The Santa Ana River Conservation and Conjunctive Use Program (SARCCUP)

PA 23 Committee
February 5, 2019
Outline

- Project Partners
- Overview
  - SARCCUP Elements
  - Budget
  - Schedule
- Status
- Next Steps
SARCCUP Partners
SARCCUP Elements

- **Habitat Improvement:** Arundo Removal & Santa Ana Sucker fish habitat restoration
- **Water Use Efficiency:** Conservation-Based Rates Support, Water-use Efficient Landscaping Design and Support
- **Groundwater Banking:** “Put and Take” Conjunctive Use Facilities
SARCCUP Budget

Total Cost: $162,313,632

- Grant: $55,000,000
- Match: $107,313,632

(Prop 84)
Total grant $55,000,000
## Responsibilities

<table>
<thead>
<tr>
<th>Agency</th>
<th>$$</th>
<th>PM</th>
<th>WUE</th>
<th>Arundo Removal</th>
<th>Habitat Restoration</th>
<th>Water Bank Infrastructure</th>
<th>Joint CEQA</th>
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Governance Through Construction

PA23
- Conjunctive Use
- Habitat

PA22
- Water Use Efficiency
Governance
GW Bank Operation

Elected Boards

Operations Committee
SARCCUP Overview
Process Overview

- Concept
  - Grant Application (2016)

- Development
  - Modeling
  - Details

- Water Bank
  - WUE
  - Habitat

- Final Project
## Foundational OWOW Management Strategy

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<th>No.</th>
<th>Strategy (in no particular order)</th>
<th>Status</th>
<th>Estimated Benefit</th>
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<td><strong>REDUCE DEMAND</strong></td>
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<td>☑ Water rate structures that encourage conservation</td>
<td>Widely implemented</td>
<td>Help meet SBX7-7 required demand reductions</td>
<td>Prop 84, Round 2 grants, being implemented and studied</td>
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<td>☑ Public education to encourage water conservation</td>
<td>Widely implemented</td>
<td>Help meet SBX7-7 required demand reductions</td>
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<td>Outdoor conservation</td>
<td>Widely implemented</td>
<td>Help meet SBX7-7 required demand reductions</td>
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<td>Reduce Evapotranspiration</td>
<td>Concept</td>
<td>More investigation required</td>
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<td><strong>OPTIMIZE IMPORTED WATER</strong></td>
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<td>Wet year storage program</td>
<td>In process</td>
<td>Increases storage in watershed</td>
<td>Being implemented/SARCCUP</td>
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<td>☑ Bay Delta Conservation Plan</td>
<td>In process</td>
<td>730,000 × 0.18 = 131,400 AFY and improved water quality</td>
<td>In process</td>
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<td>Imported water banking</td>
<td>Widely implemented</td>
<td>Water in dry years</td>
<td>Being implemented/SARCCUP</td>
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<tr>
<td></td>
<td>Prevent invasive species from clogging infrastructure</td>
<td>In process</td>
<td>Consistent deliveries</td>
<td>In process</td>
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<td><strong>STORMWATER CAPTURE</strong></td>
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<td>☑ Enhanced Santa Ana River stormwater capture</td>
<td>In process</td>
<td>12,000 AFY</td>
<td>Being implemented</td>
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<td>☑ Enhanced stormwater capture from tributaries of Santa Ana River</td>
<td>In process</td>
<td>28,000 AFY</td>
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<td>☑ Riverside North Aquifer Storage and Recovery Project</td>
<td>In process</td>
<td>12,800 AFY</td>
<td>Waiting on River HCP</td>
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<td>Concept</td>
<td>10,000 AFY</td>
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<td>☑ MS4 Credits</td>
<td>Concept</td>
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<td>☑ Re-operate flood control facilities</td>
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<td>☑ Size flood control facilities for stormwater capture</td>
<td>Concept</td>
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<td>☑ Development Standards that enhance stormwater capture</td>
<td>Concept</td>
<td>Increased stormwater capture</td>
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SARCCUP Water Bank (Conjunctive Use)

Dry year yield
(60k/yr x 3 yr)

Wet year storage
(180k)

(Grant Application)

(48k/yr x 3 yr)

(144k)

(Current)
Storage Volume

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<th>Location</th>
<th>Initial</th>
<th>Jan-18</th>
<th>Current</th>
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<td>San Bernardino</td>
<td>60,000</td>
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<td>Chino</td>
<td>96,000</td>
<td>50,000</td>
<td>14,000</td>
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<td>San Jacinto</td>
<td>19,500</td>
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<td>Elsinore</td>
<td>4,500</td>
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<td>Orange County</td>
<td>36,000</td>
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<td>Bedford-Coldwater</td>
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<td>Riverside-Arlington</td>
<td>6,000</td>
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<td>Riverside-Arlington</td>
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</table>
Water Banks and Reservoirs in California

