

As a matter of proper business decorum, the Board of Directors respectfully request that all cell phones be turned off or placed on vibrate. To prevent any potential distraction of the proceeding, we request that side conversations be taken outside the meeting room.

**AGENDA**  
**REGULAR BOARD MEETING**  
**THREE VALLEYS MUNICIPAL WATER DISTRICT**  
**1021 E. MIRAMAR AVENUE, CLAREMONT, CA 91711**

**Wednesday, April 17, 2019**  
**8:00 a.m.**

*The mission of Three Valleys Municipal Water District is to supplement and enhance local water supplies to meet our region's needs in a reliable and cost-effective manner.*

**Item 1 – Call to Order**

**Kuhn**

**Item 2 – Pledge of Allegiance**

**Kuhn**

**Item 3 – Roll Call**

**Executive  
Assistant**

**Item 4 – Additions to Agenda** [Government Code Section 54954.2(b)(2)]

**Kuhn**

Additions to the agenda may be considered when two-thirds of the board members present determine a need for immediate action, and the need to act came to the attention of TVMWD after the agenda was posted; this exception requires a degree of urgency. If fewer than two-thirds of the board members are present, all must affirm the action to add an item to the agenda. *The Board shall call for public comment prior to voting to add any item to the agenda after posting.*

**Item 5 – Reorder Agenda**

**Kuhn**

**Item 6 – Public Comment** (Government Code Section 54954.3)

**Kuhn**

Opportunity for members of the public to directly address the Board on items of public interest within its jurisdiction. The public may also address the Board on items being considered on this agenda. TVMWD requests that all public speakers complete a speaker's card and provide it to the Executive Assistant.

**Item 7 – Consent Calendar**

**Kuhn**

**7.A – Receive, Approve and File Minutes, March 2019 – [enc]**

- March 6, 2019 – Regular Board Meeting
- March 13, 2019 – Special Board Meeting

**7.B – Receive, Approve and File Financial Reports and Investment Update, March 2019 – [enc]**

- Change in Cash and Cash Equivalents Reports
- Consolidated Listing of Investment Portfolio and Investment Report
- YTD District Budget Monthly Status Reports
- Warrant List

**7.C – Imported Water Sales, March 2019 – [enc]**

The Board will review the imported water sales report for March 2019.

**7.D – Miramar Operations Report, March 2019 – [enc]**

The Board will review the Miramar Operation report for the period ending March 2019.

**7.E – Funding Agreement to Participate in the Existing Infrastructure to Create Water Supply and Water Quality Solutions Study**

The Board will consider for approval the funding agreement to participate in a study commissioned by Las Virgenes Municipal Water District that evaluates use of available wastewater treatment plant capacity for treating urban runoff to generate a new local source of recycled water.

**Items 7.A – 7.E - Board Action Required – Motion No. 19-04-5218**

Staff Recommendation: Approve as presented

**Item 8 – General Manager’s Report**

**Litchfield**

*The Executive Leadership Team will provide brief updates on existing matters under their purview and will be available to respond to any questions thereof.*

**8.A – Director Expense Reports, March 2019 [enc]**

**Kuhn**

The Board will consider approval of the March 2019 director expense reports.

**Item 8.A - Board Action Required – Motion No. 19-04-5219**

Staff Recommendation: Approve as presented

**8.B – FY 2018-19 Encumbrances Carryforward [enc]**

**Linthicum**

The Board will consider approval of rolling forward funds to next fiscal year for projects that aren’t expected to be completed by June 30, 2019.

**Item 8.B - Board Action Required – Motion No. 19-04-5220**

Staff Recommendation: Approve as presented

**8.C – Salary Schedule Effective July 1, 2019 [enc]**

**Linthicum**

The Board will consider approval of the salary schedule that is to be effective for July 1, 2019.

**Item 8.C - Board Action Required – Motion No. 19-04-5221**

Staff Recommendation: Approve as presented

**8.D – FY 2019-20 TVMWD Budget [enc]**

**Linthicum**

The Board will consider approval of the FY 2019-20 Budget.

**Item 8.D - Board Action Required – Motion No. 19-04-5222**

Staff Recommendation: Approve as presented

**8.E – Resolution No. 19-04-848 Adopting Water Rates for CY 2020 [enc]**

**Linthicum**

The Board will consider approval of Resolution No. 19-04-848 adopting water rates for CY 2020.

**Item 8.E - Board Action Required – Motion No. 19-04-5223**

Staff Recommendation: Approve as presented

**8.F – Resignation Notice Incentive Policy [enc]**

**Litchfield**

The Board will consider approval of the Resignation Notice Incentive Policy.

**Item 8.F – Board Action Required – Motion No. 19-04-5224**

Staff Recommendation: Approve as presented

**8.G – TVMWD Grand Avenue Well Equipping (Project No. 58446)**

**Peralta**

The Board will consider approval of the Grand Avenue Well Equipping Project awarding construction bid to E. J Meyer Co. for Phase 2.

**Item 8.G – Board Action Required – Motion No. 19-04-5225**

Staff Recommendation: Approve as presented

**Item 9 – Directors’ / General Manager’s Oral Reports**

**Litchfield**

Directors and the Managers may report on activities for meetings to which they are assigned to serve as the representative or alternate of TVMWD, and on other areas of interest.

## **Item 10– Closed Session**

**Kuhn**

Conference with Legal Counsel – Existing Litigation [Government Code Section 54956.9(d)(1)]

- Chino Basin Municipal Water District v. City of Chino, et al., San Bernardino County Superior Court Case No. RCV51010
- Upper San Gabriel Valley Municipal Water District v. City of Alhambra, et al., Los Angeles County Superior Court Case No. C924128

Public Employee Performance Evaluation  
(Government Code Section 54957)  
Title: General Manager

## **Item 11 – Future Agenda Items**

**Kuhn**

## **Item 12 – Adjournment and Next Meeting**

**Kuhn**

Wednesday, May 1, 2019 at 8:00 a.m.

### **American Disabilities Act Compliance Statement** *Government Code Section 54954.2(a)*



*Any request for disability-related modifications or accommodations (including auxiliary aids or services) sought to participate in the above public meeting should be directed to the TVMWD's Executive Assistant at (909) 621-5568 at least 24 hours prior to meeting.*

### **Agenda items received after posting** *Government Code Section 54957.5*

*Materials related to an item on this agenda submitted after distribution of the agenda packet are available for public review at the TVMWD office located at, 1021 East Miramar Avenue, Claremont, CA, 91711. The materials will also be posted on the TVMWD website at [www.threevalleys.com](http://www.threevalleys.com).*

*Three Valleys MWD Board Meeting packets and agendas are available for review on its website at [www.threevalleys.com](http://www.threevalleys.com).*

**MINUTES  
REGULAR BOARD OF DIRECTORS MEETING  
THREE VALLEYS MUNICIPAL WATER DISTRICT**

**Wednesday, March 6, 2019  
8:00 a.m.**

**1. Call to Order**

The Board meeting was called to order at 8:00 a.m. at the District office located at 1021 East Miramar Avenue, Claremont, California. The presiding officer was President Bob Kuhn.

**2. Pledge of Allegiance**

**3. Roll Call**

**Directors Present**

Bob Kuhn, President  
David De Jesus, Vice President  
Brian Bowcock, Secretary  
Joe Ruzicka, Treasurer  
Carlos Goytia, Director  
Denise Jackman, Director  
John Mendoza, Director

**Staff Present**

Matt Litchfield, General Manager  
Steve Kennedy, Legal Counsel  
Liz Cohn, Sr. Financial Analyst  
Maria Contreras, Administrative Assistant  
Ray Evangelista, Engineer  
Mario Garcia Chief of Engineering / Operations Officer  
Kirk Howie, Chief Administrative Officer  
Steve Lang, Water Operations Manager  
James Linthicum, Chief Finance Officer  
Ben Peralta, Project Manager  
Esther Romero, Accounting Technician

Guest present: Ted Ebenkamp, Walnut Valley Water; Ed Hilden, Walnut Valley Water; Erik Hitchman, Walnut Valley Water; Ben Lewis, Golden State Water; Tony Lima, Rowland Water; Szu Pei-Lu-Yang, Rowland Water; Darron Poulsen, City of Pomona; Brian Tueber, Walnut Valley Water; Dave Warren, Rowland Water; Chris Lancaster, Civic Publications; Janet Zimmerman, CV Strategies

**4. Additions to Agenda**

No additions requested.

**5. Reorder Agenda**

No reorder of Agenda.

**6. Public Comment**

No public comment.

## 7. General Manager's Report

### 7.A Chino Basin Project Memorandum of Understanding

General Manager Matt Litchfield presented the Board with information regarding IEUA and the grant they successfully applied for and obtained regarding Prop 1 funding for the Chino Basin program; the grant totaled \$206.9 million dollars in funding. Three Valleys is interested in participating with IEUA regarding this specific project and for funding to go to a capital program.

IEUA wants to construct a 15,000 AF/year waste water treatment facility for advance treatment for ground water recharge. Each year they recharge that water into the ground and into the Chino Basin bank.

IEUA is seeking a non-binding MOU from all stake holders involved in this project, basically an agreement for the IEUA and participating agencies to work collaboratively toward a common goal. This agreement is non-binding and we can always remove ourselves if we don't like the way this agreement is going. They are asking that we execute the agreement with the stake holders and will bring back to the March 20<sup>th</sup> meeting for approval.

### 7.B Capital Projects Update

The Grand Avenue project disinfection process will take place at the Miramar Treatment Plant. The well will be enclosed to reduce noise for the residents in the area. Water from Well Nos. 1 & 2 will be combined with the Grand Avenue well at the Miramar Treatment Plant, disinfected and discharged into effluent reservoirs. Estimated engineers cost of project is \$4.2 million, about half of that amount is for the pipeline construction.

A pre bid meeting was held on February 28<sup>th</sup> and a bid opening meeting will be held on March 21<sup>st</sup>. The estimated timeline for the project is as follows: Notice to proceed in early May. Start of project mid-June. The construction project will take approximately 9 months.

### 7.C Salary Schedule

A change to the salary schedule was brought to the board for approval. When the Strategic Plan was adopted, the position of *Water Operations Manager* was reclassified to *Chief Water Resources Officer* which requires a change in the salary schedule. This is an informational item only and will be brought back for adoption in 2 weeks. Salaries are posted with the most recent adopted version on the TVMWD website.

## 7.D FY 19-20 Budget Workshop

The board was presented with the following items in a workshop format:

- FY 2019-20 draft budget;
- CY 2020 draft rates;
- CY 2020 draft fixed charges;
- CY 2020 draft capacity charge

Based on this first draft of the budget, TVMWD would be able to maintain the current \$10 surcharge discount for CY 2020 and into the foreseeable future.

A discussion ensued regarding the State Lobbyist in Sacramento, advertising and memberships regarding the budget. It was suggested that a separate Ad Hoc committee look into these items in further detail and report back to the board.

## 7.E FY 19-20 Annual Purchase Orders

General purchases exceeding \$50,000 and public projects exceeding \$200,000 are to be approved by the Board. Staff has listed vendors/contractors used on an ongoing basis. Staff felt it appropriate to bring these before the Board for consideration for next fiscal year.

- ACWA Joint Powers Insurance Authority (JPIA) - \$675,000 for medical, dental, vision, life, liability, property and workers' compensation insurance.
- Michael J. Arnold and Associates - \$85,000 to serve as state legislative lobbyist. Includes supplemental travel to Sacramento by staff and other legislative expenses.
- Brunick, McElhaney & Kennedy Professional Law Corporation - \$140,000 for legal services.
- Chemicals -
  - o JCI Jones Chemicals - \$80,000 for chlorine
  - o Kemira Water Solutions - \$120,000 for aluminum chlorohydrate
  - o Univar USA and Brenntag Pacific - \$130,000 for sodium hydroxide
  - o Alpine Technical Services - \$85,000 for algaecide (EarthTec)
- Denali Water Solutions - \$65,000 for sludge removal services.
- CLS Landscape Management - \$55,000 for landscape maintenance for TVMWD's various infrastructure sites.
- Hach Company - \$75,000 for lab supplies, specialized equipment and servicing,

It was suggested that an Ad Hoc committee consisting of Director Carlos Goytia, Director David DeJesus and Director Denise Jackman be convened to discuss these budget items in detail and report back to the Board.

**8. Closed Session – Public Employee Performance Evaluation, pursuant to Government Code Section 54957**

Title: General Manager

**8.A Closed Session Announcements**

No Reportable Action

**9. Future Agenda Items**

None

**10. Adjournment**

Meeting adjourned at 11:15 a.m.

**11. Next Meeting**

Special Board Meeting, Wednesday, March 13, 2019 at 8:00 a.m.

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Bob Kuhn  
*President, Board of Directors*  
Three Valleys Municipal Water District

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Recorded by: Maria Contreras  
Administrative Assistant



**MINUTES**  
**SPECIAL BOARD OF DIRECTORS MEETING**  
**THREE VALLEYS MUNICIPAL WATER DISTRICT**

**Wednesday, March 13, 2019**  
**8:00 a.m.**

**1. Call to Order**

The Board meeting was called to order at 8:00 a.m. at the District office located at 1021 East Miramar Avenue, Claremont, California. The presiding officer was President Bob Kuhn.

**2. Pledge of Allegiance**

**3. Roll Call**

**Directors Present**

Bob Kuhn, President  
 David De Jesus, Vice President  
 Brian Bowcock, Secretary  
 Joe Ruzicka, Treasurer  
 Carlos Goytia, Director  
 Denise Jackman, Director  
 John Mendoza, Director

**Staff Present**

Matt Litchfield, General Manager  
 Steve Kennedy, Legal Counsel  
 Liz Cohn, Sr. Financial Analyst  
 Maria Contreras, Administrative Assistant  
 Ray Evangelista, Engineer  
 Kirk Howie, Chief Administrative Officer  
 James Linthicum, Chief Finance Officer  
 Ben Peralta, Project Manager  
 Dominique Aguiar, Operations Supervisor  
 Freeman Ensign, Operations Supervisor

**Guest present:** Ted Ebenkamp, Walnut Valley Water; Erik Hitchman, Walnut Valley Water; Brian Tueber, Walnut Valley Water; Dave Warren, Rowland Water; Paul DiMaggio, Suburban Water Systems; Darron Poulsen, City of Pomona; Bob Bowcock; Andy Malone, Six Basins Watermaster; Craig Gott, Suburban Water Systems, Rick Hansen, Claremont Resident; Dennis Williams, Geoscience; Mark Williams, Geoscience; Michael Lewis, Cont. Ind. Coalition; Chris Clarke, NPCA; Tom Barnes, ESA; Dan Ferans, SMWD; Laer Pearce, Cadiz; Brad Jensen, SGVEP; Mark Wildermuth; Rich Lambros, ECA; Clayton Miller, SCCA; Thomas Dreunar, IUOE Local 12; Roman Nava, BIA Baldy View; Ross Bunch, IUOE Local 12; Victor Carno, Southern California Group; Gregory Foster, Southern California Group; Scott Slater, Cadiz; Julio Esperias DK; Miles Kenney, Kenney Geoscience; John Monsey, NPCA; Deandre Valencia, BIZ Fed; Ronald Mawhinney, Retired; David Sikorski, IUOE Local 12; Rosendo Rodriguez, IUOE Local 12; Jorge Carillo, Los Angeles Chamber of Commerce; Anthony Holland, Greater LA African/American Chamber

## 4. Public Comment

1. Chris Clark, National Park Conservation Association  
Opposes project
2. John Monsey, National Park Conservation Association  
Opposes project
3. Clayton Miller, Southern California Contractors Association  
Supports project
4. Roman Nava, Building Industry Association  
Supports project
5. Brad Jensen, San Gabriel Valley Economic Partnership  
Supports project
6. Richard Lambros, Engineering Contractors Association (ECA)  
Supports project
7. DeAndre Valencia, BizFed  
Supports project
8. Ronald Mawhinney, Citizen  
Opposes project
9. Michael Lewis, Construction Industry Coalition on Water Quality  
Supports project
10. Jorge Carillo, Los Angeles Chamber of Commerce  
Supports project
11. Anthony Holland, Greater Los Angeles African/American Chamber  
Supports project

## 5. Independent Peer Review Report for the Groundwater Management, Monitoring, and Mitigation Plan (“GMMMP”) for the Cadiz Valley Groundwater Conservation, Recovery and Storage Project (“Project”)

Mr. Tom Barnes, ESA, gave the Board a presentation on the Cadiz Valley Water Conservation, Recovery, and Storage Project.

Mr. Mark Wildermuth, President, Wildermuth Environmental, gave an overview of the Report of the Independent Peer Review Panel to the Board of Directors.

## 6. Future Agenda Items

None

## 7. Adjournment

Meeting adjourned at 10:22 a.m.

## 8. Next Meeting

Regular Board Meeting, Wednesday, March 20, 2019 at 8:00 a.m.

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Bob Kuhn  
*President, Board of Directors*  
Three Valleys Municipal Water District


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Recorded by: Maria Contreras  
Administrative Assistant

DRAFT



**Board of Directors  
Staff Report**

**To:** TVMWD Board of Directors  
**From:** Matthew H. Litchfield, General Manager   
**Date:** April 17, 2019  
**Subject:** **Change in Cash and Cash Equivalents Report**

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<input type="checkbox"/> <b>For Action</b>	<input type="checkbox"/> <b>Fiscal Impact</b>	<b>\$</b>
<input checked="" type="checkbox"/> <b>Information Only</b>	<input type="checkbox"/> <b>Funds Budgeted:</b>	

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**Staff Recommendation:**

**No Action Necessary – Informational Item Only**

**Discussion:**

Attached for your review is the Change in Cash and Cash Equivalents Report for the period ending March 31, 2019.

**Strategic Plan Objective(s):**

3.1 – Utilize and comply with a set of financial policies to maintain TVMWD’s financial health

**Attachment(s):**

Exhibit A – Change in Cash and Cash Equivalents Report

**Meeting History:**

None

NA/LC

# Item 7.B2 - Exhibit A



## CHANGE IN CASH AND CASH EQUIVALENTS REPORT

March 1 through March 31, 2019

		<u>CASH</u>	<u>CASH EQUIVALENTS</u>
SUMMARY 3/31/2019			
	Petty Cash	6,000.00	
	Local Agency Investment Fund		28,363.30
	General Checking	1,300,000.00	
	Sweep Account	1,553,459.02	
	U.S. Bank	5,000.00	
	<b>TOTAL CASH IN BANKS &amp; ON HAND</b>	<b>\$ 2,864,459.02</b>	<b>\$ 28,363.30</b>
	TOTAL CASH IN BANKS & ON HAND 03/31/19	\$ 2,864,459.02	\$ 28,363.30
	TOTAL CASH IN BANKS & ON HAND 02/28/19	\$ 4,606,560.90	\$ 28,363.30
	<b>PERIOD INCREASE (DECREASE)</b>	<b>\$ (1,742,101.88)</b>	<b>\$ -</b>
CHANGE IN CASH POSITION DUE TO:			
	Water Sales/Charges Revenue	3,022,929.39	
	Interest Revenue	1,017.45	
	Subvention/RTS Standby Charge Revenue	8,179.62	
	Hydroelectric Revenue	-	
	Other Revenue	4,714.94	
	Investment Xfer From Chandler Asset Mgt		
	LAIF Quarterly Interest		
	Transfer To LAIF		
	Transfer From LAIF		
	INFLOWS	3,036,841.40	-
	Expenditures	(3,809,645.67)	
	Current Month Outstanding Payables	45,907.26	
	Prior Month Cleared Payables	(12,732.11)	
	Bank/FSA Svc Fees	(145.00)	
	HRA/HSA Payment	(2,327.76)	
	Xfer to PARS - Fund OPEB & Pension Trusts	-	
	Investment Xfer to CA Asset Mgt Pgm	(1,000,000.00)	
	Transfer to LAIF		
	Transfer From LAIF		
	OUTFLOWS	(4,778,943.28)	-
	<b>PERIOD INCREASE (DECREASE)</b>	<b>(1,742,101.88)</b>	<b>-</b>



# Item 7.B3

## THREE VALLEYS MUNICIPAL WATER DISTRICT CONSOLIDATED LISTING OF INVESTMENT PORTFOLIO March 31, 2019

ITEM	BOOK YIELD	BOOK VALUE	PAR VALUE	MARKET VALUE
<b>Chandler Asset Management</b>				
ABS - Asset Backed Securities	2.68%	373,972.50	373,988.69	375,350.59
Bonds - Agency	1.94%	4,045,074.93	4,040,000.00	4,021,722.40
Commercial Paper	0.00%	0.00	0.00	0.00
Money Market Fund	2.05%	365,413.22	365,413.22	365,413.22
Supranational	2.36%	630,982.51	640,000.00	630,496.20
US Corporate	2.75%	2,383,926.77	2,400,000.00	2,397,585.22
US Treasury	1.74%	2,153,889.45	2,165,000.00	2,134,996.17
	<b>2.15%</b>	<b>9,953,259.38</b>	<b>9,984,401.91</b>	<b>9,925,563.80</b>
Local Agency Invest Fund TVMWD	2.44%	28,363.30	28,363.30	28,363.30
<b>Reserve Fund</b>		<b>\$ 9,981,622.68</b>	<b>\$ 10,012,765.21</b>	<b>\$ 9,953,927.10</b>
<hr/>				
Checking (Citizens)	0.55%	1,300,000.00	1,300,000.00	1,300,000.00
Sweep Account (Citizens)	0.40%	1,553,459.02	1,553,459.02	1,553,459.02
Emergency Checking (U.S. Bank)	0.00%	5,000.00	5,000.00	5,000.00
Petty Cash Fund	0.00%	6,000.00	6,000.00	6,000.00
<b>Working Cash</b>		<b>\$ 2,864,459.02</b>	<b>\$ 2,864,459.02</b>	<b>\$ 2,864,459.02</b>
<hr/>				
<b>TOTAL PORTFOLIO</b>	<b>1.78%</b>	<b>\$ 12,846,081.70</b>	<b>\$ 12,877,224.23</b>	<b>\$ 12,818,386.12</b>

I certify that this report accurately reflects all investments of Three Valleys Municipal Water District and that all investments and this report are in conformity with Sections 53600 et seq of the California Government Code and the District's annual statement of investment policy (Resolution 19-02-845). The District's investment program herein shown provides sufficient cash flow and liquidity to meet all budgeted expenditures for the next six months.

MATTHEW H. LITCHFIELD, General Manager/Assistant Treasurer



# Three Valleys Municipal Water District - Account #10065

## MONTHLY ACCOUNT STATEMENT

MARCH 1, 2019 THROUGH MARCH 31, 2019

### Chandler Team:

For questions about your account, please call (800) 317-4747,  
or contact [operations@chandlerasset.com](mailto:operations@chandlerasset.com)

### Custodian

US Bank  
Christopher Isles  
(503) 464-3685

**CHANDLER ASSET MANAGEMENT**  
chandlerasset.com

*Information contained herein is confidential. We urge you to compare this statement to the one you receive from your qualified custodian. Please see Important Disclosures.*



**PORTFOLIO CHARACTERISTICS**

Average Modified Duration	2.30
Average Coupon	2.00%
Average Purchase YTM	2.15%
Average Market YTM	2.40%
Average S&P/Moody Rating	AA/Aa1
Average Final Maturity	2.48 yrs
Average Life	2.41 yrs

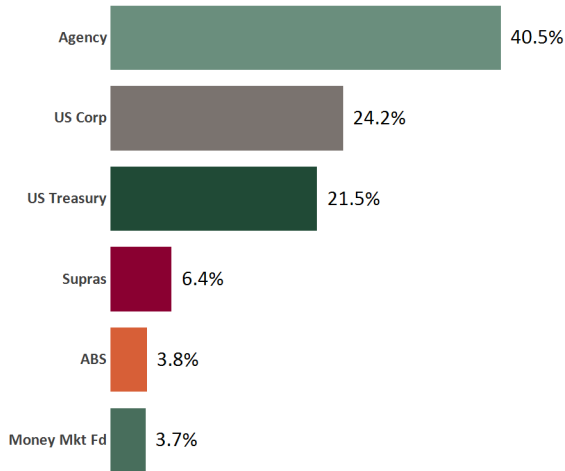
**ACCOUNT SUMMARY**

	Beg. Values as of 2/28/19	End Values as of 3/31/19
Market Value	9,847,216	9,925,564
Accrued Interest	43,860	43,613
<b>Total Market Value</b>	<b>9,891,076</b>	<b>9,969,177</b>
Income Earned	17,396	17,656
Cont/WD		-1,093
Par	9,968,831	9,984,402
Book Value	9,936,448	9,953,259
Cost Value	9,913,305	9,927,699

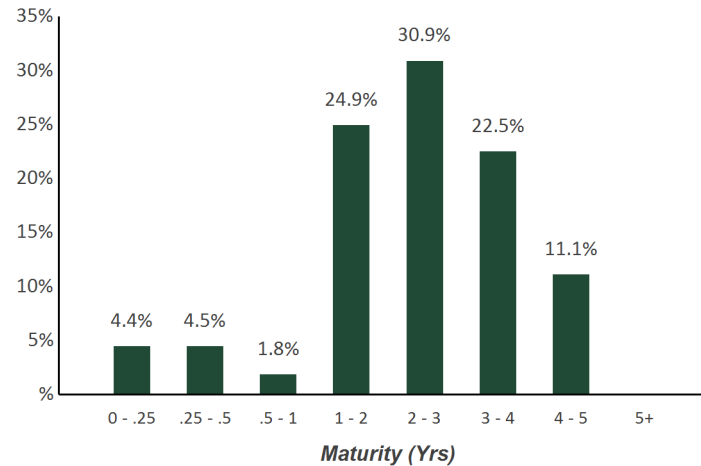
**TOP ISSUERS**

Government of United States	21.5%
Federal National Mortgage Assoc	15.2%
Federal Home Loan Bank	10.0%
Federal Home Loan Mortgage Corp	8.8%
Federal Farm Credit Bank	6.6%
International Finance Corp	4.4%
First American Govt Oblig Fund	3.7%
Inter-American Dev Bank	2.0%
<b>Total</b>	<b>72.0%</b>

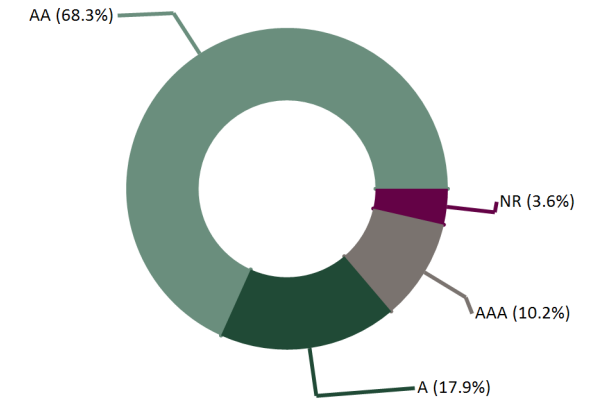
**SECTOR ALLOCATION**



**MATURITY DISTRIBUTION**



**CREDIT QUALITY (S&P)**



**PERFORMANCE REVIEW**

TOTAL RATE OF RETURN	1M	3M	YTD	1YR	Annualized				
					2YRS	3YRS	5YRS	10YRS	4/30/2009
Three Valleys Municipal Water District	0.80%	1.43%	1.43%	3.41%	1.78%	1.26%	1.49%	N/A	1.82%
ICE BAML 1-5 Yr US Treasury/Agency Index	0.85%	1.21%	1.21%	3.14%	1.52%	0.98%	1.29%	N/A	1.53%



# Statement of Compliance

As of March 31, 2019

# Item 7.B4 - Exhibit A



## Three Valleys Municipal Water District

Assets managed by Chandler Asset Management are in full compliance with state law and with the District's investment policy.

Category	Standard	Comment
Treasury Issues	No Limitation	Complies
Agency Issues	No Limitation	Complies
Municipal Securities/ Local Agency Bonds	Bonds issued by TVMWD; Issued by local agency within the state of California, including pooled investment accounts sponsored by the state of California, County Treasurers, or Joint Power Agencies	Complies
Supranationals	Issued by IBRD, IFC or IADB only; "AA" rated or higher by a NRSRO; 30% maximum; 10% max per issuer	Complies
Banker's Acceptances	"A" rated or higher by a NRSRO; 40% maximum; 5% max per issuer; 180 days max maturity	Complies
Commercial Paper	"A-1" rated or equivalent by a NRSRO; "A" rated issuer or equivalent by a NRSRO; 25% maximum; 5% max per issuer; 270 days max maturity; Issuer must be organized and operating within the US, have AUM >\$500 mil	Complies
Corporate Medium Term Notes	"A" rated or better by a NRSRO; 30% maximum; 5% max per issuer; Issued by corporations organized and operating within the U.S. or by depository institutions licensed by the U.S.	Complies
Negotiable Certificates of Deposit	30% maximum; 5% max per issuer	Complies
Certificates of Deposits/Time Deposit	Collateralized/ FDIC insured	Complies
Money Market Mutual Funds	"AAA" rated by 2 NRSROs; 20% maximum; 10% per fund	Complies
Mortgage Pass-throughs, CMOs and Asset Backed Securities	"AA" rated or higher by a NRSRO; "A" rated issuer or higher by a NRSRO; 20% maximum; 5% max per issuer	Complies
Local Agency Investment Fund - LAIF	Max program limitation	Complies
Repurchase Agreements	102% Collateralized; 1year max maturity	Complies
Reverse Repurchase Agreements	20% maximum; 92 days max maturity	Complies
Prohibited Securities	Inverse floaters; Ranges notes, Interest-only strips from mortgaged backed securities; Zero interest accrual securities	Complies
Max Per Issuer	5% of portfolio per issuer (except U.S. Government, Agencies/GSEs, Supranationals, Money Market Mutual Funds, LAIF, LGIP)	Complies
Maximum maturity	5 years	Complies

Reconciliation Summary

As of March 31, 2019

Item 7.B4 - Exhibit A



BOOK VALUE RECONCILIATION		
<b>BEGINNING BOOK VALUE</b>		<b>\$9,936,448.33</b>
<b>Acquisition</b>		
+ Security Purchases	\$0.00	
+ Money Market Fund Purchases	\$353,053.50	
+ Money Market Contributions	\$0.00	
+ Security Contributions	\$0.00	
+ Security Transfers	\$0.00	
<b>Total Acquisitions</b>		<b>\$353,053.50</b>
<b>Dispositions</b>		
- Security Sales	\$0.00	
- Money Market Fund Sales	\$0.00	
- MMF Withdrawals	\$1,092.72	
- Security Withdrawals	\$0.00	
- Security Transfers	\$0.00	
- Other Dispositions	\$0.00	
- Maturities	\$180,000.00	
- Calls	\$140,000.00	
- Principal Paydowns	\$16,390.06	
<b>Total Dispositions</b>		<b>\$337,482.78</b>
<b>Amortization/Accretion</b>		
+/- Net Accretion	\$1,240.33	
		\$1,240.33
<b>Gain/Loss on Dispositions</b>		
+/- Realized Gain/Loss	\$0.00	
		\$0.00
<b>ENDING BOOK VALUE</b>		<b>\$9,953,259.38</b>

CASH TRANSACTION SUMMARY		
<b>BEGINNING BALANCE</b>		<b>\$13,452.44</b>
<b>Acquisition</b>		
Contributions	\$0.00	
Security Sale Proceeds	\$0.00	
Accrued Interest Received	\$0.00	
Interest Received	\$15,224.47	
Dividend Received	\$155.64	
Principal on Maturities	\$180,000.00	
Interest on Maturities	\$0.00	
Calls/Redemption (Principal)	\$140,000.00	
Interest from Calls/Redemption	\$1,283.33	
Principal Paydown	\$16,390.06	
<b>Total Acquisitions</b>	<b>\$353,053.50</b>	
<b>Dispositions</b>		
Withdrawals	\$1,092.72	
Security Purchase	\$0.00	
Accrued Interest Paid	\$0.00	
<b>Total Dispositions</b>	<b>\$1,092.72</b>	
<b>ENDING BOOK VALUE</b>		<b>\$365,413.22</b>



CUSIP	Security Description	Par Value/Units	Purchase Date Book Yield	Cost Value Book Value	Mkt Price Mkt YTM	Market Value Accrued Int.	% of Port. Gain/Loss	Moody/S&P Fitch	Maturity Duration
<b>ABS</b>									
47788BAB0	John Deere Owner Trust 2017-B A2A 1.59% Due 4/15/2020	1,545.03	07/11/2017 1.60%	1,544.90 1,544.98	99.95 3.25%	1,544.19 1.09	0.02% (0.79)	Aaa / NR AAA	1.04 0.03
89237RAB4	Toyota Auto Receivable 2017-C A2A 1.58% Due 7/15/2020	28,692.27	07/25/2017 1.59%	28,692.00 28,692.15	99.80 2.66%	28,634.56 20.15	0.29% (57.59)	Aaa / AAA NR	1.29 0.19
89238BAB8	Toyota Auto Receivables Owner 2018-A A2A 2.1% Due 10/15/2020	68,751.39	01/23/2018 2.12%	68,744.36 68,747.38	99.82 2.78%	68,624.75 64.17	0.69% (122.63)	Aaa / AAA NR	1.55 0.30
47788BAD6	John Deere Owner Trust 2017-B A3 1.82% Due 10/15/2021	20,000.00	07/11/2017 1.83%	19,998.54 19,999.13	99.36 2.72%	19,872.96 16.18	0.20% (126.17)	Aaa / NR AAA	2.55 0.71
47788CAC6	John Deere Owner Trust 2016-B A4 2.66% Due 4/18/2022	35,000.00	02/21/2018 2.68%	34,997.48 34,998.14	100.04 2.64%	35,015.47 41.38	0.35% 17.33	Aaa / NR AAA	3.05 1.19
43814UAG4	Honda Auto Receivables 2018-2 A3 3.01% Due 5/18/2022	40,000.00	05/22/2018 3.03%	39,999.13 39,999.31	100.61 2.64%	40,245.88 43.48	0.40% 246.57	NR / AAA AAA	3.13 1.59
47788EAC2	John Deere Owner Trust 2018-B A3 3.08% Due 11/15/2022	100,000.00	07/18/2018 3.10%	99,992.42 99,993.62	100.73 2.68%	100,725.50 136.89	1.01% 731.88	Aaa / NR AAA	3.63 1.72
65479GAD1	Nissan Auto Receivables Owner 2018-B A3 3.06% Due 3/15/2023	80,000.00	07/17/2018 3.08%	79,997.41 79,997.79	100.86 2.65%	80,687.28 108.80	0.81% 689.49	Aaa / AAA NR	3.96 1.97
<b>Total ABS</b>		<b>373,988.69</b>	<b>2.68%</b>	<b>373,966.24</b> <b>373,972.50</b>	<b>2.68%</b>	<b>375,350.59</b> <b>432.14</b>	<b>3.77%</b> <b>1,378.09</b>	<b>Aaa / AAA</b> <b>AAA</b>	<b>2.97</b> <b>1.27</b>

<b>AGENCY</b>									
3137EADK2	FHLMC Note 1.25% Due 8/1/2019	100,000.00	09/04/2014 1.83%	97,272.00 99,813.86	99.60 2.46%	99,598.00 208.33	1.00% (215.86)	Aaa / AA+ AAA	0.34 0.33
3133EHEZ2	FFCB Note 1.6% Due 4/6/2020	200,000.00	09/28/2017 1.60%	200,012.00 200,004.84	99.22 2.38%	198,440.00 1,555.56	2.01% (1,564.84)	NR / AA+ AAA	1.02 0.99
3137EAEK1	FHLMC Note 1.875% Due 11/17/2020	200,000.00	12/28/2017 2.05%	199,016.00 199,444.11	99.24 2.35%	198,476.40 1,395.83	2.00% (967.71)	Aaa / AA+ AAA	1.64 1.58
3135G0F73	FNMA Note 1.5% Due 11/30/2020	200,000.00	12/16/2015 1.90%	196,220.00 198,728.17	98.57 2.38%	197,149.80 1,008.33	1.99% (1,578.37)	Aaa / AA+ AAA	1.67 1.62
3130A7CV5	FHLB Note 1.375% Due 2/18/2021	140,000.00	04/28/2016 1.42%	139,727.00 139,892.94	98.25 2.33%	137,545.38 229.93	1.38% (2,347.56)	Aaa / AA+ AAA	1.89 1.84



