PALMDALE WATER DISTRICT

A CENTURY OF SERVICE

August 21, 2019

AGENDA FOR REGULAR MEETING OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT to be held at the District's office at 2029 East Avenue Q, Palmdale

MONDAY, August 26, 2019

6:00 p.m.

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

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

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

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

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

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

1) Pledge of Allegiance/Moment of Silence.

2) Roll Call.

3) Adoption of Agenda.

4) Public comments for non-agenda items.

5) Presentations:

5.1) None at this time.

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

6.1) Approval of minutes of regular meeting held August 12, 2019.

6.2) Payment of bills for August 26, 2019.

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

7.1) Consideration and possible action on appeal from Samerah Plawan to General Manager determination regarding application of outstanding charges from 1552 High Point Drive, Palmdale. (General Manager LaMoreaux)

7.2) Consideration and possible action on Change Order No. 4 to the contract with ASI Construction LLC for construction of the Littlerock Reservoir Sediment Removal Project – Phase 1: Grade Control Structure under Specification No. 1802. ($1,118,792.54-additional costs and contract days related to flood event of December 17, 2018 – Non-Budgeted – Engineering/Grant Manager Riley/Project Manager Thompson Sr.)

7.3) Consideration and possible action on District participation in Dia de Los Muertos Fiesta event to be held November 2, 2019 benefitting the AV. Hispanic Chamber of Commerce Education Foundation. (Non-Budgeted – Director Dizmang/Public Affairs Director Shay)

7.4) Consideration and possible action on authorization of the following conferences, seminars, and training sessions for Board and staff attendance within budget amounts previously approved in the 2019 Budget:

a) Netcom Learning “Querying Data with Transact-SQL” Training to be held September 23 – 27, 2019 in Las Vegas.

b) CA-NV AWWA Fall Conference “Resource Sustaining Life Through Diversity of Water” to be held October 21 – 24, 2019 in San Diego.

c) Netcom Learning “Developing SQL Databases” Training to be held October 28 – November 1, 2019 in Las Vegas.

8) Information Items:

8.1) Reports of Directors:

a) Meetings; Standing Committee/Assignment Reports; General Report.

8.2) Report of General Manager.

a) August 2019 written report of activities through July 2019.

8.3) Report of General Counsel.

9) Board members' requests for future agenda items.

10) Adjournment.

DENNIS D. LaMOREAUX,
General Manager

DDL/dd

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

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

DATE: August 20, 2019 **August 26, 2019**

TO: BOARD OF DIRECTORS **Board Meeting**

FROM: Mr. Dennis D. LaMoreaux, General Manager

RE: ***AGENDA ITEM NO. 7.1 – CONSIDERATION AND POSSIBLE ACTION ON APPEAL FROM SAMERAH PLAWAN TO GENERAL MANAGER DETERMINATION REGARDING APPLICATION OF OUTSTANDING CHARGES FROM 1552 HIGH POINT DRIVE, PALMDALE. (GENERAL MANAGER LaMOREAUX)***

Recommendation:

Staff recommends that the Board deny the appeal received from Mr. Plawan regarding outstanding charges from 1552 High Point Drive and uphold the determination by General Manager LaMoreaux regarding this matter.

Alternative Options:

The Board can choose to approve the appeal.

Impact of Taking No Action:

The determination from General Manager LaMoreaux will remain if there is no action taken on this item.

Background:

Mr. Plawan initially submitted a letter dated June 17, 2019 requesting relief from a high water bill at 1552 High Point Drive wherein Mr. Plawan admitted to the illegal and unauthorized use of water at this residence.

During my investigation into Mr. Plawan's request, water use and damage charges for the property at 1552 High Point Drive were discovered as well as previous unpaid charges and multiple incidents of unauthorized water use with each of these incidents carrying a $1,000.00 fine. These charges are outlined in the attached August 5, 2019 letter to Mr. Plawan along with my determination to only charge Mr. Plawan for water use and damages in the amount of $693.66 waiving $4,000.00 in unauthorized water use charges.

Mr. Plawan submitted an appeal to this determination on August 12, 2019 wherein he again admits to the unauthorized use of water at 1552 High Point Drive.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 6 – Customer Care, Advocacy, and Outreach. This item directly relates to the District's Mission Statement.

Budget:

There is a loss of revenue to the District if Mr. Plawan's appeal is granted.

Supporting Documents:

- August 5, 2019 District response to Mr. Plawan
- August 12, 2019 letter from Mr. Samerah Plawan

August 12, 2019

To Palmdale Water District

Dear Sir / Madam:

My name is Samerah Plawan and I am the owner of the properties at 1548 & 1552 Hi Point Dr; west and also at 36551 El Camino Dr Palmdale.

I received the letter dated 8-5-2019 from your office stating that I have to pay the outstanding charges for 1552 Hi Point Dr. This is to inform your good office that we did not open the water on 1552 Hi Pt. Dr. as stated in those dates and billed to me in your letter. Nobody live in those 2 houses. We have water open on 1548 Hi Pt. Dr just to water the front & backyard and the frontyard of 1552 of the hose attached to it as they are close to each other.

So I am making an appeal to reconsider my plea as I am not willing to pay those charges at 1552 Hi Pt. in question since it is not necessary to open the water in 1552 Hi Pt since nobody live there. So please waive because I am not responsible for it & I am in good standing of my record at 1548 & 36551 El Camino.

Thank you very much for your consideration & I am looking forward for a better future of your company. GOD BLESS YOU.

Respectfully Yours

Samerah Plawan

8/12/19

Cust#
1058378

3 Loc.
RE: 1552 HighPoint

RECEIVED
AUG 12 2019
BY

PALMDALE WATER DISTRICT
A CENTURY OF SERVICE

EST. 1918

BOARD OF DIRECTORS

ROBERT E. ALVARADO
Division 1

DON WILSON
Division 2

GLORIA DIZMANG
Division 3

KATHY MAC LAREN
Division 4

VINCENT DINO
Division 5

DENNIS D. LaMOREAUX
General Manager

ALESHIRE & WYNDER LLP
Attorneys

ACWA
PROUD MEMBER

August 5, 2019

Samerah Plawan
642 North Plymouth Blvd. Apt.4
Los Angeles, CA 90004

RE: WATER SERVICE ACCOUNT 37820001-1058378 AT 36551 EL CAMINO DRIVE – APPLICATION OF OUTSTANDING CHARGES FROM 1552 HIGH POINT DRIVE

Dear Samerah Plawan:

Thank you for your patience and remaining current with undisputed water charges while I researched and reviewed the information related to the concern expressed in the letter dated June 17, 2019, copy enclosed. The letter states you own three properties in the District, and two properties have active water service accounts. The three properties are 36551 El Camino Drive, 1548 High Point Drive, and 1552 High Point Drive. The property at 1552 High Point Drive is the property without an active water service account. The letter also states water from 1548 High Point Drive is used at 1552 High Point Drive for cleaning. The concern expressed in the letter is the application of water usage and damage charges from 1552 High Point Drive to the water service account at 36551 El Camino Drive.

The water usage and damage charges in question from the property at 1552 High Point Drive are summarized as follows:

June 6, 2018	Water Usage (8 units)	$44.55
	Trip Charge	$15.00
	Broken Lock	$15.00
November 7, 2018	Water Usage (4 units)	$40.39
	Trip Charge	$15.00
	Broken Lock	$15.00
April 4, 2019	Water Usage (81 units)	$458.72
	Trip Charge	$15.00
	Broken Lock	$15.00
	Pulled Meter	$60.00
	Total:	**$693.66**

The charges summarized above were applied to the water service account at 36551 El Camino Drive on April 11, 2019. These charges and the status of water service to the property at 1552 High Point Drive are the subject of the above-referenced letter. Additionally, District staff was told of a leak in the backyard at 1552 High Point Drive and given a receipt for repair materials. The receipt is dated May 5, 2019 for a total amount of $47.33.

The water account history of 1552 High Point Drive was researched in response to the letter. This information shows a long history of involvement at the property. The history is summarized as follows:

March 14, 2007	Property Sold
July 24, 2007	Opened Water Service Account 42144048-1032065 Account Holder: Samerah Plawan
June 14, 2009	$100.00 Payment made on Outstanding Balance of $537.26 Account Off and Locked
March 8, 2010	Property Sold
November 15, 2010	Water Service Off and Locked Due to Nonapplication
December 31, 2011	Outstanding Amount of $437.26 Written Off as Bad Debt
June 6, 2018	Broken Lock and Water Usage Found (summarized above)

My review of the concern expressed in the above-referenced letter determines the following:

1. The amount of $693.66 from water use and damage at 1552 High Point Drive is calculated correctly;

2. Samerah Plawan owns both 1552 High Point Drive and 36551 El Camino Drive;

3. Samerah Plawan held an active account at 1552 High Point Drive from 2007 through 2010 and left $437.26 of unpaid charges the District was forced to write off as bad debt;

4. Property owners are responsible for water-related charges on the property;

5. The application of outstanding charges from 1552 High Point Drive to the water service account at 36551 El Camino Drive is proper;

6. Information to support a Courtesy Leak Adjustment Application was submitted to adjust the water usage of 81 units for $458.72 discovered on April 4, 2019; and

7. A Courtesy Leak Adjustment cannot be approved without an active water service account.

Other charges are possible for the activities at 1552 High Point Drive that are not currently listed. Unauthorized water use is documented three times at the property. Each occurrence is subject to a $1,000.00 fine under District policy 8.03.C.5 – Unauthorized Water Use and Section 498 of the California Penal Code. The letter also stated water from 1548 High Point Drive was used at 1552 High Point Drive. This is also unauthorized water use. Water cannot be taken from one property and used on another property without an active water service account. These instances of unauthorized water use can minimally result in charges of $4,000.00. The District has not included these charges, and I do not intend to add them at this point. **However, fines will be applied to the property for any future unauthorized water use.**

I have also noted that payments are being made on current balances at 36551 El Camino Drive. As stated above, that cooperation is appreciated. Based on the determination above, the transferred amount of $693.66 is due and payable on the 36551 El Camino Drive water service account.

Enclosed is a copy of Article 8.04 H – Disputed Bills from the Palmdale Water District Rules and Regulations. It is also available on the District's website and describes the review and appeal process adopted by the Board of Directors for customers in this situation. I recommend the water service account, including the transferred amount, be kept current if you do choose to appeal this determination. This will avoid any additional fees or charges. It will also not affect your ability to dispute the account's billing or the Board to make an adjustment.

Very truly yours,

DENNIS D. LaMOREAUX,
General Manager

DDL/dd

Enclosure

cc: Tara Rosati, Customer Care Supervisor
File

17 June 2019

Palmdale Water District
To Whom It May Concern:

Dear Sir / Madam:

My name is Samerah Plawan and I own the 1548 Hi Point Dr; 1552 Hi Point Dr and 36551 El Camino Dr Palmdale CA 93550.

We live in El Camino Dr where we have the water and also we have the water in 1548 Hi Point Drive Palmdale because we use it for cleaning the 2 house and watering the grass in the front & backyard. In 1552 Hi Point Dr, it's empty house & nobody live there.

In connection with these we received a very high bill for 1552 Hi Point Dr which we did not apply for water in that house, its empty house. ~~[illegible]~~ # $300 deposit was paid to the Palmdale Water in advance for our house in El Camino Dr. and also paid the outstanding balance for the two houses.

Please we need your help and understanding regarding this bill. GOD BLESS

If you need to call us the no is 323-7000907.

Thank you very much.

Samerah Plawan

6/17/2019

1552 High Point Dr (VACANT ACCT)
Illegal Water USAGE
Customer ID # 1058378

service restored if turned off again within this time period for non-payment.

Arcticle 8.04 H. **Disputed Bills:** The procedure to be used to contest the accuracy of water charges upon receipt of a bill for water service is as follows:

1. Up to five (5) calendar days prior to the Payment Due Date on the bill for water service, the Consumer has a right to initiate a complaint or request an investigation regarding any bill tendered by the District. Such protest shall be made in writing and delivered to the District at its office, along with all evidence and data the Consumer wishes to be considered by the District.

2. Following receipt of a complaint or a request for an investigation, the Manager shall review and evaluate the evidence provided by the Consumer and the information on file with the District concerning the water charges in question, and shall render a decision as to the accuracy of the water charges and shall also render a brief written summary of the decision.

   a. If water charges are determined to be incorrect, a corrected invoice will be provided and the revised charges will be due within ten (10) calendar days after the date of invoice for revised charges. If the revised charges remain unpaid after the prescribed period of time, water service will be terminated on the working day following the period allowed for payment, subject to the right of appeal to the Board of Directors. Water service will be restored only after outstanding water charges and any and all applicable Non-Payment Shutoff Fees and other charges are paid in full.

b. If the water charges in question are determined to be correct, the water charges are due and payable at the time the decision of the Manager is rendered.

c. At the time the decision of the Manager is rendered, the Consumer will be advised of the right to further appeal before the Board.

d. If the decision of the Manager is not to the satisfaction of the Consumer, the Consumer may request a hearing before the Board at a regular meeting. A request for hearing must be submitted in writing to the District at least ten calendar days prior to the next regular meeting of the Board.

e. Water service may not be terminated until the investigation is completed and the Consumer has been notified of the District's decision.

3. When a hearing before the Board is requested, such request shall also be made in writing and delivered to the District at its office and the Consumer shall appear at the hearing and present evidence and reasons as to why the water charges in question are not accurate. The Board shall evaluate evidence presented by the Consumer, as well as information on file with the District concerning the water charges in question, and render a decision as to the accuracy of said charges.

a. If the Board finds the water charges in question are incorrect, the Consumer will be invoiced for any additional charges and payment of the invoice is due within ten (10) calendar days from the date of said invoice. Any overcharges will be reflected as a credit

on the next regular bill to the Consumer, or refunded directly to the Consumer, in the sole discretion of the Board. If the revised charges remain unpaid after the prescribed period of time, water service will be terminated on the working day following the period allowed for payment. Service will be restored only after outstanding water charges and any and all applicable Non-Payment Shutoff Fees and other charges are paid in full.

b. If the Board finds that the water charges in question are correct, the Board's decision is final and binding.

I. **Adjustment of Bills for Meter Error:** **(Revised 2-23-98)** The Consumer may request an adjustment of the bill on the basis of meter error. Such a request must be made in writing and the rules set forth in Article 8.03(C) (3), Meter Test Charge, will apply. The District will, within one week, proceed to test the Consumer's meter; the meter will be tested in an "as found" condition, in order to determine the average meter error. If the average meter error is found to exceed 3 percent, that is if quantities of water recorded by the meter are outside of a range between 97 percent and 103 percent of the actual quantities of water passed through the meter during the test, the following billing adjustments will be made.

1. **Fast Meters**

The District will refund to the Consumer the amount of the overcharge based on corrected meter readings of the period the meter was in use and determined to be incorrect, but not to exceed a period of six months.

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

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

DATE: August 20, 2019 **August 26, 2019**

TO: BOARD OF DIRECTORS **Board Meeting**

FROM: Mr. Peter Thompson, Project Manager

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: ***AGENDA ITEM NO. 7.2– CONSIDERATION AND POSSIBLE ACTION ON CHANGE ORDER NO. 4 TO THE CONTRACT WITH ASI CONSTRUCTION LLC FOR CONSTRUCTION OF THE LITTLEROCK RESERVOIR SEDIMENT REMOVAL PROJECT – PHASE 1: GRADE CONTROL STRUCTURE UNDER SPECIFICATION NO. 1802. ($1,118,792.54-ADDITIONAL COSTS AND CONTRACT DAYS RELATED TO FLOOD EVENT OF DECEMBER 17, 2018 – NON-BUDGETED – ENGINEERING/GRANT MANAGER RILEY/PROJECT MANAGER THOMPSON)***

Recommendation:
Staff recommends that the Board approve Change Order No. 4.

Alternative Options:
There is no alternative option.

Impact of Taking No Action:
Financial harm to the contractor would result from taking no action.

Background:
The flood event of December 17, 2018 forced construction activity to stop on the Littlerock Reservoir Sediment Removal Project – Phase 1: Grade Control Structure Project. ASI was directed by the District to stabilize and secure the site until such time as construction activity could resume. The additional costs related to the stabilization and suspension periods of $1,118,792.54 were incurred and paid for by ASI. The additional costs related to recovering the site to its preflood condition will be addressed in a later change order. Time lost due to the stabilization, suspension and recovery periods is estimated to be 234 days and should be added to the contract duration.

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

Budget:
Water Revenue Bonds, Series 2018A.

Supporting Documents:
- ASI Emergency Stabilization and Suspension Period Costs Spreadsheets
- Change Order No. 4

Emergency Stabilization Period

Categories Affected	Cost Code	Description	Weekly Cost as of 1/30/2019	Weekly Cost as of 2/6/2019	Weekly Cost as of 2/13/2019	Weekly Cost as of 2/20/2019	Weekly Cost as of 2/27/2019	Weekly Cost as of 3/6/2019	Weekly Cost as of 3/13/2019	Weekly Cost as of 3/20/2019	Weekly Cost as of 3/27/2019	Weekly Cost as of 4/5/2019	Weekly Cost as of 4/10/2019	Weekly Cost as of 4/17/2019	Weekly Cost as of 4/24/2019	Weekly Cost as of 5/3/2019	Weekly Cost as of 5/8/2019	Total Costs 1/16 to 5/8	Comments
DL DS DO	31-0000	(No description)	$ -	$ 1,306.30	$ -	$ -	$ -	$ 2,808.00	$ -	$ -	$ 6,084.00	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,198.30	
DL DO	31-0601	Project Management (All)	$ -	$ 1,306.30	$ -	$ -	$ -											$ 1,306.30	Project management during demob
DL DS DO	31-0715	Security Guard Service	$ -	$ -	$ -	$ -	$ -	$ 2,808.00		$ -	$ 6,084.00	$ -			$ -		$ -	$ 8,892.00	Security 1/16 to 2/28
DL DM DS DO	32-0000	(No description)	$ -	$ 12,529.06	$ 4,410.00	$ 7,057.03	$ 2,863.19	$ 5,009.28	$ -	$ 2,866.30	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 34,734.86	
DO	32-0101	Bonds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$0.462 per $1000 contract value
DM	32-0104	Special Insurance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	
DM	32-0302	Diesel for Equipment				$ 2,963.86	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ 2,963.86	Diesel 1/25/19
DM	32-0702	Portajons/Water,Sewer Tanks	$ -	$ 869.06	$ -	$ -	$ -	$ -	$ -									$ 869.06	Portable Toilet 2/19
DM	32-0703	Yard Container/Dumpster	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 712.02								$ 712.02	Dumpster Feb
DM	32-0707	IT&CPU Supplies (incl hookup)	$ -	$ -	$ -	$ -	$ 146.22	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ 146.22	Internet service Feb
DM	32-1201	Travel Exp - Onsite Personnel	$ -	$ -	$ -	$ 1,264.15	$ -	$ 2,800.01	$ -	$ -	$ -		$ -	$ -	$ -	$ -		$ 4,064.16	B Weber Travel Thru Feb
DM DO	32-1202	Travel Exp - Home Support	$ -		$ -	$ 371.52	$ 2,716.97	$ 484.27	$ -	$ 2,154.28	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,727.04	D Dibert, Bowen travel Jan/Feb
DM	32-1205	Subsistence/Perdiem	$ -	$ 11,660.00	$ 4,410.00	$ 2,457.50	$ -	$ 1,050.00	$ -	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ 19,577.50	Employee Per Diem
DS	32-1402	Eng Sub (Dawn, As-Built, O&M)	$ -	$ -	$ -	$ -	$ -	$ 675.00	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 675.00	Engineering for Permit and Agtek survey
DE	33-0000	(No description)	$ -	$ 1,006.23	$ -	$ 1,782.42	$ 204,896.92	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 207,685.57	
DE	33-0204	Equipment Rental (OWNED)	$ -	$ -	$ -	$ -	$ 67,724.80	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 67,724.80	Owned Equipment Rent
DE	33-0205	Equipment (OUTSIDE RENTAL)	$ -	$ -	$ -	$ -	$ 137,172.12	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 137,172.12	Outside Equipment Rent
DE	33-0708	Office Trailers	$ -	$ 1,006.23	$ -	$ 1,782.42	$ -	$ -	$ -		$ -	$ -	$ -		$ -	$ -	$ -	$ 2,788.65	
DL DM DS DO	34-0000	(No description)	$ -	$ 2,929.59	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,929.59	
DL DM DS DO	34-5004	Operate Dewatering System	$ -	$ 2,206.89	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,206.89	
DS	34-5006	Install Dewatering Wells	$ -	722.7	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 722.70	8" PVC Sch 40 Belled Pipe
DL DM DO	35-0000	(No description)	$ 583.58	$ -	$ -	$ -	$ 1,880.27	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,463.85	
DL DM DO	35-5501	F/I /R Silt Fence	$ 583.58	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 583.58	Install Erosion Controls
DL DO	35-5504	Maintain Erosion Controls	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	Maintain Silt Fence for SWPPP
DL DM DO	35-5505	F/I/R Preserv & Exclu Fence	$ -	$ -	$ -	$ -	$ 1,880.27	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,880.27	Filled sand bags
DL DS DO	36-0000	(No description)	$ -	$ -	$ -	$ 11,996.01	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 11,996.01	
	36-2710	RipRap & Stone Bed Material	$ -	$ -	$ -	$ 11,996.01	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 11,996.01	252 Tons Riprap for Emergency Use
DL DM DO	39-0000	(No description)	$ 17,330.11	$ -	$ 7,647.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,977.11	
DM	39-5218	Cement-Bulk (RCC)	$ 9,042.61	$ -	$ 7,647.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,689.61	Cement disposed of from plant 171.5 tons
DM	39-5219	Flyash-Bulk (RCC)	$ 6,898.50	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,898.50	Flyash disposed of from plant 70 Tons
DM	39-5221	RCC Aggregates (Fine/Coarse)	$ 1,389.00				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,389.00	RCC Agg used to dispose of Cement/Ash 67.5 tons
DL DM DS DE DO	90-0000	(No description)	$ -	$ 100,537.87	$ 40,814.80	$ 36,641.92	$ 31,194.29	$ 31,782.42	$ 6,550.00	$ -	$ 4,640.00	$ 946.02	$ 5,647.82	$ 2,593.56	$ 600.00	$ -	$ -	$ 261,948.70	
	90-0003	Flood Control	$ -	$ 412.60	$ -	$ -	$ 13,618.97	$ 100.98	$ -	$ -	$ 4,640.00	$ -	$ -	$ -	$ -	$ -	$ -	$ 18,772.55	
	90-0004	Pumping Flood Water	$ -	$ 126.69	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 126.69	
	90-0005	Food cleanup	$ -	$ 9,557.16	$ 4,129.16	$ -	$ 5,286.02	$ -	$ -	$ -	$ -	$ 946.02	$ -	$ -	$ -	$ -	$ -	$ 19,918.36	
	90-0006	Fix Exclusion Fence from flood	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
	90-0007	Fix Erosion controls from flood	$ -	$ 1,404.44	$ 7,018.69	$ 1,800.00	$ -	$ 7,184.06	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 17,407.19	
	90-0008	Repair Bypass Diverison from Flood	$ -	$ 24,124.77	$ 371.51	$ 12,349.27	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 36,845.55	
	90-0009	Repair Dewatering System	$ -	$ 25,631.36	$ -	$ -	$ (25,631.36)	$ -	$ -	$ -	$ -	$ -	$ 5,647.82	$ 2,593.56	$ -	$ -	$ -	$ 8,241.38	
	90-0010	Debris Removal from Flood	$ -	$ -	$ 8,107.72	$ 2,313.50	$ 25,038.35	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 35,459.57	
	90-0011	Standby Time from Flood	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
	90-0012	Site Security /Protection from flood	$ -	$ 19,274.54	$ 10,359.48	$ 6,913.09	$ 6,620.52	$ 10,879.52	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 54,047.15	
	90-0013	Fuel Purchase for Flood work	$ -	$ 6,658.80	$ -	$ -	$ -	$ 1,116.78	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ 7,775.58	
	90-0014	Equipment Protection Relocation	$ -	$ 7,524.44	$ 1,640.24	$ 11,458.06	$ -	$ 4,962.08	$ -	$ -	$ -	$ -	$ -	$ -	$ 600.00	$ -	$ -	$ 26,184.82	includes RMA Group QC Trailer
	90-0015	Raw Material Disposal from Flood	$ -	$ 5,823.07	$ 9,188.00	$ 743.00	$ 6,261.79	$ 5,427.34	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 27,443.20	
	90-0016	Survey and Engineering due to flood	$ -	$ -	$ -	$ 1,065.00	$ -	$ 2,111.66	$ 6,550.00	$ -	$ -	$ -		$ -	$ -	$ -		$ 9,726.66	Includes JT Engineering SWPPP Inspections
		Job Grand Totals:	$ 17,913.69	$ 118,309.05	$ 52,871.80	$ 57,477.38	$ 240,834.67	$ 39,599.70	$ 6,550.00	$ 2,866.30	$ 10,724.00	$ 946.02	$ 5,647.82	$ 2,593.56	$ 600.00	$ -	$ -	$ 556,933.99	

Subtotal	$ 556,933.99
Markup	$ 83,540.10
Total	**$ 640,474.09**

Suspension Period

	Actual to Date	Projected	Total	Notes
ASI Owned Equipment Standby	$ 232,348.00	$ -	$ 232,348.00	Charged at 40% of internal rental rate. Mob of this equipment cost ASI $86,225. Plant set up cost $41,600. Estimated costs to demo plant, demob then re-mob all equipment, set up plant is $234,850.
Project Management	$ 12,722.26	$ 11,283.64	$ 24,005.90	Bill Weber was re-assigned to other projects as available to mitigate expense. After 6/9/19 he will be full time Littlerock.
Inspection Travel	$ 3,903.79	$ 1,300.00	$ 5,203.79	
Subsintence/Per Diem	$ 1,597.50	$ 150.00	$ 1,747.50	
E&S Repairs	$ 1,053.14	$ 500.00	$ 1,553.14	Repairs made during monthly site visits by Bill Weber.
Builders Risk Extension	$ 36,719.50		$ 36,719.50	90 policy extension from 3/19/19 to 6/19/19
Lantz Security	$ 33,286.50	$ -	$ 33,286.50	Site security for equipment and site monitoring.
William Scotsman	$ 8,257.13	$ -	$ 8,257.13	Rental for two office trailers is less than costs of demobilizing and remobilizing two trailers.
RMA Group	$ 600.00	$ 2,400.00	$ 3,000.00	Rental for lab is less than cost of demobilizing and remobilizing.
JT Engineering	$ 7,002.50	$ 362.00	$ 7,364.50	SWPPP inspections (scheduled and post-rain event as required).
Baker Corp	$ 2,012.26	$ 79.43	$ 2,091.69	Cost to disassemble batch plant to access tank for removal higher than negotiated rental rate.
Hughes Net	$ 146.13	$ -	$ 146.13	One month internet service before disconnect took effect.
Arrow Star	$ 670.08	$ -	$ 670.08	Toilets for security personnel.
Power Motive Corp	$ 6,778.03	$ 266.18	$ 7,044.21	Rental for one 60' conveyor is less than cost of demobilizing and remobilizing from CO.
Griffin Dewatering Rental* **	$ 57,731.80	$ 12,642.00	$ 70,373.80	Griffin dewatering equipment rental. Not paid and under dispute subject to equipment condition determination and insurance coverage.
Escalation - Operators Wage	$ -	$ 31,050.00	$ 31,050.00	Estimated wage escalation $2.70/hour for 11,500 hours. Union meeting to occur 6/8/19 to finalize exact amount.
Escalation - Laborers Wage	$ -	$ -	$ -	No wage escalation.
Escalation - RMA QC Wage	$ -	$ 1,620.00	$ 1,620.00	Subject to same $2.70 operator escalation. Estimating 600 hours.
Escalation - Cement	$ -	$ 12,062.00	$ 12,062.00	$6.50/ton increase.
Escalation - Flyash	$ -	$ 9,307.50	$ 9,307.50	$10.95/ton increase.
Escalation - Sand	$ -	$ -	$ -	No escalation.
Escalation - RCC Aggregate	$ -	$ 13,152.00	$ 13,152.00	$.55/ton increase.
Escalation - Rip Rap	$ -	$ -	$ -	No escalation.
Escalation - Fuel	$ -	$ 21,060.00	$ 21,060.00	Current fuel rates indicate an increase of $.26 per gallon as compared to January 2019 rates. Estimating 81,000 gallons of fuel.
Air Quality Permit Fee	$ -	$ 3,151.84	$ 3,151.84	Estimated permit extension fee based on original rate.
SWPPP Permit Fee	$ -	$ 2,905.00	$ 2,905.00	Estimated permit extension fee based on original rate.

Total	**$ 528,120.21**
Total (less Griffin Invoices)	**$ 457,746.41**
Markup (excludes equipment standby and wage and rate escalation costs)	**$ 20,572.04**
Total w/ Markup	**$ 478,318.45**

*****ASI has rejected these invoices on the grounds the equipment was likely destroyed by the 1/16/19 flood event and therefore a compensable equipment loss under Griffin's inland marine insurance policy. ASI has included these invoices for PWD reference in the event of a dispute relating to payment of these invoices or insurance coverage for the loss.**

CHANGE ORDER

No. 4

PROJECT Construction of the Littlerock Reservoir Sediment Removal Project – Phase 1: Grade Control Structure

DATE OF ISSUANCE August 19, 2019 EFFECTIVE DATE August 26,2019

OWNER Palmdale Water District

OWNER's Contract No. Specification No. 1802

CONTRACTOR ASI Construction LLC ENGINEER P.W.D.

