

The background of the slide is a light blue gradient. It is decorated with numerous water droplets of various sizes, some of which are semi-transparent and show reflections. The droplets are scattered across the slide, with a higher concentration in the top-left and bottom-right corners.

# Pumping Trough Pipeline (PTP)

## Users Meeting

May 14, 2019

## AGENDA

### PUMPING TROUGH PIPELINE USERS' MEETING

Tuesday, May 14, 2019

9:00 a.m.

Camarillo Library Community Room, 4101 Las Posas Road, Camarillo

1. **Greeting from United Water General Manager (5 minutes)**  
Mauricio E. Guardado, Jr.
2. **Pumping Trough Pipeline Operations (10 minutes)**  
Brian Collins, Operations and Maintenance Manager
  - 2.1. **Public Safety Power Shutdown (PSPS)**
  - 2.2. **Generator Purchase Proposal**
  - 2.3. **Surface Water Deliveries**
3. **Recycled Water (25 Minutes)**  
Robert Richardson, Associate Engineer  
Jeff Densmore, District Engineer, SWRCB DDW
  - 3.1. **Plans for Conversion**
  - 3.2. **Cross Connection Compliance**
  - 3.3. **Proposed Recycled Water Conveyance**
4. **Turnout Metering System Improvement Project (10 Minutes)**  
Robert Richardson, Associate Engineer
  - 4.1. **PTP Meter Easement**
5. **Proposed Budget Status (10 Minutes)**  
Joseph Jereb, Chief Financial Officer
  - 5.1. **Fiscal Year 2019-20 Preliminary Budget**
6. **Questions**



# WELCOME

UWCD General Manager

Mauricio Guardado Jr.



# SATICOY













# PUMPING TROUGH PIPELINE OPERATIONS

## SYSTEM STATUS

Brian Collins  
Operations & Maintenance Manager  
UWCD

# PTP Well Flows & Static Levels

	April 2017	Apr-18	Apr-19
	Flow/Static Level	Flow/Static Level	Flow/Static Level
PTP #1	3.9cfs / 178'	*3.4cfs / 156'	4.5cfs / 121'
PTP #2	3.1cfs / 192'	3.0cfs / 165'	3.0cfs / 156'
PTP #3	4.7cfs / 156'	*3.7cfs / 167'	3.7cfs / 154'
PTP #4	5.9cfs / 119'	5.6cfs / 168'	*4.0cfs / 130'
PTP #5	4.6cfs / 124'	5.5cfs / 155'	5.5cfs / 122'



# PTP Wells and Reservoir

Friday, May 10, 2019 2:57:46 PM

SYSTEM USER

UWCDSCADA\BRIANC

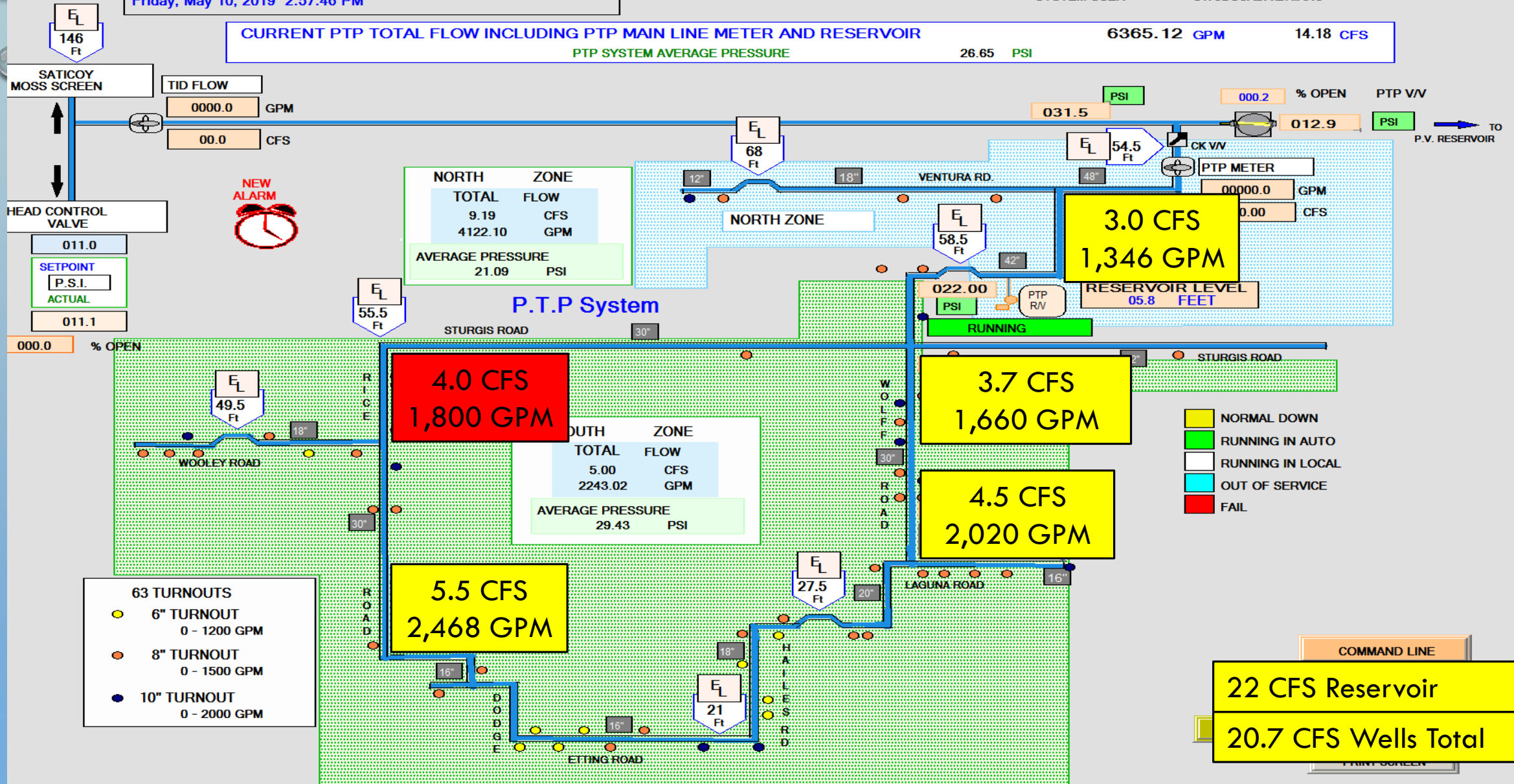
CURRENT PTP TOTAL FLOW INCLUDING PTP MAIN LINE METER AND RESERVOIR

6365.12 GPM

14.18 CFS

PTP SYSTEM AVERAGE PRESSURE

26.65 PSI



# PTP Well #4

- Preliminary analysis indicates bearing issue
- Reduced production
- Harsh water Chemistry
- Preliminary estimate \$74,000- Using PTP emergency funds included in 18-19 budget for well repairs
- No current SCE incentives available



# PTP System Water Quality



February 5, 2019  
**United Water Conservation Dist**  
 Attn: Mike Ellis  
 106 N. 3th St.  
 Santa Paula, CA 93060  
 Description : 01N21W06J05S:PTP Well #3  
 Project : Pumping Through Pipeline

Lab ID : SP 1901132-001  
 Customer ID : 2000200

Sampled On : January 24, 2019  
 Sampled By : Ruben Sanchez  
 Received On : January 24, 2019  
 Matrix : Ground Water

## General Irrigation Suitability Analysis

Test Description	Result				Graphical Results Presentation				
	mg/L	Meq/L	% Meq	Lbs/AF	Good	Possible Problem	Moderate Problem	Increasing Problem	Severe Problem
<b>Cations</b>									
Calcium	55	2.7	30	150	**				
Magnesium	24	2	21	65	**				
Potassium	4	0.1	1	11	**				
Sodium	102	4.4	48	280					
<b>Anions</b>									
Carbonate	< 10	0	0	0					
Bicarbonate	280	4.6	47	760	**				
Sulfate	184	3.8	39	500	**				
Chloride	45	1.3	13	120					
Nitrate	< 0.4	0	0	0					
Nitrate Nitrogen	< 0.1	0	0	0					
Fluoride	0.3	0.016	0	0.3					
<b>Minor Elements</b>									
Boron	0.30			0.82					
Copper	< 0.01			0					
Iron	0.40			1.1					
Manganese	0.020			0.054					
Zinc	0.040			0.11					
TDS by Summation	694			1900					
<b>Other</b>									
pH	7.4			units					
E.C.	0.919			dS/m					
SAR	2.9								
<b>Crop Suitability</b>									
No Amendments	Good								
With Amendments	Good								
<b>Amendments</b>									
Gypsum Requirement	0.5			Tons/AF					
Sulfuric Acid (98%)	16			oz/1000 Gal					
Leaching Requirement	7			%					

Good Problem

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

\*\* Used in various calculations: mg/L = Milligrams Per Liter (ppm), meq/L = Milliequivalents Per Liter



Corporate Office & Laboratory  
 853 Corporate Street  
 Santa Paula, CA 93060  
 TEL: (805) 932-2000  
 FAX: (805) 932-4172 FAX: (805) 932-3803  
 CA ELAP Certificate No. 1573

Office B. Laboratory  
 2800 Stagecoach Road  
 Studio City, CA 91615  
 TEL: (818) 942-0122  
 FAX: (818) 942-0123  
 CA ELAP Certificate No. 1562

Office B. Laboratory  
 563 E. Lindero Ave.  
 Chico, CA 95926  
 TEL: (530) 43-5315  
 FAX: (530) 43-5307  
 CA ELAP Certificate No. 2670