CUSIP	Security Description	Par Value/Units	Purchase Date Book Yield	Cost Value Book Value	Mkt Price Mkt YTM	Market Value Accrued Int.	% of Port. Gain/Loss	Moody/S&P Fitch	Maturity Duration
<b>AGENCY</b>									
3135G0J20	FNMA Note 1.375% Due 2/26/2021	200,000.00	Various 1.41%	199,699.04 199,888.85	98.24 2.33%	196,470.80 267.36	1.97% (3,418.05)	Aaa / AA+ AAA	1.91 1.86
3135G0K69	FNMA Note 1.25% Due 5/6/2021	180,000.00	06/29/2016 1.18%	180,612.00 180,264.70	97.84 2.31%	176,114.34 906.25	1.78% (4,150.36)	Aaa / AA+ AAA	2.10 2.04
3130A8QS5	FHLB Note 1.125% Due 7/14/2021	185,000.00	10/04/2016 1.33%	183,290.60 184,180.63	97.37 2.31%	180,127.47 445.16	1.81% (4,053.16)	Aaa / AA+ AAA	2.29 2.23
3137EAEC9	FHLMC Note 1.125% Due 8/12/2021	185,000.00	08/30/2016 1.33%	183,185.15 184,132.25	97.28 2.31%	179,972.63 283.28	1.81% (4,159.62)	Aaa / AA+ AAA	2.37 2.31
3135G0N82	FNMA Note 1.25% Due 8/17/2021	185,000.00	09/28/2016 1.28%	184,715.10 184,861.15	97.55 2.31%	180,475.64 282.64	1.81% (4,385.51)	Aaa / AA+ AAA	2.38 2.32
3135G0Q89	FNMA Note 1.375% Due 10/7/2021	160,000.00	10/27/2016 1.50%	159,025.60 159,503.35	97.79 2.28%	156,464.48 1,063.33	1.58% (3,038.87)	Aaa / AA+ AAA	2.52 2.44
3130AABG2	FHLB Note 1.875% Due 11/29/2021	200,000.00	12/28/2016 2.10%	197,940.00 198,883.98	98.94 2.29%	197,872.00 1,270.83	2.00% (1,011.98)	Aaa / AA+ AAA	2.67 2.56
3135G0S38	FNMA Note 2% Due 1/5/2022	200,000.00	01/11/2017 2.02%	199,845.00 199,913.94	99.22 2.29%	198,448.60 955.56	2.00% (1,465.34)	Aaa / AA+ AAA	2.77 2.66
3137EADB2	FHLMC Note 2.375% Due 1/13/2022	200,000.00	01/27/2017 2.03%	203,193.40 201,797.06	100.28 2.27%	200,556.20 1,029.17	2.02% (1,240.86)	Aaa / AA+ AAA	2.79 2.67
3135G0T45	FNMA Note 1.875% Due 4/5/2022	200,000.00	Various 1.86%	200,108.00 200,068.20	98.90 2.25%	197,803.20 1,833.33	2.00% (2,265.00)	Aaa / AA+ AAA	3.02 2.88
313379Q69	FHLB Note 2.125% Due 6/10/2022	200,000.00	09/28/2017 1.92%	201,806.00 201,227.87	99.49 2.29%	198,973.20 1,310.42	2.01% (2,254.67)	Aaa / AA+ AAA	3.20 3.05
3133EAYP7	FFCB Note 1.95% Due 7/19/2022	225,000.00	07/28/2017 1.92%	225,310.50 225,206.26	98.84 2.32%	222,387.75 877.50	2.24% (2,818.51)	Aaa / AA+ AAA	3.30 3.16
3135G0T94	FNMA Note 2.375% Due 1/19/2023	200,000.00	10/30/2018 2.99%	195,134.00 195,613.97	100.27 2.30%	200,538.60 950.00	2.02% 4,924.63	Aaa / AA+ AAA	3.81 3.60
3137EAEN5	FHLMC Note 2.75% Due 6/19/2023	190,000.00	09/27/2018 3.03%	187,691.50 187,939.08	101.74 2.31%	193,314.17 1,480.42	1.95% 5,375.09	Aaa / AA+ AAA	4.22 3.94
313383YJ4	FHLB Note 3.375% Due 9/8/2023	190,000.00	02/26/2019 2.57%	196,484.70 196,355.32	104.61 2.28%	198,749.69 409.69	2.00% 2,394.37	Aaa / AA+ NR	4.44 4.11
3130AAHE1	FHLB Note 2.5% Due 12/8/2023	75,000.00	02/26/2019 2.55%	74,830.50 74,833.71	100.91 2.29%	75,681.75 588.54	0.77% 848.04	Aaa / AA+ F-1+	4.69 4.37



CUSIP	Security Description	Par Value/Units	Purchase Date Book Yield	Cost Value Book Value	Mkt Price Mkt YTM	Market Value Accrued Int.	% of Port. Gain/Loss	Moody/S&P Fitch	Maturity Duration
<b>AGENCY</b>									
3133EDBU5	FFCB Note 3.5% Due 12/20/2023	225,000.00	01/16/2019 2.74%	232,843.50 232,520.69	105.14 2.34%	236,562.30 2,209.38	2.40% 4,041.61	Aaa / AA+ AAA	4.73 4.31
<b>Total Agency</b>		<b>4,040,000.00</b>	<b>1.94%</b>	<b>4,037,961.59</b> <b>4,045,074.93</b>	<b>2.32%</b>	<b>4,021,722.40</b> <b>20,560.84</b>	<b>40.55%</b> <b>(23,352.53)</b>	<b>Aaa / AA+</b> <b>AAA</b>	<b>2.76</b> <b>2.63</b>
<b>MONEY MARKET FUND FI</b>									
31846V203	First American Govt Obligation Fund Class Y	365,413.22	Various 2.05%	365,413.22 365,413.22	1.00 2.05%	365,413.22 0.00	3.67% 0.00	Aaa / AAA AAA	0.00 0.00
<b>Total Money Market Fund FI</b>		<b>365,413.22</b>	<b>2.05%</b>	<b>365,413.22</b>	<b>2.05%</b>	<b>365,413.22</b> <b>0.00</b>	<b>3.67%</b> <b>0.00</b>	<b>Aaa / AAA</b> <b>AAA</b>	<b>0.00</b> <b>0.00</b>
<b>SUPRANATIONAL</b>									
45950KCJ7	International Finance Corp Note 1.125% Due 7/20/2021	215,000.00	05/08/2018 2.81%	203,989.85 207,065.52	97.25 2.36%	209,076.75 477.03	2.10% 2,011.23	Aaa / AAA NR	2.31 2.25
4581X0CW6	Inter-American Dev Bank Note 2.125% Due 1/18/2022	200,000.00	10/26/2017 2.10%	200,158.00 200,104.89	99.51 2.31%	199,021.80 861.81	2.01% (1,083.09)	Aaa / NR AAA	2.81 2.69
45950VLH7	International Finance Corp Note 2% Due 10/24/2022	225,000.00	10/26/2017 2.16%	223,339.50 223,812.10	98.84 2.34%	222,397.65 1,962.50	2.25% (1,414.45)	Aaa / AAA NR	3.57 3.39
<b>Total Supranational</b>		<b>640,000.00</b>	<b>2.36%</b>	<b>627,487.35</b> <b>630,982.51</b>	<b>2.34%</b>	<b>630,496.20</b> <b>3,301.34</b>	<b>6.36%</b> <b>(486.31)</b>	<b>Aaa / AAA</b> <b>AAA</b>	<b>2.91</b> <b>2.79</b>
<b>US CORPORATE</b>									
06406HCW7	Bank of New York Callable Note Cont 8/11/2019 2.3% Due 9/11/2019	145,000.00	Various 2.29%	145,058.95 145,004.05	99.85 2.64%	144,782.79 185.28	1.45% (221.26)	A1 / A AA-	0.45 0.44
94974BGF1	Wells Fargo Corp Note 2.15% Due 1/30/2020	100,000.00	01/26/2015 2.18%	99,864.00 99,977.32	99.53 2.72%	99,534.70 364.31	1.00% (442.62)	A2 / A- A+	0.84 0.82
22160KAG0	Costco Wholesale Corp Note 1.75% Due 2/15/2020	80,000.00	02/05/2015 1.77%	79,916.00 79,985.26	99.22 2.66%	79,378.48 178.89	0.80% (606.78)	Aa3 / A+ A+	0.88 0.86
747525AD5	Qualcomm Inc Note 2.25% Due 5/20/2020	120,000.00	06/11/2015 2.49%	118,671.00 119,693.60	99.58 2.63%	119,494.08 982.50	1.21% (199.52)	A2 / A- NR	1.14 1.10



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<b>US CORPORATE</b>									
40428HPV8	HSBC USA Inc Note 2.75% Due 8/7/2020	150,000.00	12/28/2018 3.34%	148,623.00 148,837.20	100.10 2.68%	150,144.00 618.75	1.51% 1,306.80	A2 / A AA-	1.36 1.31
857477AS2	State Street Bank Note 2.55% Due 8/18/2020	100,000.00	06/28/2017 1.86%	102,098.00 100,924.51	99.94 2.59%	99,943.70 304.58	1.01% (980.81)	A1 / A AA-	1.39 1.34
00440EAT4	Chubb INA Holdings Inc Callable Note Cont 10/3/2020 2.3% Due 11/3/2020	125,000.00	02/06/2017 2.16%	125,588.75 125,243.54	99.50 2.62%	124,379.50 1,181.94	1.26% (864.04)	A3 / A A	1.60 1.53
30231GAV4	Exxon Mobil Corp Callable Note Cont 2/1/2021 2.222% Due 3/1/2021	120,000.00	05/16/2016 1.84%	122,103.60 120,842.88	99.55 2.47%	119,455.20 222.20	1.20% (1,387.68)	Aaa / AA+ NR	1.92 1.86
084670BQ0	Berkshire Hathaway Callable Note Cont 2/15/2021 2.2% Due 3/15/2021	130,000.00	03/23/2018 2.69%	128,180.00 128,801.22	99.54 2.44%	129,405.77 127.11	1.30% 604.55	Aa2 / AA A+	1.96 1.86
369550BE7	General Dynamics Corp Note 3% Due 5/11/2021	135,000.00	Various 3.19%	134,275.95 134,487.33	100.90 2.56%	136,219.32 1,575.00	1.38% 1,731.99	A2 / A+ NR	2.12 2.01
166764BG4	Chevron Corp Callable Note Cont 4/15/2021 2.1% Due 5/16/2021	135,000.00	03/23/2018 2.91%	131,750.55 132,799.67	99.28 2.45%	134,031.51 1,063.13	1.36% 1,231.84	Aa2 / AA NR	2.13 2.05
68389XBK0	Oracle Corp Callable Note Cont 8/01/21 1.9% Due 9/15/2021	115,000.00	11/29/2016 2.40%	112,425.15 113,677.22	98.36 2.59%	113,108.83 97.11	1.14% (568.39)	A1 / AA- A	2.46 2.38
24422ETL3	John Deere Capital Corp Note 2.65% Due 1/6/2022	125,000.00	07/27/2017 2.15%	127,605.00 126,625.71	99.96 2.67%	124,946.13 782.12	1.26% (1,679.58)	A2 / A A	2.77 2.63
91159HHP8	US Bancorp Callable Cont 12/23/2021 2.625% Due 1/24/2022	60,000.00	01/19/2017 2.66%	59,896.80 59,941.84	100.11 2.58%	60,065.88 293.13	0.61% 124.04	A1 / A+ AA-	2.82 2.61
44932HAC7	IBM Credit Corp Note 2.2% Due 9/8/2022	125,000.00	12/28/2017 2.60%	122,780.00 123,374.16	98.06 2.80%	122,575.50 175.69	1.23% (798.66)	A1 / A A	3.44 3.28
48128BAB7	JP Morgan Chase & Co Callable Note 1X 1/15/2022 2.972% Due 1/15/2023	125,000.00	10/30/2018 3.73%	121,335.00 121,697.45	99.96 2.98%	124,947.75 784.28	1.26% 3,250.30	A2 / A- AA-	3.80 3.09
808513AT2	Charles Schwab Corp Callable Note Cont 12/25/2022 2.65% Due 1/25/2023	125,000.00	06/01/2018 3.31%	121,453.75 122,081.40	100.01 2.65%	125,007.13 607.29	1.26% 2,925.73	A2 / A A	3.82 3.52
037833AK6	Apple Inc Note 2.4% Due 5/3/2023	125,000.00	11/29/2018 3.49%	119,456.25 119,875.03	99.03 2.65%	123,793.50 1,233.33	1.25% 3,918.47	Aa1 / AA+ NR	4.09 3.83



CUSIP	Security Description	Par Value/Units	Purchase Date Book Yield	Cost Value Book Value	Mkt Price Mkt YTM	Market Value Accrued Int.	% of Port. Gain/Loss	Moody/S&P Fitch	Maturity Duration
<b>US CORPORATE</b>									
69371RP59	Paccar Financial Corp Note 3.4% Due 8/9/2023	125,000.00	09/10/2018 3.37%	125,177.50 125,157.59	101.27 3.09%	126,583.00 613.89	1.28% 1,425.41	A1 / A+ NR	4.36 4.01
02665WCQ2	American Honda Finance Note 3.625% Due 10/10/2023	135,000.00	10/03/2018 3.64%	134,889.30 134,899.79	103.55 2.79%	139,788.45 2,324.53	1.43% 4,888.66	A2 / A NR	4.53 4.09
<b>Total US Corporate</b>		<b>2,400,000.00</b>	<b>2.75%</b>	<b>2,381,148.55</b> <b>2,383,926.77</b>	<b>2.66%</b>	<b>2,397,585.22</b> <b>13,715.06</b>	<b>24.19%</b> <b>13,658.45</b>	<b>A1 / A+</b> <b>A+</b>	<b>2.43</b> <b>2.26</b>
<b>US TREASURY</b>									
912828ST8	US Treasury Note 1.25% Due 4/30/2019	75,000.00	01/23/2015 1.22%	75,091.07 75,001.70	99.90 2.51%	74,921.25 393.65	0.76% (80.45)	Aaa / AA+ AAA	0.08 0.08
912828TH3	US Treasury Note 0.875% Due 7/31/2019	200,000.00	03/30/2015 1.30%	196,414.73 199,725.95	99.46 2.47%	198,929.60 290.06	2.00% (796.35)	Aaa / AA+ AAA	0.33 0.33
912828L99	US Treasury Note 1.375% Due 10/31/2020	180,000.00	11/23/2015 1.71%	177,181.07 179,094.75	98.49 2.35%	177,278.94 1,039.23	1.79% (1,815.81)	Aaa / AA+ AAA	1.59 1.54
912828N89	US Treasury Note 1.375% Due 1/31/2021	155,000.00	03/09/2016 1.40%	154,849.15 154,943.36	98.31 2.32%	152,384.38 353.25	1.53% (2,558.98)	Aaa / AA+ AAA	1.84 1.80
912828B90	US Treasury Note 2% Due 2/28/2021	180,000.00	04/26/2016 1.40%	185,056.07 182,000.11	99.43 2.31%	178,973.46 313.04	1.80% (3,026.65)	Aaa / AA+ AAA	1.92 1.86
912828P87	US Treasury Note 1.125% Due 2/28/2021	200,000.00	12/29/2016 1.86%	194,125.67 197,302.13	97.80 2.30%	195,601.60 195.65	1.96% (1,700.53)	Aaa / AA+ AAA	1.92 1.88
912828Q37	US Treasury Note 1.25% Due 3/31/2021	210,000.00	12/13/2016 1.81%	205,136.25 207,735.63	98.02 2.27%	205,849.14 7.17	2.06% (1,886.49)	Aaa / AA+ AAA	2.00 1.96
912828T34	US Treasury Note 1.125% Due 9/30/2021	185,000.00	11/09/2016 1.48%	181,871.52 183,399.83	97.32 2.23%	180,042.56 5.69	1.81% (3,357.27)	Aaa / AA+ AAA	2.50 2.44
912828J43	US Treasury Note 1.75% Due 2/28/2022	215,000.00	03/13/2017 2.14%	211,112.24 212,715.86	98.62 2.24%	212,026.98 327.17	2.13% (688.88)	Aaa / AA+ AAA	2.92 2.82
912828XR6	US Treasury Note 1.75% Due 5/31/2022	205,000.00	07/27/2017 1.84%	204,103.81 204,413.03	98.52 2.24%	201,964.98 1,202.40	2.04% (2,448.05)	Aaa / AA+ AAA	3.17 3.04
912828P4	US Treasury Note 1.875% Due 7/31/2022	200,000.00	09/28/2017 1.90%	199,805.36 199,865.87	98.84 2.24%	197,679.60 621.55	1.99% (2,186.27)	Aaa / AA+ AAA	3.34 3.20



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<b>US TREASURY</b>									
912828N30	US Treasury Note 2.125% Due 12/31/2022	160,000.00	01/31/2018 2.54%	156,975.00 157,691.23	99.59 2.24%	159,343.68 854.70	1.61% 1,652.45	Aaa / AA+ AAA	3.76 3.57
<b>Total US Treasury</b>		<b>2,165,000.00</b>	<b>1.74%</b>	<b>2,141,721.94</b> <b>2,153,889.45</b>	<b>2.30%</b>	<b>2,134,996.17</b> <b>5,603.56</b>	<b>21.47%</b> <b>(18,893.28)</b>	<b>Aaa / AA+</b> <b>AAA</b>	<b>2.22</b> <b>2.14</b>
<b>TOTAL PORTFOLIO</b>		<b>9,984,401.91</b>	<b>2.15%</b>	<b>9,927,698.89</b> <b>9,953,259.38</b>	<b>2.40%</b>	<b>9,925,563.80</b> <b>43,612.94</b>	<b>100.00%</b> <b>(27,695.58)</b>	<b>Aa1 / AA</b> <b>AAA</b>	<b>2.48</b> <b>2.30</b>
<b>TOTAL MARKET VALUE PLUS ACCRUED</b>						<b>9,969,176.74</b>			





Transaction Type	Settlement Date	CUSIP	Quantity	Security Description	Price	Acq/Disp Yield	Amount	Interest Pur/Sold	Total Amount	Gain/Loss
<b>ACQUISITIONS</b>										
Purchase	03/01/2019	31846V203	180,000.00	First American Govt Obligation Fund Class Y	1.000	2.01%	180,000.00	0.00	180,000.00	0.00
Purchase	03/01/2019	31846V203	3,245.70	First American Govt Obligation Fund Class Y	1.000	2.01%	3,245.70	0.00	3,245.70	0.00
Purchase	03/01/2019	31846V203	155.64	First American Govt Obligation Fund Class Y	1.000	2.01%	155.64	0.00	155.64	0.00
Purchase	03/08/2019	31846V203	4,581.25	First American Govt Obligation Fund Class Y	1.000	2.01%	4,581.25	0.00	4,581.25	0.00
Purchase	03/11/2019	31846V203	1,667.50	First American Govt Obligation Fund Class Y	1.000	2.01%	1,667.50	0.00	1,667.50	0.00
Purchase	03/15/2019	31846V203	2,522.50	First American Govt Obligation Fund Class Y	1.000	2.01%	2,522.50	0.00	2,522.50	0.00
Purchase	03/15/2019	31846V203	1,917.07	First American Govt Obligation Fund Class Y	1.000	2.01%	1,917.07	0.00	1,917.07	0.00
Purchase	03/15/2019	31846V203	30.33	First American Govt Obligation Fund Class Y	1.000	2.01%	30.33	0.00	30.33	0.00
Purchase	03/15/2019	31846V203	77.58	First American Govt Obligation Fund Class Y	1.000	2.01%	77.58	0.00	77.58	0.00
Purchase	03/15/2019	31846V203	256.67	First American Govt Obligation Fund Class Y	1.000	2.01%	256.67	0.00	256.67	0.00
Purchase	03/15/2019	31846V203	204.00	First American Govt Obligation Fund Class Y	1.000	2.01%	204.00	0.00	204.00	0.00
Purchase	03/15/2019	31846V203	5,872.88	First American Govt Obligation Fund Class Y	1.000	2.01%	5,872.88	0.00	5,872.88	0.00
Purchase	03/15/2019	31846V203	8,785.59	First American Govt Obligation Fund Class Y	1.000	2.01%	8,785.59	0.00	8,785.59	0.00
Purchase	03/18/2019	31846V203	100.33	First American Govt Obligation Fund Class Y	1.000	2.01%	100.33	0.00	100.33	0.00
Purchase	03/25/2019	31846V203	141,283.33	First American Govt Obligation Fund Class Y	1.000	2.01%	141,283.33	0.00	141,283.33	0.00



Transaction Type	Settlement Date	CUSIP	Quantity	Security Description	Price	Acq/Disp Yield	Amount	Interest Pur/Sold	Total Amount	Gain/Loss
<b>ACQUISITIONS</b>										
Purchase	03/31/2019	31846V203	2,353.13	First American Govt Obligation Fund Class Y	1.000	2.05%	2,353.13	0.00	2,353.13	0.00
<b>Subtotal</b>			<b>353,053.50</b>				<b>353,053.50</b>	<b>0.00</b>	<b>353,053.50</b>	<b>0.00</b>
<b>TOTAL ACQUISITIONS</b>			<b>353,053.50</b>				<b>353,053.50</b>	<b>0.00</b>	<b>353,053.50</b>	<b>0.00</b>
<b>DISPOSITIONS</b>										
Call	03/25/2019	91159HHH6	140,000.00	US Bancorp Callable Note Cont 3/25/2019 2.2% Due 4/25/2019	100.000	2.20%	140,000.00	1,283.33	141,283.33	0.00
<b>Subtotal</b>			<b>140,000.00</b>				<b>140,000.00</b>	<b>1,283.33</b>	<b>141,283.33</b>	<b>0.00</b>
Paydown	03/15/2019	47788BAB0	1,912.49	John Deere Owner Trust 2017-B A2A 1.59% Due 4/15/2020	100.000		1,912.49	4.58	1,917.07	0.00
Paydown	03/15/2019	47788BAD6	0.00	John Deere Owner Trust 2017-B A3 1.82% Due 10/15/2021	100.000		0.00	30.33	30.33	0.00
Paydown	03/15/2019	47788CAC6	0.00	John Deere Owner Trust 2016-B A4 2.66% Due 4/18/2022	100.000		0.00	77.58	77.58	0.00
Paydown	03/15/2019	47788EAC2	0.00	John Deere Owner Trust 2018-B A3 3.08% Due 11/15/2022	100.000		0.00	256.67	256.67	0.00
Paydown	03/15/2019	65479GAD1	0.00	Nissan Auto Receivables Owner 2018-B A3 3.06% Due 3/15/2023	100.000		0.00	204.00	204.00	0.00
Paydown	03/15/2019	89237RAB4	5,827.43	Toyota Auto Receivable 2017-C A2A 1.58% Due 7/15/2020	100.000		5,827.43	45.45	5,872.88	0.00
Paydown	03/15/2019	89238BAB8	8,650.14	Toyota Auto Receivables Owner 2018-A A2A 2.1% Due 10/15/2020	100.000		8,650.14	135.45	8,785.59	0.00



Transaction Type	Settlement Date	CUSIP	Quantity	Security Description	Price	Acq/Disp Yield	Amount	Interest Pur/Sold	Total Amount	Gain/Loss
<b>DISPOSITIONS</b>										
Paydown	03/18/2019	43814UAG4	0.00	Honda Auto Receivables 2018-2 A3 3.01% Due 5/18/2022	100.000		0.00	100.33	100.33	0.00
<b>Subtotal</b>			<b>16,390.06</b>				<b>16,390.06</b>	<b>854.39</b>	<b>17,244.45</b>	<b>0.00</b>
Maturity	03/01/2019	17275RAR3	180,000.00	Cisco Systems Note 2.125% Due 3/1/2019	100.000		180,000.00	0.00	180,000.00	0.00
<b>Subtotal</b>			<b>180,000.00</b>				<b>180,000.00</b>	<b>0.00</b>	<b>180,000.00</b>	<b>0.00</b>
Security Withdrawal	03/05/2019	31846V203	988.55	First American Govt Obligation Fund Class Y	1.000		988.55	0.00	988.55	0.00
Security Withdrawal	03/26/2019	31846V203	104.17	First American Govt Obligation Fund Class Y	1.000		104.17	0.00	104.17	0.00
<b>Subtotal</b>			<b>1,092.72</b>				<b>1,092.72</b>	<b>0.00</b>	<b>1,092.72</b>	<b>0.00</b>
<b>TOTAL DISPOSITIONS</b>			<b>337,482.78</b>				<b>337,482.78</b>	<b>2,137.72</b>	<b>339,620.50</b>	<b>0.00</b>
<b>OTHER TRANSACTIONS</b>										
Interest	03/01/2019	17275RAR3	180,000.00	Cisco Systems Note 2.125% Due 3/1/2019	0.000		1,912.50	0.00	1,912.50	0.00
Interest	03/01/2019	30231GAV4	120,000.00	Exxon Mobil Corp Callable Note Cont 2/1/2021 2.222% Due 3/1/2021	0.000		1,333.20	0.00	1,333.20	0.00
Interest	03/08/2019	313383YJ4	190,000.00	FHLB Note 3.375% Due 9/8/2023	0.000		3,206.25	0.00	3,206.25	0.00
Interest	03/08/2019	44932HAC7	125,000.00	IBM Credit Corp Note 2.2% Due 9/8/2022	0.000		1,375.00	0.00	1,375.00	0.00
Interest	03/11/2019	06406HCW7	145,000.00	Bank of New York Callable Note Cont 8/11/2019 2.3% Due 9/11/2019	0.000		1,667.50	0.00	1,667.50	0.00
Interest	03/15/2019	084670BQ0	130,000.00	Berkshire Hathaway Callable Note Cont 2/15/2021 2.2% Due 3/15/2021	0.000		1,430.00	0.00	1,430.00	0.00



Transaction Type	Settlement Date	CUSIP	Quantity	Security Description	Price	Acq/Disp Yield	Amount	Interest Pur/Sold	Total Amount	Gain/Loss
<b>OTHER TRANSACTIONS</b>										
Interest	03/15/2019	68389XBK0	115,000.00	Oracle Corp Callable Note Cont 8/01/21 1.9% Due 9/15/2021	0.000		1,092.50	0.00	1,092.50	0.00
Interest	03/31/2019	912828Q37	210,000.00	US Treasury Note 1.25% Due 3/31/2021	0.000		1,312.50	0.00	1,312.50	0.00
Interest	03/31/2019	912828T34	185,000.00	US Treasury Note 1.125% Due 9/30/2021	0.000		1,040.63	0.00	1,040.63	0.00
<b>Subtotal</b>			<b>1,400,000.00</b>				<b>14,370.08</b>	<b>0.00</b>	<b>14,370.08</b>	<b>0.00</b>
Dividend	03/01/2019	31846V203	196,698.14	First American Govt Obligation Fund Class Y	0.000		155.64	0.00	155.64	0.00
<b>Subtotal</b>			<b>196,698.14</b>				<b>155.64</b>	<b>0.00</b>	<b>155.64</b>	<b>0.00</b>
<b>TOTAL OTHER TRANSACTIONS</b>			<b>1,596,698.14</b>				<b>14,525.72</b>	<b>0.00</b>	<b>14,525.72</b>	<b>0.00</b>



Chandler Asset Management, Inc. ("Chandler") is an SEC registered investment adviser. For additional information about our firm, please see our current disclosures (Form ADV). To obtain a copy of our current disclosures, you may contact your client service representative by calling the number on the front of this statement or you may visit our website at [www.chandlerasset.com](http://www.chandlerasset.com).

Information contained in this monthly statement is confidential and is provided for informational purposes only and should not be construed as specific investment or legal advice. The information contained herein was obtained from sources believed to be reliable as of the date of this statement, but may become outdated or superseded at any time without notice.

**Custody:** Your qualified custodian bank maintains control of all assets reflected in this statement and we urge you to compare this statement to the one you receive from your qualified custodian. Chandler does not have any authority to withdraw or deposit funds from/to the custodian account.

**Valuation:** Prices are provided by IDC, an independent pricing source. In the event IDC does not provide a price or if the price provided is not reflective of fair market value, Chandler will obtain pricing from an alternative approved third party pricing source in accordance with our written valuation policy and procedures. Our valuation procedures are also disclosed in Item 5 of our Form ADV Part 2A.

**Performance:** Performance results are presented gross-of-advisory fees and represent the client's Total Return. The deduction of advisory fees lowers performance results. These results include the reinvestment of dividends and other earnings. Past performance may not be indicative of future results. Therefore, clients should not assume that future performance of any specific investment or investment strategy will be profitable or equal to past performance levels. All investment strategies have the potential for profit or loss. Economic factors, market conditions or changes in investment strategies, contributions or withdrawals may materially alter the performance and results of your portfolio.

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**Ratings:** Ratings information have been provided by Moody's, S&P and Fitch through data feeds we believe to be reliable as of the date of this statement, however we cannot guarantee its accuracy.


Security level ratings for U.S. Agency issued mortgage-backed securities ("MBS") reflect the issuer rating because the securities themselves are not rated. The issuing U.S. Agency guarantees the full and timely payment of both principal and interest and carries a AA+/Aaa/AAA by S&P, Moody's and Fitch respectively.



Benchmark Index	Disclosure
ICE BAML 1-5 Yr US Treasury/Agency Index	The ICE BAML 1-5 Year US Treasury & Agency Index tracks the performance of US dollar denominated US Treasury and nonsubordinated US agency debt issued in the US domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch). Qualifying securities must have at least one year remaining term to final maturity and less than five years remaining term to final maturity, at least 18 months to maturity at time of issuance, a fixed coupon schedule and a minimum amount outstanding of \$1 billion for sovereigns and \$250 million for agencies. (Index: GVA0. Please visit <a href="http://www.mlindex.ml.com">www.mlindex.ml.com</a> for more information)



## Board of Directors Staff Report

**To:** TVMWD Board of Directors  
**From:** Matthew H. Litchfield, General Manager   
**Date:** April 17, 2019  
**Subject:** YTD District Budget Status Report

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<input type="checkbox"/> <b>For Action</b>	<input type="checkbox"/> <b>Fiscal Impact</b>	<b>\$</b>
<input checked="" type="checkbox"/> <b>Information Only</b>	<input type="checkbox"/> <b>Funds Budgeted:</b>	

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**Staff Recommendation:**

**No Action Necessary – Informational Item Only**

**Discussion:**

Attached for your review is the YTD District Budget Status Report for the period ending March 31, 2019.

The ***Grants and Other Revenue*** and ***Planning & Resources*** line items reflect the grant and expenditure for the Cadiz Water Project Peer Review.

Due to the payment schedule for ***Membership Dues & Fees***, the YTD actuals are higher than expected. This line item is not expected to exceed budget.

The ***Hydroelectric Facilities*** line item is 90.8% of budget due to the removal, repair, and reinstall of the bearing housing at the Fulton hydro.

**Strategic Plan Objective(s):**

3.1 – Utilize and comply with a set of financial policies to maintain TVMWD’s financial health

**Attachment(s):**

Exhibit A – YTD District Budget Status Report

**Meeting History:**

None

NA/LC

## Item 7.B6 - Exhibit A

THREE VALLEYS MUNICIPAL WATER DISTRICT				
DISTRICT BUDGET - FISCAL YEAR 2018-2019				
Month Ending March 31, 2019				
	2018-2019 YTD Actual	Annual Budget All Funds	2018-2019 Percent of Budget	2018-2019 Balance Remaining
<b>REVENUES</b>				
<b>OPERATING REVENUES</b>				
Water Sales	45,861,030	56,527,935	81.1%	10,666,905
MWD RTS Standby Charge	2,043,333	3,466,681	58.9%	1,423,348
MWD Capacity Charge Assessment	936,440	1,208,200	77.5%	271,760
TVMWD Fixed Charges	495,573	665,901	74.4%	170,328
Hydroelectric Revenue	87,086	34,583	251.8%	(52,503)
<b>NON-OPERATING REVENUES</b>				
Property Taxes	1,425,334	2,120,753	67.2%	695,419
Interest Income	154,449	151,600	101.9%	(2,849)
Pumpback O&M/Reservoir #2 Reimbursement	20,128	20,000	100.6%	(128)
Grants and Other Revenue	109,097	5,054	2158.6%	(104,043)
<b>TOTAL REVENUES</b>	<b>51,132,470</b>	<b>64,200,707</b>	<b>79.6%</b>	<b>13,068,237</b>
<b>EXPENSES</b>				
<b>OPERATING EXPENSES</b>				
MWD Water Purchases	41,420,738	50,329,635	82.3%	8,908,897
MWD RTS Standby Charge	1,785,049	3,466,681	51.5%	1,681,632
Staff Compensation	3,191,231	4,239,458	75.3%	1,048,227
MWD Capacity Charge	664,680	1,208,200	55.0%	543,520
Operations and Maintenance	1,090,592	1,422,790	76.7%	332,198
Professional Services	375,942	470,450	79.9%	94,508
Directors Compensation	190,482	309,965	61.5%	119,483
Communication and Conservation Programs	133,093	185,700	71.7%	52,607
Planning & Resources	138,608	60,000	231.0%	(78,608)
Membership Dues and Fees	100,473	106,318	94.5%	5,845
Hydroelectric Facilities	38,586	42,500	90.8%	3,914
Board Elections	76,363	-	0.0%	(76,363)
<b>NON OPERATING EXPENSES</b>				
Pumpback O&M/Reservoir #2 Expenses	17,136	20,000	85.7%	2,864
<b>RESERVE EXPENSES</b>				
Reserve Replenishment	-	234,878	0.0%	234,878
<b>CAPITAL INVESTMENT</b>				
Capital Repair & Replacement	185,667	827,199	22.4%	641,532
Capital Investment Program	693,474	3,252,974	21.3%	2,559,500
<b>TOTAL EXPENSES</b>	<b>50,102,114</b>	<b>66,176,748</b>	<b>75.7%</b>	<b>16,074,634</b>
<b>NET INCOME (LOSS) BEFORE TRANSFERS</b>	<b>1,030,356</b>	<b>(1,976,041)</b>		<b>(3,006,397)</b>
TRANSFER IN FROM DEBT RESERVES				-
TRANSFER FROM/(TO) CAPITAL RESERVES		97,132		97,132
TRANSFER IN FROM CAPITAL RESERVES				-
TRANSFER IN FROM OPPORTUNITY RESERVE				-
TRANSFER IN FROM ENCUMBERED RESERVES	549,749	1,907,288		1,357,539
<b>NET INCOME (LOSS) AFTER TRANSFERS</b>	<b>\$ 1,580,105</b>	<b>\$ 28,379</b>		<b>\$ (1,551,726)</b>

*\*\*This budget is prepared on a modified cash-basis of accounting, which is a basis of accounting other than generally accepted accounting principles (GAAP).*





## Board of Directors Staff Report

**To:** TVMWD Board of Directors  
**From:** Matthew H. Litchfield, General Manager   
**Date:** April 17, 2019  
**Subject:** **Warrant List**

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<input checked="" type="checkbox"/> <b>For Action</b>	<input checked="" type="checkbox"/> <b>Fiscal Impact</b>	<b>\$ 3,809,645.67</b>
<input type="checkbox"/> <b>Information Only</b>	<input type="checkbox"/> <b>Funds Budgeted:</b>	

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**Staff Recommendation:**

**Receive and file the Warrant List for the period ending March 31, 2019 as presented.**

**Discussion:**

The monthly warrant list is provided for your information.

General checks 49177 through 49265 totaling \$736,121.45 are listed on pages 1 to 4.

MWD January water invoice totaling \$2,733,493.00 is listed on page 4.

Wire transfers for taxing agencies, benefit payments and PERS totaling \$115,588.02 are listed on pages 4 to 5.

Total payroll checks 12437 through 12509 totaling \$224,443.20 are listed on page 5.

Umpqua Bank invoice detail is listed on page 6.