You are directed to make the following changes in the Contract Documents.

Description: Additional Costs ($1,118,792.54) and Contract Days (234)

Reason for Change Order: *Additional Costs for Site Stabilization ($640,474.09) and Work Suspension Period ($478,318.45) as well as Additional Contract Days due to January 17, 2019 Flood Event.*

Attachments: *ASI Emergency Stabilization and Suspension Period Costs Spreadsheets*

CHANGE IN CONTRACT PRICE:	**CHANGE IN CONTRACT TIMES:**
Original Contract Price $ 10,675,808.00	Original Contract Times Completion: 170 Days – March 19, 2019
Net Changes from previous Change Orders No. 0 to No. 3 $ -1,175,000.00	Net Changes from previous Change Orders No. 0 to No. 3 23 – Day Extension Days
Contract Price prior to this Change Order $ 9,500,808.00	Contract Times prior to this Change order Completion: 193 Days – April 11, 2019 Days
Net Increase (decrease of this Change Order) $ 1,118,792.54	Net Increase (decrease of this Change Order) 234 – Day Extension Days
Contract Price with all approved Change Orders $ **10,619,600.54**	Contract Times with all approved Change Orders Completion: 427 Days – December 2, 2019

CHANGE ORDER

No. 4

PROJECT Construction of the Littlerock Reservoir Sediment Removal Project – Phase 1: Grade Control Structure

DATE OF ISSUANCE August 19, 2019 EFFECTIVE DATE August 26, 2019

OWNER Palmdale Water District

OWNER's Contract No. Specification No. 1802

CONTRACTOR ASI Construction LLC ENGINEER P.W.D.

RECOMMENDED:	APPROVED:	ACCEPTED:
By: _____	By: _____	By: _____
PWD, Engineering Manager	PWD, General Manager	Contractor (Authorized Signature)
Date: _____	Date: _____	Date: _____

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

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

DATE: August 20, 2019 **August 26, 2019**

TO: BOARD OF DIRECTORS **Board Meeting**

FROM: Ms. Judy Shay, Public Affairs Director

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: ***AGENDA ITEM NO. 7.3 – CONSIDERATION AND POSSIBLE ACTION ON DISTRICT PARTICIPATION IN DIA DE LOS MUERTOS FIESTA EVENT TO BE HELD NOVEMBER 2, 2019 BENEFITTING THE A.V. HISPANIC CHAMBER OF COMMERCE EDUCATION FOUNDATION. (NON-BUDGETED – DIRECTOR DIZMANG/PUBLIC AFFAIRS DIRECTOR SHAY)***

Recommendation:

Staff has no recommendation on this item.

Background:

The District has not participated in this event in the past and will need to provide liability insurance, a canopy, chairs, and a table to set up a booth at this event.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 5 – Regional Leadership.

This item directly relates to the District's Mission Statement, however, the District has not been a supporter in the past of the A.V. Hispanic Chamber of Commerce Education Foundation.

Budget:

The cost to participate in this event will be $150 for the booth and overtime charges for at least two staff members manning a booth.

Supporting Documents:

- Flyer and required documentation for the event.

3rd Annual Día de Los Muertos Fiesta

EVENT NAME:	**DIA DE LOS MUERTOS FIESTA**
DATE AND TIME:	**SATURDAY NOVEMBER 2, 2019** **10:00 AM TO 6:00 PM**
LOCATION:	**PONCITLAN SQUARE 38315 9TH STREET EAST** **PALMDALE, CA**
EXPECTED ATTENDANCE	**800 PLUS ATTENDEES**
GEOGRAPHICAL AREA:	**PALMDALE, LANCASTER, QUARTZ HILL, LITTLE ROCK, ROSAMOND, ANTELOPE ACRES, LAKE L.A. SANTA CLARITA, SAN FERNANDO, ACTON**
TARGET DEMOGRAPHIC:	**IT'S A FAMILY EVENT**
Portion of PROCEEDS TO BENEFIT:	**AV HISPANIC CHAMBER OF COMMERCE EDUCATION FOUNDATION**

A.V. HISPANIC CHAMBER OF COMMERCE

PROUDLY PRESENTS

3RD ANNUAL DAY OF THE DEAD FIESTA & EL DIA DE LOS MUERTOS

NOVEMBER 2, 2019
10AM-6PM AT
PONCITLAN SQUARE
38315 9TH STREET EAST
PALMDALE, CA 93550

AV HISPANIC CHAMBER OF COMMERCE
CONTACT US: 661.538.0607
AVHISPANICCHAMBER@GMAIL.COM
819 E. AVE Q-9, PALMDALE, CA 93550
WWW.AVHISPANICCHAMBER.ORG

CATRINA SPONSORSHIP

Catrina de Platino - $5,000

20X20 BOOTH SPACE • 12 CHAIRS • 4 TABLES
150 COMMERCIALS ON THE RADIO (SHARED MENTIONS)
YOUR LOGO ON 1,000 13X19" POSTERS USED TO PROMOTE THE EVENT
YOUR LOGO ON THE WELCOME BANNER
YOUR LOGO ON 200 GIVEAWAY SHIRTS
2 4X6' BANNERS OF YOUR COMPANY AROUND THE PARK
1 BANNER IN FRONT OF THE STAGE
****WE SUPPLY THE BOOTH, TABLE AND 2 CHAIRS****

Catrina de Oro - $2,500

10X10 BOOTH SPACE • 8 CHAIRS • 3 TABLES
75 COMMERCIALS ON THE RADIO (SHARED MENTIONS)
YOUR LOGO ON 1,000 13X19" POSTERS USED TO PROMOTE THE EVENT
YOUR LOGO ON THE WELCOME BANNER
YOUR LOGO ON 200 GIVEAWAY SHIRTS
2 4X6' BANNERS OF YOUR COMPANY AROUND THE PARK
****WE SUPPLY THE BOOTH, TABLE AND 2 CHAIRS****

Catrina de Plata - $1,500

10X10 BOOTH SPACE • 6 CHAIRS • 2 TABLES
50 COMMERCIALS ON THE RADIO (SHARED MENTIONS)
YOUR LOGO ON 1,000 13X19" POSTERS USED TO PROMOTE THE EVENT
YOUR LOGO ON THE WELCOME BANNER
YOUR LOGO ON 200 GIVEAWAY SHIRTS
****WE SUPPLY THE BOOTH, TABLE AND 2 CHAIRS****

Sugar Skull Vendor Booth - $150

*Non-Profits: $100

****YOU MUST PROVIDE YOUR OWN TABLE, CANOPY & CHAIRS****

****ALL SPONSOR PACKETS MUST BE PAID IN FULL BY OCTOBER 25, 2019****

PLEASE MAKE ALL CHECKS PAYABLE TO:
AV HISPANIC CHAMBER

Brought to you by:

A.V. HISPANIC CHAMBER OF COMMERCE
DIA DE LOS MUERTOS

WWW.AVHISPANICCHAMBER.ORG

APPLICATION FOR COMMERICAL, FOOD VENDORS & SPONSORSHIP

APPLICATION DEADLINE October 20, 2019

Sponsorship and Vendors must be paid in full by October 26, 2019

Type of Vendor:

☐$100 Non-Profit Sugar Skull ☐$150 Sugar Skull ☐$250 Food Vendor ☐$35 Altar

Sponsorship:

☐ $5000 Catrina de Platino (Platinum) ☐$2500 Catrina de Oro (Gold)

☐$1500 Catrina de Plata (Silver)

_____

Business Name

_____

Contact Name

_____

Address City State Zip Code

( ) _____ ( ) _____

Business Phone Cell Phone Email

- Please charge the following credit card:
  - Visa
  - MasterCard
  - American Express
  - Debit Card

Card # _____Exp. Date _____ Sec. Code _____

Name as it appears on the card: _____Zip Code_____

Signature: _____

Vendors must be set up by 10:00am

**Vendor must provide their own canopy, chairs and material
(No barbecue or grills allowed in Non-food vendor areas)

**(Must show proof of 501(c)(3)
(Fee is non-refundable if no show)**

Business Name_____

List items to be sold. All items are subject to approval by committee.

Vendor Agreement

This agreement is entered into this_____ day of _____2019, by and between the Día de Los Muertos Committee, Antelope Valley Hispanic Chamber of Commerce,_____ _____ (herein referred to as "Vendor").

Such said "Vendor" desires to participate in such said event in accordance with the rules and regulations that are established by Día de Los Muertos Committee, AV Hispanic Chamber of Commerce.

IT IS HEREBY AGREED by the parties herewith that the following provisions shall govern this Agreement.

ARTICLE1.VENDORRULESANDGUIDELINES

Section 1. All spaces are assigned by the Día de Los Muertos Committee.

Section 2. All items are required to be sold and supervised by the Vendor or staff employed by the Vendor.

Section 3. Setup up is between **8:00 A.M - 10:00 A.M.** on the day of the event listed herein. Vehicles are not permitted on the grounds during the event. Booth numbers will be assigned according to the order that applications are received. No Parking on the premises.

Section 4. Vendors are responsible to set up their own display, clean up their area and collect and report taxes. All vendors are required to remain in the area during the event.

Section 5. The Chamber will provide and distribute media information and publicity.

Section 6. "Dia de Los Muertos" is an outdoor event that mayhave inclement weather conditions. The Chamber is not responsible for any damage or theft of any goods, items,or vendor display.

Section 7. The Chamber shall have volunteers at the event site from 8:00 A.M. to 8:00 P.M.

Section 8. All vendors shall obtain, at their own expense, license and permits required for operation, including but not limited to licenses and permits required by the state of California, the County of Los Angeles, and the City of Palmdale, i.e., business license, Health Department permit, etc.

Section 9. Vendor agrees to provide all service equipment, supplies, and personnel, and to assume complete responsibility for the staffing and operation of the food/beverage concession.

Section 10. The Día de Los Muertos Committee reserves the privilege to prohibit the sale of any food or drink up to and including the day of the event. Alcoholic beverages are strictly prohibited by any vendor. Please note that substitutions for previous approved sale items are prohibited without approval from the Día de Los Muertos Committee. Any vendor selling any unapproved sale items will be asked to leave the premises without a refund.

Section 11. All temporary Food Stand Vendors are required to obtain a Public Health Permit 30 days prior to the event and post it on site at all times. Vendors failing to provide a Public Health certificate will be asked to leave the premises without a refund.

Section 12. All commercial Vendors are required to obtain a Sellers Permit prior to the event and post it on site at all times. Vendors failing to provide a Sellers Permit will be asked to leave the premises without a refund.

Section 13. Food Vendors must have all grills, BBQs, and propane tanks secured to the ground. Fire extinguishers must be displayed in booth with current tag.

ARTICLE 2. HEALTH REQUIREMENTS FOR TEMPORARY FOOD STAND

Section 1. Booth Construction: Booths are to be fully enclosed with walls and constructed of either wood, canvas, plastic or similar material and a self closing door.

Section 1A. A service opening (not to exceed 216 inches and spaced at least 18 in shall be provided on one or more sides. They shall be equipped with hinged doors or a fine screen that will permit individual closing.

Section 1B. Adequate ventilation must be provided at all stands except for open airbarbecuing. All food preparation and food storage shall be contained within the enclosed booth. Mechanical exhaust shall be provided in cooking areas if deemed required by the Health Officer.

Section 1C. All equipment shall meet National Sanitation Foundation (NSF) Standards in design and installation.

Section 2. Sanitation: Adequate refrigeration at 45 degrees Fahrenheit or under must be provided to handle all perishable food. All potentially hazardous food shall be maintainedat or above 140 degrees Fahrenheit. All refrigerated hot food items shall be quickly heated to 165 degrees Fahrenheit. Thermometers must be provided in all refrigerators in which perishable foods are kept and at least (1) probe type insertion thermometer to monitor food temper Boxes or containers where bottle drinks are chilled by ice or water must be so construct they may be drained and cleaned when necessary.

Section 2A. All food and utensils shall be stored a minimum of six (6) inches off thefloor in a manner that it cannot be contaminated by animals, vermin, or the public. This means an enclosed protected area for all food storage.

Section 2B. Covered trash receptacles are to be provided by the operator of the stands.

Section 2C. All single service utensils shall be stored in a clean, dry place until used and shall be dispensed in such a manner as to minimize contamination by handling.

Section 2D. Utensil washing and separate hand washing facilities must be provided.

Section 2E. Hand washing facilities in good repair shall be provided for employees within or adjacent to the food preparation area. Soap and single service sanitary towels shall be provided in hand washing facilities.

Section 3. Food Handling: Food prepared off site shall be prepared in a Public Health Permitted Facility only.

Section 3A. All foods shall be securely covered or packaged to prevent contamination dust, flies, or droplet infection.

Section 3B. All foods shall be prepared in such a way as to minimize handling.

Section 3C. Food handlers shall refrain from handling food, ice, etc.; unnecessarily keep their hands and fingers from the lip and inside of paper containers. Ice scoops are required for dispensing ice. Ice must be obtained from an approved source.

Section 3D. Single service containers shall be stored in a manner to prevent contamination from flies, dust, etc., and the use of paper cup dispensers is encouraged.

Section 3E. All bottled drinks dispensed from stands on locations where bottles might become hazardous to the safety of the patrons must be dispensed in single service paper cups. No bottles are to leave the food service area.

Section 3F. All coffee, cream, and sugar must be dispensed from approved dispensers. Community sugar bowls and spoons shall not be used. Cream may be dispensed from the original can. If fresh cream is used, it shall be maintained at 45 degrees Fahrenheit or less.

Section 3G All condiments must be covered at all times when not in use.

Section 3H. Food handlers, while engaged in preparing or serving food shall wear clean garments, hair restraints, gloves and shall keep their hands clean, at all times present a pleasing and neat appearance. Smoking by employees in food service is not permitted. Hand washing is required after using the toilet and after smoking.

Section 3I. Cleaning products, insecticides, or medication shall not be stored in food preparation or storage areas.

ARTICLE 3. TERMINATION OF AGREEMENT

Section 1. Dia de Los Muertos is an outdoor event and will be conducted rain or shine. The rental fee will not be refundable due to Vendor's cancellation or failure to appear.

ARTICLE 4. RELEASE, WAIVER AND ASSUMPTION OF RISK

Section l. Chamber shall provide and shall maintain inforce during the term of this agreement combined single limit comprehensive public liability and products liability insurance coverage with each occurrence policy liability limits in the sum of one million dollars ($1,000,000.00). This policy or policies or liability insurance shall contain the following endorsement: A signed and complete certificate of insurance shall be submitted to the AV Hispanic Chamber of Commerce prior to the event.

Section 2.

I,the undersigned am fully aware and understand the potential risks involved with my participation in this cultural activity for the Community of the Antelope Valley namely "Dia de Los Muertos" event. Specific dangers include damage to personal property, loss of personal inventory, serious physical injury, or death. Additional dangers include and are limited to damages due to inclement weather and other reasonably anticipated risks that accompany participation in such event. I acknowledge that I voluntarily participate in this event. I hereby agree to assume all risk of injury, damage to persons and property, and/or death, and to hold the A V Hispanic Chamber of Commerce, City of Palmdale and its officers, agents, or employees harmless from any liability for any injuries, or claim for damage to goods, or death that may arise in connection with my participation in this event. This Hold Harmless Agreement also pertains to any actions of negligence by the A V Hispanic Chamber of Commerce, City of Palmdale and its officers, agents or employees which may have caused or contributed to the injury, damage, or death.

2019 3rd Annual
Día de Los Muertos Fiesta

This Agreement shall be binding upon my heirs and dependents as well as myself. I participate freely and voluntarily in this event and expressly assume all of the risks of the event.

IN WITNESS WHEREOF, this agreement was executed on the date written below.

Printed Name of Vendor	Printed Name of DDLM Committee Chair
Signature	Signature
Date	Date

AGENDA ITEM NO. 7.4

Hotel and Travel Accommodations

Event Name/Date:

Netcom Learning "Querying Data with Transact-SQL" Training/September 23 - 27, 2019

CONTACT INFORMATION

First Name | Last Name | Date

ACCOMMODATION INFORMATION

Rooms and rates are subject to availability. Complete and submit this form as soon as possible to guarantee a room at the host hotel. In the event that the host hotel is booked, every effort will be made to secure a room at the closet hotel within comparable rates to the event discounted rate.

Arrival Date | Departure Date | No. of guests | Room Type

Do you require a smoking room?

◯ Yes ◯ No

Do you need transportation from the airport to the hotel?

◯ Yes ◯ No

Flight Number | Time

ADDITIONAL INFORMATION/REQUESTS

Staff Representative

LEARNING SOLUTION

for
Claudia Bolanos
Palmdale Water District

July 1, 2019

NetCom™
LEARNING

NetComLearning.com

Prepared By

Kanwaljeet Kaur
Learning Consultant

519 8th Avenue
2nd Floor
New York, NY 10018
Direct: 203.684.1016
Toll Free: 888.563.8266
Fax: 646.292.5170

E-mail: kanwaljeet@netcomlearning.com
Web: www.netcomlearning.com

Enrollment Agreement

NetCom Learning
519 8th Avenue
2nd Floor
New York, NY 10018
Direct: 203.684.1016
Toll Free: 888.563.8266
Fax: 646.292.5170

Palmdale Water District
Contact: Claudia Bolanos
2029 E Avenue Q
Palmdale, CA 93550
Business: 661.456.1092

Tuition Summary

20761: Querying Data with Transact-SQL (SQL Server 2017)
Location: Las Vegas, NV
Times:
Date(s): Sep 23, 2019 – Sep 27, 2019
Tuition $2,995.00

20762: Developing SQL Databases (SQL Server 2017)
Location: Las Vegas, NV
Times:
Date(s): Oct 28, 2019 – Nov 1, 2019
Tuition $2,995.00

Generic Promotion ..... $-1,000.00

Total (USD) **$4,990.00**

1. All courses include official curriculum where applicable.
2. Only courses with boot camps in title include exam vouchers and available exam preparation software.

Policies

The undersigned client agrees to the following policies pertaining to the classes reflected in this training agreement. If any particular provision of this agreement shall be deemed invalid or unenforceable, it shall not affect the other provisions hereof, and this agreement shall be construed in all respects as if such provision was omitted.

Shipping Policy

NetCom Learning offers free shipping for your class materials within the continental United States once payment is received. Shipping must be requested more than one week before class start date. A $100 fee will be applied for course materials that are shipped internationally more than one week prior to class or a $200 fee if less than one week prior to class.

To enable an optimal learning experience and to avoid unforeseen transit delays, NetCom Learning requests that at least two weeks are allowed for shipping.

Register Online

Enrollment in Training Class

Enrollment is confirmed on a first pay first registered basis. A seat may be temporarily reserved for two business days by faxing a signed copy of this enrollment agreement; however full payment or approved purchase order is required to confirm a seat. Client may be moved to waitlisted status if the class is booked before payment is received and enrollment is confirmed. Payment may be made with credit card, cash, check or a company purchase order upon credit approval. If you confirm your enrollment with 3 or less days before class start date, you may not receive a book on the first day. Please confirm with your Educational Consultant.

Live Online Training

Students taking online classes, agree that they will have completed connectivity and audio tests per instructions on NetCom's website, well before the class start date. The instructions are also sent to the student to the email address on record upon registration. Completing the test ahead of time, helps ensure there is enough time for troubleshooting in case student needs help with the live online environment.

Training Class Rescheduling/Cancellation

Once the client sends this signed training agreement, the client reserves enrollment in a training class. Not paying for, not showing up for, or not completing a class does not constitute cancellation and the client remains liable for the entire amount in this training agreement.

If the client cannot attend any training class for any reason, the client must inform NetCom Learning immediately by emailing customerservice@netcomlearning.com. NetCom will take the following steps:

- Try to reschedule the client into another date for the same course. A $100 reschedule fee is due and payable immediately if reschedule is requested with less than 15 calendar days from class start date. All reschedule requests must be emailed to customerservice@netcomlearning.com.
- In case another date is not available or the original course is not offered any more, NetCom Learning may choose to offer a different, comparable training class other than what client originally signed up for and apply the applicable amount towards the tuition of the other training class.
- If client cannot attend, NetCom Learning will make any balance amount available to client through NetCom Vouchers which can be redeemed by any person for any NetCom public open enrollment class. These vouchers must be redeemed within a period of one year from issue date of the vouchers.
- If client books training using MS SATV and cancels or is no-show for class, client agrees to pay the regular tuition for class.

Any nonrefundable costs that NetCom Learning has incurred on client or on client's behalf (example airfare) and any amount applicable towards classes already completed will be deducted before issuing credit for another course or issuing vouchers.

No-Show

If client is unable to attend the training class, client can attend the training class under the training class retake policy mentioned below.

Training Class Satisfaction

Client must review class outline and ensure correct pre-requisite knowledge of students for the class being enrolled in. We guarantee your satisfaction with your learning experience. However, if you are not satisfied for any reason, you can attend per the training class retake policy below.

Training Class Retake
Client can retake an open enrollment class that client has already paid for, once, within a period of one year from the start date of the original class client was enrolled in. Client can attend as long as the class is still being offered and there are available seats. Please confirm at least 2 - 3 business days before the repeat class start date to confirm seat availability. If the same class is not offered in the future, NetCom will offer client a different comparable class. There may be additional costs involved. To attend, simply retain course materials. If the courseware has changed, client must purchase the latest course material. If the class has upgraded and is for a different version, it is considered a new class and will not be available under this retake policy. If after registering for a repeat class, client does not attend, client will not be able to attend the class again for free. For any repeat class, client will only need to pay for exam vouchers, if applicable and any optional travel costs.

Class Attendance
The client must be present at a minimum of 80% of the class time to receive a certification of completion. Please maintain punctuality as classes start on time and return from breaks in a timely fashion.

Class Timings
Please arrive at least 10 minutes prior to the start time of your class. Call us at 212.629.7265 if you are running late. If you are more than 15 minutes late your seat may be given to a waitlisted student. Students arriving more than 30 minutes late may not be admitted to class.

Late Payment, Returned Check and Default Payments
All payments due must be made before or on the first day of training class. A 5% late payment fee will be added for payments not made by the due date. A $50.00 fee would be accessed for all returned or cancelled checks. Checks will not be accepted from clients who have had a returned or cancelled check. A late payment fee will apply to the due amount if a check is returned after payment due date. In case of default payments, the client agrees to pay any legal interest on the balance due, together with any cancellation costs and reasonable attorney fees incurred to effect collection of all outstanding balance. If any due amounts are placed in collections, client will be responsible for any additional collection and or attorney fees. Any delinquent account will accrue the maximum monthly interest allowable by law.

Non-Solicitation
During the term of engagement and for 36 months thereafter, client or any entity related to client will not directly or indirectly (i) encourage or solicit any NetCom representative, employee or consultant (ii) assist any other person or entity in such encouragement or solicitation; or (iii) hire, contract, or assist in hiring or retaining any such representative, employee or consultant. Any breach of this section of the agreement can cause irreparable and incalculable damage to NetCom and implies clients acceptance to immediately pay damages to NetCom, in the amount determined by NetCom. Client is encouraged to solicit work from NetCom by communicating such requests directly to NetCom management, Client's Educational Consultant or NetCom customer service.

US Government Transactions
US Government and GSA orders that are not pre-paid using US Government credit card are due net 30 from the completion day of each delivered class. Any volume or bulk purchases receiving discounting shall be subject to pre-payment requirements. Payment processing, late fees, travel expenses and other fees related to US government or GSA orders will follow US Government procurement guidelines.

NOTICE: ANY HOLDER OF THIS CONSUMER CREDIT CONTRACT IS SUBJECT TO ALL CLAIMS AND DEFENSE WHICH THE DEBTOR COULD ASSERT AGAINST THE SELLER OF GOODS OR SERVICES OBTAINED PURSUANT HERETO OR WITH THE PROCEEDS HEREOF. RECOVERY HEREUNDER BY THE DEBTOR SHALL NOT EXCEED AMOUNTS PAID BY THE DEBTOR HEREUNDER. **I understand that this agreement is a legal and binding instrument when signed by the client and accepted by NetCom Learning.**

The person signing this enrollment agreement acknowledges that he or she is authorized by the client to guarantee payment on behalf of the client. By signing below, the client agrees to the terms of this agreement. This agreement and any listed attachments is the only agreement between NetCom and the client. No other promises made by NetCom Learning or any of its employees or agents should be relied upon by the client.

[ ] Register and Pay Online

Register Online

[ ] Credit Card
[ ] Visa [ ] MasterCard [ ] American Express [ ] Discover [ ] Other

Card Number _____ Exp. Date _____

Name on Card _____ CVV/CVC _____

Billing Street _____

Billing City/State/Zip _____

Cardholder Signature _____

I authorize NetCom Learning to bill the above credit card as specified below:
[ ] Bill my credit card for a one time charge of $4,990.00 for my classes listed on the Registration Form.

[ ] Check
Check Number _____

[ ] Automatic Bank Account Debit

Bank Name _____ Routing Number _____

Bank Street Address _____ Account Number _____

Bank City, State, Zip _____ Check Number (optional) _____

[ ] Purchase Order (PO)
POs are subject to credit approval by NetCom. Client must be on the NetCom Approved Vendor list.

PO Number _____ PO Date _____

This training quote is based on payment due before first day of class. An additional 20% of the Total Tuition may apply for payment received after registration.

This proposal is valid until August 30th, 2019.

Kanwaljeet Kaur, Learning Consultant		July 1, 2019
Prepared By	Signature	Date
Client Name	Signature	Date
Supervisor	Signature	Date

Once approved, please sign above and fax the preceding pages (beginning with the ***Enrollment Agreement*** section), to my attention, **Kanwaljeet Kaur**, at **646.292.5170** or **646.843.4960**.

Course Overview

20761: QUERYING DATA WITH TRANSACT-SQL (SQL SERVER 2017)

This course is designed to introduce students to Transact-SQL. It is designed in such a way that the first three days can be taught as a course to students requiring the knowledge for other courses in the SQL Server curriculum. Days 4 & 5 teach the remaining skills required to take exam 70-761.

This course is based on the objectives of the course version 20761C.

20761: Querying Data with Transact-SQL (SQL Server 2017)

This course is designed to introduce students to Transact-SQL. It is designed in such a way that the first three days can be taught as a course to students requiring the knowledge for other courses in the SQL Server curriculum. Days 4 & 5 teach the remaining skills required to take exam 70-761.

This course is based on the objectives of the course version 20761C.

