000

* Fiscal Year 2019 = Model Year 2010 and older, or odometer over 130,500

* Fiscal Year 2020 = Remaining Vehicles

* Underutilized = Annual Mileage less than 2,000

Enterprise Fleet Management Confidential
Palmdale Water District - Fleet Planning Analysis

			Curr	ent Fleet	37	Fleet Growth	-0.62%	Propo	sed Fleet	36	10 yr Savings		
en	erpri	se	Curre	ent Cycle	12.00	Annual Miles	7,300	Propo	sed Cycle	5.00	\$373,687		
FLEET N	IANAG	EMENT	Curre	nt Maint.	\$195.00	Insurance	\$0.00	Propos	ed Maint.	\$34.28	Long Term Avg.		
				Fuel Info	-	MPG	11	Pri	ce/Gallon	\$3.00	Savings		
											\$43,585/yr		
											18.3%		
×		Flee	et Mix				Fleet C	ost			Annual		
Fiscal	Fleet	Annual								Fleet			
Year	Size	Needs	Owned	Leased	Purchase	Lease*	Maintenance	Insurance	Fuel	Budget	Savings		
						Incl. Tax							
Current	37	3.1	37	0	79,791	0	86,580	0	71,673	238,044	0		
'16	37	9	28	9	0	49,475	69,161	0	64,506	183,142	54,902		
'17	37	9	19	18	0	96,175	51,958	0	60,923	209,057	28,988		
'18	36	9	9	27	0	140,897	32,194	0	57,338	230,429	7,615		
'19	36	5	4	32	0	161,235	22,251	0	53,755	237,241	803		
'20	36	4	0	36	0	109,612	14,810	0	50,171	174,592	63,452		
'21	36	9	0	36	0	112,495	14,810	0	50,171	177,475	60,569		
'22	36	9	0	36	0	124,516	14,810	0	50,171	189,496	48,548		
'23	36	9	0	36	0	143,509	14,810	0	50,171	208,490	29,554		
'24	36	5	0	36	0	157,259	14,810	0	50,171	222,239	15,805		
'25	36	4	0	36	0	109,612	14,810	0	50,171	174,592	63,452		



* Lease Rates are conservative estimates

Open-End (Equity) Lease Proposal

									Vehicle Pricing				Monthly Payments					Annualized Cost		Equity Recovered at Term				
Vehicle Number	Year	Make	Model	Vehicle Style	Current Odometer	Replacement	Term	Annual Miles	MSRP	Invoice (1)	Incentive	Est. Equity Roli Over (2)	Delivered Price	Monthly Lease Pymnt.	Monthly Full Maintenance {3}	Initial Cost for Geotab Device (4)		Total Monthly Payment	Total Cost for 2016 (5)	Total Annual Payments	Reduced Book Value at Term	Estimated Future Value (6)	Estimated Equity at Term	Effective Monthly Payment
105	2007	Chevrolet	Silverado	1/2 Ton Pickup Truck Extended Cab WT	113,342	2016 Ford F-150 XL Reg Cab Long Bed	60 Months	10,000	\$28,385.00	\$27,015.00	\$5,815.00	\$2,500.00	\$18,985.00	\$369.10	\$38.29	\$50.00	\$29.99	\$437.38	\$1,799.52	\$5,248.56	\$3,607.00	\$13,644.00	\$10,037.00	\$270.10
98	2007	Chevrolet	Silverado	1/2 Ton Pickup Truck Extended Cab WT	125,320	2016 Ford F-150 XL Reg Cab Long Bed	60 Months	10,000	\$28,385.00	\$27,015.00	\$5,815.00	\$2,500.00	\$18,985.00	\$369.10	\$38.29	\$50.00	\$29.99	\$437.38	\$1,799.52	\$5,248.56	\$3,607.00	\$13,644.00	\$10,037.00	\$270.10
90	2005	Chevrolet	Silverado	1/2 Ton Pickup Truck Regular Cab WT	100,234	2016 Ford F-150 XL Reg Cab Long Bed	60 Months	10,000	\$28,385.00	\$27,015.00	\$5,815.00	\$2,500.00	\$18,985.00	\$369.10	\$38.29	\$50.00	\$29.99	\$437.38	\$1,799.52	\$5,248.56	\$3,607.00	\$13,644.00	\$10,037.00	\$270.10
35	2002	Ford	F-150	1/2 Ton Pickup Truck Regular Cab XL	102,164	2016 Ford F-150 XL Reg Cab Long Bed	60 Months	10,000	\$28,385.00	\$27,015.00	\$5,815.00	\$2,500.00	\$18,985.00	\$369.10	\$38.29	\$50.00	\$29.99	\$437.38	\$1,799.52	\$5,248.56	\$3,607.00	\$13,644.00	\$10,037.00	\$270.10
7	2002	Ford	F-150	1/2 Ton Pickup Truck Regular Cab XL	103,678	2016 Ford F-150 XL Reg Cab Long Bed	60 Months	10,000	\$28,385.00	\$27,015.00	\$5,815.00	\$2,500.00	\$18,985.00	\$369.10	\$38.29	\$50.00	\$29.99	\$437.38	\$1,799.52	\$5,248.56	\$3,607.00	\$13,644.00	\$10,037.00	\$270.10
22	1996	Ford	F-150	1/2 Ton Pickup Truck Regular Cab XL	95,410	2016 Ford F-150 XL Reg Cab Long Bed	60 Months	10,000	\$28,385.00	\$27,015.00	\$5,815.00	\$2,500.00	\$18,985.00	\$369.10	\$38.29	\$50.00	\$29.99	\$437.38	\$1,799.52	\$5,248.56	\$3,607.00	\$13,644.00	\$10,037.00	\$240.11
																		Total	\$10,797.12	\$31,491.36			\$60,222.00	