Office B. Laboratory  
 3442 Empress Drive, Suite D  
 San Luis Obispo, CA 93401  
 TEL: (805) 33-2940  
 FAX: (805) 783-2912  
 CA ELAP Certificate No. 2715

Office B. Laboratory  
 5415 W. Oyster Avenue  
 Visalia, CA 93291  
 TEL: (559) 734-9413  
 FAX: (559) 734-9435  
 CA ELAP Certificate No. 2810

February 5, 2019

Lab ID : SP 1901132-001

Customer ID : 2000200

**United Water Conservation Dist**

Description : 01N21W06J05S:PTP Well #3

## Micro Irrigation System Plugging Hazard

Test Description	Result		Graphical Results Presentation		
			Slight	Moderate	Severe
<b>Chemical</b>					
Manganese	0.02	mg/L			
Iron	0.4	mg/L			
TDS by Summation	694	mg/L			
<b>No Amendments</b>					
pH	7.4	units			
Alkalinity (As CaCO3)	230	mg/L			
Total Hardness	236	mg/L			
<b>With Amendments</b>					
Alkalinity (As CaCO3)	46	mg/L			
Total Hardness	46	mg/L			
pH	5.4 - 6.7	units			

Good Problem

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

## Water Amendments Application Notes:

The Amendments recommended on the previous pages include:

### Gypsum:

This should be applied at least once a year to the irrigated soil surface area. Gypsum can also be applied in smaller quantities in the irrigation water. Apply the smaller (bracketed) amount of gypsum when also applying the recommended amount of Sulfuric Acid and the larger amount when applying only Gypsum.

### Sulfuric Acid:

These products should be applied as needed to prevent emitter plugging in micro irrigation systems and/or as a soil amendment to adjust soil pH to improve nutrient availability and to facilitate leaching of salts. Please exercise caution when using this material as excesses may be harmful to the system and/or the plants being irrigated. The reported Acid requirement is intended to remove approximately 80 % of the alkalinity. The final pH should range from 5.4 to 6.7. We recommend a field pH determination to confirm that the pH you designate is being achieved. This application is based upon the use of a 98% Sulfuric Acid product. The application of Urea Sulfuric Acid is based upon the use of a product that contains 15% Urea (1.89 lbs Nitrogen), 49% Sulfuric Acid and has a specific gravity of 1.52 at 68 °F. Guidelines for the above interpretations are sourced from USDA & U.C. Cooperative Extension Service publications.

Please contact us if you have any questions.

SB1: EHB

FRUIT GROWERS LABORATORY, INC.

*Scott Bucy*

Scott Bucy, Director of Ag. Services

# Energy Savings & Project Costs

		Energy Savings		Project Cost Data				Financial Payback	
Energy Efficiency Measure	Motor HP	Annual Energy Savings (kWh/year)	Peak Demand Savings (kW)	Gross Measure Cost	Utility Incentive	Net Measure Cost	Cost Reduction (%)	Annual Energy Cost Savings	Simple Payback Period (years)
OH WELL #2A Overhaul	100	296,587	54.01	\$91,617	\$31,829	\$59,788	35%	\$38,242	1.6
PTP WELL NO. 5 Overhaul	300	134,521	2.39	\$101,723	\$11,120	\$90,603	11%	\$17,345	5.2
OH WELL #16 Overhaul	100	32,070	15.09	\$44,487	\$4,829	\$39,658	11%	\$4,135	9.6
PTP WELL NO. 2 Overhaul	250	114,419	19.82	\$82,388	\$12,127	\$70,261	15%	\$14,753	4.8
PTP WELL NO. 3 Overhaul	250	127,196	19.05	\$99,369	\$13,033	\$86,336	13%	\$16,401	5.3
OH Well 14 VFD Add-on	500	134,355	13.44	\$62,639	\$12,764	\$49,875	20%	\$17,929	2.8
OH-PTP Pump Sequencing	Various	1,715,509	205.9	\$145,701	\$72,850	\$72,851	50%	\$196,940	0.4
<b>Totals</b>		<b>2,554,657</b>	<b>329.7</b>	<b>627,924</b>	<b>\$158,552</b>	<b>469,372</b>	<b>25%</b>	<b>\$305,745</b>	<b>1.5</b>

2.6M kWh/year energy savings = **26% reduction** in annual energy costs



# SCE PSPS EMERGENCY GENERATOR RELIABILITY

## **PRACTICE OF LAST RESORT: PUBLIC SAFETY POWER SHUTOFF**

---

In alignment with its operational safety practices, SCE may proactively shut off power in high fire risk areas when extreme fire conditions present a clear and imminent danger to public safety

**California Public Utilities Commission**

Fire Threat Tear 2- Elevated

Fire Threat Tear 3- Extreme

UWCD Treated Groundwater (potable)

Surface/ Groundwater (non-potable)

UWCD Boundary

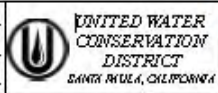
0 2.5 5 10 Miles

**UNITED WATER CONSERVATION DISTRICT**  
SANTA ANITA, CALIFORNIA

**CALIFORNIA PUBLIC UTILITIES COMMISSION**  
**FIRE THREAT MAP**

NO.	DATE	REVISION

D+38C7-D-87	<u>E. A. L.</u>
D9A4YH 87	<u>E. A. L.</u>
CJH C87-D-87	<u>_____</u>

CALIFORNIA PUBLIC UTILITIES COMMISSION  
FIRE THREAT MAP



# SCE Public Safety Power Shutoff (PSPS)



## High Winds + Low Humidity + Dry Fuels



**15 to  
40  
MPH**

Red Flag Warnings (RFW) indicate that the National Weather Service has forecasted winds in excess of 15 mph and relative humidity less than 25%, signaling conditions especially dangerous for wildfire growth. After a RFW has been issued for a high fire risk area, SCE restricts certain types of field work and requires a patrol of affected lines before they are reenergized following a fault on the system.



**40+  
MPH**

SCE will typically deploy crews to monitor field conditions when winds are forecasted to exceed 40 mph, validating our weather data and confirming conditions that may present an imminent danger to public safety. Generally, wind speeds in excess of 40 mph, coupled with low humidity, dry fuels, and dangerous field conditions (e.g. tree branches breaking/falling near power lines), may trigger the decision to shut off power to affected areas.

NOTE: These are general guidelines and are subject to change based on conditions unique to each event



## SCE Public Safety Power Shutoff (PSPS)

# How often can we expect PSPS events and how long will the outages last?



**2-10 PSPS  
shutoffs per  
year predicted**



**Outages  
predicted to  
last between  
half a day to a  
few days**

- Predictions based on historical weather data and past PSPS events. Actual frequency and duration depends on a number of factors which cannot be forecasted with certainty
- Event frequency and duration predictions across all of SCE's high fire risk areas
- Scope/impact of extreme fire conditions and time to conduct safety checks of our equipment following these conditions will affect the duration of these outages.

# SCE Public Safety Power Shutoff (PSPS)

## PUBLIC SAFETY POWER SHUTOFF

### Last resort public safety measure to mitigate wildfire risk

#### 4-7 DAYS AHEAD



- When forecasts indicate extreme weather, SCE will begin predictive modeling to assess potential impact

#### 3 DAYS AHEAD



- SCE monitors fire weather watch alerts from the National Weather Service (NWS) and continues to refine predictive models

#### 2 DAYS AHEAD



- Extreme fire weather conditions forecasted and NWS Red Flag Warning issued
- Coordinate with local gov't and agencies (e.g. emergency responders)
- Initiate customer notifications on possible power shutoff

#### 1 DAY AHEAD



- Extreme fire weather conditions imminent; continued modeling and more accurate forecasts determine affected areas
- Continue to coordinate and communicate with local government, agencies and customers of possible PSPS

#### POWER SHUTOFF



- Extreme fire weather and dangerous conditions validated by field resources
- Notify local government, agencies and customers of power shutoff

#### POWER RESTORATION



- Extreme fire weather subsides to safe levels and conditions validated by field resources
- Inspections and patrols of equipment begin, then power is restored to affected communities
- Agencies and customers notified of power restoration

#### PLANNING AND MONITORING

#### OUTAGE

Note: Actual onset of weather conditions and other circumstances beyond our control may impact coordination and notification efforts



## Freeman Diversion Generator- 2 Day Fuel Tank





**PSPS Preliminary Estimates for diesel  
generator installation**

Site	Fund			
PTP 1	\$132,000.00	470		
PTP 2	\$132,000.00	470		
PTP 3	\$132,000.00	470	<b>PTP System</b>	<b>\$903,000</b>
PTP 4	\$158,000.00	470		
PTP 5	\$154,000.00	470		
PTP Reservoir	\$131,000.00	470		
Design/permits	\$64,000.00	470		

**Hazard Mitigation Grant Notice of Interest (NOI) Submitted**

**Subject to APCD Ventura County  
approval (No emissions controls)**

Floc Building	\$62,000.00	420
SFD Shop	\$73,000.00	50
SP Tower	\$45,000.00	50
Lake Piru WTP	\$80,000.00	20
OH Wellfield	\$899,000.00	450

# Surface Water



# SANTA FELICIA DAM





Lake Piru			
	SFD Elevation	Storage Aft.	% full
10/1/2018	971.95	12,255	14.95%
11/1/2018	970.63	11,676	14.24%
12/1/2018	969.77	11,308	13.79%
1/1/2019	970.82	11,758	14.34%
2/1/2019	983.44	17,891	21.82%
3/1/2019	1013.72	39,270	47.90%
4/1/2019	1039.81	64,486	78.65%
5/1/2019	1041.5	66,337	80.91%