Note: E- learning module (Microsoft On Demand, MOD) is also available for this course Click here for more details

Course Objectives

- Describe key capabilities and components of SQL Server
- Describe T-SQL, sets, and predicate logic
- Write a single table SELECT statement
- Write a multi-table SELECT statement
- Write SELECT statements with filtering and sorting
- Describe how SQL Server uses data types
- Write DML statements
- Write queries that use built-in functions
- Write queries that aggregate data
- Write subqueries
- Create and implement views and table-valued functions
- Use set operators to combine query results
- Write queries that use window ranking, offset, and aggregate functions
- Transform data by implementing pivot, unpivot, rollup and cube
- Create and implement stored procedures
- Add programming constructs such as variables, conditions, and loops to T-SQL code

Course Outline

- Introduction to Microsoft SQL Server
  - The Basic Architecture of SQL Server
  - SQL Server Editions and Versions
  - Getting Started with SQL Server Management Studio
  - Lab : Working with SQL Server Tools
  - Working with SQL Server Management Studio
  - Creating and Organizing T-SQL Scripts
  - Using Books Online
- Introduction to T-SQL Querying
  - Introducing T-SQL
  - Understanding Sets
  - Understanding Predicate Logic
  - Understanding the Logical Order of Operations in SELECT statements
  - Lab : Introduction to T-SQL Querying
  - Executing Basic SELECT Statements

  - Executing Queries that Filter Data using Predicates
  - Executing Queries That Sort Data Using ORDER BY
- Writing SELECT Queries
  - Writing Simple SELECT Statements
  - Eliminating Duplicates with DISTINCT
  - Using Column and Table Aliases
  - Writing Simple CASE Expressions
  - Lab : Writing Basic SELECT Statements
  - Writing Simple SELECT Statements
  - Eliminating Duplicates Using DISTINCT
  - Using Column and Table Aliases
  - Using a Simple CASE Expression
- Querying Multiple Tables
  - Understanding Joins
  - Querying with Inner Joins
  - Querying with Outer Joins
  - Querying with Cross Joins and Self Joins
  - Lab : Querying Multiple Tables
  - Writing Queries that use Inner Joins
  - Writing Queries that use Multiple-Table Inner Joins
  - Writing Queries that use Self-Joins
  - Writing Queries that use Outer Joins
  - Writing Queries that use Cross Joins
- Sorting and Filtering Data
  - Sorting Data
  - Filtering Data with Predicates
  - Filtering Data with TOP and OFFSET-FETCH
  - Working with Unknown Values
  - Lab : Sorting and Filtering Data
  - Writing Queries that Filter Data using a WHERE Clause
  - Writing Queries that Sort Data Using an ORDER BY Clause
  - Writing Queries that Filter Data Using the TOP Option
  - Write Queries that filter data using the OFFSET-FETCH clause
- Working with SQL Server Data Types
  - Introducing SQL Server Data Types
  - Working with Character Data
  - Working with Date and Time Data
  - Lab : Working with SQL Server Data Types
  - Writing Queries that Return Date and Time Data
  - Writing Queries that use Date and Time Functions
  - Writing Queries That Return Character Data
  - Writing Queries That Return Character Functions
- Using DML to Modify Data
  - Adding Data to Tables
  - Modifying and Removing Data
  - Generating automatic column values
  - Lab : Using DML to Modify Data
  - Inserting Records with DML
  - Updating and Deleting Records Using DML
- Using Built-In Functions
  - Writing Queries with Built-In Functions
  - Using Conversion Functions

  - Using Logical Functions
  - Using Functions to Work with NULL
  - Lab : Using Built-In Functions
  - Writing Queries That Use Conversion Functions
  - Writing Queries that use Logical Functions
  - Writing Queries that Test for Nullability
- Grouping and Aggregating Data
  - Using Aggregate Functions
  - Using the GROUP BY Clause
  - Filtering Groups with HAVING
  - Lab : Grouping and Aggregating Data
  - Writing Queries That Use the GROUP BY Clause
  - Writing Queries that Use Aggregate Functions
  - Writing Queries that Use Distinct Aggregate Functions
  - Writing Queries that Filter Groups with the HAVING Clause
- Using Subqueries
  - Writing Self-Contained Subqueries
  - Writing Correlated Subqueries
  - Using the EXISTS Predicate with Subqueries
  - Lab : Using Subqueries
  - Writing Queries That Use Self-Contained Subqueries
  - Writing Queries That Use Scalar and Multi-Result Subqueries
  - Writing Queries That Use Correlated Subqueries and an EXISTS Clause
- Using Table Expressions
  - Using Views
  - Using Inline Table-Valued Functions
  - Using Derived Tables
  - Using Common Table Expressions
  - Lab : Using Table Expressions
  - Writing Queries That Use Views
  - Writing Queries That Use Derived Tables
  - Writing Queries That Use Common Table Expressions (CTEs)
  - Writing Queries That Use Inline Table-Valued Expressions (TVFs)
- Using Set Operators
  - Writing Queries with the UNION operator
  - Using EXCEPT and INTERSECT
  - Using APPLY
  - Lab : Using Set Operators
  - Writing Queries That Use UNION Set Operators and UNION ALL
  - Writing Queries That Use CROSS APPLY and OUTER APPLY Operators
  - Writing Queries That Use the EXCEPT and INTERSECT Operators
- Using Windows Ranking, Offset, and Aggregate Functions
  - Creating Windows with OVER
  - Exploring Window Functions
  - Lab : Using Windows Ranking, Offset, and Aggregate Functions
  - Writing Queries that use Ranking Functions
  - Writing Queries that use Offset Functions
  - Writing Queries that use Window Aggregate Functions
- Pivoting and Grouping Sets
  - Writing Queries with PIVOT and UNPIVOT
  - Working with Grouping Sets
  - Lab : Pivoting and Grouping Sets

  - Writing Queries that use the PIVOT Operator
  - Writing Queries that use the UNPIVOT Operator
  - Writing Queries that use the GROUPING SETS CUBE and ROLLUP Subclauses
- Executing Stored Procedures
  - Querying Data with Stored Procedures
  - Passing Parameters to Stored procedures
  - Creating Simple Stored Procedures
  - Working with Dynamic SQL
  - Lab : Executing Stored Procedures
  - Using the EXECUTE statement to Invoke Stored Procedures
  - Passing Parameters to Stored procedures
  - Executing System Stored Procedures
- Programming with T-SQL
  - T-SQL Programming Elements
  - Controlling Program Flow
  - Lab : Programming with T-SQL
  - Declaring Variables and Delimiting Batches
  - Using Control-Of-Flow Elements
  - Using Variables in a Dynamic SQL Statement
  - Using Synonyms
- Implementing Error Handling
  - Implementing T-SQL error handling
  - Implementing structured exception handling
  - Lab : Implementing Error Handling
  - Redirecting errors with TRY/CATCH
  - Using THROW to pass an error message back to a client
  - After completing this module, students will be able to:
  - Implement T-SQL error handling.
  - Implement structured exception handling.
- Implementing Transactions
  - Transactions and the database engines
  - Controlling transactions
  - Lab : Implementing Transactions
  - Controlling transactions with BEGIN, COMMIT, and ROLLBACK
  - Adding error handling to a CATCH block

20762: DEVELOPING SQL DATABASES (SQL SERVER 2017)

This five-day instructor-led course provides students with the knowledge and skills to develop a Microsoft SQL Server database. The course focuses on teaching individuals how to use SQL Server product features and tools related to developing a database.

This course is based on the objectives of the course version 20762C.

20762: Developing SQL Databases (SQL Server 2017)

This five-day instructor-led course provides students with the knowledge and skills to develop a Microsoft SQL Server database. The course focuses on teaching individuals how to use SQL Server product features and tools related to developing a database.

This course is based on the objectives of the course version 20762C.

Note: E- learning module (Microsoft On Demand, MOD) is also available for this course Click here for more details

Course Objectives
- Design and Implement Tables
- Describe advanced table designs
- Ensure Data Integrity through Constraints
- Describe indexes, including Optimized and Columnstore indexes
- Design and Implement Views
- Design and Implement Stored Procedures
- Design and Implement User Defined Functions
- Respond to data manipulation using triggers
- Design and Implement In-Memory Tables
- Implement Managed Code in SQL Server
- Store and Query XML Data
- Work with Spatial Data
- Store and Query Blobs and Text Documents

Course Outline
- Introduction to Database Development
  - Introduction to the SQL Server Platform
  - SQL Server Database Development Tasks
- Designing and Implementing Tables
  - Designing Tables
  - Data Types
  - Working with Schemas
  - Creating and Altering Tables
  - Lab : Designing and Implementing Tables
  - Designing Tables
  - Creating Schemas
  - Creating Tables
- Advanced Table Designs
  - Partitioning Data
  - Compressing Data
  - Temporal Tables
  - Lab : Using Advanced Table Designs
  - Partitioning Data
  - Compressing Data
- Ensuring Data Integrity through Constraints
  - Enforcing Data Integrity
  - Implementing Data Domain Integrity
  - Implementing Entity and Referential Integrity
  - Lab : Using Data Integrity Through Constraints
  - Add Constraints
  - Test the Constraints
- Introduction to Indexes
  - Core Indexing Concepts
  - Data Types and Indexes
  - Heaps, Clustered, and Nonclustered Indexes
  - Single Column and Composite Indexes
  - Lab : Implementing Indexes
  - Creating a Heap
  - Creating a Clustered Index
  - Creating a Covered Index

- Designing Optimized Index Strategies
  - Index Strategies
  - Managing Indexes
  - Execution Plans
  - The Database Engine Tuning Advisor
  - Query Store
  - Lab : Optimizing Indexes
  - Using Query Store
  - Heaps and Clustered Indexes
  - Creating a Covered Index
- Columnstore Indexes
  - Introduction to Columnstore Indexes
  - Creating Columnstore Indexes
  - Working with Columnstore Indexes
  - Lab : Using Columnstore Indexes
  - Creating a Columnstore Index
  - Create a Memory Optimized Columnstore Table
- Designing and Implementing Views
  - Introduction to Views
  - Creating and Managing Views
  - Performance Considerations for Views
  - Lab : Designing and Implementing Views
  - Creating Standard Views
  - Creating an Updateable view
- Designing and Implementing Stored Procedures
  - Introduction to Stored Procedures
  - Working with Stored Procedures
  - Implementing Parameterized Stored Procedures
  - Controlling Execution Context
  - Lab : Designing and Implementing Stored Procedures
  - Create Stored procedures
  - Create Parameterized Stored procedures
  - Changes Stored Procedure Execution Context
- Designing and Implementing User-Defined Functions
  - Overview of Functions
  - Designing and Implementing Scalar Functions
  - Designing and Implementing Table-Valued Functions
  - Considerations for Implementing Functions
  - Alternatives to Functions
  - Lab : Designing and Implementing User-Defined Functions
  - Format Phone numbers
  - Modify an Existing Function
- Responding to Data Manipulation via Triggers
  - Designing DML Triggers
  - Implementing DML Triggers
  - Advanced Trigger Concepts
  - Lab : Responding to Data Manipulation by Using Triggers
  - Create and Test the Audit Trigger
  - Improve the Audit Trigger
- Using In-Memory Tables
  - Memory-Optimized Tables
  - Natively Compiled Stored Procedures

  - Lab : Using In-Memory Database Capabilities
  - Using Memory-Optimized Tables
  - Using Natively Compiled Stored procedures
- Implementing Managed Code in SQL Server
  - Introduction to CLR Integration in SQL Server
  - Implementing and Publishing CLR Assemblies
  - Lab : Implementing Managed Code in SQL Server
  - Assessing Proposed CLR Code
  - Creating a Scalar-Valued CLR Function
  - Creating a Table Valued CLR Function
- Storing and Querying XML Data in SQL Server
  - Introduction to XML and XML Schemas
  - Storing XML Data and Schemas in SQL Server
  - Implementing the XML Data Type
  - Using the Transact-SQL FOR XML Statement
  - Getting Started with XQuery
  - Shredding XML
  - Lab : Storing and Querying XML Data in SQL Server
  - Determining when to use XML
  - Testing XML Data Storage in Variables
  - Using XML Schemas
  - Using FOR XML Queries
  - Creating a Stored Procedure to Return XML
- Storing and Querying Spatial Data in SQL Server
  - Introduction to Spatial Data
  - Working with SQL Server Spatial Data Types
  - Using Spatial Data in Applications
  - Lab : Working with SQL Server Spatial Data
  - Become Familiar with the Geometry Data Type
  - Add Spatial Data to an Existing Table
  - Find Nearby Locations
- Storing and Querying BLOBs and Text Documents in SQL Server
  - Considerations for BLOB Data
  - Working with FILESTREAM
  - Using Full-Text Search
  - Lab : Storing and Querying BLOBs and Text Documents in SQL Server
  - Enabling and Using FILESTREAM Columns
  - Enabling and Using File Tables
  - Using a Full-Text Index
- SQL Server Concurrency
  - Concurrency and Transactions
  - Locking Internals
  - Lab : SQL Server Concurrency
  - Implement Snapshot Isolation
  - Implement Partition Level Locking
- Performance and Monitoring
  - Extended Events
  - Working with extended Events
  - Live Query Statistics
  - Optimize Database File Configuration
  - Metrics
  - Lab : Monitoring, Tracing, and Baselining

- Collecting and Analyzing Data Using Extended Events
- Implementing Baseline Methodology

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- Dr. Michael Marquardt, President of the World Institute for Action Learning, Professor at George Washington University

Hotel and Travel
Accommodations

Event Name/Date:

CA-NV AWWA Fall Conference/October 21 - 24, 2019

CONTACT INFORMATION

First Name | Last Name | Date

ACCOMMODATION INFORMATION

Rooms and rates are subject to availability. Complete and submit this form as soon as possible to guarantee a room at the host hotel. In the event that the host hotel is booked, every effort will be made to secure a room at the closet hotel within comparable rates to the event discounted rate.

Arrival Date | Departure Date | No. of guests | Room Type

Do you require a smoking room?

○ Yes ○ No

Do you need transportation from the airport to the hotel?

○ Yes ○ No

Flight Number | Time

ADDITIONAL INFORMATION/REQUESTS

Staff Representative

American Water Works Association
California-Nevada Section

ANNUAL FALL CONFERENCE 2019
October 21 - 24 · San Diego, CA
TOWN & COUNTRY HOTEL

RESOURCE *sustaining life through diversity of water*

Attendee Registration Form

__I am a speaker at this conference. Date _____ Time _____

Attendee Name_____

Title _____ Company _____

Address _____ City _____ State_____ Zip_____

Phone _____ Cell _____ Fax _____

Attendee Email_____ AWWA Member #_____

Type of Membership (check one) __Individual __Organization __Operator/Admin. __Utility

Complimentary Spouse/Guest (If attending) *Household members only. Does not include Water Industry Personnel_____

Member Registration	Early On or Before 8/22/19	PRE On or Before 10/15/19	Onsite After 10/15/19	Subtotals
☐ FULL REGISTRATION: Includes All Technical sessions, Keynote Lunch & Exhibitor Hosted Lunch & Exhibit Hall Entrance	$445	$495	$545	$ _____
☐ Tuesday One-Day: Includes Keynote Lunch & Exhibit Hall Entrance	$225	$275	$315	$ _____
☐ Wednesday One-Day: Includes Exhibitor Hosted Lunch & Exhibit Hall Entrance	$225	$275	$315	$ _____
☐ EDUCATION PACKAGE Wednesday/Thursday Includes Technical Sessions & Exhibit Hall Entrance	$225 NO MEALS	$275 NO MEALS	$315 NO MEALS	$ _____
☐ Thursday One-Day Includes Technical Sessions	$149	$149	$149	$ _____
☐ Thursday - Global Water Track Includes ticket to WFP Lunch & Learn*	$75	$75	$75	$ _____
☐ STUDENT - Must be full time Student/AWWA Student Member ☐ RETIREE REGISTRATION - Must be: 1) Retired from all gainful employment. 2) A member of AWWA for at least 15 years. 3) At least 60 years of age.	FREE NO MEALS	FREE NO MEALS	FREE NO MEALS	$ FREE

Non Member Registration	Early On or Before 8/22/19	PRE On or Before 10/15/19	Onsite After 10/15/19	Subtotals
☐ FULL REGISTRATION: Includes all technical sessions, Keynote Lunch & Exhibitor Hosted Lunch & Exhibit Hall Entrance	$495	$545	$595	$ _____
☐ Tuesday One-Day: Includes Keynote Lunch & Exhibit Hall Entrance	$275	$325	$375	$ _____
☐ Wednesday One-Day: Includes Exhibitor Hosted Lunch & Exhibit Hall Entrance	$275	$325	$375	$ _____
☐ EDUCATION PACKAGE Wednesday/Thursday Includes Technical Sessions & Exhibit Hall Entrance	$275 NO MEALS	$325 NO MEALS	$375 NO MEALS	$ _____
☐ Thursday One-Day Includes Technical Sessions	$149	$149	$149	$ _____
☐ Thursday - Global Water Track Includes ticket to WFP Lunch & Learn*	$75	$75	$75	$ _____

Lunches
If not included with registration fee

☐ Keynote Lunch $50

☐ Exhibitor Hosted Lunch $50

Subtotal $_____

SPECIAL EVENTS
☐ Tues. Technical Tour $55.00

☐ Wed. Technical Tour $55.00

☐ Thurs. WFP Lunch & Learn* $55.00

☐ 1 Foursome LCM Golf Tournament $1,000.00

Subtotal $_____

Are you a Young Professional?
☐ 35 years old or younger
☐ 10 years experience or less

CONTACT HOURS
☐ FREE
(I am an individual, operator or administrative AWWA member)

☐ $20.00
(My utility/organization is an AWWA member or I am not an AWWA member)

PAYMENT METHOD
Check #_____
Payable to CA-NV AWWA (U.S. funds)

PO#_____
Must be accompanied by a physical copy of the PO

Credit Card: ☐ Visa ☐ MC ☐ AMEX

Card No.:_____ CVV:_____

Exp. Date:_____

Name on Card:_____

Authorized Signature:_____

Billing Zip Code:_____
Must be Zip Code in which your credit card statement is mailed
For copy of receipt, please write email address:

PAYMENT INFORMATION
Registration Total: _____ Special Events Total: _____

Meal Total: _____ Contact Hours: _____

Total Amount Due: _____

Refund requests must be submitted in writing to the Section office by September 30, 2019. A $50 administrative fee will be deducted from all refunds. **No Refunds Granted after September 30, 2019.** By submitting this form, you are consenting to having your photo/video taken at the event which may be used for future Section promotions. To opt-out email info@ca-nv-awwa.org.

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Rancho Cucamonga, CA 91730
Phone: (909) 481-7200
Fax: (909) 291-2107
www.ca-nv-awwa.org

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or submit by fax to (909) 291-2107 or by email to schickarmane@ca-nv-awwa.org

Tuesday, October 22, 2019
Sessions 1-10

RESOURCE sustaining life through diversity of water

ANNUAL FALL CONFERENCE 2019

	SESSION 1 **Leadership Development** ROOM	SESSION 2 **Asset Management** ROOM	SESSION 3 **Meters** ROOM	SESSION 4 **Water Treatment** ROOM	SESSION 5 **Reuse & Desalination** ROOM	SESSION 6 **SDWA Committee** ROOM	SESSION 7 **SEP Committee** ROOM	SESSION 8 **Water Well Technology** ROOM	SESSION 9 **Distribution System Water Quality** ROOM	SESSION 10 **Tanks, Reservoirs & Structures** ROOM
1:30 PM - 2:00 PM		How one utility is leveraging analytics to optimize operations and reduce apparent losses *Kristine Gali (Valor Water Analytics)*	Developing Meter Changeout Criteria Based on Apparent Rank of Importance *Richard Small (Riverside Public Utilities)*	Optimizing Biofiltration for Improved Manganese Control under Winter Conditions (WRF 4749) *Ashley Evans (Arcadis) & Amina Stoddart (Dalhousie Univ.)*	Stocktake on Reuse *Melanie Tan (Kennedy Jenks)*	State and Federal Regulatory Updates *Darrin Polhemus (DDW, State Board)*	CA & NV WARN Meeting and Exercise *Lisa Deklinski (City of Sacramento)*	Process and Progress of Updating California's Well Standards *Julie Haus (State of CA Dept. of Water Resources)*	Breakpoint Chlorination and Chloramination to Limit DBP Formation *Harsh Ashani & Tarrah Henrie (Corona Environmental Consulting)*	Potable Water Tank Mixing, Simple Solution to many Water Quality Problems *Dave Summerfield (Medora Corp. - SolarBee/GridBee)*
2:00 PM - 2:30 PM		How one utility is leveraging analytics to optimize operations and reduce apparent losses *Kristine Gali (Valor Water Analytics)*	Small Meter Sampling - New Data & Insights *Kris Williams (WSO)*	Impact of Biological Filtration on NDMA Precursor Concentrations (WRF 4669) *Ashley Evans (Arcadis)*	IPR vs DPR: Which One Makes More Sense for Your Community *Val Frenkel (Greely and Hansen)*	State and Federal Regulatory Updates *My Linh Nguyen (RDEP)*	CalWARN Meeting and Exercise *Lisa Deklinski (City of Sacramento)*	Well Construction Standards - Which One(s) Do I Use? *Kevin McGilliciuddy (Roscoe Moss Company)*	History of Water Service Line Materials *Whit Hall (REHAU)*	Steel Tanks - Risk and Resilience Assessment and Mitigation Strategies *Leslie Scott, P.E. (Tank Industry Consultants)*
2:30 PM - 3:00 PM		Asset Management using GIS and Related Field Survey Equipment and Practices *Mark Carey, P.E. & Richard Relyea (MC Engineering, Inc.)*	Large Customer Meter Flow Profiling *Kris Williams (WSO)*	From Zero to 60 in the PFAS Lane! *Erin Mackey (Brown and Caldwell)*	The Regional Recycled Water Program – A New Source of Water for Southern California *Heather Collins (Metropolitan Water District of So. Cal)*	State and Federal Regulatory Updates *TBD*	CalWARN Meeting and Exercise *Lisa Deklinski (City of Sacramento)*	Tracking Aquifer Storage and Recovery (ASR) Well Performance, Automation & Programming for City of Phoenix Well #299, City of Phoenix, Arizona. *Gary M. Gin, R.G. (Leonard Rice Engineers)*	History of Water Service Line Materials *Whit Hall (REHAU)*	Replacement of Two Earthen Reservoirs with Two Prestressed Concrete Tanks on a Challenging Site *Cindy Bertsch (Water Works Engineers) & Brandon Stieber (San Jose Water)*
3:00 PM - 4:00 PM	BREAK									
4:00 PM - 4:30 PM	Young Professionals Flash Mentoring Session *Jim Fisher (San Diego Water Authority), David Clark (Metropolitan Water District), & Diane Pitman (Metropolitan Water District)*	Asset Management Approach to Water Well Maintenance *Mike Judkins (Suez Advanced Solutions)*	Meter Health Analytics – Finding Revenue for Utilities on High-Value Water Meters *Andrew Kodis & Frank Kaplan (Olea Edge Analytics)*	Sometimes There is a Silver Bullet: How a Water Treatment Plant Increased Its Water Production by Reducing Its Sludge Waste Stream Generation *Aileen Kondo (West Yost Assoc.)*	A Case Study: Developing City of San Diego's Advanced Water Treatment Operator Training *Elise Chen (Trussel Technologies, Inc.)*	Impacts of Woolsey Fire on Distribution Systems and Water Quality: A Case Study of Las Virgenes Municipal Water District *John Zhao (Las Virgenes MWD)*	CalWARN Meeting and Exercise *Lisa Deklinski (City of Sacramento)*	Implementation of a Strategic Well Rehabilitation Program *Tara Rolfe & Josh Sebow (Wood Rogers, Inc.)*	Proactive Corrosion Control Treatment Evaluation *Tarrah Henrie, (Corona Environmental Consulting), Bryan Rinde (Golden State Water Co.), & Sheldon Masters (Corona Environmental Consulting)*	Engaging Your Water Tank, The In's and Outs *Matt Tasch (Superior Tank Solutions, Inc.)*
4:30 PM - 5:00 PM	Young Professionals Flash Mentoring Session *Jim Fisher (San Diego Water Authority), David Clark (Metropolitan Water District), & Diane Pitman (Metropolitan Water District)*	Asset Management Approach to Water Well Maintenance *Mike Judkins (Suez Advanced Solutions)*	Top Down and Bottom Up Business Case for Water Meter Changeout and AMI *Richard Relyea & Mark Carey, P.E. (MC Engineering, Inc.)*	Maximizing Residuals Management: A Comparison of Residuals Process Trains at Three EBMUD Water Treatment Plants *Deborah Russell (EBMUD)*	East County Advanced Water Purification Program Update *Mark Nimiec (Padre Dam Municipal Water District) & Patrick Huston (Kennedy Jenks)*	State Water Board's Perspective on Wildfire Impacts to Water Quality Among Local Suppliers *Jeff Densmore (State Water Resources Control Board, Div. of Drinking Water)*	CalWARN Meeting and Exercise *Lisa Deklinski (City of Sacramento)*	Lessons Learned in Water Well Rehabilitation and Redevelopment *Russell Kyle & Kimberly Makur (KYLE Groundwater, Inc.)*	Water Use Patterns and Pipe Materials Influence DBP Formation and Microbial Succession *Sheldon Masters (Corona Environmental Consulting)*	Blue Green Algae (BGA) in Lakes and Raw Water Reservoirs. Formation, Identification and Control of this Cyanotoxin *Dave Summerfield (Medora Corp. - SolarBee/GridBee)*
5:00 PM - 5:30 PM		An Objective CMMS Evaluation Framework *Sean Pou (Hazen and Sawyer)*	Top Down and Bottom Up Business Case for Water Meter Changeout and AMI *Richard Relyea & Mark Carey, P.E. (MC Engineering, Inc.)*	Residuals Management for Small Systems *Kevin Berryhill & Keith Mortensen (Provost & Pritchard Consulting Group)*	Improving MF and UF Membrane Energy Efficiency Through Real-Time Colloidal Particle Monitoring *Ganesh Rajagopalan (Kennedy Jenks)*	City of Redding Water System's Experience After the Carr Fire *Dan Beans (City of Redding Water Utility)*	CalWARN Meeting and Exercise *Lisa Deklinski (City of Sacramento)*			Maximizing Resource Efficiency via Controlled Raw Water Withdrawal *Kelly McCurry (Ixom Watercare)*

Wednesday, October 23, 2019
Sessions 11-21, 7:30 AM to 1:30 PM

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	SESSION 11 **Leadership Development** ROOM	SESSION 12 **Engineering & Construction / Pipeline Rehabilitation** ROOM	SESSION 13 **Operator** ROOM	SESSION 14 **Water Treatment / Research** ROOM	SESSION 15 **Energy & Sustainability** ROOM	SESSION 16 **Water Management & Efficiency** ROOM	SESSION 17 **Water Treatment / Research** ROOM	SESSION 18 **Systems Controls** ROOM	SESSION 19 **Environmental Health & Safety** ROOM	SESSION 20 **SEP Committee** ROOM	SESSION 21 **Financial Management / New Technology** ROOM
7:30 AM - 8:00 AM	Water is Your Friend- How to Communicate the Value You Provide to Your Community *Sahr Sweiss (Greeley and Hansen)*	Young Ductile Iron Pipe Failures *John Farley (City of Riverside Public Utilities Dept.)*	Development of a Comprehensive Operator Training Program. *Mechelle Bevens (Helix Water District)*	Navigating the Chemistry of Manganese and its Removal through a Water Treatment Plant *Issam Najm (WQTS, Inc.)*		Into the World of AMI and How We Got Here *Kevin Barnes (Ferguson)*	Update on the state of laboratory accreditation in California--from one laboratory's perspective *Cindy Ziemicki (Helix Water District) & David Kimbrough (Pasadena Water and Power)*	Improving Control System Safety after an Arc flash study *Matt Samor (Arc Flash San Diego)*			
8:00 AM - 8:30 AM	Water is Your Friend- How to Communicate the Value You Provide to Your Community *Sahr Sweiss (Greeley and Hansen)*	Fixed-Screen Surface Water Intakes – Trenchless Construction *Henry Hunt (Layne Christensen)*	Zeta potential, what it is and how it's used for Plant Optimization. *Tommy Pearce (Helix Water District)*	Removal of Perfluorinated Chemicals (PFCs) from an Arizona Groundwater Well by Various Adsorbents *Harsh Ashani (Corona Environmental Consultanting) & Onur G. Apul, Ph.D. (Univ. of Massachusetts, Lowell)*		How to Address Infrastructure Replacement Quicker In 2019-2020 *Frank Gill (Heilman Capital)*	Update on the state of laboratory accreditation in California--from one laboratory's perspective *Cindy Ziemicki (Helix Water District) & David Kimbrough (Pasadena Water and Power)*	Improving Control System Safety after an Arc flash study *Matt Samor (Arc Flash San Diego)*			
8:30 AM - 10:00 AM	BREAK										
10:00 AM - 10:30 AM	What am I supposed to say? Combating Negative Water Messages in Social Media *Bill Steele (Corporate Culture Development)*	Rapid design and construction of nitrate treatment in Barstow, California *George Zakhari (Golden State Water Company)*	Aeration versus TOC Reduction: What is the right tool for your WTP? *Ellen Gaby (Buhr) (Ivoss Watercare, Inc.)*	Merit and feasibility of using satellite remote sensing for routinely monitoring lakes and reservoirs used for drinking water supply *Seyoum Gebremariam (Metropolitan Water District of So. Cal)*	The Partnership for Clean Water - Treatment and Energy Usage Optimization *Todd Brewer (AWWA)*	Expanding the Possibilities of AMI: The New Approach NaaS and SaaS *Robert Gustin (Neptune Technology Group)*	Rapid design and construction of nitrate treatment in Barstow, California *George Zakhari (Golden State Water Company)*	Levels of Reliability *Kent Melville (Inductive Automation)*	Measuring Ammonia Oxidizing Bacteria in the Laboratory *David Kimbrough (Pasadena Water & Power)*	AWWA/FEMA Resource Typing *Christine Herndon (Herndon Solutions)*	Not Another Rate Survey *Johnathan Cruz (Moulton Niguel Water District)*
10:30 AM - 11:00 AM	What am I supposed to say? Combating Negative Water Messages in Social Media *Bill Steele (Corporate Culture Development)*	California American Water Utilizes Design-Build Approach for Successful Well Site PFOA/PFOS Treatment *Tim Hasler (California American Water)*	Aeration versus TOC Reduction: What is the right tool for your WTP? *Ellen Gaby (Buhr) (Ivoss Watercare, Inc.)*	Monitoring and Management of Problem Causing Algae in Surface Waters at the Metropolitan Water District of Southern California *Margaret Spoo-Chupka (Metropolitan Water District of So. Cal)*	From A to Z, Energy Efficiency for the Water Sector *James Pasmore (Southern California Edison)*		California American Water Utilizes Design-Build Approach for Successful Well Site PFOA/PFOS Treatment *Tim Hasler (California American Water) & Rob Craw (AquaCUS Vets)*	Levels of Reliability *Kent Melville (Inductive Automation)*	Measuring Ammonia Oxidizing Bacteria in the Laboratory *David Kimbrough (Pasadena Water & Power)*	AWWA/FEMA Resource Typing *Christine Herndon (Herndon Solutions)*	Not Another Rate Survey *Johnathan Cruz (Moulton Niguel Water District)*
11:00 AM - 11:30 AM	SDCWA's Leadership Development Strategy *Jim Fisher (San Diego County Water Authority)*	How Did the City of Sacramento Restore the Useful Life of 100 MGD Filters *Megan Thomas (City of Sacramento)*	How knowledge transfer lead to a 35-year asset management plan at Helix Water District water treatment plant with 54-year-old aging infrastructure. *Larry Lyford & Henry Palechek (Helix Water District)*	Cyanotoxin Sample Preparation and Analysis by LC/MS/MS *Eduardo Garcia (Metropolitan Water District of So. Cal)*	From A to Z, Energy Efficiency for the Water Sector *Bill McDonnell (Metropolitan Water District of So. Cal)*	The Impact of Digital Customer Engagement on Water Conservation: A Comparative Analysis *Ganesh Krishnamurthy (Drapecountz) & Dr. Mehdi Nemati (UCR School of Policy)*	How Did the City of Sacramento Restore the Useful Life of 100 MGD Filters *Megan Thomas (City of Sacramento) & Tim Williams (Kennedy/Jenks)*	Methods for Upgrading Legacy Control Systems Software *Michael Erwin (TJC and Associates)*	Generators, Portable Booster Pumps and Emergency Preparedness *Agustin Mireles (California Water Service)*	Emergency Water Bypass lay-flat hose *Isaac Alatorre (Portable Pipeline Systems)*	Planning for a Rainy Day *Dave Gore (San Diego County Water Authority)*
11:30 AM - 12:00 PM	Leading the Way - Metropolitan's Leadership Development Programs *Diane Pitman (Metropolitan Water District)*	How Did the City of Sacramento Restore the Useful Life of 100 MGD Filters *Megan Thomas (City of Sacramento)*	How knowledge transfer lead to a 35-year asset management plan at Helix Water District water treatment plant with 54-year-old aging infrastructure. *Larry Lyford (Helix Water District)*	Efficacy of Treatment Processes for Cyanotoxin Removal and Degradation *Alex Gorzalski (Huzen and Sawyer)*	From A to Z, Energy Efficiency for the Water Sector *Virginia Lew (California Energy Commission)*	Conserving Water by Making Data Actionable *Paul Hauffen (Sedaru)*	How Did the City of Sacramento Restore the Useful Life of 100 MGD Filters *Megan Thomas (City of Sacramento) & Tim Williams (Kennedy/Jenks)*	Methods for Upgrading Legacy Control Systems Software *Michael Erwin (TJC and Associates)*	Generators, Portable Booster Pumps and Emergency Preparedness *Agustin Mireles (California Water Service)*	Pursuing AWIA 2018 Compliance with the Updated AWWA Cyber Security Guidance & Tool *Andrew Obrt (West Yost Associates)*	
12:00 PM - 1:30 PM	LUNCH										

