



Townhall Meeting

March 11, 2021 5:30

**Impacts From State and Federal Mandates, PFAS Regulations, Infrastructure Improvements, and the Increasing Cost of Groundwater/Imported Water**



## **Serrano Water District**

**Providing Water to Our Community Since  
1876**

# SWD History

- Incorporated in 1876 as a Mutual Irrigation Water Company; SWD was the foundation of the Villa Park you know today.
- Santiago Dam constructed 90 years ago in 1931 to capture and store Santiago Creek winter flows.
- SWD owns 25% Recreation Rights at Irvine Lake.

# Reliable Uninterruptable Supply

- In the event of a catastrophe, SWD can maintain its water supply with a multitude of different sources unlike most other agencies.
  - Native creek water stored in Irvine Lake
  - Imported Water Into Irvine Lake during dry seasons.
  - Groundwater (Two Wells)
  - Emergency connections with Orange.
  - Two Storage Reservoirs
    - 6 Million Gallon
    - 3 Million Gallon

# Santiago Creek Reservoir (Irvine Lake) Local Supply Reliability



# Santiago Creek Reservoir (Irvine Lake)

- Irvine Lake provides a local reliable, uninterrupted water supply.
- Generates revenue for the SWD (stored water/ recreation concessions).
- SWD owns 25% of the Dam/water rights at Irvine Lake which includes 25% of maintenance and capital costs.
- Irvine lake can hold up to 25,000 acre-feet of native or imported water and has a 66-square mile watershed.

*Acre-foot of water = 325,851 gallons*

# SWD Water Treatment & Distribution System

- 4 Million Gallons Per Day Water Treatment Plant (Treat Irvine Lake water)
- 2 Groundwater Wells - Local and Reliable (3 MGD and 1 MGD)
- Smith Reservoir - 6 Million Gallon Tank
- Smith Booster Pump Station (7 Large pumps)
- Lockett Reservoir - 3 Million Gallon Tank

# SWD Water Treatment & Distribution System

- 2269 Meters
- 42 Miles of Distribution Pipeline
- 358 Fire Hydrants
- 963 Valves
- 25 Pressure Reducing and Sustaining Valves
- City of Orange Supply and Emergency Interconnections



# Challenges Facing SWD

- Regulatory Requirements and Emerging Contaminants (PFAS Treatment for now)
- Aging Infrastructure
- New Seismic Standards for Dam Safety
- Increasing Groundwater Costs (OCWD *recycled water, stormwater, imported water*)
- Increasing Metropolitan Water District of Southern California (MWDSC) Imported Water Costs

# Newsom Administration Creates De-Facto PFAS Regulation

- February 2020 - State Water Board adopted a Response Level for PFAS constituents which prompted SWD to take all wells offline.
- SWD supply is now 100% Irvine Lake/MWDSC Imported Water until PFAS filtration system is in place.
- \$1.3 Million loss in annual revenue.
- Water costs are now substantially higher, and we have temporarily lost one source of redundant supply.
- We are absorbing the losses until PFAS filtration system is operational.



# Increased Cost of Purchasing Water Due to PFAS Filtration

- PFAS filtration impact groundwater costs by 20%
- Import Water is nearly 50% higher than groundwater.
- Getting our groundwater wells back online is a priority!

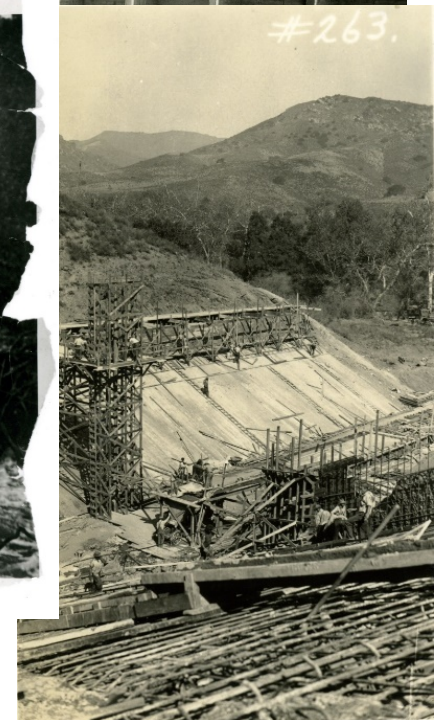
**Table 6 – OCWD Service Territory Perspective**

