

Maintaining NPR System Reliability to Support Regional Water Supply

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South Bay Water Recycling
WaterReuse 2015



Environmental Services

*Delivering world class utility services and programs
to improve our health, environment and economy*

South Bay Water Recycling – City of San José



Regulatory Origins of Recycled Water

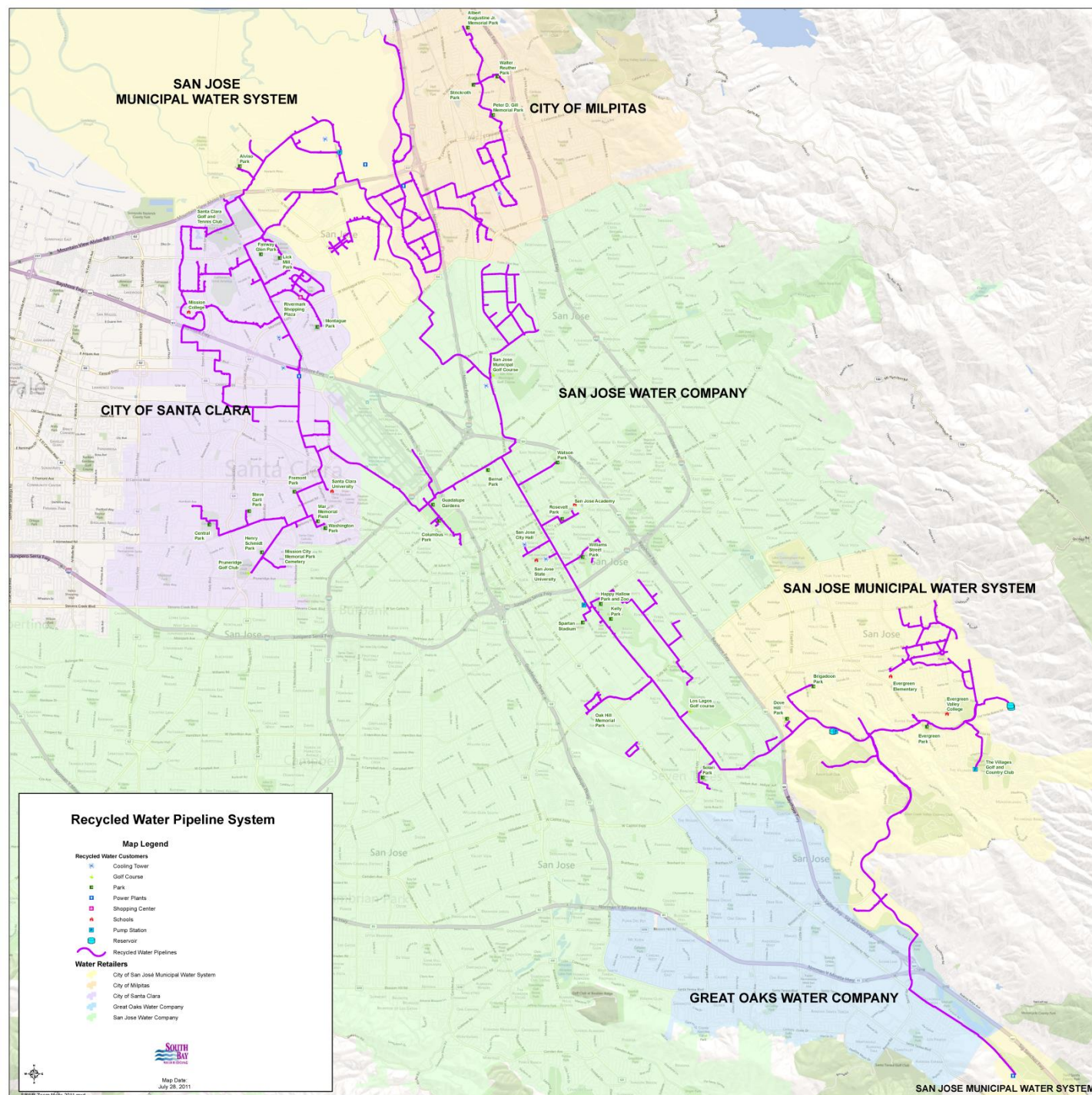
- Regulatory Requirement - NPDES
- Effluent well below 120 MGD threshold
- Finite supplies for Bay Health, NPR and Potable Reuse