Note:

1 Vehicles for Palmdale Water District will be factory ordered and thus priced at invoice rather than the higher MSRP price found at dealers.

2 The Equity Roll Over is from the Equity generated by the sale of Palmdale Water's six selected trucks. These six trucks are conservatively going to sell for a total of \$15,000 and this amount is spread equally across the six new trucks.

3 Full Maintenance includes all prevantative and non-prevantative items as well as 24 hour roadside service. Does not include brakes and tires for these are wear items that are not forecasted for replacement within the term.

4 This represents the initial cost for the actual Geotab device. The device is plug and play, plugging right into the OBD 2 Port. This is a one time cost.

5 The new truck orders will be placed by the end of June (before the order cutoff) and have an estimated delivery time of 8-10 weeks. Therefore monthly payments will not start until September of 2016. This calculation shows an estimated 4 months of monthly payments on these vehicles for the remainder of 2016 and also includes the Geotab device cost. 6 Estimated Future Value is based off ALG.com confirmed by resale team as an accurate estimate assuming 5 years hold and 10,000 annual miles/year.

Quote is Subject to Customer's Credit Approval

Enterprise FM Trust will be the owner of the vehicle covered by this Quote. Enterprise FM Trust (not Enterprise FM Trust (not Enterprise Fleet Management) will be the Lessor of such vehicle under the Mater Open-End (Equity) Lease Agreement and shall have all rights and obligations of the Lessor under the Mater Open-End (Equity) Lease Agreement with respect to such vehicle.

Lessee hereby authorizes this vehicle order, agrees to finance the vehicle on the terms set forth herein and in the Master Equity Lease Agreement and agrees that Lessor shall have the right to collect damages in the event Lesse fails or refuses to accept delivery of the ordered vehicles. Lessee certifies that it intends that more than 50% of the use of the vehicle is to be in a trade or business of the Lessee.

COMPANY: Palmdale Water District

BY

Customer _____

¹ Delivered Price of Vehicle May be Adjusted to Reflect Final Manufacturer's Invoice. Lessee Hereby Assigns to Lessor any Manufacturer Rebates And/Or Manufacturer Incentives Intended for the Lessee, Which Rebates And/Or Incentives Have Been Used By Lessor to Reduce the Capitlaized Price of the Vehicle.

² Monthly Lease Charge Will Be Adjusted to Reflect the Interest Rate on the Delivery Date (Subject to a Floor).

6/7/2016

PALMDALE WATER DISTRICT BOARD MEMORANDUM

DATE:	June 16, 2016	June 22, 2016
TO:	BOARD OF DIRECTORS	Board Meeting
FROM:	Jennifer Emery, Human Resources Director	
	Matthew Knudson, Assistant General Manager	
VIA:	Mr. Dennis D. LaMoreaux, General Manager	
RE:	AGENDA ITEM NO. 7.5 - CONSIDERATION ON APPROVAL OF ORGANIZATIONAL CHA	

Recommendation:

Staff recommends that the Board approve the attached organization chart which allows the District to place its resources where they are most needed. The following is a summary of the proposed changes that will allow the District to remain neutral in the number of staff for 2016.

