

Irvine Ranch Water District

Water Banking Projects Update for Municipal Water District of Orange County

February 3, 2014

Irvine Ranch Water District





Presentation Overview

Irvine Ranch Water District

- Purpose of IRWD Water Banking Projects
- Water Banking Projects overview
- Operations and stored water
- Agreements between IRWD, MWDIOC and MWD
- Draft Wheeling Agreement
- Cost of water to IRWD's service area
- Conceptual water banking program





Purpose of IRWD Water Banking Projects

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- To improve IRWD's water supply reliability during periods of severe drought and/or supply interruptions
- To store supplemental wet year supplies using cost efficient methods
- To meet IRWD's projected needs for import water for 3 years in a row
 - Using 88,000 AF of contingency storage



Water Banking Projects Overview

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- IRWD has developed two Water Banking Projects in Kern County:
 - 761 acres of recharge basins
 - 7 production wells
 - 36 cfs of capacity
 - 50,000 acre-feet of storage capacity
 - Access to Cross Valley Canal and California Aqueduct
- Expansion in progress

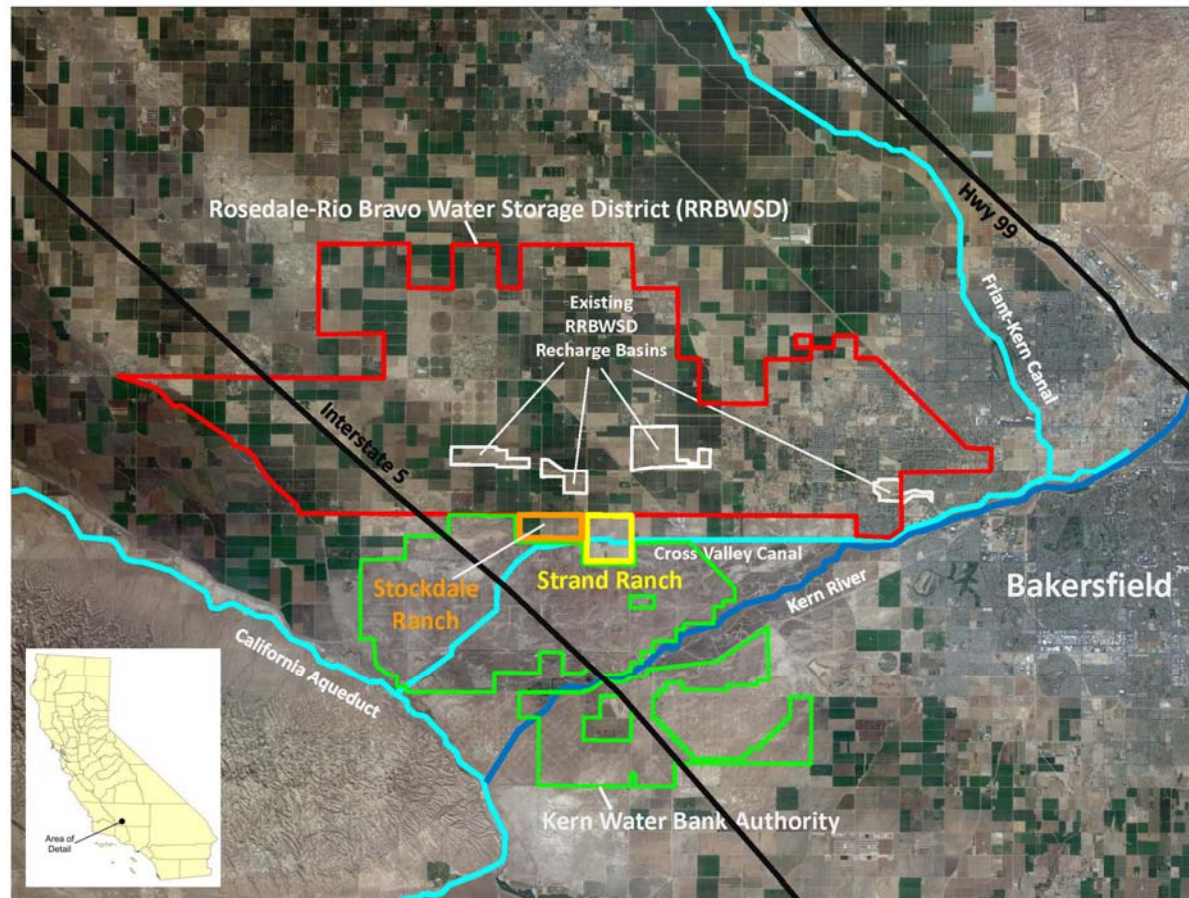




Water Banking Projects Location

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Location ideal for water banking and conveyance