Groundwater			MWD Untreated Import & SWD Treat		
Description	Annual Cost	Unit Cost (\$/AF)	Description	Annual Cost	Unit Cost (\$/AF)
Project Capital	\$ 452,231	\$ 245	Untreated Service	\$1,434,347	\$ 777
Project O&M	\$ 378,800	\$ 205	Readiness to Serve	\$ 119,990	\$ 65
Well Power	\$ 225,212	\$ 122	SWD Treatment	\$ 188,292	102
<b>Total</b>	<b>\$1,055,912</b>	<b>\$ 572</b>	<b>Total</b>	<b>\$1,742,624</b>	<b>\$ 944</b>

**Method 2: OCWD Perspective**

Taking the SWD Wells out of service would reduce the RA payments made by SWD to

# Aging Infrastructure



# Estimated \$45-55 Million Capital Replacement Over next 5-10 Years

- \$35 Million - Santiago Reservoir Spillway and Outlet Tower Replacement. Both are over 90 years old! (Still in design approval phase with DSOD)
  - DSOD Seismic Upgrades, State Mandated Improvements
  - Increased safety improvements due to Orville Dam incident, State Mandated Improvements.
- \$6 Million – Smith Reservoir Tank Replacement (circa 1970)
- \$4 Million – Pipeline, Treatment Plant Rehabilitation, Groundwater Well Generator and related equipment.

# How Do We Pay For It All?

- Reserves
- Grants
- Rate Increases
- Loans



# Serrano Water District Has Not Increased Rates In Over 5 Years!

- Last rate increase was to stabilize revenue losses projected from the 2015 drought restrictions as well as capital infrastructure upgrades.
- Water use did not bounce back to pre-drought consumption and most of us have adopted permanent water conservation practices as we projected resulting in 20% lost revenue annually.
- Absorbing increasing costs and not increasing rates to keep pace with regional rates that are exceeding the consumer price index unlike other agencies.
- Presently, SWD is financially sound and very stable.
- Current cash reserves are \$9.5 Million

# Robert Bowcock

Bob Bowcock is a Water Resources Manager who has been actively engaged in the water resources management in California and nationally throughout its legislative and practical development beginning in 1982.

Bob began his career working at Metropolitan Water District of Southern California and has served as a Public Works Director and Utility Manager in Los Angeles County.

Bob has been a groundwater management agency Watermaster, appointed by the Superior Courts of California, since 1990. Bob currently represents water agencies and clients in over two hundred watersheds throughout the United States and Canada.

Bob served as a Project Advisor to the American Water Works Research Foundation on development of Water Utility Rates and has conducted over 100 rate surveys and analysis.

Bob represents water agencies and clients in 16 states developing regulations associated with the clean-up of PFAS contamination.

Bob routinely testifies to all fifty state legislatures and the United States Congress on Water Utility issues.



# Rate Survey

- Los Angeles-Long Beach-Anaheim Consumer Price Index
- MWDSC Rates
- MWDOC Rates
- OCWD Rates
- Regional Rates

# Los Angeles-Long Beach-Anaheim Consumer Price Index

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
2010	1.8	1.4	1.9	1.9	1.8	0.9	0.9	0.8	0.4	0.7	0.7	1.3	1.2	1.6	0.8
2011	1.8	2.3	3.0	3.3	3.1	2.9	2.4	2.4	3.1	2.8	3.0	2.2	2.7	2.7	2.6
2012	2.1	2.1	2.0	1.5	1.6	1.6	1.9	2.3	2.2	3.0	2.1	1.9	2.0	1.8	2.3
2013	2.0	2.2	1.3	0.9	1.0	1.4	1.3	0.8	0.6	-0.1	0.4	1.1	1.1	1.5	0.7
2014	0.8	0.5	1.0	1.4	1.7	1.8	2.0	1.8	1.7	1.4	1.3	0.7	1.3	1.2	1.5
2015	-0.1	0.1	0.5	0.5	1.1	0.8	1.4	1.1	0.7	1.0	1.6	2.0	0.9	0.5	1.3
2016	3.1	2.4	1.7	2.0	1.4	1.8	1.1	1.4	1.9	2.2	1.8	2.0	1.9	2.1	1.7
2017	2.1	2.7	2.7	2.7	2.5	2.2	2.5	2.8	3.1	3.1	3.6	3.6	2.8	2.5	3.1
2018	3.5	3.6	3.8	4.0	4.1	4.0	3.9	3.9	3.9	4.1	3.6	3.2	3.8	3.8	3.8
2019	3.2	2.5	2.7	3.3	3.1	3.3	3.3	3.0	3.0	3.2	3.2	3.0	3.1	3.0	3.1
2020	3.1	3.4	1.9	0.7	0.9	1.4	1.9	2.0	1.2	0.7	1.0	1.5	1.6	1.9	1.4