Wednesday, October 23, 2019
Sessions 11-21, 1:30 PM to 5:30 PM

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	SESSION 11 **Leadership Development** ROOM	SESSION 12 **Engineering & Construction / Pipeline Rehabilitation** ROOM	SESSION 13 **Operator** ROOM	SESSION 14 **Water Treatment / Research** ROOM	SESSION 15 **Energy & Sustainability** ROOM	SESSION 16 **Water Management & Efficiency** ROOM	SESSION 17 **Water Treatment / Research** ROOM	SESSION 18 **Systems Controls** ROOM	SESSION 19 **Environmental Health & Safety** ROOM	SESSION 20 **SEP Committee** ROOM	SESSION 21 **Financial Management / New Technology** ROOM
1:30 PM - 2:00 PM	Cultivating Tomorrow's Leaders within Your Organization *David Clark (Metropolitan Water District)*	Finding Pipe Failures Before They Occur *Jim Fitchett (Noda, Inc.) & David Hughes (Consultant)*	Operators Round Table *Bill Cardinal (Calaveras County Water District), Tommy Pearce (Helix Water District), Robert Janowski (City of Napa), & Larry Lyford (Helix Water District)*	Cyanotoxin Incidence and Control Case Studies *Jeff Neemann (Black & Veatch)*	Strategic Energy Management Experiences of 50 Water Utilities *Steve Jones (Hansen, Allen and Luce, Inc.)*	A Lesson on the Significance of Financial and Operational Benefits Post-AMI Implementation *Steve Nees (Utilivorks Consulting, Inc.)*	Microplastics – What You Need to Know *Tarrah Heinle (Corona Environmental Consulting)*	How to Drive Agency Requirements into SCADA *Chris Schleich (Enterprise Automation)*	Public Health Risk-Balancing: A New Approach to Setting MCLs *David Kniebough (Pasadena Water & Power)*	AWIA - Long Beach Water's Journey Through the Process *David Lopez (City of Long Beach)*	Remote Satellite Imagery Finds Hidden Background Leaks *Gadi Kovarsky (Utilis)*
2:00 PM - 2:30 PM	Expert Panel focused on Developing future technical leaders and managers in the water industry *Jim Fisher (San Diego County Water Authority), Ted Ma (Real Ted Ma), & Diane Pitman (Metropolitan Water District)*	Pipe Bursting Water Mains - Trenchless Replacement and Rehabilitation *George Mallakis (II Technologies, Inc. - Trenchless Solutions)*	Operators Round Table *Bill Cardinal (Calaveras County Water District), Tommy Pearce (Helix Water District), Robert Janowski (City of Napa), & Larry Lyford (Helix Water District)*	Multiple Barriers of Cyanotoxin Control for the City of Salem *Katie Ottoboni (Carollo Engineers)*	Strategic Energy Management Experiences of 50 Water Utilities *Steve Jones (Hansen, Allen and Luce, Inc.)*	PANEL: Understanding All That Could be Involved with a Meter Solution *Kevin Barnes (Ferguson), Frank Gill (Holmon Capital), Robert Gustin (Neptune Technology Group), Ganesh Krishnamurthy (Dropcountr), Paul Hauffen (Sedaru), & Steve Nees (Utilivorks Consulting, Inc.)*	Methodology to Detect and Quantitate Microplastics in Water Sources *Amber Skarelka (Eurofins S-F Analytical, Inc.)*	How to Drive Agency Requirements into SCADA *Chris Schleich (Enterprise Automation)*	Hazardous Waste Mangement, A Guide to Common Errors and Misconceptions *Danielle Palmer & Bear Bridges (Bellhire Environmental Services, Inc.)*	AWIA - Long Beach Water's Journey Through the Process *David Lopez (City of Long Beach)*	Real-Time Membrane Fouling and Scaling Monitoring of RO Plants *Dr. Yoram Cohen (Nooria Water Technologies)*
2:30 PM - 3:00 PM	Expert Panel focused on Developing future technical leaders and managers in the water industry *Jim Fisher (San Diego County Water Authority), Ted Ma (Real Ted Ma), & Diane Pitman (Metropolitan Water District)*	Non-destructive Condition Assessment and Rehabilitation of 36" Diameter Steel Water Transmission Pipeline *Tim Ross & Eric Fockler (Helix Water District)*	Operators Round Table *Bill Cardinal (Calaveras County Water District), Tommy Pearce (Helix Water District), Robert Janowski (City of Napa), & Larry Lyford (Helix Water District)*	What do I do when UCMR4 shows Cyanotoxin Occurrence? *Eli B. Townsend (Calgon Carbon)*	Winner of Outstanding Energy Management Award *Brian Collins (United Water Conservation District)*		Conventional and Biological Treatment for the Removal of Microplastics from Drinking Water *Robert Andrews (Univ. of Toronto)*	SCADA Technology Panel Discussion *Henry Pulechek - Moderator (Helix Water District)*	Hazardous Waste Mangement, A Guide to Common Errors and Misconceptions *Danielle Palmer & Bear Bridges (Bellhire Environmental Services, Inc.)*	The Boxed Water Solution...The Most Economical Emergency Potable Water Solution *Andrew Ohst (West Yost Associates)*	The advantages of combining multiple data sources to combat NRW *Roy Martinez (Xylem)*
3:00 PM - 4:00 PM	BREAK										
4:00 PM - 4:30 PM	How Women's Networking Groups Can Improve Leadership Diversity *Hediah Esfahani (Metropolitan Water District)*	Utilizing Ground Penetrating Radar for Pipeline Rehabilitation Design and Construction *Jesus Gonzalez (Los Angeles Department of Water and Power)*	Pipeline Locating for the Ardent Operator *Bryan Wilfley (California Water Service)*	Water Treatment Requirements Driven by Our Changing Climate & Natural Hazards *Sarah Deslauriers (Carollo Engineers)*		Beyond Leak Detection: Evaluating Water Conservation and Leak Notification Benefits of "Smart Home" Devices *Danielle McPherson (WaterNow Alliance)*	Bioanalytical Tools for Water Quality Monitoring: Assessing emerging contaminants in recycled and ambient waters *Alvine Mehinto (Southern CA Coastal Water)*	Wireless Technologies and How They Can Be Used By a Water District *Eric Lee (Soletek Corporation)*	Development of a Novel Multi-Dilution NPDES Permit *Brie Post (Trussell Technologies, Inc.)*	Three Reasons You Could Have A Power Shutdown (PSPS)	IS YOUR DEVELOPED WELL WELL-DEVELOPED? *Charles Cutner (HPC/Welljet) & Jordan Kear (Kear Groundwater)*
4:30 PM - 5:00 PM	Leading Through Innovation: EBMUD's Initiatives to Promote Employee Development and Growth *Laura Johnson (EBMUD)*	Reducing Water Loss Using Partially Corrugated Stainless Steel Service Pipe *John M. Grocki (Nickel Institute)*	Flow Pacing a Gaseous Chlorine Feed-system. *Henry Pulechek (Helix Water District)*	Drought! Fire! Storms! ...The Operational Effects of Climate Change on Water Treatment and How to Plan for It *Michael Hartlaub & Dan Gill (EBMUD)*		Real-time Measurements of Water Quality and End-Use With Instant Reporting Saves Water and Assets *Frank Burns (APANA) & Thomas Pape (Best Management Partners)*	Bioanalytical Tools for Water Quality Monitoring: Assessing emerging contaminants in recycled and ambient waters *Alvine Mehinto (Southern CA Coastal Water)*	Wireless Technologies and How They Can Be Used By a Water District *Eric Lee (Soletek Corporation)*	Implementing New Employee Learning Technologies *Charles Allen (Golden State Water Company)*	Typing Your Generators To Ensure Reliability *Lauren Wisniewski (U.S. Environmental Protection Agency)*	IS YOUR DEVELOPED WELL WELL-DEVELOPED? *Charles Cutner (HPC/Welljet) & Jordan Kear (Kear Groundwater)*
5:00 - 5:30 PM		Depolying Remote Pressure Monitors on Fire Hydrants *Gabriel Gomez (Liberty Utilities - Park Water Co.), Virgil Diaz (Mueller Co.) & Harold Mosley (Mueller Co.)*	Dam Management *Mechelle Burns (Helix Water District)*	Corrosion Control Treatment for Low Alkalinity Source Waters *Nicole Blute (Hazen and Sawyer)*		Are Prescriptive Landscape Ordinances Measuring up to Actual Water Savings? *David Longridge (EBMUD)*	Emerging Contaminants Roundtable Q&A	SCADA: Your Most Critical Asset *Dean Ford (Westin Technology Solutions)*		Lessons Learned from Most Recent Disasters	

Thursday, October 24, 2019
Sessions 22-28

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ANNUAL FALL CONFERENCE 2019

	SESSION 22 **Communications & Customer Relations** ROOM	SESSION 23 ROOM	SESSION 24 **Smaller Utilities** ROOM	SESSION 25 **Water Treatment** ROOM	SESSION 26 **Water Loss** ROOM	SESSION 27 **Distribution System Water Quality** ROOM	SESSION 28 **Global Water Issues** ROOM
8:00 AM - 8:30 AM			Arsenic Removal - Hopi Case Study *Brett Gleitsmann (Rural Community Assistance Corporation)*	Water Treatment Chemicals and Calcium Carbonate Saturation *John Kenny & David Hokanson (Trussell Technologies, Inc.)*	The New Water Loss Performance Standards - What you need to know *Max Gomberg (State Water Resources Control Board)*	Teamwork Makes the UDF Dream Work: How A Strong Client-Consultant Partnership Leads to a Successful Pilot Study at Reasonable Cost *Kambria Tiana (West Yost Associates) & Travis Franklin (Elk Grove Water District)*	Water for People GLOBAL TRACK ???
8:30 AM - 9:00 AM	Becoming a Potable Reuse "Expert": Lessons Learned By A Non-Technical Person Who Specializes in Clearly Communicating Technical Concepts to the Public *Megan Bramsmy (Katz & Assoc.)*		Source Water Quality and Impacts to Reliability in Small Systems *Beth Clark (Golden State Water Co.)*	When fields changed, water changed... how to adapt? *Peter van Bucher (Carollo Engineers)*	Real Loss Component Analysis - WHAT IS THAT?? *Reinhard Sturm (Water Systems Optimization)*	Active Removal of THM Levels in Drinking Water Distribution Systems *Joshua Kunisaram (UGSI Solutions)*	
9:00 AM - 9:30 AM	An Evaluation of Home Test Kits in Response to a "Pesticide Scare" in San Francisco *Gregg Olson (San Francisco Public Utilities Commission)*		Partnership for Safe Water - Small Systems Program *Todd F. Brewer, Ph.D., P.E. (AWWA)*	Blending Desalinated Seawater into Existing Regional Supplies: The Significant Influence of Ocean Temperature on Water Quality *Brent Alspach (Arcadis)*	A Review of the Water Loss Audit Reports in California *Todd Thompson (Dept. of Water Resources)*	Design, Cost, and Performance of a Spray Aeration System for THM Removal from a Treated Water Reservoir *Issam Najm (MWH, Inc.)*	
9:30 AM - 10:00 AM	BREAK						
10:00 AM - 10:30 AM	A Guide to Risk Communication from AWWA *Melissa Elliott (Raftelis)*		Use of UV and chloramines in a very small surface water system to minimize HAA5 formation *Jim McVeigh (Rural Community Assistance Corporation)*	Optimizing your filter performance with Ceramic Filtration Media *Trevor Johnson (Sapphire-Water)*	Mapping Water Loss Data Collection at California Water Service (part 1) *Kate Gasner (Water Systems Optimization)*	An Evaluation of Home Test Kits in Response to a "Pesticide Scare" in San Francisco *Gregg Olson (San Francisco Public Utilities Commission)*	Water for People GLOBAL TRACK ???
10:30 AM - 11:00 AM	The Importance of Outreach in Selling a Water Rate Increase *Leslie Payne (Sweetwater Authority)*			Status & Potential Impact of Chlorate Regulation in the US *Bob Newton (De Nora Water Technologies)*	Mapping Water Loss Data Collection at California Water Service (part 2) *Kate Gasner (Water Systems Optimization)*	Chloramine Residual Optimization and Management in Distribution Networks *Robin Giguere (UGSI Solutions)*	
11:00 AM - 11:30 AM	Solutions for Citizens: Description of a Flood Risk Reduction Program through the Lens of Environmental Justice *Roy David (Greeley and Hansen)*			Selecting Alternative Disinfection: Safe and Reliable Alternatives *Gunnar Thordarson (UGSI Solutions)*	Water Loss Open Forum *Sue Mosburg (Sweetwater Authority)*	Guaranteeing Operability for when it Matters Most San Francisco Public Utilities Commission (SFPUC) Fire Hydrant Assessment Program *Roy Martinez (Wuchs Water Services) & Katie Miller (San Francisco Public Utilities Commission)*	
11:30 AM - 12:00 PM	Being a Good Neighbor Dictates the Communication and Outreach Strategies for a Successful Construction Project *Rupam Soni & Salvador Vazquez (Metropolitan Water District of So. Cal)*			Selecting Alternative Disinfection: Safe and Reliable Alternatives *Gunnar Thordarson (UGSI Solutions)*		Online Turbidity Monitoring - Technology to Reduce Headaches and Cost *Mary Boris (SWAN Analytical USA)*	

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ANNUAL FALL CONFERENCE 2019

Technical Program

Most sessions qualify for Contact Hours. Please be sure to scan in and out of each session. A maximum of 25 contact hours are available for the conference.

Tuesday, October 22, 2019

Session 1 – Leadership Development Room:

1:30 PM – 2:00 PM

2:00 PM – 2:30 PM

2:30 PM – 3:00 PM

4:00 PM – 4:30 PM

Young Professionals Flash Mentoring Session

Jim Fisher (San Diego Water Authority), David Clark (Metropolitan Water District), & Diane Pitman (Metropolitan Water District)

Young Professionals Networking Event – Flash Mentoring Session. Participants will have an opportunity to learn and seek guidance from several highly experienced water Industry professionals during this interactive mentoring session aimed at helping Young Professionals find greater success in their careers. Mentors with experience as water system operators, designers, project managers and managers will be provided from several leading water agencies and consulting firms.

4:30 PM – 5:00 PM

Young Professionals Flash Mentoring Session

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5:00 PM – 5:30 PM

Session 2 – Asset Management Room:

1:30 PM – 2:00 PM

How one utility is leveraging analytics to optimize operations and reduce apparent losses.

Kristine Gali (Valor Water Analytics)

Participants in this session will learn how a medium-sized water utility in Nevada has leveraged Customer Metering Inaccuracies to optimize operations and augment revenue assurance goals. Other utilities (on hourly or monthly reads; mechanical or static meters) can use learnings from this case study to understand the opportunities available with added insight into overall metering operations and data.

2:00 PM – 2:30 PM

How one utility is leveraging analytics to optimize operations and reduce apparent losses.

Kristine Gali (Valor Water Analytics)

Participants in this session will learn how a medium-sized water utility in Nevada has leveraged Customer Metering Inaccuracies to optimize operations and augment revenue assurance goals. Other utilities (on hourly or monthly reads; mechanical or static meters) can use learnings from this case study to understand the opportunities available with added insight into overall metering operations and data.

2:30 PM – 3:00 PM

Asset Management using GIS and Related Field Survey Equipment and Practices

Mark Carey, P.E. & Richard Relyea (MC Engineering, Inc.)

Participants in this session will learn effective techniques for gathering data and preparing GIS based maps using Trimble field data collection units and ERSI ArcGIS software with related user field apps.

4:00 PM – 4:30 PM

Asset Management Approach to Water Well Maintenance

Mike Judkins (Suez Advanced Solutions)

Participants will learn the how and why we see declining yields in well production, and a new modern approach to preventing this from happening.

4:30 PM – 5:00 PM

Asset Management Approach to Water Well Maintenance

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Participants will learn the how and why we see declining yields in well production, and a new modern approach to preventing this from happening.

5:00 PM – 5:30 PM

An Objective CMMS Evaluation Framework

Sean Pour (Hazen and Sawyer)

Participants in this session will learn how to objectively evaluate available CMMS in the market to find a system that supports the unique business needs and functional and technical requirements of the their agencies.

Session 3 – Meters Room:

1:30 PM – 2:00 PM

Developing Meter Changeout Criteria Based on Apparent Rank of Importance

Richard Small (Riverside Public Utilities)

Participants in this session will learn how to understand the steps involved in developing their own analytical approach of "Apparent Rank of Importance" based on revenue by each meter size class. This information can be another tool to help improve meter changeout program success, ultimately generating more revenue for their organization.

2:00 PM – 2:30 PM

Small Meter Sampling - New Data & Insights

Kris Williams (WSO)

Participants in this session will learn about sources of uncertainty to consider while planning small customer meter testing efforts. The presentation will draw from a data set of more than 4,000 random and representative small customer meter test results drawn primarily from California utility meter stocks.

2:30 PM – 3:00 PM

Large Customer Meter Flow Profiling

Kris Williams (WSO)

Participants in this session will learn about practical guidance to record flow data from existing large customer meters in addition to how recorded data can later be used to manage apparent losses.

4:00 PM – 4:30 PM

Meter Health Analytics – Finding Revenue for Utilities on High-Value Water Meters

Andrew Kodis & Frank Kaplan (Olea Edge Analytics)

Participants in this session will learn how to ensure their utility bills for every drop of water delivered to large commercial and industrial customers utilizing Olea's Meter Health Analytics (MHA) solution.

4:30 PM – 5:00 PM

Top Down and Bottom Up Business Case for Water Meter Changeout and AMI

Richard Relyea & Mark Carey, P.E. (MC Engineering, Inc.)

Participants in this session will learn the value of using a comprehensive top down to bottom up approach to developing a solid business case when determining how and when to implement an AMI/Meter Replacement Program.

5:00 PM – 5:30 PM

Top Down and Bottom Up Business Case for Water Meter Changeout and AMI

Richard Relyea & Mark Carey, P.E. (MC Engineering, Inc.)

Participants in this session will learn the value of using a comprehensive top down to bottom up approach to developing a solid business case when determining how and when to implement an AMI/Meter Replacement Program.

Session 4 – Water Treatment Room:

1:30 PM – 2:00 PM

Optimizing Biofiltration for Improved Manganese Control under Winter Conditions (WRF 4749)

Ashley Evans (Arcadis) & Amina Stoddart (Dalhousie Univ.)

Participants in this session will learn about operational and design factors that may improve Mn removal across biofilters during the winter months.

2:00 PM – 2:30 PM

Impact of Biological Filtration on NDMA Precursor Concentrations (WRF 4669)

Ashley Evans (Arcadis)

Participants in this session will learn about factors that may impact nitrosamine formation across biological filters.

2:30 PM – 3:00 PM

From Zero to 60 in the PFAS Lane!

Erin Mackey (Brown and Caldwell)

Participants in this session will learn about the optimization process, lessons learned and discuss the development of the modeling tool used for predicting effluent PFAS at the existing GAC facility.

4:00 PM – 4:30 PM

Sometimes There is a Silver Bullet: How a Water Treatment Plant Increased Its Water Production by Reducing Its Sludge Waste Stream Generation

Aileen Kondo (West Yost Assoc.)

Participants in this session will learn how one water treatment plant that has an Actiflo pretreatment process reduced its production of wastewater for sewer disposal with minimal capital investment.

4:30 PM – 5:00 PM

Maximizing Residuals Management: A Comparison of Residuals Process Trains at Three EBMUD Water Treatment Plants

Deborah Russell (EBMUD)

Participants in this session will learn about three case studies to upgrade the residuals treatment processes at three unique water treatment plants. Improvements are designed to optimize residuals management under varying constraints and challenges.

5:00 PM – 5:30 PM

Residuals Management for Small Systems

Kevin Berryhill & Keith Mortensen (Provost & Pritchard Consulting Group)

Participants in this session will learn about residuals management challenges and solutions for groundwater treatment and small surface water treatment plants. The presentation will include a discussion of applicable regulations affecting treatment plant residuals discharges.

Session 5 – Reuse & Desalination Room:

1:30 PM – 2:00 PM

Stocktake on Reuse

Melanie Tan (Kennedy Jenks)

Participants in this session will be provided with an overview of the latest reuse activities in California. This includes updates on regulations, funding opportunities, major projects and lessons learned from past projects.

2:00 PM – 2:30 PM

IPR vs DPR: Which One Makes More Sense for Your Community

Val Frenkel (Greely and Hansen)

This presentation will provide the audience insight regarding common ground for IPR and DPR, explore the major differences between the two, address the pros and cons when comparing IPR and DPR, discuss different types of water reuse strategies and how they can be developed, and address what are the challenges and how to make potable reuse projects successful based on several decades of research and practical experience gain from California experience.

2:30 PM – 3:00 PM

The Regional Recycled Water Program – A New Source of Water for Southern California

Heather Collins (Metropolitan Water District of So. Cal)

The Metropolitan Water District of Southern California and the Sanitation Districts of Los Angeles County have partnered to develop the Regional Recycled Water Program, which will create a new, sustainable water supply for Southern California. The program will start with a demonstration facility and could eventually become one of the largest advanced water treatment plants in the world. At full build-out, this $3.4 billion project would include a 150-mgd advanced water treatment plant, pumping stations, and over 60 miles of conveyance pipelines. Come and learn about the project details, project status, and plans for implementation.

4:00 PM – 4:30 PM

A Case Study: Developing City of San Diego's Advanced Water Treatment Operator Training

Elise Chen (Trussel Technologies, Inc.)

Attendees will learn about the considerations and challenges with the development and execution of an advanced water treatment operator training program.

4:30 PM – 5:00 PM

East County Advanced Water Purification Program Update

Mark Nimiec (Padre Dam Municipal Water District) & Patrick Huston (Kennedy Jenks)

Participants in this session will learn about the East County Advanced Water Purification Program that creates a new, local, reliable and drought-proof water supply. The Program was conceived in 2012 and has achieved key milestones that include construction of an AWP demonstration facility, DDW conceptual approval for surface water augmentation at Lake Jennings, tracer study at Lake Jennings, adoption of project specific CEQA, and receipt of funding commitments. This update will include a discussion on the history of the Program, current work being performed, and next steps for the Program.

5:00 PM – 5:30 PM

Improving MF and UF Membrane Energy Efficiency Through Real-Time Colloidal Particle Monitoring

Ganesh Rajagopalan (Kennedy Jenks)

Participants in this session will learn about a novel membrane fouling mitigation strategy to improve energy efficiency during membrane filtration – a key step in direct or indirect potable reuse. The application of a nanoparticles tracking analysis (NTA) technology is demonstrated for real-time monitoring of colloidal particles in the membrane feed water and to optimize pretreatment via coagulant addition. Results from two pilot demonstration sites show how this strategy performs for UF or MF membranes and its potential operating and economic benefits.

Session 6 – SDWA Committee Room:

1:30 PM – 2:00 PM

State and Federal Regulatory Updates

Darrin Polhemus (DDW, State Board)

Participants will hear the latest updates from state and federal regulators.

2:00 PM – 2:30 PM

State and Federal Regulatory Updates

My-Linh Nguyen (NDEP)

Participants will hear the latest updates from state and federal regulators.

2:30 PM – 3:00 PM

State and Federal Regulatory Updates

SPEAKER NAME

Participants will hear the latest updates from state and federal regulators.

4:00 PM – 4:30 PM

Impacts of Woolsey Fire on Distribution Systems and Water Quality: A Case Study of Las Virgenes Municipal Water District

John Zhao (Las Virgenes MWD)

Participants in this session will learn about the impacts of the Woolsey Fire on the facilities of Las Virgenes Municipal Water District including water quality concerns.

4:30 PM – 5:00 PM

State Water Board's Perspective on Wildfire Impacts to Water Quality Among Local Suppliers

Jeff Densmore (State Water Resources Control Board, Div. of Drinking Water)

Participants in this session will hear from the State Water Resources Control Board about their experiences and interactions with local water suppliers when a wildfire impacts their utilities.

5:00 PM – 5:30 PM

City of Redding Water System's Experience After the Carr Fire

Dan Beans (City of Redding Water Utility)

Participants in this session will learn about the impacts of the Carr Fire on the facilities of the City of Redding's water system including water quality concerns.

Session 7 – SEP Committee Room:

1:30 PM – 2:00 PM

CA & NV WARN Meeting and Exercise

Lisa Deklinski (City of Sacramento)

Participants will learn how the CalWARN and NVWARN networks play a critical role in disasters and the new CalWARN Operation Plan makes it easy and understandable. Participants will gain a greater understanding on how to make their utility more resilient in the ever-increasing disasters California and Nevada are experiencing.

2:00 PM – 2:30 PM

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Session 8 – Water Well Technology Room:

1:30 PM – 2:00 PM

Process and Progress of Updating California's Well Standards

Julie Haas (State of CA Dept. of Water Resources)

Participants in this session will learn about the coming updates to California's well construction standards.

2:00 PM – 2:30 PM

Well Construction Standards - Which One(s) Do I Use?

Kevin McGillicuddy (Roscoe Moss Company)

Participants will learn about the focal points of AWWA, NGWA, and state of California and Nevada well construction standards.

2:30 PM – 3:00 PM

Tracking Aquifer Storage and Recovery (ASR) Well Performance, Automation & Programming for City of Phoenix Well #299, City of Phoenix, Arizona.

Gary M. Gin, R.G. (Leonard Rice Engineers)

Participants in this session will learn about programming logic developed for the City of Phoenix's ASR wells for automated backwashing, tracking of recharge and backwashing performance (specific capacity), and recording of critical well operational metrics (e.g., volume recharged or pumped).

4:00 PM – 4:30 PM

Implementation of a Strategic Well Rehabilitation Program

Tara Rolfe & Josh Sebow (Wood Rogers, Inc.)

Participants in this session will learn about the design and implementation of successful, customized well rehabilitation projects based upon the recommendations contained within a strategic systemwide well assessment program.

4:30 PM – 5:00 PM

Lessons Learned in Water Well Rehabilitation and Redevelopment

Russell Kyle & Kimberly Makar (KYLE Groundwater, Inc.)

Participants in this session will learn about potential pitfalls associated with well rehabilitation and redevelopment, such that problems can be quickly identified, assessed, and addressed to minimize risk to the well, personnel, and the length of time a well is out of service.

5:00 PM – 5:30 PM

Session 9 – Distribution System Water Quality Room:

1:30 PM – 2:00 PM

Breakpoint Chlorination and Chloramination to Limit DBP Formation

Harsh Ashani & Tarrah Henrie (Corona Environmental Consulting)

How bench-scale testing of breakpoint chlorination and simulated distribution system testing can inform water quality treatment outcomes in groundwater with naturally occurring ammonia.

2:00 PM – 2:30 PM

History of Water Service Line Materials

Whit Hall (REHAU)

Various past and present materials used in Water Service Lines/ Laterials and the characteristics of them as well as some new materials available.