Strand Ranch: 611 acres total; 502 acres of recharge basins (acquired in 2004)

Stockdale West Ranch: 325 acres; 259 acres of recharge basins (acquired in 2010)



Long-Term Local Partnerships Make it Work

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- IRWD / Rosedale-Rio Bravo Water Storage District (Rosedale)
 - Water Banking and Exchange Agreement (30 year term)
 - Executed in January 2009
 - Provides for shared use of the Strand Ranch
 - IRWD as the owner, Rosedale as the operator
- IRWD / Buena Vista Water Storage District (BVWSD)
 - Water Exchange Agreement (28 year term)
 - Executed in December 2010
 - Exchanges of pre-1914 Kern River water on a 2-for-1 basis



Strand Ranch Project Fully Operational

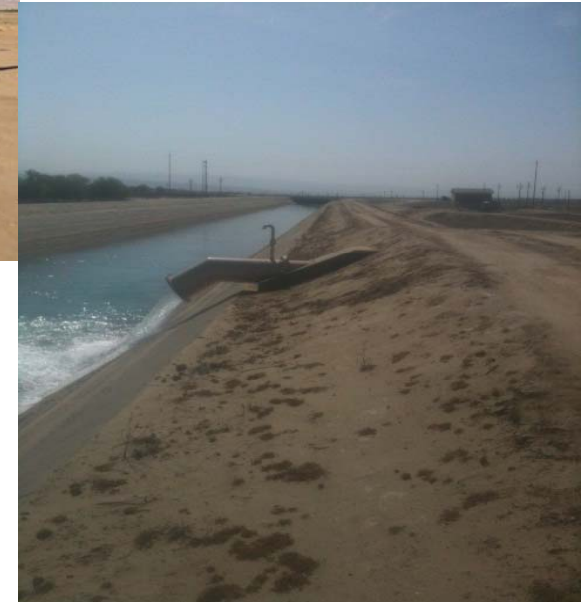
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Recharge of 35,730
AF on Strand Ranch



Final well site with
fencing and security
measures

Well start up and
discharge to CVC
in April 2013 ¹⁾



¹⁾ Pumping to CVC and California Aqueduct approved by DWR, Kern County Water Agency and MWD in early 2013.

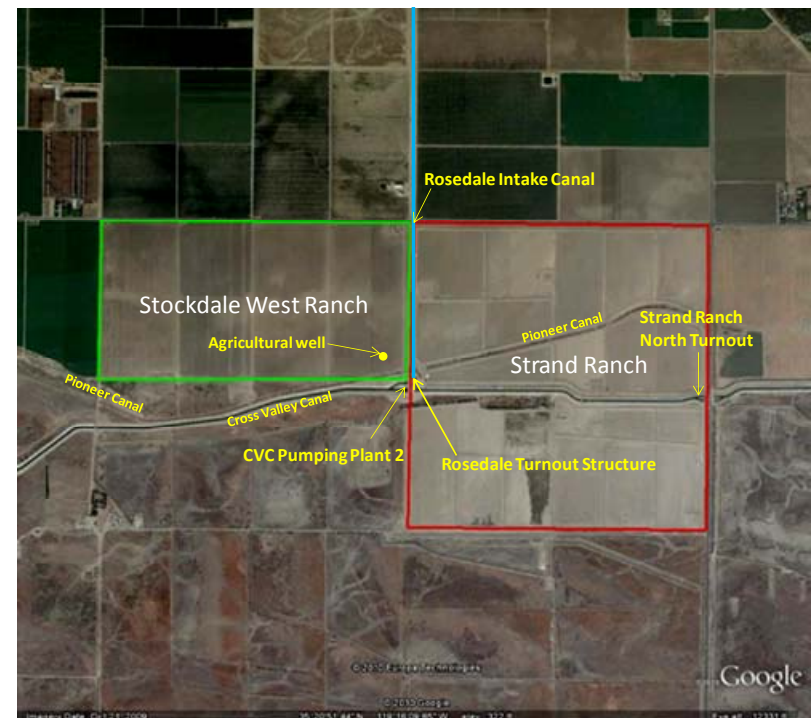


Expansion onto the Stockdale West Ranch

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Short-Term Pilot Project (2011)

- IRWD constructed 259 acres of recharge ponds
 - 4 miles of embankments
- Recharged 3,268 AF of Pre-1914 Kern River Water
 - 2 for 1 Exchange with Buena Vista Water Storage District (BVWSD)