# MWDSC Rates for Imported Water

Effective January 1st	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	
Tier 1 Supply Rate (\$/AF)	\$156	\$201	\$209	\$209	\$208	
Tier 2 Supply Rate (\$/AF)	\$290	\$295	\$295	\$295	\$295	
System Access Rate (\$/AF)	\$259	\$289	\$299	\$326	\$346	
Water Stewardship Rate (\$/AF)	\$41	\$52	\$55	\$69	\$65	
System Power Rate (\$/AF)	\$138	\$124	\$132	\$127	\$136	
Full Service Untreated (\$/AF)		12.1%	4.4%	5.2%	3.3%	27%
Tier 1	\$594	\$666	\$695	\$731	\$755	
Tier 2	\$728	\$760	\$781	\$817	\$842	
Treatment Surcharge (\$/AF)	\$348	\$313	\$320	\$319	\$323	
Full Service Treated (\$/AF)						
Tier 1	\$942	\$979	\$1,015	\$1,050	\$1,078	
Tier 2	\$1,076	\$1,073	\$1,101	\$1,136	\$1,165	
Readiness-to-Serve Charge (\$M)	\$153	\$135	\$140	\$133	\$136	
Capacity Charge (\$/cfs)	\$10,900	\$8,000	\$8,700	\$8,600	\$8,800	

# MWDSC Current Biennial Rates

Full Service (\$/AF)	2020	2021		2022	
Tier 1	\$755	\$777	3%	\$799	3%
Tier 2	\$842	\$819	(3%)	\$841	3%

# Municipal Water District of Orange County (MWDOC)

	<u>Fixed</u>	<u>Volume</u>	<u>Total</u>	<u>% MWDSC</u>
MWDOC	\$13,863,000	\$146,324,000	160,187,000	12.85%
			<u>Water Sales</u>	
			\$273,136,000	20.28%

*Not including Anaheim, Fullerton or Santa Ana which are individual member agencies.*

# Orange County Water District (OCWD) Replenishment Assessment

Section 27(b) of the District Act states the following: “The total of the *replenishment assessment* levied in any year shall not exceed an amount of money found to be necessary to purchase sufficient water to replenish the average annual overdraft for the immediate past five water years plus an additional amount of water sufficient to eliminate over a period of not less than 10 years nor more than 20 years, the accumulated overdraft, plus an amount of money to pay the costs of initiating, carrying on, and completing any of the powers, projects and purposes for which this district is organized.”

# Groundwater

## OCWD Replenishment Assessment

• 2015-16	\$322 per AF	
• 2016-17	\$402 per AF	25%
• 2017-18	\$445 per AF	11%
• 2018-19	\$462 per AF	4%
• 2019-20	\$487 per AF	5%
• 2019-2020	\$524 per AF	8%
		63% compounded increase

