



SRCSD's Water Recycling Program Present & Future Water Recycling Efforts

Presentation to the SCGA - September 9, 2009
by Ruben Robles & Jose Ramirez

SRCSD's Services & Regional Setting

SRCSD's Services

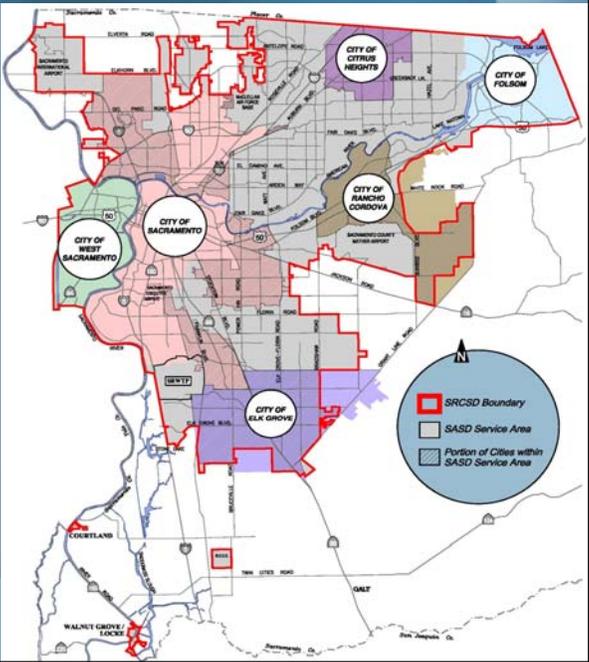
- Regional conveyance, treatment, and reuse of wastewater
- 1.3 million residents
- 4 contributing agencies

Water Resources

- 20 + water purveyors
- Surface water, groundwater, recycled water

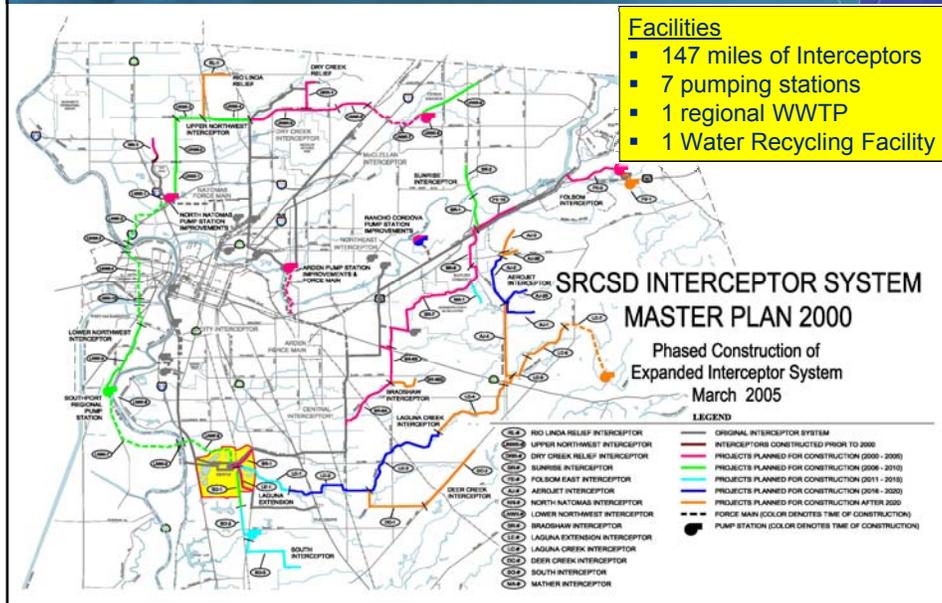
Land Use Authority

- Cities and Sacramento County



The map displays the Sacramento Regional County Sanitation District (SRCSD) boundary in red. Within this boundary, various cities are shown with their own service areas: City of West Sacramento (green), City of Sacramento (pink), City of Elk Grove (purple), City of Rancho Cordova (brown), City of Citrus Heights (blue), and City of Folsom (light blue). A legend indicates that the red outline is the SRCSD Boundary, the light blue shaded area is the SASD Service Area, and the darker blue shaded area represents the Portion of Cities within SASD Service Area. Major roads like I-5, I-80, and SR-99 are also visible.

SRCS D Facilities & Operations



SRCS D's Water Supply Portfolio

Water Source	ADF* (mgd)	Annual Volume (Ac-Ft/Yr)	% of Total Volume	Existing Use
SRWTP (SE**)	153	171,000	99.36%	Discharged into the Sacramento River
WRF PI (TE***)	1 - 3.5 (seasonal)	1,100	0.64%	Urban Non-Residential Landscape Irrigation in Elk Grove + Industrial/Landscape Use at SWRTP
Total		172,100	100%	

*ADF = Average Daily Flow
 **Average flow/volume for the last 8 years.
 *** Avg. flow/volume for the last 3 years.