- **SARCCUP1**: 44,000
- **Temperance Flat**: 1,200,000 AF
- **Kimberlina Groundwater Recharge Basin and Banking Project**: 153,000 AF
- **Semitropic Groundwater Storage Bank**: 1,650,000 AF
- **West Kern Water District Groundwater Banking Project**: 2,600,000 AF
- **Arvin-Edison Water Storage District**: 700,000 AF
- **AVEK High Desert Water Bank**: 260,000 AF
- **Mojave Water Agency Program**: 330,000 AF
- **Big Bear Lake**: 73,000 AF
- **Lake Silverwood**: 73,000 AF
- **Lake Perris**: 131,000 AF
- **Diamond Valley Lake**: 810,000 AF
- **Enlargement San Vicente Reservoir**: 152,000 AF
- **Olivenhain Reservoir**: 24,000 AF
- **Lake Matthews**: 182,000 AF
- **Castaic Lake**: 325,000 AF
- **Pyramid Lake**: 160,000 AF
- **Kern Water Bank**: 1,500,000 AF
- **Garden Bar**: 149,000 AF
- **Los Vaqueros Expansion**: 60,000 AF
- **Pixley/Delano-Earlimart Joint Ground Water Bank**: 90,000 AF
Two State Water Contractors

- Metropolitan Water District of Southern California
- San Bernardino Valley Municipal Water District

State Water Project

Bay-Delta
Valley District Predicts Surplus Water in Wet Years

Valley Surplus (SARCCUP) 21%
In Wet Years, Excess Water Flows Under the Golden Gate Bridge (2017)
SARCCUP Storage and Dry Year Yield (Dec 2018)

- Local Storage
- Six Basins
- 144,000 AF

Dry Year Yield

- EMWD (36,000)
- SBVMWD (36,000)
- WMWD (36,000)
- OCWD (36,000)
Long Term Operations Dependent on Hydrology

- Fill*: Fill to 180,000 AF
- Draw*: Draw water levels

Timeline:
- Design: 2016
- Construction: 2019
- Operation: 2022
- Grant Performance: 2032
- Lifespan: 2052
Water Use Efficiency

- Conservation-Based Water Rates*
  - 5 retail agencies study and adopt the rate structure
  - 2,412 acre feet saved over three years

- Smartscape Program (Coastkeeper)
  - Landscape design
  - Care for low water use plants
  - Irrigation audits
  - Irrigation tune-ups
  - Workshops

*Also known as budget-based water rates.
Habitat (Arundo removal)

- Approximately 640 acres
  - 1 acre uses 3.75+ acre-feet of water per year more water than native habitat
  - 2,400 afy of water conserved
Arundo Locations
Habitat (Sucker)

- Create 3.5 miles of stream habitat
- Restore 41 acres of native riparian habitat
Location of Projects in Santa Ana River

*Note: Evans Lake near SR-60 and Hidden Valley Ponds not funded by Grant
Progress

- **Water conservation (28%)**
- **Habitat**
  - CEQA Habitat (50%)
  - Design Habitat (60%)
  - Arundo Removal (60% being treated)
- **Water Bank**
  - Decision support modeling (complete)
- **Agreements**
  - MWDSC/MWDSC Agencies (60%)
  - MWDSC/Valley District (60%)
- **CEQA**
  - San Jacinto Basin (complete)
  - OCWD/WMWD (complete)
- **Construction**
  - San Jacinto Basin (5%)
  - Riverside-Arlington (40%)
  - Bedford Coldwater (30%)
  - Orange County
  - Chino
San Jacinto Basin (EMWD)

Well 201

Well 202

Well 203
Riverside-Arlington (WMWD)

Concrete Placement for Pump Station Footings Complete
12/27/2018

Installation of Vertical Turbine Pumps and Motors
1/3/2019
# SARCCUP Schedule

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<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
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<td>Grant Contract</td>
<td>Decision Support Model</td>
<td>Joint CEQA</td>
<td>San Jacinto CEQA</td>
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<td>Dec.</td>
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<td>Key Agreements:</td>
<td>San Jacinto Watermaster Agreement</td>
<td>MWDSC/SBVMWD and MWDSC/EMWD/WMWD/OCWD</td>
<td>DWR Grant Amend. No. 1</td>
<td>Amend. No. 2</td>
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<td>SARCCUP Capital Funding Agreement</td>
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<td>Mar.</td>
<td>Dec.</td>
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<td>EMWD: Planning/Permits/Design</td>
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<td>Construction – Water Bank</td>
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<td>OCWD: Arundo Removal Study/Permits/Design</td>
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<td>Construction – Arundo Removal</td>
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<td>OCWD: New Well(s) CEQA, Design, Construction</td>
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<td>SBVMWD: Design/Bio Surveys/Agency Review/Engineering</td>
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<td>Construction - Habitat</td>
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<td>WMWD: Construction – Sterling, La Sierra, Elsinore Wells</td>
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<td>Well Drilling, Cannon-Campbell, CRA Crossing, WR-23</td>
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**Construction Deadline**: Sept. 2021
Important Next Steps