**Elevation increase (feet)**

69.55

**Storage increase Lake Piru (Aft)**

54,082

**Freeman Diversion**

	Aft diverted
Oct-18	0
Nov-18	25
Dec-18	630
Jan-19	3,325
Feb-19	6,845
Mar-19	5,861
Apr-19	11

**Total Aft Diversions at Freeman**

16,697 AFT

**Total Storage Aft - water year 18-19 by UWCD through 5/1/19**

70,779 AFT

# Rice Avenue Grade Separation Project and its Impact on PTP System

Maryam Bral  
Chief Engineer

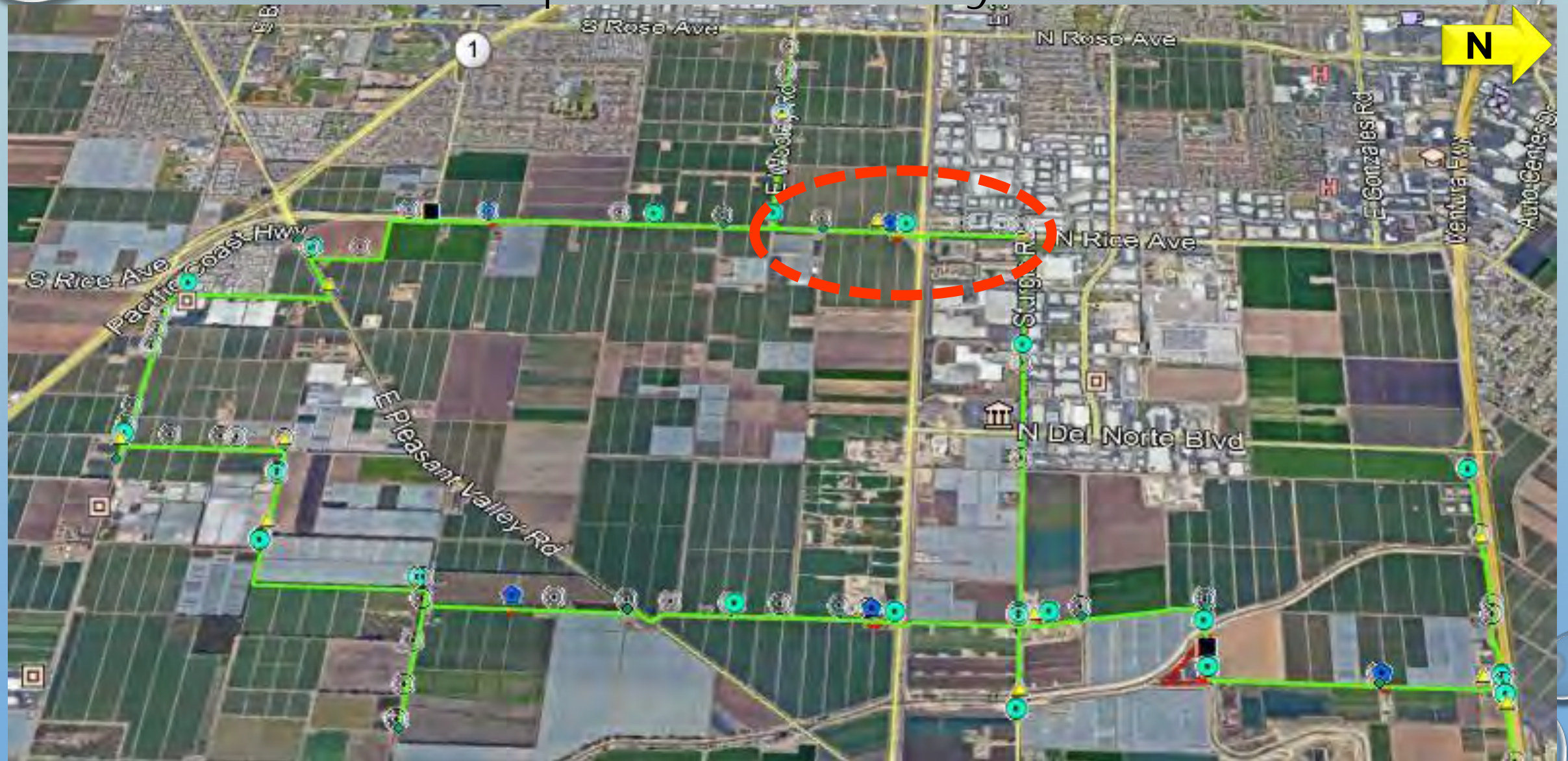


# Rice Avenue Grade Separation Project

- ☐ City of Oxnard is designing a grade separation at Rice Avenue at the 5th Street (SR 34) and the Union Pacific Railroad tracks.
- ☐ Project addresses a public safety issue as a result of accidents and fatalities at the rail crossing in recent years.
- ☐ United is in support of the Project.



# Impact on PTP System









# PTP WELL NO. 4





# Rice Avenue Grade Separation Project

- ☐ United has been in discussions with the City, its consultants, the County and the local legislators since 2015.
- ☐ United hired Kennedy Jenks in 2018 to evaluate relocation alternatives and relocation costs.
- ☐ PTP system is a public utility and relocation costs should be included in the Project with no financial burden on the PTP Users.



