

AGENDA
IRVINE RANCH WATER DISTRICT
SUPPLY RELIABILITY PROGRAMS COMMITTEE
THURSDAY, JUNE 16, 2016

CALL TO ORDER 3:00 p.m., Committee Room, Second Floor, District Office
15600 Sand Canyon Avenue, Irvine, California

ATTENDANCE Committee Chair: Peer Swan _____
Alternate: Mary Aileen Matheis _____

<u>ALSO PRESENT</u>	Paul Cook	_____	Kellie Welch	_____
	Rob Jacobson	_____	Patrick Sheilds	_____
	Ray Bennett	_____	Paul Weghorst	_____
	Jo Ann Corey	_____	Dane Johnson	_____
	Fiona Sanchez	_____	Christine Compton	_____
	_____	_____	_____	_____

COMMUNICATIONS

1. Notes: Weghorst
2. Public Comments
3. Determine the need to discuss and/or take action on item(s) introduced that came to the attention of the District subsequent to the agenda being posted.
4. Determine which items may be approved without discussion.

INFORMATION

- | | | |
|----|--|--|
| 5. | <u>WATER BANKING PROJECT FACILITIES, CAPACITIES AND PROGRAMS OVERVIEW – JOHNSON/WELCH/SANCHEZ/WEGHORST</u> | |
|----|--|--|

Recommendation: Receive and file.

OTHER BUSINESS

6. A. Directors' Comments

OTHER BUSINESS - Continued

6. B. CLOSED SESSION with real property negotiator (Government Code Section 54956.8).

Property: Parcels 839-150-001; 839-150-002; 821-160-001; 821-160-010; 830-150-002; 830-160-001, 002, 003, 004, 007; 830-170-001, 002, 003; 830-190-001; and 857-150-001, 002, County of Riverside – Lease;

Negotiating Parties: Charles Van Dyke;

Agency Negotiator: Paul Cook, General Manager

Purpose of Negotiations: Price and Term of Payment, and

CLOSED SESSION with real property negotiator (Government Code Section 54956.8).

Property: Parcels 875-240-008, 878-102-006, 878-102-011, 878-102-012, 866-021-004, 866-022-001, 866-022-03, 866-080-004, 866-090-012, 869-020-002, and 869-050-010, County of Riverside

Negotiating Parties: Hayday Farms, Inc.

Agency Negotiator: Paul Cook, General Manager

Purpose of Negotiations: Price and Term of Payment,

Property: Parcels 824-030-001 and 824-030-002, County of Riverside

Negotiating Parties: Calabrese.

Agency Negotiator: Paul Cook, General Manager

Purpose of Negotiations: Price and Term of Payment, and

Property: Parcels 827-030-004, 827-030-005, 827-110-005, 827-110-006, 827-110-010, 827-110-011, 827-110-014, and 827-110-016, County of Riverside

Negotiating Parties: Lourenco Farm.

Agency Negotiator: Paul Cook, General Manager

Purpose of Negotiations: Price and Term of Payment.

- C. Adjourn

Availability of agenda materials: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the above-named Committee in connection with a matter subject to discussion or consideration at an open meeting of the Committee are available for public inspection in the District's office, 15600 Sand Canyon Avenue, Irvine, California ("District Office"). If such writings are distributed to members of the Committee less than 72 hours prior to the meeting, they will be available from the District Secretary of the District Office at the same time as they are distributed to Committee Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available at the entrance of the meeting room at the District Office.

The Irvine Ranch Water District Committee Room is wheelchair accessible. If you require any special disability-related accommodations (e.g., access to an amplified sound system, etc.), please contact the District Secretary at (949) 453-5300 during business hours at least seventy-two (72) hours prior to the scheduled meeting. This agenda can be obtained in an alternative format upon written request to the District Secretary at least seventy-two (72) hours prior to the scheduled meeting.

June 16, 2016

Prepared by: D. Johnson/K. Welch

Submitted by: F. Sanchez/P. Weghorst

Approved by: Paul Cook



SUPPLY RELIABILITY PROGRAMS COMMITTEE

WATER BANKING PROJECT FACILITIES, CAPACITIES AND PROGRAMS OVERVIEW

SUMMARY:

Staff has prepared a summary table of the storage, recharge and recovery capacities of existing and planned IRWD water banking projects including capacities available to IRWD in the Kern Water Bank. A table that provides an update on Strand Ranch recovery and recharge operations and the balance of the stored water in the Kern Water Bank has also been prepared. In addition, maps have been created that show the location of project wells and pipelines and the Cross Valley Canal turn-out locations. At the May 19, 2016 Committee meeting, staff presented a diagram that shows IRWD's water banking and exchange programs with Rosedale-Rio Bravo Water Storage District (Rosedale). To complement these summary tables, maps and diagram, staff has prepared two additional diagrams describing IRWD's exchange agreements with Buena Vista Water Storage District (BVWSD) and Dudley Ridge Water District (DRWD). At the Committee meeting, staff will provide an overview of these new diagrams.

