MARCH 9<sup>TH</sup>, 2010

#### WATEREUSE CALIFORNIA 2010 ANNUAL CONFERENCE

#### IEUA WINNING RECYCLED WATER STRATEGY

PRESENTED BY: MIR FATTAHI, IEUA AND JOHN ROBINSON, MWH





**BUILDING A BETTER WORLD** 

# IEUA BACKGROUND

- IEUA was formed in 1950 to supply supplemental water to the region
- IEUA expanded to become a regional wastewater treatment agency with domestic and industrial disposal systems
- IEUA's service area encompasses 242 square miles in the southwest corner of San Bernardino County and includes the following facilities:
  - 5 Treatment plans with a total treatment capacity of 60 MGD, a composting facility partially owned by LACSD, and several domestic and industrial trunk and interceptor sewer lines
- Member agencies include the cities of Chino, Chino Hills, Fontana, Ontario, Montclair and Cucamonga Valley Water District and Monte Vista Water District

#### IEUA RECYCLED WATER PROGRAM

#### Agency Goal

- "The overall goal of the IEUA Recycled Water Program is to encourage maximum use of the recycled water resource for beneficial purposes, thereby conserving water within the Chino Basin and reducing the dependency on imported water."
- In December 2007, IEUA adopted an aggressive 3-Year Business Plan to increase the use of recycled water within the Agency's Service Area

#### **OVERVIEW**

- Regional Recycled Water System Overview
- Current Recycled Water Supply & Demand
- Grants and Loan Summary
- Recycled Water
  - Capital Project Summary
  - Groundwater Recharge
  - Pricing Strategy

#### **IEUA TREATMENT FACILITIES**



## NE AREA PROJECTS: 1299 E PIPELINE STEEL PIPE MANUFACTURING

Manufacturing 36" Steel Pipe – ARRA Field Verification



## NE AREA PROJECTS: 1299 E PIPELINE



Trenching on Day Canyon



36" Recycled Water Pipeline

#### NE AREA PROJECTS: 1299 E RESERVOIR & 1630 E PUMP STATION



Setting Forms for Pump Base Foundation



**Pouring Concrete for Pump Base Foundation** 



Setting of Vertical Turbine Pump Cans

## NE AREA PROJECTS: 1630 E PIPELINE SEGMENT A



Installation of 36" Pipeline on Victoria St.



Butterfly Valve Installation on Victoria St.



Installation of 36" Pipeline on Victoria St.



Installation of 36" Pipeline on Victoria St.

#### **STATUS UPDATE: RW CAPITAL PROJECTS SUMMARY**

	Project Name	Aug 2008 Cost Estimate (Millions)	Current Cost Estimate (Millions)
Iroved Projects	Northeast Area	\$ 44	\$28
	Northwest Area	40	27 - 31
	Priority Projects	0	4 - 22
App	Sub Total	\$84	\$59 - \$81
Planning Projects	Southern Area	\$29	\$11-18
	Central Area (Wineville Extension)	8	13 - 15.5
	Heritage Village Lateral	4	4
	Baseline Regional – Phase I	4	4
	Baseline Regional Phase II	19	15 - 19
	Sub Total	\$ 35	\$ 36 - \$42.5
	TOTAL	\$ 119	\$95 - \$123.5

# RECYCLED WATER SUPPLY & DEMAND FORECAST

	Current	Short Term	Ultimate
Plant Capacity	84 MGD	84 MGD	105-110 MGD
Projected Wastewater Influent	58 MGD	60 MGD	105 MGD
RW Storage	9 MG	20.5 MG	41.5 MGD
RW Connected Demand	27 MGD (30,300 AFY)	49 MGD (55,000 AFY)	82 MGD (91,746 AFY)

AF thousands	Current Fiscal Year	FY 2010/11	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15
Direct AF Sales	22	25	28	32	34	38
GWR AF Sales	10	15	17	18	19	20
	32	40	45	50	53	58

#### **RECYCLED WATER CUSTOMER DEMAND TYPES**

RW User Type	Actual Usage FY 07-08 (AFY)	Short Term Demand (AFY)	Ultimate Demand (AFY)
Prado Lake	1,030	3,000	3,000
Golf Course	1,196	4,500	9,000
Landscape Irrigation	2,278	14,500	37,000
Agricultural Irrigation	3,998	13,000	5,000
Industrial	50	1,500	6,000
Cooling Tower	1,102	3,500	5,000
Total Direct Sales	9,654	40,000	65,000
Groundwater Recharge	2,343	15,000	27,000 – 33,000
Total RW Demand	11,997	55,000	92,000 – 98,000

## IEUA GRANT AND LOAN SUMMARY

Completed Projects	Location	Project Cost	Grants	Schedule
San Antonio – Pipeline B	Ontario & Montclair	rio & Montclair \$10 M \$2.6 M		Complete
1158/1270 Pump Station	Rancho Cucamonga	\$10 M	\$10 M	
1158 Pipeline – A & B	Rancho Cucamonga	\$4 M	\$6.3 M	Complete
RP-4 1158 Reservoirs	Rancho Cucamonga	\$6 M		Complete
Total Completed Projects		\$30 M	\$8.9 M	
Projects in Design/Planning	Location	Project Cost	Grants	
NE Area Projects	Rancho Cucamonga & Fontana	\$30 M	\$11.2 M	Summer 2010
NW Area Projects Ontario, Rancho Cucamonga & Uplano		\$29 M*	\$8 M	Fall 2011
Southern Area Projects	Chino & Chino Hills	\$20 M		Pending Approval
RP-5 RWPS Expansion	Chino	\$1.5 M		May 2010
Total Projects Design/Planning		\$80.5 M	\$19.2 M	

