



Santa Rosa Incremental Recycled Water Program Update

Windsor Town Council

November 1st, 2006

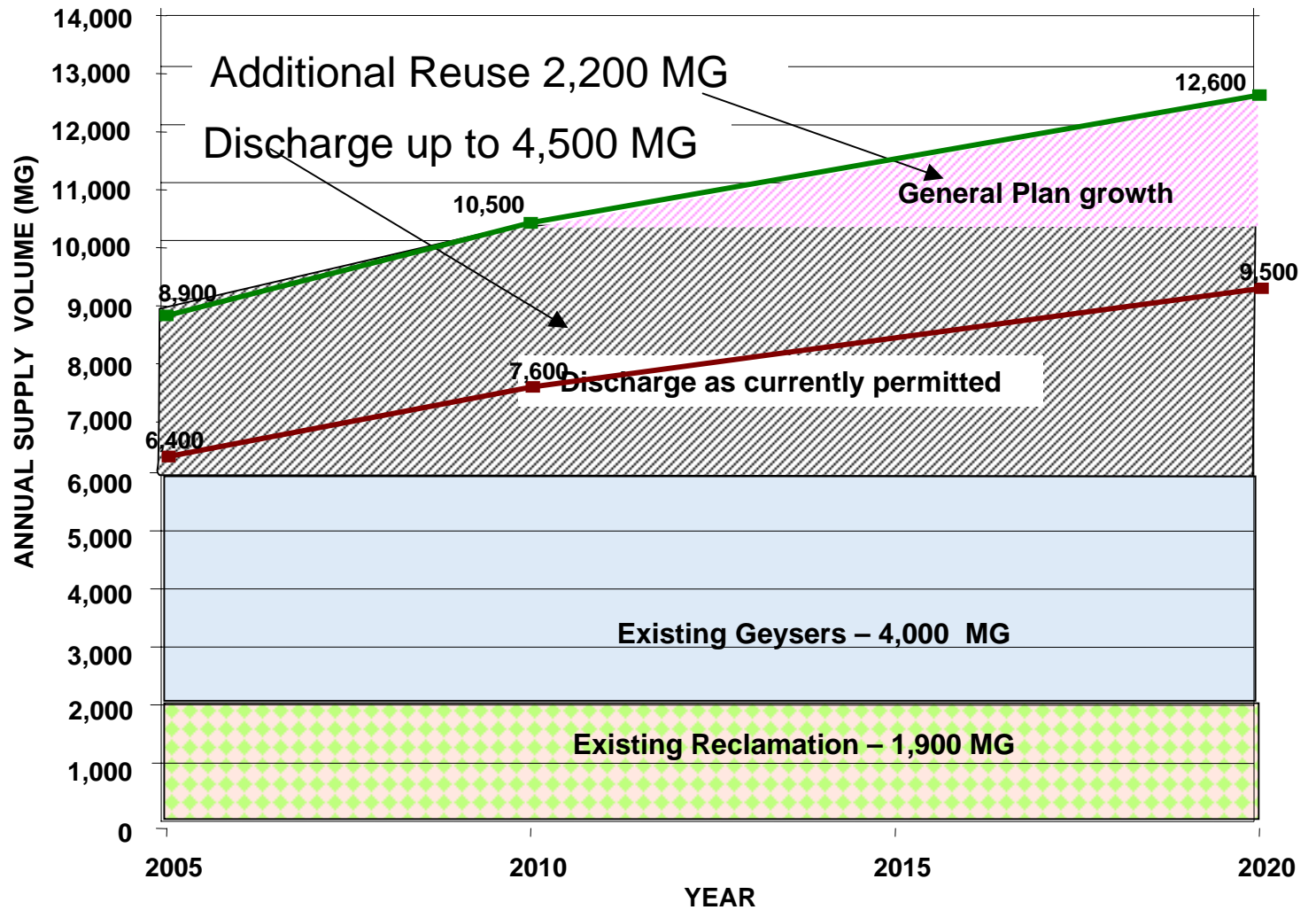


Agenda

- IRWP Update
 - Master Plan
 - Santa Rosa Urban Reuse Project
 - Seasonal Storage Project
 - Discharge Compliance Project
- Partnering Opportunities