# RECYCLED WATER

## PLANS FOR CONVERSION

Robert Richardson  
Associate Engineer  
UWCD

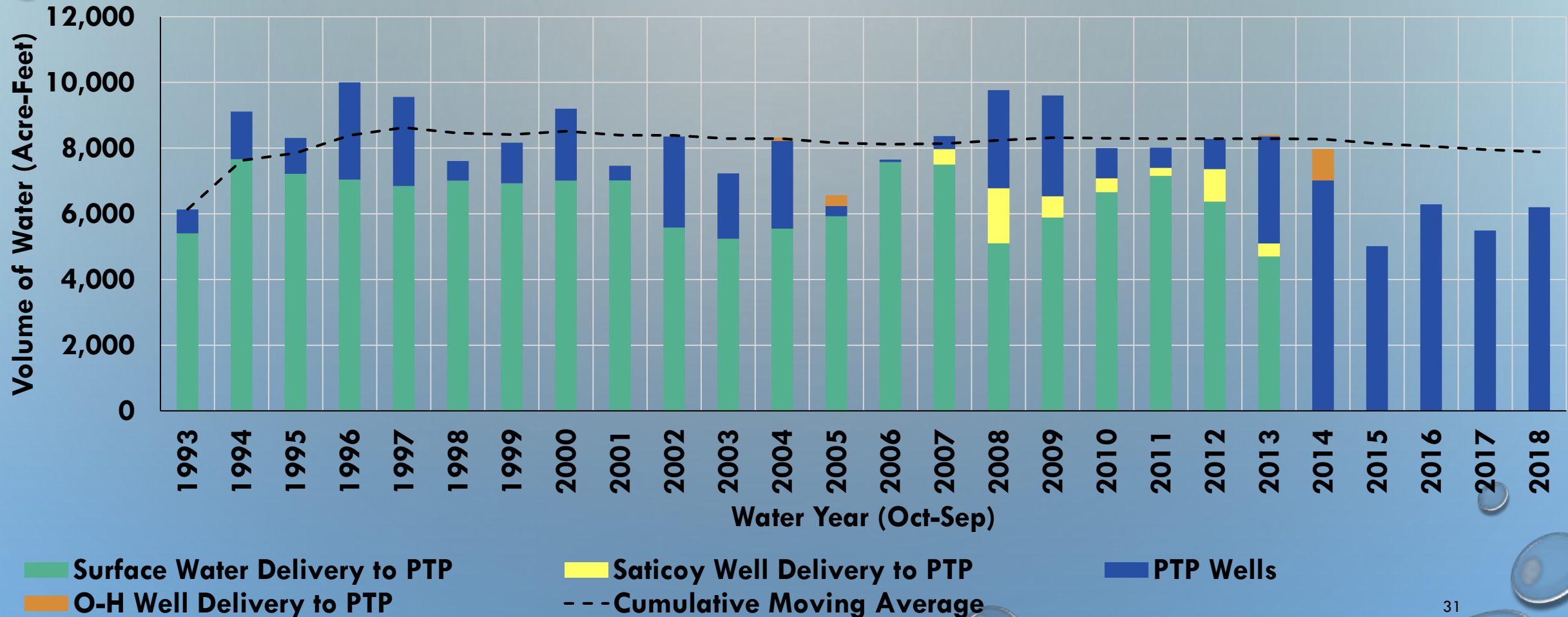


## **3.1 – Plans for Conversion**



# Why Pursue Recycled Water?

## Pumping Trough Pipeline System Water Supply Sources (1993 to 2018)





# Why Pursue Recycled Water?

**Table 1 – Water Quality Data of Select Parameters for Various PTP System Water Sources**

Parameter	Unit	Surface Water <sup>(1)</sup> (1991-2016)	Saticoy Wells (2003-2013)	PTP Wells (2010-2016)	O-H Wells <sup>(2)</sup> (2003-2016)	Proposed AWPf Permeate (Q4 2016)
Total Dissolved Solids (TDS)	mg/L	699 to 1,480 <b>1,134 (avg)</b>	713 to 2,040 <b>1,082 (avg)</b>	645 to 1,020 <b>879 (avg)</b>	928 to 1,150 <b>1,031 (avg)</b>	<b>65</b>
Conductivity	µS/cm	864 to 1,850 <b>1,419 (avg)</b>	921 to 2,490 <b>1,364 (avg)</b>	930 to 1,330 <b>1,164 (avg)</b>	1,190 to 1,450 <b>1,307 (avg)</b>	<b>130</b>
pH	--	7.6 to 8.8 <b>8.2 (avg)</b>	7.4 to 7.8 <b>7.6 (avg)</b>	4.7 to 8.0 <b>7.5 (avg)</b>	6.2 to 8.3 <b>7.7 (avg)</b>	<b>7.7</b>
Calcium	mg/L	93 to 190 <b>139 (avg)</b>	91 to 258 <b>142 (avg)</b>	43 to 125 <b>93 (avg)</b>	117 to 161 <b>135 (avg)</b>	<b>6.2</b>
Magnesium	mg/L	29 to 86 <b>53 (avg)</b>	33 to 92 <b>51 (avg)</b>	14 to 42 <b>31 (avg)</b>	35 to 41 <b>38 (avg)</b>	<b>0.1</b>
Potassium	mg/L	2 to 10 <b>5.2 (avg)</b>	3 to 8 <b>4.6 (avg)</b>	5 to 9 <b>6.3 (avg)</b>	3 to 6 <b>4.3 (avg)</b>	<b>1.1</b>
Bicarbonate	mg/L	123 to 350 <b>243 (avg)</b>	200 to 430 <b>260 (avg)</b>	160 to 310 <b>255 (avg)</b>	160 to 280 <b>252 (avg)</b>	<b>40</b>
Sulfate	mg/L	264 to 757 <b>493 (avg)</b>	270 to 920 <b>462 (avg)</b>	163 to 450 <b>337 (avg)</b>	301 to 510 <b>444 (avg)</b>	<b>2.7</b>
Chloride	mg/L	22 to 102 <b>61 (avg)</b>	27 to 120 <b>60 (avg)</b>	36 to 69 <b>45 (avg)</b>	40 to 56 <b>47 (avg)</b>	<b>19</b>
Nitrate as NO3	mg/L	< 0.4 to 13 <b>5.3 (avg)</b>	< 0.4 to 12 <b>5.9 (avg)</b>	<b>&lt; 0.4</b>	< 0.4 to 12 <b>2.3 (avg)</b>	<b>1.9</b>
Boron	mg/L	0.3 to 1.0 <b>0.7 (avg)</b>	0.5 to 0.9 <b>0.6 (avg)</b>	0.2 to 0.6 <b>0.4 (avg)</b>	0.0006 to 0.7 <b>0.5 (avg)</b>	<b>0.7</b>

# Recycled Water Permitting Timeline

2016

- PTP User's Meetings (Apr 18 & Dec 8)
- Hazard Assessments
- Customer Surveys
- On-Site Surveys

2017

- On-Site Surveys
- **Draft Title 22 Engineering Report submitted to SWRCB DDW (Mar 2017)**
- Letters to Customers – Notice of Improvements Needed (Apr 7)
- PTP/PVP User's Meeting (Apr 26)
- **Draft Title 22 Engineering Report submitted to LA RWQCB (Jun 2017)**
- **Conditional Approval from LA RWQCB (Oct 2017)**

2018

- Letters to Customers – Notice of Corrections Required (Apr 6)
- PTP User's Meeting (May 1)
- Plan for Corrections (May 21)
- Make Corrections (Oct 5)
- Cross-Connection Testing

2019

- **PTP User's Meeting (May 14)**
- **Cross-Connection Testing and Compliance**
- **On-Site Surveys**



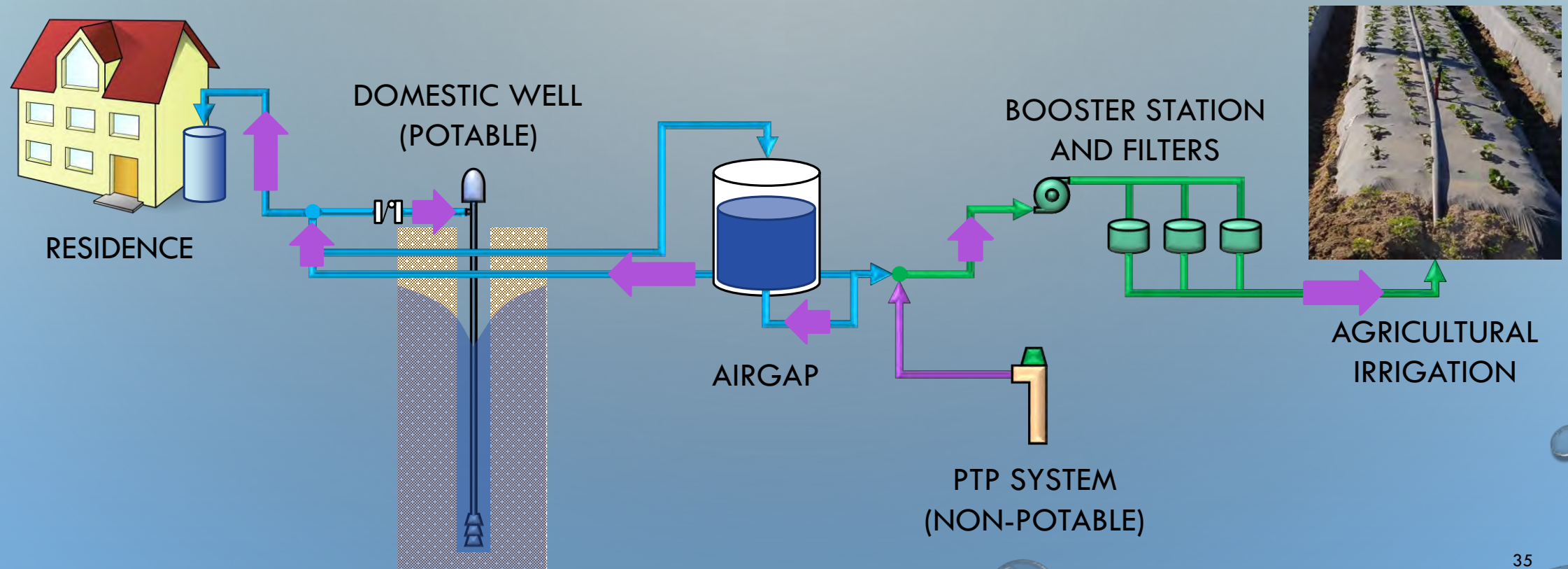
## Los Angeles Regional Water Quality Control Board

### 4. Conditional Approval

As noted above, an amendment to the Oxnard WRR/WDR Order No. R4-2011-0079-A02/A01 is not needed to supply Oxnard AWPf recycled water to the PTP. The Regional Water Board approves the recycled water distribution and use in the PTP system as outlined in the June 5, 2017 engineering report with the following conditions:

- A. The extension and the PTP, as well as the property owner/lessees cross connections, have been approved by the DDW and a copy of the approval letter has been submitted to the Regional Water Board.
- B. The PTP distribution system is in compliance with WRR/WDR Order No. R4-2011-0079-A02/A01.
- C. The blended water from the CWD is not distributed via the PTP until the amendment to include the Camarillo WRP's effluent and to expand the recycled water use area has been adopted for WRR/WDR Order No. R4-2015-0030 and the PTP is in compliance with the amended order.

# Cross-Connected Dual Plumbed Use Area





# PTP System - Properties Served - Statistics

**Table 1 - Characteristics of the PVP and PTP System**

Description	PTP System	PVP ("C" Customers)	Total
<b>No. of Properties</b>	149	7	<b>156</b>
<b>Total Land Served (acres)</b>	5,151	486	<b>5,637</b>
<b>No. of Private Domestic Wells</b>	39	2	<b>41</b>
<b>No. of Private Irrigation Wells</b>	38	5	<b>43</b>
<b>Sites with Public Access</b>	10	1	<b>11</b>
<b>Dual Plumbed Sites</b>	60	2	<b>62</b>
<b>Sites with Residences</b>	41 <sup>(1)</sup>	1	<b>42</b>
<b>Sites with Retail Space</b>	5	0	<b>5</b>
<b>Sites with Workshops</b>	24	0	<b>24</b>
<b>Sites with Offices</b>	3	0	<b>3</b>