2:30 PM – 3:00 PM

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4:00 PM – 4:30 PM

Proactive Corrosion Control Treatment Evaluation

Tarrah Henrie, (Corona Environmental Consulting), Bryan Rinde (Golden State Water Co.), & Sheldon Masters (Corona Environmental Consulting)

Participants in this session will learn about corrosion control evaluation and lead leaching from galvanized iron pipes.

4:30 PM – 5:00 PM

Water Use Patterns and Pipe Materials Influence DBP Formation and Microbial Succession

Sheldon Masters (Corona Environmental Consulting)

Impact of water conservation on water quality in building plumbing systems.

5:00 PM – 5:30 PM

Session 10 – Tanks, Reservoirs & Structures Room:

1:30 PM – 2:00 PM

Potable Water Tank Mixing, Simple Solution to many Water Quality Problems

Dave Summerfield (Medora Corp. - SolarBee/GridBee)

Participants in this session will learn how potable water tank mixing can potentially solve many water quality problems that they may be experiencing. Typical tank water quality problems will be discussed and how tank mixing can provide a solution to those problems. Different types of water tank mixers will be discussed. At the end of this session an attendee will be knowledgeable on potable water tank mixers and their many benefits.

2:00 PM – 2:30 PM

Steel Tanks - Risk and Resilience Assessment and Mitigation Strategies

Leslie Scott, P.E. (Tank Industry Consultants)

Tanks are major assets, so structural integrity and life expectancy are an important part of water utility planning. Tank evaluation assessments generally consider up to eleven different review categories with multiple evaluations in each category. This presentation focuses on three review categories related to the tank's structural integrity as well as tank design and specification strategies to enhance long-term asset preservation.

2:30 PM – 3:00 PM

Replacement of Two Earthen Reservoirs with Two Prestressed Concrete Tanks on a Challenging Site

Cindy Bertsch (Water Works Engineers) & Brandon Stieber (San Jose Water)

Participants of this session will learn from a utility's experience with replacing two earthen reservoirs with two prestressed concrete tanks on a site with an old creek bed, geotechnical instability, expansive soils, public scrutiny, and a potentially active earthquake fault.

4:00 PM – 4:30 PM

Engaging Your Water Tank, The In's and Outs

Matt Tasch (Superior Tank Solutions, Inc.)

Participants will learn about what they are looking at when they step up to their tanks as well as how to indentify concerns for maintenace.

4:30 PM – 5:00 PM

Blue Green Algae (BGA) in Lakes and Raw Water Reservoirs. Formation, Identification and Control of this Cyanotoxin.

Dave Summerfield (Medora Corp. - SolarBee/GridBee)

Participants in this session will learn how algae blooms are an increasing threat to raw water reservoirs and lakes. We will discuss how to identify "good" green consumable algae that makes up the bottom of the food chain and the "toxic" blue green algae and how each type of algae affects water quality. Different algae control mechanisms will be discussed so an attendee will be more knowledgable if an algae bloom occurs at their raw water source reservoir or recreational lake.

5:00 PM – 5:30 PM

Maximizing Resource Efficiency via Controlled Raw Water Withdrawal

Kelly McCurry (Ixom Watercare)

Participants in this session will learn about new research into monitoring the constantly changing quality in source waters.

Wednesday, October 23, 2019

Session 11 – Leadership Development Room:

7:30 AM – 8:00 AM

Water is Your Friend- How to Communicate the Value You Provide to Your Community

Sahr Sweiss (Greeley and Hansen)

Participants in this session will learn how utilities can use effective communication strategies and branding to provide a superior customer experience; build trust with the communities they serve, educate their consumers on the true value of the water they provide, help influence the political agenda and thus funding opportunities, and improve outreach for personnel recruitment.

8:00 AM – 8:30 AM

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10:00 AM – 10:30 AM

What am I supposed to say? Combating Negative Water Messages in Social Media

Bill Stierle (Corporate Culture Development)

Participants will learn about critical messaging strategies and techniques helpful for communicating with the public, regulators, politicians, and news agencies. The presentation will cover lessons learned from the frontline of the Flint Michigan water crisis and will include practical steps to address emotional reactions and conflict in an effective way. These communication tools reduce emotional reactions to yield more effective communication and problem solving skills during stressful situations.

10:30 AM – 11:00 AM

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11:00 AM – 11:30 AM

SDCWA's Leadership Development Strategy

Jim Fisher (San Diego County Water Authority)

Participants will learn about the SDCWA's strategy for developing staff so that they may promote future leaders from within the organization.

11:30 AM – 12:00 PM

Leading the Way - Metropolitan's Leadership Develoipment Programs

Diane Pitman (Metropolitan Water District)

Participants in this session will learn about Metropolitan Water District's leadership development programs that focus on existing and potential future managers. The structure and design of these programs provide introductory knowledge, build upon existing management skills, develop a network of managers to support growth and learning and ensure individuals understand the role of the manager before they become one.

1:30 PM – 2:00 PM

Cultivating Tomorrow's Leaders within Your Organization

David Clark (Metropolitan Water District)

Participants in this session will learn about effective approaches to cultivate leaders within an organization. The presentation provide specific examples including implementing a balanced recruitment strategy, orientation programs, mentoring programs, effective career progression messaging, women's networking groups, and leadership training.

2:00 PM – 2:30 PM

Expert Panel focused on Developing future technical leaders and managers in the water industry

Jim Fisher (San Diego County Water Authority), Ted Ma (Real Ted Ma), & Diane Pitman (Metropolitan Water District)

Participants will be able to ask the expert panel specific questions about strategies and programs that organizations can use to foster professional growth of their staff and help prepare individuals to take on greater responsibilities and be the leaders we will need in the future.

2:30 PM – 3:00 PM

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4:00 PM – 4:30 PM

How Women's Networking Groups Can Improve Leadership Diversity

Hedieh Esfahani (Metropolitan Water District)

Water utilities and consulting firms are hiring increasing numbers of women engineers, scientists and technicians every year. Formal networking groups provide effective support for new employees, facilitate professional and leadership development, and enhance recruitment efforts. Participants will learn how launching a Society of Women Engineers (SWE) chapter is helping Metropolitan Water District develop future leaders and increase diversity.

4:30 PM – 5:00 PM

Leading Through Innovation: EBMUD's Initiatives to Promote Employee Development and Growth

Laura Johnson (EBMUD)

Participants in this session will learn about a variety of initiatives that EBMUD has developed to encourage innovation and allow employees to develop and grow in their careers

5:00 PM – 5:30 PM

Session 12 – Engineering & Construction / Pipeline Rehabilitation Room:

7:30 AM – 8:00 AM

Young Ductile Iron Pipe Failures

John Farley (City of Riverside Public Utilities Dept.)

Learning Outcomes include: (1) An overview and history of the Riverside Public Utilities water distribution system; (2) Synopsis of the failures observed on young ductile iron pipe; (3) Description of the action plan for assessing and identifying the root cause of the failures; (4) Factors contributing to the failures; and (5) Actions to protect against future failures. Understanding the contributing factors of these pipeline breaks is an important step toward effectively planning future pipeline projects and maximizing the useful service life of underground assets.

8:00 AM – 8:30 AM

Fixed-Screen Surface Water Intakes – Trenchless Construction

Henry Hunt (Layne Christensen)

Participants in this session will learn of a simple approach to construction of a passive surface water intake system that offers environmental advantages both during construction and operation. They will see factors involved in assessing the feasibility to consider this type of intake system, and see the approach to site and design a passive intake system. They will see advantages during permitting, construction and operation of this type of intake design, which can reduce operator attentuion and minimize O&M costs. for the utlity.

10:00 AM – 10:30 AM

Rapid design and construction of nitrate treatment in Barstow, California

George Zakhari (Golden State Water Company)

Participants in this section will learn how a Southern California utility addressed rapid increases in nitrate impacts to their primary well field by operational changes and rapid design and construction of a 2.8 MGD nitrate treatment plant. Details of operational changes, expedited treatment design and construction will be shared during the presentation.

10:30 AM – 11:00 AM

California American Water Utilizes Design-Build Approach for Successful Well Site PFOA/PFOS Treatment

Tim Hasler (California American Water)

Participants in this session will learn how California American Water's utilization of the design-build procurement method resulted in a successful project for PFOA/PFOS treatment at a Sacramento well site. Items to be covered include background information, project challenges, public outreach, project schedule and milestones, and key benefits of the design-build method.

11:00 AM – 11:30 AM

How Did the City of Sacramento Restore the Useful Life of 100 MGD Filters

Megan Thomas (City of Sacramento)

Participants in this session will learn about the challenges of rehabilitating and restoring underperforming filters to their former self by replacing media and damaged filter nozzles, along with demonstrating the filters capability to achieve the previously rated capacity of 100 MGD. In addition, the lessons learned to extend the useful life of the filters by restoring the filter's concrete and steel bulkhead structures while keeping the WTP online will be shared.

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1:30 PM – 2:00 PM

Finding Pipe Failures Before They Occur

Jim Fitchett (Voda, Inc.) & David Hughes (Consultant)

Participants in this session will learn how advances in AI can find unseen patterns of prior pipe failures and predict future LoF of each pipe segment with high accuracy. Imagine water main pipes with a credit score indicating they are likely to default on delivering water. Participants will also learn how patterns and insights from multiple utilities, applied to your data, can enhance predictions for active pipes. Finally, data intake for AI can improve data quality and enhance effectiveness of all asset management tools.

2:00 PM – 2:30 PM

Pipe Bursting Water Mains - Trenchless Replacement and Rehabilitation

George Mallakis (TT Technologies, Inc. - Trenchless Solutions)

How to use Pipe Bursting Technologies to rehabilitate and replace their failing and undersized distribution Pipelines.

2:30 PM – 3:00 PM

Non-destructive Condition Assessment and Rehabilitation of 36" Diameter Steel Water Transmission Pipeline

Tim Ross & Eric Fockler (Helix Water District)

Participants will learn how Helix Water District assessed the overall condition and rehabilitated its 5.7 mile long 36" diameter steel water transmission pipeline. Using remote field testing technology, the location, amount of corrosion, and remaining thickness of the pipeline's steel cylinder was pinpointed, which allowed Helix staff to develop a targeted rehabilitation plan incorporating pipe segment removal and replacement, internal welded plate repairs, and long-term cathodic protection strategies.

4:00 PM – 4:30 PM

Utilizing Ground Penetrating Radar for Pipeline Rehabilitation Design and Construction

Jesus Gonzalez (Los Angeles Department of Water and Power)

Participants in this session will learn how the Los Angeles Department of Water and Power is utilizing Ground Penetrating Radar (GPR) to gain efficiencies both in design and construction of pipeline rehabilitation projects.

4:30 PM – 5:00 PM

Reducing Water Loss Using Partially Corrugated Stainless Steel Service Pipe

John M. Grocki (Nickel Institute)

Partially Corrugated Service Pipe (PCSP) has been an important part of programs used to reduce water loss. Participants in this session will learn: the history of use in Asia, the technology behind using 316L stainless steel for this product and the potential for pilot installations and commercial installations in North America.

5:00 PM – 5:30 PM

Depolying Remote Pressure Monitors on Fire Hydrants

Gabriel Gomez (Liberty Utilities - Park Water Co.), Virgil Diaz (Mueller Co.), & Harold Mosley (Mueller Co.)

How Utiltities can deploy remote pressure monitoring fire hydrants.

Session 13 - Operator Room:

7:30 AM – 8:00 AM

Development of a Comprehensive Operator Training Program.

Mechelle Berens (Helix Water District)

Participants will learn the process by which a comprehensive training program for new plant operators and operator trainees was developed for a large conventional surface water treatment plant. The program consists of a 300+ page document defining the "how to" of all major pieces of the plant process, written quizzes and hands-on skills demonstrations for each section as well as all-encompassing scenario type questions with sign off at each step to ensure new staff is brought up to speed quickly and efficiently. The manual also serves as a reference for the more seasoned staff when performing tasks which don't come up as often.

8:00 AM – 8:30 AM

Zeta potential, what it is and how it's used for Plant Optimization.

Tommy Pearce (Helix Water District)

Participants will learn how Zeta potential is used in plant process and Jar Testing in order to optimize plant performance at HWD 106 MGD conventional with intermediate ozone water treatment plant.

10:00 AM – 10:30 AM

Aeration versus TOC Reduction: What is the right tool for your WTP?

Ellen Gaby (Buhr) (Ixom Watercare, Inc.)

Participants will learn the limits of aeration for DBP reduction as well as methods to define what their TOC treatment goal needs to be in order to assure compliance with DBPs

10:30 AM – 11:00 AM

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11:00 AM – 11:30 AM

How knowledge transfer lead to a 35-year asset management plan at Helix Water District water treatment plant with 54-year-old aging infrastructure.

Larry Lyford & Henry Palechek (Helix Water District)

Participants will learn the process and methods used for knowledge transfer that lead to a 35-year asset management plan for a 106 MGD water treatment plant and implementation strategies

11:30 AM – 12:00 PM

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1:30 PM – 2:00 PM

Operators Round Table

Bill Cardinal (Calaveras County Water District), Tommy Pearce (Helix Water District), Robert Janowski (City of Napa), & Larry Lyford (Helix Water District)

This is the place to bring your problems and solutions to your peers. The panel and audience will share and learn from the other professionals in the room. The floor is open to any discussion on water industry topics. Raw water quality, treatment in any part of the treatment process. Distribution system operations including DBP formation and the reductions once formed. The odd things found in your distribution system. Handling customers and complaints. The retirement of the aging workforce. How to get the attention of the younger generation and training with the new mindset. Troubleshooting pumps and pumping issues. You bring your ideas and problems and we will attempt to find solutions.

2:00 PM – 2:30 PM

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4:00 PM – 4:30 PM

Pipeline Locating for the Ardent Operator

Bryan Wilfley (California Water Service)

This presentation will discuss the importance of accurately locating buried water infrastructure, the minimum requirements of California Government Code 4216.1 and methods of locating facilities to alleviate the potential for injuries, property damage, service interruptions, delays in projects, and other costly problems. Attendees will learn how to implement a systematic approach to locating facilities to improve the safety, accuracy, and efficiency of locating. Additionally, alternative methods of locating hard-to-locate and non-metallic pipe will be discussed while attempting to dispel dangerous pseudo-scientific approaches

4:30 PM – 5:00 PM

Flow Pacing a Gaseous Chlorine Feed-system.

Henry Palechek (Helix Water District)

Participants in this session will learn how to flow pace their chlorine systems. It will look at issues and concerns that should evaluated. The end result should be better control of the chlorine feed system and the residual leaving the plant.

5:00 PM – 5:30 PM

Dam Management

Mechelle Burns (Helix Water District)

Participants will learn some basics of earthen dam design and the vulnerabilities of these dams. The program of inspection and maintenance for two earthen dams will be discussed as will the development Emergency Action Plans to meet the new regulatory requirements.

Session 14 – Water Treatment / Research Room:

7:30 AM – 8:00 AM

Navigating the Chemistry of Manganese and its Removal through a Water Treatment Plant

Issam Najm (WQTS, Inc.)

...about the chemistry of manganese in water and the conditions that improve its removal through a water treatment plant.

8:00 AM – 8:30 AM

Removal of Perfluorinated Chemicals (PFCs) from an Arizona Groundwater Well by Various Adsorbents

Harsh Ashani (Corona Environmental Consultanting) & Onur G. Apul, Ph.D. (Univ. of Massachusetts, Lowell)

the occurrence different species of PFC in environment and concentrations found in Arizona groundwater. In addition, the effectiveness of treatment processes using conventional adsorbents like GAC, IEX Resins, PAC and carbonaceous nanoadsorbents (graphene, graphene oxides and carbon nanotubes) is explored.

10:00 AM – 10:30 AM

Merit and feasibility of using satellite remote sensing for routinely monitoring lakes and reservoirs used for drinking water supply

Seyoum Gebremariam (Metropolitan Water District of So. Cal)

This presentation describes development and application of satellite-based capability to routinely monitor water quality in multiple lakes and reservoirs used by Metropolitan Water District of Southern California (MWDSC) for storing source water supplying its treatment plants and water utilities in Southern California.

10:30 AM – 11:00 AM

Monitoring and Management of Problem Causing Algae in Surface Waters at the Metropolitan Water District of Southern California

Margaret Spoo-Chupka (Metropolitan Water District of So. Cal)

The Metropolitan Water District of Southern California (MWDSC) manages surface water reservoirs that are a source of drinking water for more than 19 million people in Southern California. These surface waters periodically experience algae and cyanobacteria growth that can negatively impact water quality by clogging filters in treatment plants, producing toxins and taste and odor compounds, and blooming. MWDSC performs regular and targeted monitoring of algal populations with the goal of identifying potentially problematic events or organisms. This presentation will review the program, from sample collection to analysis, and how we utilize monitoring data to fill in knowledge gaps and guide management strategies.

11:00 AM – 11:30 AM

Cyanotoxin Sample Preparation and Analysis by LC/MS/MS

Eduardo Garcia (Metropolitan Water District of So. Cal)

We have developed an analytical method to simultaneously detect 15 cyanotoxins, including microcystins, cylindrospermopsin and anatoxin-a. A unified sample collection and preservation is being optimized. Other parameters being evaluated include lysis techniques (sonication vs. freeze-thaw), several types of syringe filters, standards from different sources, and two different LC/MS/MS instruments.

11:30 AM – 12:00 PM

Efficacy of Treatment Processes for Cyanotoxin Removal and Degradation

Alex Gorzalski (Hazen and Sawyer)

Participants in this session will learn about the regulatory requirements for toxin monitoring and the efficacy of various treatment processes for the removal and/or degradation of cyanotoxins. This presentation will also include a demonstration of CyanoTOX, a spreadsheet-based tool for estimating treatment efficacy that is available to AWWA members free of charge.

1:30 PM – 2:00 PM

Cyanotoxin Incidence and Control Case Studies

Jeff Neemann (Black & Veatch)

Participants in this session will learn about the occurrence and treatment of cyanotoxins in drinking water. They will learn about different treatment methods such as ozone, chlorine, PAC, GAC and their effectiveness at removal of cyanotoxins. They will learn about two case studies that had events and how they responded.

2:00 PM – 2:30 PM

Multiple Barriers of Cyanotoxin Control for the City of Salem

Katie Ottoboni (Carollo Engineers)

Participants in this session will learn about the performance of the existing and future barriers for the City's cyanotoxin control. The presentation will cover slow sand filtration cyanotoxin removal, implementation of near-term enhancements of PAC addition/removal without conventional pre-treatment, chlorination's role in a multi-barrier approach and long-term enhancements.

2:30 PM – 3:00 PM

What do I do when UCMR4 shows Cyanotoxin Occurrence?

Eli B. Townsend (Calgon Carbon)

about most recent findings of research aimed to how trace level concentrations are removed and how multiple cyanotoxins interact during removal, and will be presented with case studies evaluating full-scale removal efficiency.

4:00 PM – 4:30 PM

Water Treatment Requirements Driven by Our Changing Climate & Natural Hazards

Sarah Deslauriers (Carollo Engineers)

Participants in this session will learn about which natural hazards are increasingly variable (over the last five years and the extent to which those and others are expected to change over the next couple decades) and what is important to know/consider for water quality planning. The participants will also learn how a couple agencies have had to respond to and recover from recent wild fires, as well as how

one Regional Water Board intends to plan ahead to protect their water quality in spite of the changing climate.

4:30 PM – 5:00 PM

Drought! Fire! Storms! ...The Operational Effects of Climate Change on Water Treatment and How to Plan for It

Michael Hartlaub & Dan Gill (EBMUD)

Participates in this session will learn about the operational challenges linked to climate change and EBMUD's long-term plans to address these challenges through more robust treatment processes, infrastructure hardening, greater operational flexibility, and supply diversification.

5:00 PM – 5:30 PM

Corrosion Control Treatment for Low Alkalinity Source Waters

Nicole Blute (Hazen and Sawyer)

Participants in this session will learn about the water quality factors associated with corrosion for distribution system and household plumbing materials, indices for evaluating corrosivity, and treatment options for minimizing corrosion outcomes when using low alkalinity water supplies.

Session 15 – Energy & Sustainability Room:

7:30 AM – 8:00 AM

8:00 AM – 8:30 AM

10:00 AM – 10:30 AM

The Partnership for Clean Water - Treatment and Energy Usage Optimization

Todd Brewer (AWWA)

Participants will learn about key aspects related to the Partnership for Clean Water - a wastewater treatment and energy usage optimization program that is part of the Partnership Programs from AWWA.
In addition to learning about key aspects of the self-assessment process in support of continuous improvement, attendees will also learn about the savings in energy efficiency identified by Partnership utilities. Key features of the program will be briefly presented as well.

10:30 AM – 11:00 AM

From A to Z, Energy Efficiency for the Water Sector

James Pasmore (Southern Calfornia Edison)

Participants in this session will learn about the state's energy-related goals and how to implement energy efficiency projects including funding opportunities available to water agencies.

11:00 AM – 11:30 AM

From A to Z, Energy Efficiency for the Water Sector

Bill McDonnell (Metropolitan Water District of So. Cal)

Participants in this session will learn about the state's energy-related goals and how to implement energy efficiency projects including funding opportunities available to water agencies.

11:30 AM – 12:00 PM

From A to Z, Energy Efficiency for the Water Sector

Virginia Lew (California Energy Commission)

Participants in this session will learn about the state's energy-related goals and how to implement energy efficiency projects including funding opportunities available to water agencies.

1:30 PM – 2:00 PM

Strategic Energy Management Experiences of 50 Water Utilities

Steve Jones (Hansen, Allen and Luce, Inc.)

Participants will learn the tools, methods, and funding of energy management for water systems, as well as common challenges and opportunities illustrated through selected case studies.

2:00 PM – 2:30 PM

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2:30 PM – 3:00 PM

Winner of Outstanding Energy Management Award

Brian Collins (United Water Conservation District)

Participants in this session will hear from the winner of CA-NV AWWA's Outstanding Energy Management Award and learn about their efforts to reduce energy use and resulting greenhouse gas emissions.

4:00 PM – 4:30 PM

4:30 PM – 5:00 PM

5:00 PM – 5:30 PM

Session 16 – Water Management & Efficiency Room:

7:30 AM – 8:00 AM

Into the World of AMI and How We Got Here

Kevin Barnes (Ferguson)

history of the meter technology, how it migrated to AMR and now AMI.

8:00 AM – 8:30 AM

How to Address Infrastructure Replacement Quicker In 2019-2020

Frank Gill (Holman Capital)

about financing options and how to evaluate how justify the cost for implementing solutions .

10:00 AM – 11:00 AM

Expanding the Possibilities of AMI: The New Approach NaaS and SaaS

Robert Gustin (Neptune Technology Group)

solutions to outsourcing of network ops delivered as NaaS and data management through a SaaS model.

11:00 AM – 11:30 AM

The Impact of Digital Customer Engagement on Water Conservation: A Comparative Analysis

Ganesh Krishnamurthy (Dropcountr) & Dr. Mehdi Nemati (UCR School of Policy)

how data that are already available to them can be used to better manage the way they run their system for increased optimization.

11:30 AM – 12:00 PM

Conserving Water by Making Data Actionable

Paul Hauffen (Sedaru)

how data that are already available to them can be used to better manage the way they run their system for increased optimization.

11:30 PM – 12:00 PM

A Lesson on the Significance of Financial and Operational Benefits Post-AMI Implementation

Steve Nees (Utiliworks Consulting, Inc.)

how to accurately quantify projected financial and operational benefits prior to an AMI implementation and compare the actual results post-deployment to ensure that reporting requirements are met. They will also develop a better understanding of commonly missed benefits in an AMI environment and the identification of opportunities for improved system use from the resulting benefit data.

2:00 PM – 2:30 PM

PANEL: Understanding All That Could be Involved with a Meter Solution

Kevin Barnes (Ferguson), Frank Gill (Holman Capital), Robert Gustin (Neptune Technology Group), Ganesh Krishnamurthy (Dropcountr), Paul Hauffen (Sedaru), & Steve Nees (Utiliworks Consulting, Inc.)

Panel discussion from agencies as well as vendors in all aspects of working with a meter solution.

2:30 PM – 3:00 PM

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Panel discussion from agencies as well as vendors in all aspects of working with a meter solution.

4:00 PM – 4:30 PM

Beyond Leak Detection: Evaluating Water Conservation and Leak Notification Benefits of "Smart Home" Devices

Danielle McPherson (WaterNow Alliance)

preliminary results of a pilot study aimed at quantifying the water-saving potential of next-generation customer-side leak detection devices. The presentation will include key findings from 7+ months of study observation, including: 1) successes and challenges of applicant recruitment and device installation; 2) changes in water use behavior; and 3) participant interest and satisfaction with the devices. Attendees can gain insights for implementing residential leak detection programs in their communities.

4:30 PM – 5:00 PM

Real-time Measurements of Water Quality and End-Use With Instant Reporting Saves Water and Assets

Frank Burns (APANA) & Thomas Pape (Best Management Partners)

how enabling an intelligent water management platform, essentially shifting understanding of major water end-use from a monthly interval to real-time water use measurement and analysis, has proven to drastically reduce waste, optimize costs and infrastructure, and protect assets of CII customers.

5:00 PM – 5:30 PM

Are Prescriptive Landscape Ordinances Measuring up to Actual Water Savings?

David Langridge (EBMUD)

how commercial properties with well-designed, Smart irrigation systems are not using water efficiently compared to a budget in the EBMUD service area. This presentation will share findings from more than 80 commercial dedicated irrigation metered accounts that serve apartment, homeowner association, business, city, and county landscapes.

Session 17 – Water Treatment / Research Room:

7:30 AM – 8:00 AM

Update on the state of laboratory accreditation in California--from one laboratory's perspective

Cindy Ziernicki (Helix Water District) & David Kimbrough (Pasadena Water and Power)

About the current state of affairs of laboratory accreditation in California from one lab's perspective.

8:00 AM – 8:30 AM

Update on the state of laboratory accreditation in California--from one laboratory's perspective

Cindy Ziernicki (Helix Water District) & David Kimbrough (Pasadena Water and Power)

About the current state of affairs of laboratory accreditation in California from one lab's perspective.

10:00 AM – 10:30 AM

Rapid design and construction of nitrate treatment in Barstow, California

George Zakhari (Golden State Water Company)

Participants in this section will learn how a Southern California utility addressed rapid increases in nitrate impacts to their primary well field by operational changes and rapid design and construction of a 2.8 MGD nitrate treatment plant. Details of operational changes, expedited treatment design and construction will be shared during the presentation.

10:30 AM – 11:00 AM

California American Water Utilizes Design-Build Approach for Successful Well Site PFOA/PFOS Treatment

Tim Hasler (California American Water) & Rob Craw (AqueoUS Vets)

Participants in this session will learn how California American Water's utilization of the design-build procurement method resulted in a successful project for PFOA/PFOS treatment at a Sacramento well site. Items to be covered include background information, project challenges, public outreach, project schedule and milestones, and key benefits of the design-build method.

11:00 AM – 11:30 AM

How Did the City of Sacramento Restore the Useful Life of 100 MGD Filters

Megan Thomas (City of Sacramento) & Tim Williams (Kennedy/Jenks)

Participants in this session will learn about the challenges of rehabilitating and restoring underperforming filters to their former self by replacing media and damaged filter nozzles, along with demonstrating the filters capability to achieve the previously rated capacity of 100 MGD. In addition, the lessons learned to extend the useful life of the filters by restoring the filter's concrete and steel bulkhead structures while keeping the WTP online will be shared.

11:30 AM – 12:00 PM

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1:30 PM – 2:00 PM

Microplastics – What You Need to Know

Tarrah Henrie (Corona Environmental Consulting)

Participants in this session will learn about upcoming requirements for microplastics analysis.

2:00 PM – 2:30 PM

Methodology to Detect and Quantitate Microplastics in Water Sources

Amber Skaretka (Eurofins S-F Analytical, Inc.)

Participants in this session will learn about the testing for microplastics in drinking water

2:30 PM – 3:00 PM

Conventional and Biological Treatment for the Removal of Microplastics from Drinking Water

Robert Andrews (Univ. of Toronto)

Participants in this session will learn about the removal or transformation of microplastics by specific unit processes including coagulation, ozonation and filtration (anthracite or GAC, biological or non-biologic)

4:00 PM – 4:30 PM

Bioanalytical Tools for Water Quality Monitoring: Assessing emerging contaminants in recycled and ambient waters

Alvine Mehinto (Southern CA Coastal Water)

This presentation will describe current state of science and local collaborative research to evaluate the robustness and utility of using cell assays to evaluate complex water mixtures of chemicals. Southern California Coastal Water Research Project Authority (SCCWRP) has conducted a series of laboratory and field studies to develop performance-based protocols and applied these tools to screen water samples from various environments.

4:30 PM – 5:00 PM

Bioanalytical Tools for Water Quality Monitoring: Assessing emerging contaminants in recycled and ambient waters

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The occurrence of emerging contaminants (also known as CECs) for which little relevant toxicity data is available, continues to pose a challenge for utilities and regulators. In recent years, bioanalytical tools have been proposed to assess complex environmental mixtures and their potential risks to public and ecological health. These cell-based assays are designed to respond to known and unknown chemicals acting via a common mode of action. As such, they offer an integrative approach to complement targeted chemical analyses and toxicity testing.