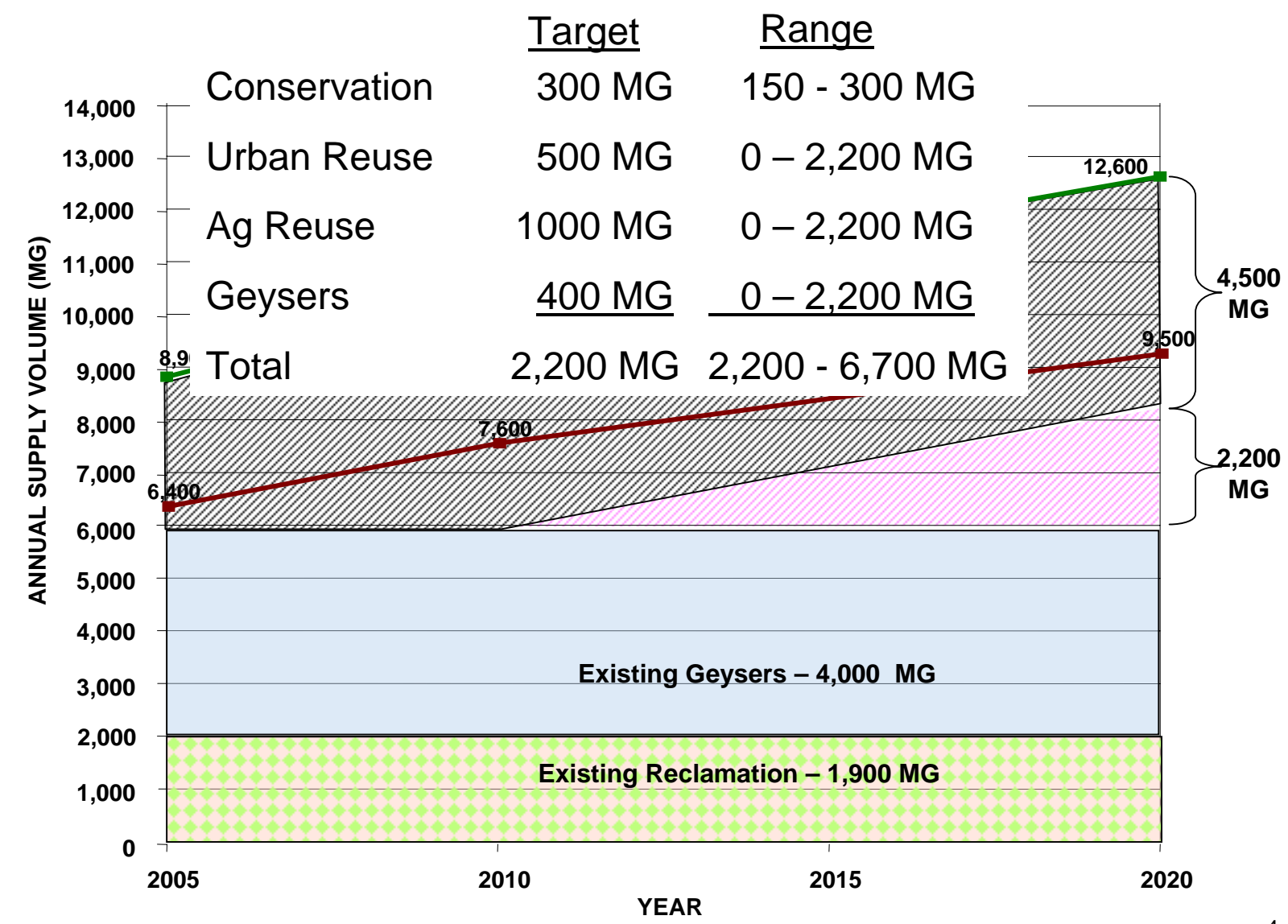


Master Plan





Master Plan





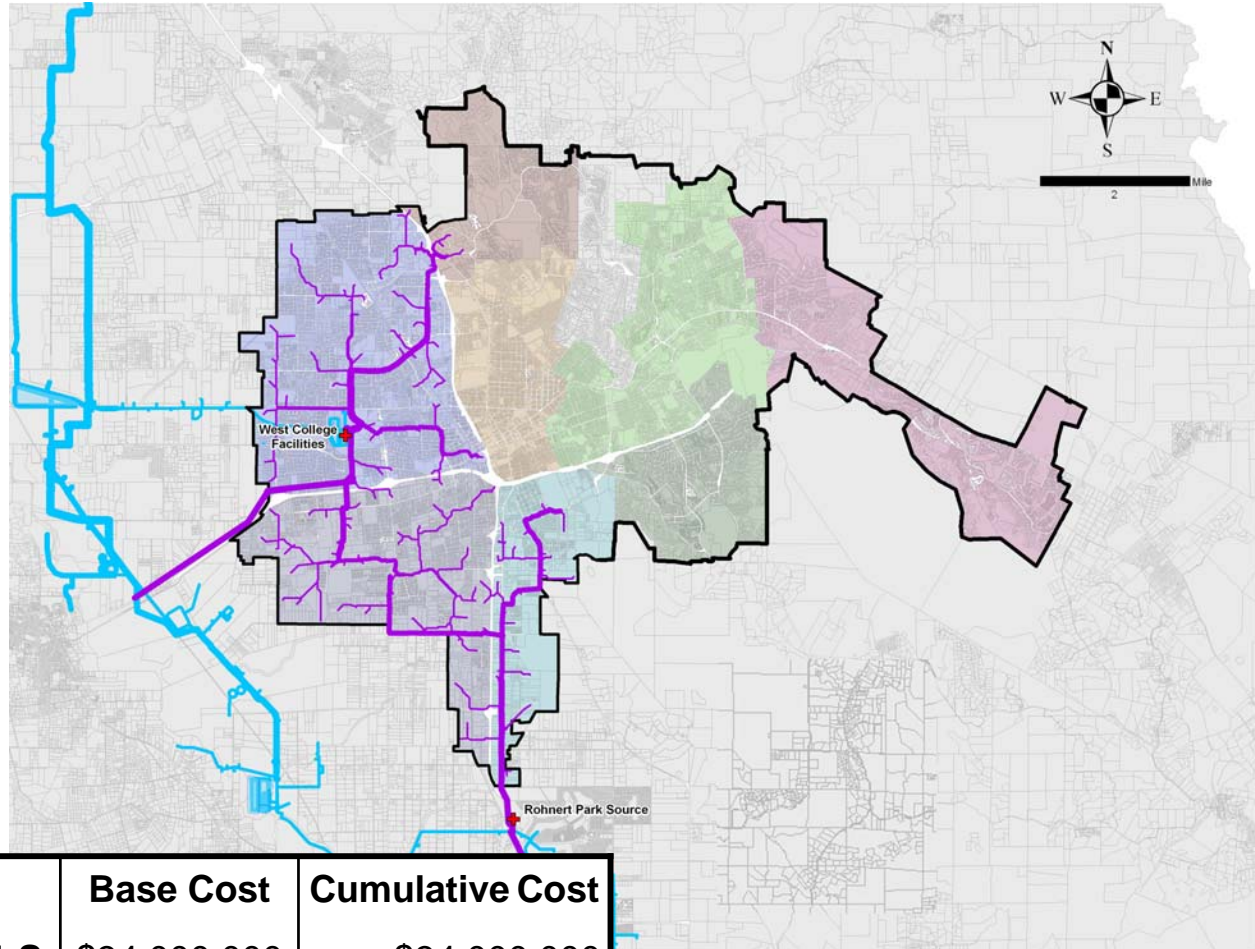
Santa Rosa Urban Reuse Project

- Serve existing and future customers that would otherwise use potable supply
- 1,000 MG/year or 3,000 AF/year, 50% future expansion potential
- \$120 million
- Current status: preliminary design





Phase 2 West - 250 MGY

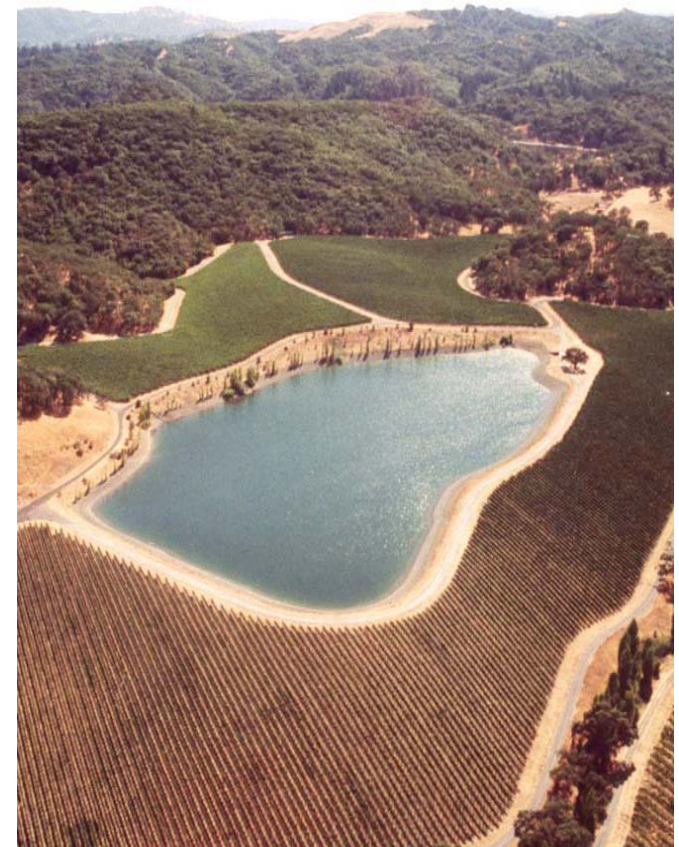


ALT.	Base Cost	Cumulative Cost
Phase 1 S	\$34,000,000	\$34,000,000
Phase 1 W	\$35,000,000	\$69,000,000
Phase 2 S	\$26,000,000	\$ 95,000,000
Phase 2 W	\$24,000,000	\$119,000,000



Seasonal Storage Project

- Additional storage needed
 - SR Urban Reuse Project
 - Discharge Compliance Project
- Feasibility Study
 - 34 sites being evaluated
 - Partnership at S&T
 - W Rvr Rd @ Eastside Rd
 - Many others
 - 7 “sites” to be short-listed
 - 500 – 1,000 MG storage goal
 - CEQA Process
 - Notice of Prep – Jan '07
 - Project Draft EIR – Sep '07
 - Project Selection – Jan '08