(1) One residence was recently demolished

As of August 14, 2018



# PTP System User's Plans to Remove Cross-Connections

**Table 3 - Customer Responses**

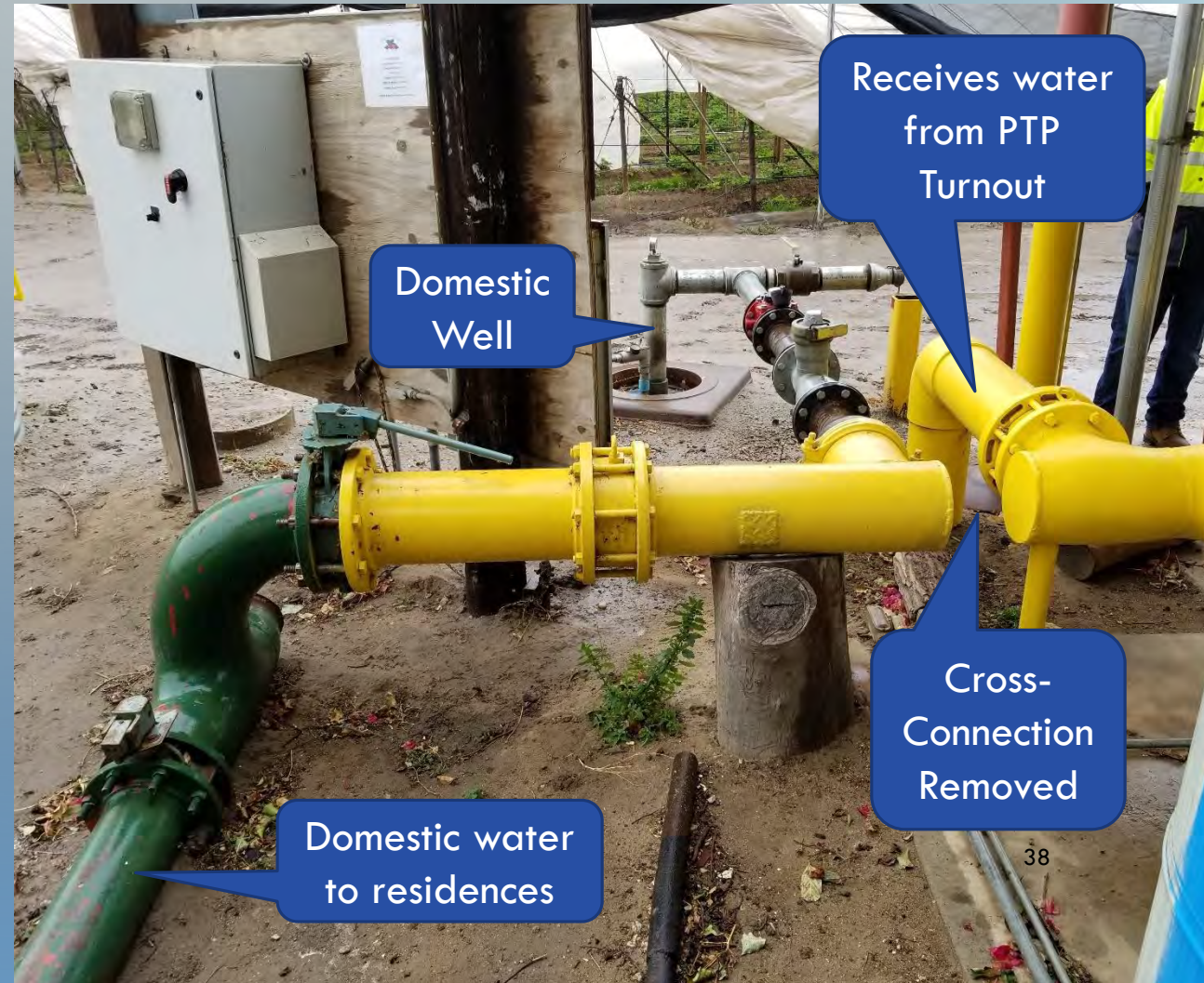
<b>Response</b>	<b>No. of Responses</b>
<b>Option 1: Install new domestic well</b>	2
<b>Option 2: Install new air gap</b>	7
<b>Option 3: Abandon domestic system</b>	1
<b>Option 4: Other</b>	1
<b>Subtotal</b>	<b>11</b>
<b>No response received</b>	6
<b>Total</b>	<b>17</b>





# Recycled Water Program Update

## PTP Turnout – Removed Cross-Connection





# RECYCLED WATER

## Cross Connection Compliance

Jeff Densmore, District Engineer  
S.W.R.C.B. DDW





# RECYCLED WATER BRIEFING

May 2019

Jeff Densmore, P.E.  
DDW Santa Barbara District

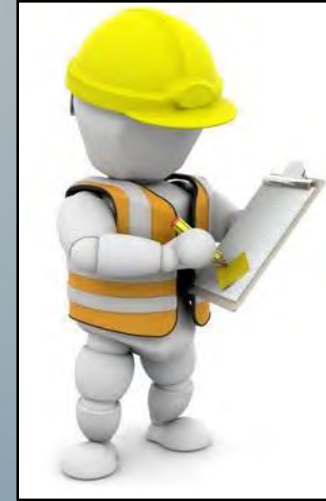
# USES OF RECYCLED WATER

- DISINFECTED TERTIARY RECYCLED WATER:
  - FLUSHING TOILETS AND URINALS
  - FOOD CROPS
  - PARKS, PLAYGROUNDS, SCHOOLS
  - RESIDENTIAL LANDSCAPE
  - UNRESTRICTED GOLF COURSES



# USE AREA CONTROLS

- SITE CONTAINMENT
- SETBACK
- SIGNAGE
- WORKER/PUBLIC PROTECTION
- CROSS CONNECTIONS
- USE SITE PLAN
- USE SUPERVISOR
- USER AGREEMENT



# HOSE BIBS

- SECTION 60301.400 - A FAUCET WHICH A COMMON GARDEN HOSE CAN BE READILY ATTACHED.
- SECTION 60310(G) - NO HOSE BIBS IN RW SYSTEM WITH PUBLIC ACCESS.





# PURPLE HEADS AND PIPES

- H&S CODE, SECTION 116815



# RW OVERSPRAY

- SECTION 60310(E)
- ON PICNIC TABLES
- ON DRINKING WATER FOUNTAINS
- PONDING



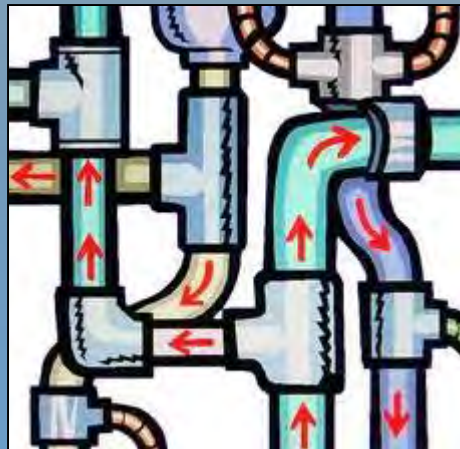


# USE AREA AGREEMENT

- TERMS OF SERVICE
- PIPING PLANS – VERIFIED WITH SITE SURVEY
- BACKFLOW PROTECTION
- USE AREA SUPERVISOR DESIGNATION AND TRAINING

# USE SUPERVISORS

- TITLE 17, SECTION 7586
- RESPONSIBLE FOR AVOIDANCE OF CROSS CONNECTIONS DURING INSTALLATION, OPERATION, AND MAINTENANCE.
- HAVE THEY BEEN TRAINED/CERTIFIED?





The background is a light blue gradient with several realistic water droplets of various sizes scattered across the surface. The droplets have highlights and shadows, giving them a three-dimensional appearance.

# BACKFLOW PROTECTION REQUIREMENTS

# FIVE MEANS OF PREVENTING BACKFLOW

- AIR GAP SEPARATION
- REDUCED PRESSURE PRINCIPLE ASSEMBLY
- DOUBLE CHECK VALVE ASSEMBLY
- PRESSURE VACUUM BREAKER/  
SPILL-RESISTANT VACUUM BREAKER
- ATMOSPHERIC VACUUM BREAKER



# AIR GAP

AN APPROVED AIR GAP SHALL BE AT LEAST DOUBLE THE DIAMETER OF THE SUPPLY PIPE MEASURED VERTICALLY ABOVE THE OVERFLOW RIM OF THE RECEIVING VESSEL BUT NEVER LESS THAN 1".

AN AIR GAP IS THE ONLY PROTECTION ALLOWED BETWEEN A RECYCLED WATER SYSTEM AND A DRINKING WATER SYSTEM.



*2x diameter  
not less than 1"*

**Air Gap**




# IMPROPER AIR GAP





# BACKFLOW PROTECTION IS NORMALLY REQUIRED ON THE POTABLE WATER SYSTEM WHEN USING:

- RECYCLED WATER
  - AGRICULTURAL WATER
  - RAW WATER
- 



# BACKFLOW PREVENTION ASSEMBLIES MUST BE TESTED:

- UPON INSTALLATION
- AT LEAST ON AN ANNUAL BASIS OR MORE FREQUENTLY AS REQUIRED BY WATER PURVEYOR
- AFTER REPAIR

# EXAMPLES OF CROSS-CONNECTIONS





# BYPASSING THE ASSEMBLY



# BYPASS AT METER





# CONNECTED TO A RECYCLED QC



# GIRL WITH BIKE WASHING HANDS IN SPRINKLERS





# GIRL WASHING FACE IN IRRIGATION WATER



# SHUTDOWN TESTING REQUIREMENTS

Needed to demonstrate that the recycled water system is not cross connected to the potable water system.





# REVIEWING PLANS/AS-BUILTS



# SHUTDOWN TEST INCLUDES:

- . Operating all irrigation stations
- . Check for overspray/runoff/ponding
- . Signage, appurtenance marking
- . Irrigation controller charts
- . As built plans
- . Use site supervisor appointed
- . Compliance with storm water permit requirements
- . Separation between potable and recycled water









# CHECKING FOR CROSS-CONNECTIONS

Be aware of the site's recycled and potable water system pressures.

When recycled water system is turned off, periodically check to ensure there is no flow.

Watch for new construction near the use site (construction trailers, etc.) that may need a temporary water source.



The background is a light blue gradient. In the top-left corner, there are several water droplets of various sizes, some overlapping. In the top-right corner, there is one small droplet. In the bottom-right corner, there is a cluster of droplets, including a large one and several smaller ones. In the bottom-center, there are two more droplets.

**THE SITE SUPERVISOR**  
IS LITERALLY THE EYES AND EARS OF THE  
RECYCLED WATER PURVEYOR.





# ROUTINE AND ANNUAL SITE INSPECTIONS

ROUTINE INSPECTION IS PERFORMED BY THE  
SITE SUPERVISOR.

ANNUAL INSPECTION IS PERFORMED BY THE  
WATER PURVEYOR AND SITE SUPERVISOR.