SBWR

System Statistics

- 142 Miles Pipeline
- 785 Customers
 - Irrigation 63%
 - Industrial 37%
- Average 11,000 AFY
 - Annual distribution
- 3 Reservoirs
 - 9.5 MG storage
- 5 Pump Stations
 - max 54 MGD



Recycled Water Pipeline System

Map Legend

Recycled Water Customers

- Cooling Tower
- Golf Course
- Park
- Power Plants
- Shopping Center
- Schools
- Pump Station
- Reservoir
- Recycled Water Pipelines

Water Retailers

- City of San Jose Municipal Water System
- City of Milpitas
- City of Santa Clara
- Great Oaks Water Company
- San Jose Water Company

South Bay Water Services

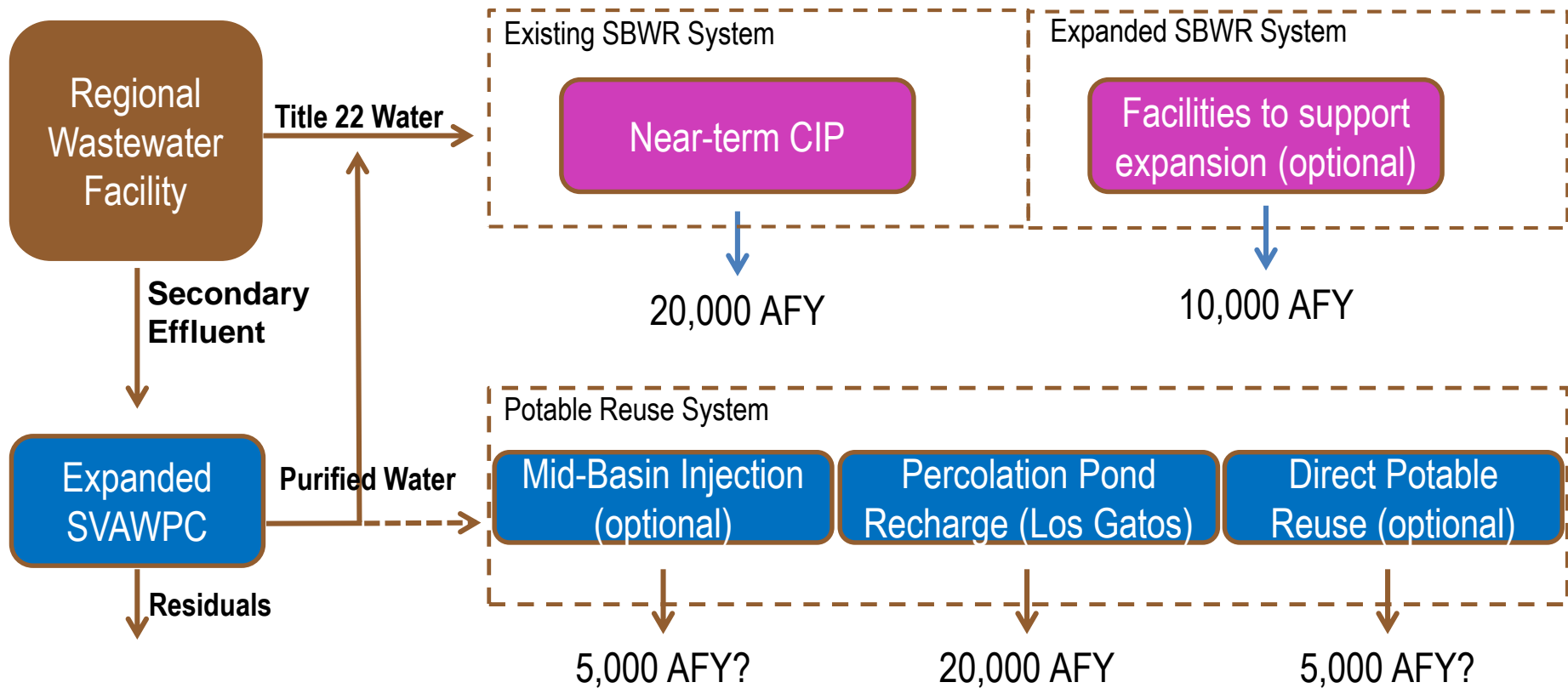
Map Date: July 28, 2011



Water Supply Focus

- District Water Supply Goals
- Drivers for Increased Use
 - Truck Fill
- Advanced Treatment Pilot
 - Improved Water Quality
 - Production streamlining

Water Supply Focus for Future of Recycled Water



NPR 2014 Demand and 2020 Estimates

Retail Agency	2014 /15 Actual Use (AFY)	Master Plan Near-Term Estimate (AFY)	2020 Total Planned Use (AFY)
City of Milpitas	940	100	1,040
City of Santa Clara	3,558	1,100	4,658
San José Municipal Water	4,485	1,500	5,985
San José Water Company	1,931	1,200	3,131
Total	10,944	3,900	14,814

SBWR Near-Term CIP

Project Name	Estimated Cost Range
Increase Production Capacity to 53 mgd	
•Filter Flux Rate	\$75,000
•Free Chlorine Disinfection Studies/Implementation	\$500,000 - \$1,000,000
Improve Distribution System Stability	
•Upgrade Pump Station 5 Bypass	\$300,000 - \$500,000
•Zone 1 Storage	\$33 million
Restore/Rehabilitate Existing Condition-Related Deficiencies	