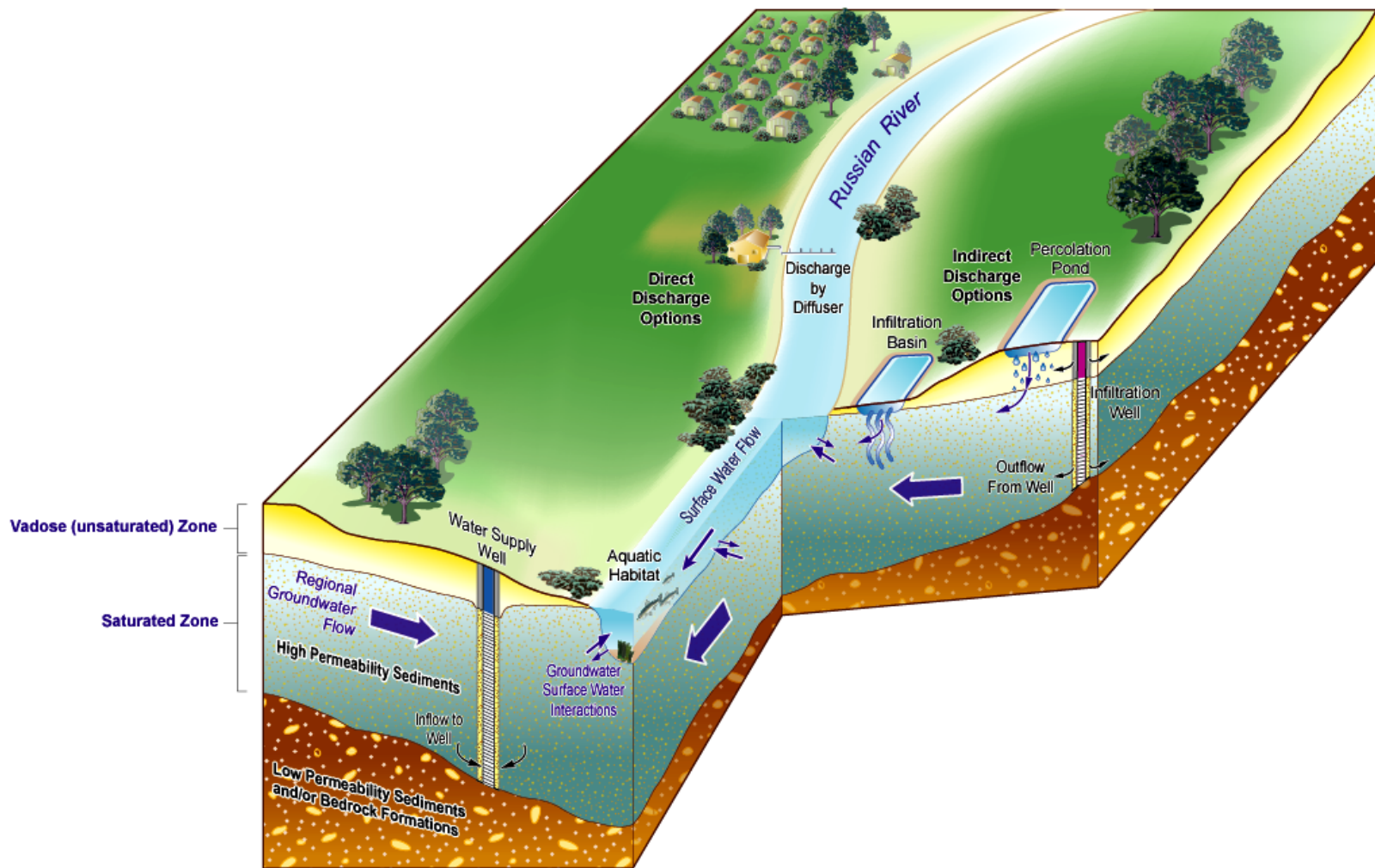
Discharge Compliance Project

- Why? – increasingly stringent regulations
- What?
 - Only tertiary water
 - No change in discharge volume relative to existing permit
- How?
 - Continued Laguna discharge
 - Direct discharge to River
 - Indirect discharge to River
 - Combinations





Russian River and Groundwater Relationships to Discharge Compliance





Discharge Compliance Project

- Why? – increasingly stringent regulations
- What?
 - Only tertiary water
 - No change in discharge volume relative to existing permit
- How?
 - Continued Laguna discharge
 - Direct discharge to River
 - Indirect discharge to River
 - Combinations
- Where?





Discharge Siting Criteria

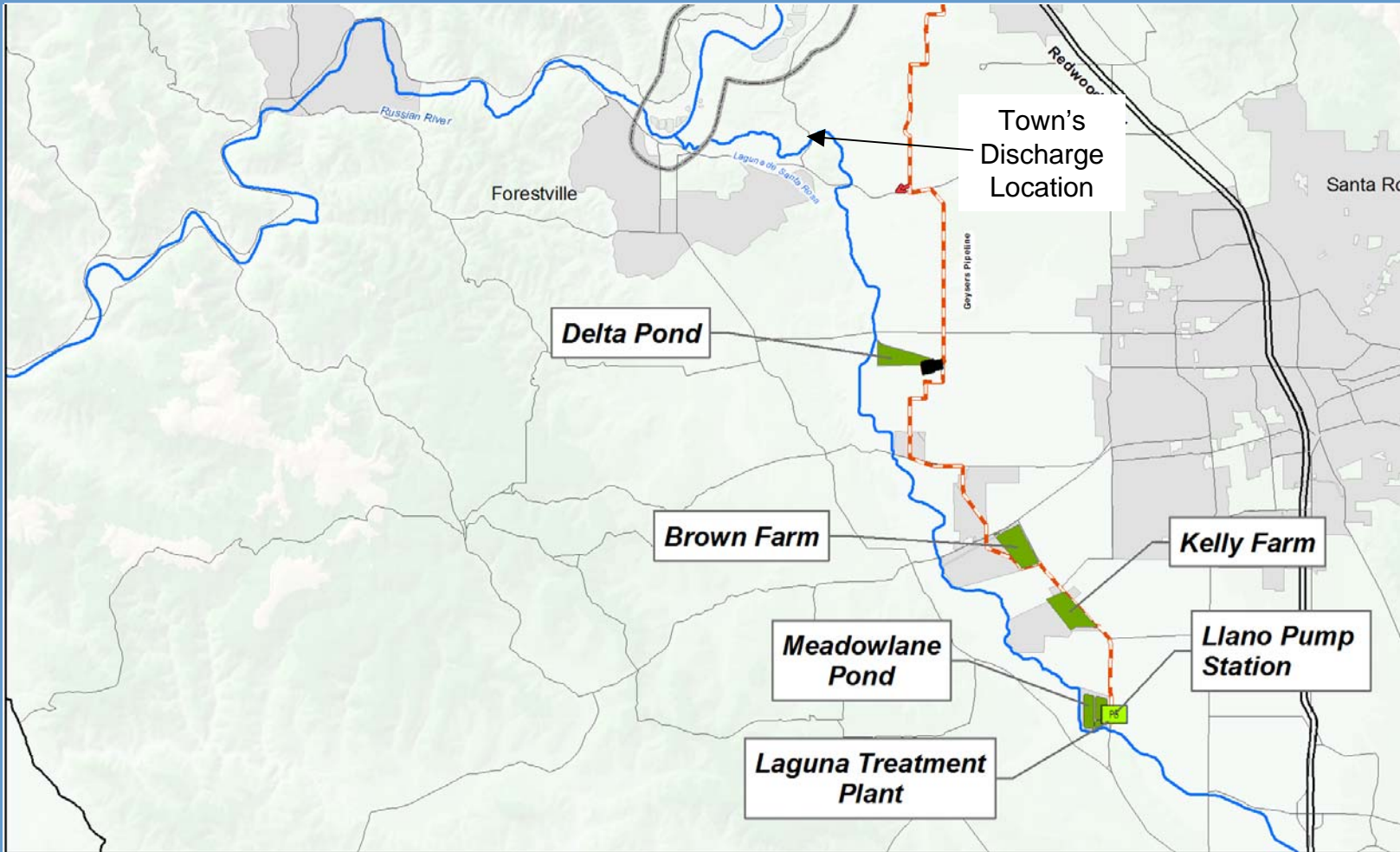
Table 1. - Discharge Site Evaluation Criteria