# DUTIES OF THE SITE SUPERVISOR





# Inspecting for Overspray and Runoff





# INSPECTING FOR BROKEN HEADS





# CHECKING PROPER SIGNAGE



# WRONG SIGN, WRONG WAY





# CHECKING VALVE BOXES



# QUICK COUPLER QUILL WITH HOSE BIBB





# SITE SUPERVISOR WITH RECYCLED AND POTABLE HOSES



# IRRIGATION DURING DAY WITH MISTING





# IRRIGATION INTO STORM DRAIN



# PONDING: KEPT ON USE SITE





# RUNOFF






# CROSS CONNECTION CONTROL PROGRAMS: ENSURING THE SAFE USE OF RECYCLED WATER

Recycled water is not potable water and cannot be treated like potable water. Recycled water has a definite and necessary place in the California water equation, but that equation must recognize the public health and safety implications of the use of recycled water.

The recycled water producer, the user, and the regulatory authority must all work together to ensure the safe use of this beneficial resource.





# Questions?

**Jeff Densmore, P.E.**

**805-566-1326**

[Jeff.Densmore@waterboards.ca.gov](mailto:Jeff.Densmore@waterboards.ca.gov)



# RECYCLED WATER

## PROPOSED RECYCLED WATER CONVEYANCE

Robert Richardson  
Associate Engineer  
UWCD



## 3.3 – Proposed Recycled Water Conveyance



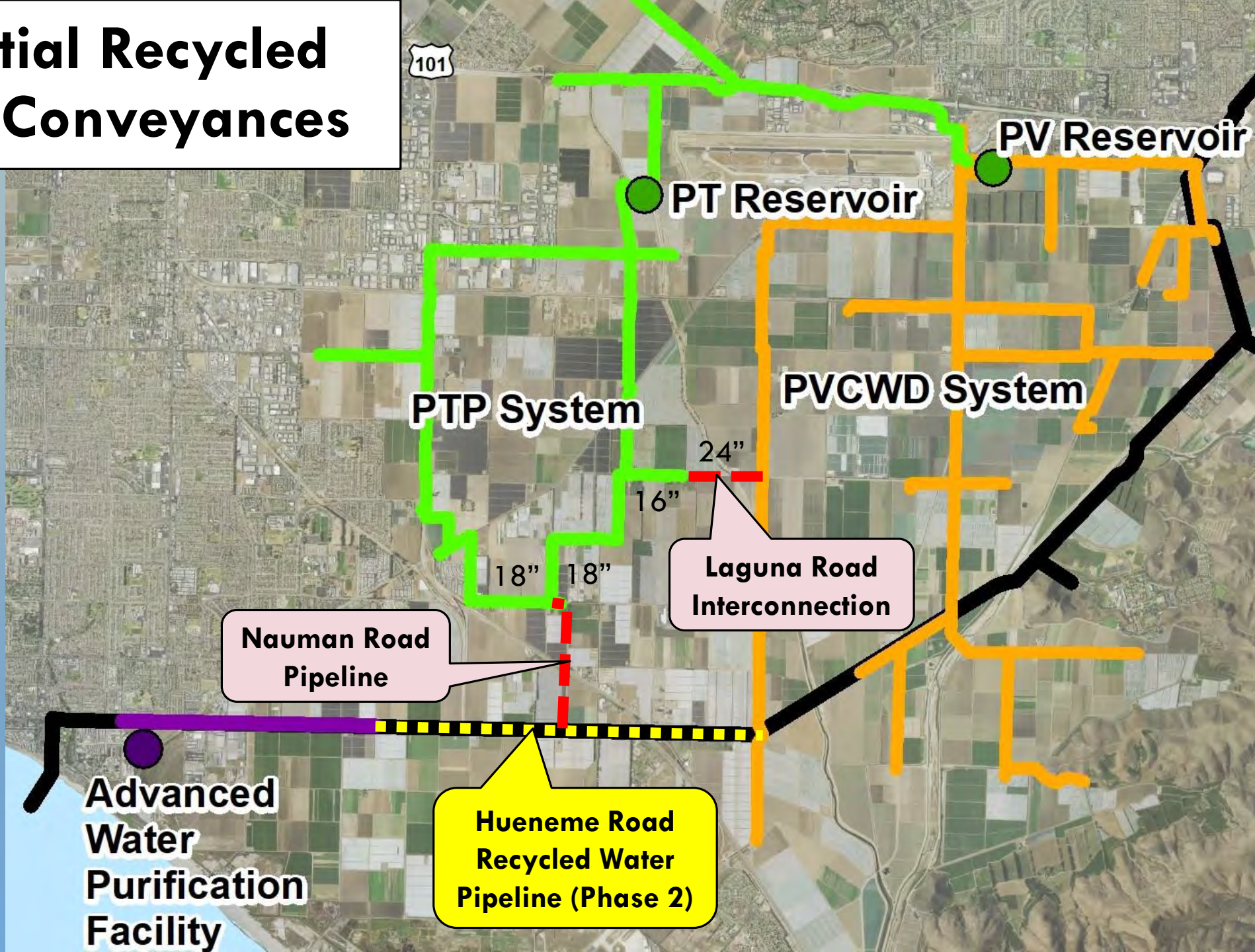
# City of Oxnard Status

- **Salinity Management Pipeline (SMP) Permit**
  - Recycled Water deliveries extended to December 31, 2020
- **Hueneme Road Recycled Water Pipeline (Phase 2)**
  - **Feb 28, 2019** – Solicitation for construction bids
  - **May 21, 2019** – Construction bids due
  - **Aug – Sep, 2019?** – Commence construction
- **Water Business Plan**
  - GOAL: Expand AWPf as a water supply source
  - **April 9, 2019** - City Council awarded contract to Gannett Fleming
  - **April – February, 2020?** – Public Outreach
  - **June – December, 2019?** – Water Rate Study
  - **Jan, 2020?** – Presentation to City Council





# Potential Recycled Water Conveyances



# TURNOUT METERING SYSTEM IMPROVEMENT PROJECT

## PTP METERING PROJECT PROGRESS

Robert Richardson  
Associate Engineer  
UWCD



## **4. PTP Turnout Metering System Improvement Project**

# What is the PTP Metering Improvement Project?

## Existing PTP Turnout

Manual Monthly Readings

Vertical Up-flow Propeller Meter

## Improved PTP Turnout

Radio Antenna

Solar Panel

New Butterfly Valve

Security Fence Enclosure

Electro-magnetic Flow Meter (SCADA Integrated)

Customer Piping

Battery System





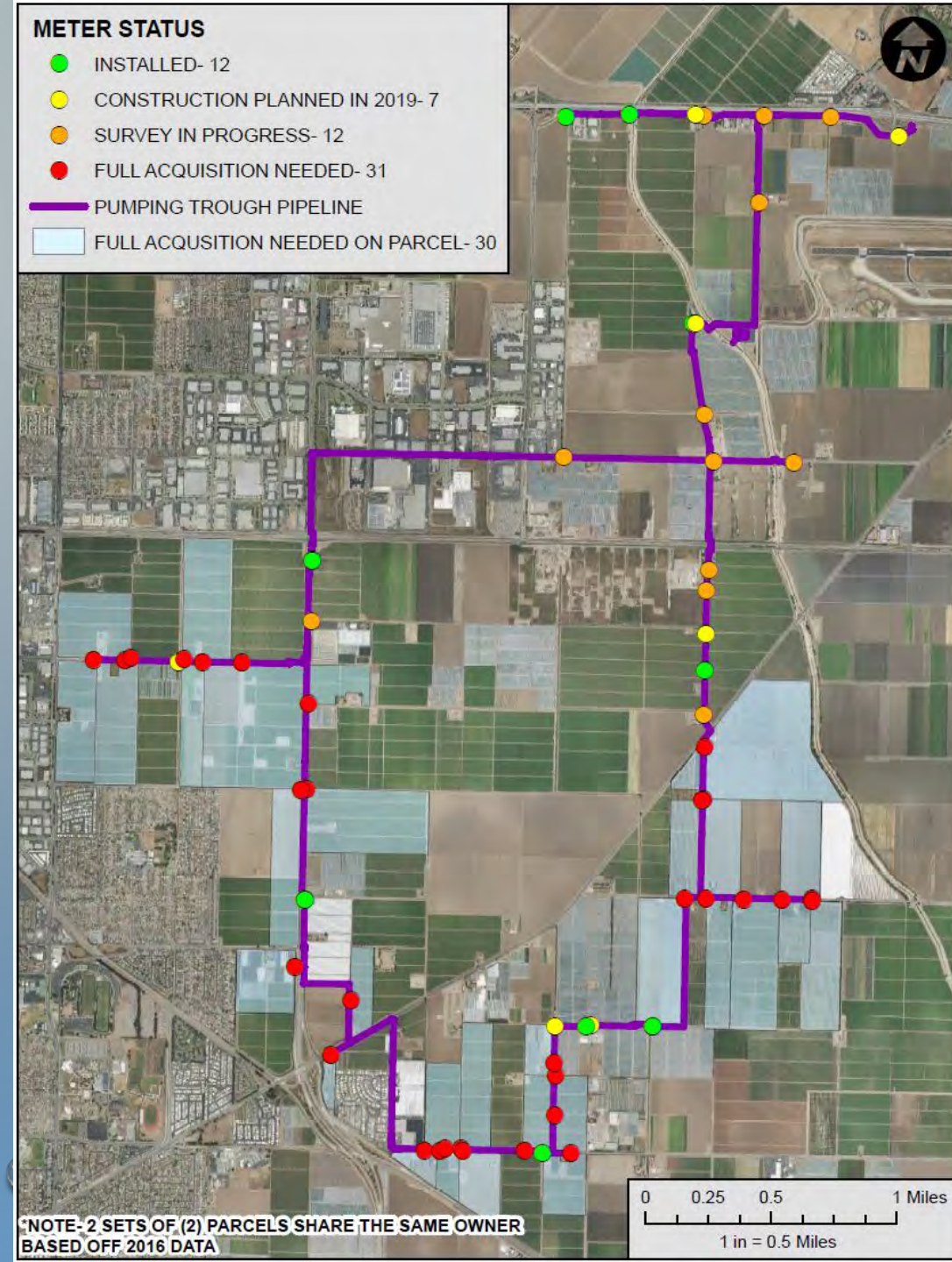
# PTP Metering Improvement Project

- **Status**

- Installed – 12
- Upcoming Construction Planned – 7
- Complete Easement Maps & Legal Descriptions – 12
- Full Right-of-Way Acquisition Needed - 31

