420 square miles

43 cities

Population = 4 million (over 10% of California’s population)

250,000 acre feet of groundwater annually

Groundwater provides 40% of water supply
Imported Water Supply Challenges

CA Bay Delta:
- Environmental
- Land Subsidence
- Seismic Vulnerability

Colorado River Drought:
Lake Mead’s water level has dropped more than 100 ft since 2000.
WRD’s WIN Program will eliminate demand for imported water to replenish groundwater
Benefits of Groundwater

- Local reliable & sustainable supply
- Drought protection
- Cost-effective
Storm Water

Spreading Grounds
Interconnection Pipeline Completed 2012!

Conserves Approx 1,300 AFY for stormwater
5,700 AFY Recycled

Rio Hondo Spreading Grounds Inlet Prior to Recycled Water Diversion
San Gabriel River Spreading Grounds Inlet During Recycled Water Diversion
Whittier Narrows Conservation Pool
1,100 AFY Stormwater Capture
Current Imported Water Demands

Montebello Forebay Spreading Grounds
21,000 AFY (out of 125,000 AFY)

West Coast Barrier
4,500 AFY (out of 17,000 AFY)

Alamitos Gap Barrier
3,000 AFY (out of 6,000 AFY)

Dominguez Gap Barrier
4,000 AFY (out of 8,000 AFY)
Leo J. Vander Lans
AWTF Expansion
Anticipated Completion 2014

Alamitos Gap Barrier
3,000 AFY
Traditional vs. Enhanced Recovery

**Benefits:**
- Use 12% less source water
- MF and RO are smaller in sizes
- Substantially less waste discharge
- Significant savings in capital and O&M costs

Enhanced Recovery with Waste Minimization

**Benefits:**
- Use 12% less source water
- MF and RO are smaller in sizes
- Substantially less waste discharge
- Significant savings in capital and O&M costs
## Estimated Savings with Enhanced Recovery Capital Costs

<table>
<thead>
<tr>
<th>Category</th>
<th>Traditional ($M)</th>
<th>Enhanced Recovery ($M)</th>
<th>Savings ($M)</th>
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<tbody>
<tr>
<td>Microfiltration</td>
<td>10.1</td>
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<td>Reverse Osmosis</td>
<td>7</td>
<td>7.6</td>
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<td>Other Facilities</td>
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<tr>
<td>Sewer Capacity</td>
<td>12</td>
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<td><strong>Total</strong></td>
<td><strong>42.7</strong></td>
<td><strong>31.4</strong></td>
<td><strong>-11.3</strong></td>
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Savings as percent Construction Cost: 36%
## Annual Savings with Enhanced Recovery – O&M

<table>
<thead>
<tr>
<th>Category</th>
<th>Traditional Expansion ($)</th>
<th>Enhanced Recovery ($)</th>
<th>Annual Savings ($)</th>
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<td>MF BWT</td>
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<tr>
<td>3(^{rd}) Stage RO</td>
<td>0</td>
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<td>Sewer Surcharge</td>
<td>560,000</td>
<td>200,000</td>
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<td>Additional Source Water Purchase</td>
<td>340,000*</td>
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<td><strong>Net Savings</strong></td>
<td></td>
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<td><strong>-$520,000</strong></td>
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* An additional 1,240 acre feet per year of source water is required at $275/acre foot.
Project Cost and Funding Summary

- Construction Contract Cost = $31.4 million

- Fully paid for by existing Capital Reserve Fund in WRD budget

- Approximately $10 million comes from federal and state reimbursable grant funds

- On track to be complete ON TIME (Fall 2014) and WITHIN BUDGET
What is GRP?
What is GRIP?

- 21,000 AF  Imported
- 11,000 AF  Tertiary
- 10,000 AF  AWT
- 50,000 AF  Not Fully Secured
- 50,000 AF  Fully Secured
Proposed AWT Site at SJCWRP
AWT at SJCWRP (video)
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<tr>
<th></th>
<th>2013</th>
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</table>
Savings - Present Value
(Reliability Benefits Not Included)

Status Quo
- 21,000 AF Imported

Status Quo
- 31,000 AF Imported

GRIP

Savings
Imported Spreading Water & Replenishment Assessment (RA)
A Sustainable Solution

THE CORNERSTONE of the WRD’s Water Independence Now Program, which seeks 100% independence from imported water.

REPLENISH the area’s groundwater reservoirs with local resources.

CONSERVE water resources, save money, and create a local water source for residents.

CREATE a sustainable solution to potential water supply shortages.