South County Ag Program
(South Sacramento County Agriculture & Habitat Lands Recycled Water Program)

Central Valley/Sierra Foothill Chapter of WateReuse California

July 19, 2018

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Senior Civil Engineer
Background

Water Recycling Goal
• 2004 – Regional San Board of Directors adopted a water recycling goal up to 40 MGD or 23,000 AFY by the year 2024

Master Plan Level Study
• 2007 – Water Recycling Opportunity Study (WROS)

South County Ag Program (Program)
• 2007 to 2008 – High level study/Technical Memorandum
• 2009 to 2010 – Harness support to form SWR Coalition
• 2011 to 2014 – USBR Title XVI Feasibility Study
• 2015 to 2017 – Facilities Plan Report (10% level of design)
Recommended Program and Concept

- Refined place of use
- Irrigates up to 16,000 acres of ag and habitat conservation lands
- Delivers up to 50,000 AFY of recycled water
- Recharges groundwater basin
- Provides conjunctive use
- Cost-effective
Program Benefits

**Farmers**
- Provides a sustainable water supply for agriculture
- Reduces groundwater pumping costs
- May help to lower well maintenance and replacement costs

**Region**
- Creates a new water supply
- Restores local groundwater levels by up to 35 feet within 15 years
- Increases groundwater storage by ~245,000 AF in 10 years
- Provides ~30,000 AFY for conjunctive use during droughts
- Helps accomplish objectives of SGMA

**Regional San**
- Meets the goals for a large scale water recycling program
- Reduces effluent discharge to Sacramento River
- Provides an effluent management option
- Promotes environmental stewardship and maximizes use of recycled water for beneficial uses

**Environmental**
- Improves stream flows in the lower Cosumnes River
- Benefits the Chinook salmon
- Increases riparian and wetland habitats
- Supports a variety of threatened species
- Supports adjacent Preserve & Refuge
# Mass Balance Analysis and Water Supply Benefits

<table>
<thead>
<tr>
<th>Description</th>
<th>Million-Acre Feet</th>
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</thead>
<tbody>
<tr>
<td>Benefits to Groundwater within Model Area</td>
<td>0.5</td>
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<tr>
<td>Benefits to Surrounding Basins</td>
<td>1.6</td>
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<tr>
<td>Benefits to Streamflow</td>
<td>2.1</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>4.2</strong></td>
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</table>

Notes:
1) Assumes 84-year simulation period
2) Used SacIWRM Integrated Hydrologic Model
GW Elevation with Project — Comparison to Baseline —

Restores local groundwater levels by up to 35 feet within 15 years
Increase in Groundwater Storage

Difference between Project 2030 versus Baseline 2030

Increases groundwater storage by ~245,000 AF in 10 years

(Folsom Dam picture)
Water Quality Benefits

- Reduce salt loading to Sacramento River by 95 tons per day

- Equivalent benefit would require costly reverse osmosis treatment for salt removal
Ecosystem Benefits

Additional 3,500 acres of *sandhill crane* habitat, which could support up to 700 additional individuals.

Additional 500 acres of *vernal pool* habitat, which supports many listed species.

 Longer migration window for fall-run *Chinook salmon* as a result of increased flow volume in the Cosumnes River.

Improved groundwater conditions and strategic water delivery can improve up to approximately 5,000 acres of *wetlands and riparian forests* by 2030.

From Executive Summary Pg 10
(A.1 Executive Summary EGPI)
Collaboration and Stakeholders

Local
- Farmers, landowners, SCFB, conservancy agencies
- Stakeholder Advisory Group
- Sacramento Water Recycling Coalition
- Water agencies and land use jurisdictions

Regional
- Regional Water Authority (American River Basin IRWMP)
- Coalition to Support Delta Projects

State
- SWRCB, DWR, CVRWQCB, CDFWS, CWC

Federal
- U.S. Bureau of Reclamation
- Congressional delegation
Facilitating Collaboration & Building Partnerships

From Support Letters (A.6_Other_SecEGPI) & A.1
Executive Summary EGPI Pg 15-16
Environmental Impact Report (EIR) – CEQA / STATE
• Lead agency: Regional San
• Draft EIR was published on 7/8/2016
• Held public meeting on 7/25/2016
• 15 comment letters received for Draft EIR on 8/22/2016
• EIR Certification expected in February 2017

Environmental Impact Statement (EIS) – NEPA / FEDERAL
• Lead agency: U.S. Bureau of Reclamation
• EIS process to restart after EIR process is completed
Petition for Change / Water Rights

- Water Code Section (WCS) 1210 – Acknowledges rights of POTWs
- WCS 1211 – Requires Filing Petition for Change with SWRCB
- Petition filed on 8/3/2016
- Five protests received by 9/21/2016
- Protest dismissal terms have been reached
- SWRCB expects to issue the approved order by Sep. 2018
Governance Alternatives

- Seven alternatives were evaluated

- Three alternatives remain under discussion:
  - Regional San annexes service area
  - Contract directly with farmers
  - Hybrid Alternative (Annexation and Individual User Agreements)
Customer Concerns

- Recycled water pricing
- Onsite retrofit costs
- Water quality and reliability
- Crop marketability
- Market and user assurances
- Extraction of banked groundwater
- Governance
  - Representation
  - Another government agency
  - Imposition of new fees
  - Acceptable to customers
Seeking State and Federal Funding

- **State**
  - Clean Water State Revolving Fund
  - Prop. 1 Water Bond - Water Storage Investment Program
  - Integrated Regional Water Management Plan

- **Federal**
  - USBR Title XVI and WaterSMART Programs
  - Water Infrastructure and Improvement for the Nation Act (WIIN, S.612)
Table 1. Project Rankings and Suggested MCEDs.

<table>
<thead>
<tr>
<th>Project (By Score)</th>
<th>Application Score (Maximum 100)</th>
<th>Rank</th>
<th>Funding Request $ in Millions (May 2018)</th>
<th>Suggested MCED $ in Millions</th>
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<tbody>
<tr>
<td>Pacheco Reservoir Expansion Project</td>
<td>82</td>
<td>2</td>
<td>$484.55</td>
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<td>South County Ag Program</td>
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<td>Los Vaqueros Reservoir Expansion Project</td>
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<td>Temperance Flat Reservoir Project</td>
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<td>Chino Basin Conjunctive Use Program</td>
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<td>Sites Project</td>
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<td>3</td>
<td>$916.62</td>
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<td>Kern Fan Groundwater Storage Project</td>
<td>54</td>
<td>3</td>
<td>$85.66(^2)</td>
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<td>Willow Springs Water Bank</td>
<td>53</td>
<td>3</td>
<td>$123.29</td>
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\(^1\) Regulations section 6010(e)(5) prohibits staff from making a suggested MCED for Rank 3 projects.

\(^2\) Funding request was $85.70 million from May 2018. Program eligible amount determined in the May Commission meeting is $85.66 million.

Source: CWC Meeting Agenda/Handout for July 24, 2018
### Schedule

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Next Steps

- Preliminary award of Prop. 1 WSIP Grant – End of July 2018
- Approval of order for Petition for Change – By Sep. 2018
- Continue pursuing state and federal funding - Ongoing
- Continue engaging potential users - Ongoing
- Develop institutional and governance frameworks - Ongoing
- Prepare Basis of Design Report – late 2018 to 2019
- Enter into agreements with funding agencies and partners – Ongoing
- Establish governance framework - ongoing
Questions

https://www.regionalsan.com/water-recycling