WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA



## Water Independence Now Program

Presented to WateReuse – LA Chapter August 13, 2013



## Imported Water Supply Challenges



CA Bay Delta: *Environmental Land Subsidence Seismic Vulnerability* 

#### Colorado River Drought:



Lake Mead's water level has dropped more than 100 ft since 2000.



# WRD's WIN Program will eliminate demand for imported water to replenish groundwater

## Benefits of Groundwater

- Local reliable & sustainable supply
- Drought protection
- Cost-effective



#### Spreading Grounds Interconnection Pipeline Completed 2012!

Interconnection Pipeline (ICP)

San Gabriel SG ICP Outfall

Dor Gar Spreading Grounds DOWNEY

MONTEBELL

ALHAMBRA

COMMERCE

SANTA FE

SPRINGS

NORWALK

05

EL SEGUNDO

EVERLY HILLS

Rio Hondo SG ICP Inlet/Outfall

Rio Hondo Spreading Grounds Inlet Prior to Recycled Water Diversion

Miles

San Gabriel River Spreading Grounds Inlet During Recycled Water Diversion Conserves Approx 1,300 AFY for stormwater 5,700 AFY Recycled

LA HAERA HEIGHTS









Miles

OF SOUTHERN CALIFORNIA

#### **Traditional vs. Enhanced Recovery**



**Enhanced Recovery with Waste Minimization** 



#### **Benefits:**

- Use 12% less source water
- MF and RO are smaller in sizes
- Substantially less waste discharge
- Significant savings in capital and O&M costs

## **LVLWTF Expansion Process Diagram**



## Estimated Savings with Enhanced Recovery Capital Costs

Category	Traditional (\$M)	Enhanced Recovery (\$M)	Savings (\$M)	
Microfiltration	10.1	10.2	0.1	
Reverse Osmosis	7	7.6	0.6	
Other Facilities	13.6	13.6	0	
Sewer Capacity	12	0	-12	
Total	42.7	31.4	-11.3	
		Savings as percent Construction Cost	36%	

## Annual Savings with Enhanced Recovery – O&M

Category	Traditional Expansion (\$)	Enhanced Recovery (\$)	Annual Savings (\$)	
MF BWT	0	80,000	80,000	
3 <sup>rd</sup> Stage RO	0	100,000	100,000	
Sewer Surcharge	560,000	200,000	-360,000	
Additional Source Water Purchase	340,000 <b>*</b>	0	-340,000	
Net Savings			-\$520,000	

\* An additional 1,240 acre feet per year of source water is required at \$275/acre foot.

#### **Project Cost and Funding Summary**

- Construction Contract Cost = \$31.4 million
- Fully paid for by existing Capital Reserve Fund in WRD budget
- Approximately \$10 million comes from federal and state reimbursable grant funds
- On track to be complete ON TIME (Fall 2014) and WITHIN BUDGET

# What is **GRIP**?







# **GRP** Proposed AWT Site at SJCWRP







	2013	2014	2015	2016	2017	2018
EIR/EIS						
Outreach						$\rightarrow$
Design						
Title 22 Eng.						
Report						
Permitting (FOF,						
WDR/WRR)						
Construction						





# Imported Spreading Water & Replenishment Assessment (RA)





**THE CORNERSTONE** of the WRD's Water Independence Now Program, which seeks 100% independence from imported water.

**REPLENISH** the area's groundwater reservoirs with local resources.

**CONSERVE** water resources, save money, and create a local water source for residents.

**CREATE** a sustainable solution to potential water supply shortages.