- 1) One Field Customer Care Rep II to report to the Deputy Water and Energy Resources Director. This position will continue to function as the resource for responding to leak reports and water conservation enforcement.
- 2) The Water Conservation Aide would also report to the Deputy Water and Energy Resources Director thereby allowing the District to better coordinate our rebate/water conservation policies with our water demand/supply needs.
- 3) The PIO/Conservation Manager title will change to Public Affairs and Sustainability Director. This position will focus on the messaging of our water sustainability policies. We are entering into a period where the District's focus is shifting from the present drought into the future sustainability of our water supply for generations to come. The Public Affairs and Sustainability Director will focus on networking and messaging for the District's projects including the recharge project, sediment removal at Littlerock Reservoir, and other District infrastructure improvement projects.
- 4) The staff recommends that the District create a new position that will be twenty hours a week as an Administrative Assistant for the Public Affairs and Sustainability Director.
- 5) One Field Customer Care Rep I will move to a Service Worker I position and report to the Construction Supervisor. This position was originally created to work on the meter maintenance program and will continue doing so.

VIA: Mr. Dennis D. LaMoreaux, General Manager

- 6) The Administrative Technician position formally within the Operations Department would be reclassified as a Management Analyst position, and this would allow this person to continue the support of the Operations Department but also give analytical support and recommendations to the Water and Energy Resources and Customer Care Departments. This position would report to the Deputy Water and Energy Resources Director.
- 7) Staff recommends making permanent the temporary "out of class" assignment for the Project Manager, which would move the reporting structure of the Engineering Department to the Project Manager. This would allow the Engineering/Grant Manager to maintain his focus on obtaining grants for the District.
- 8) Staff recommends creating a new Plant Operator III Lead position that will be filled by an existing Plant Operator. The new position will focus on coordinating maintenance activity needs at the Water Treatment Plant and create an opportunity for succession planning within the Operations Department.
- 9) The Operations Tech II position within the Operations Department would move and report to the Maintenance Supervisor within the Facilities Department. This will move all District maintenance activity under the Facilities Department.
- 10) The existing Warehouse Technician positions will be reclassified to Purchasing Technician and changes to their job description are proposed.
- 11) The attached Proposed Organizational Chart also shows future positions that are not recommended to be filled at this time, but staff wanted to show the Board that these positions are recommended as the needs of the District changes and succession planning is developed. By showing these future positions, the Board and staff know where future needs of the District are and employees can strive to gain the knowledge and skills needed for these positions.

If the Board approves the concept of the recommended changes, staff will make changes to the effected job descriptions and present said job descriptions and supporting salary range recommendations to the full Board for consideration and possible approval.

Alternative Options:

The alternative is to maintain the current individual job descriptions and organizational chart.

BOARD OF DIRECTORS PALMDALE WATER DISTRICT VIA: Mr. Dennis D. LaMoreaux, General Manager

Background:

The Board of Directors expressed interest in consolidating the maintenance work of the District in order to gain efficiencies. By mailing door tags and other efficiency improvements, we will be able to move meter maintenance completely into the Facilities Department along with moving Water Conservation Field activities into the Water and Energy Resources Department.

The Board of Directors has asked the District to pursue creating a premier Customer Care Department. The position of Management Analyst will allow our Customer Care Department to obtain the metrics necessary to measure our success in this area.

The Board of Directors has expressed interest in the pursuit of grants and low interest loans whenever possible in order to finance the infrastructure of the District. The Engineering/Grant Manager position has been greatly successful in the pursuit of funding for our major infrastructure projects. Our Project Manager has stepped up to handle many of the day-to-day management tasks of the Engineering Department in order to facilitate this.

Staff is confident that the proposed organizational changes and defined areas of responsibility will allow the District to continue improving our operations and efficiencies.

Strategic Plan Initiative:

This work is part of Strategic Plan Initiative No. 2 – Organizational Excellence.

Budget:

These movements would have no effect on the 2016 budget.