**Strategic Plan Objective(s):**

3.1 – Utilize and comply with a set of financial policies to maintain TVMWD's financial health

**Attachment(s):**

Exhibit A – Warrant List

**Meeting History:**

None

NA/LC

# Item 7.B8 - Exhibit A



THREE VALLEYS MUNICIPAL WATER DISTRICT  
Warrant List  
March 2019

**General Checks 49177 through 49265**  
**Payroll Wire Transfer 2678 through 2694**  
**Payroll Checks 12437 through 12509**

Check Number	Vendor	Description	Paid Amount
49177	AQUILOGIC, INC.	CADIZ VALLEY INDEPENDENT PEER REVIEW ( GRANT FUNDING)	98,500.00
49178	AZUSA LIGHT & WATER	ELECTRIC UTILITY - 1/14/19 TO 2/11/19	18.69
49179	CA-NV SECTION AWWA	WATER QUALITY ANALYST GRADE 1 CERTIFICATION RENEWAL - LARIOS	55.00
49180	EUROFINS EATON ANALYTICAL	LABORATORY TESTING - TOC/ALKALINITY	75.00
49181	GENTRY, JASON R	ELECTRICAL SERVICES - EXTERIOR LIGHTS/SUMP PUMP/EXHAUST FAN	5,125.52
49182	HACH COMPANY	OI CHLORINE CKT BOARD ASSY/TOTAL CHLORINE REAGENTS/AMMONIA/MONOCHLORAMINE	1,591.29
49183	HARBOR FREIGHT TOOLS	TARPS	46.40
49184	HARRINGTON IND PLASTICS, LLC	CONNECTORS/UNIONS/TEES/VALVES/NIPPLE/BUSHING/GASKETS	348.79
49185	HOME DEPOT CREDIT SERVICES	CONCRETE & MASONRY SEALANT/INSULATING FOAM SEALANT/CAULK GUN/INSULATION ROLL	51.31
49186	LAGERLOF,SENECAL,GOSNEY, & KRUSE, LLP	LEGAL FEES THROUGH JANUARY 31, 2019	1,581.46
49187	R & B AUTOMATION, INC.	BRACKET FABRICATION/INSTALL	45,000.00
49188	SOUTHERN CALIFORNIA EDISON	MIRAMAR - FEB	109.32
49189	SWRCB	WATER SYSTEM FEES 7/1/18 THROUGH 6/30/19	14,410.42
49190	CELL BUSINESS EQUIPMENT	PLOTTER LEASE - MAR	268.28
49191	CLS LANDSCAPE MANAGEMENT	LANDSCAPE MAINTENANCE - CUT WEEDS AT MIRAMAR & GRAND	706.50
49192	DE LAGE LANDEN FIN SVCS, INC.	POSTAGE METER LEASING CHARGES 2/15/19 - 3/14/19	106.06
49193	DIVE/CORR, INC	UNDERWATER INSPECTION OF RESERVOIRS #1 & #2	2,500.00
49194	JEFFREY C. SCHENKEL, DBA SOUTH COAST MEDIA SVC	OUTREACH AD	564.00
49195	JERICO SYSTEMS, INC.	SIX BASIN STRATEGIC PLAN PROGRAMMATIC EIR - EIR DEVELOPMENT	8,853.90
49196	LARRY BURKE ENTERPRISES	BATTERY FOR DISTRICT VEHICLE	128.68
49197	PERALTA, BEN	11/28/18 FALL ACWA CONFERENCE MILEAGE EXPENSE	78.48
49198	SOUTHERN CALIFORNIA EDISON	MIRAMAR/WILLIAMS/FULTON/PM-26/SCADA/PUMPBACK - FEB	1,740.57
49199	BURLINGTON SAFTY LAB OF CA,INC	RETEST INSULATING GLOVES	17.32



THREE VALLEYS MUNICIPAL WATER DISTRICT  
 Warrant List  
 March 2019

Item 7.B8 - Exhibit A

General Checks 49177 through 49265  
 Payroll Wire Transfer 2678 through 2694  
 Payroll Checks 12437 through 12509

Check Number	Vendor	Description	Paid Amount
49200	D & H WATER SYSTEMS INC.	DRY POLYMER FEED SYSTEM	133,480.50
49201	GENTRY, JASON R	ELECTRICAL SERVICES - ALARM RECEPTACLE/LIVE OAK	913.47
49202	HAAKER EQUIPMENT CO.	PLUG/TRIGGER GUN/WAND/SOCKET/COUPLERS	84.45
49203	LINCOLN FINANCIAL GROUP	401A DEFRD: MARCH 10 PAYROLL	200.00
49204	LINCOLN LIFE, EMPL SVCS(5H-26)	457 DEFRD: MARCH 10 PAYROLL	9,375.00
49205	LIZ COHN	REPLENISH PETTY CASH - MEETINGS/SEMINARS/SOLAR CUP/MISC/RETIREMENT SUPPLIES	368.95
49206	LOWE'S	TRANSFER/DIGGING SHOVELS/GLOVES/PAPER TOWELS/DRILL BITS/COUPLING PUSH FITTING	488.39
49207	MC MASTER-CARR SUPPLY COMPANY	WATER & INERT GAS VALVE	182.30
49208	OFFICE DEPOT	MONITOR PRIVACY FILTER/MARKERS/PENS/NAME BADGE LABELS	446.56
49209	R & B AUTOMATION, INC.	ACTUATORS ASSESSMENT AT FULTON AND LIVE OAK SPREADING GROUNDS	1,190.00
49210	SAM'S CLUB	OFFICE SUPPLIES	89.64
49211	SOUTHERN CALIFORNIA EDISON	MIRAMAR/WILLIAMS/FULTON - FEB	2,919.12
49212	TIME WARNER CABLE	BROADBAND SERVICES - WILLIAMS/PLANT 2/FULTON 2/9/19 - 3/20/19	239.97
49213	AVS SYSTEMS	TROUBLESHOOT IPC'S	233.75
49214	LARIOS, LEONARDO	T4 CERTIFICATION	105.00
49215	LINCOLN FINANCIAL GROUP	ANNUAL RETIREMENT ADMINISTRATION CHARGE FOR 1/1/18 - 12/31/18	60.00
49216	PRIME SYSTEMS IND AUTOMATION	SCADA PROGRAMMING/HARDWARE/METER CALIBRATIONS/GRAND WELL/5TH & WHITE/6TH & WHITE	20,478.98
49217	REGNL CHAMBER OF COMMERCE SGV	SALUTE TO HEROES PRAYER BREAKFAST - RUZICKA/HR SEMINAR SERIES - MENDOZA	70.00
49218	SAN ANTONIO WATER COMPANY	WATER AVAILABILITY CHARGE 12/30/18 - 2/28/19	4.00
49219	ULINE	DOUBLE SCISSOR LIFT TABLES	1,446.28
49220	UMPQUA BANK	UMPQUA BANK INVOICE DETAIL - LAST PAGE	17,813.66
49221	UMPQUA BANK	UMPQUA BANK INVOICE DETAIL - LAST PAGE	27,179.27
49222	WEX BANK	FUEL 2/01/19 - 2/28/19	918.13
49223	BRUNICK, MCELHANEY & KENNEDY	LEGAL FEES - FEB	15,460.00



THREE VALLEYS MUNICIPAL WATER DISTRICT  
 Warrant List  
 March 2019

Item 7.B8 - Exhibit A

General Checks 49177 through 49265  
 Payroll Wire Transfer 2678 through 2694  
 Payroll Checks 12437 through 12509

Check Number	Vendor	Description	Paid Amount
49224	CANNON CORPORATION	HYDROPNEUMATIC TANK SYSTEM DESIGN/CONSTRUCTION DOCS THROUGH FEB 28, 2019	1,385.50
49225	CANON FINANCIAL SERVICES,INC.	COPY MACHINE LEASE - MAR	1,755.56
49226	CCS INTERACTIVE	QUARTERLY WEBSITE HOSTING APR - JUN 2019	174.00
49227	CITY OF CLAREMONT	REFUSE PICKUP/STREET SWEEPING - FEB	149.64
49228	CITY OF LA VERNE	AWWA RESEARCH FOUNDATION DUES DUPLICATE PAYMENT	1,030.00
49229	CITY OF UPLAND	WATER PURCHASE 1122.4 AF	140,300.00
49230	CLS LANDSCAPE MANAGEMENT	LANDSCAPE MAINTENANCE - MAR	2,965.00
49231	DENALI WATER SOLUTIONS, LLC	SLUDGE REMOVAL - FEB	4,036.02
49232	GLENDORA UNIFIED SCHOOL DIST.	11/15/18 SUTHERLAND STUDENTS TRANSPORTATION	2,600.00
49233	GOURMET GOURMET CATERING, INC	12/19/18 MEETING EXPENSE - BALANCE	2,107.49
49234	HARRINGTON IND PLASTICS, LLC	CONNECTORS/UNIONS/TEES/TUBINGS/VALVE SHUT OFF	620.61
49235	HOUSE, LON W.	WILLIAMS/FULTON GENERATION OPTIONS ANALYSIS	12,293.75
49236	INTERFACE SECURITY SYSTEMS LLC	EOC WIRELESS BROADBAND SERVICE 4/1/19 - 4/30/19	134.88
49237	KEMIRA WATER SOLUTIONS, INC.	PAX-XL19	11,956.00
49238	LINCOLN CLUBS	3/28/19 SGV CHAPTER MEETING - RUZICKA	40.00
49239	MICHAEL J ARNOLD & ASSOC, INC.	LEGISLATIVE CONSULTANT MAR/FEB EXPENSES	6,084.00
49240	RELIANCE STANDARD LIFE INS.	LT DISAB: MARCH 2019	993.54
49241	ROBERT AVERY CARTER	DOUBLE DOOR LOCK REPAIR	95.00
49242	S.G. VALLEY NEWSPAPER GROUP	NOTICE INVITING BIDS GRAND AVE WELL EQUIPPING PROJECT	922.00
49243	SCWUA	3/21/19 SUCCESSFUL LEADERSHIP - BOWCOCK,DE JESUS,RUZICKA,MENDOZA	120.00
49244	SOUTHERN CALIFORNIA EDISON	MIRAMAR - FEB	241.45
49245	THOMAS HARDER & CO.	GRAND AVE WELL-ENGR DESIGN/ANALYSIS/CONSTRUCTION MGMT/INSPECTION	37,270.00
49246	UNDERGROUND SERVICE ALERT	CALIFORNIA STATE FEE FOR REGULATORY COSTS - BALANCE	234.90
49247	UNDERGROUND SERVICE ALERT	DIGALERT TICKETS - FEB	54.55



THREE VALLEYS MUNICIPAL WATER DISTRICT  
Warrant List  
March 2019

Item 7.B8 - Exhibit A

General Checks 49177 through 49265  
Payroll Wire Transfer 2678 through 2694  
Payroll Checks 12437 through 12509

Check Number	Vendor	Description	Paid Amount
49248	ACWA/JPIA	ACWA EMPLOYEE BENEFITS - APRIL 2019	44,521.53
49249	LINCOLN LIFE, EMPL SVCS(5H-26)	457 DEFRD: BOARD-MARCH 2019	5,544.00
49250	REDI-RELIEF FIRST AID & SAFETY, INC.	FIRST AID KITS/IBUPROFEN/ASPIRIN/LENS CLEANING TOWELETTES/OINTMENT/COUGH DROPS	444.36
49251	SOCALGAS	FULTON SERVICE 02/05/19 - 03/07/19	14.79
49252	SOUTHERN CALIFORNIA EDISON	FULTON/WILLIAMS - OCT 2018 THROUGH JAN 2019	4,992.03
49253	AFLAC	AFLAC SUPP. INS: MARCH 2019 (EMPLOYEE REIMBURSED)	1,000.80
49254	ANTHRACITE FILTER MEDIA CO.	ANTHRACITE FILTER MEDIA	8,418.75
49255	BRENNTAG PACIFIC, INC.	SODIUM HYDROXIDE	7,412.41
49256	CA DEPT OF TAX & FEE ADMIN	2018 USE TAX	1,894.00
49257	CLAREMONT PRINT & COPY	BUSINESS CARDS - LANG	98.55
49258	JOHN ROBINSON CONSULTING, INC	CONSULTING SERVICES - SIX BASINS GRANT FUNDING SUPPORT	375.00
49259	LARRY BURKE ENTERPRISES	BATTERY FOR SKID STEER	147.29
49260	LIEBERT CASSIDY WHITMORE	LEGAL FEES - FEB	216.00
49261	MC MASTER-CARR SUPPLY COMPANY	STUD ANCHOR/WASHER/HEX NUT FOR CONCRETE	180.14
49262	OFFICE DEPOT	BATHROOM TISSUE PAPER/MULTIFOLD PAPER TOWELS/TRASH BAGS/PAPER	404.63
49263	R & B AUTOMATION, INC.	FILTERS REPAIR & MAINTENANCE	9,390.00
49264	SCHULER CONSTRUCTORS INC.	HYDROPNEUMATIC TANK REMOVAL AND BOOSTER PUMPS IMPROVEMENT - RETENTION	5,321.95
49265	SYNCB/AMAZON	ERGONOMIC MONITOR W/KEYBOARD TRAY/SAFETY VESTS/TONER CARTRIDGES/WEATHER TROUSER	2,556.92
<b>TOTAL AMOUNT OF CHECKS LISTED</b>			<b>\$ 736,121.45</b>
12788	METROPOLITAN WATER DISTRICT	JANUARY 2019 MWD WATER INVOICE	2,733,493.00
<b>TOTAL AMOUNT OF WIRE TRANSFERS</b>			<b>\$ 2,733,493.00</b>
2678	FEDERAL TAX PAYMENT	FED TAX: FEBRUARY 24 PAYROLL	13,192.23



THREE VALLEYS MUNICIPAL WATER DISTRICT  
 Warrant List  
 March 2019

Item 7.B8 - Exhibit A

General Checks 49177 through 49265  
 Payroll Wire Transfer 2678 through 2694  
 Payroll Checks 12437 through 12509

Check Number	Vendor	Description	Paid Amount
2679	BASIC PACIFIC	HEALTH SAVINGS ACCT: FEBRUARY 24 PAYROLL	1,567.50
2680	PUBLIC EMPLOYEES RETIREMENT SY	PERS CONTR: FEBRUARY 24 PAYROLL	15,611.26
2681	STATE TAX PAYMENT	STATE TAX: FEBRUARY 24 PAYROLL	5,124.62
2682	CALPERS-457 PLAN	PERS-457 DEFERRED COMP/EMPL LOAN: FEBRUARY 24 PAYROLL	2,941.39
2683	FEDERAL TAX PAYMENT	FED TAX: MARCH 10 PAYROLL	13,071.77
2684	BASIC PACIFIC	HEALTH SAVINGS ACCT: MARCH 10 PAYROLL	1,567.50
2685	PUBLIC EMPLOYEES RETIREMENT SY	PERS CONTR: MARCH 10 PAYROLL	15,585.16
2686	STATE TAX PAYMENT	STATE TAX: MARCH 10 PAYROLL	5,075.25
2687	CALPERS-457 PLAN	PERS-457 DEFERRED COMP: MARCH 10 PAYROLL	2,830.00
2688	BASIC PACIFIC	HEALTH SAVINGS ACCT: BOARD-MARCH 2019	516.66
2689	FEDERAL TAX PAYMENT	FED TAX: BOARD-MARCH 2019	1,212.26
2690	STATE TAX PAYMENT	STATE TAX: BOARD-MARCH 2019	513.98
2691	CALPERS-457 PLAN	PERS-457 DEFERD COMP: BOARD-MARCH 2019	345.00
2692	FEDERAL TAX PAYMENT	FED TAX: MARCH 24 PAYROLL	15,049.17
2693	PUBLIC EMPLOYEES RETIREMENT SY	PERS CONTR: MARCH 24 PAYROLL	15,645.20
2694	STATE TAX PAYMENT	STATE TAX: MARCH 24 PAYROLL	5,739.07
<b>TOTAL AMOUNT OF PAYROLL WIRE TRANSFERS LISTED</b>			<b>\$ 115,588.02</b>

**PAYROLL SUMMARY**

Check# 12437 - 12509

<b>TOTAL AMOUNT OF PAYROLL CHECKS LISTED</b>	<b>\$ 224,443.20</b>
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THREE VALLEYS MUNICIPAL WATER DISTRICT  
Warrant List  
March 2019

# Item 7.B8 - Exhibit A

**General Checks 49177 through 49265**  
**Payroll Wire Transfer 2678 through 2694**  
**Payroll Checks 12437 through 12509**

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Check Number	Vendor	Description	Paid Amount
<b>TOTAL March 2019 CASH DISBURSEMENTS</b>			<b>\$ 3,809,645.67</b>

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THREE VALLEYS MUNICIPAL WATER DISTRICT  
 Warrant List  
 March 2019

# Item 7.B8 - Exhibit A

Umpqua Bank E-Payables Invoice Detail Check 49220  
 Umpqua Bank Credit Cards Invoice Detail Check 49221

Check Number	Vendor	Description	Paid Amount
49220	ACCENT COMPUTER SOLUTIONS, INC.	IT SERVICES - FEB/PROTECH BACKUP/365 BUSINESS/WIRELESS POINT TO POINT PROJECT	4,753.78
49220	AIRGAS SPECIALTY PRODUCTS	AMMONIA/AMMONIUM HYDROXIDE	2,798.00
49220	AIRGAS USA, LLC	OXYGEN CYLINDER RENTAL	51.01
49220	ALPINE TECHNICAL SERVICES, LLC	HEAT BLANKET	4,486.50
49220	ALS GROUP USA, CORP	LABORATORY TESTING FOR THM	1,430.00
49220	CLINICAL LABORATORY OS SB, INC.	OUTSIDE LABORATORY TESTING - DEC	1,620.00
49220	GROUND CONTROL SYSTEMS, INC.	IDIRECT EMERGENCY RESPONDER SERVICES FEE - FEB	279.00
49220	PREMIER FAMILY MEDICINE ASSOC	PULMONARY FUNCTION TEST - LARSON	25.00
49220	RAYNE WATER CONDITIONING, INC.	AUTOMATIC WATER SOFTENERS REPAIR	95.00
49220	VWR INTERNATIONAL INC.	PETRI DISH/SEROLOGIC PIPETS/ALKALINE REAGENT/TRYPIC SOY BROTH/COTTON APPLICATOR	1,334.77
49220	WECK LABORATORIES, INC.	LABORATORY TESTING FOR ALKALINITY	75.00
49220	WESTERN WATER WORKS SUPPORT	PLAIN CASE PRESSURE GAUGES/PIPE WRAPPING TAPE/WRENCH SET WITH BAG	865.60
<b>TOTAL AMOUNT OF UMPQUA BANK E-PAYABLES SERVICES INVOICE</b>			<b>\$ 17,813.66</b>
49221	ACWA	5/7-10/19 SPRING CONFERENCE & CLE WORKSHOP - BOWCOCK	580.00
49221	ACWA/JPIA	3/13-14/19 AGUIAR,BURROUGHS,COLE,HARBERSON,HERNANDEZ,LANG,LARSON,NELSON,SUAREZ	1,520.00
49221	ALL SEASON PARTY SUPPLY	2/2/19 RETIREMENT EVENT HELIUM RENTAL DEPOSIT REFUND	(50.00)
49221	ARROW TRAILER SUPPLIES, INC.	EOC TRAILER LEAK REPAIR SUPPLIES	106.40
49221	ELECTRO-SENSORS, INC.	SPEED SWITCH FOR BELT FILTER PRESS	596.77
49221	HOME DEPOT	SALT	835.73
49221	HUNTINGTON HARDWARE CO., INC.	BRUSH MEETING STILES	49.54
49221	MICHAEL'S	FRAME AND SPECIALTY MAT	87.28
49221	MISCELLANEOUS VENDORS	EVENTS REGISTRATIONS & EXPENSES - FEB	1,389.35
49221	RUBBER STAMPS UNLIMITED, INC.	CHARGE CARD TRANSACTION STAMPS	122.10
49221	SHERATON FAIRPLEX	5/30 & 10/31 LEADERSHIP BREAKFAST DEPOSITS & 2/28/19 BALANCE / RETIREMENT EVENT-HANSEN	18,650.11
49221	THE SIGN CHEF	MAGNETIC TVMWD LOGOS FOR DISTRICT VEHICLES	3,138.00
49221	WATER EDUCATION FOUNDATION	3/29/19 SAWPA REGISTRATION - MENDOZA	153.99
<b>TOTAL AMOUNT OF UMPQUA BANK CARD SERVICES INVOICE</b>			<b>\$ 27,179.27</b>





THREE VALLEYS MUNICIPAL WATER DISTRICT  
Warrant List  
March 2019  
Umpqua Bank E-Payables Invoice Detail Check 49220  
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49220	AIRGAS USA, LLC	OXYGEN CYLINDER RENTAL	51.01
49220	ALPINE TECHNICAL SERVICES, LLC	HEAT BLANKET	4,486.50
49220	ALS GROUP USA, CORP	LABORATORY TESTING FOR THM	1,430.00
49220	CLINICAL LABORATORY OS SB, INC.	OUTSIDE LABORATORY TESTING - DEC	1,620.00
49220	GROUND CONTROL SYSTEMS, INC.	IDIRECT EMERGENCY RESPONDER SERVICES FEE - FEB	279.00
49220	PREMIER FAMILY MEDICINE ASSOC	PULMONARY FUNCTION TEST - LARSON	25.00
49220	RAYNE WATER CONDITIONING, INC.	AUTOMATIC WATER SOFTENERS REPAIR	95.00
49220	VWR INTERNATIONAL INC.	PETRI DISH/SEROLOGIC PIPETS/ALKALINE REAGENT/TRYPIC SOY BROTH/COTTON APPLICATOR	1,334.77
49220	WECK LABORATORIES, INC.	LABORATORY TESTING FOR ALKALINITY	75.00
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<b>TOTAL AMOUNT OF UMPQUA BANK E-PAYABLES SERVICES INVOICE</b>			<b>\$ 17,813.66</b>
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49221	ALL SEASON PARTY SUPPLY	2/2/19 RETIREMENT EVENT HELIUM RENTAL DEPOSIT REFUND	(50.00)
49221	ARROW TRAILER SUPPLIES, INC.	EOC TRAILER LEAK REPAIR SUPPLIES	106.40
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<b>TOTAL AMOUNT OF UMPQUA BANK CARD SERVICES INVOICE</b>			<b>\$ 27,179.27</b>

# Item 7.C1



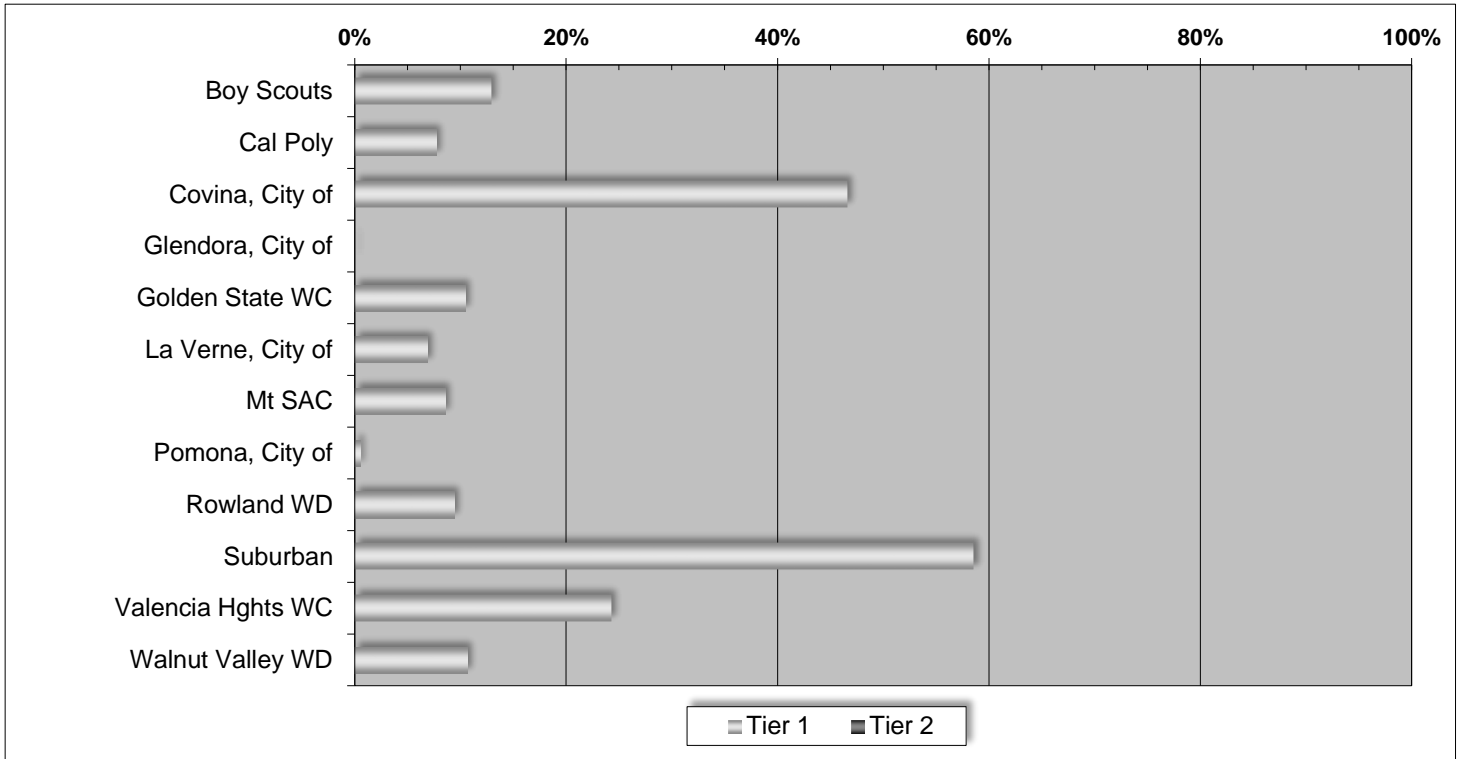
## Tier 1 Balance (in Acre-Feet) Calendar Year 2019 (through March 2019)

Agency	Tier 1 Allocation					Balance
		Weymouth	Miramar	CIC	Spreading	
Boy Scouts of America	36	4.6	0.0	0.0	0.0	31.0
Cal Poly Pomona	269	20.7	0.0	0.0	0.0	248.3
Covina, City of *	1,568	0.0	0.0	730.8	0.0	837.2
Glendora, City of *	4,101	0.0	0.0	0.0	0.0	4,101.3
Golden State Water Company *	15,714	837.5	745.2	54.7	0.0	14,076.5
La Verne, City of	8,026	0.0	551.5	0.0	0.0	7,474.8
Mt San Antonio College	699	59.5	0.0	0.0	0.0	639.5
Pomona, City of *	7,052	19.8	11.1	0.0	0.0	7,021.3
Rowland Water District *	14,741	1,169.9	211.5	0.0	0.0	13,359.5
Suburban Water Systems *	1,961	27.7	0.0	1,120.2	0.0	813.1
Three Valleys MWD	NA				0.0	NA
Valencia Heights Water Co *	464	0.0	0.0	112.6	0.0	351.4
Walnut Valley Water District *	26,057	2,228.3	542.0	0.0	0.0	23,286.5

\* Deliveries to JWL are assigned to Pomona, RWD, and WVWD.  
 Deliveries to BGL are assigned to Suburban, VHWC, GSWC and WVWD.  
 Deliveries to CIC are assigned to Covina, Glendora, GSWC, SWS, and VHWC.  
 Quantities apportioned to above agencies are preliminary based on available data.

**TVMWD Tier 1 Allowable = 80,688**  
**MWD Tier 1 Deliveries = 8,508**  
**TVMWD Tier 1 Balance = 72,180**

**Overage by Individual Agencies 0.0**





## Three Valleys Municipal Water District Miramar Operations Report

### MARCH 2019

#### Water Quality

The treatment plant produced treated water that met or exceeded state and federal drinking water standards.

Water quality data for the month of March (results of the combined filter effluent)

		Units	Results	Limits	
Turbidity	TU	NTU	<b>0.08</b>	0.3	<i>Results should be less than limits to comply</i>
Total Dissolved Solids	TDS	mg/l	<b>230</b>	500	
Total Trihalomethanes	TTHM	µg/l	<b>64.4-69.2</b>	80	<i>Ranges from 4 distribution locations (Mar results)</i>
Haloacetic Acids	HAA	µg/l	<b>30.6-39.0</b>	60	
Total Organic Carbon	TOC	Units RAA Ratio	Results <b>1.16</b>	Minimum Limit 1.00	<i>* RAA Results should be greater than minimum limit to comply</i>

Reportable violations made to SWRCB: **NONE**

*\*RAA - Running Annual Average*

#### Monthly Plant Production

<b>Potable water produced from Miramar Plant</b>	<b>791.1</b> AF	<u>Capacity</u> 1844.6 AF	<u>Monthly %</u> 42.9%
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#### Monthly Well Production

	Days in service		Same month prior year	Days in service
Well #1	<b>3</b>	<b>3.3</b> AF	<b>30.1</b> AF	<b>23</b>
Well #2	<b>3</b>	<b>6.8</b> AF	<b>40.9</b> AF	<b>22</b>
<b>Total monthly Well production</b>		<b>10.1</b> AF	<b>71.0</b> AF	

#### Monthly Sales

La Verne	<b>222.6</b> AF	27.8%
GSWC (Claremont)	<b>193.5</b>	24.1%
GSWC (San Dimas)	<b>74.1</b>	9.2%
PWR-JWL	<b>310.5</b>	38.8%
Pomona (Mills)	<b>0.0</b>	0.0%
TVMWD Admin	<b>0.4</b>	0.1%
<b>Total Potable Water Sold</b>	<b>801.2</b> AF	100.0%

#### Year To Date 2018-19

	Actual	Budget	% of Budget
Potable Water Sold from Miramar Plant (95.1%)	<b>12,611.3</b> AF	11,525.6 AF	109.4%
Total Well Production (4.9%)	<b>648.4</b>	957.3	67.7%
<b>Total Potable Water Sold (Plant &amp; Wells)</b>	<b>13,259.7</b> AF	12,482.9 AF	106.2%

Average monthly water sold **1,473.3** AF

## Hydroelectric Generation (kWh) FY 2018-19

	Monthly kWh		YTD kWh		
	Actual	Budget	Actual	Budget	% of Budget
Miramar					
Hydro 1	<b>13</b>	110,723	<b>1,280,951</b>	1,051,865	121.8%
Hydro 2	<b>114</b>	11,210	<b>797</b>	144,128	0.6%
Hydro 3	<b>31,152</b>	22,723	<b>156,338</b>	292,147	53.5%
Williams	<b>0</b>	74,356	<b>1,059,520</b>	603,108	175.7%
Fulton	<b>0</b>	30,940	<b>396,840</b>	293,932	135.0%
	<b>31,279</b>	249,952	<b>2,894,446</b>	2,385,180	121.4%

## Operations/Maintenance Review

### Special Activities

- ▶ Several of the Operations staff meet with a professor and graduate student from Cal Poly Pomona to discuss the possible research into the reuse of the belt filter press sludge, as part of a graduate project/thesis.
- ▶ Operations staff received Confined Space Training sponsored by JPIA.
- ▶ All District staff and directors received Ethics & Harassment Training given by Liebert Cassidy Whitmore.
- ▶ The District hosted a seminar provided by D & H Water Sales on "Optimizing Chlorimine Residual Control within your Distribution System". Thirty one guests were in attendance which included District staff and our member agencies.
- ▶ Doreck Construction repaired a leak at the Wheeler connection and relocated the leaking air vac.
- ▶ The temporary polymer trailer was delivered and will be wired by the electrical contractor and put to use during the construction installation of our new system.

### Outages/Repairs

- ▶ SCE had several scheduled power outages in the distribution system for maintenance. Power has since been restored.

### Unbudgeted Activities

- ▶ None

## Other

- ▶ District staff assisted with tours to the following groups: students from Pitzer College, Lorbeer Middle School from the City of Pomona, Webb Schools in Claremont, Rowland Elementary School and a troop from the Girl Scouts.

Submitted by: \_\_\_\_\_

Steve Lang  
Operations Manager


### Distribution:

- Board of Directors
- General Manager
- Chief Engineering & Operations Officer



## Board of Directors Staff Report

**To:** TVMWD Board of Directors

**From:** Matthew H. Litchfield, General Manager 

**Date:** April 17, 2019

**Subject:** **Funding Agreement to Participate in the Existing Infrastructure to Create Water Supply and Water Quality Solutions Study**

<input checked="" type="checkbox"/> <b>For Action</b>	<input checked="" type="checkbox"/> <b>Fiscal Impact</b>	<b>\$ 7,500.00</b>
<input type="checkbox"/> <b>Information Only</b>	<input type="checkbox"/> <b>Funds Budgeted:</b>	

### Staff Recommendation:

**Board approval of the Funding Agreement to participate in the preparation of the Phase 2 White Paper.**

### Discussion:

In May 2018, the TVMWD participated in the review of a Phase 1 White Paper entitled *Tapping into Available Capacity in Existing Infrastructure to Create Water Supply and Water Quality Solutions* initiated by the Las Virgenes Municipal Water District (“LVMWD”). The study was prepared by LVMWD in partnership with the Main San Gabriel Watermaster and Water Replenishment District of Southern California to explore the opportunity for diverting urban runoff and first flush stormwater to the region's wastewater treatment plants to generate a new source of recycled water. The white paper identified the merits of the strategy, while recognizing the need to engage a broader group of stakeholders to address the potential challenges and complexities.

The Phase 2 White Paper is intended to evaluate the opportunity for controlled and strategic integration of the region's existing stormwater and wastewater systems to achieve multiple benefits: (1) enhance the quality of receiving waters in Los Angeles County, and (2) increase water supplies available for recycling. As proposed, the work would be performed by Jacobs Engineering Group, Inc., with input and oversight from 12 public agency participants including the District. Based on the terms of a proposed cooperative funding agreement, the 11 other participants would provide \$334,500 toward the work. In addition, Metropolitan Water District of Southern California (MWD) approved a Future Supply Actions Funding Program grant in the amount of \$339,500.

## **Fiscal Impact:**

The net cost to TVMWD for participation in the preparation of the Phase 2 White Paper is \$7,500.00. The total cost of the study is \$694,000 with \$339,500 provided by MWD to the LVMWD through its Future Supply Actions Funding Program and \$334,500 reimbursed by 11 other public agency participants.

Sufficient funds are available in the adopted Fiscal Year 2018-19 Budget for the work.

## **Strategic Plan Objective(s):**

- 1.3 – Maintain diverse sources of water supplies and storage, and increase extractable water storage supplies to 10,000 AF
- 3.3 – Be accountable and transparent with major decisions

## **Attachment(s):**

Exhibit A – Funding Agreement

Exhibit B – Phase 2 Whitepaper Presentation Slides

## **Meeting History:**

Board Meeting – April 3, 2019

NA/ML

# Item 7.E2 - Exhibit A

## **AGREEMENT**

This Agreement is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 2019, by and between the following public agencies (hereinafter referred to individually as "Party" and collectively as "Parties") to cooperatively prepare and fund a study evaluating opportunities to tap into available capacity in existing infrastructure to create water supply and water quality solutions:

- Central Basin Municipal Water District (hereinafter referred to as "Central Basin");
- City of Los Angeles, LA Sanitation and Environment (hereinafter referred to as "LASAN");
- City of Los Angeles, Department of Water and Power (hereinafter referred to as "LADWP");
- City of Pasadena (hereinafter referred to as "Pasadena");
- City of Torrance (hereinafter referred to as "Torrance");
- County Sanitation District No. 2 of Los Angeles County (hereinafter referred to as "LACSD");
- Las Virgenes Municipal Water District (hereinafter referred to as "LVMWD");
- Los Angeles County Flood Control District (hereinafter referred to as "LACFCD");
- Main San Gabriel Basin Watermaster (hereinafter referred to as "Main San Gabriel Basin");
- Three Valleys Municipal Water District (hereinafter referred to "Three Valleys");
- Upper San Gabriel Valley Municipal Water District (hereinafter referred to as "Upper District"); and
- Water Replenishment District of Southern California (hereinafter referred to as "WRD").

## **RECITALS**

WHEREAS, the Parties consist of public agencies with responsibility for various aspects of water resources management in the County of Los Angeles, including flood control; water conservation; surface water quality; stormwater management; groundwater management; and wastewater collection, treatment and recycling;

WHEREAS, in May 2018, LVWMD, Main San Gabriel Basin and WRD completed a Phase 1 White Paper on Tapping into Available Capacity in Existing Infrastructure to Create Water Supply and Water Quality Solutions that highlighted the potential merits of controlled and strategic integration of the region's existing stormwater and wastewater systems to achieve multiple benefits, namely enhancing the quality of receiving waters in Los Angeles County and increasing water supplies available for recycling;



# Item 7.E2 - Exhibit A

WHEREAS, the Phase 1 White Paper identified the need for additional study to address the potential challenges and complexities and to engage a much broader group of stakeholder agencies responsible for the underlying water management functions; and

WHEREAS, the Parties desire to collaboratively prepare and fund a Phase 2 White Paper on Tapping into Available Capacity in Existing Infrastructure to Create Water Supply and Water Quality Solutions (hereinafter referred to as "Study").

NOW, THEREFORE, in consideration of the mutual benefits to be derived by the Parties and of the promises herein contained, it is hereby agreed as follows:

## **SECTION 1: OBLIGATIONS OF THE PARTIES**

### 1.1 Obligations of LVMWD:

- 1.1.1 Scope of Services. LVMWD shall execute and administer a professional services agreement for the preparation of the Study on behalf of the Parties, for a not-to-exceed amount of \$694,000 (hereinafter referred to as "Consultant Costs"), in accordance with the scope of work and fee proposal included as Exhibit "A."
- 1.1.2 Data, Reports, and Documents. Within five (5) business days of receipt of deliverables and completion of the Study, LVMWD shall electronically deliver to the Parties the Study, materials and documents created under this Agreement. If the Parties use any of the data, reports and documents furnished or prepared for projects other than the project shown on Exhibit "A," LVMWD shall be released from responsibility to third parties concerning the use of the data, reports and documents.
- 1.1.3 Invoicing. LVMWD shall invoice the Parties for their respective contributions toward the Consultant Costs for the Study based on the terms provided herein.
- 1.1.4 Consideration. LVMWD shall contribute \$20,000 toward the Consultant Costs for the Study, as more fully described on Exhibit "A."
- 1.1.5 Funding. LVMWD shall prepare and submit a proposal to the Metropolitan Water District of Southern California for \$339,500 in funding from its Future Supply Actions Funding Program for the Study. If such funding is awarded, LVMWD shall execute a funding agreement with Metropolitan Water District of Southern California for the funding, which shall be applied toward the Consultant Costs.

# Item 7.E2 - Exhibit A

1.1.6 Steering Committee. LVMWD shall participate as a member of the “Steering Committee” as further defined and provided for in Section 2.1 below.

1.1.7 Technical Review Committee. LVMWD shall participate as a member in the “Technical Review Committee” as further defined and provided for in Section 2.2 below.

1.1.8 Attribution. LVMWD shall ensure that attribution for the Study is provided to all Parties, unless a Party requests otherwise in writing. Attribution will not be provided to a Party that fails to provide payment, in full or in part, as required by this Agreement.

## 1.2 Obligations of LACFCD:

1.2.1 Consideration. LACFCD shall contribute \$125,000 toward the Consultant Costs for the Study, as more fully described on Exhibit “A.” LACFD shall pay said amount to LVMWD within forty-five (45) calendar days of receipt of an invoice.

1.2.2 Committees. LACFCD shall participate as chair of the Steering Committee and member of the Technical Review Committee.

## 1.3 Obligations of LACSD:

1.3.1 Consideration. LACSD shall contribute \$56,000 toward the Consultant Costs for the Study, as more fully described on Exhibit “A.” LACSD shall pay said amount to LVMWD within forty-five (45) calendar days of receipt of an invoice.

1.3.2 Committees. LACSD shall participate as co-chair of the Steering Committee and chair of the Technical Review Committee.

## 1.4 Obligations of LASAN:

1.4.1 Consideration. LASAN shall contribute \$56,000 toward the Consultant Costs for the Study, as more fully described on Exhibit “A.” LASAN shall pay said amount to LVMWD within forty-five (45) calendar days of receipt of an invoice.