# Current Local Water Rates

Residential Units 40 ccf

City/Water District	Tier 1 (ccf)	Tier 2 (ccf)	Tier 3 (ccf)	Tier 4 (ccf)	Tier 5 (ccf)	5/8x3/4"	Commodity	Total	Rate Analysis
Buena Park, City of	\$1.79					\$20.86	\$71.52	<b>\$101.62</b>	4% - 5% annual rate increases last few years.
Huntington Beach, City of	\$2.17					\$16.70	\$86.61	<b>\$103.31</b>	Rate Study
Seal Beach, City of	\$2.23	\$2.88				\$18.93	\$98.30	<b>\$117.23</b>	2021 14% increase / 2022 12% increase / 2023, 24, 25 8% per year increase.
La Palma, City of	\$2.54					\$21.02	\$101.60	<b>\$122.62</b>	7.5% increase every year, past 5-years.
Orange, City of	\$2.68	\$2.75	\$2.85			\$15.26	\$108.39	<b>\$123.65</b>	2022 5% increase / July 2021 New Rate Study
Tustin, City of	\$2.93					\$20.88	\$117.20	<b>\$138.08</b>	2022, 2023, 2024 5% increase per year.
Yorba Linda WD	\$2.86					\$25.66	\$114.40	<b>\$140.06</b>	Rate Study
Westminster, City of	\$3.21	\$3.99				\$8.12	\$140.88	<b>\$149.00</b>	Rate Study
Garden Grove, City of	\$3.14	\$4.37				\$18.98	\$134.21	<b>\$153.19</b>	Rate Study
Anaheim, City of	\$3.60					\$9.90	\$143.80	<b>\$153.70</b>	Rate Study
Fullerton, City of	\$1.94	\$3.96	\$4.29			\$29.72	\$124.02	<b>\$153.74</b>	2022 11% increase / 2023 5% increase / 2024 4% increase
Newport Beach, City of	\$3.35					\$21.86	\$134.00	<b>\$155.86</b>	2022, 2023, 2024 8% increase per year.
Fountain Valley, City of	\$3.90					\$9.03	\$156.00	<b>\$165.03</b>	2022, 2023 6% increase per year.
South Coast WD	\$3.19	\$3.37	\$3.56			\$27.01	\$138.08	<b>\$165.09</b>	Rate Study
Serrano WD	\$3.75					\$32.21	\$146.25	<b>\$178.46</b>	Last Rate Increase September 2015 (5-Years)
Mesa WD	\$4.49					\$14.30	\$179.60	<b>\$193.90</b>	2022 5% increase
Santa Ana, City of	\$2.17	\$5.13				\$21.94	\$174.12	<b>\$196.06</b>	2022 6.5% increase.
GS W/E Systems	\$4.06	\$4.67	\$5.37			\$16.49	\$192.10	<b>\$208.59</b>	PUC Rate Case
La Habra, City of	\$2.54	\$4.14	\$6.01			\$17.99	\$197.68	<b>\$215.67</b>	2022 9% increase / 2023 8% increase / 2024 6% increase
Trabuco Canyon WD	\$2.50	\$3.18	\$6.04	\$7.85		\$18.03	\$202.78	<b>\$220.81</b>	2022, 2023, 2024, 2025 8% increase per year.
San Clements, City of	\$4.93					\$26.56	\$197.20	<b>\$223.76</b>	Rate Study
Laguna Beach County WD	\$5.25	\$9.09				\$18.68	\$210.00	<b>\$228.68</b>	24% increase over past 5-years.
Emerald Bay	\$5.25	\$8.81				\$18.68	\$210.00	<b>\$228.68</b>	Under Contract with Laguna Beach
Brea, City of	\$3.59	\$4.69	\$6.18	\$7.24		\$15.93	\$217.00	<b>\$232.93</b>	Rate Study
East Orange County WD	\$5.07					\$55.02	\$202.80	<b>\$257.82</b>	Rate Study
El Toro WD	\$2.65	\$3.04	\$6.21	\$7.95		\$19.83	BB	<b>BB</b>	Rate Study
Irvine Ranch WD	\$1.47	\$2.00	\$4.86	\$13.63		\$10.35	BB	<b>BB</b>	Rate Study
Moulton Niguel WD	\$2.08	\$2.42	\$3.59	\$5.39	\$9.86	\$9.77	BB	<b>BB</b>	Rate Study
San Juan, City of	\$4.37	\$6.08	\$6.60	\$6.60		\$28.17	BB	<b>BB</b>	Rate Study
Santa Margarita WD	\$2.20	\$2.57	\$3.36	\$5.53		\$23.46	BB	<b>BB</b>	Rate Study

BB=Budget Based rates



# How Water Rates Are Set

- Operations & Maintenance Costs
- Energy, Chemicals & Professional Staff
- Regulatory Compliance
- Sources of Supply
- Treatment
- Storage
- Transmission
- Distribution

# Projected Rate Impacts

- Consumer Price Index
- Regional Rate Increases (OCWD, MWD, etc.)
- Groundwater Contamination (OCWD - Cost Sharing)
  - Groundwater PFAS Treatment Systems
- Regional Water Supply Projects
- Santiago Dam Structural Upgrades
- Storage Upgrades
- Transmission & Distribution Pipeline Replacement
- Possible Future Drought Impacts

# Serrano Water District's Commitment to the Ratepayers

- Provide the highest quality of water at the most cost-effective price
- Maintain and ensure a safe, reliable, and secure uninterrupted supply.
- Continue Governmental Compliance
- Conservation and Environmental Conformance