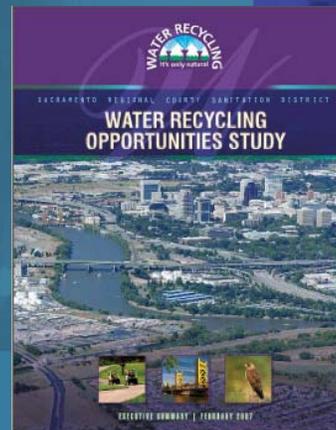
Water Recycling Program Timelines

- **1990s – Initiated Partnership with SCWA**
 - Investigation & Conceptual Planning
 - Public Outreach Efforts Initiated
 - Purple Pipe Installation w/Base Infrastructure
- **2000s**
 - Construction of 5-mgd WRF (1999-2002)
 - SRCSD/SCWA Wholesale Agreement (2002)
 - Start of recycled water deliveries(April 2003)
 - Water Recycling Opportunities Study (2007)
 - WRF Phase II Expansion – Design (2009)
- **Future Goals**
 - Build Phase II WRF Expansion Project (2010-2014)
 - Develop a Large-Scale Water Recycling Program

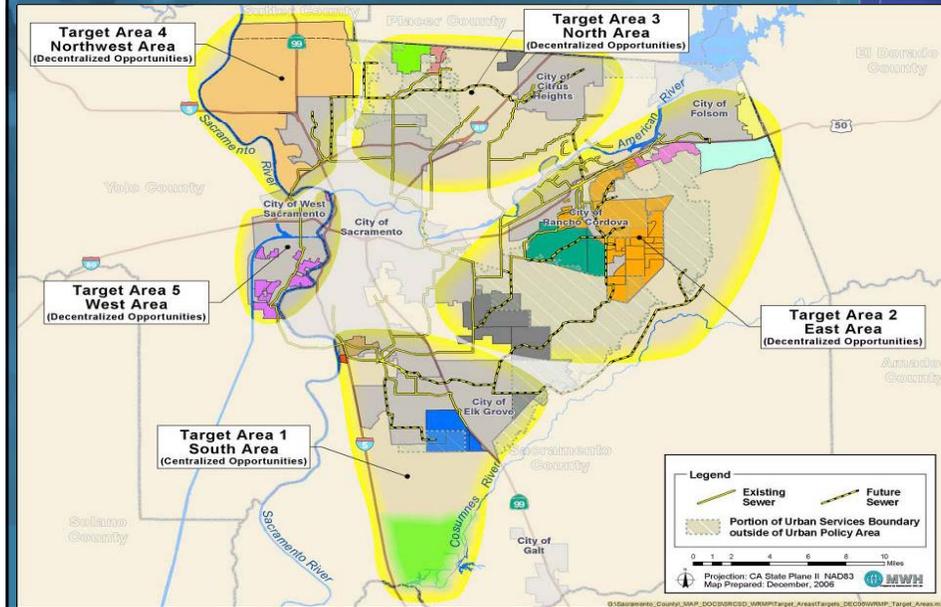
Water Recycling Opportunities Study (WROS)

Purpose: To identify, evaluate, and prioritize projects for potential use of recycled water to meet the strategic goal of recycling **30-40 mgd** of water over the next 20 years.

- Completed in **2007**
- Evaluated **5 Target Areas** in the Sac. region.
- Identified, Ranked, and Prioritized **18 Potential Recycled Water Projects**
- **Recommendations**