1.4.2 Committees. LASAN shall participate as co-chair of the Steering Committee and co-chair of the Technical Review Committee.

# Item 7.E2 - Exhibit A

## 1.5 Obligations of LADWP, Main San Gabriel Basin, and WRD:

1.5.1 Consideration. LADWP, Main San Gabriel Basin, and WRD shall each contribute \$20,000 toward the Consultant Costs for the Study, as more fully described on Exhibit "A." LADWP, Main San Gabriel Basin, and WRD shall each pay said amount to LVMWD within forty-five (45) calendar days of receipt of an invoice.

1.5.2 Committees. LADWP, Main San Gabriel Basin, and WRD shall each participate as members of the Steering Committee and Technical Review Committee.

## 1.6 Obligations of Central Basin, Pasadena, Three Valleys, Torrance, and Upper District:

1.6.1 Consideration. Central Basin, Pasadena, Three Valleys, Torrance, and Upper District shall each contribute \$7,500 toward the Consultant Costs for the Study, as more fully described on Exhibit "A." Central Basin, Pasadena, Three Valleys, Torrance, and Upper District shall each pay said amount to LVMWD within forty-five (45) calendar days of receipt of an invoice.

1.6.2 Committees. Central Basin, Pasadena, Three Valleys, Torrance, and Upper District shall each participate as members of the Steering Committee and Technical Review Committee.

### **SECTION 2: COMMITTEES**

2.1 Steering Committee. The Parties shall form a Steering Committee that will oversee the progress of work, provide strategic direction on the Study, and ensure that the work products best reflect the interests of each Party. The Steering Committee will meet periodically and consist of principals representing each Party. Upon any Party's failure to provide payment, in full or in part, as required by this Agreement, such Party shall be removed from the Steering Committee.

2.2 Technical Review Committee. The Parties shall form a Technical Review Committee that will provide technical input on the Study, review the deliverables, and vet comments provided by the Parties to LVMWD and the consultant. Upon any Party's failure to provide payment, in full or in part, as required by this Agreement, such Party shall be removed from the Technical Committee.

### **SECTION 3: GENERAL PROVISIONS**

3.1 Term. This agreement shall commence on the date above written and continue until the Study is completed.

## Item 7.E2 - Exhibit A

3.2 Termination. LVMWD may terminate this Agreement, effective thirty (30) days from the date of written notice, upon any Party's failure to provide payment, in full or in part, as required by this Agreement, after having failed to cure such failure to pay within thirty (30) days of the date of notice provided by LVMWD. In the event of termination of this Agreement, LVMWD shall not be responsible for further preparation or completion of the Study. In the event LVMWD terminates this Agreement pursuant to this section, LVMWD shall refund all unused funds to the respective, non-defaulting parties, in proportion to the non-defaulting parties' respective contributions made prior to the time of the termination.

3.3 Governing Law. This Agreement is made under and will be governed by the laws of the State of California. Further, the Parties shall comply with all applicable laws, ordinances, codes, and regulations of the federal, state, and local governments.

3.4 Good Faith. Each Party shall use reasonable efforts and work in good faith for the expeditious completion of the Study. In the event that the Consultant Costs to prepare the Study are greater than those described herein, the Parties agree to meet and confer in good faith to determine a mutually agreeable allocation of the additional costs.

3.5 No Third-Party Beneficiary. This Agreement is for the sole benefit of the Parties and does not grant rights to any non-Party or impose obligations on a Party beyond those specified herein or in favor of any non-party.

3.6 Severability. The provisions of this Agreement are severable, and the invalidity, illegality or unenforceability of any provision of this Agreement will not affect the validity or enforceability of any other provisions. If any provision of this Agreement is found to be invalid, illegal, or unenforceable, the Parties shall endeavor to modify that clause in a manner that gives effect to the intent of the Parties entering into this Agreement.

3.7 Amendments. This Agreement may be amended or modified only by written mutual consent of all Parties.

3.8 Notice. Any correspondence, communication, or contact concerning this Agreement must be directed to the Parties at the name and address listed on Exhibit "B." Notice will be deemed as given upon personal delivery, receipt of e-mail, receipt of fax confirmation, or five days after deposit in U.S. Mail, first-class postage, prepaid, and addressed as shown on Exhibit "B."

3.9 Counterparts. This Agreement may be executed in counterparts and the signed counterparts will constitute a single instrument. The signatories to this Agreement represent that they have the authority to bind their respective Party.



# Item 7.E2 - Exhibit A

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective officers, duly authorized, as of the dates opposite their respective signatures.

**LAS VIRGENES MUNICIPAL  
WATER DISTRICT**

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

By: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

APPROVED AS TO FORM:

By: \_\_\_\_\_

# Item 7.E2 - Exhibit A

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective officers, duly authorized, as of the dates opposite their respective signatures.

**CENTRAL BASIN MUNICIPAL  
WATER DISTRICT**

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

By: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

APPROVED AS TO FORM:

By: \_\_\_\_\_

# Item 7.E2 - Exhibit A

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective officers, duly authorized, as of the dates opposite their respective signatures.

**CITY OF LOS ANGELES, LASAN**

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

By: \_\_\_\_\_

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

By: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

APPROVED AS TO FORM:

By: \_\_\_\_\_



# Item 7.E2 - Exhibit A

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective officers, duly authorized, as of the dates opposite their respective signatures.

**CITY OF LOS ANGELES,  
DEPARTMENT OF WATER AND  
POWER**

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

By: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

APPROVED AS TO FORM:

By: \_\_\_\_\_

# Item 7.E2 - Exhibit A

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective officers, duly authorized, as of the dates opposite their respective signatures.

**CITY OF PASADENA**

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

By: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

APPROVED AS TO FORM:

By: \_\_\_\_\_

# Item 7.E2 - Exhibit A

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective officers, duly authorized, as of the dates opposite their respective signatures.

**CITY OF TORRANCE**

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

By: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

APPROVED AS TO FORM:

By: \_\_\_\_\_

# Item 7.E2 - Exhibit A

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective officers, duly authorized, as of the dates opposite their respective signatures.

**COUNTY SANITATION DISTRICT  
NO. 2 OF LOS ANGELES COUNTY**

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

By: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

APPROVED AS TO FORM:

By: \_\_\_\_\_

# Item 7.E2 - Exhibit A

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective officers, duly authorized, as of the dates opposite their respective signatures.

**LOS ANGELES COUNTY FLOOD  
CONTROL DISTRICT**

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

By: \_\_\_\_\_

APPROVED AS TO FORM:

By: \_\_\_\_\_

# Item 7.E2 - Exhibit A

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective officers, duly authorized, as of the dates opposite their respective signatures.

**MAIN SAN GABRIEL BASIN  
WATERMASTER**

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

By: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

APPROVED AS TO FORM:

By: \_\_\_\_\_

# Item 7.E2 - Exhibit A

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective officers, duly authorized, as of the dates opposite their respective signatures.

**THREE VALLEYS MUNICIPAL  
WATER DISTRICT**

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

By: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

APPROVED AS TO FORM:

By: \_\_\_\_\_

# Item 7.E2 - Exhibit A

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective officers, duly authorized, as of the dates opposite their respective signatures.

**UPPER SAN GABRIEL VALLEY  
MUNICIPAL WATER DISTRICT**

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

By: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

APPROVED AS TO FORM:

By: \_\_\_\_\_



# Item 7.E2 - Exhibit A

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective officers, duly authorized, as of the dates opposite their respective signatures.

**WATER REPLENISHMENT DISTRICT  
OF SOUTHERN CALIFORNIA**

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

By: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

APPROVED AS TO FORM:

By: \_\_\_\_\_

Exhibit "A"

Mr. David Pedersen, P.E.  
General Manager  
Las Virgenes Municipal Water District  
4232 Las Virgenes Road,  
Calabasas, CA 91302-1994

October 31, 2018

Subject: Phase 2 of Tapping into Available Capacity in Existing Infrastructure to Create Water Supply and Water Quality Benefits White Paper

Dear Mr. Pedersen,

CH2M Hill Engineers, Inc. (CH2M), a fully owned subsidiary of Jacobs Engineering Group Inc., is pleased to submit this proposal to the Las Virgenes Municipal Water District (LVMWD) to undertake Phase 2 of Tapping into Available Capacity in Existing Infrastructure to Create Water Supply and Water Quality Benefits White Paper. We look forward to building upon the findings and next steps identified in Phase 1, completed in May 2018, to further explore the opportunity for controlled and strategic integration of Los Angeles County's existing stormwater and wastewater systems for regional water supply and quality benefits.

Development of this white paper is intended to be a collaborative effort between LVMWD along with other participating parties including Central Basin Municipal Water District, Los Angeles Sanitation and Environment, Los Angeles Department of Water and Power, Los Angeles County Sanitation Districts, Los Angeles County Department of Public Works, Main San Gabriel Basin Watermaster, and the Water Replenishment District of Southern California. We understand success of this study is dependent on a continued communication and coordination between LVMWD and CH2M as well as participating agencies.

For this study, we have assembled a highly-specialized technical and support services team that has worked in stormwater, wastewater, and water resources fields locally in Los Angeles County and on various water reuse projects. Our team has a comprehensive understanding of the purpose, need, and goals of the study. We offer our commitment and availability on this project to ensure timely, cost-effective project delivery. The CH2M team provides:

- A strong Principal-in-Charge, Rich Nagel, who will bring extensive experience and understanding of the region's water resources, and strong working knowledge and relationships with local agencies and stakeholders.
- The project manager of Phase 1, Amanda Heise, who has experience in Los Angeles County on stormwater and integrated water management projects.
- A strong, local core project team with technical expertise across multiple disciplines such as watershed hydrology and water quality, sewer collection systems, dry and wet weather flow analysis, and stormwater management.
- A strategic advisor, Jim Stahl, experienced in providing guidance and engineering solutions to water and wastewater agencies, municipal government and industrial clients across the country

# Item 7.E2 - Exhibit A

Page 2  
October 31, 2018

on the planning, public outreach, permitting, and implementation of cost-effective and environmentally sound wet infrastructure systems.

- Regulatory expertise provided Sam Unger and Mehranian of Cordoba Corporation, offering extensive experience in regulatory compliance under the California Regional Water Quality Control Board.

The Scope of Work for this study is included in Exhibit A. The work will be completed on a time and material basis. The total Not-To-Exceed limit for this effort is \$694,000. The work is estimated to begin in January 2019 and be completed within 12 months.

Thank you again for this opportunity. We look forward to working with you in this effort.

Regards,  
CH2M HILL Engineers, Inc.

*Amanda Heise*

Amanda Heise  
Project Manager



Tim Smith  
Vice President

CC: Rich Nagel/CH2M

## **Exhibit A**

### Scope of Work

## Study Impetus

Dry weather diversions (WRDs) and wet weather diversions (WWDs) provide highly-controlled means of diverting urban stormwater to a water reclamation plant (WRP). Two significant benefits include a new source of recycled water, and the possible reduction of discharged pollutants to receiving waters. Agencies have, in recent times, emphasized the separation of storm and wastewater systems, and it is important to emphasize that this is not a return to “combined sewers,” but rather the controlled introduction of dry weather urban runoff, and/or (typically) the first-flush storm flow into the wastewater collection system, but only where and when sufficient capacity exists within the collection system and the WRP.

Compliance with MS4 permits requires retention of stormwater from the 85<sup>th</sup> percentile, 24-hour storm event, or the volume established for the drainage area based on a Reasonable Assurance Analysis (RAA) conducted as part of a Watershed Management Plant (WMP) or Enhanced WMP (EWMP). Based on the site-specific conditions and size of the storm event, it may not be possible to capture and divert the entire storm event volume. In that case, a portion of the storm event flows can be captured which can contribute to MS4 compliance, but not necessarily satisfy the entire compliance requirement. An approach similar to the RAA, in consultation with the Regional Board, would need to be applied to quantify the water quality benefit that would be provided by the WWD. In any case, diversion projects can help manage and divert the “first flush” of storm events to reduce the highest concentration of pollutants that originate from urban/pervious surfaces and provide reductions in pollutant loadings that discharge to receiving waterbodies.

WWDs present a unique opportunity for compliance with Bacteria TMDLs. Many Bacteria TMDLs in the Los Angeles Region define wet weather as the day of the rain event that experience 0.1 inch of rain or more and the three following days. It has been observed at several DWDs that runoff flows rapidly decline after a storm event. If the stormwater runoff in the three days after a storm event can be diverted to a WWD, then the diversion rate would be typical of dry weather conditions so there would likely not be capacity concerns, but it would contribute toward wet weather compliance with the requirements of Bacteria TMDLs. Diversion of these lower flows would likely require only a change of the operational strategy of DWDs.

An earlier version of scope document (dated August 28, 2018), was circulated to stakeholders for discussion and input. Thoughtful comments were received and have been incorporated into the scope of work presented herein. The received comments cannot be fully addressed within a brief scope of work, so, for clarity and completeness, the comments provided, and our responses, are appended herein as Exhibit 1. Exhibit 1 is not part of the scope of work explicitly but is included so that stakeholders can understand how their comments have been considered and incorporated. The comments and responses can be further refined during the study discussions and workshops.

## Objectives and Approach

### Objectives

CH2M Hill Engineers Inc. (CH2M), a fully owned subsidiary of Jacobs Engineering Group Inc., proposes to explore leveraging available capacity in the WRPs for treating urban runoff/stormwater to generate new water supply (i.e., recycled water) while achieving water quality benefits for the receiving waters. This approach may offer another important Best Management Practice (BMP) tool for MS4 permit compliance, particularly as a pathway offering benefits for wet weather compliance. This potential compliance tool exemplifies the benefits of integrated regional water management practices by enhancing both stormwater quality and water supply, while efficiently utilizing existing infrastructure. The study area<sup>1</sup> will encompass the sewershed of the 12 water reclamation plants (WRPs) indicated in Figure 1 (appended).

Through an analysis of existing DWDs, CH2M will produce a framework to guide the implementation of DWDs and WWDs by:

- Incorporating knowledge gained from the existing DWDs to guide the selection of locations suitable for dry and wet weather diversions to provide water supply and water quality benefits.
- Conducting case studies of four existing DWDs to determine the feasibility of converting those to WWDs.
- Developing a framework for conversion of DWDs to WWDs to allow the permissive connection of the stormwater system to the wastewater system through controlled diversions either directly to a WRP or via the wastewater collection system.

The following are also considerations within the study:

- Water supply benefits from the diversion of stormwater will vary according to the storm size, recycled water production and storage capacities, and end uses. For example, during large storm events, the demand for recycled water may be low due to reduced irrigation demand and potentially full utilization of spreading grounds with storm water. The study will not be addressing the production, storage and delivery of the recycled water, but will acknowledge the variability of this water supply benefit.
- The study will provide a discussion on the generation of water supply and water quality benefits (although the quantification of the water supply and water quality benefits is beyond the scope of this study).
- Diversion locations immediately upstream of the WRPs are preferable because their effect on the plant flows is immediate, and this is a benefit for plant operations control.
- Future design of dry and wet weather diversion structures will need to consider avoiding impacts to the Los Angeles County Flood Control District (LACFCD) facility operations, preventing adverse impacts to flood risk, and protecting public safety.
- Climate change can impact rainfall intensity and frequency which may have implications on diversion volume. In this study, climate change impacts will be discussed qualitatively.
- Water supply and water quality benefits provided by diversions will be site-specific and will depend on several factors. These include size and capacity of the diversions, upstream sources of flow and pollutants, capacities in the adjacent sewer systems to accept runoff, discharge

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<sup>1</sup> See also the Study Area definition in the Key Terminology section beginning on page 4.

locations, space available for creating storage, and opportunities and constraints, both physical and regulatory.

## Approach

CH2M will use existing data (to be requested from stakeholders or common government data sources such as NOAA), as the foundation for the analytical work. Because of the very large volume of existing data within the stakeholder geographic area and the various data formats and structures, CH2M will request and utilize detailed data for focused areas of the study to keep on-track with scope, schedule and budget. CH2M will, however, request metadata (e.g. the extent, type, format, and quality of data) to understand the scope of all available data for the purpose of documentation.

The following activities are planned:

- **Stakeholder Coordination** – this will be conducted throughout the project to maintain a common understanding of the project progress. To facilitate ongoing review and input, 12 technical memoranda (TM) will be produced as the study progresses to communicate interim findings and seek stakeholder feedback; a final report will summarize and consolidate the findings.
- **Data Collection** – data (and metadata) will be requested from stakeholders, gathered, and compiled. The type of data will be specified, but is expected to include locations, data type, sources, formats, quality, and data gaps. CH2M will provide a summary of the data sources and type of information, and will serve as a data repository and reference for subsequent studies of dry and wet weather diversions.
- **Inventory and Efficacy Analysis** - existing DWDs will be assessed (location, capacity, type, and constraints) to understand their potential additional dry weather flow diversion, and the potential for conversion to WWDs. This will consider the capacity of the DWD and receiving wastewater system.
- **Identify DWDs for Focused Study** - in consultation with the stakeholders, select up to four DWDs and conduct case studies for potential conversion to WWDs.
- **Cistern Diversion Investigation** - Conduct case studies of existing cisterns with direct diversion to the sanitary system.
- **Path Forward Framework** - Develop a framework for MS4 permittees to plan, execute, and assess steps to obtain approvals from the involved agencies for planning and building new diversions and/or converting DWDs to WWDs
- **TM and Report Preparation** - Document the findings of the study in a series of TMs, and a draft and final study report.

Table 1 lists the proposed tasks and primary deliverables of this study, and Figure 2 (appended) shows the relationships between the tasks and key activities:

**Table 1 – Study Tasks and Deliverables**

Task	Task Description	TM Title
1	Project Chartering	
2	Collect, Review and Summarize Data	TM No. 1 – Inventory of Dry Weather Data TM No. 2 – Inventory of Wet Weather Data TM No. 3 – Characterization of Dry and Wet Weather Flows TM No. 4 – Inventory of DWDs TM No. 5 – DWD Efficacy Analysis



# Item 7.E2 - Exhibit A

3	Identification of Potential DWDs for Conversion to WWDs	TM No. 6 – Identification of DWDs for Potential Conversion to WWDs
4	Case Studies of Selected Diversions	TM No. 7 – Feasibility Analysis of Selected DWDs for Conversion to WWDs
5	Develop Overall Conceptual Plan to Divert Remaining Dry Weather Flow	TM No. 8 – Conceptual Plan to Divert Remaining Dry Weather Flows in the Study Area
6	Case Study of Cisterns with Direct Diversion to Sanitary Sewer	TM No. 9 – Case Studies of Cisterns with Direct Diversion to Sanitary Sewer
7	Regulatory Considerations	TM No. 10 – Regulatory Considerations
8	Framework for MS4 Permittees for Conversion of DWDs and WWDs	TM No. 11 – Path Forward Framework of Conversion of DWDs to WWDs for MS4 Permittees
9	Conclusions and Recommendations	TM No. 12 – Conclusions and Recommendations
10	Final Report	
11	Project Management and Meetings	

## Key Terminology

**Dry Weather Diversion (DWD):** Dry weather diversions (also commonly referred to as low flow diversions) are diversions of non-stormwater flows from the storm drain system into the sanitary sewer system for treatment at wastewater treatment facilities. In LACSD’s policy for their service area, dry weather diversions typically include flows up to the first 0.1 inch of rainfall and they are not allowed to resume operation until 24 hours after cessation of rainfall.

**Wet Weather Diversion (WWD):** Wet weather diversions are diversions of both non-stormwater and stormwater flows from the storm drain system into the sanitary sewer system for treatment at wastewater treatment facilities. For this project, the goal will be to capture and divert as much storm volume as possible to help achieve the MS4 compliance. However, the captured and diverted storm runoff will be site-specific and will depend on several factors, such as the size and type of diversion structure, capacity of the sewer system, and storage opportunities.

**Capture Volume:** Capture volume is the volume that can be captured by the diversion structure. Capture volumes will be project-specific, and may be able to divert a portion of, or more than the 85<sup>th</sup> percentile, 24-hour MS4 permit compliance storm event.

**First Flush** – In this context, the first flush is described as the initial volume of runoff from a rain event that is generated after a dry period. It is believed that the runoff generated in the beginning of a rainfall event is the most contaminated (first flush) and contains contaminants from washing out contaminant buildup from impervious surfaces. The concentration of pollutants in the first flush varies by the size of the storm event and by pollutant.

**Municipal Separate Storm Sewer System (MS4) Permit:** Permits are issued under the National Pollutant Discharge Elimination System (NPDES) Program and administered within Los Angeles County by the Los Angeles Regional Water Quality Control Board (LARWQCB). Permits issued for Los Angeles County include Order No. R4-2012-0175, as amended, *Waste Discharge Requirements for MS4 Discharges within the Coastal Watersheds of Los Angeles County, except those Discharges Originating from the City of Long Beach MS4* and Order No. R4-2014-0024, as amended, *Waste Discharge Requirements for MS4 Discharges from the City of Long Beach*.

**Study Period:** Data collected, reviewed, and summarized will be limited to calendar years 2002 through 2017.

# Item 7.E2 - Exhibit A

**Study Area:** The study area for the project is limited to the sewershed of the 12 water reclamation plants (WRPs) as identified in Table 2 (and Figure 1). For the purposes of this study, the WRFs include wastewater treatment plants that currently deliver recycled water as well as those with potential to produce recycled water in the future.

Table 2. Sewersheds Included in the Study Area

	Owning Agency	Facility	Rated Capacity (MGD)	Rated Capacity (AFY)
<b><i>Sewersheds included in the study area:</i></b>				
1	LACSD	Joint WPCP	400	448,058
2	LACSD	Long Beach WRP	25	28,004
3	LACSD	Los Coyotes WRP	37.5	42,005
4	LACSD	Pomona WRP	15	16,802
5	LACSD	San Jose Creek WRP	100	112,014
6	LACSD	Whittier Narrows WRP	15	16,802
7	LASAN	Donald C. Tillman WRP	80	89,612
8	LASAN	Hyperion WRP	450	504,065
9	LASAN	LA-Glendale WRP	20	22,403
10	LASAN	Terminal Island WRP	30	33,604
11	Burbank	Burbank WRP	11	12,322
12	LVMWD	Tapia WRP	12	13,442
<b><i>Sewersheds not included in the study area:</i></b>				
1	LACSD	La Cañada WRP	0.2	224
2	LACSD	Lancaster WRP	18	20,163
3	LACSD	Palmdale WRP	12	13,442
4	LACSD	Saugus WRP	6.5	7,281
5	LACSD	Valencia WRP	21.6	24,195
6	LACDPW	Lake Hughes Community WTF	0.09	104
7	LACDPW	Malibu Mesa WRP	0.2	224
8	LACDPW	Malibu WPCP	0.05	57
9	LACDPW	Trancas WPCP	0.08	84

Abbreviations:

- AFY = acre-feet per year
- LACDPW = Los Angeles County Department of Public Works
- LACSD = Los Angeles County Sanitation Districts
- LASAN = City of Los Angeles, Bureau of Sanitation
- LVMWD = Las Virgenes Municipal Water District
- MGD = million gallons per day
- WPCP = water pollution control plant
- WRP = water reclamation plant
- WRF = water reclamation facility
- WTF = water treatment facility

## Scope of Work

### Task 1: Project Chartering

Project chartering comprises the project kick-off meeting and stakeholder workshop. Through these sessions the project team will clarify the objectives, scope and schedule for the project, and identify the stakeholder representatives that will assist with various tasks and information requests.

The kick-off meeting will introduce the project team members, and clarify the study objectives, scope, and schedule. The meeting will also identify a date and make a plan for the stakeholder meeting. A meeting agenda will be circulated prior to the meeting.

CH2M will coordinate with LVMWD to conduct the stakeholder workshop. The purpose is to review project scope and schedule and to identify stakeholder involvement throughout the project. A workshop agenda will be circulated prior to the workshop.

The initial stakeholders participating in this project include:

- LVMWD
- Central Basin Municipal Water District (CBMWD)
- City of Los Angeles, Los Angeles Sanitation (LASAN)
- City of Los Angeles, Department of Water and Power (LADWP)
- Sanitation Districts of Los Angeles County (LACSD)
- Metropolitan Water District of Southern California (MWD)
- Water Replenishment District of Southern California (WRD)
- Los Angeles County Department of Public Works/Los Angeles County Flood Control District (LACFCD)
- Main San Gabriel Basin Watermaster

#### **Deliverables:**

- Meeting agenda and notes (action items and key decisions in bulleted form) from the kick-off meeting and the stakeholder workshop, both draft and final.

#### **Assumptions:**

- The kick-off meeting will be a conference call, lasting up to two hours, and will be attended in-person by three project team members from CH2M.
- The stakeholder workshop will be held at the Sanitation Districts of Los Angeles County office in Whittier, California with a duration of four hours. Up to three CH2M staff will attend in person.

## Task 2: Collect, Review and Summarize Data

The purpose of this task is to gather and compile existing information related to dry and wet weather flows within the study area from 2002 through 2017. Dry and wet weather data gathering and compilation are separated into independent subtasks to provide smaller and focused TMs for stakeholder review, thereby providing helpful guidance to the team as work proceeds. The summarized data will be used in the focused studies described in Task 3, but are expected to be helpful in screening for future DWD and WWD projects.

CH2M will lead the coordination efforts with the project team members, and LVMWD will coordinate with the stakeholders. The summary will also provide information on any data gaps and recommendations to fill in the data gaps if needed for the subsequent tasks.

### Subtask 2.1: Collect and Review Dry Weather Data

CH2M will request data related to dry weather storm drain flows and sanitary sewer capacity from 2002 through 2017. CH2M will prepare the data request and provide to LVMWD to submit to stakeholders and the LARWQCB. The received data will be consolidated and documented in TM 1, and any data gaps will be identified.

The data request will include, but not be limited to, the following:

#### Diversion/BMP Data

- DWD data or other diversion information, including infrastructure location, as-built plans, diversion capacity and configuration, flow data, water quality data, subwatershed drainage area and delineated boundary, pre-treatment mechanisms, and possibly available information.
- DWD planning documents, reports, and permits.
- Operation and maintenance data on existing DWDs, and capital, operation, and maintenance costs.
- Stormwater management facility details, including detention facilities, cisterns, and bioretention facilities (within the tributary area/watersheds of existing DWD) which are potential candidates for diverting flows to the wastewater collection system.

#### Storm Drain Data

- Storm drain flow gauging data for the watersheds of DWDs.
- Monitoring years and duration of measurements, e.g., flows measured during studies for specific periods vs. continuous flow monitoring systems.

#### Wastewater Collection System Data

- Wastewater collection system GIS data.
- Flow data from 12 WRPs (as identified in Table 2).
- Dry weather sanitary sewer and storm drain capacities where DWDs are implemented, information on related monitoring programs.

#### Watershed-level Data

- Watershed management planning documents including the Los Angeles Basin Conservation Study and the Greater Los Angeles Water Collaborative reports, Integrated Regional Watershed Management Plans (IRWMPs) and Enhanced Watershed Management Programs (EWMPs).
- Sewer System Management Plans (SSMPs).

## **Deliverables:**

- TM No. 1 – Inventory of Dry Weather Data (draft and final).

## **Assumptions:**

- The TM will be approximately 10 pages.
- Stakeholders will provide data in a readily-usable electronic format, within three weeks of the data request. Acceptable data formats will be discussed.
- Because the quantity, quality and completeness of the received data are not currently known, CH2M has assumed 100 hours for data consolidation and review of the dry weather data task.
- Any data received after the compilation and summary will not be included in TM No. 1.

## **Subtask 2.2: Collect and Review Wet Weather Data**

CH2M will request data related to wet weather data from 2002 through 2017. CH2M will prepare the data request and provide to LVMWD to submit to stakeholders and the LARWQCB. The received data will be consolidated and documented in TM 2, and any data gaps will be identified.

The information related to wet weather will include, but not be limited to, the following:

### Rainfall Data

- Rain gage data in the watersheds where the DWDs exists. NOAA or Los Angeles County rain gage data will be collected.

### Storm Drain Data

- Wet weather flow data
- Information on the locations and duration(s) of measured wet weather flows in the study area.
- Water quality data, specifically for storm drains where DWDs exist.

### Wastewater Collection System Data

- Available wet-weather flow data (may be included in the received data from Subtask 2.1).
- Historical hourly, or more frequent, influent sanitary sewer flows to WRPs 24 hours prior to, during and up to 7 days after rainfall events.
- Inventory of telemetry or smart sensor systems of the sanitary sewer system.
- Locations and dates of sanitary sewer overflows caused by rainfall events, and locations of localized flooding.
- Significant Inflow and infiltration studies during wet weather events.

### Watershed-level Data

- Integrated Watershed Management Plans (IRWMPs) and Enhanced Watershed Management Programs (EWMPs).
- GIS files of delineated drainage areas tributary to existing DWDs, and other GIS watershed data, such as land use, etc. (to be determined).

## **Deliverables:**

- TM No. 2 – Inventory of Wet Weather Data (draft and final).

## **Assumptions:**

- The TM will be approximately 10 pages.

- Stakeholders will provide data in a readily-usable electronic format, within three weeks of the data request. Acceptable data formats will be discussed.
- Because the quantity, quality and completeness of the received data are not currently known, CH2M has assumed 100 hours of time for data consolidation and review of the wet weather data.
- Rainfall data will be limited to the rain gages in the study area, and the summary will be focused on the rainfall gages where DWDs exist, and those used in the TMDL development in the watersheds
- Any data received after the compilation and summary will not be included in TM No. 2.

## Subtask 2.3: Characterize and Quantify Dry Weather and Wet Weather Data

Quantification and characterization of flows is an important to the understanding of flows tributary to existing DWDs, water quality, capacity of the existing infrastructure (both diversion structures and sanitary systems), and the potential for these systems to accommodate flows beyond dry weather flows.

CH2M will characterize dry and wet weather flows handled by existing DWDs. Based on the information received, characterization and quantification of flows will include:

### Storm Drain System

- Storm drain flows originating from the tributary areas of the DWDs.
- Dry weather flows will be estimated at peak if a diversion does not have storage. The average flow over the allowable diversion hours will be provided if a diversion includes storage.
- Information on water quality impairments for parameters of concern, e.g., metals, nutrients, and bacteria, and other constituents for which TMDLs have been developed within the subwatersheds where the DWDs are located.

### Wastewater Collection System

- Conveyance capacity of the downstream collection system from the location of the diversion.
- Summaries of seasonal average, peak flows, and available capacities at the WRPs will be developed.
  - For diversions further upstream in the sewer system, the analysis will focus on the available capacity after rainfall has subsided (e.g., dry-weather peak capacity and the capacity available during off-peak hours) and the time between the end of rainfall and return to baseflow. These data can be used to determine the draw down rate for stormwater storage.
  - Potential constraints for utilizing existing infrastructure/system for the wet weather flows.
  - Flows currently captured by DWDs and additional potential to capture dry weather flows.

### **Deliverable:**

- TM No. 3 – Characterization of Dry and Wet Weather Flows (draft and final).

### **Assumptions:**

- The TM will be approximately 10 pages.
- No monitoring or modeling is scoped under this task.
- Wastewater system capacity data will be provided by the stakeholders.

## Subtask 2.4: Prepare Inventory of DWDs

An inventory of the received DWD data will be prepared. The inventory and summary may include the following (depending upon data gathered under previous subtasks):

- DWD location, receiving waterbody name where drainage area was discharged prior to the DWD; DWD owner, capacity, storage, jurisdiction, land use, and year constructed.
- Watershed tributary drainage area that discharges to DWD, and related hydrology data, including but not limited to flows, and land use types contributing to the runoff.
- Any pre-treatment system and related information, e.g., type of maintenance needed, frequency of maintenance, agency responsible.
- Map of the DWDs, including tributary drainage areas if the GIS files of the drainage areas are available.
- DWD facility/structure type, DWD capital and operational costs and requirements, and responsible agency.
- lessons learned from the performance of existing DWDs, challenges, and successes of using DWDs as a tool for stormwater management.

### Deliverable:

- TM No. 4 – Inventory of DWDs (draft and final).

### Assumptions:

- The TM will be approximately 10 pages.
- No data analysis is scoped under this task.

## Subtask 2.5: Determine Efficacy of Existing DWDs

Existing DWDs will be assessed to evaluate their potential to accommodate additional dry weather flows. The screening-level assessment may include:

- Quantity of flow diverted by each existing DWD, and whether a DWD also functions as a WWD.
- Adopted and planned TMDLs in the watershed where DWD is located.
- Summary of variations in flows for subwatersheds that are diverted to the DWDs.
- Summary of pollutant loading in the subwatersheds diverted to DWDs.
- Land use.
- Collection system capacities.

### Deliverable:

- TM No. 5 – DWD Efficacy Analysis (draft and final).

### Assumptions:

- The TM will be approximately 10 pages.
- Assessments will be based on received data from earlier subtasks.

## Task 3: Identification of Potential DWDs for Conversion to WWDs

Based on the data compiled in Task 2, analysis will be conducted to understand if the existing DWDs and the connected wastewater collection system have capacity for conversion to WWDs. CH2M will prepare a list of DWDs that have the potential for conversion to WWDs. Out of that list up to four DWDs will be selected for conducting a preliminary feasibility analysis.

### Subtask 3.1: Select DWDs for Conducting Preliminary Feasibility Analysis

Up to four existing DWDs will be selected and evaluated for potential conversion to WWDs. The selection process will incorporate available data for the diversion as identified in Task 2, and also input from stakeholders.

The following are expected to be assessed based on received data:

- Temporal/seasonal variations in both dry and wet weather flows generated in the tributary areas of the DWDs.
- Design capacity of the diversion system.
- Ability of the existing DWD system to accommodate additional flows.
- Opportunity for physical expansion, e.g., availability of land and potential public safety impacts.
- Capability of the sanitary sewers in the area to handle additional flows.
- Capability of downstream WRP(s) to handle additional flows and the timing of those flows.

#### Deliverable:

- TM No. 6 – Identification of DWDs for Potential Conversion to WWDs (draft and final).

#### Assumptions:

- The TM will be approximately 10 pages.
- Assessments will be based on received data from earlier subtasks.

## Task 4: Case Studies of Selected Diversions

CH2M will conduct a preliminary feasibility analysis of the four selected DWDs from Task 3 to understand the feasibility of converting those DWDs to WWDs.

### Subtask 4.1: Perform Rainfall and Wet Weather Flow Analysis

Existing Intensity-Duration-Frequency (IDF) curves will be used to estimate the flows generated from the watersheds/catchment areas of each selected DWD. IDF curves will be used in conjunction with runoff estimation formulae; e.g. the Rational Method, to predict the peak runoff amounts from a particular watershed. Generated flows/volumes will be routed (using a simplified static accumulation approach) to each selected DWD.

#### Deliverables:

- No separate deliverable will be submitted under this task; results will be incorporated into TM No. 7 – Feasibility Analysis of Selected DWDs for Conversion to WWDs.

#### Assumptions:

- Existing IDF curves will be taken from NOAA, Los Angeles County Hydrology Manual, or other agreed-upon source.



## Subtask 4.2: Evaluation of Hydrologic and Water Quality Modeling to Quantify Flow and Pollutant Reduction

For each selected DWD watershed, CH2M will use the existing Watershed Management Modeling System (WMMS) developed by the Los Angeles County Flood Control District to develop water balances, and estimate (quantify) water quality pollutant reduction benefits.

The following activities are expected to be performed for each of the four selected DWDs:

- Review approaches used in the TMDLs to understand the pollutants of concern, and review EWMPs for quantification of flows in the subwatersheds where the DWD exists.
- Assess the feasibility of using analysis developed in the study area conducted by Los Angeles County Department of Public Works and LACFCD and Bureau of Reclamation for understanding region's water supply and demand, impacts from projected population growth and climate change in the watersheds of the Los Angeles region.
- Discussion and summary of other potential approaches, such as the Los Angeles County Department of Public Works Hydrology Manual, the Rational Method based on the area, and modeling tools.

### Deliverables:

- No separate deliverable will be submitted under this task; results will be incorporated into TM No. 7 – Feasibility Analysis of Selected DWDs for Conversion to WWDs.

### Assumptions:

- It is assumed that the WMMS model has been calibrated for flows and water quality for the Los Angeles Basin watersheds (specifically the four identified in Task 2) and will be readily available to apply for this task without modification by CH2M.
- Analysis will be based upon existing collected data.

## Subtask 4.3: Evaluate Sewer Capacity to Convey Stormwater Flows

CH2M will evaluate up to four priority storm drain locations for the potential for new storm water flow diversions by comparing available sewer capacity to existing hydrologic conditions. The results of Tasks 3 will provide the basis for this evaluation. The following analysis will be conducted:

- 1) Estimate the capacity of existing sewers at the specific target locations to convey flows from up to the targeted capture volume using the information gathered in Task 2.5. This analysis will consider the additive effects of multiple diversions (using a simplified static accumulation of flows so that downstream sewer reaches are not loaded beyond the maximum wet weather flow constraint identified by the sewerage agency<sup>2</sup>.
- 2) Estimate the amount of stormwater that could be captured and treated at each target location.
- 3) If storage at a DWD for first flush volume is not an option, and water supply is an important goal, storage upstream in the watershed may be considered. The captured stormwater can then be released back into the storm drain to be conveyed to a diversion when capacity is available. A balance needs to be found between available land, capturing enough water for MS4 compliance, water supply benefits, and available conveyance and treatment capacity.

### Deliverables:

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<sup>2</sup> The Sanitation Districts and the City of Los Angeles use a standard of 75% d/D (or a flow depth no greater than 75% of the diameter of the pipe).