Stockdale Integrated Banking Project

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Long-Term Project

- Additional recharge, storage and recovery capacity
- Similar terms to the IRWD/Rosedale agreement on the Strand Ranch
- Makes use of IRWD's Stockdale West Ranch and Rosedale's Stockdale East Property
- Draft Environmental Impact Report currently being prepared
 - Public Review in February 2014
- Terms for a water exchange project with BVWSD are under development



Recharge on the Stockdale West Ranch



Sources of Water for Storage in Water Bank

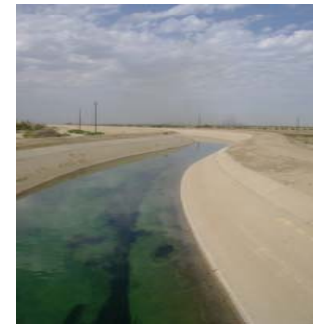
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Water from the State Water Project (SWP):

- Short-Term Unbalanced Exchange Programs (Table A water from SWP contractors)
 - 2008 and 2011 Central Coast Water Authority (CCWA)
 - 2011 Antelope Valley East Kern Water Agency (AVEK)
- IRWD's Jackson Ranch in Dudley Ridge Water District (DRWD)
 - 883 acres with 1,747 AF of Table A Entitlement
 - Water to be banked at Strand Ranch on 2-for-1 basis
 - Participation rights in the Kern Water Bank (7,600 AF of storage)

Water from Non-SWP Supplies:

- Kern River Flood Flows (via Rosedale); IRWD retains 20%.
- Kern River High-Flow "Pre-1914" Water (via BVWSD)
 - IRWD retains 50%
- Other Wet-Year Exportable Supplies (as available)





Strand & Stockdale Water Banking Operations

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Year	BVWSD	AVEK	CCWA	DRWD
2010	Recharged 8,741 AF		Recharged 589 AF	
2011	Recharged 16,732 AF on Strand and 3,268 AF on Stockdale Pilot			
2012	Recovered 2,500 AF by exchange	Stored 5,000 AF (direct & in-lieu)	Recharged 1,400 AF	
2013	Recovered 6,667 AF by extraction		Recovered 280 AF by extraction	
2014	Recovery for BVWSD of 3,800 AF by extraction Recovery and wheeling of 1,000 AF to IRWD	Recovery for AVEK of 2,229 AF by extraction	Recovery for CCWA of 207 AF by exchange	869 AF to be stored in Strand Ranch or Southern California



IRWD's Stored Supplies

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Strand Ranch	Stockdale Ranch	Kern Water Bank
<p>16,843 AF</p> <ul style="list-style-type: none">• 12,330 AF of Pre-1914 Kern River water• 4,513 AF SWP water	<p>1,401 AF of Pre-1914 Kern River water</p>	<p>4,039 AF of SWP water</p>



IRWD / MWDOC / MWD Agreements

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- Coordinated Operating and Exchange Agreement (2011)
 - Allows IRWD to secure SWP water
 - Storage in Strand Ranch
 - Water is delivered to IRWD through exchange
 - MWD can borrow SWP supplies from IRWD
- Wheeling Agreement (in process)
 - Allows access to MWD facilities to transport non-SWP supplies to IRWD's service area





Draft Wheeling Agreement

Irvine Ranch Water District

Consistent with MWD's Wheeling Service

- To transport water not owned or controlled by MWD
- Transactions within a one-year period (\$5,000 fee)
- Subject to the MWD General Manager's determination of available system capacity

Wheeling Service Rates:

System Access Rate	\$243 / AF
Water Stewardship Rate	\$ 41 / AF
Actual Power (estimated)	\$208 / AF
Treatment	\$297 / AF

Total Wheeling Service	\$789 / AF

Note: MWD's Full Service Tier 1 Treated Rate = \$890 / AF (2014)



Draft Wheeling Agreement

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- Will facilitate a pilot for recovery and delivery of 1,000 AF of pre-1914 Kern River high flow water
 - Test all necessary agreements and arrangements to wheel non-SWP water to IRWD's service area
 - Maintains the Strand Ranch as an "Extraordinary Supply" source
- Modeled after two previous agreements
 - San Diego County Water Authority
- IRWD, MWD and MWDOC will be parties
- Template for future wheeling transactions