- **Budget: ~\$1,608,593 (proposed FY 19-20)**

- District contribution: ~ \$287,622/ \$973,493
- State (DWR) contribution: \$140,628/ \$635,100
- Encumbered (meters & equipment): \$165,970





# PTP Turnout No. 153





# PTP Turnout Nos. 104 & 116





# PTP Turnout No. 130 & 131





# PROPOSED BUDGET STATUS

FISCAL YEAR  
2019-20 PRELIMINARY BUDGET

Joseph Jereb  
Chief Financial Officer  
UWCD



# 2019-2020 BUDGET PREVIEW

PUMPING TROUGH PIPELINE FUND

MAY 14, 2019



# AGENDA

- FY18-19 CLOSE--CURRENT PROJECTIONS
- OPERATIONAL OUTLOOK FOR COMING YEAR
- FY19-20 PROPOSED BUDGET
  - EXPENDITURES
  - CAPITAL IMPROVEMENT PROJECTS
  - REVENUES
    - RATE HISTORY
    - 2019-2020 RATES

# FY18-19 PROJECTED FINISH

## TIMING OF SPEND, GRANTS AND FINANCING OF CIP DRIVES VARIANCES FROM BUDGET

### Pumping Trough Pipeline Fund

(\$ thousands)	FY17-18 Actual	FY18-19 Adjusted Budget	FY18-19 Projection	var to Plan	var to PY
Water Delivery/Fixed Costs	2,125	1,855	1,845	-1%	-15%
Fox Canyon GMA	77	75	75	0%	-2%
Grants	116	677	125	-82%	7%
Other	55	1,056	604	-43%	91%
<b>Total Revenue</b>	<b>2,373</b>	<b>3,664</b>	<b>2,648</b>	<b>-28%</b>	<b>10%</b>
Personnel Expense	308	326	326	0%	6%
Operating Expense	668	888	808	-9%	21%
Allocated Overhead	313	446	446	0%	42%
Debt Service	72	92	92	0%	28%
Other	1,138	2,304	1,627	-29%	43%
<b>Total Expenditure</b>	<b>2,499</b>	<b>4,056</b>	<b>3,299</b>	<b>-19%</b>	<b>32%</b>

	Actual FY 2017-18	Budget FY 2018-19	Projected FY 2018-19
<b>Cash Reserves/Working Capital:</b>			
Beginning Balance July 1	46	379	379
Net Surplus / (Shortfall)	(126)	(392)	(651)
Add Back Non-cash Depreciation	459	456	456
<b>Ending Balance June 30</b>	<b>379</b>	<b>443</b>	<b>184</b>

**Reserve Requirement** **\$250k - \$300k**

- DELIVERY VOLUMES TRENDING TO PLAN
- OTHER REVENUE BELOW PLAN ON LOWER BORROWING FOR CIP
- OPEX IN LINE WITH FY18-19 BUDGET
- CIP BELOW PLAN DUE TO TIMING OF METERING PROJECT
- CASH BELOW RESERVE REQUIREMENT DUE TO DELAY IN METERING FINANCING



# EXPENDITURE/CASH FLOW

(\$ thousands)	Actual FY 2017-18	Projected FY 2018-19	Proposed Budget FY 2019-20
<b>Expenditures:</b>			
Regular Salaries	179	182	243
Overtime Salaries	12	15	9
Employee Benefits	117	129	165
<b>Personnel Costs</b>	<b>308</b>	<b>326</b>	<b>417</b>
Contractual Services	5	51	11
Office Expenses	5	11	8
Travel, Meetings, Training	0	4	4
Fuel-Gasoline-Diesel	7	13	20
Insurance	18	20	20
Fox Canyon GMA	79	75	75
Utilities	403	384	455
Telephone	1	1	2
Safety, Supplies, Clothing	6	10	12
Water Treatment Chemicals	43	30	45
Maintenance	83	186	222
Small Tools & Equipment	3	4	4
Permits & Licenses	6	7	4
Water Quality Services	2	3	10
Miscellaneous	4	9	36
<b>Operating Expenses</b>	<b>668</b>	<b>808</b>	<b>927</b>
Replacement/Depreciation	459	456	460
Allocated Overhead	313	446	430
Debt Service	72	92	326
Capital Outlay	57	329	106
Transfers Out	622	842	1,896
<b>Total Expenditures</b>	<b>2,499</b>	<b>3,299</b>	<b>4,561</b>

	Actual FY 2017-18	Projected FY 2018-19	Proposed Budget FY 2019-20
<b>Cash Reserves/Working Capital:</b>			
Beginning Balance July 1	46	379	184
Net Surplus / (Shortfall)	(126)	(651)	(362)
Add Back Non-cash Depreciation	459	456	460
<b>Ending Balance June 30</b>	<b>379</b>	<b>184</b>	<b>281</b>

Reserve Requirement

\$250k - \$300k

- **PERSONNEL**
  - ADDITION OF I&E SUPERVISOR AND REVISED ALLOCATION OF OPS AND ENGINEERING HEADS
- **OPEX**
  - UTILITIES—SCE EXPANSION OF PEAK HOURS
  - MAINTENANCE—CARRY OVER FROM PY
- **DEBT SERVICE**
  - EXTERNAL FINANCING FOR CIP

# CIP OUTLOOK

## INCLUDES PERSONNEL ALLOCATED TO PROJECTS

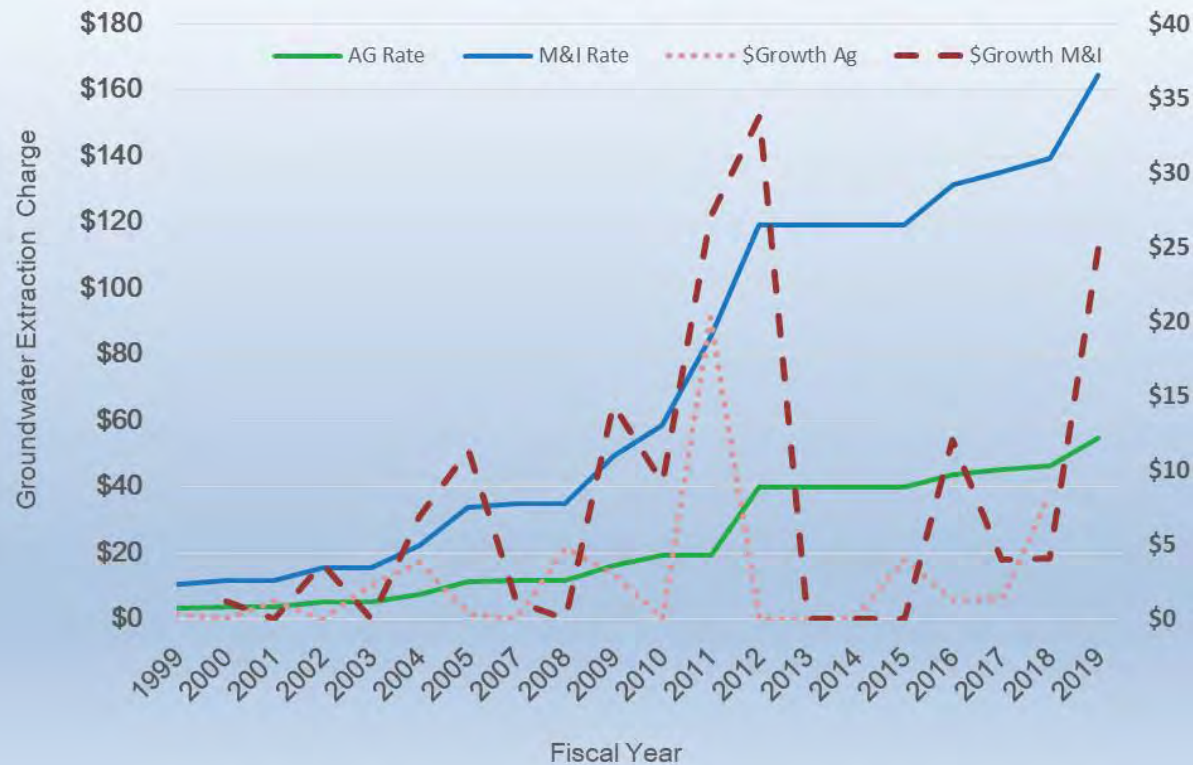
Project #	Description	PTP	TOTAL
8022	PTP Turnout Metering System	750	750
8038	PTP System Emergency Generator	903	903
8040	Santa Paula Microwave Communications Tower	32	267
8024	New Headquarters	182	1,764
8028	Replace El Rio Trailer	5	35
8041	Asset Management/CMMS System	3	30
<b>TOTAL AMOUNT PER YEAR</b>		1,896	12,784