- No separate deliverable will be submitted under this task; results will be incorporated into TM No. 7 – Feasibility Analysis of Selected DWDs for Conversion to WWDs.

**Assumptions:**

- Analysis will be based upon existing collected data.

**Subtask 4.4: Interview WRP Operators – Wet Weather Plant Performance**

Interviews with WRP managers/operators will be conducted to understand plant wet weather performance and operation. Of interest are WRP capacities, hydraulic and process constraints, and concerns that may affect the flow diversion potential within the WRP sewershed.

A questionnaire will be developed and sent to WRP managers/operators (via the appropriate stakeholder) to gather information, and up to five in-person meetings will be conducted.

**Deliverables:**

- WRP manager/operator questionnaire.
- Interview agendas and meeting notes (draft and final)

**Assumptions:**

- Results will be incorporated into TM No. 7 – Feasibility Analysis of Selected DWDs for Conversion to WWDs.
- Stakeholders will facilitate the WRP questionnaires and feedback, and assist with coordination of the in-person on-site meetings.
- Data and information by WRP operators will be available prior to the in-person meetings.
- Up to five meetings will be held at individual WRPs; each meeting will be two hours in duration, and will be attended by up to two CH2M staff.

**Subtask 4.5: Evaluate Feasibility of Wet Weather Flow Diversion**

The purpose of this analysis is to develop a range of flows for use in evaluating the potential for new storm water flow diversions. For the four DWDs, and using data collected in prior tasks, CH2M will develop (depending on available data) the annual storm, 85<sup>th</sup> percentile storm, 2-year, 5-year, and 10-year storms using a simplified approach to pro-rate the storms based on annual rainfall values based on the LA County Hydrology Manual. The results will be compared against available sewer capacities, and other infrastructure demands for storage and conveyance.

Based on the information developed in the previous tasks, CH2M will evaluate the need for storage to facilitate the conversion to a WWD.

**Deliverable:**

- TM No. 7 – Feasibility Analysis of Selected DWDs for Conversion to WWDs (draft and final).

**Assumptions:**

- The TM will be approximately 10 pages.
- No new hydrologic analysis will be performed under this task.
- Analysis will use data collected in previous tasks.

## Task 5: Develop Conceptual Plan to Divert Remaining Dry Weather Flow

The conceptual plan will be developed to divert remaining dry weather flows in the study area to WRPs. It is assumed that the overall conceptual plan will be applicable to all the treatment plants in the study area.

### Deliverable:

- TM No. 8 –Conceptual Plan to Divert Remaining Dry Weather Flows in Study Area (draft and final).

### Assumptions:

- The TM will be approximately 10 pages.
- Analysis will be dependent on the available data in the storm drain system and sewersheds.
- No monitoring and modeling is scoped under this task.

## Task 6: Case Study of Cisterns with Direct Diversion to Sanitary Sewer

CH2M understands that distributed BMPs, such as cisterns, are being implemented/planned within the jurisdictions of the stakeholders. The related study conducted by the Greater Los Angeles Water Collaborative, a partnership between LADWP, LASAN, and LACFCD, will be reviewed to understand the findings of the study. Two examples of cisterns in the stakeholder jurisdictions will be considered for diversion of wet weather flows from cisterns to the wastewater collection system.

### Deliverable:

- TM No. 9 – Case Studies of Cisterns with Direct Diversion to Sanitary Sewer (draft and final).

### Assumptions:

- The TM will be approximately 10 pages.
- Flows generated from cisterns are collected at one central location and there are existing DWDs where flows from the cisterns can be diverted.
- Only data collected in previous tasks will be used in this task.

## Task 7: Regulatory Considerations

Existing relevant regulations relating to storm drain diversions to the sanitary system will be summarized and examined, and opportunities for regulatory flexibility identified.

### Subtask 7.1: High Level Review of Relevant Policies and Regulations

CH2M will summarize the existing relevant regulations relating to storm drain diversions to the sanitary sewer system. A high-level review of regulatory requirements and policies will be conducted.

Key activities include:

- Review of WRP discharge requirements for storm water, e.g. Public Health/end use requirements for treated storm water (Title 22), and combined sewer overflow (CSO)/sanitary sewer overflow (SSO) regulations.
- Review of existing NPDES permits, including evaluation and summary of existing MS4 requirements.
- Conduct a meeting with the project stakeholders to understand their NPDES compliance requirements regarding post-construction stormwater treatment objectives.
- Review of relevant TMDLs documents and EWMP treatment objectives goals.
- Review of SSMPs.

## **Deliverables:**

- Stakeholder meeting agenda and point-form meeting notes (draft and final).

## **Assumptions:**

- Results of this subtask will be incorporated into TM No. 10 – Regulatory Considerations.
- The review will not be specific to any diversion, but will be an overview of the existing relevant regulations relating to storm drain diversions to the sanitary system.
- The stakeholder meeting will be held in Los Angeles, will be up to four hours in duration, and will be attended by up to three CH2M staff.
- Analysis will be based upon existing collected data.

## **Subtask 7.2: Regulatory Considerations and Regional Board Engagement**

Through a series of additional meetings/workshops, CH2M will develop a process to engage Los Angeles Regional Water Quality Control Board (LARWQCB) during the planning phases of this project. Benefits are expected to include early identification of constraints and concerns, unified approaches to resolving issues to help gain acceptance of the approach. LARWQCB input regarding the existing DWDs will be of great value to design a robust approach and a solid framework for MS4 permittees to adopt to avoid any major issues.

CH2M will lead the discussions with LARWQCB and stakeholders. Up to three in-person meetings and two workshops with LARWQCB are included in this scope.

## **Deliverables:**

- Meeting/workshop agendas and point-form meeting notes (draft and final).
- TM No. 10 – Regulatory Considerations (draft and final)

## **Assumptions:**

- Up to three in-person meetings will be held in Los Angeles; each meeting will be up to two hours in duration, and will be attended by up to three CH2M staff.
- Up to two workshops will be held in Los Angeles; each workshop will be up to three hours in duration, and will be attended by up to three CH2M staff.
- The TM will be approximately 10 pages.

## **Task 8: Framework for MS4 Permittees for Conversion of DWDs to WWDs**

CH2M will develop a framework for MS4 permittees to guide conversion of an existing DWD to a WWD, or development of a new WWD. The framework will include an approach to plan, execute, and assess steps to start a dialogue and obtain approvals from the agencies involved, such as infrastructure owners, treatment plant operators and regulators.

The framework will include a checklist of items to obtain approvals for the process. It will include, but not limited to the following:

- Appropriateness/feasibility of a WWD.
- Geographical information and project location
  - Preferable evaluation for downstream solutions to gain maximum benefit.
  - Priority (e.g., end of pipe, river diversions, or large municipal agencies downstream).
  - Infrastructure demands (e.g., pump stations, right of way, plumbing, detention storage).

- Upland solutions (e.g., local diversions, infrastructure demands (flow splitter designs, storm drain connections, upsizing sewers)).
- Design elements.
- Planning and steps to obtain approvals from LARWQCB and infrastructure owners (e.g. LACFCD Flood Permit), CEQA, USACE 401, USACE 404, CA DFW, and CA Coastal Commission).
- Compliance-based criteria.
  - Municipal
    - Phase 1 MS4 permit compliance -- cities, LACFCD, Port of Los Angeles.
    - Small MS4 permit compliance -- traditional and non-traditional MS4s, e.g., LAX, UCLA, CSULA, etc.
  - Industrial
    - Potential to connect to industrial storm water facilities.
    - Incentives.

Other potential topics may include:

- Operational controls and control interface
- Real-time monitoring.
- Sanitary sewer overflows.
- Peak flow capacity.
- Margin of safety.

**Deliverable:**

- TM No. 11 – Path Forward Framework of Conversion of DWDs to WWDs for MS4 Permittees (draft and final).

**Assumptions:**

- The TM will be approximately 10 pages.
- The framework will not be specific to a location, but will be generalized with the steps to follow for conversion of DWDs to WWDs.
- Only data collected in previous tasks will be used in this task.
- Deliverables (e.g., TMs) will be provided in electronic format only.

## Task 9: Conclusions and Recommendations

Produce a synthesized set of conclusions and recommendations based on the 11 TMs.

**Deliverable:**

- TM No. 12 – Conclusions and Recommendations (draft and final).

**Assumptions:**

- The TM will be a maximum of 5 pages.

## Task 10: Draft and Final Report

CH2M will prepare a draft report to present the work completed in Tasks 1 through 9. The draft report will consist of a clear and concise Summary Report that communicates the major elements of each TM, all of which will be appended.

### **Deliverables:**

- Project report (draft and final).

### **Assumptions:**

- The final report will be a approximately 10 pages, excluding the appended TMs.
- Stakeholders review the report and provide comments after a 4-week period.
- Comments on the draft report are assumed to be minimal as the deliverables under tasks 1 through 9 would have been previously reviewed by the stakeholders and the draft report is a compilation of those deliverables with prior comments addressed.

## Task 11: Project Management and Meetings

CH2M will perform project management activities which will include project setup, communications with the project manager at LVMWD, attending project meetings, monthly progress conference calls, internal quality control reviews, and preparation of monthly progress reports and invoices. This task also includes communications with LVMWD to plan for the workshops, communication with the LARWQCB.

Four, in-person, quarterly meetings of the project team with LVMWD are assumed under this task. These meetings will cover project progress, next steps, project schedule and budget, stakeholder process, and strategy. CH2M will conduct up to an additional two conference calls per month with LVMWD to review progress and discuss any issues or concerns.

### **Assumptions:**

- Eight monthly progress meetings will be conducted by phone or Skype, and will be attended by up to three CH2M staff; meetings will be 1 hour in duration. An agenda, and draft and final meeting notes will be provided. Four quarterly meetings will double as progress meetings.
- Four quarterly meetings will be attended in person by up to three CH2M staff; meetings will be two hours in duration, and held at in Los Angeles. An agenda, and draft and final meeting notes will be provided.
- Up to 24 progress conference calls will be attended by up to three CH2M staff, and each call will be one hour in duration. Final call notes will be provided for each call.
- Meeting notes will be point-form, and will include decisions and action items.

### **General Project Assumptions:**

- The CH2M Project Manager will work directly with the project stakeholders to receive comments on the draft TMs, and will agree on an appropriate stakeholder review period for each TM so that project schedule is not adversely affected. Comments will be consolidated and reconciled by CH2M and reviewed with LVMWD prior to incorporation into the final document. CH2M will revise draft TMs based on the comments received and submit to LVMWD and stakeholders. Up to 10 hours of time per TM, and for the final report, have been assumed for resolution of stakeholder comments.
- All received data will be available in usable electronic format. Data extraction from CAD files, GIS maps, or paper files will not be performed by CH2M.

- After discussion with LVMWD on the required elements for the project, CH2M and LVMWD will determine whether any additional scope and budget will be needed to fill in identified major data gaps, and/or perform the analysis.

**Deliverables:**

- Periodic meeting agendas and notes (final).
- Monthly progress reports and invoices.

## Budget

This fee of this project will be on a time-and-materials basis for the scope of work described herein. The estimated budget to complete Tasks 1 through 11 is \$694,000. Table 3 contains a breakdown by each of the 11 tasks.

**Table 3 – Cost by Task**

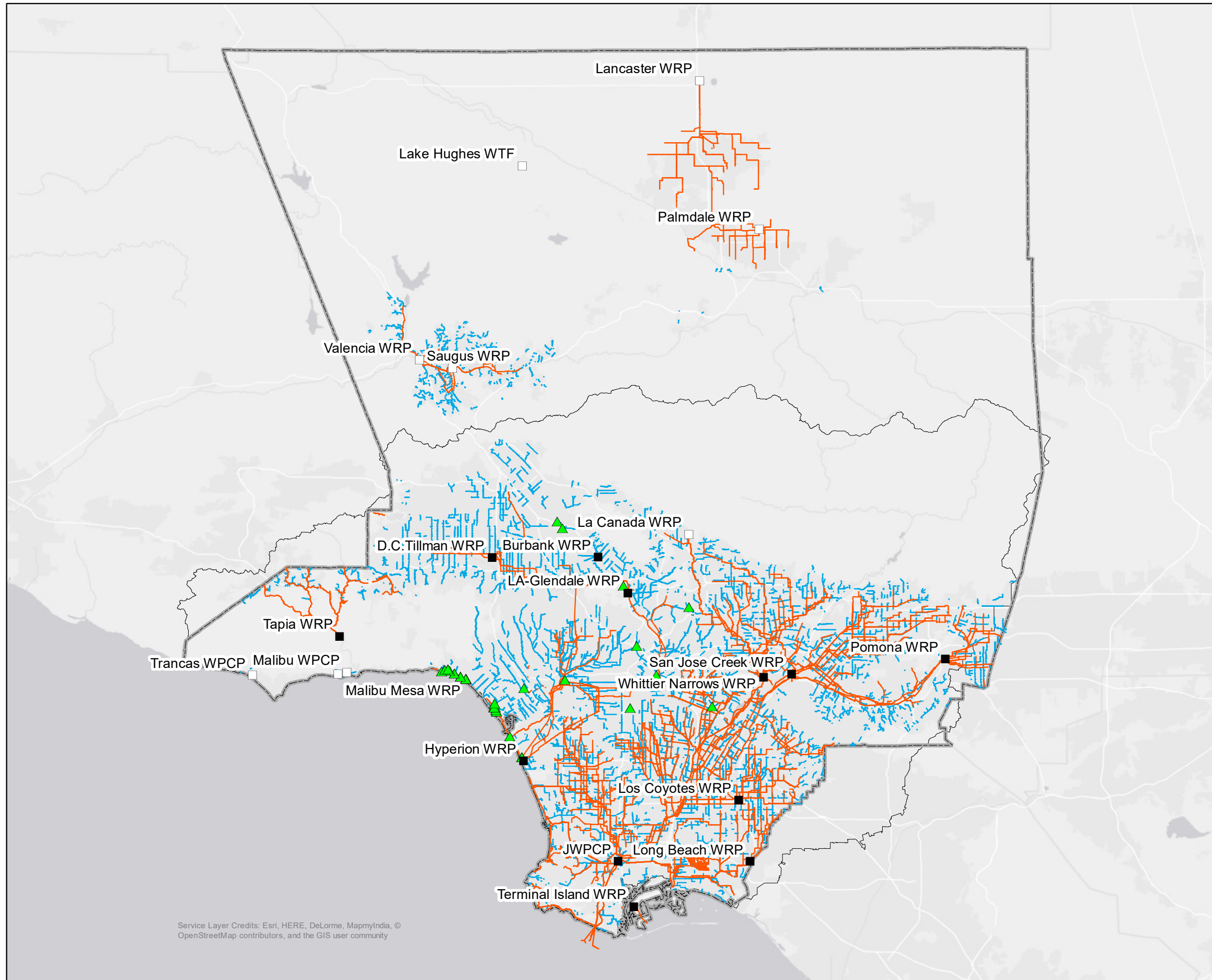
<b>Project Task</b>	<b>Hours</b>	<b>Budget</b>
Task 1: Project Chartering Sessions	109	\$21,883
Task 2: Collect, Review and Summarize Data	878	153,054
Task 3: Identification of Potential DWDs for Conversion to WWDs	294	\$54,496
Task 4: Case Studies of Selected Diversions	860	\$155,827
Task 5: Develop Overall Conceptual Plan to Divert Remaining Dry Weather Flow	189	\$34,072
Task 6: Case Study of Cisterns with Direct Diversions to a Sanitary Sewer System	228	\$41,560
Task 7: Regulatory Considerations	253	\$62,570
Task 8: Develop Path Forward Framework for MS4 Permittees for Conversion of DWDs and WWDs	215	\$39,700
Task 9: Conclusions and Recommendations	176	\$33,218
Task 10: Draft and Final Report	153	\$29,402
Task 11: Project Management and Meetings	387	\$68,218
<b>Total</b>	<b>3,742</b>	<b>\$694,000</b>

CH2M will not be obligated to perform work beyond the contracted budget, and LVMWD will not be obligated to compensate CH2M beyond the authorized budget without LVMWD approval.

This proposal is valid for sixty (60) days from the submittal date.

## Schedule

The work is estimated to be completed within 12 months of contract execution. It is assumed that the work will begin in January 2019.



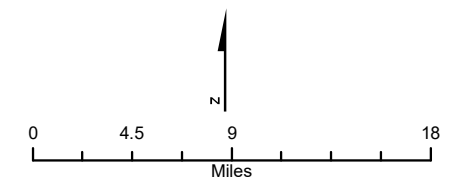
**LEGEND**

**Wastewater Treatment/Reclamation Facility**

- Sewershed Included in Study Area
- Sewershed Not Included in Study Area
- ▲ Existing Dry Weather Diversion
- Large Interceptor/Outfall Sewer
- Storm Drain > 48"
- Los Angeles County Boundary
- Los Angeles Basin

**Notes:**

1. For clarity, resolution of piping varies by area. Not all pipes are shown.
2. Maps are intended for high-level view of existing facilities. Locations of facilities are approximate.



Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

**Figure 1**  
Existing Low Flow Diversions and WRPs



 = Technical Memorandum

Stakeholder Participation

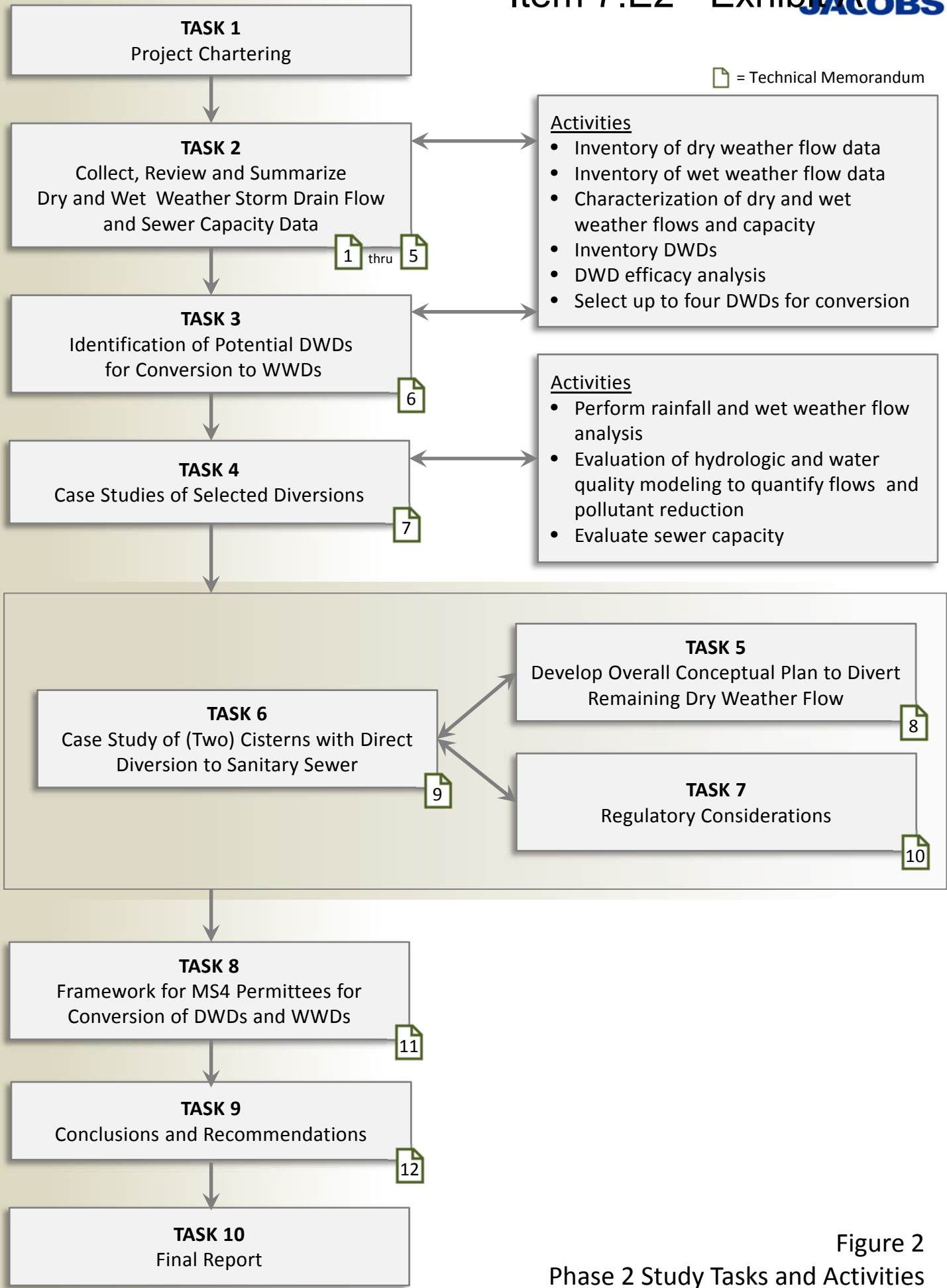


Figure 2  
Phase 2 Study Tasks and Activities

**Exhibit 1**

Responses to Stakeholder Comments on  
August 28, 2018 Draft Scope

# Item 7.E2 - Exhibit A

Exhibit 1  
 Responses to Stakeholder Comments on  
 August 28, 2018 Draft Scope

No	Task	Comment	Response
<b>LA County Department of Public Works</b>			
LACDPW-1	Key Terminology	Is there a potential to utilize a 15-year period? This would then include the very wet 2004-05 storm season which could provide some useful insights when coupled with the 2012-2016 drought.	Agree, we will use the study period from CY 2002 through 2017 to include the very wet 2004-05 storm season and the 2012-2016 drought.
LACDPW-2	Task 1	This white paper is an excellent opportunity to showcase the benefits of integrated regional water management practices; we suggest adding such language.	Yes, the benefits of integrated regional water management practices will be added into the deliverables of this study. Incorporated text to reflect this point in the new conceptual approach section of the scope of work .
LACDPW-3	Task 2	What is considered to be "reasonable"?	Edited text to state that the stakeholders will provide the data within three weeks of the request sent by Jacobs.
LACDPW-4	Task 2.1	Modifications to LACFCD stormwater infrastructure or operations have potentially significant public-safety impacts and these should also be considered	Edited text to state that the stakeholders will provide the data within three weeks of the request sent by CH2M/Jacobs.
LACDPW-5	Task 2.1	The LA Basin Study and the Greater Los Angeles Water Collaborative reports are also <u>good resources which we can provide</u>	Yes, we added these studies to the list of documents for review under this task.
LACDPW-6	Task 2.2	Could this compiled GIS data be later made available to the Project Partners?	Yes, we will provide the GIS data to the Project Partners.
LACDPW-7	Task 2.6	LA County Public Works has 21 low-flow diversions (LFDs) which we have been operating for 15+ years. Data sources include construction records, maintenance records, telemetry system data, etc. Note there was a minor error or needed clarification on page 4-2 of the May 2018 white paper; the Herondo LFD has a capacity of 60 OR 120 gpm depending on the time of day, not 60,120.	We will make this data correction for the Phase 2 of the project and utilize the County's LFD data.
LACDPW-8	Task 2.6	LACDPW's Low-Flow Diversion Task Force will be able to work with the authors to seek this information.	We will communicate with the LACDPW's Low-Flow Diversion Task Force members to gather LFD data and info.
LACDPW-9	Task 3	Other factors to consider for analysis: How will flows be diverted? - Design of diversion structures needs to be considered to avoid any impacts to LACDPW operations and to prevent adverse impacts to flood risk. Would these flows otherwise be captured?	Acknowledged and added information related to these comments into the conceptual approach. Provided below are responses to these comments: - Conceptualization of preliminary design of diversion structures will be conducted for the selected (4) diversions in Task 4. Features to avoid any impacts to LACDPW operations and to prevent adverse impacts to flood risk will be considered.
		- are there spreading grounds downstream of diversion?	Location of spreading grounds will be identified if affected by the location of a select diversion.
		- does this diversion add an actual supply benefit?	The diversions projects will provide water supply benefit when the downstream WRF effluent is recycled. However, the analysis for the location and end uses of the generated water supply will not the focus of this study.
		Design to limit pumping	Need pumping for permissive aspects of diversions.
		- Some elevated locations may allow diversions without need for pumping, greatly reducing operation and design costs, along with CO2 reductions from less energy use	As noted above, pumping is necessary to assure permissive diversion from the storm drain system to the sanitary system.
		Who will receive the recycled water? - Whether there are existing customers, need, or opportunity to use the additional recycled water; - Groundwater, whether aquifer is confined, could water be directly placed into infiltration? - Availability of spreading ground capacity in the area; - Restrictions from the regional board as to where recycled water can be spread (e.g. distance to production wells); - availability of spreading grounds is limited during wet weather, and priority is given to storm flows; Please contact LACDPW to discuss any of these further.	The end users of the water supply generated by the diversion projects will not be the focus of the study. However, qualitative description of end users will be discussed in the project report.

# Item 7.E2 - Exhibit A

Exhibit 1  
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August 28, 2018 Draft Scope

No	Task	Comment	Response
LACDPW-10	Task 4.1	It is recommended that this analysis incorporate local climate change projections for storm frequencies.	In the overall conceptual approach, we have acknowledged the climate change impacts for the study. Where appropriate, we will include qualitative description for climate change impacts on storm frequencies.
LACDPW-11	Task 4.2	It is recommended to consider a climate-adjust 85th percentile storm event to assess the future effectiveness of these facilities.	Per above response to comment LACDPW-10, we will address climate change impacts qualitatively in this study.
LACDPW-12	Task 4.3	We believe storage is a key design feature given the highly irregular flows observed in our systems.	For the four case studies conducted under this study, the analysis will include storage considerations to accommodate highly irregular flows.
LACDPW-13	Task 4.3	Can combinations of seasonal dry and wet flow patterns be considered? Or could this "optimization" come later?	This analysis will be a part of the final feasibility analysis of the project(s) identified under this study, which will depend on the data available.
LACDPW-14	Task 4.3	Based on our experience, flows vary widely on an hourly, daily, monthly, and annual basis. Wet years have much more dry weather flow.	This discussion was referring to gaging of the wastewater in the collection system rather than stormwater runoff. It has since been removed from the scope language and will be considered during the study only if necessary and feasible.
LACDPW-15	Task 4.3	Hourly peak? Daily? "Peak" flow might be replaced with "85% daily dry-weather flow total on a multi-year basis" or something similar.	The amount of flow diverted will depend on the size of the diversion and capacity of the wastewater system.
LACDPW-16	Task 4.5	Could these be climate-adjusted?	The impact of climate change will be acknowledged and climate change adjustments to stormwater flows will be discussed qualitatively.
LACDPW-17	Task 6	This concept was coarsely assessed in the Greater LA Water Collaborative, a partnership between LADWP, LASAN, and LACFCD. The report can be shared with the Project Team.	We will review the report to understand the findings of the study. Added language to this scope to reflect this.
LACDPW-18	Task 8	This suggests/emphasizes path forward centers predominantly around water quality. If water supply is to receive equal exploration, perhaps a separate task for path forward related to water supply or else rename Task 8 to account for both...	The goal of the path forward task is to develop a framework for agencies to follow who would like to proceed with WWDs to divert surface water to create recycled water. The steps needed to develop new WWDs, or conversion of DWDs to WWDs will be discussed in this task, without quantification of potential water supply benefits.
LACDPW-19	Task 9	Consider adding infrastructure owners (e.g. LACFCD Flood Permit), CEQA, USACE 401, USACE 404, CA DFW, and CA Coastal Commission permitting requirements	Infrastructure owners have been added in the text for this task. Other agencies that may be involved in the process for diversions will be considered.
LACDPW-20	Schedule	It is assumed that further development, opportunities for further GIS expansion/overlays, discussion of how/when to engage other stakeholders, and further alignment with other sources/studies will be a part of the white paper process.	This is the intent of the stakeholder coordination/project steering committee. These elements will be discussed during stakeholder meetings.
<b>LA County Sanitation Districts: Ruffell, Kristen</b>			
LACSD-1	Task 1	Do you want to give any other MS4 permittees a chance to participate since the findings could affect their programs?	The participation of additional stakeholders will be discussed in the stakeholder meetings and communication about the study will be provided in other forums.
LACSD-2	Task 2.1	Attached is an example of the data available for one of LACSD's sewers. These Clearance Diagrams represent the available capacity during peak dry weather flow and are prepared by hand using a combination of sewer level monitoring and best professional judgement (for example, knowledge of a cross connection that can flow either direction depending on the time of day or an episodic industrial discharge). To determine the capacity available in any section of sewer, all of the downstream sections need to be analyzed along with any completing projects (e.g. a new industrial wastewater discharge) to determine the constraining flow.	We will rely on LACSD to provide the relevant available sewer capacities for diversion locations.
LACSD-3	Task 2.1	We have these and can provide them. What will they be used for?	We will review the SSMPs for data related to sewer systems and the plans (e.g., operation and maintenance) in place.
LACSD-4	Task 2.2	Given the paper-based flow records and the case-by-case analysis needed, this may not be worth the effort/cost	In this task, we will prepare a summary of the available data, the extent of data, and the format of it. We have clarified in the text that the GIS database will house only data provided electronically.

# Item 7.E2 - Exhibit A

Exhibit 1  
 Responses to Stakeholder Comments on  
 August 28, 2018 Draft Scope

No	Task	Comment	Response
LACSD-5	Task 2.3	We do not have sufficient data to characterize flows or capacity in wet weather except at the headworks to a treatment plant.	We will use all data that is readily available to characterize flows or capacity in wet weather. Since the wet weather data in the sewer system are limited, the focus will be to prioritize diversions upstream of WRPs rather than further upstream in the sewage collection system. Data gaps will be identified under this study for the feasibility analysis of the projects identified under this scope.
LACSD-6	Task 2.3	We can provide a map of the current Smart Covers we have installed. Please be aware that many of our smart covers are moved frequently, therefore we would prefer not to put these locations in a report. We have attempted to use this data for a control system and found that it was not reliable or frequent enough to manage flows. We are happy to share our experience.	We understand the concern and will not include the information about the location of the Smart Covers in the deliverables prepared under this scope. We would like to hear about your experience with the quality/use of this data.
LACSD-6	Task 2.3	We do not have a system-wide study. Our operations section has completed targeted studies to resolve particular issues, but formal reports were not prepared.	There may be value in considering the finding of targeted studies, depending on the potential WWD locations we wind up considering. We can discuss at that time.
LACSD-6	Task 2.4	Raw wet weather flow data is useful for calibrating models (both for the generated storm flow and the capacity available in the sewer), but cannot be directly used for planning or design.	Agreed. The purpose of this task is to document the availability of data and its attributes such as locations, type of data, quality of data, etc.
LACSD-6	Task 2.5	This conflicts with the highlighted text in the next paragraph.	Corrected in the next paragraph for consistency.
LACSD-6	Task 2.5	Doing this for the whole study area is a much larger task than the areas upstream of existing diversions (as stated in previous paragraph). Which one do you intend?	The flow characterization will be for the areas upstream of existing DWDs not for the entire study area.
LACSD insert	Subtask 2.5	For a proposed diversion to the headworks of a wastewater treatment facility, sufficient data exist to develop a model that will be used to determine minute-by-minute capacity throughout an 85 <sup>th</sup> percentile design storm. This model will be sufficient to estimate dry and wet weather capacity.	Development of such a model, useful for site-specific facility design, is not planned to be conducted under this scope of work where design will be considered at a more conceptual level.
LACSD insert	Subtask 2.5	Storm drain flows originating from the tributary areas of the DWDs for the 85th percentile 24-hour design storm. Flows will be graphs in one-minute increments throughout the storm. The peak flow and the total volume will also be identified.	Flow graphing will be dependent on the data available/provided, and could be developed for the selected diversions, rather than the entire study area. The targeted capture volume could be more or less than the compliance storm.
LACSD deletion	Subtask 2.5	Water quality data, specifically for parameters of concern, e.g., metals, nutrients, and bacteria, and other constituents for which TMDL are developed in the watersheds where the DWDs are located	An inventory of water quality data will be beneficial to understand the water quality issues and loadings of pollutants in the watershed where diversions are studied.
LACSD insert	Subtask 2.5	Because the flow in the sewer system is dependent on the rate of rainfall, location(s) of flooding, and wet-weather operations of the sewer system, an analysis of available capacity during a storm can only be accomplished by developing a hydrodynamic model and calibrating it with sewer flow data collected during a range of storm conditions. Use of dry weather flow or data from one or two storms is not sufficient to determine the safe capacity during wet weather.	Agree that hydrodynamic modeling would be an optimal tool for assessing wet weather flow conditions in the sanitary sewer systems. Where the benefit of such modeling is available (e.g., City of LA) and it can be applied by the agency to inform the study, it will be considered. Where such a model does not exist or data is not available, other approaches to estimating available sewer capacity during wet weather will be considered with the respective agency.
LACSD insert	Subtask 2.5	In addition to physical flow, capacity must also consider future upstream residential/commercial/institutional/industrial developments, peak flow cycles, inflow and infiltration, and other factors that the various managing jurisdictions may apply. Guidelines for determining available capacity should therefore allow for differing methodologies that may be applied by the various controlling agencies.	We will work with the sewerage agencies to appropriately identify reasonable estimates of available capacities in their sanitary sewer systems.
LACSD-7	Task 3	The Sanitation Districts should conduct this analysis for the diversions in our service area.	Thank you.