•PS 5 VFDs	\$60,000
•Other Condition Assessment Projects (2014-2015 Projects)	\$2 million
•Valve Exercising Program	<\$100,000/year
•PS 5 and PS8/11 Electrical Room HVAC replacement	\$150,000 – \$250,000
Update Control Strategies/Equipment to Improve Operational Efficiency	
•Filter Backwash Automation	\$100,000 – \$500,000
•Distribution System Automation	\$650,000 – \$2,150,000
•Automate Zone Bypass Valve at Pump Station 8/11	<\$50,000
Provide Operator Operations Support	
•Update SBWR Systems Operations Manual	\$100,000 - \$200,000
Total Estimated Cost of 5 Year CIP	\$40 - \$50 million

Trend to Operational Cost Recovery

Fiscal Year	Revenue	Expenses	Profit/Loss
2005-2006	\$1,468,689	\$2,829,552	(\$1,360,863)
2006-2007	\$1,775,268	\$3,372,250	(\$1,596,982)
2007-2008	\$2,254,006	\$3,776,713	(\$1,522,707)
2009-2009	\$2,670,766	\$4,676,028	(\$2,005,262)
2009-2010	\$2,584,734	\$5,355,191	(\$2,770,457)
2010-2011	\$2,595,114	\$5,609,799	(\$3,014,685)
2011-2012	\$3,383,121	\$5,374,827	(\$1,991,706)
2012-2013	\$4,465,734	\$6,004,282	(\$1,538,548)
2013-2014	\$6,272,939	\$6,610,696	(\$ 337,757)
2014-2015 proj.	\$6,788,467	\$6,052,000	\$ 736,467

Program Goals: Maintain and Optimize

- Operational Efficiencies for Existing Infrastructure
- Support Recycled Water needs of Local Agencies
- Ensure that Revenue Pays for Operating and Maintaining the Utility – Evolving Rate Strategy
- Collaborate with District for Potable Reuse Opportunities



Thank you!



Our passion. Our city. San Jose

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