Supporting Documents:

- Proposed 2016 Organizational Chart
- Proposed Administration and Department Managers Areas of Responsibilities

Proposed – Administration and Departments Managers Areas of Responsibility



Proposed 2016 Organizational Chart



PALMDALE WATER DISTRICT BOARD MEMORANDUM

DATE:	June 16, 2016	June 22, 2016
то:	BOARD OF DIRECTORS	Board Meeting
FROM:	Mr. Mike McNutt, PIO/Conservation Director	
VIA:	Mr. Dennis D. LaMoreaux, General Manager	
RE:	AGENDA ITEM NO. 7.6 – CONSIDERATION AND ON OUTREACH ACTIVITIES.	POSSIBLE ACTION

A detailed report on Outreach activities, as listed on the agenda, will be provided at the Board meeting.

MINUTES OF MEETING OF THE PERSONNEL COMMITTEE OF THE PALMDALE WATER DISTRICT, SEPTEMBER 28, 2015:

A meeting of the Personnel Committee of the Palmdale Water District was held Monday, September 28, 2015, at 2029 East Avenue Q, Palmdale, California, in the Board Room of the District office. Chair Mac Laren called the meeting to order at 10:00 a.m.

1) Roll Call.

Attendance:	Others Present:
Personnel Committee:	Dennis LaMoreaux, General Manager
Kathy Mac Laren, Chair	Vincent Dino, PWD Director
Joe Estes, Committee	Matt Knudson, Assistant General Manager
Member	Jennifer Emery, Human Resources Director
	Dawn Deans, Executive Assistant
	0 members of the public

2) Adoption of Agenda.

It was moved by Committee Member Estes, seconded by Chair Mac Laren, and unanimously carried to adopt the agenda, as written.

3) Public Comments.

There were no public comments.

4) Action Items:

4.1) Consideration and Possible Action on Approval of Minutes of Meeting Held August 18, 2015.

It was moved by Committee Member Estes, seconded by Chair Mac Laren, and unanimously carried to approve the minutes of the Personnel Committee meeting held August 18, 2015, as written.

4.2) Consideration and Possible Action on Salary Survey. (Assistant General Manager Knudson/Human Resources Director Emery)

Human Resources Director Emery provided a synopsis of the Salary Survey including the current range, the Salary Survey range, and staff's recommended salary

SEPTEMBER 28, 2015 PERSONNEL COMMITTEE MEETING

range for each of the District's positions along with recommended title changes and then provided an overview of staff's research and preparation of the Salary Survey and meetings with all staff members regarding the Salary Survey.

After a brief discussion of the Salary Survey, it was moved by Committee Member Estes, seconded by Chair Mac Laren, and unanimously carried that the Committee concurs with staff's recommendation to approve the Salary Survey as presented and that the Salary Survey be presented to the full Board for consideration at the October 14, 2015 Regular Board Meeting.

The Committee then commended Human Resources Director Emery and staff on their preparation of the Salary Survey.

4.4) Discussion and Review of Human Resources Calendar. (Human Resources Director Emery)

Human Resources Director Emery stated that Human Resources Calendar goals for this quarter will focus on Open Enrollment for benefits, which is scheduled for October 6 with representatives from JPIA, lunch, and a vendor fair; that the Holiday Party is scheduled for December; and that succession planning will begin next year.

5) Project Updates.

5.1) Status on Customer Service 2015 Campaign. (Human Resources Director Emery)

General Manager LaMoreaux stated that the Customer Care Department continues to work with customers to help them understand the drought rules and that the field side of the Customer Care Department has been enforcing drought rules followed by discussion of appeals to water waste fines.

5.2) Status on Wellness Program. (Human Resources Director Emery)

Human Resources Director Emery stated that the District received a \$1,000.00 grant from JPIA to begin a Wellness Program, and these funds will be used for a nutritionist, a healthy cooking class, and a self-defense instructor with remaining funds to be spent on videos for lunch workout sessions and exercise equipment for these videos.

5.3) Other.

There were no other items for discussion.

6) Information Items.

There were no further information items.

7) Board Members' Requests for Future Agenda Items.

Committee Member Estes requested talking points for Directors regarding benefits and the Salary Survey.

Human Resources Director Emery then reviewed how the District is significantly different from other agencies as staff performs many tasks and research in-house outside of normal job description duties to help reduce costs.

Employee contributions towards CalPERS and current General Counsel interpretations of CalPERS requirements were then discussed, and it was determined that this issue be reviewed at the next Committee meeting if a legal opinion is available or during budget discussions.

There were no further requests for future agenda items.