This presentation will summarize the state of science for bioanalytical tools and describe the work from SCCWRP and collaborators to evaluate the robustness and utility of these assays for water quality monitoring. SCCWRP's initial work focused on the optimization and evaluation of protocols for endocrine-related cell assays (e.g. estrogen receptor assay) in various aquatic environments. These studies have shown that bioanalytical tools can be used to successfully benchmark water of different qualities. Moreover, bioscreening responses were generally in agreement with available chemical monitoring data. For example, wastewater effluents typically had the highest levels of endocrine activity, while most advanced treated water samples showed little to no bioactivity. Additional research is currently investigating the link between cell-based and animal/community responses to determine the risks associated with observed bioactivity.

5:00 PM – 5:30 PM

Emerging Contaminants Roundtable Q&A

TBD

Participants will be able to ask the expert panel specific questions about emerging contaminants.

Session 18 – Systems Controls Room:

7:30 AM – 8:00 AM

Improving Control System Safety after an Arc flash study

Matt Samar (Arc Flash San Diego)

This presentation will look at the steps that a water utility should be doing before, during and after an arc flash study.

8:00 AM – 8:30 AM

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10:00 AM – 10:30 AM

Levels of Reliability

Kent Melville (Inductive Automation)

A reliable control system is comprised of two categories: technology problems and people problems. Technology problems consist of hardware, software, and network assets. Reliability of these assets is more than simply avoiding failure. Reliability issues include inconsistency and performance concerns.

The goal of a control system is to enable individuals to complete the industrial process successfully and prevent people from harming the system whether malicious or inadvertent. Threat prevention includes a proper network architecture, user authentication and consistent patching practices. This session will provide five steps to create a reliable system.

1. Audit System & Roles
2. Prioritize Improvement Areas
3. Create an Action Plan
4. Execute Action Plan
5. Repeat Process

The reliability life cycle includes your past implementations, your present maintenance, and deliberate planning for future changes. It can be done!

10:30 AM – 11:00 AM

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11:00 AM – 11:30 AM

Methods for Upgrading Legacy Control Systems Software

Michael Erwin (TJC and Associates)

Participants will learn about integration methods between various control systems.

11:30 AM – 12:00 PM

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1:30 PM – 2:00 PM

How to Drive Agency Requirements into SCADA

Chris Schleich (Enterprise Automation)

Participants will learn about techniques their agencies can use to improve the outcomes of SCADA development. There are two common traits to control interfaces that feel effortless to use - consistency and the needs of the end user have been accounted for. The presentation will be based on a true story from a 10 MGD GW desalinization facility in the region. Techniques covered will include control workshops, screen design reviews, standards development, witnessed FAT, and cutover planning.

2:00 PM – 2:30 PM

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2:30 PM – 3:00 PM

SCADA Technology Panel Discussion

Henry Palechek – Moderator (Helix Water District)

Participants will learn about current trends in SCADA technology and are urged to participate and bring questions.

4:00 PM – 4:30 PM

Wireless Technologies and How They Can Be Used By a Water District

Eric Lee (Solectek Corporation)

Desired outcome of the session is better education of communications staff at water agencies regarding latest technologies for more informed choices if/when they select next-generation wireless systems.

4:30 PM – 5:00 PM

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5:00 PM – 5:30 PM

SCADA: Your Most Critical Asset

Dean Ford (Westin Technology Solutions)

Participants in this session will learn how to unlock the hidden values of your SCADA system. We will discuss how we can move your organizations perception of SCADA as a cost and begin treating it as the Critical Asset that it is.

Session 19 – Environmental Health & Safety Room:

7:30 AM – 8:00 AM

8:00 AM – 8:30 AM

10:00 AM – 10:30 AM

Measuring Ammonia Oxidizing Bacteria in the Laboratory

David Kimbrough (Pasadena Water & Power)

Participants in this session will learn a new technique for the assessment of nitrification in their system. Nitrification of chloraminated drinking water is a significant problem for many Community Water Systems (CWSs). Ammonia Oxidizing Bacteria (AOB) consume ammonia and monochloramine and release nitrite, a process which can result is significant loss of disinfectant and the uncontrolled growth of bacteria. AOB are very difficult to culture in the laboratory so measuring the density of these organisms is impractical for CWSs. This paper presents a laboratory method to quantify how active AOB are, irrespective of their density.

10:30 AM – 11:00 AM

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11:00 AM – 11:30 AM

Generators, Portable Booster Pumps and Emergency Prepardness

Agustin Mireles (California Water Service)

Participants in this session will learn the importance of having a resilient Auxiliary Power System, the methods to maintain the units at peak performance and what not to do during an emergency situation.

11:30 AM – 12:00 PM

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1:30 PM – 2:00 PM

Public Health Risk-Balancing: A New Approach to Setting MCLs

David Kimbrough (Pasadena Water & Power)

Participants in this session will learn how MCLs are set can have tremendous impacts on how Public Water Systems operate and on public health. Historically, California Division of Drinking Water (DDW) has used a process similar to Cost-Benefit Analysis (CBA), an "Economic Analysis" (EA) to develop its Maximum Contaminant Level (MCL) while the Federal government has used a full CBA. In each case, the costs of implementation, treatment, residuals disoposal, analysis, &c are tallied as a "Cost" while human health, morbidity and mortality, are tallied as benefits. Both costs and benefits can be monetarized as dollars. Recently, the DDW adopted a new regulations setting an MCL for Chromium (VI) (CR6) using a variation on the CBA. This regulations was challenged in court and overturned. The court ruled that DDW did not perform an EA consistent with California law. DDW

must incorporate "affordability" into its EA. This paper presents an alternative approach to setting MCL which include affordability. It uses non-monetary risk-balancing, measuring the decreased risk in public health risk from lowering an MCL against the increased public health risk from increasing the price of water.

2:00 PM – 2:30 PM

Hazardous Waste Mangement, A Guide to Common Errors and Misconceptions

Danielle Palmer & Bear Bridges (Belshire Environmental Services, Inc.)

Participants in this session will learn get an understanding of what the hazardous waste generator's responsibility is when shipping hazardous waste offsite; common manifest errors and how to avoid them; the basics of the e-manifest system; common generator errors related to waste storage and management (packaging, labeling, time clocks, etc) and how to avoid them; sampling errors and waste characterization errors related to analytical data review.

2:30 PM – 3:00 PM

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4:00 PM – 4:30 PM

Development of a Novel Multi-Dilution NPDES Permit

Brie Post (Trussell Technologies, Inc.)

For the first time, an NPDES permit provides maximum flexibility to discharge various blends of wastewater and RO concentrate from Pure Water Monterey's potable reuse project. This novel multi-dilution permitting approach captures the complexity of various discharge blends to maximize the production of recycled water while protecting ocean ecosystems. Participants will learn: (a) the steps for developing an NPDES permit, and (b) the approach taken to develop a multi-dilution NPDES permit for a potable reuse project.

4:30 PM – 5:00 PM

Implementing New Employee Learning Technologies

Charles Allen (Golden State Water Company)

Participants in this session will learn how identifying and implementing a Learning Management System (LMS) will help them meet employee's learning needs and Utility compliance requirements. "Lesson's Learned" will be shared on how Golden State Water Company has identified, configured, and implemented two major LMS systems over ten years, and has improved learning, met regulatory compliance requirements, saved time, and reduced costs.

5:00 PM – 5:30 PM

Session 20 – SEP Committee Room:

7:30 AM – 8:00 AM

8:00 AM – 8:30 AM

10:00 AM – 10:30 AM

AWWA/FEMA Resource Typing

Christine Herndon (Herndon Solutions)

Learn how the revised AWWA Resource Typing Manual provides guidance on developing water sector resource types for personnel, teams, and equipment allowing for the expedited mutual aid request and response to intrastate and interstate incidents that exceed the capability of the local utility

10:30 AM – 11:00 AM

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11:00 AM – 11:30 AM

Emergency Water Bypass lay-flat hose

Isaac Alatorre (Portable Pipeline Systems)

Participants of this session will learn how lay-flat systems work, the pitfalls of connecting NSF hose to resident or commercial connection and how resource typing with CalWarn can help their organization and the surrounding communities

11:30 AM – 12:00 PM

Pursuing AWIA 2018 Compliance with the Updated AWWA Cyber Security Guidance & Tool

Andrew Ohrt (West Yost Associates)

Participants in this session will learn about updates to AWWA's cybersecurity guidance and tool completed in 2019 and how to use the updated tool to support pursuit of AWIA 2018 compliance.

1:30 PM – 2:00 PM

AWIA - Long Beach Water's Journey Through the Process

David Lopez (City of Long Beach)

By discussing the methods and approach used by the City of Long Beach Water Department, attendees will learn how to navigate the challenges they may face while attempting to successfully implementing the new American Water Infrastructure Act.

2:00 PM – 2:30 PM

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2:30 PM – 3:00 PM

The Boxed Water Solution...The Most Economical Emergency Potable Water Solution

Andrew Ohrt (West Yost Associates)

Participants in this session will learn about updates to AWWA's cybersecurity guidance and tool completed in 2019 and how to use the updated tool to support pursuit of AWIA 2018 compliance.

4:00 PM – 4:30 PM

Three Reasons You Could Have A Power Shutdown (PSPS)

TBD

Particpants will learn the components of the Public Safety Power Shutdown (PSPS) and how this program impacts a water utilities ability to produce and pump water

4:30 PM – 5:00 PM

Typing Your Generators To Ensure Reliability

Lauren Wisniewski (U.S. Environmental Protection Agency)

Participants of this session will learn how to assess and document their back-up generator needs and other ways they can increase their resilience to grid power outages

5:00 PM – 5:30 PM

Lessons Learned from Most Recent Disasters

TBD

Description needed.

Session 21 – Financial Management / New Technology
Room:

7:30 AM – 8:00 AM

8:00 AM – 8:30 AM

10:00 AM – 10:30 AM

Not Another Rate Survey

Johnathan Cruz (Moulton Niguel Water District)

Participants of this interactive session will learn how advances in data science and its application can transform surveys and reporting efforts into useful and reusable information and tools for their agency and the utility industry as a whole.

10:30 AM – 11:00 AM

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11:00 AM – 11:30 AM

Planning for a Rainy Day

Dave Gore (San Diego County Water Authority)

How strong financial policies and proactive management provides ultimate rate resiliency.

11:30 AM – 12:00 PM

1:30 PM – 2:00 PM

Remote Satellite Imagery Finds Hidden Background Leaks

Gadi Kovarsky (Utilis)

Attendees will gain skills to help reduce NRW. Attendees will learn the historical performance metrics of traditional BOTG leak detection services. Attendees will learn the performance metrics of Utilis satellite directed leak detection services. Attendees will learn new leak detection techniques and processes that lower the cost of finding leaks. Attendees will gain performance metric insights related to leak detection methods that make comparisons possible.

2:00 PM – 2:30 PM

Real-Time Membrane Fouling and Scaling Monitoring of RO Plants

Dr. Yoram Cohen (Noria Water Technologies)

Participants in this session will learn about the fundamentals of mineral scaling and fouling, including the factors that affect the onset and rate of these processes. Participants will be informed on how direct membrane surface monitoring, along with advanced machine learning/AI, can contribute to early fouling and scale detection, preventative measures, and optimal RO plant operation at high-recovery.

2:30 PM – 3:00 PM

The advantages of combining multiple data sources to combat NRW

Roy Martinez (Xylem)

Participants in this session will learn about using distributed sensors with advanced data analytics to monitor for non-revenue water.

4:00 PM – 4:30 PM

IS YOUR DEVELOPED WELL WELL-DEVELOPED?

Charles Carner (HPC/Welljet) & Jordan Kear (Kear Groundwater)

Participants in this session will learn how to avoid the pitfalls of new well development, obtain maximum production and efficiency from their wells, and minimize the environmental impact of groundwater extraction.

4:30 PM – 5:00 PM

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5:00 PM – 5:30 PM

Thursday, October 24, 2019

Session 22 – Communications & Customer Relations
Room:

8:00 AM – 8:30 AM

8:30 AM – 9:00 AM

Becoming a Potable Reuse "Expert": Lessons Learned By A Non-Technical Person Who Specializes in Clearly Communicating Technical Concepts to the Public

Megan Drummy (Katz & Assoc.)

Public outreach is essential to a potable reuse project—as research and numerous case studies have demonstrated, public sentiment can make or break a project that relies on understanding the safety and viability of advanced technology and complex technical concepts. Yet, the majority of the people who shape outreach programs and lead public outreach activities do not have a technical background or work in the water/wastewater field. Most of us are already trained in providing information to the public, but due to the level of detail that is required for a potable reuse outreach program, we have to become near experts ourselves in potable reuse to be able to adequately translate the information so it is digestible for the general public. As someone who specializes in potable reuse outreach as a practitioner in Katz & Associates' water practice, this presentation will detail the lessons learned in how to best get and deliver the technical information in order to clearly communicate with the public, as well as outline what the most effective outreach methods and activities for a variety of stakeholders are. Examples from a variety of potable reuse projects will be used, including Pure Water San Diego and Eastern Municipal Water District's Groundwater Reliability Plus program.

9:00 AM – 9:30 AM

An Evaluation of Home Test Kits in Response to a "Pesticide Scare" in San Francisco

Gregg Olson (San Francisco Public Utilities Commission)

Participants in this session will learn about a SFPUC home test kit evaluation including over 400 tests on three brands of drinking water test kits. The analyses included split sampling with certified laboratories and the use of standards to evaluate the reliability of kits at different concentrations. The presentation will cover an October 2018 incident which led to a pesticide scare, SFPUC's follow-up monitoring (showing all pesticides as non-detect), and results of the SFPUC home kit evaluation.

10:00 AM – 10:30 AM

A Guide to Risk Communication from AWWA

Melissa Elliott (Raftelis)

Participants in this session will learn about a new tool from AWWA: A Risk Communication Guide and how to use it and apply it at their own utilities through examples and projects.

10:30 AM – 11:00 AM

The Importance of Outreach in Selling a Water Rate Increase

Leslie Payne (Sweetwater Authority)

Participants of this session will learn why it is important to add a communications plan and public outreach component into their rate study efforts.

11:00 AM – 11:30 AM

Solutions for Citizens: Description of a Flood Risk Reduction Program through the Lens of Environmental Justice

Ray David (Greeley and Hansen)

Participants in this session will learn about how environmental justice is a driver in many projects around the County. The participants will learn how flood risk programs implement environmental justice as they make planning and design-level decisions.

11:30 AM – 12:00 PM

Being a Good Neighbor Dictates the Communication and Outreach Strategies for a Successful Construction Project

Rupam Soni & Salvador Vazquez (Metropolitan Water District of So. Cal)

Participants in this session will learn about The Metropolitan Water District of Southern California's commitment to improving infrastructure for future water reliability. They will learn about efforts to make community relations a priority for these improvements and the resulting outcomes. Participants will also learn about various communication tools and strategies that can be used to engage communities impacted during a water infrastructure improvement project and gain their support.

Session 23 – Room:

8:00 AM – 8:30 AM

8:30 AM – 9:00 AM

9:00 AM – 9:30 AM

10:00 AM – 10:30 AM

10:30 AM – 11:00 AM

11:00 AM – 11:30 AM

11:30 AM – 12:00 PM

Session 24 – Smaller Utilities Room:

8:00 AM – 8:30 AM

Arsenic Removal - Hopi Case Study

Brett Gleitsmann (Rural Community Assistance Corporation)

Attendees will learn about the challenges of operating an arsenic removal system given the limited financial and technical resources that many small systems face. For systems designing or installing treatment systems, this session will be particularly relevant as it will highlight key operational issues to plan and budget for.

8:30 AM – 9:00 AM

Source Water Quality and Impacts to Reliability in Small Systems

Beth Clark (Golden State Water Co.)

This presentation will describe how seawater intrusion, as well as high levels of nitrates or selenium have impacted reliability in three of Golden State Water Company's small water systems in its Coastal district. The presentation will also describe the solutions Golden State Water has implemented to mitigate these source water issues and increase reliability.

9:00 AM – 9:30 AM

Partnership for Safe Water - Small Systems Program

Todd F. Brewer, Ph.D., P.E. (AWWA)

Participants will learn about the self-assessment methodology that is the foundation of all Partnership Programs and vital to continuous improvement and optimization efforts. This presentation will present details of the self-assessment approach and the framework for the Small Systems Program within the Partnership. Opportunities for funding from USDA Rural Development funds - in support of infrastructure improvements for systems serving less than 10,000, will also be presented.

10:00 AM – 10:30 AM

Use of UV and chloramines in a very small surface water system to minimize HAA5 formation

Jim McVeigh (Rural Community Assistance Corporation)

Participants in this session will learn the process that a very small surface water system took to develop, design, construct and operate a UV/free chlorine/chloramine disinfection system to control HAA5 formation and come back into compliance with this disinfection by-product MCL.

10:30 AM – 11:00 AM

11:00 AM – 11:30 AM

11:30 AM – 12:00 PM

Session 25 – Water Treatment Room:

8:00 AM – 8:30 AM

Water Treatment Chemicals and Calcium Carbonate Saturation

John Kenny & David Hokanson (Trussell Technologies, Inc.)

Participants in this session will learn how common water treatment chemicals impacts calcium carbonate saturation; how to model these impacts; how to use a publicly-available spreadsheet tool to model these impacts; how the modal can be used to estimate pH; and examples of application to the water treatment industry.

8:30 AM – 9:00 AM

When fields changed, water changed… how to adapt?

Peter von Bucher (Carollo Engineers)

Participants will learn about SSJID's pre-oxidation and residuals management study, which aimed to help the District adapt to changing raw water quality conditions. The District's raw water quality has deteriorated due to changing agriculture practices in the watershed among other factors.

9:00 AM – 9:30 AM

Blending Desalinated Seawater into Existing Regional Supplies: The Significant Influence of Ocean Temperature on Water Quality

Brent Alspach (Arcadis)

Participants in this session will learn the impact of temperature on RO permeate water quality and the significant influence that seasonal variation can exert on the ability to achieve performance targets. Participants will also learn the conditions in which it is most critical to examine the ongoing projected performance of RO as a function of temperature during the design process.

10:00 AM – 10:30 AM

Optimizing your filter performance with Ceramic Filtration Media

Trevor Johnson (Sapphire-Water)

Participants in this session will learn about the benefits of upgrading their traditional sand and anthracite media to a revolutionary, highly porous ceramic media. The attendees will learn about a simple solution to problems they didn't know they had such as excessive head loss, high energy usage, unnecessary water consumption and short lifetime of their filter medias. There will be several case studies and sets of pilot information presented highlighting how facilities throughout the world have realized the benefits of ceramic filtration media.

10:30 AM – 11:00 AM

Status & Potential Impact of Chlorate Regulation in the US

Bob Newton (De Nora Water Technologies)

Understand the potential impact of chlorate MCL and options to reduce chlorate formation on chlorine disinfectant they utilize

11:00 AM – 11:30 AM

Selecting Alternative Disinfection: Safe and Reliable Alternatives

Gunnar Thordarson (UGSI Solutions)

Participants will learn about Otay Water Treatment Plant; replaced Gas Chlorine with OSHG. The Otay Water Treatment Plant is a 30 MGD conventional plant relying on Chlorine Dioxide as a primary disinfectant. We will learn about the evaluation process use by the City of San Diego and the drivers that lead to an innovative and power efficient design.

11:30 AM – 12:00 PM

Selecting Alternative Disinfection: Safe and Reliable Alternatives

Gunnar Thordarson (UGSI Solutions)

Participants will learn about Otay Water Treatment Plant; replaced Gas Chlorine with OSHG. The Otay Water Treatment Plant is a 30 MGD conventional plant relying on Chlorine Dioxide as a primary disinfectant. We will learn about the evaluation process use by the City of San Diego and the drivers that lead to an innovative and power efficient design.

Session 26 – Water Loss Room:

8:00 AM – 8:30 AM

The New Water Loss Performance Standards - What you need to know

Max Gomberg (State Water Resources Control Board)

Participants will learn about the upcoming regulatory timeline and proposed water loss performance standards framework requirement for retail urban water suppliers in California.

8:30 AM – 9:00 AM

Real Loss Component Analysis - WHAT IS THAT??

Reinhard Sturm (Water Systems Optimization)

Participants will learn, at a high level, the process of conducting a RLCA, the data needed, and how the results should be interpreted.

9:00 AM – 9:30 AM

A Review of the Water Loss Audit Reports in California

Todd Thompson (Dept. of Water Resources)

Provide a forum for Section members to hear about the Department of Water Resources' assessment of the new Water Loss Audit Program (Program) and to provide a forum for input about the Program with DWR. Summary data from the audits submitted to date will be presented.

10:00 AM – 10:30 AM

Mapping Water Loss Data Collection at California Water Service (part 1)

Kate Gasner (Water Systems Optimization)

California Water Service (Cal Water), the largest regulated water utility west of the Mississippi River, recently designed a strategic plan to better manage the water losses in its varied systems. Cal Water has a unique outlook as it manages more than 60 water systems, each with different operating challenges, water loss profiles, and cost of source water. In 2018, Cal Water conducted AWWA water audits for each of its urban retail water systems (21) alongside a component analysis of leakage to better understand intervention opportunities. Equipped with this assessment tool, Cal Water developed a company-wide policy and plan that built on its existing water loss program to tackle its next steps in water loss management and data improvement. This presentation highlights the tenets of Cal Water's Water Loss Control Program and highlight how the company is prioritizing action across its systems.

10:30 AM – 11:00 AM

Mapping Water Loss Data Collection at California Water Service (part 2)

Kate Gasner (Water Systems Optimization)

California Water Service (Cal Water), the largest regulated water utility west of the Mississippi River, recently designed a strategic plan to better manage the water losses in its varied systems. Cal Water has a unique outlook as it manages more than 60 water systems, each with different operating challenges, water loss profiles, and cost of source water. In 2018, Cal Water conducted AWWA water audits for each of its urban retail water systems (21) alongside a component analysis of leakage to better understand intervention opportunities. Equipped with this assessment tool, Cal Water developed a company-wide policy and plan that built on its existing water loss program to tackle its next steps in water loss management and data improvement. This presentation highlights the tenets of Cal Water's Water Loss Control Program and highlight how the company is prioritizing action across its systems.

11:00 AM – 11:30 AM

Water Loss Open Forum

Sue Mosburg (Sweetwater Authority)

This session will be an open forum to share what's happening on the national level related to Water Loss Control and for participants to ask their water loss questions of the preceeding speakers. An open mic to provide input into the development of the water loss performance standard framework/regulations.

11:30 AM – 12:00 PM

Session 27 – Distribution System Water Quality Room:

8:00 AM – 8:30 AM

Teamwork Makes the UDF Dream Work: How A Strong Client-Consultant Partnership Leads to a Successful Pilot Study at Reasonable Cost

Kambria Tiano (West Yost Associates) & Travis Franklin (Elk Grove Water District)

Participants in this session will learn how a water utility can collaborate with a consultant to implement a pilot UDF study (at a fraction of the cost of a systemwide UDF program) to evaluate the effectiveness of UDF within the utility's water system. A brief introduction to UDF benefits and challenges will be provided with the presentation, with the remainder of the session focusing on a case study where West Yost partnered with Elk Grove Water District to evaluate the potential benefits of implementing a UDF program.

8:30 AM – 9:00 AM

Active Removal of THM Levels in Drinking Water Distribution Systems

Joshua Kurniawan (UGSI Solutions)

Participants will learn about several case studies that demonstrates the effectiveness of active THM removal. Elevated trihalomethane (THM) levels are the most common violations of the Stage 2 DBP Rule in the United States. Municipalities across the country have employed a variety of methods to reduce THM formation rates, often incurring costly and lengthy treatment plant upgrades, which often provide dismal reduction levels.

9:00 AM – 9:30 AM

Design, Cost, and Performance of a Spray Aeration System for THM Removal from a Treated Water Reservoir

Issam Najm (WQTS, Inc.)

how a non-proprietary spray aeration system was installed inside a reservoir and how effective it is at THM removal.

10:00 AM – 10:30 AM

An Evaluation of Home Test Kits in Response to a "Pesticide Scare" in San Francisco

Gregg Olson (San Francisco Public Utilities Commission)

Participants in this session will learn about a SFPUC home test kit evaluation including over 400 tests on three brands of drinking water test kits. The analyses included split sampling with certified laboratories and the use of standards to evaluate the reliability of kits at different concentrations. The presentation will cover an October 2018 incident which led to a pesticide scare, SFPUC's follow-up monitoring (showing all pesticides as non-detect), and results of the SFPUC home kit evaluation.

10:30 AM – 11:00 AM

Chloramine Residual Optimization and Management in Distribution Networks

Robin Giguere (UGSI Solutions)

Learn how Chloramination is a successful disinfectant strategy in potable water systems provides benefits such as a lower potential for disinfection byproduct formation (THMs) and improved disinfectant persistence in distribution systems. We will discuss case studies that demonstrate the importance of maintaining chemical equilibrium between ammonia, chlorine and chloramines.

11:00 AM – 11:30 AM

Guaranteeing Operability for when it Matters Most San Francisco Public Utilities Commission (SFPUC) Fire Hydrant Assessment Program

Roy Martinez (Wachs Water Services) & Katie Miller (San Francisco Public Utilities Commission)

Attendees of this presentation will learn how properly maintaining and managing fire hydrants ensures they will operate correctly when they are needed – and safeguard precious lives and valuable property in emergencies.

11:30 AM – 12:00 PM

Online Turbidity Monitoring - Technology to Reduce Headaches and Cost

Mary Boris (SWAN Analytical USA)

Attendees will learn about current technologies used to monitor turbidity, designs and technologies that reduce issues, maintenance, and operating cost. Technical and design features that eliminate the need for routine calibration and provide accurate reliable measurement.

Session 28 – Global Water Issues
Room:

8:00 AM – 8:30 AM

Global Water Issues

TBD

Description needed.

8:30 AM – 9:00 AM

Global Water Issues

TBD

Description needed.

9:00 AM – 9:30 AM

Global Water Issues

TBD

Description needed.

10:00 AM – 10:30 AM

Global Water Issues

TBD

Description needed.

10:30 AM – 11:00 AM

Global Water Issues

TBD

Description needed.

11:00 AM – 11:30 AM

Global Water Issues

TBD

Description needed.

11:30 AM – 12:00 PM

Global Water Issues

TBD

Description needed.

Hotel and Travel
Accommodations

Event Name/Date:

Netcom Learning "Developing SQL Databases" Training/October 28 - November 1, 2019

CONTACT INFORMATION

First Name | Last Name | Date

ACCOMMODATION INFORMATION

Rooms and rates are subject to availability. Complete and submit this form as soon as possible to guarantee a room at the host hotel. In the event that the host hotel is booked, every effort will be made to secure a room at the closet hotel within comparable rates to the event discounted rate.

Arrival Date | Departure Date | No. of guests | Room Type

Do you require a smoking room?

○ Yes ○ No

Do you need transportation from the airport to the hotel?

○ Yes ○ No

Flight Number | Time

ADDITIONAL INFORMATION/REQUESTS

Staff Representative

LEARNING SOLUTION

for
Claudia Bolanos
Palmdale Water District

July 1, 2019

NetCom™
LEARNING

NetComLearning.com

Prepared By

Kanwaljeet Kaur
Learning Consultant

519 8th Avenue
2nd Floor
New York, NY 10018
Direct: 203.684.1016
Toll Free: 888.563.8266
Fax: 646.292.5170

E-mail: kanwaljeet@netcomlearning.com
Web: www.netcomlearning.com

Enrollment Agreement

NetCom Learning
519 8th Avenue
2nd Floor
New York, NY 10018
Direct: 203.684.1016
Toll Free: 888.563.8266
Fax: 646.292.5170

Palmdale Water District
Contact: Claudia Bolanos
2029 E Avenue Q
Palmdale, CA 93550
Business: 661.456.1092

Tuition Summary

20761: Querying Data with Transact-SQL (SQL Server 2017)
Location: Las Vegas, NV
Times:
Date(s): Sep 23, 2019 – Sep 27, 2019
Tuition $2,995.00

20762: Developing SQL Databases (SQL Server 2017)
Location: Las Vegas, NV
Times:
Date(s): Oct 28, 2019 – Nov 1, 2019
Tuition $2,995.00

Generic Promotion ..... $-1,000.00

Total (USD) **$4,990.00**

1. All courses include official curriculum where applicable.
2. Only courses with boot camps in title include exam vouchers and available exam preparation software.

Policies

The undersigned client agrees to the following policies pertaining to the classes reflected in this training agreement. If any particular provision of this agreement shall be deemed invalid or unenforceable, it shall not affect the other provisions hereof, and this agreement shall be construed in all respects as if such provision was omitted.

Shipping Policy

NetCom Learning offers free shipping for your class materials within the continental United States once payment is received. Shipping must be requested more than one week before class start date. A $100 fee will be applied for course materials that are shipped internationally more than one week prior to class or a $200 fee if less than one week prior to class.

To enable an optimal learning experience and to avoid unforeseen transit delays, NetCom Learning requests that at least two weeks are allowed for shipping.