#### **Groundwater Recharge Background**

oIEUA started recycled water recharge in Ely Basin in 1999: 500 AFY

•With the completion of the Phase I recharge program and RWQCB/DPH permit approval, seven basins available for recycled water recharge with a capacity of over 7,200 AFY

 October 2009 RWQCB/DPH permit amendment modifying averaging period (5yrs to 10yrs) and diluent blending criteria increased capacity to over 10,000 AFY

 San Sevaine and Victoria Basins online Sept, 2010 increasing the combined recycled water recharge capacity to over 20,000 AFY





#### **Groundwater Recharge History**



# IEUA DEMAND MANAGEMENT

#### **Operational Goal**

- Industrial and irrigation demands met by coordinated demand management system
- Recharge all surplus recycled water into ground water recharge
- Quarterly meetings are being scheduled with large customers and member agencies to:
  - Potentially schedule to offset large agricultural users demands
  - Work with Parks and Schools to irrigate within their district on alternate days

#### **KEY NEW WATER RATE ISSUES:**

- MWD water rates increasing much faster (50+%) than assumed a few years ago
- IEUA recycled water debt service significantly lower because of Fed/State grants and SRF low interest rates
- As a result, MWD LRP revenue of \$250/AF not justified because IEUA overall costs of \$245/AF much lower than MWD current effective rate of \$798/AF

#### MWD EFFECTIVE RATE COMPARISON TO AGENCY RATE



Draft and Preliminary Information 1/7/2010

## FY 2010/11 TOTAL ESTIMATED COSTS

#### FY 2010/11 Total Estimated Costs

\$9.8 Million / 40,000 AF Total Deliveries = \$245/AF



#### **RECYCLED WATER RATE SURVEY – SOUTHERN CALIFORNIA AGENCIES**

Wholesale Agencies						
Agency		Туре	Notes	Rate \$/AF		
Calleguas Municipal Water District		Wholesale	Base Rate	\$750		
Central Basin Municipal Water District		Wholesale	Tiered Rates	\$ 275 - \$ 497		
Eastern Municipal Water District		Wholesale	Tiered Rates	\$181-\$288		
Inland Empire Utilities Agency		Wholesale	Base Rate	\$75		
Irvine Ranch Water District		Retail & Wholesale	Base Rate	\$449		
MWD		Wholesale	Tiered Rate	\$0-\$250		
Orange County Water District		Wholesale	Green Acres rate	\$326		
Upper San Gabriel Water District		Wholesale	Various Customer Agmnt	\$ 315-360		
West Basin Municipal Water District		Wholesale	Tiered Rates	\$ 501 - 1,195		
Retail Agencies						
Agency	Туре		Notes	Rate \$/AF		
Burbank	Retail	Recycled Water Service		\$823		
	ne tall	School Recycled Water Service		\$414		
City of Carlsbad	Retail	Base Rate		\$ 1,098		
City of Escondido	Retail	Base Rate		\$ 976		
Fallbrook Public UD	Retail	Base Rate		\$719		
City of Glendale	Retail	Tiered Rates		\$238 - \$ 475		
Las Virgenes Municipal Water District		Tiered Rates for Las Virgenes Val	ley Zone	\$818-\$1,355		
° .	Tiered Rates for Western / Calabasas Zone		asas Zone	\$510-\$1,446		
LA Dept of Water & Power	Retail	Tiered Rates		\$1,227 - \$1,913		
Long Beach Water Department	Retail	Non Peaking – Peaking Rates		\$ 531 - \$ 744		
Olivenhain Municipal WD	Retail	Base Rate		\$1,019		
Otay Water District	Retail	Base Rate		\$1,124		
City of Poway	Retail	Base Rate		\$1,294		
Rincon Del Diablo MWD	Retail	Base Rate		\$897		
City of San Diego	Retail	Base Rate		\$ 348		
San Dieguito Water District	Retail	Base Rate		\$1,124		
City of Santa Barbara	Retail	All Usage not applicable for irrigation		\$784		
Sante Fe Irrigation District	Retail	Base Rate		\$ 1,133		

#### CONCLUSION

- Short Term (Business Plan 50,000 AFY) Strategy:
  - IEUA RW storage capacity increase
    - From 9 MG to 12.5 MG by Summer 2010
    - From 12.5 MG to 20.5 MG by Summer 2012
- Long Term (Ultimate– 98,000 AFY) Strategy:
  - IEUA RW Operational capacity increase
    - Phase the increase in capacity to meet the demands
  - IEUA RW storage capacity increase
    - Phase the storage capacity increases to meet the demands
- Demands will be optimized by Demand Management
- Continue to Pursue Grants and Loans

# Questions?