It was then stated that the next Personnel Committee meeting will be held October 20, 2015 at 10:00 a.m.

8) Adjournment.

There being no further business to come before the Personnel Committee, the meeting was adjourned at 10:36 a.m.

Gatter Standard Chair

MINUTES OF REGULAR MEETING OF THE COMMISSIONERS OF THE ANTELOPE VALLEY STATE WATER CONTRACTORS ASSOCIATION, MARCH 10, 2016.

A regular meeting of the Commissioners of the Antelope Valley State Water Contractors Association was held Thursday, March 10, 2016, at the Palmdale Water District at 2029 East Avenue Q, Palmdale. Chair Hogan called the meeting to order at 7:00 p.m.

1) Pledge of Allegiance.

At the request of Chair Alvarado, Controller Barnes led the pledge of allegiance.

2) Roll Call.

Attendance:	Others Present:
Robert Alvarado, Chair	Matt Knudson, AVSWCA General Mngr.
Keith Dyas, Vice Chair	Tom Barnes, Controller
Neal Weisenberger, Secretary	Travis Berglund, LCID General Mngr.
Leo Thibault, Treasurer-Auditor	Dwayne Chisam, AVEK General Mngr.
Marco Henriquez, Alt. Cmsnr.	George Lane, AVEK Alt. Commissioner
Tim Clark, Alt. Cmsnr.	Dennis Hoffmeyer, Accounting Supervisor
	Danielle Henry, Administrative Assistant
	0 members of the public

EXCUSED ABSENCE --Kathy Mac Laren, Commissioner Barbara Hogan, Commissioner

3) Public Comments for Non-Agenda Items.

There were no public comments.

4) Consideration and Possible Action on Minutes of Regular Meeting Held January 14, 2016.

It was moved by Commissioner Weisenberger, seconded by Alternate Commissioner Clark, and unanimously carried by all members of the Board of Commissioners present at the meeting to approve the minutes of the regular meeting held January 14, 2016, as written.

5) Payment of Bills.

Commissioner Thibault reviewed the bills received for payment and then moved to pay the bills received from PWD in the amount of \$1,056.79 for staff services, from AVEK in the amount of \$676.48 for staff services, and from A.V. Web Designs in the total amount of \$2,018.83 for the monthly website charges for January through March, 2016 as well as postcard printing costs and project management. The motion was seconded by Commissioner Weisenberger and unanimously carried by all members of the Board of Commissioners present at the meeting.

Commissioner Thibault then reviewed and moved to approve ratification of the payment made to the United States Department of the Interior (U.S.G.S.) in the amount of \$90,050.00 for the quarterly billings for cooperative water resources investigations per the Joint Funding Agreement between the Association and U.S.G.S for the period of November 1, 2014 through October 31, 2015. The motion was seconded by Alternate Commissioner Henriquez and unanimously carried by all members of the Board of Commissioners present at the meeting.

6) Discussion on Amendments to the Association Bylaws and Joint Powers Agreement. (General Manager Knudson)

After a brief discussion of the Association's Bylaws and the flexible language in the Joint Powers Agreement in regards to Association audits, General Manager Knudson recommended keeping the Bylaws and Joint Powers Agreement as written after which the Commissioners agreed with his recommendation.

7) Discussion and Possible Action on the Recommendation of the Member Agencies General Managers Regarding Regional Leadership of Water Conservation Efforts. (Commissioner Weisenberger)

After a brief discussion of the direction of the A.V. Water Partners and of the lack of communication and coordination of water conservation efforts among Antelope Valley water agencies, staff was directed to coordinate a meeting with the conservation representatives from the various Antelope Valley water agencies to discuss joint efforts for valley-wide water conservation.

8) Discussion and Possible Action on Annual SMART Landscaping Expo. (Chair Alvarado)

General Manager Knudson recommended utilizing social media to distribute a save the date for this year's SMART Landscaping Expo, and after a brief discussion of contacting local news channels, the Commissioners agreed that early advertisement and planning will be beneficial for the event.

Commissioner Weisenberger then recommended that staff hold a meeting to discuss a list of responsibilities for this year's Expo after which Chair Alvarado agreed with his recommendation.

9) Report of General Manager.

a) Update on Revenue, Expenditures and Change in Net Position.