Register Online

Enrollment in Training Class

Enrollment is confirmed on a first pay first registered basis. A seat may be temporarily reserved for two business days by faxing a signed copy of this enrollment agreement; however full payment or approved purchase order is required to confirm a seat. Client may be moved to waitlisted status if the class is booked before payment is received and enrollment is confirmed. Payment may be made with credit card, cash, check or a company purchase order upon credit approval. If you confirm your enrollment with 3 or less days before class start date, you may not receive a book on the first day. Please confirm with your Educational Consultant.

Live Online Training

Students taking online classes, agree that they will have completed connectivity and audio tests per instructions on NetCom's website, well before the class start date. The instructions are also sent to the student to the email address on record upon registration. Completing the test ahead of time, helps ensure there is enough time for troubleshooting in case student needs help with the live online environment.

Training Class Rescheduling/Cancellation

Once the client sends this signed training agreement, the client reserves enrollment in a training class. Not paying for, not showing up for, or not completing a class does not constitute cancellation and the client remains liable for the entire amount in this training agreement.

If the client cannot attend any training class for any reason, the client must inform NetCom Learning immediately by emailing customerservice@netcomlearning.com. NetCom will take the following steps:

- Try to reschedule the client into another date for the same course. A $100 reschedule fee is due and payable immediately if reschedule is requested with less than 15 calendar days from class start date. All reschedule requests must be emailed to customerservice@netcomlearning.com.
- In case another date is not available or the original course is not offered any more, NetCom Learning may choose to offer a different, comparable training class other than what client originally signed up for and apply the applicable amount towards the tuition of the other training class.
- If client cannot attend, NetCom Learning will make any balance amount available to client through NetCom Vouchers which can be redeemed by any person for any NetCom public open enrollment class. These vouchers must be redeemed within a period of one year from issue date of the vouchers.
- If client books training using MS SATV and cancels or is no-show for class, client agrees to pay the regular tuition for class.

Any nonrefundable costs that NetCom Learning has incurred on client or on client's behalf (example airfare) and any amount applicable towards classes already completed will be deducted before issuing credit for another course or issuing vouchers.

No-Show

If client is unable to attend the training class, client can attend the training class under the training class retake policy mentioned below.

Training Class Satisfaction

Client must review class outline and ensure correct pre-requisite knowledge of students for the class being enrolled in. We guarantee your satisfaction with your learning experience. However, if you are not satisfied for any reason, you can attend per the training class retake policy below.

Training Class Retake
Client can retake an open enrollment class that client has already paid for, once, within a period of one year from the start date of the original class client was enrolled in. Client can attend as long as the class is still being offered and there are available seats. Please confirm at least 2 - 3 business days before the repeat class start date to confirm seat availability. If the same class is not offered in the future, NetCom will offer client a different comparable class. There may be additional costs involved. To attend, simply retain course materials. If the courseware has changed, client must purchase the latest course material. If the class has upgraded and is for a different version, it is considered a new class and will not be available under this retake policy. If after registering for a repeat class, client does not attend, client will not be able to attend the class again for free. For any repeat class, client will only need to pay for exam vouchers, if applicable and any optional travel costs.

Class Attendance
The client must be present at a minimum of 80% of the class time to receive a certification of completion. Please maintain punctuality as classes start on time and return from breaks in a timely fashion.

Class Timings
Please arrive at least 10 minutes prior to the start time of your class. Call us at 212.629.7265 if you are running late. If you are more than 15 minutes late your seat may be given to a waitlisted student. Students arriving more than 30 minutes late may not be admitted to class.

Late Payment, Returned Check and Default Payments
All payments due must be made before or on the first day of training class. A 5% late payment fee will be added for payments not made by the due date. A $50.00 fee would be accessed for all returned or cancelled checks. Checks will not be accepted from clients who have had a returned or cancelled check. A late payment fee will apply to the due amount if a check is returned after payment due date. In case of default payments, the client agrees to pay any legal interest on the balance due, together with any cancellation costs and reasonable attorney fees incurred to effect collection of all outstanding balance. If any due amounts are placed in collections, client will be responsible for any additional collection and or attorney fees. Any delinquent account will accrue the maximum monthly interest allowable by law.

Non-Solicitation
During the term of engagement and for 36 months thereafter, client or any entity related to client will not directly or indirectly (i) encourage or solicit any NetCom representative, employee or consultant (ii) assist any other person or entity in such encouragement or solicitation; or (iii) hire, contract, or assist in hiring or retaining any such representative, employee or consultant. Any breach of this section of the agreement can cause irreparable and incalculable damage to NetCom and implies clients acceptance to immediately pay damages to NetCom, in the amount determined by NetCom. Client is encouraged to solicit work from NetCom by communicating such requests directly to NetCom management, Client's Educational Consultant or NetCom customer service.

US Government Transactions
US Government and GSA orders that are not pre-paid using US Government credit card are due net 30 from the completion day of each delivered class. Any volume or bulk purchases receiving discounting shall be subject to pre-payment requirements. Payment processing, late fees, travel expenses and other fees related to US government or GSA orders will follow US Government procurement guidelines.

NOTICE: ANY HOLDER OF THIS CONSUMER CREDIT CONTRACT IS SUBJECT TO ALL CLAIMS AND DEFENSE WHICH THE DEBTOR COULD ASSERT AGAINST THE SELLER OF GOODS OR SERVICES OBTAINED PURSUANT HERETO OR WITH THE PROCEEDS HEREOF. RECOVERY HEREUNDER BY THE DEBTOR SHALL NOT EXCEED AMOUNTS PAID BY THE DEBTOR HEREUNDER. **I understand that this agreement is a legal and binding instrument when signed by the client and accepted by NetCom Learning.**

The person signing this enrollment agreement acknowledges that he or she is authorized by the client to guarantee payment on behalf of the client. By signing below, the client agrees to the terms of this agreement. This agreement and any listed attachments is the only agreement between NetCom and the client. No other promises made by NetCom Learning or any of its employees or agents should be relied upon by the client.

[ ] Register and Pay Online

Register Online

[ ] Credit Card
[ ] Visa [ ] MasterCard [ ] American Express [ ] Discover [ ] Other

Card Number _____ Exp. Date _____

Name on Card _____ CVV/CVC _____

Billing Street _____

Billing City/State/Zip _____

Cardholder Signature _____

I authorize NetCom Learning to bill the above credit card as specified below:
[ ] Bill my credit card for a one time charge of $4,990.00 for my classes listed on the Registration Form.

[ ] Check
Check Number _____

[ ] Automatic Bank Account Debit

Bank Name _____ Routing Number _____

Bank Street Address _____ Account Number _____

Bank City, State, Zip _____ Check Number (optional) _____

[ ] Purchase Order (PO)
POs are subject to credit approval by NetCom. Client must be on the NetCom Approved Vendor list.

PO Number _____ PO Date _____

This training quote is based on payment due before first day of class. An additional 20% of the Total Tuition may apply for payment received after registration.

This proposal is valid until August 30th, 2019.

Kanwaljeet Kaur, Learning Consultant		July 1, 2019
Prepared By	Signature	Date
Client Name	Signature	Date
Supervisor	Signature	Date

Once approved, please sign above and fax the preceding pages (beginning with the ***Enrollment Agreement*** section), to my attention, **Kanwaljeet Kaur**, at **646.292.5170** or **646.843.4960**.

Course Overview

20761: QUERYING DATA WITH TRANSACT-SQL (SQL SERVER 2017)

This course is designed to introduce students to Transact-SQL. It is designed in such a way that the first three days can be taught as a course to students requiring the knowledge for other courses in the SQL Server curriculum. Days 4 & 5 teach the remaining skills required to take exam 70-761.

This course is based on the objectives of the course version 20761C.

20761: Querying Data with Transact-SQL (SQL Server 2017)

This course is designed to introduce students to Transact-SQL. It is designed in such a way that the first three days can be taught as a course to students requiring the knowledge for other courses in the SQL Server curriculum. Days 4 & 5 teach the remaining skills required to take exam 70-761.

This course is based on the objectives of the course version 20761C.

Note: E- learning module (Microsoft On Demand, MOD) is also available for this course Click here for more details

Course Objectives

- Describe key capabilities and components of SQL Server
- Describe T-SQL, sets, and predicate logic
- Write a single table SELECT statement
- Write a multi-table SELECT statement
- Write SELECT statements with filtering and sorting
- Describe how SQL Server uses data types
- Write DML statements
- Write queries that use built-in functions
- Write queries that aggregate data
- Write subqueries
- Create and implement views and table-valued functions
- Use set operators to combine query results
- Write queries that use window ranking, offset, and aggregate functions
- Transform data by implementing pivot, unpivot, rollup and cube
- Create and implement stored procedures
- Add programming constructs such as variables, conditions, and loops to T-SQL code

Course Outline

- Introduction to Microsoft SQL Server
  - The Basic Architecture of SQL Server
  - SQL Server Editions and Versions
  - Getting Started with SQL Server Management Studio
  - Lab : Working with SQL Server Tools
  - Working with SQL Server Management Studio
  - Creating and Organizing T-SQL Scripts
  - Using Books Online
- Introduction to T-SQL Querying
  - Introducing T-SQL
  - Understanding Sets
  - Understanding Predicate Logic
  - Understanding the Logical Order of Operations in SELECT statements
  - Lab : Introduction to T-SQL Querying
  - Executing Basic SELECT Statements

  - Executing Queries that Filter Data using Predicates
  - Executing Queries That Sort Data Using ORDER BY
- Writing SELECT Queries
  - Writing Simple SELECT Statements
  - Eliminating Duplicates with DISTINCT
  - Using Column and Table Aliases
  - Writing Simple CASE Expressions
  - Lab : Writing Basic SELECT Statements
  - Writing Simple SELECT Statements
  - Eliminating Duplicates Using DISTINCT
  - Using Column and Table Aliases
  - Using a Simple CASE Expression
- Querying Multiple Tables
  - Understanding Joins
  - Querying with Inner Joins
  - Querying with Outer Joins
  - Querying with Cross Joins and Self Joins
  - Lab : Querying Multiple Tables
  - Writing Queries that use Inner Joins
  - Writing Queries that use Multiple-Table Inner Joins
  - Writing Queries that use Self-Joins
  - Writing Queries that use Outer Joins
  - Writing Queries that use Cross Joins
- Sorting and Filtering Data
  - Sorting Data
  - Filtering Data with Predicates
  - Filtering Data with TOP and OFFSET-FETCH
  - Working with Unknown Values
  - Lab : Sorting and Filtering Data
  - Writing Queries that Filter Data using a WHERE Clause
  - Writing Queries that Sort Data Using an ORDER BY Clause
  - Writing Queries that Filter Data Using the TOP Option
  - Write Queries that filter data using the OFFSET-FETCH clause
- Working with SQL Server Data Types
  - Introducing SQL Server Data Types
  - Working with Character Data
  - Working with Date and Time Data
  - Lab : Working with SQL Server Data Types
  - Writing Queries that Return Date and Time Data
  - Writing Queries that use Date and Time Functions
  - Writing Queries That Return Character Data
  - Writing Queries That Return Character Functions
- Using DML to Modify Data
  - Adding Data to Tables
  - Modifying and Removing Data
  - Generating automatic column values
  - Lab : Using DML to Modify Data
  - Inserting Records with DML
  - Updating and Deleting Records Using DML
- Using Built-In Functions
  - Writing Queries with Built-In Functions
  - Using Conversion Functions

  - Using Logical Functions
  - Using Functions to Work with NULL
  - Lab : Using Built-In Functions
  - Writing Queries That Use Conversion Functions
  - Writing Queries that use Logical Functions
  - Writing Queries that Test for Nullability
- Grouping and Aggregating Data
  - Using Aggregate Functions
  - Using the GROUP BY Clause
  - Filtering Groups with HAVING
  - Lab : Grouping and Aggregating Data
  - Writing Queries That Use the GROUP BY Clause
  - Writing Queries that Use Aggregate Functions
  - Writing Queries that Use Distinct Aggregate Functions
  - Writing Queries that Filter Groups with the HAVING Clause
- Using Subqueries
  - Writing Self-Contained Subqueries
  - Writing Correlated Subqueries
  - Using the EXISTS Predicate with Subqueries
  - Lab : Using Subqueries
  - Writing Queries That Use Self-Contained Subqueries
  - Writing Queries That Use Scalar and Multi-Result Subqueries
  - Writing Queries That Use Correlated Subqueries and an EXISTS Clause
- Using Table Expressions
  - Using Views
  - Using Inline Table-Valued Functions
  - Using Derived Tables
  - Using Common Table Expressions
  - Lab : Using Table Expressions
  - Writing Queries That Use Views
  - Writing Queries That Use Derived Tables
  - Writing Queries That Use Common Table Expressions (CTEs)
  - Writing Queries That Use Inline Table-Valued Expressions (TVFs)
- Using Set Operators
  - Writing Queries with the UNION operator
  - Using EXCEPT and INTERSECT
  - Using APPLY
  - Lab : Using Set Operators
  - Writing Queries That Use UNION Set Operators and UNION ALL
  - Writing Queries That Use CROSS APPLY and OUTER APPLY Operators
  - Writing Queries That Use the EXCEPT and INTERSECT Operators
- Using Windows Ranking, Offset, and Aggregate Functions
  - Creating Windows with OVER
  - Exploring Window Functions
  - Lab : Using Windows Ranking, Offset, and Aggregate Functions
  - Writing Queries that use Ranking Functions
  - Writing Queries that use Offset Functions
  - Writing Queries that use Window Aggregate Functions
- Pivoting and Grouping Sets
  - Writing Queries with PIVOT and UNPIVOT
  - Working with Grouping Sets
  - Lab : Pivoting and Grouping Sets

  - Writing Queries that use the PIVOT Operator
  - Writing Queries that use the UNPIVOT Operator
  - Writing Queries that use the GROUPING SETS CUBE and ROLLUP Subclauses
- Executing Stored Procedures
  - Querying Data with Stored Procedures
  - Passing Parameters to Stored procedures
  - Creating Simple Stored Procedures
  - Working with Dynamic SQL
  - Lab : Executing Stored Procedures
  - Using the EXECUTE statement to Invoke Stored Procedures
  - Passing Parameters to Stored procedures
  - Executing System Stored Procedures
- Programming with T-SQL
  - T-SQL Programming Elements
  - Controlling Program Flow
  - Lab : Programming with T-SQL
  - Declaring Variables and Delimiting Batches
  - Using Control-Of-Flow Elements
  - Using Variables in a Dynamic SQL Statement
  - Using Synonyms
- Implementing Error Handling
  - Implementing T-SQL error handling
  - Implementing structured exception handling
  - Lab : Implementing Error Handling
  - Redirecting errors with TRY/CATCH
  - Using THROW to pass an error message back to a client
  - After completing this module, students will be able to:
  - Implement T-SQL error handling.
  - Implement structured exception handling.
- Implementing Transactions
  - Transactions and the database engines
  - Controlling transactions
  - Lab : Implementing Transactions
  - Controlling transactions with BEGIN, COMMIT, and ROLLBACK
  - Adding error handling to a CATCH block

20762: DEVELOPING SQL DATABASES (SQL SERVER 2017)

This five-day instructor-led course provides students with the knowledge and skills to develop a Microsoft SQL Server database. The course focuses on teaching individuals how to use SQL Server product features and tools related to developing a database.

This course is based on the objectives of the course version 20762C.

20762: Developing SQL Databases (SQL Server 2017)

This five-day instructor-led course provides students with the knowledge and skills to develop a Microsoft SQL Server database. The course focuses on teaching individuals how to use SQL Server product features and tools related to developing a database.

This course is based on the objectives of the course version 20762C.

Note: E- learning module (Microsoft On Demand, MOD) is also available for this course Click here for more details

Course Objectives
- Design and Implement Tables
- Describe advanced table designs
- Ensure Data Integrity through Constraints
- Describe indexes, including Optimized and Columnstore indexes
- Design and Implement Views
- Design and Implement Stored Procedures
- Design and Implement User Defined Functions
- Respond to data manipulation using triggers
- Design and Implement In-Memory Tables
- Implement Managed Code in SQL Server
- Store and Query XML Data
- Work with Spatial Data
- Store and Query Blobs and Text Documents

Course Outline
- Introduction to Database Development
  - Introduction to the SQL Server Platform
  - SQL Server Database Development Tasks
- Designing and Implementing Tables
  - Designing Tables
  - Data Types
  - Working with Schemas
  - Creating and Altering Tables
  - Lab : Designing and Implementing Tables
  - Designing Tables
  - Creating Schemas
  - Creating Tables
- Advanced Table Designs
  - Partitioning Data
  - Compressing Data
  - Temporal Tables
  - Lab : Using Advanced Table Designs
  - Partitioning Data
  - Compressing Data
- Ensuring Data Integrity through Constraints
  - Enforcing Data Integrity
  - Implementing Data Domain Integrity
  - Implementing Entity and Referential Integrity
  - Lab : Using Data Integrity Through Constraints
  - Add Constraints
  - Test the Constraints
- Introduction to Indexes
  - Core Indexing Concepts
  - Data Types and Indexes
  - Heaps, Clustered, and Nonclustered Indexes
  - Single Column and Composite Indexes
  - Lab : Implementing Indexes
  - Creating a Heap
  - Creating a Clustered Index
  - Creating a Covered Index

- Designing Optimized Index Strategies
  - Index Strategies
  - Managing Indexes
  - Execution Plans
  - The Database Engine Tuning Advisor
  - Query Store
  - Lab : Optimizing Indexes
  - Using Query Store
  - Heaps and Clustered Indexes
  - Creating a Covered Index
- Columnstore Indexes
  - Introduction to Columnstore Indexes
  - Creating Columnstore Indexes
  - Working with Columnstore Indexes
  - Lab : Using Columnstore Indexes
  - Creating a Columnstore Index
  - Create a Memory Optimized Columnstore Table
- Designing and Implementing Views
  - Introduction to Views
  - Creating and Managing Views
  - Performance Considerations for Views
  - Lab : Designing and Implementing Views
  - Creating Standard Views
  - Creating an Updateable view
- Designing and Implementing Stored Procedures
  - Introduction to Stored Procedures
  - Working with Stored Procedures
  - Implementing Parameterized Stored Procedures
  - Controlling Execution Context
  - Lab : Designing and Implementing Stored Procedures
  - Create Stored procedures
  - Create Parameterized Stored procedures
  - Changes Stored Procedure Execution Context
- Designing and Implementing User-Defined Functions
  - Overview of Functions
  - Designing and Implementing Scalar Functions
  - Designing and Implementing Table-Valued Functions
  - Considerations for Implementing Functions
  - Alternatives to Functions
  - Lab : Designing and Implementing User-Defined Functions
  - Format Phone numbers
  - Modify an Existing Function
- Responding to Data Manipulation via Triggers
  - Designing DML Triggers
  - Implementing DML Triggers
  - Advanced Trigger Concepts
  - Lab : Responding to Data Manipulation by Using Triggers
  - Create and Test the Audit Trigger
  - Improve the Audit Trigger
- Using In-Memory Tables
  - Memory-Optimized Tables
  - Natively Compiled Stored Procedures

  - Lab : Using In-Memory Database Capabilities
  - Using Memory-Optimized Tables
  - Using Natively Compiled Stored procedures
- Implementing Managed Code in SQL Server
  - Introduction to CLR Integration in SQL Server
  - Implementing and Publishing CLR Assemblies
  - Lab : Implementing Managed Code in SQL Server
  - Assessing Proposed CLR Code
  - Creating a Scalar-Valued CLR Function
  - Creating a Table Valued CLR Function
- Storing and Querying XML Data in SQL Server
  - Introduction to XML and XML Schemas
  - Storing XML Data and Schemas in SQL Server
  - Implementing the XML Data Type
  - Using the Transact-SQL FOR XML Statement
  - Getting Started with XQuery
  - Shredding XML
  - Lab : Storing and Querying XML Data in SQL Server
  - Determining when to use XML
  - Testing XML Data Storage in Variables
  - Using XML Schemas
  - Using FOR XML Queries
  - Creating a Stored Procedure to Return XML
- Storing and Querying Spatial Data in SQL Server
  - Introduction to Spatial Data
  - Working with SQL Server Spatial Data Types
  - Using Spatial Data in Applications
  - Lab : Working with SQL Server Spatial Data
  - Become Familiar with the Geometry Data Type
  - Add Spatial Data to an Existing Table
  - Find Nearby Locations
- Storing and Querying BLOBs and Text Documents in SQL Server
  - Considerations for BLOB Data
  - Working with FILESTREAM
  - Using Full-Text Search
  - Lab : Storing and Querying BLOBs and Text Documents in SQL Server
  - Enabling and Using FILESTREAM Columns
  - Enabling and Using File Tables
  - Using a Full-Text Index
- SQL Server Concurrency
  - Concurrency and Transactions
  - Locking Internals
  - Lab : SQL Server Concurrency
  - Implement Snapshot Isolation
  - Implement Partition Level Locking
- Performance and Monitoring
  - Extended Events
  - Working with extended Events
  - Live Query Statistics
  - Optimize Database File Configuration
  - Metrics
  - Lab : Monitoring, Tracing, and Baselining

- Collecting and Analyzing Data Using Extended Events
- Implementing Baseline Methodology

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- Dr. Michael Marquardt, President of the World Institute for Action Learning, Professor at George Washington University

PALMDALE RECYCLED WATER AUTHORITY (PRWA)

MINUTES OF JUNE 17, 2019
REGULAR MEETING AGENDA NO. 49
PALMDALE RECYCLED WATER AUTHORITY (PRWA)
HELD AT CITY OF PALMDALE
CITY HALL COUNCIL CHAMBER
38300 SIERRA HIGHWAY, SUITE B
PALMDALE, CALIFORNIA
www.cityofpalmdale.org
www.palmdalewater.org.

1. CALL TO ORDER.

Vice Chair Dino called the meeting to order at 7:01 p.m.

2. PLEDGE OF ALLEGIANCE.

3. ROLL CALL: CHAIR JUAN CARRILLO, DIRECTORS VINCENT DINO, KATHY MAC LAREN, AUSTIN BISHOP AND HELEN VELADOR

Director Bettencourt served as alternate in place of Chair Carrillo who was not present,

PRESENT: Vice Chair Dino, Directors MacLaren, Bishop, Bettencourt, and Velador
ABSENT: Chair Carrillo

Motion: Move to excuse the absence of Chair Carrillo.
Moved by Director Bettencourt, seconded by Director MacLaren.

Vote: Motion Carried (5-0)
Yes: Vice Chair Dino, Directors MacLaren, Bishop, Bettencourt, and Velador

4. CONSENT CALENDAR:

4.1 Approve the Minutes from the previous meeting held on May 20, 2019 (7pm). (Staff Reference: Authority Secretary Smith)

Public Comments: None.

Motion: Move to approve Item 4.1
Moved by Director Velador, seconded by Director Bettencourt.

Vote: Motion Carried (5-0)
Yes: Vice Chair Dino, Directors MacLaren, Bishop, Bettencourt, and Velador

5. ACTION CALENDAR:

5.1 Discussion and possible action regarding information received from consultants. (Staff Reference: Executive Director LaMoreaux)

Assistant Executive Director Heffernan presented the staff report, and addressed each item and gave the Board an overview as follows:

1) In regards to developing a brand, logo, mission statement, etcetera for the Palmdale Recycled Water Authority (PRWA).

Assistant Executive Director Heffernan stated that once we receive bids we would bring back a proposal to the Board to enter into a contract.

2) In regards to putting together a Public Outreach campaign before Phase II construction.

There was Board discussion regarding a recycled water Public Outreach campaign and it was decided that this should be handled in-house.

3) In regards to re-establishing a Palmdale Recycled Water Authority (PRWA) website.

Assistant Executive Director Heffernan stated that he would like to get 4 or 5 versions of a logo for the Palmdale Recycled Water Authority and bring them back to the Board.

Public Comments: None.

Motion: Move forward with getting logo.
Moved by Director Bishop.
Motion failed due to lack of a second.

There was further Board discussion regarding the logo and website for the Palmdale Recycled Water Authority.

Motion: Amend motion to direct staff to move forward with looking at proposals for the Palmdale Recycled Water Authority logo and branding.

Moved by Director Bishop, seconded by Director MacLaren.

Vote: Motion Carried (5-0)
Yes: Vice Chair Dino, Directors MacLaren, Bishop, Bettencourt, and Velador

6. SPECIAL REPORT

6.1 Update and presentation on the Upper Amargosa Creek project. (Staff Reference: Executive Director LaMoreaux)

There was no staff report for this item.

Mike Shahbakhti, City of Palmdale Sr. Civil Engineer presented a PowerPoint presentation regarding the Amargosa Creek project.

Director Bettencourt stated that the slides regarding Amargosa Creek design should be on website or included in the City of Palmdale magazine.

7. NON-AGENDA ITEMS - PUBLIC COMMENTS:

Public Comments: None.

8. REQUESTS FOR NEW AGENDA ITEMS.

There were no requests for new agenda items.

9. INFORMATIONAL REPORT OF THE BOARD OF DIRECTORS, EXECUTIVE DIRECTOR, AND ASSISTANT EXECUTIVE DIRECTOR.

Director Bettencourt spoke about schools getting involved in recycled water contests as part of a public outreach campaign.

Director Bishop stated that he has been reading about the recycled water movement in community and worldwide.

Director Velador attended a community meeting at Oasis Park on June 11, 2019 regarding the Avenue S Environmental Enhancement and Urban Forestry project.

Authority Attorney Ditzhazy stated that the Palmdale Recycled Water Authority and City agreement has been completed and sent to Los Angeles County Sanitation District. He expects it back in a week or two. He is working on other agreements for temporary pump stations and overall allocations. Authority Attorney Ditzhazy also suggested the Authority put together a Press Release for Amargosa Creek.

10. ADJOURNMENT.

Vice Chair Dino adjourned the meeting at 8:00 p.m.

PASSED, APPROVED, and ADOPTED this 15th day of July 2019.

_____
Juan Carrillo
Chair

ATTEST:

_____
Rebecca J. Smith,
Secretary

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

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

DATE: August 21, 2019 **August 26, 2019**

TO: BOARD OF DIRECTORS **Board Meeting**

FROM: Mr. Dennis D. LaMoreaux, General Manager

RE: ***AGENDA ITEM NO. 8.2.a – AUGUST 2019 GENERAL MANAGER REPORT***

The following is the August 2019 report to the Board of activities through July 2019. It is organized to follow the District's six strategic initiatives and is intended to provide a general update on the month's activities. A summary of the initiatives is as follows:

Water Resource Reliability

Complete the 2018 phase of the Upper Armagosa Creek Recharge Project
Ensure Palmdale Recycled Water Authority (PRWA) to be fully operational by year 2020
Adopt new state-of-the-art water treatment technologies
Implement the Antelope Valley Groundwater Adjudication agreement
Complete the grade-control structure for the Littlerock Reservoir Sediment Removal Project
Continue the next phase towards the completion of Palmdale Regional Groundwater Recharge and Recovery Project
Identify and pursue opportunities to increase the reliability of water supply

Organizational Excellence

Offer competitive compensation and benefits package to promote employee retention
Focus Succession Planning Program on ensuring an overlap of training for key positions
Continue providing transparency to our ratepayers
Promote and support leadership training and professional development programs to enhance the District's customers' experience

Systems Efficiency

Implement 2016 Water System Master Plan
Develop a five-year Infrastructure Revitalization Plan to continue the reinvestment and preventative maintenance for aging infrastructure
Explore energy independence
Continue being the industry's leader on the use of Granular Activated Carbon (GAC)
Research and test new technologies to increase efficiencies
Improve safety and training for Directors, employees and customers
Develop a crisis communications plan

Financial Health and Stability

Pursue additional grant funding for all District projects
Adopt a sustainable and balanced rate structure to meet short and long-term needs
Create a five-year financial plan in conjunction with the 2019 Water Rate Plan
Maintain adequate reserve levels, high-level bond rating, and financial stability

Regional Leadership

Enhance relationships with Antelope Valley partnerships, including local water agencies, Antelope Valley State Water Contractors Association and the Palmdale Recycled Water Authority
Expand school water education programs
Engage elected officials in water-related issues
Continue offering career opportunities through the Internship Program
Provide opportunities for local businesses to contract with the District

Customer Care, Advocacy and Outreach

Increase Customer Care accessibility through communication and feedback to enhance customers' experience
Evaluate, develop, and market additional payment options
Be point of communication for customers' water-related public health concerns
Develop the District's Public Outreach Plan
Increase public awareness of the District's history and promote centennial anniversary

This report also includes charts that show the effects of the District's efforts in several areas. They are organized within each strategic initiative and include status of the State Water Resources Control Board's (SWRCB) long-term conservation orders, 20 x 2020 status, the District's total per capita water use trends, 2019 water production and customer use graph, mainline leaks, and the water loss trends for both 12- and 24-month running averages.