- Anticipated for approval by PA 23 Committee in Spring/Summer:
  - **Redistribution of Grant Funds for Water Bank**
    - Reductions for facilities removed
    - Increases for new facilities
  - **Final Storage Amount for Water Bank**
    - Still negotiating Chino Basin storage for use by EMWD and WMWD (14,000 AF)
  - **Contract amendments for final Water Bank**
    - SAWPA/DWR
    - SAWPA/agencies
  - **CEQA**
    - Sucker Habitat
  - **Agreements**
    - MWDSC/MWDSC Agencies Agreement
    - MWDSC/Valley District Agreement
    - Finalize SARCCUP Capital Funding Agreement
Santa Ana River Conservation and Conjunctive Use Program – Project Schedule Updates

Presenter: Brian Dietrick, Woodard & Curran

February 5, 2019
### SARCCUP Schedule Roll-Up – With Storage Options 2, 4 & 5

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<th>Year</th>
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<td>2017</td>
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<td>- Decision Support Model: Aug. 2018</td>
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<td>- Joint CEQA: Mar. 2018</td>
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<td>- San Jacinto CEQA: Mar. 2018</td>
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<td>and MWDSC/EMWD/WMWD/OCWD: June 2018</td>
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<td>- MWDSC/SBVMWD and MWDSC/EMWD/WMWD/OCWD: Dec. 2018</td>
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<td>- DWR Grant Amend. No. 1, Amend. No. 2: June 2018</td>
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<td>- Sub-Grantee (5): June 2018</td>
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<td>- SARCCUP Operating: Dec. 2018</td>
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<td><strong>Projects:</strong> SAWPA: Implementation – Smartscape and Conservation-Based Rates</td>
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<td>- EMWD: Planning/Permits/Design, Construction – Water Bank</td>
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<td>- OCWD: Arundo Removal Study/Permits/Design, Construction – Arundo Removal</td>
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<td>- SBVMWD: Design/Bio Surveys/Agency Review/Engineering, Construction - Habitat</td>
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<td>- WMWD: Construction – Sterling, La Sierra, Elsinore Wells, Well Drilling, Cannon-Campbell, CRA Crossing, WR-23</td>
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**Reporting extends through 2022**

**Construction Deadline Sept. 2021**

01-24-2019
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<th>Year</th>
<th>Grant Contract</th>
<th>Program Management</th>
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<th>Key Agreements and Grant Deliverables</th>
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*Key Agreements and Grant Deliverables:*
- SAWPA-OCCK Sub-Agreement Amendment No. 1
- Project Monitoring Plans
- State-SAWPA Grant Agreement Amendment No. 1
- Retail Agency Sub-Agreements for Water Rates
- OCCK Smartscape - Implementation

*SAWPA Water Use Efficiency Project Implementation:*
- Conservation Rates - Outreach
- Conservation Rates - Implementation

*Construction Deadline Sept. 2021*

*Reporting extends through 2022*
IEUA Conjunctive Use Project

IEUA and Sub-Agency Agreement

SAWPA-IEUA Sub-Agreement

Joint CEQA

Permitting

Design

- Wells and Treatment
- Pipeline Interconnections

IEUA discussions with member agencies

Construction

- Wells and Treatment
- Pipeline Interconnections

Reporting extends through 2022

Construction Deadline Sept. 2021

01-24-2019
San Jacinto CEQA Grant Contract

EMWD Conjunctive Use Project

SAWPA-EMWD Sub-Agreement

EMWD San Jacinto WM Agreement

Right-of-Way Acquisition

San Jacinto CEQA

Permitting

Design

Mt. Ave – Prelim.

Mt. Ave - Final

Drilling – Prelim.

Equipping – Prelim.

Equipping - Final

Construction

Well Drilling

Mountain Avenue West

Well Equipping

Reporting extends through 2022

Construction Deadline Sept. 2021

01-24-2019
OCWD Arundo Removal Project

SAWPA-OCWD Sub-Agreement

Joint CEQA

Arundo Removal Study

Permitting

Design

Construction

Grant Contract

Reporting extends through 2022

Construction Deadline
Sept. 2021

01-24-2019
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**Design**
- Drilling – Prelim.
- Drilling – Final
- Equipping – Prelim.
- Equipping – Final
- Elsinore Basin - Wells
- La Sierra Pipeline/Sterling Pump Station
- Riverside Basin – Wells/Cannon Campbell Pump Station/Colorado River Aqueduct (PS/CRA) Crossing

**Construction**
- Non-SARCCUP CEQA
- Well Drilling
- Elsinore Basin - Wells
- La Sierra Pipeline/Sterling PS
- Riverside Basin – Wells/Cannon Campbell PS/ CRA Crossing
- Well Equipping

**Reporting**
- Extends through 2022
- Construction Deadline Sept. 2021

**Notes**
- Reporting 01-24-2019