Exclusionary Criteria		Direct	Indirect
	Minimum Site Acreage	X	X
	River Channel Stability and Scour	X	-
	Absence of Suitable Alluvium	-	X
	Within Source Area of Municipal Supply Well	-	X
Preferential Criteria			
Cost	Facilities Construction	X	X
	Operations & Maintenance	X	X
Engineering	Reliability	X	X
	Flexibility	X	X
	Liquefaction Potential	X	X
	Seismic Stability	X	X
	Constructability	X	X
	Mixing Zone Requirements	X	-
	River Navigation Impacts	X	-
	Proximity to Future Recycled Water Customers	X	X
	Soil Infiltration Capacity	-	X
	Soil pH	-	X
	Depth to Groundwater	-	X
	Permeability	-	X
	Subsurface Travel Time and Distance	-	X
	Alluvial Storage Capacity	-	X
	Alluvium Spill Point	-	X
	Discharge Zone Size	-	X
	Flood Plain	-	X
Proximity to Existing Wells	X	X	
Greenhouse Gas Production/Energy Use	X	X	
Logistics	Discharge Permitting (Regional Board)	X	X
	Construction Permitting (Corps of Engineers, others)	X	X
	Property Acquisition	X	X
	Schedule Compliance	X	X





Existing Laguna Facilities





Criteria Used to Identify Sites In Shaded Area

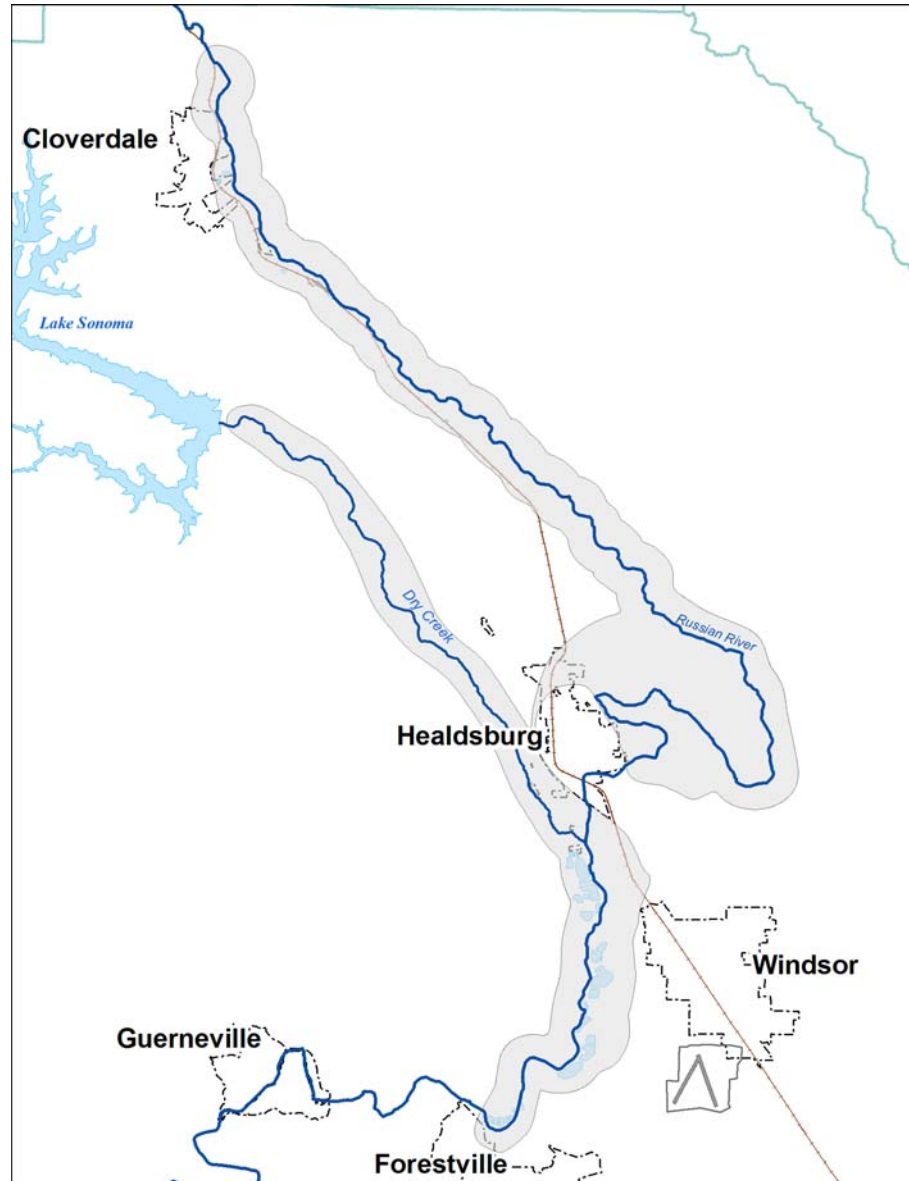


Figure ES-5 excerpt





Geysers Pipeline Alignment

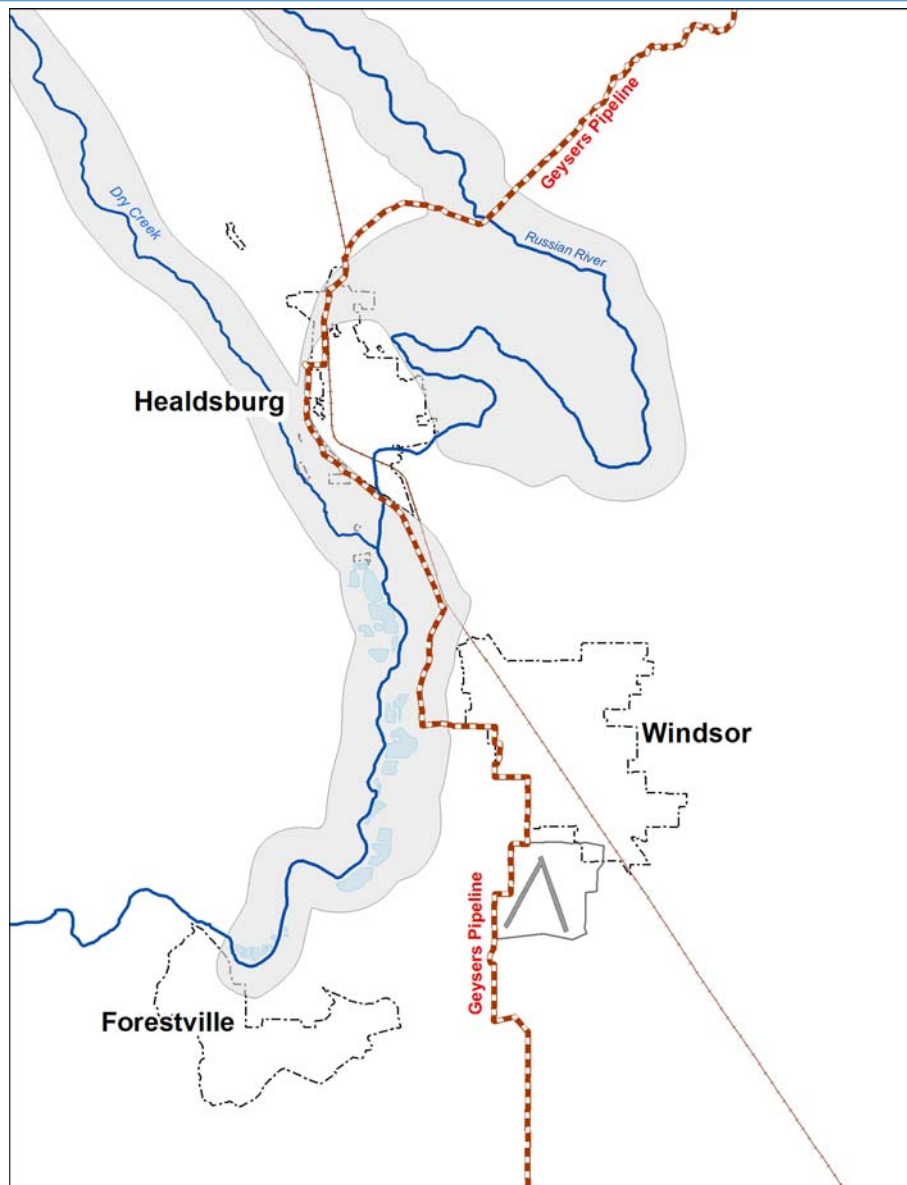


Figure ES-5 excerpt





Candidate Direct Discharge Sites

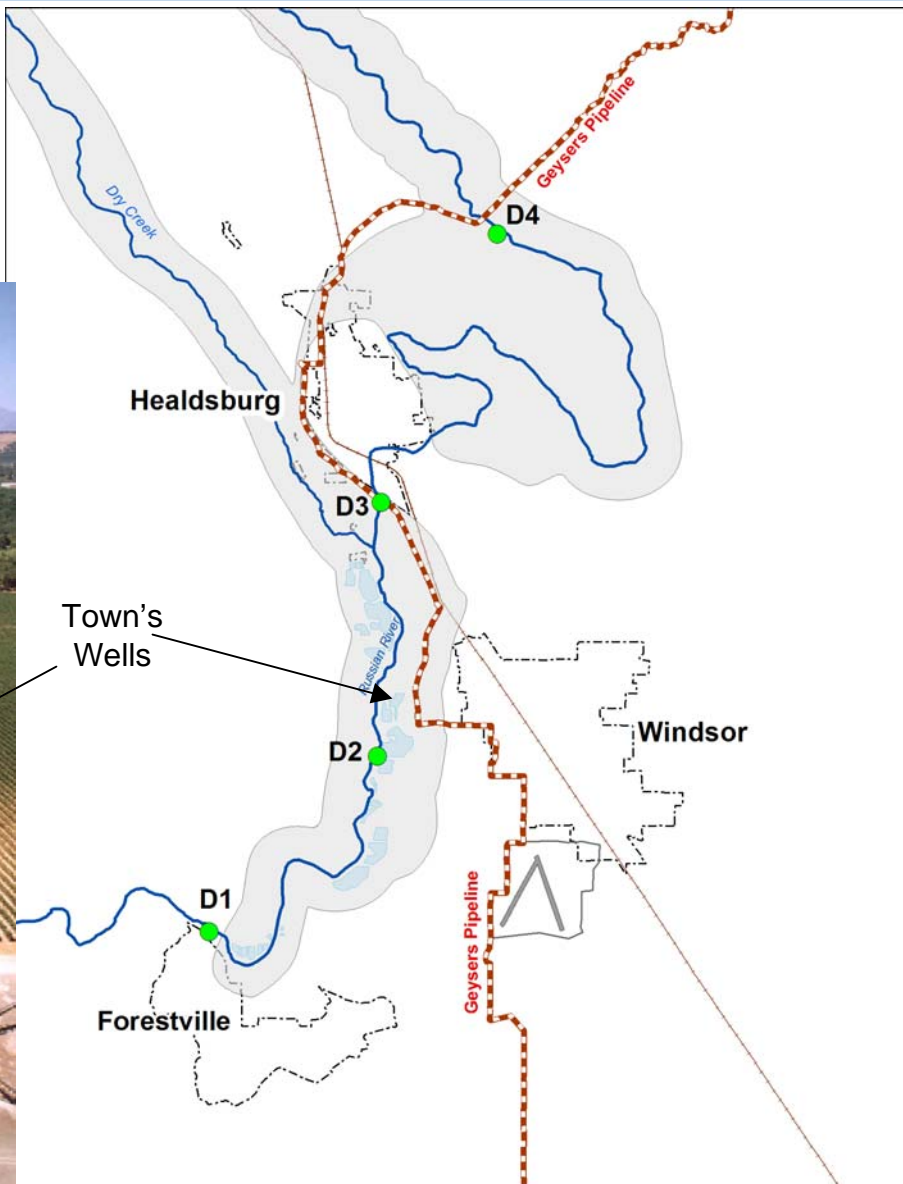
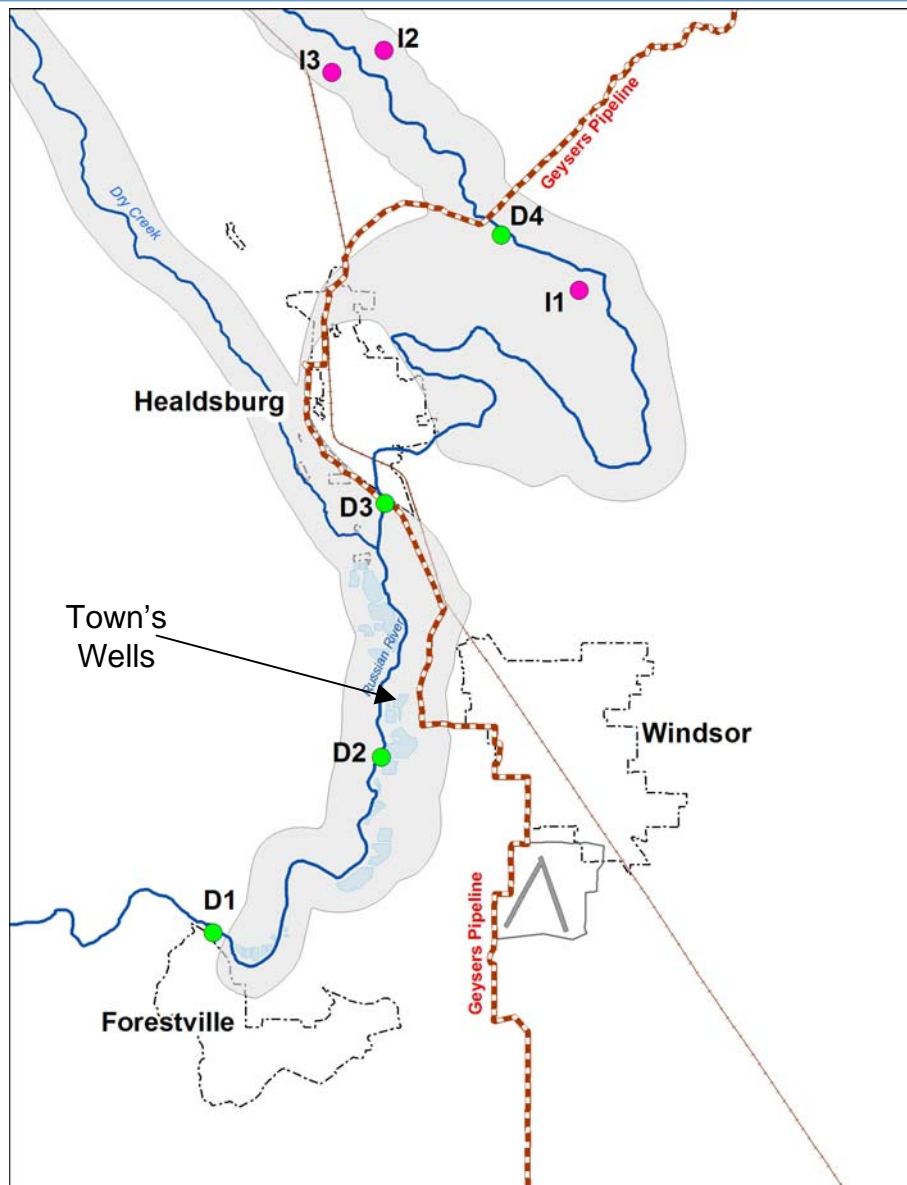


