South County Ag Program
A Model Multi-Benefit Recycled Water Program

CASA Annual Conference
August 22, 2019

Terrie L. Mitchell
Manager, Legislative & Regulatory Affairs
and A-PMO
Today’s Topics

- Overview of the South County Ag Program & Benefits
- Summary of WSIP Funding Award
- Costs
- Ecosystem Management
- Data Management
- Key Next Steps
Developing An Opportunity – The South County Ag Program

- Delivers up to 50,000 AFY of recycled water
- Irrigates up to 16,000 acres of ag and habitat lands
- Provides in-lieu recharge
- Produces multiple benefits
  - Groundwater Restoration
  - Ecosystem
  - Water Quality
  - Conjunctive Use
- Has broad stakeholder support!
Summary of the Water Storage Investment Program (WSIP) Funding Award

- 2014 Water Bond provided $2.7 billion to fund water storage projects (surface and groundwater)
- California Water Commission tasked with developing and implementing WSIP
- WSIP can only fund the value of the “Public Benefits”
- Regional San awarded $280.5 million for the South County Ag Program
Facilitating Collaboration & Building Partnerships
Groundwater Restoration Benefits

The *foundation* that is needed to produce all the other Public Benefits

- Restores groundwater levels up to 35 feet within 15 years
- Improves stream flows in the Cosumnes River
- Increases groundwater storage by ~ 245,000 AF in 10 years
- Helps improve regional water supply sustainability
Ecosystem-Groundwater Connection

Groundwater affects streamflow

Spring

Summer/Fall
Ecosystem & Water Quality Benefits Totaling $280.5 Million

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

Improved water quality
Other Non-Monetized Public Benefits

- Improves Climate Change Resiliency
- Improves Habitat Connectivity
- Preserves Working Farmlands
- Improves Groundwater Dependent Ecosystem Science
- Aids in Emergency Fire Response
- Increases Recreation
- Helps accomplish objectives of Prop. 1 and SGMA
Projected Design & Capital Costs (in 2015 dollars)

Planning and Design Costs - $75,306,630
  - Ecological Planning - $29,045,000
  - Facilities & GW Banking - $46,261,630

Construction Costs - $207,886,000
  - Facilities Cost - $173,500,000
  - GW Monitoring Wells - $150,000
  - Ecological Program - $34,236,000

Total Planning, Design & Capital Costs - $283,192,630

Total WSIP Funding - $280,500,000
Projected Annual O&M Costs & Total Program Costs

In 2015 dollars

Total Annual O&M Cost (over 100 years) - $4,273,000
- Pipeline & Pump Station - $2,600,000
- Ecological Monitoring - $1,473,000
- GW Banking - $200,000
- GW Monitoring - $74,000

Total Replacement Costs for 100 years - $20,000,000

TOTAL CAPITAL AND O&M PROGRAM COSTS - $730,492,630
A Unique Program Requires A Different Management Approach

Two Program Management Offices have been established: A-PMO & C-PMO

Key elements of the A-PMO

- Water Rights
- WSIP Admin
- Stakeholder Outreach
- Groundwater Acct/Bank
- Groundwater Monitoring
- Reg/Leg Advocacy
- Recycled Water Utility
- C-PMO & CEQA Support
- Ecological Program
From Concept to Implementation

WSIP Application
Benefit Targets
(Conceptual Ecological Plan)

- Benefit Targets
  - Landscape-wide Optimization
  - Landowner Recruitment & Contracting
- Water Delivery & Management Actions
  - Monitoring
  - Adaptive Management

Benefit Targets Achieved!
BasinScout Process Developed by The Freshwater Trust

Modeling of Costs & Ecological Benefits

Optimization to Achieve Targets at Least Cost

Landowner Outreach & Project Implementation

Site Assessment & Feasibility Analysis

Site Assessment & Feasibility Analysis

Basin status
Recharge
Crop type
Water use
### Relevant/Eligible Fields

<table>
<thead>
<tr>
<th>Delivery Area Total (fields)</th>
<th>Acres</th>
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<th>Water Demand (AF/yr)</th>
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Response to Letters of Interest

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## Irrigation Demand by Interested Landowners

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### Water Demand Breakdown

- **Delivery Area Total (fields):** 14,483 acres, 380 fields, NA AF/yr
- **Crop Irrigation:** 11,578 acres, 281 fields, 39,180 AF/yr
- **Irrigation associated with interested land owners:** 4,988 acres, 93 fields, 18,144 AF/yr
- **Crane Habitat (dry year):** 7,783 acres, 168 fields, 8,419 AF/yr

### Map Legend

- **Recycled Water Delivery Area**
- **Tax lots "Interest Status"**
  - Yes
  - Maybe
  - No
  - Unknown
- **Crop Irrigation Demand**
  - Avg. yearly applied water (acre-feet)
    - > 750
    - 250 - 750
    - > 0 - 250
    - Not irrigated
Groundwater Accounting Principles

- Focus on local benefits first
- Protect working farms and habitat lands
- Support SGMA compliance

- Once sustainable groundwater targets are met, collaborate to implement a fair and transparent groundwater accounting program
Key Next Steps to Secure WSIP Funds

- On-going collaboration
- Secure Petition for Change
- Finalize ecological plan
- Establish pricing of recycled water and utility governance
- Develop and secure agreements with landowners/farmers

• Design conveyance and distribution system
• Complete Draft Supplemental CEQA Documents by Jan 2022
• Secure all major environmental permits
• Develop Contracts with State Water Board and Fish & Wildlife
• Secure funding agreement with Water Commission

2019
Reimbursement cannot occur until completion of all key documents.

2021
Many Thanks to the South County Ag Team:

- Regional San Staff
- Woodard & Curran
- The Freshwater Trust

Questions?

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