5 Target Areas Evaluated in WROS



Summary of Potential Recycled Water Projects Identified in the WROS

Target Area No.	Potential Water Recycling Project	CDP 3.0 Ranking	Recycled Water Demands			Estimated Capital Costs	
			Average Day Demand (MGD)	Peak Day Demand (MGD)	Annual Demand (AF/Year)	(\$ in millions)	EUAC/AF (\$/AF)
1	South County Ag. Lands	2	9.3	16.5	10,438	\$48	\$245
1	Phase II Developments & South County Ag. Lands (2,000 Acres Ag Lands Option)	1	11.6	22.3	13,014	\$89	\$354
1	Phase II Developments	3	2.3	5.8	2,576	\$48	\$728
1	BCGC	4	0.3	0.7	591	\$5	\$966
1	BCGC and Delta Shores	5	1.0	2.2	985	\$15	\$1,025
1	Delta Shores	8	0.7	1.5	394	\$13	\$1,284
2	Mather Areas	7	2.4	5.9	2,598	\$55	\$1,781
2	City of Folsom & Glenborough (Scenario C)	16	1.7	4.4	1,920	\$83	\$3,010
2	City of Rancho Cordova, City of Folsom, Glenborough, and Mather Areas	9	7.8	20	8,819	\$318	\$2,515
2	City of rancho Cordova & Mather Areas	6	6.2	15.7	6,899	\$224	\$2,537
2	City of Folsom & Glenborough (Scenario D)	12	8.6	21.9	9,701	\$465	\$3,252
2	City of Rancho Cordova	10	3.8	9.8	4,301	\$89	\$2,554
3	Rio Linda/Elverta – Cherry Island/Gibson Ranch	13	1.3	3.2	1,411	\$32	\$1,866
3	Rio Linda/Elverta – Cherry Island/Gibson Ranch & Elverta Specific Plan	11	1.6	3.9	1,713	\$40	\$1,902
3	Rio Linda/Elverta Area – Elverta Specific Plan	18	0.3	0.7	302	\$17	\$4,430
4	Natomas JV Area	15	4.4	11.1	4,928	\$157	\$2,358
4	Rio Linda/Elverta – Elverta Specific Plan and Natomas JV Area	14	4.7	11.8	5,230	\$177	\$2,469
5	City of West Sacramento	17	1.4	3.8	1,736	\$63	\$2,609

Existing (Phase I) & Proposed (Phase II) Expansion to WRP in Elk Grove

Key Participants

- SRCSD, SCWA, Elk Grove

Phase I

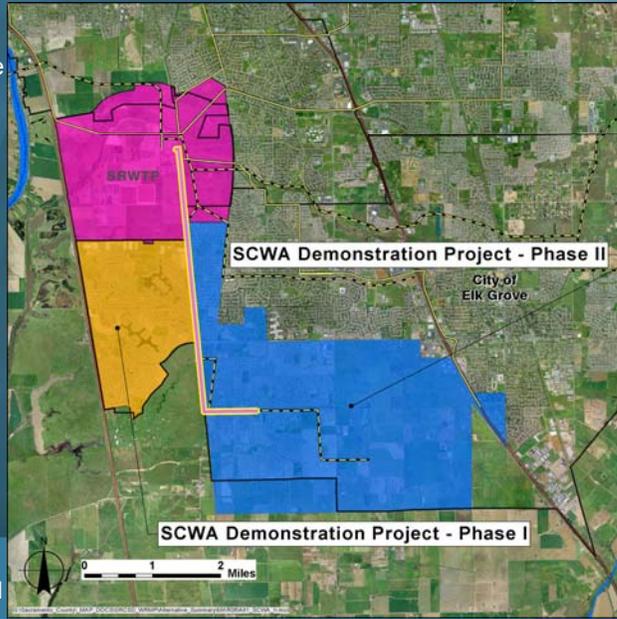
- WRF 5 mgd capacity
- Operational since 2003
- Over 50 RW customers
- RW demand ~1,100 AFY

Phase II

- Expand WRF to 10 mgd
- 24" T-main, Storage tanks
- 55/106 sites already built
- RW demand 2,650 to 3,500 AFY

Current Status

- WRF PII is in design
- SCWA's T-Main is on hold



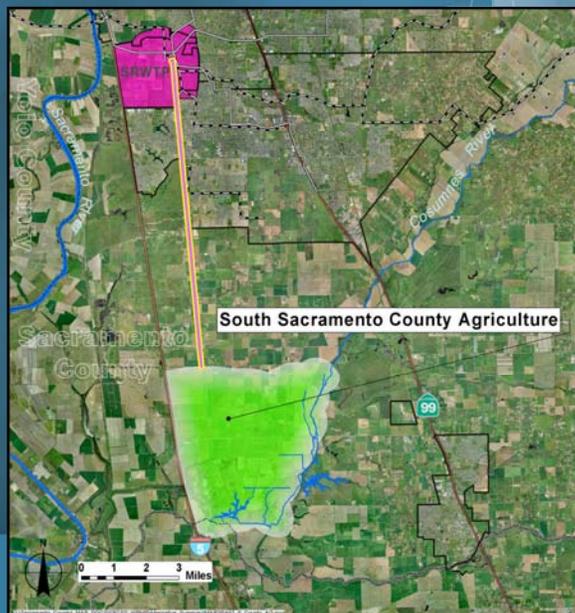
South Sacramento County Agriculture & Habitat Lands (South County) Project