General Manager Knudson provided a brief update of the Association's Revenue, Expenditures and Change in Net Position after which Senior Accountant Hoffmeyer stated that the associated costs for the SMART Landscaping Expo and AVSavesWater.com website will need to be accounted for in this year's fiscal budget followed by a discussion of future U.S.G.S. Joint Funding Agreement costs and the potential benefit for this program, or a similar program, to be taken over by the future Watermaster.

b) Update on Antelope Valley Watermaster meetings.

General Manager Knudson stated that the five member Watermaster Board is partially seated; that AVEK appointed Director Rob Parris; that the Public Water Suppliers Group nominated Director Leo Thibault; that LA County Waterworks District No. 40 will most likely be represented by Director Adam Ariki; and that the next two scheduled Watermaster meetings will be focused on helping the landowners appoint representatives for the two remaining seats on the Board.

Chair Alvarado then requested that this item remain as a standing item on future agendas.

c) Report of Meeting held February 8, 2016 between AVEK, LCID and PWD to Discuss Possible Partnerships.

General Manager Knudson reported that staff and Commissioners from the three member agencies met on February 8, 2016 to discuss potential future partnerships, such as water banking opportunities, followed by a brief discussion of the economic benefits of water banking in the Antelope Valley.

General Manager Knudson then stated that he signed an engagement letter with The Pun Group for the preparation of the Association's upcoming audit and that an updated Association contact list has been provided.

Chair Alvarado then welcomed Alternate Commissioner Henriquez to the Association Commission after which Alternate Commissioner Henriquez stated that he is honored to be included among this distinguished group of gentlemen.

10) Report of Controller.

a) Update on Status of Agreement Related to Regional Control of Water from the State Water Project.

Controller Barnes provided a detailed presentation on the proposed Multi-Year Water Exchange Agreement with the Department of Water Resources for regional control of water from the State Water Project including the purpose & scope, the background, the timeline, the accounting, the charges, and the next steps involved, and after a brief discussion of the future benefits of the proposed agreement, it was recommended by General Manager Knudson that staff provide the same presentation to each member agency's Board.

11) Reports of Commissioners.

Commissioners Weisenberger stated that AVEK will not be participating in this year's Home Show on April 8-10, 2016 as it proved not to be beneficial last year due to low attendance.

Commissioner Dyas reported that AVEK's former General Manager Dan Flory was thrilled to receive the Certificate of Appreciate from the Association that was presented to him at an AVEK Board meeting by PWD Director Dino and announced that Mr. Dwayne Chisam will be AVEK's new General Manager after which the Commissioners congratulated Mr. Chisam on his new position. Commissioner Thibault then reported that he recently traveled to Florida where there is an abundance of water.

12) Report of Attorney.

No attorney was present.

13) Commission Members' Requests for Future Agenda Items.

Commissioner Weisenberger suggested that the Association focus its attention on regional activities, such as water banking opportunities, followed by a discussion of potential Ad Hoc or sub-committees to help expedite the process of participating in regional opportunities and of the direction of the Association.

There were no further requests for future agenda items.

14) Consideration and Possible Action on Scheduling the Next Association Meeting.

It was determined that the next regular meeting of the Association will be held April 14, 2016 at 7:00 p.m. at PWD.

15) Adjournment.

There being no further business to come before the Commissioners, the regular meeting of the Commissioners of the Antelope Valley State Water Contractors Association was adjourned at 8:05 p.m.

Mel Constants

MINUTES OF MEETING OF THE FINANCE COMMITTEE OF THE PALMDALE WATER DISTRICT, MAY 10, 2016:

A meeting of the Finance Committee of the Palmdale Water District was held Tuesday, May 10, 2016, at 2029 East Avenue Q, Palmdale, California, in the Board Room of the District office. Chair Henriquez called the meeting to order at 4:03 p.m.

Roll Call.	
Attendance:	Others Present:
Finance Committee:	Dennis LaMoreaux, General Manager
Marco Henriquez, Chair	Matt Knudson, Assistant General Manager
Robert Alvarado, Committee	Mike Williams, Finance Manager
Member	Jim Riley, Engineering/Grant Manager
	Dennis Hoffmeyer, Accounting Supervisor
	Bob Egan, Financial Advisor
	Dawn Deans, Executive Assistant

2) Adoption of Agenda.

1)

It was moved by Committee Member Alvarado, seconded by Chair Henriquez, and unanimously carried to adopt the agenda, as written.