- **DEBT FINANCE \$1.8M**
  - BACKUP GENERATORS--\$0.9M
  - METERING SYSTEM--\$0.7M
  - HQ RENOVATION--\$0.2M

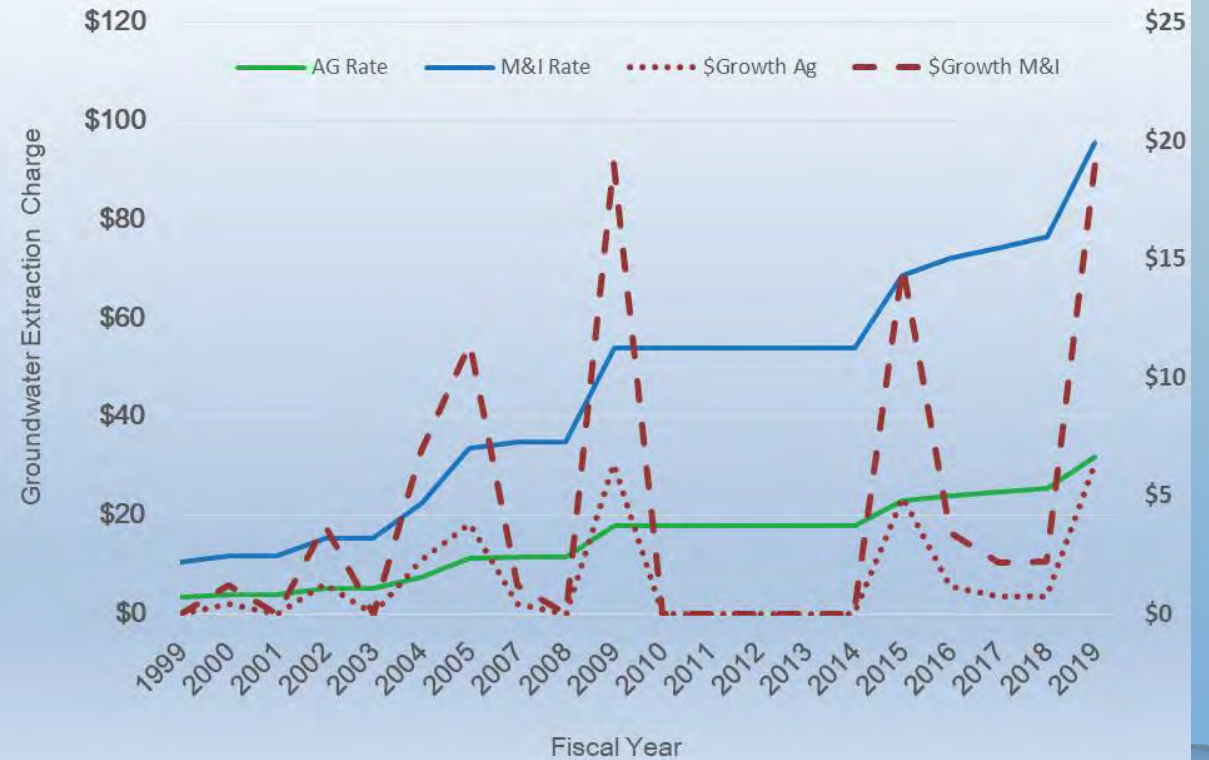


# GROUNDWATER RATE HISTORY

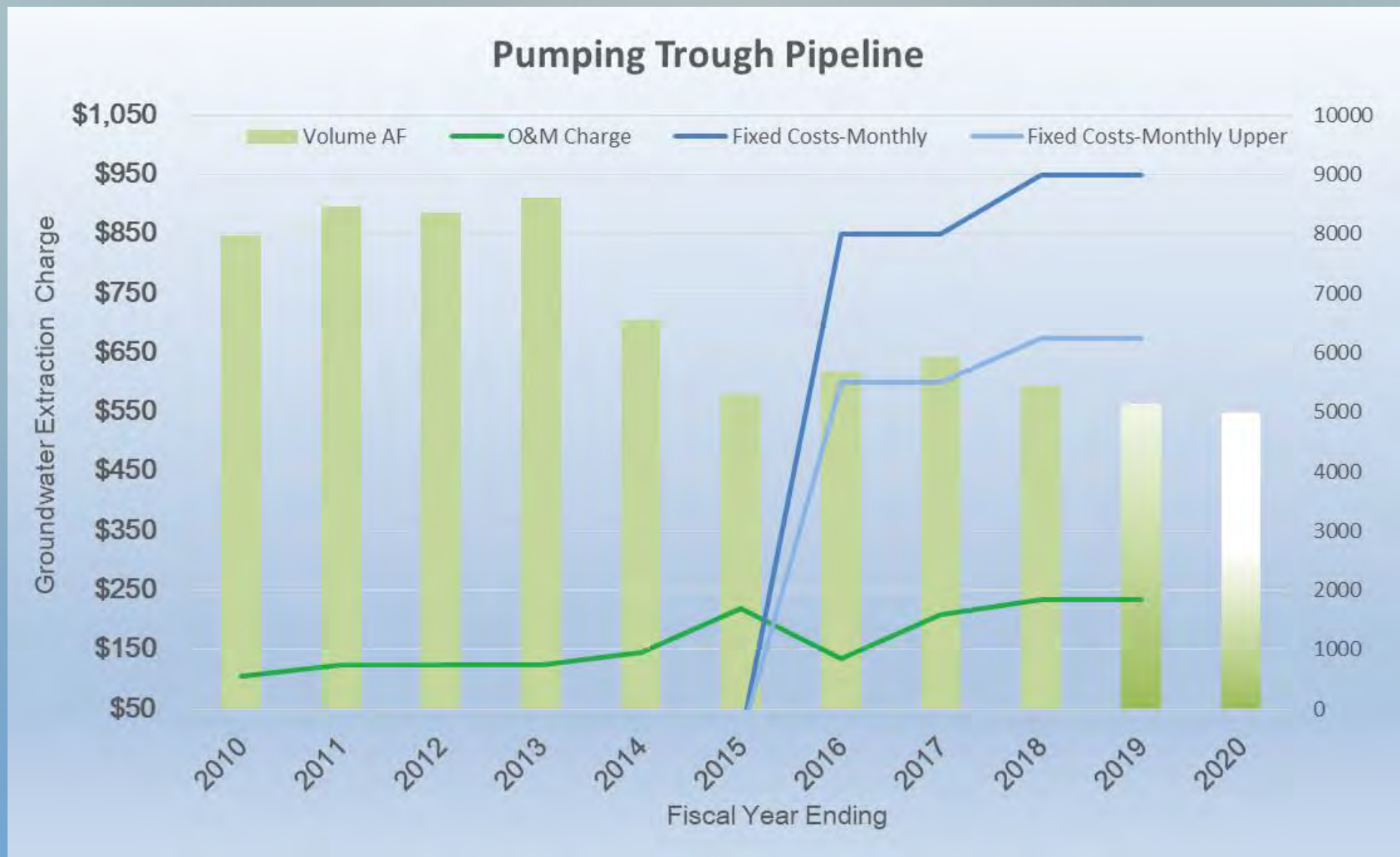
Zone A GW Rate



Zone B GW Rate



# PIPELINE RATE AND VOLUME HISTORY





# PTP PIPELINE REVENUE

## Pumping Trough Pipeline Fund

(\$ thousands)	FY17-18 Actual	FY18-19 Projection	FY19-20 Proposed	var to PY
Water Delivery/Fixed Costs	2,125	1,845	1,928	5%
Fox Canyon GMA	77	75	75	0%
Grants	116	125	394	215%
Other	55	604	1,803	199%
<b>Total Revenue</b>	<b>2,373</b>	<b>2,648</b>	<b>4,199</b>	<b>59%</b>

- **OPERATING REVENUE UP 5%**
- **DEBT FINANCE \$1.8M**
  - BACKUP GENERATORS--\$0.9M
  - METERING SYSTEM--\$0.7M
  - HQ RENOVATION--\$0.2M

# CURRENT RATE PROPOSAL

## Pipeline Charges (per Acre Foot):

(\$)	PT Pipeline <sup>2</sup>		
	FY 2019-20	FY 2018-19	\$ Change
O & M Charge	250.00	235.00	15.00
Fixed Costs/ Fixed Charge - Monthly	950.00	950.00	0.00
Fixed Cost - Upper System - Monthly <sup>4</sup>	675.00	675.00	0.00
PTP Sub-allocation Surcharge <sup>6</sup>	See Note	See Note	See Note
Saticoy Well Field Delivery Charge	30.00	30.00	0.00
GMA Pump Charge <sup>8</sup>	12.50	12.50	0.00

<sup>2</sup> - Pipeline users pay Zone A and Zone B extraction charges and water purchase surcharge listed above as well as the pipeline-specific charges.

<sup>4</sup> - Rate applies only to PTP turnouts above elevation 58.5 instead of the PTP Fixed Cost - Monthly Rate.

<sup>6</sup> - The PTP Surcharge = equivalent to FCGMA groundwater extraction surcharge rates, on a pro rata basis, in an amount to reimburse the District for 100% of potential FCGMA surcharge.

<sup>8</sup> - This rate is set by the Fox Canyon GMA and subject to change. Also applies to all Saticoy Well Field deliveries.

## • VARIABLE RATE INCREASE OF \$15

- FIXED RATES REMAIN UNCHANGED
- IN-LIEU GROUNDWATER RATES INCREASE BY \$8/25 FOR AG/M&I

Charges (per Acre Foot): (\$)	Conservation Extraction Charge - Zone A Proposed			Freeman Extraction Charge - Zone Proposed			
	FY 2019-20	FY 2018-19	\$ Change	FY 2015-16	FY 2019-20	FY 2018-19	\$ Change
Agriculture Rate	54.79	46.43	8.36	22.90	33.93	25.51	8.42
Municipal & Industrial Rate	164.37	139.30	25.07	68.70	101.80	76.54	25.26



# QUESTIONS ?