Key Participants

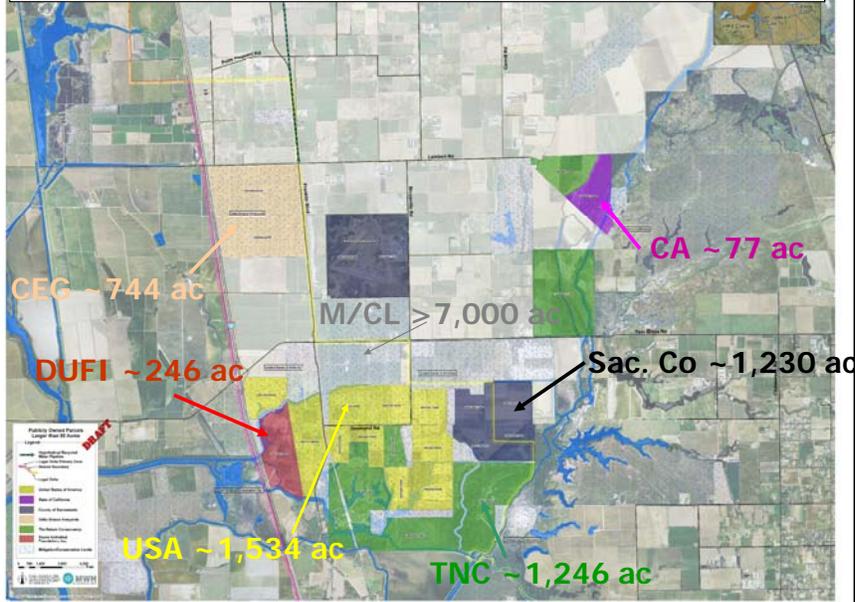
- SRCSD, Elk Grove, TNC

Project Elements

- Centralized Project
- Use of secondary effluent (RW) to irrigate Agricultural & Mitigation Lands
- 2,000 to 8,000 acres of Ag & Mitigation lands could use RW
- Pumping Facilities
- 10 mile long 36"-48" T-Main



Existing Mitigation/Conservation and Publicly Owned Lands
Larger than 50 Acres



Estimated Irrigation Demands

Water Demands	Irrigation Demand for 2000 gross acres (1800 irrigated acres)	Irrigation Demand for 8000 gross acres (7200 irrigated acres)
Average Demand (MGD)	9.3	37.3
Peak Demand (MGD)	18.7	74.7
Ac-Ft/Yr	10,438	41,760

Capital and O&M Costs for 2,000 Acre Option

	Capital	O&M Annual Cost	Total EUAC with Capital	EUAC per Ac-Ft
SRWTP	\$5,550,000	\$261,000	\$502,000	\$48
T-Main	\$35,689,000	\$98,000	\$1,642,000	\$157
On-Site	\$14,787,000	\$221,000	\$861,000	\$82
Total	\$56,026,000	\$580,000	\$3,005,000	\$288

Capital and O&M Costs for 8,000 Acre Option

	Capital	O&M Annual Cost	Total EUAC with Capital	EUAC per Ac-Ft
SRWTP	\$24,641,000	\$2,578,000	\$3,645,000	\$87
T-Main	\$47,585,000	\$131,000	\$2,190,000	\$52
On-Site	\$58,139,000	\$579,000	\$3,095,000	\$74
Total	\$130,365,000	\$3,288,000	\$8,930,000	\$214

Challenges for the Water Recycling Program

- The SRCSD is **not a water purveyor nor a land use authority**
- Lack of adequate **funding**
- Water **rights/legal issues**
- Lack of **Groundwater Banking & Accounting System**
- User **distance** from source of supply
- **Costs** of potable water supplies in the region can be lower than recycled water at this time

Why Do More Water Recycling?

- Limited water supplies & increasing water demands
- Increased competition for water supplies
- State demand for water has placed the Delta in jeopardy
- Future water supplies are uncertain, and agencies need to plan for sustainable, reliable, and drought-proof water supplies
- Effluent management options



South County Project – Next Steps

- Engage stakeholders to identify partners & to refine acreage and water use/demands
- Secure Ag/mitigation lands
- Develop a Financing Plan & Revenue Program
- Develop process to secure the water rights involved
- Develop process to obtain a permit for a new point of discharge
- Seek Funding Opportunities
- Evaluate use of RW for Wetlands???
- Develop PoA or MOU between partners
- Support preparation of WAF or Banking mechanism

Questions & Contact Information

CONTACT

- **Jose Ramirez**
ramirezj@sacsewer.com or (916) 876-6059
- **Ruben Robles**
roblesr@sacsewer.com or (916) 876-6119
- **Stan Dean**
deans@sacsewer.com or (916) 875-9101