0 members of the public

3) Public Comments.

There were no public comments.

4) Action Items:

4.1) Consideration and Possible Action on Approval of Minutes of Special Meeting Held April 25, 2016.

It was moved by Committee Member Alvarado, seconded by Chair Henriquez, and unanimously carried to approve the minutes of the special Finance Committee meeting held April 25, 2016, as written.

4.2) Discussion and Overview of Cash Flow Statement and Current Cash Balances as of March, 2016. (Financial Advisor Egan)

~1~

MAY 10, 2016 FINANCE COMMITTEE MEETING

Financial Advisor Egan reviewed the investment funds report as of March, 2016, including the decrease in cash of \$3.6 million due to the payment of semi-annual principal and interest bond payments and operations costs and then provided an overview of the cash flow report for March and April, including assessments received in April, anticipated RDA pass-through funds, grant funds, Department of Water Resources refunds to be received, upcoming Butte payments, scheduled semi-annual principal and interest bond payments, and the projected year-end balance, which is tracking as planned.

Chair Henriquez inquired about the capital and printer leases followed by discussion of the benefit of these leases.

4.3) Discussion and Overview of Financial Statements, Revenue, and Expense and Departmental Budget Reports for March, 2016. (Finance Manager Williams)

Finance Manager Williams reviewed in detail the balance sheet, profit and loss statement, year-to-year comparisons, month-to-month comparisons, consumption comparisons, and revenue and expense analysis reports for the period ending March, 2016; stated that most departments are operating at or below the targeted expenditure percentage of 25%; and then reviewed department line items above the targeted expenditure percentage followed by clarification of long-term debt.

4.4) Discussion and Overview of Committed Contracts Issued and Water Revenue Bond Projects. (Assistant General Manager Knudson)

Assistant General Manager Knudson reviewed the purpose and status of the Committed Contracts and Payout Schedule, which includes approved 2016 engineering projects, projects contractually committed, budgeted but not yet committed projects listed in order of priority, and payments for projects funded from the Water Revenue Series 2013A Bonds.

4.5) Discussion and Possible Action on Long Term Financial Planning. (Assistant General Manager Knudson/Engineering/Grant Manager Riley)

Assistant General Manager Knudson stated that budget numbers are reviewed on a monthly basis with an estimate for year-end cash; that staff recommends projections be made at a minimum of five-year increments to better manage long-term Debt Service Coverage and the process for maintaining the capacity of Littlerock Reservoir followed by discussion of capital improvement funds.

5.2) Other.

Finance Manager Williams reviewed payment transaction types for the first quarter over the past seven years including a breakdown of electronic types of payments and customer activity between the hours of 5:00 p.m. and 6:00 p.m. for the past quarter.

There were no other information items.

6) Board Members' Requests for Future Agenda Items.

Chair Henriquez requested a presentation on the District's budget-based rates be made to the Committee and the Proposition 218 Water Rate Plan be considered after the presentation.

General Manager LaMoreaux then recommended sample summaries from the financial model and the full Proposition 218 Water Rate Plan be presented to the Committee to provide a better understanding of the financial model.

Financial Advisor Egan then informed the Committee that he will be unavailable to attend Finance Committee or Board meetings through the end of August but will be providing monthly written reports and will be available via teleconference if needed.

There were no further requests for future agenda items.

It was then determined that the next Finance Committee meeting will be held June 6, 2016 at 4:00 p.m.

7) Adjournment.

There being no further business to come before the Finance Committee, the meeting was adjourned at 5:29 p.m.

Chair

MINUTES OF MEETING OF THE FACILITIES COMMITTEE OF THE PALMDALE WATER DISTRICT, MAY 19, 2016:

A meeting of the Facilities Committee of the Palmdale Water District was held Thursday, May 19, 2016, at 2029 East Avenue Q, Palmdale, California, in the Board Room of the District office. Chair Dino called the meeting to order at 10:00 a.m.

1) Roll Call.

Attendance:	Others Present:
Facilities Committee:	Dennis LaMoreaux, General Manager
Vincent Dino, Chair	Matt Knudson, Assistant General Manager
Marco Henriquez, Committee	Tim Moore, Facilities Manager
Member	Jim Stanton, Information Technology Manager
	Richard Heinonen, G.I.S. Coordinator
	Tammy Lucas, Management Analyst
	Dawn Deans, Executive Assistant
	0 members of the public

2) Adoption of Agenda.