Figure ES-5 excerpt



Candidate Indirect Discharge Sites





Candidate Pipeline Alignments and Pump Station Sites

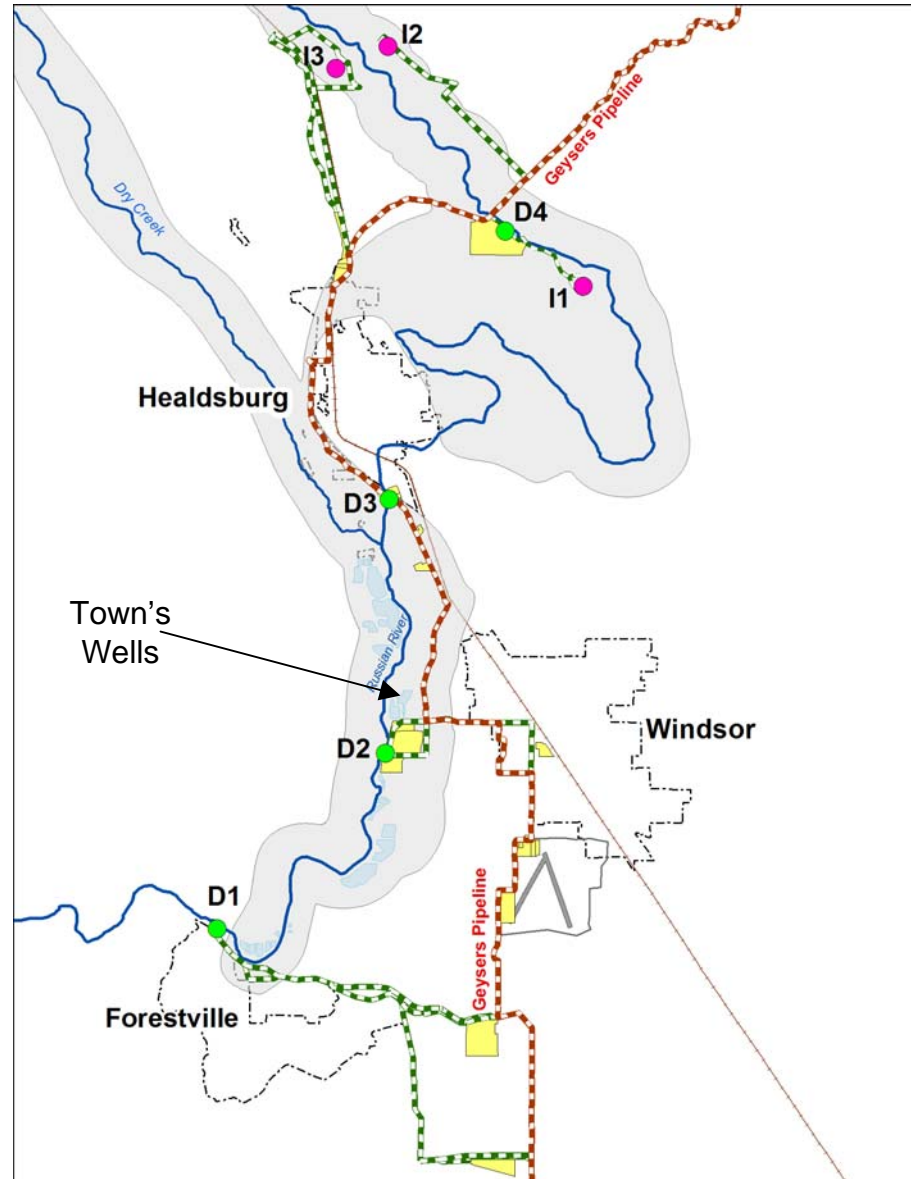


Figure ES-5 excerpt





Technical Studies - Direct Discharge

- Outfall/Diffuser Configuration Evaluations
- Geotechnical Investigations
- Aquatic Studies
- Update “State of Science” Work – Non Regulated Compounds
- Surface Water Modeling
- Siting Analysis





Technical Studies - Indirect Discharge

- Field Studies
- Plant Pilot Studies
- Aquatic/Terrestrial Plant Treatment/Uptake Evaluation
- Water Quality Constituent Attenuation Summary
- Flood Plain Impacts
- Facilities Configuration Evaluations
- Groundwater Modeling
- Siting Analysis





Project Schedule

- Dec 5 - Determine alternatives to be evaluated in EIR
- May '07 – Circulate Draft EIR
- October '07 – Certify EIR
- Nov '07 – Feb '08 – Select project



Opportunities for Cooperation

- Conveyance
- Storage
- Urban reuse
- Steamfield injection
- Discharge



Incremental Recycled Water Program