# Item 7.E2 - Exhibit A

Exhibit 1  
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August 28, 2018 Draft Scope

No	Task	Comment	Response
LACSD-8	Task 4	Many diversions won't go to reclaimed water. Should diversions be evaluated for their potential to generate new water?	The assumption of this study will be to generate potential water supply. Any water at the WRP could be used for generation of recycled water. We will not evaluate how much water will be reused as the study will not focus on end uses.
LACSD-9	Task 4	Different than the 85 <sup>th</sup> percentile 24-hour flow? Define?	Changed capture of "first flush" to capture of "targeted capture volume", which is dependent on available/potential storage volume in, or external to, the WWD.
LACSD-10	Task 4.1	Define first flush	Defined
LACSD-11	Task 4.3	There isn't enough money in the proposal to do this countywide. Suggest identifying priority locations and doing a detailed analysis on those. Locations near the WRPs may be most advantages.	Task 4 consists of conducting case studies on up to 4 selected LFDs.
LACSD-12	Task 4.3	[1] The Sanitation Districts and the City of Los Angeles? use a standard of 75% d/D (or a flow depth no greater than 75% of the diameter of the pipe.	Added footnote as suggested; City of Los Angeles indeed uses 0.75 d/D as trigger flow for capacity expansion.
LACSD-13	Task 4.3	This task is for new diversions, what pumping improvements did you have in mind?	Pumping improvements may be needed at existing DWDs to convey wet weather flows rather than the smaller, dry weather flows.
LACSD insert	Subtask 4.3	1) If sewer capacity is a constraint to conveying the required wet weather event volume, estimate the relative costs of sewer expansion improvements to enhance stormwater diversion will be considered, such as: • The cost of providing additional sewer conveyance. 3) The cost of providing stormwater storage so that the design volume can be diverted within 72 hours, or pumping improvements	Deleted. Cost analysis will not be a part of this scope.
LACSD-14	Task 4.5	Are you intending to identify peaks? Total volume? How will you use this data given that the flows are variable throughout the storm?	We will develop a range of flows, including peaks and total volumes.
LACSD-15	Task 5	Can you provide more information as to how you plan to do this and what you think the output will look like? Any analysis needs to take into account that multiple projects will compete for the same capacity. Maybe this is a conceptual path forward given the detailed analysis of targeted locations in Task 4.3?	We will develop an output matrix that shows how much of the dry weather flows have been addressed by the existing DWDs, and, of the remaining dry weather flow in the watershed, the amount that could potentially be diverted to the sanitary system.
LACSD-16	Task 7.1	These are very broad. Maybe they can be refined in the first meeting with the stakeholders	This will be discussed with the stakeholders before the initiation of this task.
LACSD-17	Task 7.2	This should also be discussed among the stakeholders, given that many have a history and understanding of the Regional Board's jurisdiction in diversions	Agreed
LACSD-18	Task 8	These are not Regional Board issues. These issues will need to be discussed with the receiving sewerage agency.	Agreed. The text has been moved to Task 8.
LACSD-19	Task 7.3	These are the issues that would need Regional Board buy off.	Agreed.
LACSD-20	Task 10	How long will stakeholders have to review?	A review period of four weeks has been added in the text.
<b>LA Sanitation and Environment</b>			
LASAN-1	General Comments	It is recommended to provide projections of potential water supply benefits by DWDs, WWDs, and conversions of DWDs to WWDs as not all diverted runoff would necessarily result in actual water supply benefits.	The focus of this study is to identify the feasibility of diverting stormwater to the sanitary system for potential water supply benefit, i.e., if the wastewater is ultimately treated for reuse. It will be dependent on a number of factors such as type of diversion (wet or dry), location and capacity of the system to generate recycled water along with the end users. The end users and determination of water supply benefits will not be a focus of this study. However, the report of this project will include high level description of water supply benefits and potential beneficial uses.
LASAN-2	General Comments	When converting DWDs to WWDs, the water supply benefit is anticipated to be minimal because flows in the wastewater collection system during storm events are already sufficient. A possible solution would be a combination of a WWD and a detention tank to attenuate peak storm runoff and delayed diversion to the collection system.	These comments are addressed in this section. Brief response to the comments provided here: <ul style="list-style-type: none"> <li>• Storage will be considered as appropriate which will be site-specific.</li> <li>• Volume to be addressed by the diversions will be discussed with the stakeholders. It will be dependent on several factors as discussed in this section.</li> <li>• Agree with the comment on an auto-shutoff system for the diversions.</li> </ul>

# Item 7.E2 - Exhibit A

Exhibit 1  
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 August 28, 2018 Draft Scope

No	Task	Comment	Response
LASAN-3	General Comments	A complete storm hydrograph is preferred when assessing the ability of the wastewater collection system and the WRPs to convey the peak runoff flow for the 85 <sup>th</sup> percentile storm event.	Using a complete hydrograph allows the full volume and shape of the storm event to be routed through the collection system. But if only a portion of the entire hydrograph is being routed into the diversion, or if storage is provided at the diversion, then the overall magnitude and shape of the hydrograph are of less importance, because much of that total volume will bypass the diversion.
LASAN-4	General Comments	Operators of the wastewater collection system may require an auto-shutoff system that would turn off the WWD if certain levels are reached in the wastewater collection system.	Agreed.
LASAN-5	Task 2.1	Flow data covering the second part of study period (2007-2017) might be more readily available than data covering the first part, which depends on when gauges were installed.	This comment is for the wastewater system data collection. We will use available data for the study for the period from 2007-2017 and if additional time is needed to extract data from archives, we will begin with the data that is more readily available.
LASAN-6	Task 2.5	Some modeling may become necessary under this subtask if there are large data gaps.	We will make that assessment as the study progresses and, if needed, work with the agencies to schedule their execution of such modeling, where possible.
LASAN-7	Task 2.7	For determining the efficacy of DWDs in relation to regulatory (MS4 Permit) compliance, it is important to establish the metric for compliance. We usually don't evaluate reduction of pollutant loadings by DWDs. We design DWDs to divert all dry weather runoff from a drainage area (no DWD discharge -> MS4 is not responsible for exceedances of water quality standards in receiving water). Likewise, a WWD that diverts the 85th percentile storm event would make the drainage area to that WWD into full compliance, regardless of the actual reduction of the pollutant loading.	The intent of this study is to add WWDs as another tool to be included as part of the strategy for achieving MS4 compliance; it is not expected to replace all of the other BMPs that will also be needed to fully manage the 85th percentile storm event. If the WWD will be able to handle the 85th percentile storm then the drainage area will be in full compliance. As mentioned in the conceptual approach, the amount of flow handled by each diversion will be dependent on several factors, e.g., site-specific conditions, size and capacity of the diversions, availability of storage in the upstream area of the diversion, etc. In case, the WWD cannot handle the 85th percentile storm event, then a methodology should be established in consultation with the Regional Board to determine the water quality benefit/credit from the reduction in loadings due to diversion.
LASAN-8	Task 3	There may be an interesting area for potential exploration by consultant team, specifically for addressing Bacteria TMDLs: - Many Bacteria TMDLs define wet weather as the day of the rain event and the three day following that storm event. - We have observed at several DWDs that runoff flows to rapidly decline after a storm event. - If we also divert runoff in the three days after a storm event, the diversion rate could be typical of dry weather (no capacity issues) but from a MS4 Permit/Bacteria TMDL compliance perspective it would count towards wet weather compliance. - This would be a partial/temporal conversion of DWDs to WWDs that would only require a change of the operational strategy.	This discussion has been added to the conceptual approach section of the study's scope of work.
LASAN-9	Task 4 (intro)	It is mentioned that LASAN is working on two DWD to WWD conversions, being effective in 2019. In the kickoff meeting, we brought up two examples of WWD projects that are being planned in the Ballona Creek watershed. However, those are done by other municipalities, and they will not be done by 2019 as they are in the early planning stages. Consultant team is recommended to confirm with LASAN whether we're talking about the same projects.	Thank you for clarifying the status of the planned WWD projects (by others) in the Ballona Creek watershed. For the case studies, four new projects will be identified for case studies based on the availability of data and discussion with the stakeholders.
LASAN-10	Task 4.3	If flow gauging upstream and downstream of a DWD would be necessary, who would be performing those services?	In that case, flow gauging of sewage upstream and downstream of the DWD will be conducted by the agencies owning the sanitary sewer system.
LASAN-11	Task 7.1	It is not clear why new development and redevelopment design criteria, building conditions, and municipal ordinances are important for evaluating runoff diversions to the wastewater collection system.	The stated factors do not affect the physical capacity to convey diverted flows, but may affect how much should be diverted to positively influence receiving waters. We will include a high level review of the regulatory requirements to qualitatively assess their impact on potential diversion flows.
		We recommend also evaluating the impact of runoff diversions on contractual agreements for sewage conveyance and treatment between contract agencies.	Under Task 8, a path forward strategy will lay out the steps and considerations for developing contractual mechanisms among agencies who participate in the projects.

# Item 7.E2 - Exhibit A

Exhibit 1  
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August 28, 2018 Draft Scope

No	Task	Comment	Response
		Large scale runoff diversion could potentially result in reduction of flow/water levels in receiving waters which, in turn, could bring issues related to beneficial uses of the receiving waters, water rights, etc. However, this may be beyond the scope.	These issues will be acknowledged during the Phase 2 work, but the impact of reduction of flow/water levels on receiving waters needs to be addressed on a case-by-case basis. We will acknowledge the impact of diversions on the downstream beneficial uses in the receiving waters.
LASAN-11	Budget	Practical note: the consultant team will need to execute a license agreement with LASAN for receiving GIS files. This is a standard procedure taking about one week to complete.	We acknowledge this comment. We will initiate the process as soon as the study begins.



Exhibit "B"

# Item 7.E2 - Exhibit A

## Contact Information for Parties to Agreement

- Central Basin Municipal Water District  
Mr. Kevin Hunt, General Manager  
Central Basin Municipal Water District  
6252 Telegraph Road  
Commerce, CA 90040-2512  
(323) 201-5548  
[kevinh@centralbasin.org](mailto:kevinh@centralbasin.org)
- City of Los Angeles, LA Sanitation and Environment  
Mr. Enrique C. Zaldivar, Director and General Manager  
LA Sanitation and Environment  
1149 South Broadway, 9th Floor  
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[enrique.zaldivar@lacity.org](mailto:enrique.zaldivar@lacity.org)
- City of Los Angeles, Department of Water and Power  
Mr. David Pettijohn, Director of Water Resources  
City of Los Angeles, Department of Water and Power  
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- City of Pasadena  
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- City of Torrance  
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City of Torrance  
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# Item 7.E2 - Exhibit A

- County Sanitation District No. 2 of Los Angeles County  
Ms. Grace Robinson Hyde, Chief Engineer and General Manager  
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- Las Virgenes Municipal Water District  
Mr. David Pedersen, General Manager  
Las Virgenes Municipal Water District  
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Calabasas, CA 91302  
(818) 251-2122  
[dpedersen@lvmwd.com](mailto:dpedersen@lvmwd.com)
- Los Angeles County Flood Control District  
Mr. Keith Lilley, Assistant Deputy Director  
Stormwater Planning Division  
Los Angeles County Department of Public Works  
900 South Fremont Avenue  
Alhambra, CA 91803  
(626) 458-4300  
[klilley@dpw.lacounty.gov](mailto:klilley@dpw.lacounty.gov)
- Main San Gabriel Basin Watermaster  
Mr. Tony Zampiendo, Executive Officer  
Main San Gabriel Basin Watermaster  
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(626) 815-1300  
[tony@watermaster.org](mailto:tony@watermaster.org)
- Three Valleys Municipal Water District  
Mr. Matthew H. Litchfield, General Manager/Chief Engineer  
Three Valleys Municipal Water District  
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(909) 621-5568  
[mlitchfield@tvmwd.com](mailto:mlitchfield@tvmwd.com)

# Item 7.E2 - Exhibit A

- Upper San Gabriel Valley Municipal Water District

Mr. Tom Love, General Manager  
Upper San Gabriel Valley Municipal Water District  
602 East Huntington Drive, Ste B  
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(626) 443-2297  
[tom@usgvmwd.org](mailto:tom@usgvmwd.org)

- Water Replenishment District of Southern California

Mr. Robb Whitaker, General Manager  
Water Replenishment District of Southern California  
4040 Paramount Boulevard  
Lakewood, CA 90712  
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## Phase 2 White Paper

Tapping into Available Capacity in Existing Infrastructure  
to Create Water Supply and Water Quality Solutions

March 13, 2019



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## Agenda

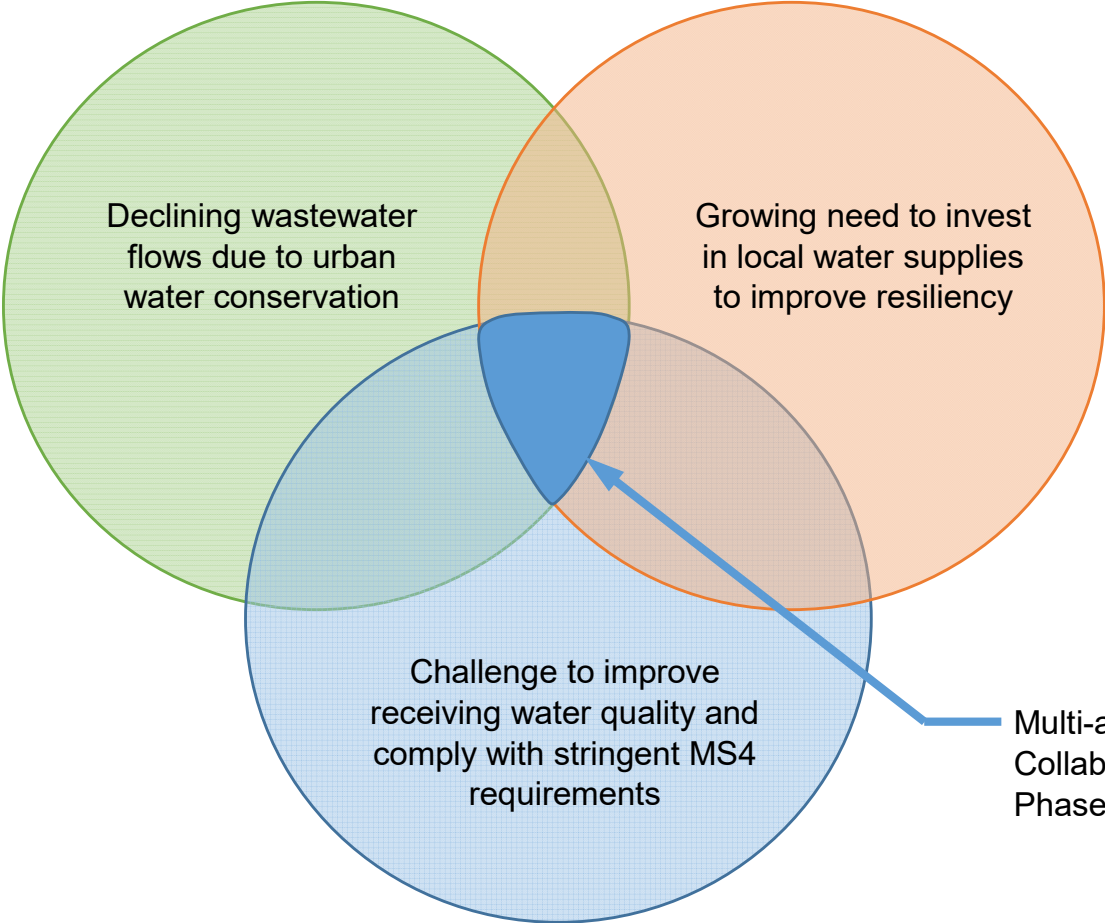
1. Welcome and Introductions
2. Project Drivers and Goal
3. Review of Phase 1 White Paper
4. Phase 2 Funding and Stakeholders
5. Phase 2 Strategy and Approach
6. Stakeholder Involvement
7. Communication Protocols
8. Discussion
9. Wrap-up and Next Steps

# Welcome and Introductions

**Project Drivers and Goal**

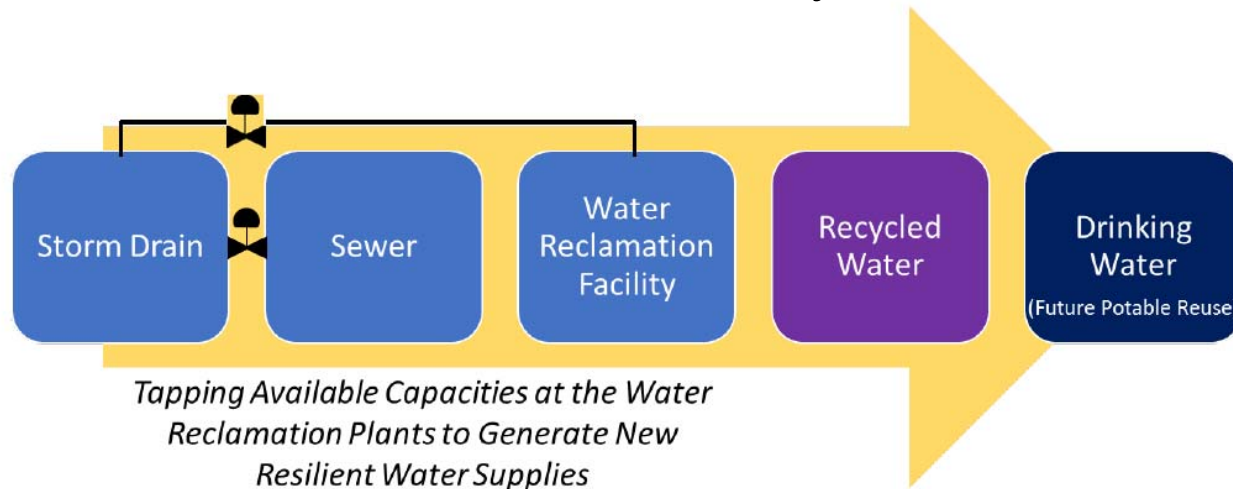


# Project Drivers



## Project Goal

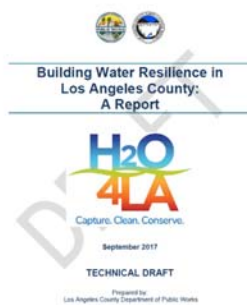
- Explore leveraging available capacity in the water reclamation plants (WRPs) for treating urban runoff and stormwater to:
  - Improve receiving water quality
  - Generate new local source of recycled water



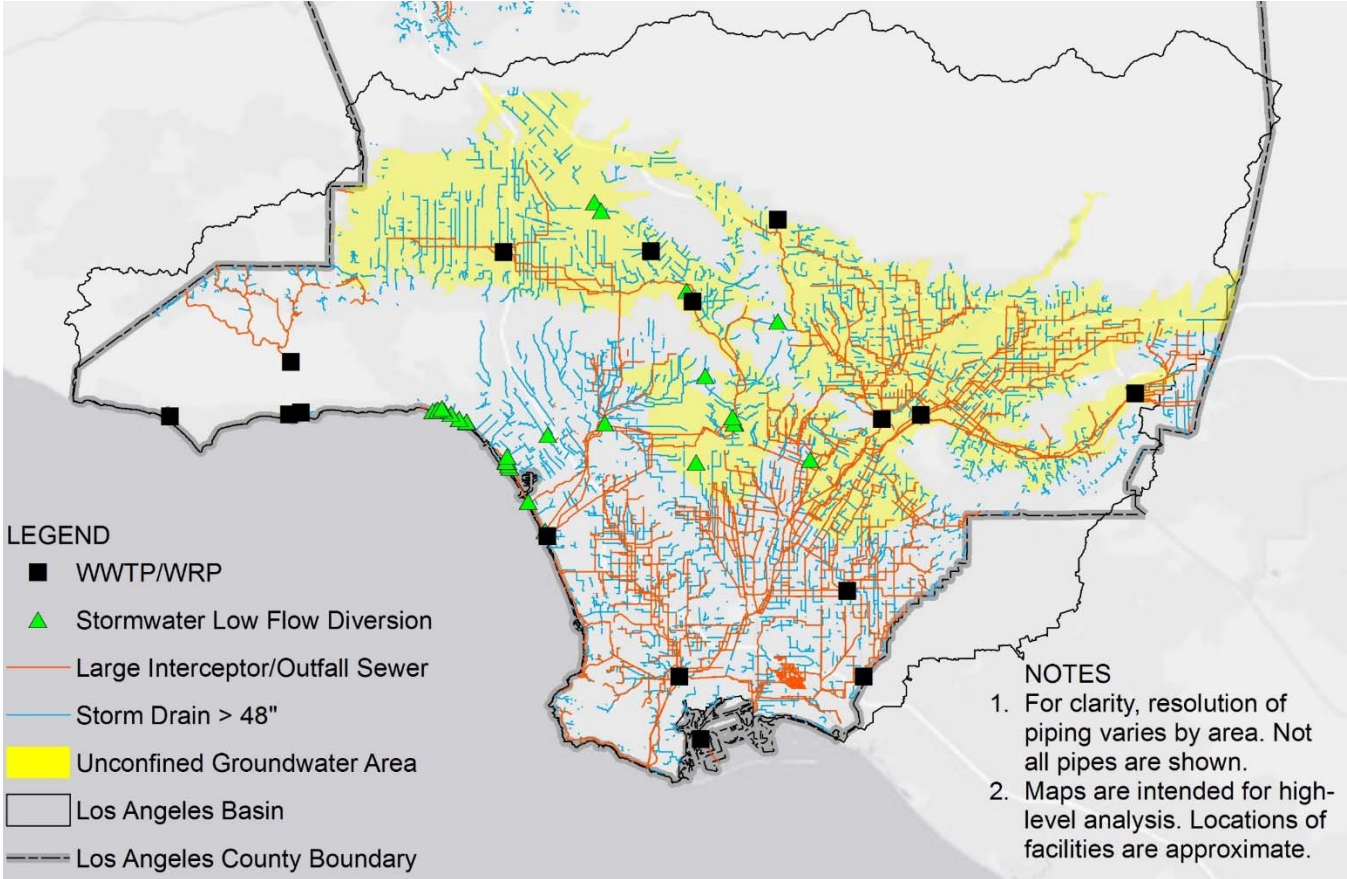
**Review of Phase 1 White Paper**

## Phase 1: Completed May 2018

- Conducted high-level analysis to understand possibilities of a controlled storm drain diversion to the sanitary sewer system
- Surveyed pre- and post-drought influent flows to WWTPs throughout Los Angeles County
- Surveyed current and planned recycled water production at WRPs
- Mapping of existing wastewater and stormwater infrastructure and existing diversions
- Reviewed alignment with existing planning documents:



# Phase 1: Infrastructure Mapping

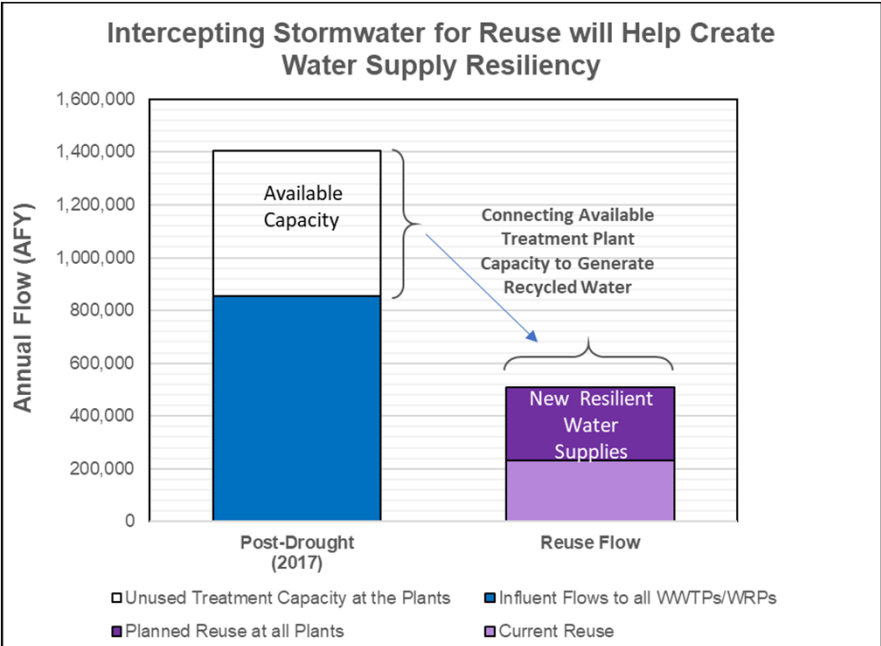
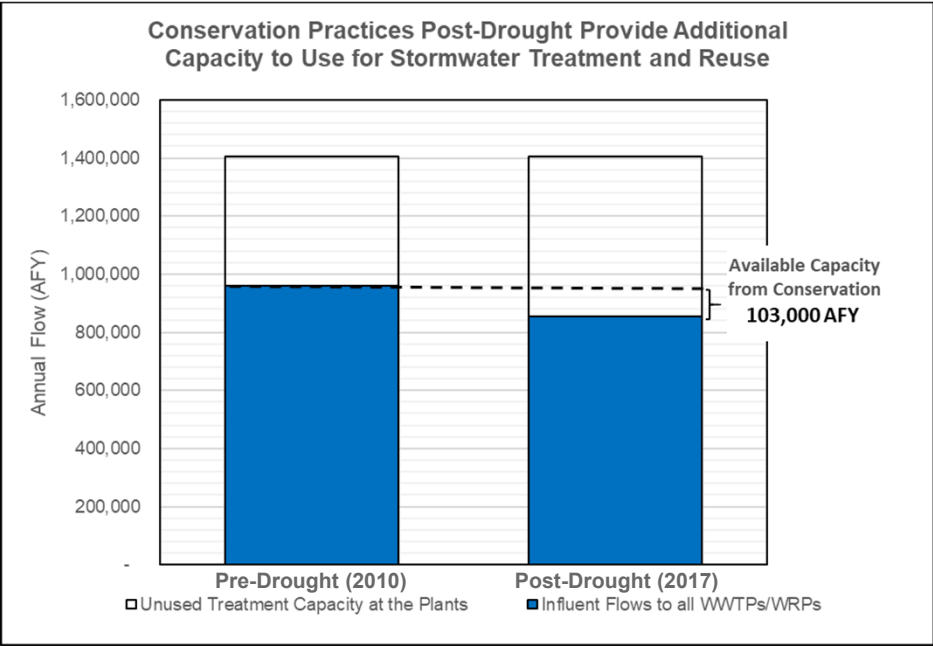


## Phase 1 Infrastructure Mapping

- 21 Municipal Wastewater Treatment Plants
  - Los County Sanitation Districts - 11
  - City of Los Angeles Bureau of Sanitation - 4
  - Consolidated Sewer Maintenance District of Los Angeles County - 4
  - Las Virgenes Municipal Water District - 1
  - City of Burbank - 1
- 21,000 miles of sewers amongst owners listed above
- 3,300 miles of storm drains owned by LACFCD
- 50 existing low flow diversions (LFDs)
- Thousands of miles of additional city-owned sewer and drainage systems
- Only 28% of the Los Angeles Basin is available for groundwater augmentation through stormwater infiltration.

# Phase 1: Key Findings

- Conservation → 103,000 AFY Reduction of Influent WWTP Flows (2010 vs 2017)
- 1.4M AFY capacity amongst 21 WWTPs, only 61% of capacity utilized in 2017
- Future recycled water demand expected to more than double



## Phase 1: Outcome

- Highlighted the merits of further analysis of diverting urban runoff to the wastewater system
- Illustrated the need for additional study to:
  - Address potential challenges and complexities
  - Engage a much broader group of stakeholders

WHITE PAPER  
PRE-RELEASE VERSION

Tapping into Available Capacity in  
Existing Infrastructure to Create Water  
Supply and Water Quality Solutions

Prepared for  
Las Virgenes Municipal Water District  
Main San Gabriel Basin Watermaster

May 2018

**ch2m.**  
CH2M HILL Engineers, Inc.  
1000 Wilshire  
Suite 2100  
Los Angeles, CA 90017

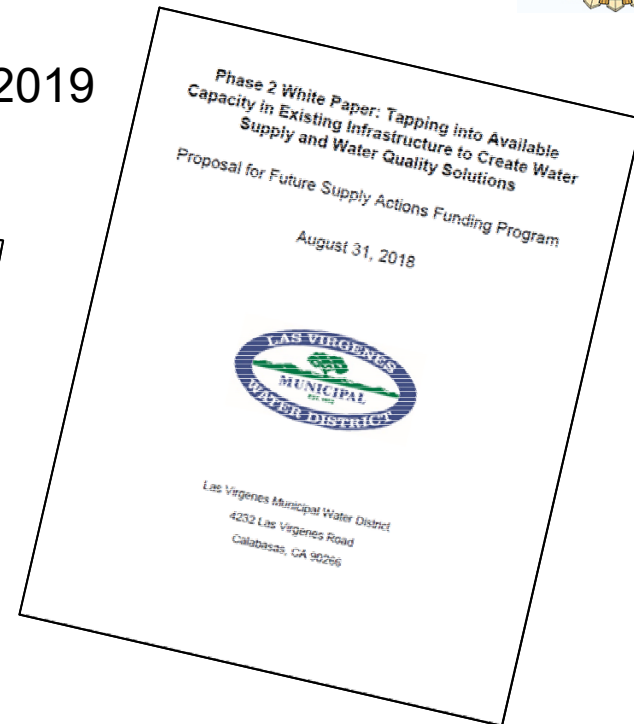
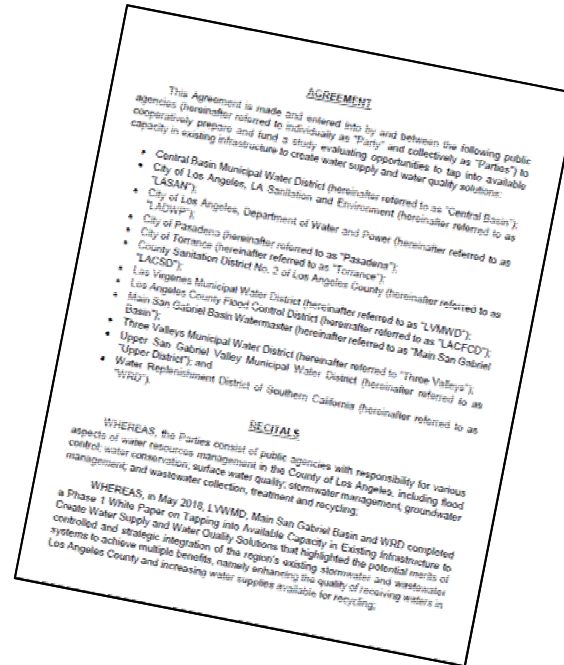


## Phase 2 Funding and Stakeholders

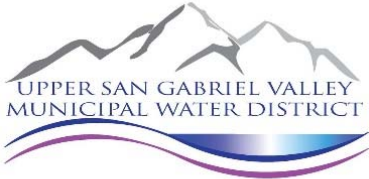
# Metropolitan Water District Future Supply Actions Funding Program



- FSA application due August 31, 2018
- Awarded \$339,500 by MWD Board January 8, 2019



# Funding Agencies



## **Phase 2 Strategy and Approach**

## Key Terminology

- **Dry Weather Diversion (DWD):** a diversion of non-stormwater flows from the storm drain system to the sanitary sewer system. Also referred to as low flow diversion (LFD)
- **Wet Weather Diversion (WWD):** a diversion of both non-stormwater and stormwater flows from the storm drain system into the sanitary sewer system. Note: diverted volume is location specific
- **Capture Volume:** volume that can be captured by the diversion structure in a fixed time. Volumes will be project-specific, and may divert less or more than the 85<sup>th</sup> percentile, 24-hour storm event.
- **First Flush:** the initial volume of runoff from a rain event that is generated after a dry period

## Phase 2 Goals and Objectives

- Build upon the work initiated within Phase 1 and engage a broader group of stakeholders.
- Explore the opportunity for controlled and strategic integration of the region's existing stormwater and wastewater systems to achieve water quality and supply benefits.
- Collect, review, and summarize existing data and data gaps relating to dry weather, wet weather, and existing diversions.
- Understand efficacy of existing DWDs and WWDs.
- Conduct case studies of four existing DWDs to determine feasibility of converting to WWDs.
- Understand regulatory considerations.
- Develop framework to guide implementation of DWDs and WWDs.

# Organizational Chart

**Steering Committee**  
Chair: LACFCD  
Vice-chairs: LACSD & LASAN

**Technical Review Committee**  
Chair: LACSD  
Vice-chair: LASAN

**Principal-in-Charge**  
Rich Nagel, P.E.

**Contract Manager**  
Dave Pedersen, P.E.  
Coleman Olinger, P.E.

**Strategic Advisor**  
JFS Engineering  
Jim Stahl, P.E.

**Project Manager**  
Amanda Heise, P.E.

**Quality Manager**  
Judi Miller, P.E.

**Watershed Hydrology and Water Quality**  
Jagjit Kaur, Ph.D.

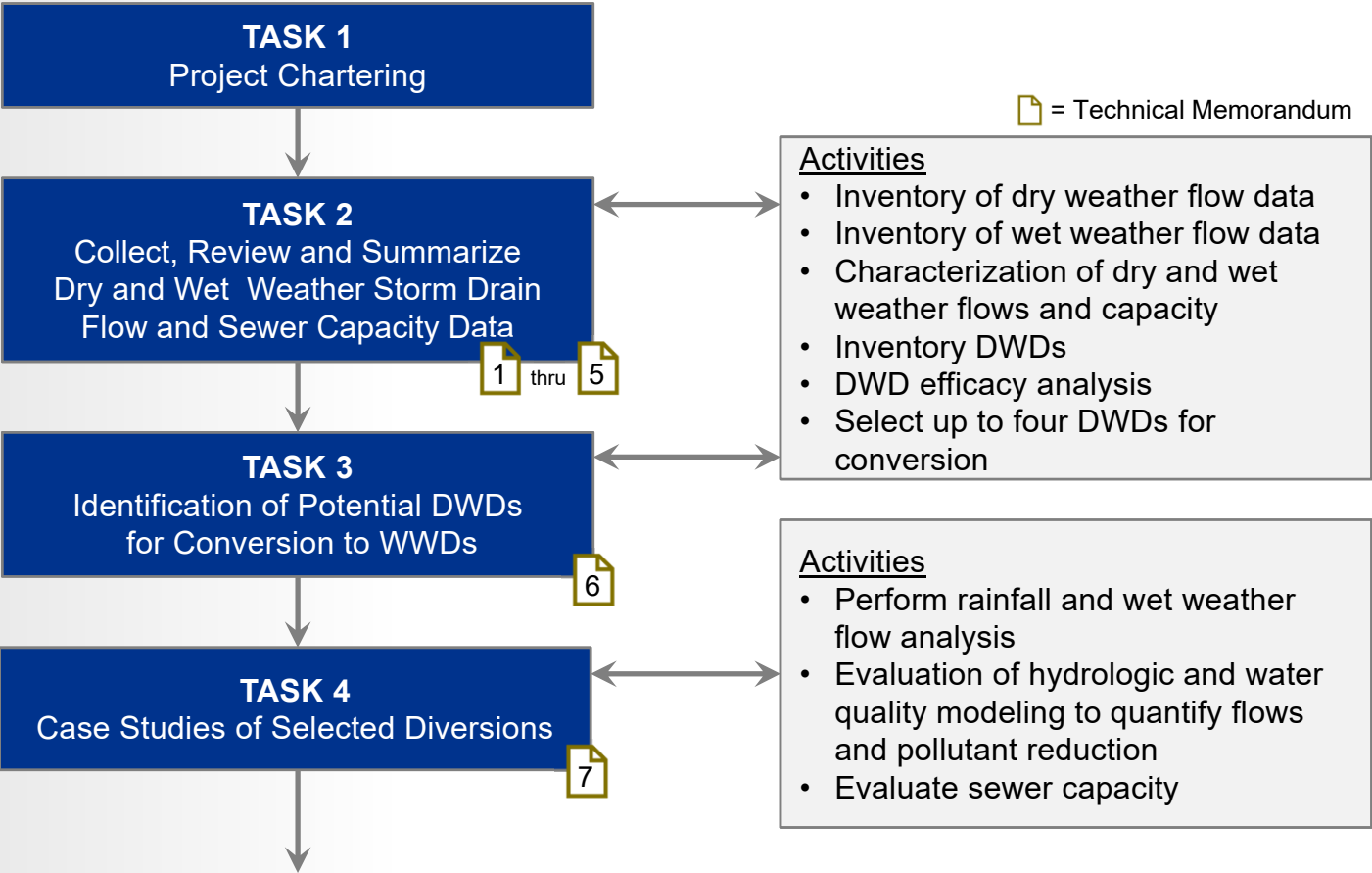
**Sewer Collection Systems**  
Jeff Friesen, P.E.

**Dry and Wet Weather Analysis**  
Rajat Chakraborti, Ph.D.

**Stormwater Management**  
Robert Henderson, P.E.

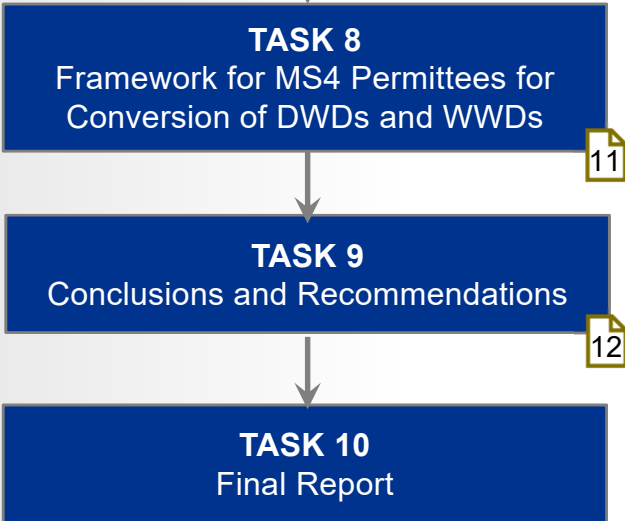
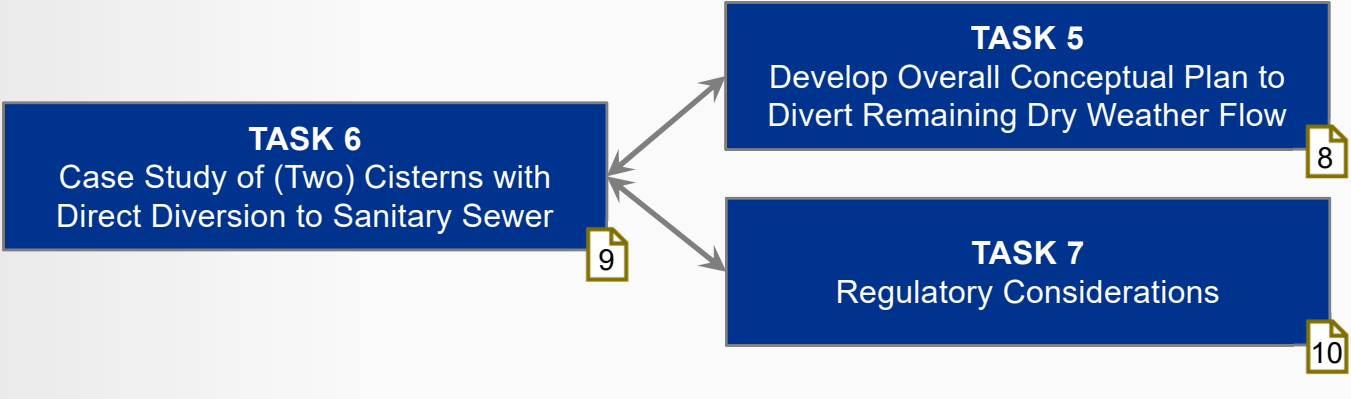
**Regulatory Considerations**  
Cordoba Corporation  
Sam Unger, P.E.  
Maria Mehranian

Stakeholder Participation





Stakeholder Participation



- Note:
- Detailed scope provided as handout
  - Team is available post-workshop for further discussion

## Deliverables

Task	Task Description	Deliverable (Draft and Final)
1	Project Chartering	
2	Collect, Review and Summarize Data	TM No. 1 – Inventory of Dry Weather Data TM No. 2 – Inventory of Wet Weather Data TM No. 3 – Characterization of Dry and Wet Weather Flows TM No. 4 – Inventory of DWDs TM No. 5 – DWD Efficacy Analysis
3	Identification of Potential DWDs for Conversion to WWDs	TM No. 6 – Identification of DWDs for Potential Conversion to WWDs
4	Case Studies of Selected Diversions	TM No. 7 – Feasibility Analysis of Selected DWDs for Conversion to WWDs
5	Develop Overall Conceptual Plan to Divert Remaining Dry Weather Flow	TM No. 8 – Conceptual Plan to Divert Remaining Dry Weather Flows in the Study Area
6	Case Study of Cisterns with Direct Diversion to Sanitary Sewer	TM No. 9 – Case Studies of Cisterns with Direct Diversion to Sanitary Sewer
7	Regulatory Considerations	TM No. 10 – Regulatory Considerations
8	Framework for MS4 Permittees for Conversion of DWDs and WWDs	TM No. 11 – Path Forward Framework of Conversion of DWDs to WWDs for MS4 Permittees
9	Conclusions and Recommendations	TM No. 12 – Conclusions and Recommendations
10	Final Report	Final Report
11	Project Management and Meetings	

## **Deliverable Comment and Review**

- Draft and final documents will be distributed by Jacobs
- Comments will be collected and consolidated by Jacobs and key comments reviewed with Technical Review Committee
- TM No. 1-12
  - Packaged delivery of TMs for review
  - 3-week review and comment period for TM package
- Draft Report
  - 3-week review and comment period

# Schedule



- Task 1 - Project Chartering** 2/1/2019 - 3/14/2019
- Task 2 - Collect, Review and Summarize Data** 3/13/2019 - 7/9/2019
- Task 3 - Identification of Potential DWDs for Conversion to WWDs** 6/12/2019 - 8/20/2019
- Task 4 - Case Studies of Selected Diversions** 7/24/2019 - 10/15/2019
- Task 5 - Develop Overall Conceptual Plan to Divert Remaining Dry Weather Flow** 9/25/2019 - 11/26/2019
- Task 6 - Case Study of Cisterns with Direct Diversion to Sanitary Sewer** 9/25/2019 - 11/12/2019
- Task 7 - Regulatory Considerations** 6/12/2019 - 8/20/2019
- Task 8 - Framework for MS4 Permittees for Conversion of DWDs and WWDs** 11/13/2019 - 1/21/2020
- Task 9 - Conclusions and Recommendations** 12/18/2019 - 1/28/2020
- Task 10 - Final Report** 1/29/2020 - 3/3/2020
- Task 11 - Project Management and Meetings** 2/1/2019 - 3/3/2020

## Data Request and Timeline

- See Handout
- Point of Contact for Data Collection
  - Sharing instructions will be distributed to contacts identified
- Response Schedule
  - Response to data request due to Jacobs team April 2
  - Excel file to be provided
  - Contact & Question: Amanda Heise

**Stakeholder Involvement**

## Stakeholder Involvement

- Participants of Steering Committee & Technical Review Committee
  - **Steering Committee:** to oversee the progress of work, provide strategic direction on the study and ensure that the work products best reflect the interests of each party.
    - Please add names of participants from your organizations to sign-up sheet
  - **Technical Review Committee:** to provide technical input on the study, review the deliverables, and vet comments provided by the parties to LVMWD and the consultant.
    - Please add names of participants from your organizations to sign-up sheet
  - **Data Points of Contact:** Technical leads at each agency to coordinate data request and transfer
    - Please add names of participants from your organizations to sign-up sheet

## Stakeholder Involvement

- Involvement
  - Provide data
  - Participate in the committees to help guide the process and provide inputs
  - Review project deliverables and provide comments



**Communication Protocol**

## Communication Protocol

- Point of Contact: Amanda Heise
  - CC Dave Pedersen, Coleman Olinger, and Rich Nagel
  - Contact information will be provided with meeting summary
- Identify Stakeholder's Points of Contact
  - Data collection
  - Steering and Technical Review Committees
- Other Interested Parties
  - Interface with Dave Pedersen

## Communication Protocol

### Point of Contact:

Amanda Heise (Project Manager)

Jacobs

213.228.8264

916.216.3368 mobile

[Amanda.Heise@jacobs.com](mailto:Amanda.Heise@jacobs.com)

<b>Discussion</b>	

## Discussion

- Criteria for success
- Foreseeable hurdles
- Questions/concerns/considerations?