It was moved by Committee Member Henriquez, seconded by Chair Dino, and unanimously carried to adopt the agenda, as written.

3) Public Comments.

There were no public comments.

4) Action Items:

4.1) Consideration and Possible Action on Approval of Minutes of Regular Meeting Held October 1, 2015.

It was moved by Committee Member Henriquez, seconded by Chair Dino, and unanimously carried to approve the minutes of the Facilities Committee meeting held October 1, 2015, as written.

4.2) Consideration and Possible Action on Lease With Verizon for Cell Tower at 6MG Clearwell Site. (\$3,000.00/Month Revenue – Assistant General Manager Knudson)

MAY 19, 2016 FACILITIES COMMITTEE MEETING

Assistant General Manager Knudson provided an overview of the District's existing cell tower leases and the terms of the proposed cell tower lease at the 6MG clearwell site with Verizon, and after a brief discussion of the terms of the proposed lease and of revenue to the District, it was moved by Committee Member Henriquez, seconded by Chair Dino, and unanimously carried that the Committee concurs with staff's recommendation to approve the Lease with Verizon for a cell tower at the 6MG clearwell site and that this item be presented to the full Board for consideration at the May 19, 2016 Regular Board Meeting.

4.3) Consideration and Possible Action on Approval of Scanner/Plotter Purchases. (\$50,000.00 – Budgeted – Information Technology Manager Stanton)

Information Technology Manager Stanton provided an overview of the need to purchase new scanners/plotter, and after a brief discussion of the brand and warranties for the proposed equipment, it was moved by Committee Member Henriquez, seconded by Chair Dino, and unanimously carried that the Committee concurs with staff's recommendation to approve the scanner/plotter purchases in the not-to-exceed amount of \$50,000.00 and that this item be presented to the full Board for consideration at the May 19, 2016 Regular Board Meeting.

4.4) Consideration and Possible Action on Declaring Various Vehicles and Equipment as Surplus Property Per Article 12.08 of the District's Rules and Regulations. (Facilities Manager Moore)

Facilities Manager Moore provided an overview of the proposed vehicles and equipment staff recommends be declared as surplus, and after a brief discussion of the method of disposal for this equipment and of potential leases for future vehicles, it was moved by Committee Member Henriquez, seconded by Chair Dino, and unanimously carried that the Committee concurs with staff's recommendation to declare various vehicles and equipment as surplus property per Article 12.08 of the District's Rules and Regulations and that this item be presented to the full Board for consideration at the May 19, 2016 Regular Board Meeting.

4.5) Consideration and Possible Action to Purchase Used Construction Equipment Utilizing Proceeds From Selling Surplus Equipment. (Facilities Manager Moore) Facilities Manager Moore provided an overview of the equipment proposed to be purchased with surplus equipment funds, and after a brief discussion of this equipment, it was moved by Committee Member Henriquez, seconded by Chair Dino, and unanimously carried that the Committee concurs with staff's recommendation to purchase construction equipment utilizing proceeds from selling surplus equipment and that this item be presented to the full Board for consideration at the May 19, 2016 Regular Board Meeting.

5) Information Items.

5.1) Other.

General Manager LaMoreaux informed the Committee that staff and Director Henriquez have been working with Fin & Feather Club representatives regarding renewal of their lease; that the Fin & Feather Club has agreed to the terms and has signed the updated lease; and that this item will be presented to the full Board for consideration at the May 19, 2016 Regular Board Meeting.

There were no additional information items.

6) Board Members' Requests for Future Agenda Items.

Committee Member Henriquez requested a complete list of all the District's equipment.

It was then stated that an item for "Consideration and possible action on lease options for the District's lighter duty vehicles" will be presented to the Committee at the next meeting.

There were no further requests for future agenda items.

7) Adjournment.

There being no further business to come before the Facilities Committee the meeting was adjourned at 10:35 a.m.

Chair

PALMDALE WATER DISTRICT BOARD MEMORANDUM

DATE:	June 15, 2016	June 22, 2016
то:	BOARD OF DIRECTORS	Board Meeting
FROM:	Mr. Dennis D. LaMoreaux, General Manager	
RE:	AGENDA ITEM NO. 8.2 – JUNE, 2016 ACTIVITIES THROUGH MAY, 2016	WRITTEN REPORT OF

A written report will be provided and reviewed at the Board meeting.