Water Resource Reliability

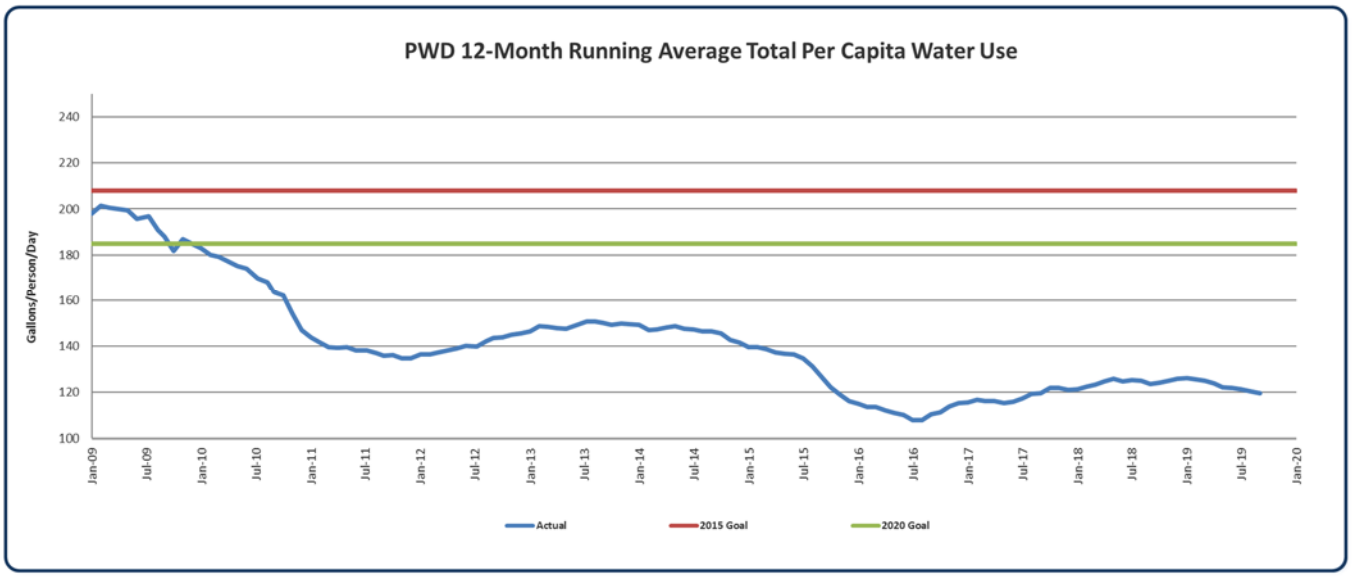
This initiative includes conservation efforts, water supply projects, and water planning. Recent highlights are as follows:

State Water Resources Control Board (SWRCB) Activities

- The 20 x 2020 per capita reduction goals passed by the legislature in 2009 with new long-term water budgeting requirements have now been replaced with new requirements and water agency water budgets. These follow through on the "Making Water Conservation

a California Way of Life" plan. The District expects to easily comply with the new requirements as they are based on the same philosophy as the District water budget rate structure.

The District's compliance with the former 20 x 2020 law is evident from the chart titled "PWD 12-Month Running Average Total Per Capita Water Use.":



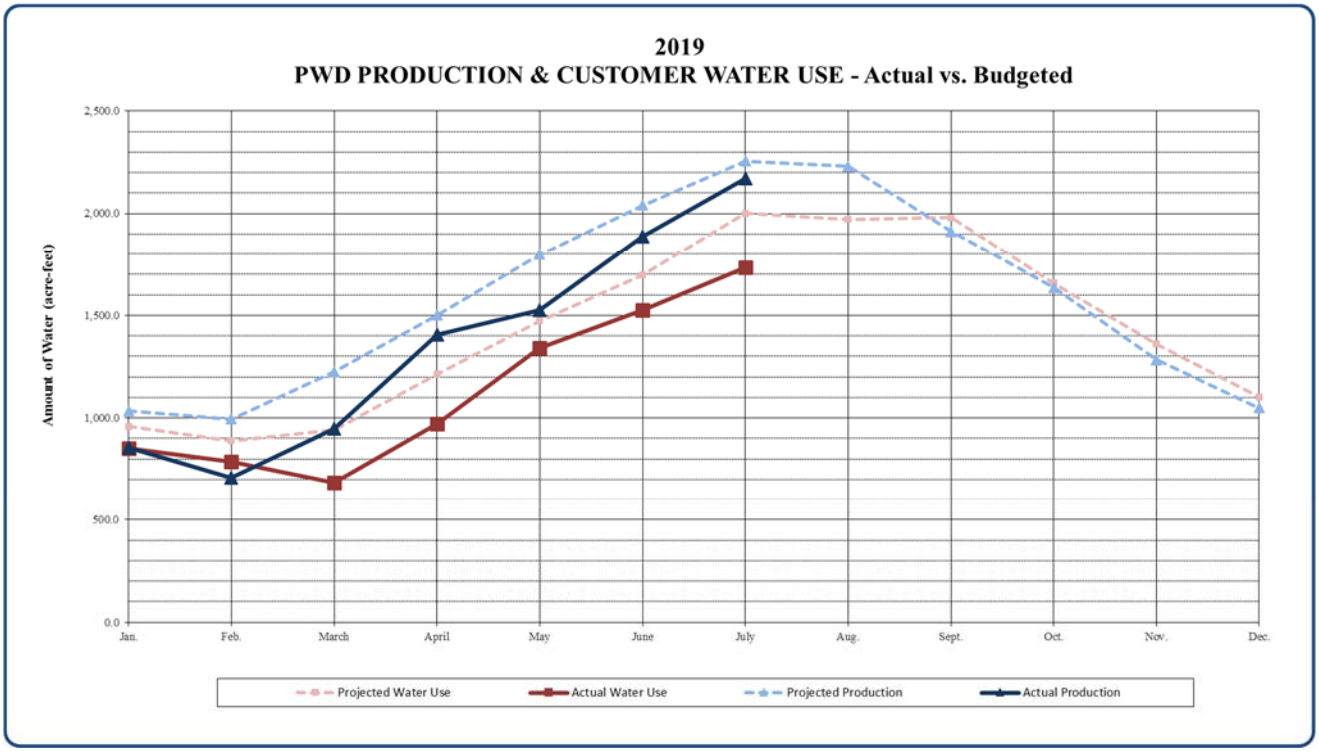
The District's customers have cut their water use by **48.1%** from the baseline number of 231 and met the 2020 Goal in early 2010. The current Total-GPCD is 120.

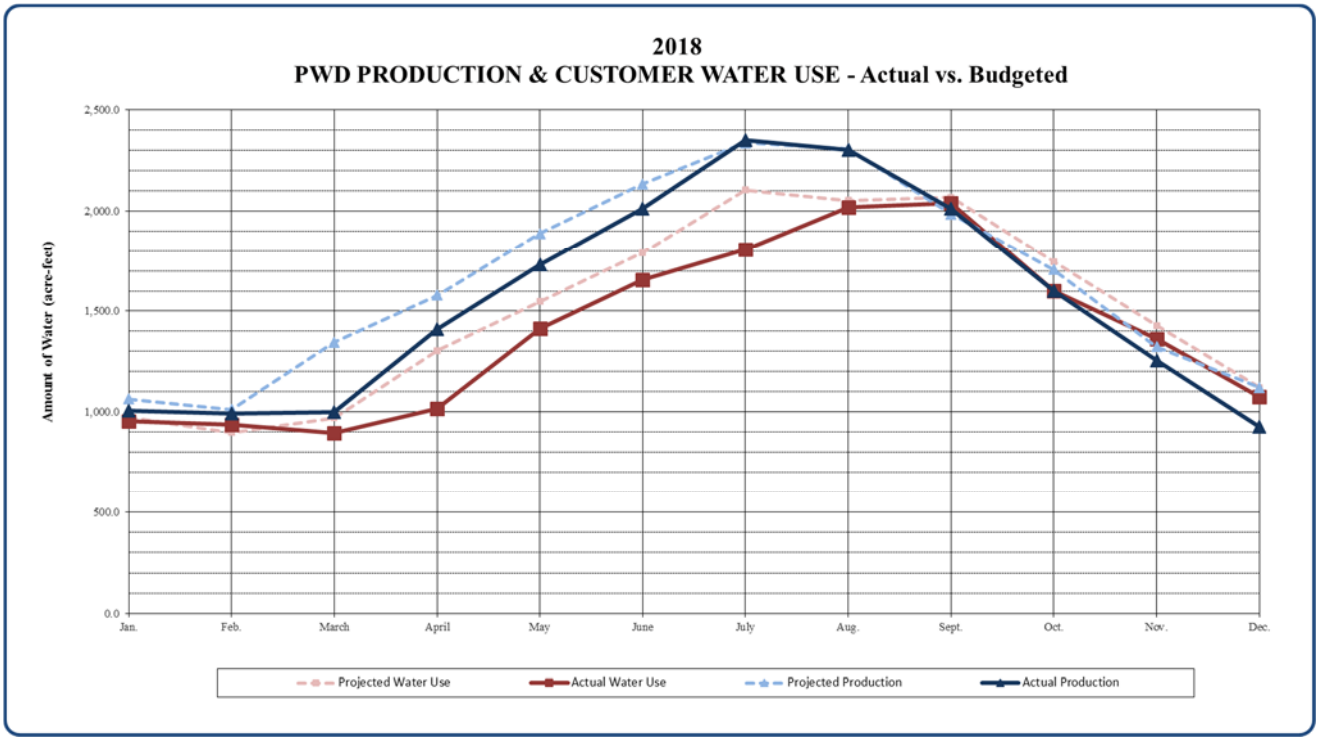
Water Supply Information

- The AV Adjudication is now in its fourth year, and the reduction to the native safe yield is in its second year. The District's native groundwater right is 2,769.63 AF. Other groundwater rights for 2018 were 1,452.27 AF of unused Federal Reserve Rights, 3,828.41 AF of Return Flow Rights, and 3,911.94 AF of Carryover Rights. These groundwater rights total 11,962.55 AF. The District used approximately 6,073 AF. This leaves a total **carryover amount of 5,904.19 AF for 2019**. The District's **2019 groundwater rights total 7,986.67 AF without the Carryover Rights**. A more detailed description of the District adjudicated groundwater production rights is provided below.

- The 2019 water resources plan is finalized. The precipitation index for the area contributing to the State Water Project (SWP) leveled off at 136% of average, a significantly wet year. The 2019 SWP allocation is 75% and provides 23,475 AF. The District will be using a higher amount of surface water than normal due to the SWP and Littlerock Reservoir supplies. SWP supplies beyond our customers' needs will be banked or exchanged to help provide water during dry years. The following graph shows actual

amounts through July 2019 and monthly projections for both production and consumption, based on the prior five years of actual monthly information, for the entire year. Water use is 14% less than anticipated so far this year due to the rainy weather and appears to be recovering. The 2018 chart is added in this report for comparison.





Groundwater Production Rights Summary

Director Wilson requested an overview of the District's adjudicated groundwater rights. A native safe yield of 82,300 acre-feet per year (AFY) was established by the Court for the Antelope Valley Area of Adjudication, and the adjudication Parties were divided into various classes to establish respective water rights among groundwater producers.

- The Production Right is the portion of the Native Safe Yield assigned to each Party. Production Rights for specific Parties are defined in the Judgment in Exhibit 3 (Non-Overlying Production Rights), Exhibit 4 (Overlying Production Rights), and in Paragraphs 5.1.3, 5.1.4, and 5.1.5 for the Small Pumper Class, Federal Reserved Water Rights, and State of California, respectively. **The District's Production Right is 2,769.63 AF/Year.**

- Unused Federal Reserved Water Rights are the portion of water rights, 7,600 AF/Y, left unused by the Federal government. This amount has been approximately 6,000 AF/Y and is divided amongst the Non-Overlying Producers (Public Water Suppliers). **The District's share of Unused Federal Reserve Water Right for 2019 is 1,418.99 AF.**

- Imported Water Return Flows represent water brought into the basin from outside of the watershed that provides a net increase in groundwater supply (i.e., does not include consumed or evaporated imported water). Return flows for agriculture were established in the Judgment at 34 percent of imported water use and at 39 percent for municipal and industrial uses. Each year's amount is determined based on an average of the five (5) prior years of imported water. **The District's typical Imported Water Return Flow Right is approximately 4,000 AF/Year, 3,798.05 for 2019.**

- Carry Over Water is the right to an unused portion of an annual Production Right or a right to Imported Water Return Flows in a year after the year in which the right was originally available. **The District is building Carry Over Rights for years when surface water supplies are low. The District's Carryover Right going into 2019 is 5,904.19.**

- Stored Water is water held in storage in the basin as a result of direct spreading or other methods for subsequent withdrawal and use pursuant to an agreement with the Watermaster. It does not include Imported Water Return Flows. **The District currently has approximately 1,500 AF stored in the Antelope Valley and is participating in projects (Upper Amargosa, Big Rock Creek, and Palmdale Regional Groundwater Recharge and Recovery Project) for more storage in the future.**

Other Items

- The Littlerock Reservoir Sediment Removal Project Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was fully approved in 2017. All required permits are in place, and a construction contract for the Grade Control Structure was awarded in July 2018 to ASI Construction, LLC (ASI) of Colorado Springs.

  ASI installed dewatering wells around the construction area and began pumping out water in early November. Dewatering, excavation, and constructing a water bypass continued through December and early January. A series of storms during the week of January 14th overwhelmed the partially completed water bypass and flooded the construction site.

  ASI returned to the site in mid-July and began working. The first activities were re-establishing the dewatering network so excavation can be done, rebuilding the upstream berm to protect the construction site, and reinstalling the bypass pipe to allow storm water to go around the site. The tentative plan is to place RCC in mid to late September.

  A citizen's committee, Friends of Littlerock Dam (FOLD), was formed in the Littlerock, Pearblossom, and Juniper Hills area to find a way to reopen the Littlerock Reservoir Recreation area. They worked with the District and the USFS on this issue. The USFS has issued an eviction notice to the former operator living at the Reservoir. They also plan to issue a request for proposals for a recreational operator. This process is expected to take a year.

- The public review of the Draft California Environmental Quality Act (CEQA) EIR for the Palmdale Regional Groundwater Recharge and Recovery Project is complete. The Final EIR was certified by the Board on July 13, 2016, and the Notice of Determination was filed on July 14, 2016. The comments from the SWRCB Recycled Water Division on the Title 22 Engineering Report were addressed and returned for further review. Another set of comments was received in 2018 and information is being collected to address them.

  The soil column tests were completed and reported on late last year. The District reviewed additional geotechnical work done to verify the proposed location is suitable. The result is a recommendation to drill an additional well to better understand the aquifer in the area.

- The Upper Amargosa Creek Recharge Project is now under construction. One contract is for the California Aqueduct turnout and transmission water main. The other is for the recharge basins. They are higher than original estimates and will result in a request from the City of Palmdale to the District, LA County Waterworks, and AVEK for additional

funding. A successful groundbreaking was held on November 15, 2018. Construction is expected to be completed late this year.

- California Water Fix: There have been recent regulatory approvals moving this project forward. However, the current Governor has only stated support for one of the proposed tunnels. The State Water Contractors and the Department of Water Resources are continuing discussions about the Project's financing and operations. These discussions will result in a clearer picture of the effect on individual contractors. Staff is directly involved in these discussions and will be able to update the Board in the future.

Organizational Excellence

This initiative includes efforts to restructure staff duties and activities to more efficiently provide service to our customers. Recent highlights are as follows:

- Workshops were held to discuss the District's direction and update the Strategic Plan for 2019. This process reset the District's standing committees to align better with the Strategic Plan and give them clear direction.

- The District and other members of the Public Water Agencies Group (PWAG) have hired and share the services of an Emergency Preparedness Coordinator. This has already resulted in a successful training held at the District office. More activities, including drills and a review of the Emergency Response Plan, are planned for 2019. This approach also kept the District in a good position when responding to the July 4 and 5 earthquakes near Ridgecrest.

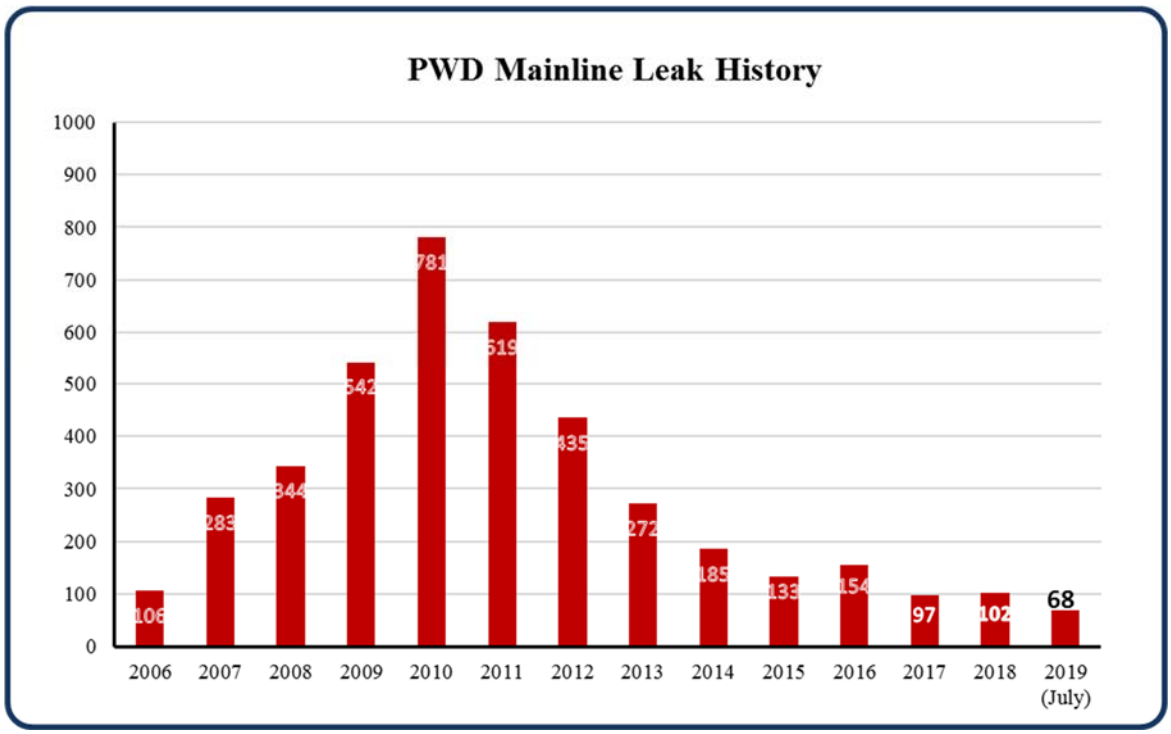
- The Board of Directors and staff completed a cultural survey in 2018. The results show continuing overall improvements in the District's operations. The Mathis Group will assist the Board and staff in following up on the survey and improving the District's operations. The staff Communications Committee has started working with the overall staff to reinforce strong areas from the Survey and help improve the other areas.

Systems Efficiency

This initiative largely focuses on the state of the District's infrastructure. Recent highlights are as follows:

- The effects of the District's past efforts in replacing failing water mains and meters can be seen in the reduced number of mainline leaks. This is illustrated in the chart titled

"Mainline Leak History." The mainline leaks through July 2019 are 68, and there were 44 service line leaks. This sharp increase is due to water main replacement work near old mains.

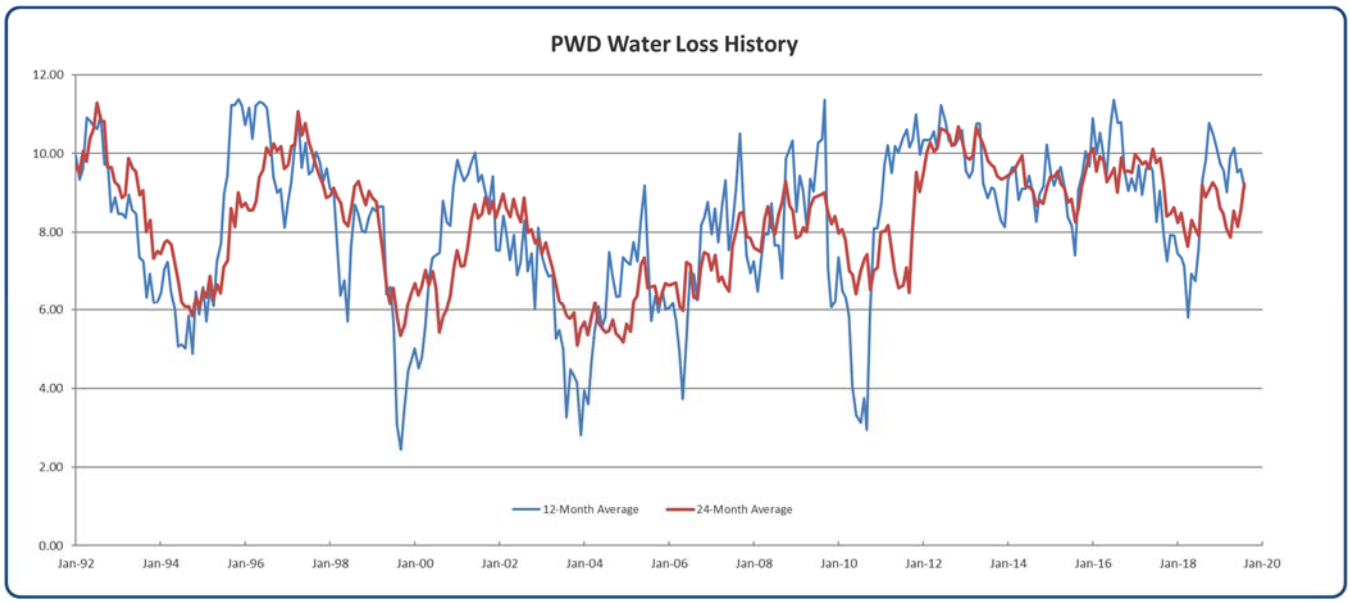


- The 2019 Budget includes replacing approximately 2,800 meters. Staff is doing this replacement project and will evaluate how best to do it in future years.

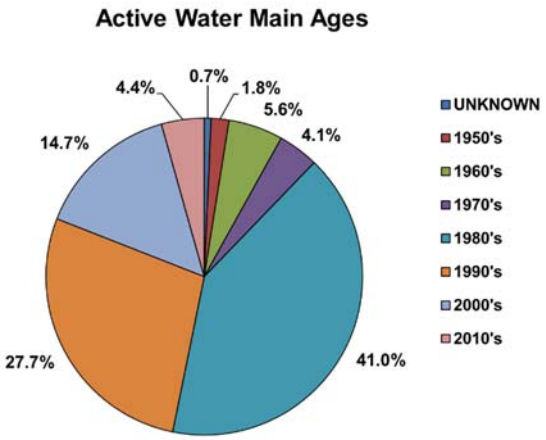
- Facilities staff is focusing on maintenance activities to incorporate pressure reducing valves, air-vacuum release valves, and other facilities as their efforts can continue to be more preventative due to a lower number of emergency repairs.

- The District's replacement work for 2019 includes Avenue V-5 west of 47th Street East, and East Avenue P-8 from 20th Street East to 25th Street East. Camares Drive south of Barrel Springs Road is now completed.

- The positive effect of both water main and water meter replacement programs is shown on the chart titled "PWD Water Loss History." The running average for water losses is now under 10%.



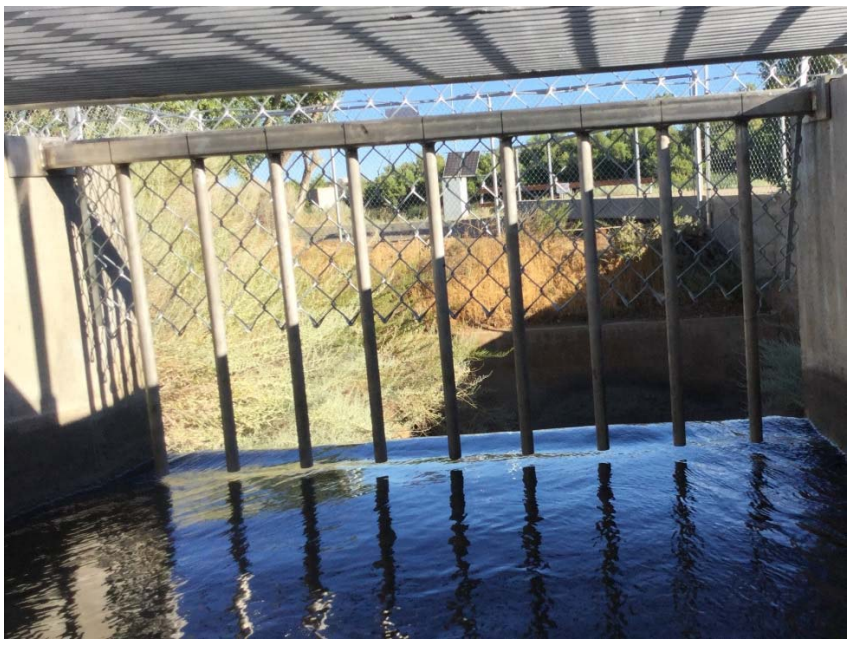
- Director Alvarado recently asked for a summary of the District's water main ages. This information has been included as additional information in annual budgets in the past in a tabular form. Staff used the information to create the following graph. This shows that 2.6%, 10.33 miles, of the water distribution system is nearly seventy years old or is of unknown age.



Summary of Data from Auxilary DB:
(MLpipeLab.mdb/MainLinePipe2019)

Decade Installed	Total Pipe Length	Percent of Total Pipe
Unknown	15,104	0.7%
1950's	39,233	1.8%
1960's	120,177	5.6%
1970's	89,234	4.1%
1980's	884,224	41.0%
1990's	598,566	27.7%
2000's	316,952	14.7%
2010's	94,247	4.4%
TOTAL	2,157,737	

- A number of significant repairs were made to Palmdale Ditch earlier this year to prepare for moving water to Palmdale Lake. These included brush and tree removal, crack sealing, concrete panel replacements, and the use of clay blankets to seal a porous section of the Ditch. Another area of concern was the fencing where the Ditch drops to an inlet into Palmdale Lake. It was in bad condition, and a large tree also made securing the area difficult. The tree was removed and new fencing installed to secure the area and help prevent anyone from being drawn into a culvert by the flow in the Palmdale Ditch. The following pictures show the finished work.




DANGER


DANGER

Financial Health and Stability

- Engineering staff has successfully applied for planning grant funding for the Palmdale Regional Groundwater Recharge and Recovery Project and for the Phase II pipeline for the Palmdale Recycled Water Authority. Application packages for further funding have been determined to be complete by the State. A comment letter was also submitted to raise the priority of both projects in the State's funding plan for 2017/2018.

  The State is satisfied with resolutions from the City and the District related to the PRWA Phase II funding application for compliance with their repayment requirements. An amendment to the JPA was also completed to tie these into PRWA. The outstanding financing issue is the State's approach to determining the District's Debt Coverage Ratio. They continue to include non-operating expenses into the calculation. Staff and our financial advisor are still working on this issue. PRWA is also trying to obtain completed booster station plans being held by Los Angeles County Waterworks District 40 to complete the Phase II design plans and financing.

  Staff is also working with the California Infrastructure Bank, Holman Capital, and considering a public bond issue for this project. Early discussions show this as a strong possibility to fund the work.

- A new water rate study conducted in accordance with Proposition 218 is started for 2019. Three proposals were received in March and a recommendation made to the Board to award a contract to RDN. The first staff meetings with RDN were held in April. Staff is providing all the needed information to project revenue needs over the next five years.

  The Board authorized obtaining better information for irrigated property that will help make the District's water rate structure more accurate. RDN has completed a financial forecast for the next five years with assistance from staff. A presentation of RDN's recommendation is scheduled for August 12th. A program of public outreach will follow and a public hearing to consider water rates for the next five years is anticipated in October.

- Engineering/Grant Manager Riley has worked with the Bureau of Reclamation for the acceptance of a Feasibility Report for the Palmdale Regional Groundwater Recharge and Recovery Project and having it eligible for funding. The 2017 competition effort did not result in an award of funds from the Bureau. However, lessons from this submittal were used in the current funding competition.

- Water-Wise Landscape Conversion Program (Cash-for-Grass Program): The District received a $75,000 Grant from the Bureau of Reclamation in 2017 to assist in funding the

Program. The District has fully used the grant funds. The Board approved an application for additional funds in February.

Regional Leadership

This initiative includes efforts to involve the community, be involved in regional activities, and be a resource for other agencies in the area. Recent highlights are as follows:

- Activities of the Palmdale Recycled Water Authority (PRWA) and Antelope Valley State Water Contractors Association have continued.

- The District staff continues to share the administration of the Antelope Valley Watermaster Board (AVWB) with AVEK and related meetings.

- District staff is active in the local chambers, GAVEA, and area human resources and public information groups.

- The first "PWD Water Ambassador Academy" was conducted on September 19 and 26, October 3 and a tour/graduation on October 6, 2018. The response from them was overwhelmingly positive. The next Academy was successfully completed in March. A high school version of the Academy was successfully held as a one-day event on May 16, 2019.

- The District has joined with other water districts to express concerns with the proposed Statewide water tax over the last two years. The State Senate also refused the water tax approach. Instead, the State has created a $130M fund using Greenhouse Gas Funds.

Customer Care and Advocacy

This initiative includes efforts to better serve our customers. Recent highlights are as follows:

- The ability to make payments at 7-Eleven and Family Dollar Store is also continuing to grow.

- Customer Care office and field staff are crosstraining to better understand the other's interaction with customers and to improve communication.

- Customers are continuing to take advantage of the District's electronic payment options. 59% of all payments made by customers were done electronically in 2018.