

Water Reclamation Feasibility Study September 30, 2014

### **Building a Strong Team**

- John Mura, General Manager/CEO
- Mike Maestas, Assistant General Manager
- Tom Holliman, Engineering Manager
- Kelly Malloy, Public Affairs/Conservation Manager
- Ashok Dhingra, AKD Consulting Principal
- Lyndel Melton, RMC, Principal in Charge
- Steve Hirai, RMC, Project Manager



### **Current Capacity vs. Long-term Needs**



**Approximately 6,000 units** have been included in approved Land Use Agency Master Plan documents.



### **Challenges We Face Today**





### Taking it to the Board



EAST VALLI WATER DISTRI

## **Three Potential Plant Locations**





# Taking a Closer Look at the Sterling Avenue Site

	Near Headquarters	Near Golden Triangle Area	Sterling Between 3 <sup>rd</sup> and 5 <sup>th</sup>
Available Flow	0	0	
Land Uses	0	0	
Impacts to Community	0	0	
Energy Impacts	0	0	
Site Availability		0	
Proximity to Reuse Sites	0	0	0
Proximity to Recharge Sites			

Relative Lower Ranking 
Relative Higher Ranking





# Where Would the Water Go?

	Urban Irrigation	Commercial/ Industrial	Groundwater Recharge
Infrastructure Requirements	0		
Full Use of Available RW	0	0	
Ease of Implementation	0	0	
Cost to Implement	0	0	

O Relative Lower Ranking





### **Boiling it Down to Three Choices**



# **Comparing Option Costs**

	1. All Flow to San Bernardino	2. Partial Treatment at Sterling	3. Treatment at Sterling for Entire District
20-yr Cost to EVWD for Treatment at San Bernardino	\$221 Million	\$136 Million	-
20-yr Cost for Treatment by East Valley	-	\$120 Million	\$200 Million
20-yr Cost of New Treatment Facility		\$61 Million	\$103 Million
20-yr Cost of Infrastructure to EVWD	\$34 Million	\$29 Million	\$45 Million
20-yr Value of Water to East Valley	-	(\$89 Million)	(\$148 Million)
Percent Increase to Existing Cost	40%	41%	10%

#### Costs represent total costs over 20 – years of operation



# Impacts to New Development

New Development Costs	1. All Flow to San Bernardino	2. Partial Treatment at Sterling	3. Treatment at Sterling for Entire District
Capacity Cost for 4 MGD Treatment at San Bernardino	\$30.1 Million		
Treatment Impact of Future Demands		\$34.4 Million	\$41.3 Million
Collection System Impact of Future Demands	\$34.6 Million	\$17.5 Million	\$8.9 Million
Estimated Cost per EDU	\$7,525	\$6,800	\$5,840
		-\$725	-\$1,685



### More Than a Treatment Site



### There are Opportunities for Multi-Use Development at Sterling



### The Glass Half Empty

- Odor
- Noise
- Facility Design
- Property Values
- Surrounding Land Use





### The Glass Half Full

- Creation of a new drought-proof water supply
- Avoided system improvements
- Increased local control





### **Creating an Information Loop**

- Weekly Conference Calls
- Collaborate to prioritize messages

Create digestible pieces

Recycled wa recycling has **County Sani** area, east o recharge t advanced w the Californ

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streent Plant in Carson, California operates reclamation facility similar to the one under consideration v East Valley Water District.

#### Want to Learn More? Join Us for a Tour

East Valley Water District would like to invite you to take Join us for a no cost, first-hand look at the modern a day-long tour to a working reclamation facility in Southern California that highlights the technology that could be utilized at the proposed facility.

reclamation process. Transportation and lunch will be provided. Space is limited, contact us today to reserve your seat by calling (909) 885-4900 or email kmalloy@ eastvalley.org.



#### YOUR WATER RECLAMATION QUESTIONS ANSWERED

Today, we are experiencing one of the worst recorded droughts in California history. Water agencies have learned lessons from dry periods to develop new ways to increase water efficiency. Did you know that there are many uses of water other than for drinking? Landscape irrigation, commercial processes, and groundwater replenishment are all activities than can use recycled water.

#### WHAT IS WATER RECYCLING?

As the region has grown, it is becoming more difficult for nature alone to meet the community's needs for fresh water. Advances in technology and extensive research, have resulted in reclamation facilities that can recreate he natural cleaning process of water, but at a much faster rate. Using the same principles as the water cycle, reclamation or recycling produces clean vater that exceeds state and federal standards.

Water recycling is a proven natural process that has been occurring for billions of years, and today, we have been able to replicate this cycle and even improve on it to produce quality water for alternative uses.

#### HOW DO OTHER AGENCIES USE RECYCLED WATER?

Today, numerous agencies throughout Southern California recharge their groundwater supplies with recycled water. Since 1962, the Los Angeles County Sanitation District has been using recycled water to recharge groundwater aquifers east of downtown Los Angeles.

Modern water recycling facilities use advanced water treatment technologies to produce a high quality water supply that consistently meets the California state water quality requirements.

f you are interested in joining the District for a tour of an operational reclamation facility, please contact the Administration Department at (909) 885-4900.



### **Creating an Information Loop**

SEPTEMBER 2014

EAST VALLEY WATER DISTRICT IDENTIFIES POTENTIAL

SITE TO RESOLVE SEWER CAPACITY LIMITATIONS

IPELINE

OOKING AHEAD AT THE COST OF WASTEWATER TREATMENT

20 YEAR COST EVALUATION OF WASTWATER FLOW OPTIONS

\$54 Million

ast to EVWD for Treatment at San Bernardino

t for Treatment by East Valley

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Id he \$73 millio

- 6 Public Workshops/Meetings
- 5 Monthly Print Advertisements
  - Ran a total of 11 times
- 5 Monthly Bill Inserts
  - +110,000 pieces
- 7 Newspaper Articles
- Website Content
- Neighborhood Meetings by Request
- Tours



### 24/7 Project Overview



### Looking to Others That Are Good Neighbors

- District visited three facilities
  - Anaheim Water Recycling Demonstration Facility
  - Lighthouse Water Reclamation Facility
  - Brightwater Reclamation Campus
- Selection Criteria
  - Process must be completely enclosed
  - Active steps taken to reduce/eliminate odors
  - Must utilize 100% membrane treatment technology
  - Incorporated design elements in building construction



### **Anaheim Water Recycling Demo Facility**



### Tour Highlights

- Local example of odorless, noiseless facility
- Within 15 feet from Anaheim City Hall
- Designed in a way visitors can walk around the facility and learn



### **Lighthouse Reclamation Facility**



- Tour Highlights
  - Limited space for site
  - No odors/noise
  - Environmentally sensitive area
  - Designed to fit seamlessly within harbor
  - Lessons learned from their design/construction process



### **Brightwater Water Reclamation Campus**



### Tour Highlights

- Extensive community engagement throughout similar feasibility evaluation process
- Incorporated multi-phase equipment expansions in design
- <u>Zero</u> odor threshold from community
- Passive/educational uses incorporated throughout site



### Laying Out the Road Map









### **Contact Us**

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