## **Wrap-up and Next Steps**

## Next Steps

- Identify Stakeholder's Points of Contact for the data request
- Data Request
  - Information due to Jacobs April 2
  - Excel file to be sent to stakeholders
  - Questions on data request: to Amanda Heise

**Thank You!**

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March 13, 2019

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**DIRECTOR EXPENSE SHEET**

**Item 8.A1**

**NAME:**

**MONTH / YEAR**

No	Day	Title of Meeting / Description	Mileage (assumed as round trip unless noted)				Meeting Compensation
			From City	To City	Miles	Miles \$	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

No	Day	Miscellaneous Expense (please itemize each expense)	Misc. Expense
1			
2			
3			
4			
5			

Subtotal Miscellaneous Expense

Subtotal Mileage

Subtotal Meeting Compensation

Subtotal All

Mandatory Deferred Compensation @ 7.5%

Voluntary Deferred Compensation *(negative entry: default @ 0)*

**TOTAL**

*I certify the above is correct and accurate to the best of my knowledge*

Signature \_\_\_\_\_

\* Mileage is reimbursed at IRS Standard Business Mileage Rate

\*\*Directors are eligible for ten meeting days per month at \$200 per day. Ordinance Nos. 02-01-7 and 02-07-15

Here's your itinerary and other important travel information.

[View our mobile site](#) | [View in browser](#)



[Manage Flight](#) | [Flight Status](#) | [My Account](#)



## Payment information

### Total cost

#### Air - **WHKPV4**

Base Fare	\$	232.89
U.S. Transportation Tax	\$	17.47
U.S. 9/11 Security Fee	\$	11.20
U.S. Flight Segment Tax	\$	8.40
U.S. Passenger Facility Chg	\$	9.00

**Total** \$ **278.96**

### Payment

#### Visa ending in 1398

Date: February 5, 2019

**Payment Amount: \$278.96**

Fare Rules: If you decide to make a change to your current itinerary it may result in a fare increase. In the case you're left with travel funds from this confirmation number, you're in luck! We're happy to let you use them towards a future flight for the individual named on the ticket, as long as the new travel is completed by the expiration date.

Your ticket number: 5262436158056

## Prepare for takeoff

# Item 8.A1

Sheraton Grand Sacramento Hotel  
1230 J Street  
Sacramento, CA 95814  
United States  
Tel: 916-447-1700 Fax: 916-447-1701



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Frederick Bowcock  
AMERICAN WATER WORKS ASSOCIATI  
4700 HALAGA CIR  
LA VERNE, CA, 917502245  
201347 - 2019 CA-NV AWWA Spring Con Sta

Page Number : 2 Invoice Nbr : 823376  
Guest Number : 2171014  
Folio ID : A  
Arrive Date : 24-MAR-19 11:01  
Depart Date : 28-MAR-19 09:34  
No. Of Guest : 1  
Room Number : 2510

I agreed to pay all room & incidental charges.

82

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## EXPENSE SUMMARY REPORT

Currency: USD

Date	Rm Charge	Taxes	Telephone	Other	Total	Payment
03-24-2019	0.00	0.00	0.00	18.74	18.74	0.00
03-28-2019	0.00	0.00	0.00	0.00	0.00	-18.74
Total	0.00	0.00	0.00	18.74	18.74	-18.74

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# DIRECTOR EXPENSE SHEET

# Item 8.A2

Submit Form

**NAME:** David De Jesus, MWD

**MONTH / YEAR**

March

2019

No	Day	Title of Meeting / Description	Mileage (assumed as round trip unless noted)				Meeting Compensation
			From City	To City	Miles	Miles \$	
1	4	E&O Pre-meeting with Jim Green and management staff					\$ 200.00
Monthly meeting with Mr. Jim Green and staff on E&O Committee related agenda items for the month, including updates on current projects and water supply operations							
2	5	San Gabriel Valley Caucus Meeting					\$ 200.00
Joined SGV directors (San Marino, Pasadena, and Upper District) for a discussion on issues impacting our respective areas.							
3	11	Committee Meeting					\$ 200.00
Attended various meetings which will be reported on at the regularly scheduled Three Valley Meeting							
4	12	Board Meeting					\$ 200.00
Attended the Board meeting the details of which will be reported at the Three Valleys Meeting or video of which can be found on the MWD website							
5	18	CRA Special Board Meeting					\$ 200.00
Special board called to address the DCP and the action taken by MWD to shoulder the cutbacks in flows allocated to IID thus freeing the burden of potential shortages in the plan. Board subsequently approved moving forward with the plan despite IID's opposition.							
6	26	Special Board workshop on the Bay Delta California Water Fix					\$ 200.00
Staff provided the board with presentations outlining where the project was due to recent changes in costs, and political will.							
7	27	Follow-up conference call with COO Deven Upadhyay					\$ 200.00
Subsequent to our meeting last week on local water supply metering issues, a conference call was set up to discuss potential legal implications and operational strategies related to the MWD and CRA Board decision to move forward with the signing of the DCP despite the opposition of IID.							
8	29	CRA Inspection Tour (Day1)					\$ 200.00
As the MWD director for the District, I hosted the 3 day educational tour of MWD's facilities along the CRA							
9	30	CRA Day 2					\$ 200.00
See Day 1 info above							
10	31	CRA Day3					\$ 200.00
See Day 1 info above							

No	Day	Miscellaneous Expense (please itemize each expense)	Misc. Expense
1			
2			
3			
4			
5			

*I certify the above is correct and accurate to the best of my knowledge*

Subtotal Miscellaneous Expense \$ 0.00

Subtotal Mileage \$ 0.00

Subtotal Meeting Compensation \$ 2,000.00

Subtotal All \$ 2,000.00

Mandatory Deferred Compensation @ 7.5% (\$ 150.00)

Voluntary Deferred Compensation *(negative entry, default @ 0)* (\$ 891.50)

**TOTAL \$ 958.50**

Signature \_\_\_\_\_

\* Mileage is reimbursed at IRS Standard Business Mileage Rate

\*\*Directors are eligible for ten meeting days per month at \$200 per day. Ordinance Nos. 02-01-7 and 02-07-15



## DIRECTOR EXPENSE SHEET

**NAME:** David De Jesus, Division 2

**MONTH / YEAR**

March

2019

No	Day	Title of Meeting / Description	Mileage (assumed as round trip unless noted)				Meeting Compensation
			From City	To City	Miles	Miles \$	
1	6	Board Workshop	Walnut	Claremont	38.0	\$ 22.04	\$ 200.00
The meeting included an MOU with a Chino Basin Project to obtain Prop 1 funding for groundwater storage project, approval of the salary schedule for 2019, to review the FY 19-20 Budget Workshop format.							
2	7	Quarterly Chino Basin Watermaster Matters Caucus	Walnut	Chino	30.0	\$ 17.40	\$ 200.00
the inaugural public agency caucus meeting was held at IEUA to generally discuss chino basin issues as it related specifically to the public agencies represented on the board. It was decided that the meetings would rotate and be held quarterly.							
3	13	Special Board Meeting	Walnut	Claremont	38.0	\$ 22.04	\$ 200.00
A special board meeting was called to hear both sides of the issues on the Cadiz Project. No decisions were made other than to agree to conduct additional meetings in the future to obtain additional information and facts about the latest studies.							
4	14	Ethics and Harassment Training	Walnut	Claremont	38.0	\$ 22.04	\$ 200.00
Required every 2 years for publicly elected officials							
5	19	Ad-hoc Budget Committee	Walnut	Claremont	38.0	\$ 22.04	\$ 200.00
Met with management staff and Director Jackman to review listed expenditures related to conservation, public media and messaging.							
6	20	Meeting with President and GM re: Solar Boat concerns	Walnut	Covina	12.0	\$ 6.96	\$ 200.00
Meeting was held to discuss a number of issues raised by staff regarding the solar boat building event held at the District HQ. The GM was provided with insight and suggestions offered for further discuss with Three Valleys and the host of the event MWDSC.							
7	21	San Gabriel Valley Water Utilities Association	Walnut	Pomona	14.0	\$ 8.12	\$ 200.00
Attended the monthly meeting and Heard consultant and former water manager Robert Deloach speak about leadership and the necessary elements that make a person successful in any business.							
8	22	Conference call with Deven Upadhyay	Walnut	Pomona	14.0	\$ 8.12	\$ 200.00
Monthly meeting to discuss developing issues in the San Gabriel service area. Deven provided an update to the metering issue along the San Gabriel Pipeline route being looked into by operations staff. Additional information was exchanged and the investigation continues. Initial feedback on the Colorado DCP was also discussed with additional feedback expected after the decision.							
9	25	San Gabriel Valley Water Association Board Meeting	Walnut	Azusa	20.0	\$ 11.60	\$ 200.00
Attended the meeting and provided the group with updates on both Three Valleys and MWDSC.							
10	28	Chino Basin Watermaster	Walnut	Rancho C.	42.0	\$ 24.36	\$ 200.00
Attended the meeting as the District voting alternate. Covered the meeting in Bobs absence.							

No	Day	Miscellaneous Expense (please itemize each expense)	Misc. Expense
1			
2			
3			
4			
5			

Subtotal Miscellaneous Expense \$ 0.00

Subtotal Mileage \$ 164.72

Subtotal Meeting Compensation \$ 2,000.00

Subtotal All \$ 2,164.72

Mandatory Deferred Compensation @ 7.5% (\$ 150.00)

Voluntary Deferred Compensation *(negative entry, default @ 0)* (\$ 891.50)

**TOTAL \$ 1,123.22**

*I certify the above is correct and accurate to the best of my knowledge*

Signature \_\_\_\_\_

\* Mileage is reimbursed at IRS Standard Business Mileage Rate

\*\*Directors are eligible for ten meeting days per month at \$200 per day. Ordinance Nos. 02-01-7 and 02-07-15



DIRECTOR EXPENSE SHEET

Item 8.A4

Submit Form

NAME: Carlos Goytia, Division 1

MONTH / YEAR

March

2019

No	Day	Title of Meeting / Description	Mileage (assumed as round trip unless noted)				Meeting Compensation
			From City	To City	Miles	Miles \$	
1	2	City of Pomona	Pomona	Pomona	8.0	\$ 4.64	\$ 200.00
Met w/Mayor Sandoval and discussed City related issues							
2	4	Pomona City Council	Pomona	Pomona	8.0	\$ 4.64	\$ 200.00
Met w/Mayor Sandoval and Council Member Preciado							
3	6	TVMWD BM/Workshop	Pomona	Claremont	32.0	\$ 18.56	\$ 200.00
Attended and participated in boardroom deliberations and discussions							
4	8	Assembly Member F. Rodriguez Event	Pomona	Pomona	8.0	\$ 4.64	\$ 200.00
Dedication ceremony for the fallen Officer, G. Cassillas							
5	13	TVMWD - Special Board Meeting	Pomona	Claremont	32.0	\$ 18.56	\$ 200.00
Cadiz : proponents and opponents for the project							
6	14	TVMWD - Board Room	Pomona	Claremont	32.0	\$ 18.56	\$ 200.00
Ethic and Harassment Training							
7	15	Meeting w/PUSD Vocational Training Center	Pomona	Pomona	8.0	\$ 4.64	\$ 200.00
Discussions on career pathways in water and partnerships for collaboration							
8	16	Senator Connie Leyva Speakers Series	Pomona	Montclair	21.0	\$ 12.18	\$ 200.00
Guest Speaker @ Young Senator Program @ Montclair City Hall - Water Education							
9	28	WELL Conference	Pomona	Long Beach	35.0	\$ 20.30	\$ 200.00
Water education w/ elected leaders from throughout the state. Special guest speaker Mayor Robert Garcia of Long Beach							
10	29	2nd Day WELL Conference on Water Education	Pomona	Long Beach	35.0	\$ 20.30	\$ 200.00
Water Resiliency in So. Cal. Special guest speaker Senator Bob Hertzberg							

No	Day	Miscellaneous Expense (please itemize each expense)	Misc. Expense
1	28	Reimbursement for Hotel (Room & Parking)	\$ 222.11
2			
3			
4			
5			

Subtotal Miscellaneous Expense \$ 222.11

Subtotal Mileage \$ 127.02

Subtotal Meeting Compensation \$ 2,000.00

Subtotal All \$ 2,349.13

Mandatory Deferred Compensation @ 7.5% (\$ 150.00)

Voluntary Deferred Compensation (negative entry, default @ 0) \$ 0.00

**TOTAL \$ 2,199.13**

I certify the above is correct and accurate to the best of my knowledge

Signature \_\_\_\_\_

\* Mileage is reimbursed at IRS Standard Business Mileage Rate

\*\*Directors are eligible for ten meeting days per month at \$200 per day. Ordinance Nos. 02-01-7 and 02-07-15



Mr Carlos Goytia  
 1021 E. Miramar Ave.  
 Claremont CA 91711  
 United States

Room No. : A142  
 Arrival : 03-28-19  
 Departure : 03-29-19

**INFORMATION INVOICE**

Membership No :  
 A/R Number :  
 Group Code :  
 Company Name :  
 Booking : 11042SB464559  
 Reference

Page No. : 1 of 1  
 Folio No. :  
 Conf. No. : 20549080  
 Cashier No. :  
 User ID : ATORRES

Thank You For Staying With Us 03-29-19

Date	Text	Charges USD	Credits USD
03-28-19	Room Rate	159.00	
03-28-19	LB City Tourism Assessment	4.77	
03-28-19	CA State Tourism Assessment	0.31	
03-28-19	Occupancy Tax	19.08	
03-28-19	Self Parking	22.00	
03-28-19	Facilities Fee	16.95	
03-29-19	VISA		222.11
<b>Total</b>		<b>222.11</b>	<b>222.11</b>

Balance Due 0.00  
 Total incl. Tax 222.11



# DIRECTOR EXPENSE SHEET

# Item 8.A5

**Submit Form**

**NAME:** Denise Jackman, Division VII

**MONTH / YEAR** March 2019

No	Day	Title of Meeting / Description	Mileage (assumed as round trip unless noted)				Meeting Compensation
			From City	To City	Miles	Miles \$	
1	6	TVMWD General Meeting	Rowland Heights	Claremont	45.6	\$ 26.45	\$ 200.00
General meeting - Listen to Budget Issues presented by staff.							
2	12	Rowland Water District Monthly Meeting	Rowland Heights	Rowland Heights	2.0	\$ 1.16	\$ 200.00
District meeting of Rowland Water - Listen to Reports presented by RWD.							
3	13	TVMWD Special meeting	Rowland Heights	Claremont	45.6	\$ 26.45	\$ 200.00
Participated in discussions and listened to issues of Cadiz project by peers.							
4	14	TVMWD Training	Rowland Heights	Claremont	45.6	\$ 26.45	\$ 200.00
Participated in required course training for harassment and ethics							
5	19	TVMWD Ad Hoc Committee Meeting	Rowland Heights	Claremont	45.6	\$ 26.45	\$ 200.00
Discuss with staff and fellow directors issues related to 2019-2020 budget							
6	20	Walnut Valley Water District Monthly Meeting	Rowland Heights	Walnut	12.2	\$ 7.08	\$ 200.00
District meeting of Walnut Valley - Listen to Reports presented by WVWD.							
7	21	MTSAC President's Breakfast Meeting	Rowland Heights	Walnut	19.0	\$ 11.02	\$ 200.00
Attended President's meeting and represented TVMWD at Breakfast							
8	29	Metropolitan Water District Educational tour of Colorado and Diamond Valley Water	Rowland Heights	Claremont	45.6	\$ 26.45	\$ 200.00
Arrive at TVMWD - Travel to Palm Springs - Tour of several MET facilities							
9	30	Metropolitan Water District Educational Tour Continued					\$ 200.00
Travel to Colorado Plant - Tour of several MET Facilities							
10	31	Metropolitan Water District Educational Tour Continued					\$ 200.00
Travel from Colorado plant back to TVMWD - Tour MET Facilities							

No	Day	Miscellaneous Expense (please itemize each expense)	Misc. Expense
1	19	Monterey Bay Inn - Registration and Payment for Monterey Conference	\$ 749.25
2			
3			
4			
5			

I certify the above is correct and accurate to the best of my knowledge

Signature \_\_\_\_\_

Subtotal Miscellaneous Expense	\$ 749.25
Subtotal Mileage	\$ 151.50
Subtotal Meeting Compensation	\$ 2,000.00
Subtotal All	\$ 2,900.75
Mandatory Deferred Compensation @ 7.5%	(\$ 150.00)
Voluntary Deferred Compensation (negative entry, default @ 0)	\$ 0.00
<b>TOTAL</b>	<b>\$ 2,750.75</b>

\* Mileage is reimbursed at IRS Standard Business Mileage Rate

\*\*Directors are eligible for ten meeting days per month at \$200 per day. Ordinance Nos. 02-01-7 and 02-07-15



# Item 8.A5

Re: March Expense Report - Message (HTML)

File Message Help Tell me what you want to do

Ignore Delete Archive Reply Reply All Forward More Meeting Kiosk Team Email Done Reply & Delete Create New To Manager Rules OneNote Move Actions Assign Mark Categorize Follow Up Tags Policy Unread Edit Select Find Related Translate Read Aloud Zoom Customer Manager

Wed 4/10/2019 2:32 PM

XJ xxx-Denise Jackman  
Re: March Expense Report

To: Nadia Aguirre

**Hotels.com confirmation number**  
157002682198

**Check-in**  
Tuesday, May 7, 2019 (4 PM-midnight local time)

**Check-out**  
Friday, May 10, 2019 (Before noon local time)

**Your stay**  
3 nights, 1 room

**Cancellation policy**  
See cancellation policy below

**Amount paid**  
\$749.25

See full payment details below

**Manage booking**

**Book again**

**Hotels.com Rewards™**

4 5 6 7 8 9 10 FREE



**Hotels.com™**

Dear Wesley, your booking is guaranteed and all paid for.

Go paperless! Download our app to access and manage this booking offline.

Download for free

**Monterey Bay Inn**  
242 Cannery Row,  
Monterey,  
93940,





**DIRECTOR EXPENSE SHEET**

**Item 8.A6**

**Submit Form**

**NAME:** Bob Kuhn, Division 4

**MONTH / YEAR**

March

2019

No	Day	Title of Meeting / Description	Mileage (assumed as round trip unless noted)				Meeting Compensation
			From City	To City	Miles	Miles \$	
1	6	Three Valleys Board Workshop	Glendora	Claremont	20.0	\$ 11.60	\$ 200.00
Normal district business discussion and moving some of the issues to the board meeting							
2	7	Glendora Chamber of Commerce Legislative Committee	Glendora	Glendora	4.0	\$ 2.32	\$ 200.00
I attend on a monthly basis to represent the district and answer questions that come up							
3	11	General Manager & Maria Kennedy & Janet Zimmerman	Glendora	Claremont	20.0	\$ 11.60	\$ 200.00
Two different meetings 1) talk about funding for future projects, and 2) talk about the Cadiz meeting and what to expect from the Cadiz side of the issue							
4	13	Board workshop - Cadiz issues	Glendora	Claremont	20.0	\$ 11.60	\$ 200.00
Open meeting with several explaining the engineering report TVMWD requested							
5	14	CBWM Agg. Pool meeting	Glendora	Rancho Cucamonga	32.0	\$ 18.56	\$ 200.00
Agenda issues I was interested in there position on the Appeal issue coming up							
6	18	San Gabriel Valley Talk Group	Glendora	Glendora	4.0	\$ 2.32	\$ 200.00
Several Council members, and special district elected from around the San Gabriel Valley talking about issues of concern at the time							
7	19	Joint meeting Rotary & Kawis Glendora	Glendora	Glendora	4.0	\$ 2.32	\$ 200.00
one of several presenters on various subjects, mine was water issues and is the trout over? Hell no!							
8	20	JPIA / Risk Management Committee - Phone Conference	Glendora	0			\$ 200.00
2 hr. conference call talking about the issues of Risk Management and how they are dealing with it.							
9	28	SGVEP Monthly Meeting	Glendora	Pasadena	42.0	\$ 24.36	\$ 200.00
the call it a power lunch, each month its different issues this month was the new tax laws for 2019							
10			Glendora				

No	Day	Miscellaneous Expense (please itemize each expense)	Misc. Expense
1			
2			
3			
4			
5			

*I certify the above is correct and accurate to the best of my knowledge*

Signature \_\_\_\_\_

Subtotal Miscellaneous Expense	\$ 0.00
Subtotal Mileage	\$ 84.68
Subtotal Meeting Compensation	\$ 1,800.00
Subtotal All	\$ 1,884.68
Mandatory Deferred Compensation @ 7.5%	(\$ 135.00)
Voluntary Deferred Compensation <i>(negative entry; default @ 0)</i>	(\$ 1,665.00)
<b>TOTAL</b>	<b>\$ 84.68</b>

\* Mileage is reimbursed at IRS Standard Business Mileage Rate

\*\*Directors are eligible for ten meeting days per month at \$200 per day. Ordinance Nos. 02-01-7 and 02-07-15



# DIRECTOR EXPENSE SHEET

# Item 8.A7

Submit Form

**NAME:** John Mendoza, Division 6

**MONTH / YEAR**

March

2019

No	Day	Title of Meeting / Description	Mileage (assumed as round trip unless noted)				Meeting Compensation
			From City	To City	Miles	Miles \$	
1	6	TVMWD Board of Directors meetin	Pomona	Claremont			\$ 200.00
Meeting of the BOD staff and member agencies.							
2	11	SGVRC affairs	Pomona	Walnut			\$ 200.00
Meeting of various elected officials and business to discuss legislative actions.							
3	13	TVMWD Special Meeting	Pomona	Claremont			\$ 200.00
Cadiz Water Project independent review.							
4	14	TVMWD Ethics and Harassment Training	Pomona				\$ 200.00
Special training for board members and staff.							
5	21	MTSAC Foundation Presidents Breakfast	Pomona	Walnut			\$ 200.00
President MTSAC President Dr. Scroggins presentation to local officials, community members and staff about developments in education techniques and future funding.							
6	27	Six Basins Watermaster	Pomona	Claremont			\$ 200.00
Members meeting with presentation of Six Basins past history and web site workshop.							
7	28	SGVEP Power Luncheon	Pomona	Pasadena			\$ 200.00
Real estate transaction and property rights transfers and new legislation.							
8	29	MWD Upper Colorado River aqueduct Tour	Pomona	Claremont			\$ 200.00
Inspection trip Colorado Aqueduct hosted by Director David De Jesus							
9	30	MWD Upper Colorado aqueduct tour	Pomona	Claremint			\$ 200.00
Regional tour of the Colorado River Aquaduct							
10	31	MWDUpper Colorado aqueduct tour	Pomona	Claremont			\$ 200.00
Regional tour hosted by Director David De Jesus.							

No	Day	Miscellaneous Expense (please itemize each expense)	Misc. Expense
1			
2			
3			
4			
5			

*I certify the above is correct and accurate to the best of my knowledge*

Signature \_\_\_\_\_

Subtotal Miscellaneous Expense	\$ 0.00
Subtotal Mileage	\$ 0.00
Subtotal Meeting Compensation	\$ 2,000.00
Subtotal All	\$ 2,000.00
Mandatory Deferred Compensation @ 7.5%	(\$ 150.00)
Voluntary Deferred Compensation <i>(negative entry: default @ 0)</i>	\$ 0.00
<b>TOTAL</b>	<b>\$ 1,850.00</b>

\* Mileage is reimbursed at IRS Standard Business Mileage Rate

\*\*Directors are eligible for ten meeting days per month at \$200 per day. Ordinance Nos. 02-01-7 and 02-07-15



## DIRECTOR EXPENSE SHEET

# Item 8.A8

Submit Form

**NAME:** Joe Ruzicka, Division 5

**MONTH / YEAR**

March

2019

No	Day	Title of Meeting / Description	Mileage (assumed as round trip unless noted)				Meeting Compensation
			From City	To City	Miles	Miles \$	
1	6	TVMWD - Board Meeting	Diamond Bar	Claremont	40.0	\$ 23.20	\$ 200.00
Attended and participated in the deliberations.							
2	11	SGV Regional Chamber - GAC	Diamond Bar	Rowland Hgts.	14.0	\$ 8.12	\$ 200.00
Attended and met with political, community and business leaders and discussed current legislation being introduced in Sacramento and Washington.							
3	12	RWD - Board Meeting	Diamond Bar	Rowland Hgts.	14.0	\$ 8.12	\$ 200.00
Attended and apprised myself of the concerns and plans of a member agency.							
4	13	TVMWD - Special Board Meeting	Diamond Bar	Claremont	40.0	\$ 23.20	\$ 200.00
Attended and participated in the deliberations.							
5	14	LA County COB - Board Meeting	Diamond Bar	Los Angeles	60.0	\$ 34.80	\$ 200.00
Attended and chaired a meeting of the COB Board and discussed property sale of the former Covina Redevelopment Agency.							
6	20	WVWD - Board Meeting	Diamond Bar	Walnut	10.0	\$ 5.80	\$ 200.00
Attended and apprised myself of the issues of concern to a member agency.							
7	21	SCWUA - Membership Meeting	Diamond Bar	Pomona	22.0	\$ 12.76	\$ 200.00
Attended and heard a presentation on leadership principles.							
8	28	Lincoln Club - Membership Meeting	Diamond Bar	Covina	26.0	\$ 15.08	\$ 200.00
Attended and discussed current legislative action in Sacramento.							
9			Diamond Bar				
10			Diamond Bar				

No	Day	Miscellaneous Expense (please itemize each expense)	Misc. Expense
1			
2			
3			
4			
5			

*I certify the above is correct and accurate to the best of my knowledge*

Signature \_\_\_\_\_

Subtotal Miscellaneous Expense	\$ 0.00
Subtotal Mileage	\$ 131.08
Subtotal Meeting Compensation	\$ 1,600.00
Subtotal All	\$ 1,731.08
Mandatory Deferred Compensation @ 7.5%	(\$ 120.00)
Voluntary Deferred Compensation <i>(negative entry, default @ 0)</i>	\$ 0.00
<b>TOTAL</b>	<b>\$ 1,611.08</b>

\* Mileage is reimbursed at IRS Standard Business Mileage Rate

\*\*Directors are eligible for ten meeting days per month at \$200 per day. Ordinance Nos. 02-01-7 and 02-07-15



**Board of Directors  
Staff Report**

**To:** TVMWD Board of Directors  
**From:** Matthew H. Litchfield, General Manager *[Signature]*  
**Date:** April 17, 2019  
**Subject:** **FY 2018-19 Encumbrance Carryforward**

---

<input checked="" type="checkbox"/> <b>For Action</b>	<input type="checkbox"/> <b>Fiscal Impact</b>	<b>\$</b>
<input type="checkbox"/> <b>Information Only</b>	<input checked="" type="checkbox"/> <b>Funds Budgeted:</b>	<b>\$2,634,836</b>

---

**Staff Recommendation:**

**Staff is recommending approval to carry forward \$2,634,836 from FY 2018-19 to FY 2019-20 for capital projects incomplete as of June 30, 2019.**

**Discussion:**

Staff expects the following projects to continue into FY 2019-20 and therefore respectfully requests funds are carried forward:

- Grand Avenue Well \$1,192,741
- Land Acquisition (future wells) 750,000
- Building Modifications 313,429
- Carports 226,972
- JWL Control Valve 151,694
- \$2,634,836**

The above is our best estimate of projects we expect to be incomplete at June 30, 2019.

A final breakdown of all projects will be provided at the conclusion of the audit (November 2019) for final approval.

**Strategic Plan Objective(s):**

- 1.5 – Maintain water infrastructure to assure 100% reliability
- 3.1 – Utilize and comply with a set of financial policies to maintain TVMWD’s financial health
- 3.3 – Be accountable and transparent with major decisions

**Attachment(s):**

None


**Meeting History:**

Board of Directors Meeting, April 3, 2019, Informational Item Only

NA/JL



**Board of Directors  
Staff Report**

**To:** TVMWD Board of Directors  
**From:** Matthew H. Litchfield, General Manager   
**Date:** April 17, 2019  
**Subject:** **Salary Schedule effective July 1, 2019**

---

<input checked="" type="checkbox"/> <b>For Action</b>	<input type="checkbox"/> <b>Fiscal Impact</b>
<input type="checkbox"/> <b>Information Only</b>	<input type="checkbox"/> <b>Funds Budgeted:</b>

---

**Staff Recommendation:**

**Staff is recommending approval of the salary schedule effective July 1, 2019.**

**Background:**

Pursuant to CalPERS and California Code of Regulations Section 570.5, salary schedule changes must be approved and adopted by the employer’s governing body according to the requirements of applicable public meeting laws.

**Discussion:**

Provided is the proposed salary schedule to be effective July 1, 2019, which reflects a 3.93% increase to salary ranges, based on the change from calendar year 2017 to 2018 in the Consumer Price Index - Urban Wage Earners and Clerical Workers, as prepared by the Bureau of Labor Statistics. These ranges were included in calculating the budget for FY 2019-20.

As a reminder, these adjustments are made to the salary ranges, not to the individual employee’s salary. Salary changes continue to be based on the merits of the employee’s annual evaluation.

**Strategic Plan Objective(s):**

3.3 – Be accountable and transparent with major decisions

**Attachment(s):**

Exhibit A – Salary Schedule effective July 1, 2019

**Meeting History:**

Board of Directors Meeting, April 3, 2019, Informational Item Only

NA/JL

# Item 8.C2 - Exhibit A

## THREE VALLEYS MUNICIPAL WATER DISTRICT ANNUAL SALARY RANGE BY CLASSIFICATION

Effective: July 1, 2019

CLASSIFICATION	Miniumum Salary Range	Maximum Salary Range
ACCOUNTING TECHNICIAN	\$ 50,018	\$ 80,029
ADMINISTRATIVE ASSISTANT	\$ 46,231	\$ 73,969
CHIEF ADMINISTRATIVE OFFICER	\$ 140,549	\$ 224,878
CHIEF FINANCE OFFICER	\$ 140,549	\$ 224,878
CHIEF OPERATIONS OFFICER	\$ 140,549	\$ 224,878
CHIEF WATER RESOURCES OFFICER	\$ 140,549	\$ 224,878
COMPLIANCE SPECIALIST	\$ 65,592	\$ 104,947
CONSERVATION & RESOURCE ANALYST	\$ 77,430	\$ 123,889
ENGINEER	\$ 78,068	\$ 124,910
EXECUTIVE ASSISTANT	\$ 57,596	\$ 92,154
GENERAL MANAGER	\$ 220,000	\$ 275,000
INSTRUMENTATION/ELECTRICAL SYSTEM OPERATOR	\$ 69,876	\$ 111,801
OPERATIONS SUPERVISOR	\$ 82,643	\$ 132,229
PLANT ASSISTANT	\$ 40,198	\$ 64,316
PROJECT MANAGER	\$ 102,497	\$ 163,995
SENIOR FINANCIAL ANALYST	\$ 77,237	\$ 123,579
SHIFT OPERATOR II	\$ 49,473	\$ 79,157
SHIFT OPERATOR III	\$ 60,890	\$ 97,424
SHIFT OPERATOR IV	\$ 67,188	\$ 107,501
SHIFT OPERATOR V	\$ 69,876	\$ 111,801

Based on Board approval, an adjustment to each salary range classification will be considered for July 1 of each year. Range adjustments are tied to changes in the Consumer Price Index - Urban Wage Earners and Clerical Workers for Los Angeles-Long Beach-Anaheim as prepared by the Bureau of Labor Statistics, from current year annual to the prior year annual. The adjustment to each salary range is intended to keep TVMWD's salary ranges at the market level and may not necessarily impact individual salaries. The opportunity for individual salary increases will continue under the merit-based system employed by TVMWD. An important note is that an employee's annual salary may be below the minimum salary range if: (1) their annual evaluation has not yet occurred in the current fiscal year or (2) their performance documented in prior annual evaluations has not merited an increase that has kept up with index adjustments to the salary ranges.

### **Shift Differential Pay**

- Shift operators and plant assistants who work at times other than dayshift (7 AM to 3 PM) will be compensated with 10% additional pay for those hours.
- Shift differential pay is considered special compensation and will be reported to CalPERS as such.

### **Standby Pay**

- Shift operators who serve in an on-call capacity will be paid \$35 per day (\$70 on holidays).
- One operator will be designated to serve in this role every day (weekdays and weekends).
- The on-call operator must be available on his designated day to return to the plant within 30 minutes of receiving a call, ready for work as in any other instance. If the on-call operator is unable to return to work, he is responsible for locating a substitute operator. The substitute operator will receive the \$35 standby pay.
- In addition to receiving the \$35 per day, the on-call operator will be paid for the additional time spent responding to the situation.
  - If responding by phone only, the on-call operator will be guaranteed at least 15 minutes of additional pay. All time over 15 minutes will be rounded up to the nearest 15 minute increment.
  - If responding in person, the on-call operator will be guaranteed at least two hours of additional pay. All time over two hours will be rounded up to the nearest 15 minute increment.
  - Operators will be eligible for OT and shift differential pay as applicable for time spent responding.
- Standby pay is not considered special compensation and thus will not be included as a part of final compensation in calculating CalPERS pension.

### **Holiday Pay**

- Any employee scheduled who works on either the actual holiday or the observed holiday will be paid at one and one-half times the employee's regular rate of pay. Since the employee is working the holiday, the employee will also be paid an additional eight hours at regular pay for that holiday.





Board of Directors
Staff Report

To: TVMWD Board of Directors
From: Matthew H. Litchfield, General Manager
Date: April 17, 2019
Subject: FY 2019-20 Budget

Table with 4 columns: For Action (checked), Information Only (unchecked), Fiscal Impact (\$ 70,781,679), Funds Budgeted (unchecked)

Staff Recommendation:

Staff is recommending approval of the FY 2019-20 budget.

Discussion:

Attached for consideration is the final draft of the FY 2019-20 budget, which has been presented twice to the Board, the ad-hoc committee and the member agency managers. Input from each meeting was used to prepare this final draft.

Highlights of the proposed budget:

- TVMWD's controllable operating expenses over the 5-year period are within a half percent of what staff projected last year.
• An in-depth review was performed by the ad-hoc committee to validate the necessity of legislative outreach, community outreach and memberships. Changes were recommended and will be implemented during the year.
• TVMWD's standby charge is well below the maximum amount and is expected to remain that way for the next seven years.
• TVMWD continues to operate with no debt and no plans to issue debt.
• TVMWD continues to focus on improving local supply reliability, as evidenced by 75% of the FY 2019-20 capital budget (and 50% of the 5-year CIP budget) focused on enhancing local groundwater production.
• All reserves are expected to be above minimum reserve targets as of 6/30/19. While we expect to slightly dip below our \$10M emergency goal during FY 2019-20, we expect to be back above the following year and beyond.