Draft Wheeling Agreement

Irvine Ranch Water District

Next Steps

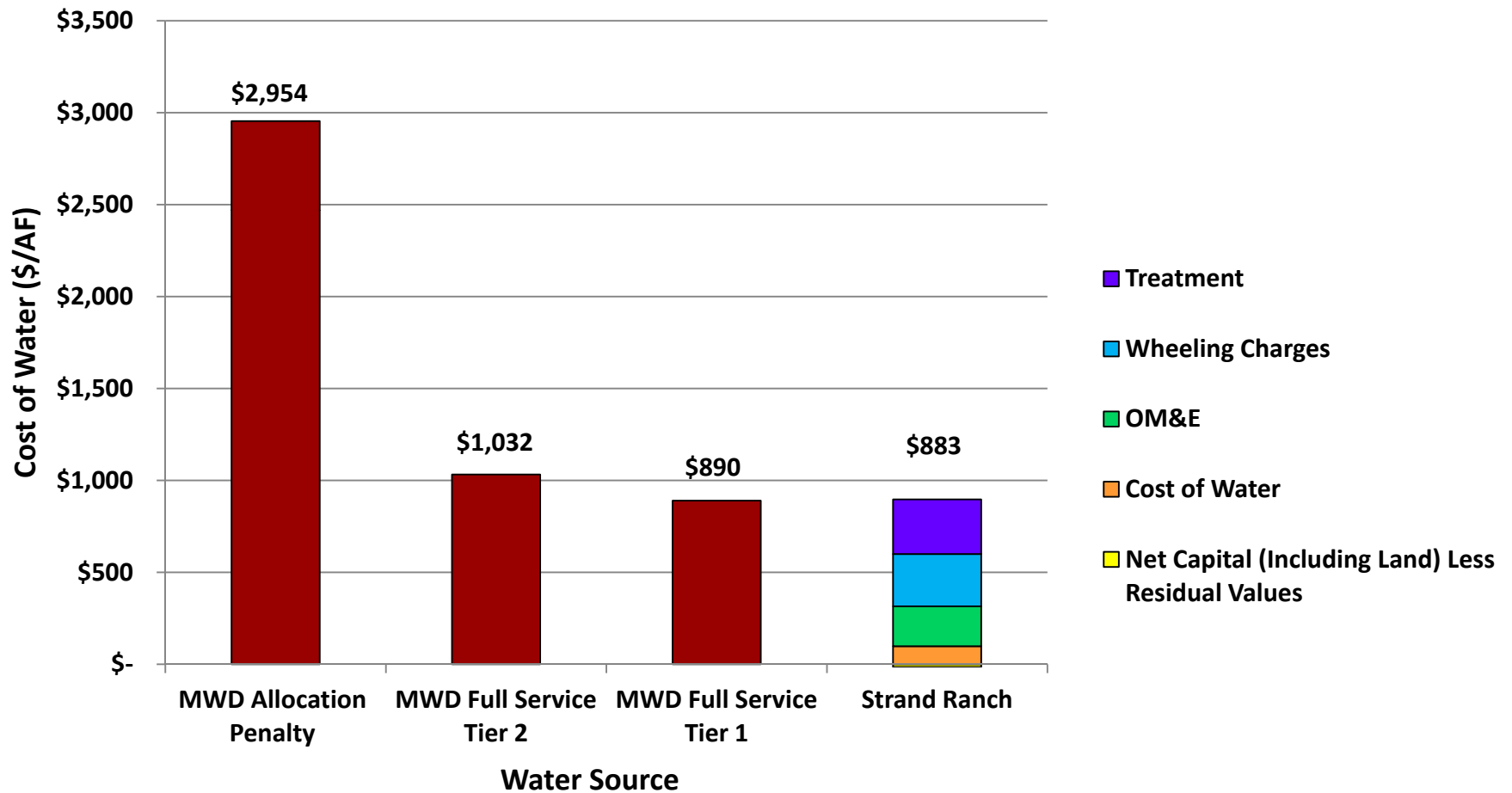
- Reviews by both MWD and MWDOC
- Joint meetings to review comments and proposed revisions
- Finalization of the Agreement:
 - IRWD Board of Directors April 2014
 - MWDOC Board of Directors April 2014
 - MWD General Manager May 2014
- Plan for recovery and delivery of water
 - Summer 2014





MWD 2014 Rates and Strand Ranch Costs¹

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1/ Strand Ranch costs shown are for wheeled non-SWP water



Conceptual Water Banking Program

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- IRWD and MWDOC staff are working together to conceptualize a water banking program using MWD water
- The program could provide reliability benefits to IRWD, other agencies in Orange County and other MWD Member Agencies:
 - Enhance dry year supply reliability
 - Providing an opportunity to establish “Extraordinary Supply” programs





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