Strategic Plan Objective(s):

- 3.1 – Utilize and comply with a set of financial policies to maintain TVMWD's financial health
3.3 – Be accountable and transparent with major decisions

**Attachment(s):**

Exhibit A – FY 2019-20 Budget

**Meeting History:**

Board of Directors Meeting, March 6, 2019, Informational Item Only

Budget Ad-Hoc Meeting, March 19, 2019, Informational Item Only

Budget Ad-Hoc Meeting, April 1, 2019, Informational Item Only


Board of Directors Meeting, April 3, 2019, Informational Item Only

NA/JL

FY 2019/20 TVMWD BUDGET VERSION 3.0										
	FY 2018/19	FY 2018/19	FY 2019/20	Pass Through	Operating	Capital	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
	Budget	Projected	Budget	Fund	Fund	Fund	Budget	Budget	Budget	Budget
<b>REVENUES</b>										
Water Sales	56,527,935	59,309,158	58,985,405		58,985,405		57,380,721	57,910,094	59,524,004	61,364,662
Standby Charge	3,466,681	3,466,681	3,551,583	3,551,583			3,857,237	4,182,410	4,405,571	4,729,991
Capacity Charge Assessment	1,208,200	1,208,200	1,173,600	1,173,600			1,303,120	1,381,880	1,474,960	1,582,360
Property Taxes	2,120,753	2,328,648	2,300,944			2,300,944	2,300,944	2,300,944	2,300,944	2,300,944
Fixed Charge Assessment	665,906	665,906	685,623		685,623		701,659	725,230	747,376	769,208
Hydroelectric Sales	34,583	126,609	126,609		126,609		126,609	126,609	126,609	126,609
Interest Income	151,600	377,856	212,900		212,900		212,900	212,900	212,900	212,900
Pumpback O&M & Reservoir #2 Reimb.	20,000	22,827	20,000	20,000			20,000	20,000	20,000	20,000
Grants and Other Revenue	5,054	107,597	5,170		5,170		5,300	5,432	5,568	5,707
<b>TOTAL REVENUES</b>	<b>64,200,712</b>	<b>67,613,481</b>	<b>67,061,835</b>	<b>4,745,183</b>	<b>60,015,708</b>	<b>2,300,944</b>	<b>65,908,489</b>	<b>66,865,500</b>	<b>68,817,932</b>	<b>71,112,381</b>
<b>EXPENSES</b>										
Water Purchases	50,329,636	53,539,411	52,837,522		52,837,522		51,005,884	51,533,845	53,089,810	54,669,480
MWD RTS Charge	3,466,681	3,466,681	3,551,583	3,551,583			3,857,237	4,182,410	4,405,571	4,729,991
Staff Compensation	4,239,457	4,147,336	4,200,756		4,200,756		4,340,598	4,522,072	4,701,748	4,869,899
MWD Capacity Charge	1,208,200	1,208,200	1,173,600	1,173,600			1,303,120	1,381,880	1,474,960	1,582,360
Operations and Maintenance	1,422,790	1,458,801	1,347,432		1,347,432		1,365,074	1,394,329	1,424,211	1,454,734
Capital Repair and Replacement	700,199	327,770	285,000			285,000	100,000	-	-	200,000
Capital Investment Program	3,379,974	1,053,468	3,233,213			3,233,213	1,032,684	2,341,000	2,986,222	1,087,925
Professional Services	470,450	477,913	524,982		524,982		536,233	597,725	559,463	571,453
Directors Compensation	309,965	297,120	331,520		331,520		336,999	342,768	348,841	355,236
Communication and Conservation Programs	185,700	188,817	193,000		193,000		197,136	201,361	205,677	210,084
Planning and Resources	60,000	152,360	90,000		90,000		91,929	93,899	95,911	97,967
Membership Dues and Fees	106,318	102,923	81,054		81,054		82,791	84,565	86,378	88,229
Hydroelectric Facilities	42,500	39,649	39,000		39,000		39,836	40,690	41,562	42,452
Pumpback O&M & Reservoir #2	20,000	22,827	20,000	20,000			20,000	20,000	20,000	20,000
Board Elections	-	76,363	-		-		-	-	-	-
Reserve Replenishment	234,878	234,878	238,181		238,181		238,181	238,999	238,999	239,835
Project Encumbrances from prior year		2,634,836	2,634,836			2,634,836	-	-	-	-
<b>TOTAL EXPENSES</b>	<b>66,176,748</b>	<b>69,429,352</b>	<b>70,781,679</b>	<b>4,745,183</b>	<b>59,883,447</b>	<b>6,153,049</b>	<b>64,547,701</b>	<b>66,975,543</b>	<b>69,679,353</b>	<b>70,219,644</b>
<b>NET INCOME (LOSS) BEFORE TRANSFERS</b>	<b>(1,976,037)</b>	<b>(1,815,870)</b>	<b>(3,719,844)</b>	<b>-</b>	<b>132,261</b>	<b>(3,852,105)</b>	<b>1,360,788</b>	<b>(110,043)</b>	<b>(861,422)</b>	<b>892,737</b>
TRANSFER FROM BOARD ELECTION RESERVES	-	76,363								
TRANSFER FROM/(TO) CAPITAL RESERVES	97,132	97,132	1,217,269			1,217,269	(1,168,260)	40,056	685,278	(1,013,019)
TRANSFER FROM/TO ENCUMBERED RESERVES	1,907,288	1,907,288	2,634,836			2,634,836				
<b>NET INCOME (LOSS) AFTER TRANSFERS</b>	<b>28,384</b>	<b>264,913</b>	<b>132,261</b>	<b>-</b>	<b>132,261</b>	<b>-</b>	<b>192,528</b>	<b>(69,987)</b>	<b>(176,144)</b>	<b>(120,282)</b>
	<b>CY 2019</b>		<b>CY 2020</b>				<b>CY 2021</b>	<b>CY 2022</b>	<b>CY 2023</b>	<b>CY 2024</b>
MWD RATE	\$ 1,050		\$ 1,078				1,104	1,130	1,159	1,183
TVMWD SURCHARGE	\$ (10)		\$ (10)				(10)	(10)	(10)	(10)
TVMWD RATE	\$ 1,040		\$ 1,068				\$ 1,094	\$ 1,120	\$ 1,149	\$ 1,173
<b>ANNUAL FIXED CHARGE</b>	<b>\$ 681,330</b>		<b>\$ 689,917</b>				<b>\$ 713,400</b>	<b>\$ 737,060</b>	<b>\$ 757,692</b>	<b>\$ 780,724</b>



## Board of Directors Staff Report

**To:** TVMWD Board of Directors  
**From:** Matthew H. Litchfield, General Manager   
**Date:** April 17, 2019  
**Subject:** **Resolution No. 19-04-848 Adopting Water Rates for CY 2020**

---

<input checked="" type="checkbox"/> <b>For Action</b>	<input type="checkbox"/> <b>Fiscal Impact</b>	<b>\$</b>
<input type="checkbox"/> <b>Information Only</b>	<input type="checkbox"/> <b>Funds Budgeted:</b>	

---

**Staff Recommendation:**

**Staff is recommending approval of Resolution No. 19-04-848 Adopting Water Rates for CY 2020**

**Discussion:**

Attached is the proposed rate resolution for rates and charges that will go into effect January 1, 2020. Based on the final draft of the FY 2019-20 Budget, TVMWD will apply a surcharge discount of -\$10 per AF to treated water delivered during calendar year 2020. This is the third consecutive year TVMWD has been able to reduce MWD's treated water rate with a discounted surcharge.

TVMWD will apply a \$0 surcharge to untreated water delivered during calendar year 2020. Untreated deliveries may be subject to charges from other agencies based on the connection used and basin delivered to.

Also attached are the summary schedules of the capacity and fixed charges for 2020.

**Strategic Plan Objective(s):**

3.1 – Utilize and comply with a set of financial policies to maintain TVMWD's financial health

3.3 – Be accountable and transparent with all major decisions

**Attachment(s):**

Exhibit A – Resolution No. 19-04-848 Water Rates for Calendar Year 2020

Exhibit B – Capacity Charges for Calendar Year 2020

Exhibit C – Fixed Charges for Calendar Year 2020

**Meeting History:**

Board of Directors Meeting, April 3, 2019, Informational Item Only

NA/JL

# Item 8.E2 - Exhibit A

## RESOLUTION NO. 19-04-848

### **A RESOLUTION OF THE BOARD OF DIRECTORS OF THREE VALLEYS MUNICIPAL WATER DISTRICT ADOPTING WATER RATES FOR CALENDAR YEAR 2020**

WHEREAS, the Board of Directors of Three Valleys Municipal Water District (“TVMWD”) finds as follows:

A. TVMWD is a municipal water district organized and operating pursuant to Water Code Section 71000 et seq., and is a Member Agency of the Metropolitan Water District of Southern California (“MWD”) which wholesales imported water to TVMWD;

B. TVMWD is responsible for the sale and distribution of the water it purchases from MWD, and is authorized under Water Code Sections 71611-71613 to sell any water within its control to consumers, cities, and other public agencies and corporations;

C. Under Water Code Sections 71613-71617, TVMWD is authorized to fix rates at which the water it delivers may be sold;

D. TVMWD has approved the Fiscal Year (FY) Budget for 2019-20 consisting of expenses for expected water sales, reserves, and the Miramar Water Treatment Plant (“Miramar”);

E. TVMWD intends to collect sufficient revenues to cover the projected expenses from miscellaneous revenue, state subventions, property taxes, and by rate-based fees and charges for delivered and/or stored water;

F. The revenues raised by the levying of TVMWD’s water rates are used for all the purposes authorized by law, including but not limited to (1) funding the operating costs of TVMWD, including employee wages and benefits; (2) purchasing or leasing supplies, equipment, and materials; (3) meeting financial reserve needs and requirements; (4) obtaining funds for capital projects necessary to maintain service within existing services areas; (5) providing for repairs, maintenance, and depreciation of works owned and operated by TVMWD; (6) yielding a reasonable surplus for improvements, extensions, and enlargements; and (7) paying the principal, interest and maintaining the required coverage on any bonded indebtedness;

G. The establishment, modification, structuring, restructuring, and approval of TVMWD’s water rates are for the purpose of meeting TVMWD’s operating expenses (including employee wages and benefits), purchasing and/or leasing supplies, equipment, and materials, meeting TVMWD’s financial reserve needs and requirements, and obtaining funds for capital projects necessary to maintain service within TVMWD’s existing service areas, and is therefore exempt from the requirements of the California Environmental Quality Act as provided by Public Resources Code Section 21080(b)(8);

H. The amount of the rates and charges hereby adopted do not exceed the reasonable anticipated costs for the corresponding services provided by TVMWD, and therefore the fees imposed hereby do not qualify as a “tax” under Article XIIC, Section 1(e), of the California Constitution or Section 50076 of the California Government Code, and the

# Item 8.E2 - Exhibit A

actions taken herein are exempt from the additional notice and public meeting requirements of the Ralph M. Brown Act pursuant to Government Code Sections 54954.6(a)(1)(A) and (B); and

I. To the extent that the water rates hereby adopted apply to TVMWD’s provision of wholesale water service to its retail agencies, such rates are not imposed upon any person as an incident of property ownership, and thus are not subject to the substantive and procedural prerequisites of Article XIID of the California Constitution.

**NOW, THEREFORE, BE IT RESOLVED** that TVMWD’s Board of Directors (“Board”) does hereby adopt and order as follows:

1. **Effective Date.** The effective date of the following rates, fees and charges shall be January 1, 2020 unless otherwise noted. The rates shall remain in effect until changed or canceled by the Board.
2. **Rates.** All sales, deliveries, and availability of water at the rates established herein shall be subject to the ability of TVMWD to sell, deliver, and make available such water under operating conditions determined by the General Manager of TVMWD and of MWD, and subject to the water service agreements of TVMWD and of MWD.
  - A. **TVMWD Water Rates.** MWD has assigned a “base firm demand” or allocation of water deliveries to TVMWD for the period January 1, 2015 through December 31, 2024 based on Option 2 of the new 10-year purchase order agreement. A Tier 1 base firm demand of 80,688 acre-feet has been allocated to the TVMWD Member Agencies based on the proportional share of each Member Agency’s 10-year average (FY 2005 through FY 2014); however, no agency will receive less than their CY 2014 Tier 1 limit. The Tier 1 allocations for calendar year 2020 are as follows:

<i>Member Agency</i>	<i>CY 2020 Tier 1 Allocation</i>
<b>Boy Scouts</b>	<b>36</b>
<b>Cal Poly</b>	<b>269</b>
<b>Covina</b>	<b>1,568</b>
<b>Glendora</b>	<b>4,101</b>
<b>JWL</b>	<b>31,066</b>
<b>La Verne</b>	<b>8,026</b>
<b>Mt. SAC</b>	<b>699</b>
<b>RWD</b>	<b>4,879</b>
<b>GSWC - Claremont</b>	<b>5,576</b>
<b>GSWC - San Dimas</b>	<b>10,138</b>
<b>VHWC</b>	<b>464</b>
<b>Suburban</b>	<b>1,961</b>
<b>WVWD</b>	<b>11,905</b>
<b>Tier-1 Acre Foot Allotment</b>	<b>80,688</b>

## Item 8.E2 - Exhibit A

Each Member Agency's allocation may change if TVMWD's base firm demand is changed, but the sum of the Tier 1 allocations shall remain the same as the base firm demand assigned to TVMWD by MWD. If TVMWD's base firm demand is changed, the Member Agency Tier 1 allocation will change in proportion to the amount the agency contributed to the change and in comparison to the total increase in TVMWD's base firm demand.

Effective January 1, 2020 treated water from TVMWD will be sold at \$1,068 per acre foot for Tier 1 and \$1,155 per acre foot for Tier 2.

Individual Member Agencies that exceed their Tier 1 allocation during the calendar year will be billed at the end of the calendar year for the additional demand at the appropriate Tier 2 amount, depending upon actual Tier 2 costs incurred by TVMWD as a whole.

- B. Groundwater Replenishment Water Rate.** MWD did not adopt a replenishment water rate for 2020 and beyond. Groundwater replenishment water is provided only when additional water for such use is available from MWD. Subject to any applicable legal restrictions, the General Manager may set a groundwater replenishment rate at his/her discretion for deliveries to non-Member Agencies as long as the amount is no less than the rates applicable to Member Agencies.
- C. In Lieu Water Rate.** MWD did not adopt a replenishment water rate for 2020 and beyond, therefore an in-lieu water rate has yet to be determined. As provided for in the section on replenishment service in the MWD Rate Structure Administrative Procedures Handbook, TVMWD will incorporate these procedures for the sale of available in-lieu water service. This water will be sold for the replenishment of water supplies in groundwater basins, as a substitute for deliveries from the Weymouth Treatment and Miramar Treatment facilities.
- D. Untreated Water Rate.** Untreated water purchased from MWD for spreading purposes that is later extracted and sold will be charged at the current TVMWD rate on the date of extraction, less the initial price paid for the water. Effective January 1, 2020 the untreated rates from TVMWD will be \$755 per acre foot for Tier 1 and \$842 per acre foot for Tier 2. Additional charges based on the connection used and basin delivered to may apply. Subject to any applicable legal restrictions, the General Manager may set an untreated water rate at his/her discretion for deliveries to non-Member Agencies as long as the amount is no less than the rates applicable to Member Agencies.
- E. Capacity Charge.** The MWD Capacity Charge ("Charge") will be \$8,800 per cubic foot second (cfs) effective January 1, 2020. TVMWD's Capacity Charge basis will be 143.2 based on TVMWD's peak connected capacity during the last three completed fiscal years. The Charge will either increase or decrease only if a new 24-hour peak demand is established during the period of May-September of any year. Subsequently, a revised Charge would become effective on January 1 of the following year. A monthly allocation Charge will apply to each Member Agency based on their specific non-coincidental peak during the period of 2016 to 2018, as follows:



## Item 8.E2 - Exhibit A

<i>Agency</i>	<i>3 Year High Peak</i>	<i>Per CFS Charge 2020</i>	<i>2020 CFS Basis</i>	<i>2020 Monthly Charge</i>	<i>2020 Annual Charge</i>
<b>Boy Scouts</b>	0.5	\$8,800	0.4	\$268	\$3,211
<b>Cal Poly</b>	0.9	\$8,800	0.7	\$482	\$5,781
<b>Covina</b>	7.1	\$8,800	5.2	\$3,800	\$45,602
<b>Covina Irrigating Co.</b>	20.0	\$8,800	14.6	\$10,705	\$128,457
<b>Glendora</b>	8.3	\$8,800	6.1	\$4,442	\$53,310
<b>La Verne</b>	17.7	\$8,800	13.0	\$9,498	\$113,973
<b>Mt. SAC</b>	2.6	\$8,800	1.9	\$1,392	\$16,699
<b>PWR-JWL</b>	41.3	\$8,800	30.1	\$22,105	\$265,263
<b>RWD</b>	16.0	\$8,800	11.7	\$8,564	\$102,765
<b>GSWC – Claremont</b>	21.3	\$8,800	15.5	\$11,376	\$136,517
<b>GSWC - San Dimas</b>	19.3	\$8,800	14.1	\$10,330	\$123,961
<b>WVWD</b>	41.2	\$8,800	30.1	\$22,052	\$264,621
<b>Capacity Charge Totals:</b>	<b>196.2</b>		<b>143.2</b>	<b>\$105,013</b>	<b>\$1,260,160</b>

As the cfs basis is subject to change each year, TVMWD will re-allocate the charge to each Member Agency for their proportionate share in setting the new peak. The monthly charge shall be paid regardless of the quantity of water delivered during the month and will be separate from the monthly water sale charges invoiced by TVMWD.

3. **Penalties.** In the event any Member Agency shall be delinquent in the payment for water delivered by TVMWD, or through an MWD connection, and/or other charges as invoiced by TVMWD, an additional charge equal to two (2) percent of such delinquent payment for each month or portion thereof (days delinquent divided by 30) that such payment remains delinquent shall be assessed, and the Member Agency shall pay such charge to TVMWD in addition to the amount of such delinquent payment. Notwithstanding the above, if the total period of delinquency does not exceed five (5) business days, the additional charge shall be equal to one (1) percent of such delinquent payment. In the event any Member Agency shall be delinquent for more than thirty (30) days in the payment for water, such delinquency shall be reported by the General Manager to the Board of Directors of TVMWD at its next meeting. The Board, in its discretion and upon such other conditions as it may prescribe after giving the Member Agency a reasonable opportunity to be heard, may order the termination of service to such Member Public Agency until all delinquent payments, including additional charges, are made to TVMWD or may authorize such other actions as may be legally available to effectuate collection.
  
4. **Cost Allocations.** The required revenue for the TVMWD's FY 2019-20 Budget will be met in the following revenue priorities: (a) Miscellaneous revenues (interest, etc.); (b) State subventions; (c) TVMWD's Standby Charge; (d) Water Sales; and (e) Fixed Cost Allocations. The required calendar year 2020 Fixed Cost Allocation revenue of \$689,551 shall be obtained through three component allocations in equal amounts. Each allocated cost component will generate revenue of \$229,850. Each Member Agency has already submitted to TVMWD its certified component values.

## Item 8.E2 - Exhibit A

- A. Connected Capacity Charge.** Each Member Agency has the ability to receive water from TVMWD through service connections of TVMWD and/or MWD. The capacity of each service connection shall be determined and allocated to a Member Agency. The Member Agency's total allotment for the connected capacity charge shall be one-third (1/3) of the total required Cost Allocation revenue. The Connected Capacity Charge shall be collected on a monthly basis.
- B. Equivalent Small Meter Charge.** All Member Agency revenue meters shall be converted to an equivalent number of 5/8" water meters using the AWWA conversion table found in the Service Meter Manual. The Member Agency's total allotment for the equivalent small meter charge shall be one-third (1/3) of the total required Cost Allocation revenue. The Equivalent Small Meter Charge shall be collected on a monthly basis.
- C. Historical Water Use Charge.** TVMWD maintains the historical record of imported water use of each Member Agency. The moving three-year average total ending FY 2017-18 for the total use of all Member Agencies will be calculated. The Member Agency's percentage of the total three-year average water use shall be one-third (1/3) of the required Cost Allocation revenue. The Historical Use Charge shall be collected on a monthly basis.
- 5. Hydroelectric Rate.** TVMWD also operates a hydroelectric facility at the Miramar plant. On an as available basis, the hydro provides power to the facilities through a separate meter. The actual power delivered through the Miramar hydro is received at the water treatment plant. The rate that TVMWD will charge for hydroelectric power will be equal to the melded aggregate average of the rate paid to Edison on the regular monthly bill.
- 6. Definitions.** The definition and application of the foregoing classes and conditions of service shall be the same as those established, interpreted, and amended from time to time by MWD through its Administrative Code, and such other rules, regulations, policies, ordinances, or resolutions that have been or may be adopted by the MWD Board of Directors, which are by this reference incorporated herein and adopted by the TVMWD as though set forth herein in their entirety.
- A. Acre-foot.** The volume of water contained in one-acre area one foot deep. Approximately 435.6 ccf or 325,851 gallons.
- B. CCF.** The volume of water contained in one hundred cubic feet. Approximately 748 gallons.
- C. CFS.** A flow rate of one cubic foot of water per second. Approximately 448.8 gallons per minute.
- D. Groundwater Replenishment.** Water used for direct spreading by a Member Agency to meet the legal requirements of groundwater basin adjudication.

# Item 8.E2 - Exhibit A

**E. Member Agency.** Those agencies within TVMWD's service area that are or can be provided with water service as listed below:

Boy Scouts of America – Firestone Scout Reservation  
California State University - Pomona  
Covina, City of  
Covina Irrigating Company  
Glendora, City of  
Golden State Water Company (Claremont & San Dimas)  
La Verne, City of  
Mt. San Antonio College  
Pomona, City of  
Pomona-Walnut-Rowland Joint Pipeline Commission  
Rowland Water District  
Suburban Water Systems  
Valencia Heights Water Company  
Walnut Valley Water District

**F. MWD.** MWD is a metropolitan water district organized and existing under the Metropolitan Water District Act of the State of California (Statutes 1969, Chapter 209, as amended).

**G. Imported Water.** District water shall be comprised of water resources obtained from MWD, TVMWD's Miramar delivery, Member Agencies and other parties and/or produced and treated water by TVMWD from surface and groundwater resources. MWD Tier 1 and other supply charges are included in TVMWD's water charge.

**7. General Manager Authority.** TVMWD's General Manager is hereby authorized to take any and all actions necessary to carry out the intent of the Board as is stated herein and as otherwise required in order to comply with applicable law.

**ADOPTED and PASSED** at a meeting of the Three Valleys Municipal Water District's Board of Directors, on this 17<sup>th</sup> day of April 2019 by the following vote:

AYES:  
NOES:  
ABSTAIN:  
ABSENT:

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Bob G. Kuhn  
President

ATTEST:

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Brian Bowcock  
Secretary

SEAL:

Item 8.E3 - Exhibit B  
**MWD CAPACITY CHARGE SUMMARY**  
**EFFECTIVE JANUARY 2020**

<b>AGENCY</b>	<b>CFS BASIS</b>	<b>ANNUAL CHARGE</b>	<b>MONTHLY CHARGE</b>	<b>%</b>
Boy Scouts	0.4	\$ 3,211.42	\$ 267.62	0.25%
Cal Poly	0.7	\$ 5,780.55	\$ 481.71	0.46%
Covina	5.2	\$ 45,602.12	\$ 3,800.18	3.62%
Covina Irrigating Company	14.6	\$ 128,456.68	\$ 10,704.72	10.19%
Glendora	6.1	\$ 53,309.52	\$ 4,442.46	4.23%
Joint Water Line (JWL)	30.1	\$ 265,263.04	\$ 22,105.25	21.05%
La Verne	13.0	\$ 113,973.19	\$ 9,497.77	9.04%
Mt. Sac	1.9	\$ 16,699.37	\$ 1,391.61	1.33%
Pomona	0.0	\$ -	\$ -	0.00%
Rowland Water District	11.7	\$ 102,765.34	\$ 8,563.78	8.15%
GSWC (Claremont)	15.5	\$ 136,517.33	\$ 11,376.44	10.83%
GSWC (San Dimas)	14.1	\$ 123,960.69	\$ 10,330.06	9.84%
Suburban	0.0	\$ -	\$ -	0.00%
Valencia Heights	0.0	\$ -	\$ -	0.00%
Walnut Valley Water District	30.1	\$ 264,620.75	\$ 22,051.73	21.00%
<b>TOTAL</b>	<b>143.2</b>	<b>1,260,160</b>	<b>\$ 105,013</b>	<b>100.00%</b>

Notes:

1. The MWD Capacity Charge is paid by each member agency based on TVMWD's allocation of the specific non-coincidental peak calculation over a three year period 2016, 2017, and 2018.
2. The MWD Capacity Charge basis of 143.2 cfs at \$8800 per cfs is assigned to TVMWD by MWD and is passed-through directly to the member agencies.

# TVMWD FIXED CHARGES SUMMARY Item 8.E4 - Exhibit C

## EFFECTIVE JANUARY 2020

AGENCY	IMPORTED WATER USE			CONNECTED CAPACITY			EQUIVALENT SMALL METER (ESM)			TOTAL \$
	(3yr Avg) (AF)	ANNUAL \$	%	(cfs)	ANNUAL \$	%	METERS	ANNUAL \$	%	
Boy Scouts	17.2	\$ 64.60	0.03%	1.5	\$ 846.08	0.37%	256.4	\$ 229.85	0.10%	\$ 1,140.52
Cal Poly	179.3	\$ 674.71	0.29%	2.0	\$ 1,128.10	0.49%	2,564.3	\$ 2,298.50	1.00%	\$ 4,101.32
Covina	242.7	\$ 913.16	0.40%	20.0	\$ 11,281.01	4.91%	5,147.0	\$ 4,613.55	2.01%	\$ 16,807.72
Covina Irrigating Company	3,914.1	\$ 14,728.77	6.41%	20.0	\$ 11,281.01	4.91%	0.0	\$ -	0.00%	\$ 26,009.78
Glendora	1,029.4	\$ 3,873.61	1.69%	40.0	\$ 22,562.01	9.82%	26,948.5	\$ 24,155.48	10.51%	\$ 50,591.10
Joint Water Line (JWL)	19,024.8	\$ 71,590.75	31.15%	121.0	\$ 68,250.08	29.69%	0.0	\$ -	0.00%	\$ 139,840.83
La Verne	5,329.4	\$ 20,054.53	8.73%	15.0	\$ 8,460.75	3.68%	20,873.5	\$ 18,710.09	8.14%	\$ 47,225.38
Mt. Sac	355.8	\$ 1,339.01	0.58%	5.0	\$ 2,820.25	1.23%	2,564.3	\$ 2,298.50	1.00%	\$ 6,457.77
Pomona	0.5	\$ 1.98	0.00%	20.0	\$ 11,281.01	4.91%	47,843.0	\$ 42,884.37	18.66%	\$ 54,167.36
Rowland Water District	6,075.3	\$ 22,861.39	9.95%	30.0	\$ 16,921.51	7.36%	24,235.0	\$ 21,723.19	9.45%	\$ 61,506.09
GSWC (Claremont)	4,899.6	\$ 18,437.32	8.02%	15.0	\$ 8,460.75	3.68%	27,520.0	\$ 24,667.72	10.73%	\$ 51,565.80
GSWC (San Dimas)	7,046.7	\$ 26,517.03	11.54%	35.0	\$ 19,741.76	8.59%	32,453.5	\$ 29,089.90	12.66%	\$ 75,348.69
Suburban	0.0	\$ -	0.00%	0.0	\$ -	0.00%	17,087.0	\$ 15,316.04	6.66%	\$ 15,316.04
Valencia Heights	0.0	\$ -	0.00%	4.0	\$ 2,256.20	0.98%	1,595.6	\$ 1,430.23	0.62%	\$ 3,686.43
Walnut Valley Water District	12,966.6	\$ 48,793.62	21.23%	79.0	\$ 44,559.97	19.39%	47,339.5	\$ 42,433.05	18.46%	\$ 135,786.64
<b>TOTAL</b>	<b>61,081.3</b>	<b>\$ 229,850</b>	<b>100%</b>	<b>407.5</b>	<b>\$ 229,850</b>	<b>100%</b>	<b>256,428</b>	<b>\$ 229,850</b>	<b>100%</b>	<b>\$ 689,551</b>

Notes:

1. The Imported Water Use Charge is based on average import water deliveries in the 2015/16, 2016/17 & 2017/18 fiscal years.
2. Connected Capacity for the Badillo-Grand Pipeline is according to WVWD's maintenance allocation: WVWD 60 cfs and Valencia Heights. 4 cfs.
3. Boy Scouts ESM Charge is calculated based on 0.1% of total ESMs; Cal Poly & Mt. SAC ESM Charges are calculated based on 1.0% of total ESMs
4. Covina, Glendora, and Valencia Heights ESM Charges are calculated based on 27%, 98%, and 67%, respectively, of their corresponding total ESMs. Percentages are based on agencies' service area within TVMWD.
5. Fire Service Meters are not included in the ESM calculations



**Board of Directors  
Staff Report**

**To:** TVMWD Board of Directors  
**From:** Matthew H. Litchfield, General Manager *[Signature]*  
**Date:** April 17, 2019  
**Subject:** **Resignation Notice Incentive Policy**

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<input checked="" type="checkbox"/> <b>For Action</b>	<input type="checkbox"/> <b>Fiscal Impact</b>	<b>\$</b>
<input type="checkbox"/> <b>Information Only</b>	<input type="checkbox"/> <b>Funds Budgeted:</b>	

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**Staff Recommendation:**

**Staff is recommending approval of the attached resignation notice incentive policy.**

**Discussion:**

Fifty percent of TVMWD’s workforce is eligible to retire today. Knowing as early as possible when employees are going to leave provides the following opportunities:

- Additional training of potential internal candidates for promotional opportunities
- Time for recruitment and cross training prior to employee’s separation
- Evaluation of whether any organizational restructuring should occur
- An accurate forecast of future salaries and benefits
- Lessens impact on overtime, vacation schedule conflicts, workload, etc.

Staff has drafted the attached policy that provides the employee with a financial incentive if they can provide 6 months of notice. TVMWD’s legal counsel has reviewed the agreement and provided the attached release waiver.

**Strategic Plan Objective(s):**

- 2.4 – Evaluate short-term and long-term workforce needs to achieve optimal efficiency and cost effectiveness without sacrificing employee morale or productivity
- 3.3 – Be accountable and transparent with major decisions

**Attachment(s):**

Exhibit A – Resignation Notice Incentive Policy

**Meeting History:**

Board of Directors Meeting, April 3, 2019, Informational Item Only

NA/JL

# Item 8.F2 - Exhibit A



## **Resignation Notice Incentive Policy**

**Purpose:** Identify vacancies as early as possible to provide the following opportunities:

- Additional training of potential internal candidates for promotional opportunities
- Time for recruitment and cross training prior to employee's separation
- Evaluation of whether any organizational restructuring should occur
- An accurate forecast of future salaries and benefits
- Lessens impact on overtime, vacation schedule conflicts, workload, etc.

**Eligibility:** Employee must have 5 years of service with TVMWD prior to submitting this form

### **Criteria:**

- Employee must provide written resignation 180 days prior to separation date
- Actual separation date must be within 5 working days of the date stated on this form, unless otherwise approved by the General Manager.
- The employee is not entitled to and will not receive incentive payment if prior to separation date on this form:
  - employee voluntarily resigns from employment
  - is terminated or placed on probation by TVMWD for reasons related to performance or conduct
  - passes away
  - takes more than 6 unplanned leave days after submitting written notice. FMLA and sickness with doctor's notes will be excluded.
- Incentive payment is not PERSable compensation
- This policy should not be viewed as encouragement to resign. It simply allows TVMWD to maintain smooth operations when the employee does separate. While this is expected to be an on-going program, the board or management may decide to change or end this program as they see fit.

### **Procedure:**

- The employee must complete and execute both sides of this form. The resignation must be voluntary and unconditional and will be deemed permanently binding, enforceable, and irrevocable upon submission to, and execution by, TVMWD's General Manager.

### **Incentive Payment:**

- A one-time payment of \$10,000 will be processed on employee's final paycheck. Employee may choose to defer all or a portion to 401/457 plan subject to IRS limits.

I have read and agree to be bound by the terms set forth in the policy above and in the Release on the following page. My separation date from TVMWD per my resignation will be \_\_\_\_\_.

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
General Manager Signature

\_\_\_\_\_  
Date

# Item 8.F2 - Exhibit A



## RELEASE

THIS RELEASE ("Release"), executed on the date set forth below, is a release whereby the undersigned ("Releasor"), pursuant to Section 1541 of the Civil Code, extinguishes all rights and claims against THREE VALLEYS MUNICIPAL WATER DISTRICT ("TVMWD"), a Municipal Water District organized and operating pursuant to California Water Code Section 71000 et seq., as herein set forth.

1. On \_\_\_\_\_, 20\_\_, Releasor voluntarily and irrevocably resigned from his/her/their position of employment with TVMWD effective \_\_\_\_\_, 20\_\_. Consequently, Releasor hereby accepts a single lump-sum payment of \$10,000.00 as the total severance to which he/she/they shall be entitled to receive from TVMWD upon separation from employment. This Release does not affect any other compensation and benefits that Releasor may have earned under TVMWD's employment policies prior to the effective date of his/her/their resignation.

2. Releasor, on behalf of himself/herself/themselves and his/her/their descendants, ancestors, dependents, heirs, spouses, executors, administrators, agents, servants, employees, representatives, assigns, and successors ("the Releasors"), hereby fully, irrevocably, and unconditionally, releases and forever discharges TVMWD and its predecessors, successors, affiliates, subsidiaries, parents, corporations, companies, and divisions, and each and all of their respective current and former officers, directors, administrators, assigns, agents, servants, stockholders, employees, insurers, attorneys, representatives, and successors ("the Released Parties") from any and all demands, damages, debts, liabilities, obligations, contracts, agreements, actions, causes of action, suits, judgment, liens, indebtedness, losses, costs, and claims of whatever nature, character, or description, whether known or unknown, anticipated or unanticipated, foreseen or unforeseen, suspected or unsuspected, fixed or contingent, which Releasor and the Releasors now have or may hereafter have or claim to have against TVMWD and the Released Parties arising out of or related to Releasor's employment with TVMWD, including, but not limited to, events occurring during the period of said employment and the facts, circumstances, and allegations surrounding the termination of Releasor's employment with TVMWD.

3. Releasor acknowledges that this Release was entered into voluntarily, and also expressly acknowledges that he/she/they has been informed and is familiar with the provisions of Section 1542 of the California Civil Code which provides as follows:

A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS THAT THE CREDITOR OR RELEASING PARTY DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE AND THAT, IF KNOWN BY HIM OR HER, WOULD HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR OR RELEASED PARTY.

Releasor expressly waives the provisions of California Civil Code Section 1542, as well as any and all similar protections under the law, and further waives any rights that he/she/they may have to invoke said provisions now or in the future with respect to the releases set forth herein. Releasor recognizes and understands that factors which have induced him/her/they to enter into this Release may turn out to be incorrect or different from what he/she/they had previously anticipated, and Releasor expressly assumes all of said risks, including the risks of this waiver of California Civil Code Section 1542, and thus assumes full responsibility for any resulting liabilities.

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Employee Signature


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Date





## Board of Directors Staff Report

**To:** TVMWD Board of Directors  
**From:** Matthew H. Litchfield, General Manager   
**Date:** April 17, 2019  
**Subject:** TVMWD Grand Avenue Well Equipping (Project No. 58446)

<input checked="" type="checkbox"/> <b>For Action</b>	<input checked="" type="checkbox"/> <b>Fiscal Impact</b>	<input checked="" type="checkbox"/> <b>Funds Budgeted</b>
<input type="checkbox"/> <b>Information Only</b>	<input type="checkbox"/> <b>Cost Estimate:</b>	<b>\$3,434,444</b>

**Requested Action:**

**Award the construction contract to E.J. Meyer Co. for Phase 2 – Equipping of TVMWD Grand Avenue Well at a cost not to exceed \$3,434,444.**

**Discussion:**

Final bids for the project were opened on March 21, 2019. The preliminary bid results were shared and discussed at the April 3rd board workshop. The low bid of \$3,434,444 is about 18% lower than the Engineer's Estimate of \$4,200,000.

Staff has contacted the references and reviewed the financial information provided by the apparent low bidder (E.J. Meyer Co.) and has found the bid to be complete. E.J. Meyer Co. and their team of sub-contractors has successful experience on similar projects with various water agencies. Accordingly, staff recommends that E.J. Meyer Co. be awarded the construction contract for the equipping of TVMWD Grand Avenue Well. The construction work and related activities are anticipated to require approximately nine months to complete.

Prior to the start of construction mobilization, staff plans to reach out to residents that may be impacted by construction activities to provide project information and ensure residents are aware of the importance and benefits of the new well.

**Strategic Plan Objective(s):**

- 1.3 – Maintain diverse sources of water supplies and storage, and increase extractable water storage supplies to 10,000 AF.
- 1.4 – Capable of delivering 10,000 AFY from local sources in case of drought or catastrophe.
- 1.5 – Maintain water infrastructure to assure 100% reliability.
- 2.1 – Utilize 10,000 AF of well production to meet annual demands.
- 2.3 – Manage water infrastructure and staff operations to minimize costs.
- 3.3 – Be accountable and transparent with major decisions

**Attachment(s):**

None

**Meeting History:**

Board Meeting – April 3, 2019

NA/BP