BACKGROUND:

Capacity and Operations Tables:

A table has been prepared that presents storage, recharge and recovery capacities of existing and planned IRWD water banking projects including capacities available to IRWD in the Kern Water Bank. Another table has been prepared that provides an update on Strand Ranch recovery and recharge operations and the balance of the stored water in the Kern Water Bank. These tables are provided as Exhibits "A" and "B", respectively.

Project Maps:

To support the tables provided as Exhibits "A" and "B", staff has prepared maps that depict wells and pipelines and Cross Valley Canal turn-out locations. The facilities shown on these maps are associated with the Strand Ranch, Stockdale West, Stockdale East and Rosedale Drought Relief Projects. The maps are provided as Exhibits "C" and "D".

Program Agreement Diagrams:

In May 2016, staff reviewed with the Committee the diagram in Exhibit "E" that describes IRWD's water banking and exchange programs with Rosedale. Two new diagrams have been created to describe other important IRWD exchange programs. The first of the new diagrams, provided as Exhibit "F", describes IRWD's exchange program with BVWSD. The second diagram, provided as Exhibit "G", depicts IRWD's exchange program with DRWD.

The exchange program with BVWSD facilitates unbalanced exchanges of pre-1914 Kern River water and the exchange program with DRWD facilitates unbalanced exchanges of State Water Project water. Both programs are operated to the mutual benefit of IRWD and its exchange partners. Next month, staff anticipates presenting additional diagrams that describe IRWD's coordinated operating, exchange and wheeling agreements with Metropolitan Water District.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

- Exhibit "A" – Recharge, Storage and Recovery Capacities of Existing and Planned Water Banking Projects
- Exhibit "B" – Strand Ranch Storage, Recharge and Recovery Operations Update
- Exhibit "C" – Map of Water Banking Project Wells and Pipelines
- Exhibit "D" – Map of Cross Valley Canal Turnouts
- Exhibit "E" – Rosedale Water Banking and Exchange Agreements Diagram
- Exhibit "F" – Buena Vista Long Term Water Banking and Exchange Agreement Diagram
- Exhibit "G" – Dudley Ridge Water District Unbalanced Exchange Program Diagram

Exhibit "A"

TABLE 1
Current and Anticipated Water Banking Projects
Recharge, Storage and Recovery Capacities May
June 16, 2016

WATER BANKING PROJECT	OWNERSHIP AND WELL INFO			ALLOCATED CAPACITY (AF)					1 ST PRIORITY RECOVERY CONDITIONS (CFS)		2 ND PRIORITY RECOVERY CONDITIONS (CFS)	
	IRWD OWNED	WELLS EXISTING	WELLS PROPOSED	TOTAL STORAGE CAPACITY	ANNUAL RECHARGE 1 ST PRIORITY	ANNUAL RECHARGE 2 ND PRIORITY	ANNUAL RECOVERY 1 ST PRIORITY	ANNUAL RECOVERY 2 ND PRIORITY	RECOVERY CAPACITY AS PLANNED ¹	RECOVERY CAPACITY CURRENT CONDITIONS ²	RECOVERY CAPACITY AS PLANNED	RECOVERY CAPACITY CURRENT CONDITIONS
Strand Ranch	Yes	7	-	50,000	17,500	-	17,500	-	40.0	18.6	-	-
Stockdale West	Yes	-	3	26,000	27,100	-	11,250	-	15.0	-	-	-
Stockdale East	No	-	2	-	-	19,000	-	7,500	-	-	10.0	-
IRWD Acquired Storage Account ³	No	-	-	50,000	-	-	-	-	-	-	-	-
Drought Relief Project Wells	No	-	3	-	-	-	-	-	15.0	-	-	-
Kern Water Bank Storage Account ⁵	No	-	-	9,495	3,200	-	6,330	-	-	-	-	-
TOTALS		7	8	135,495	47,800	19,000	35,080	7,500	70.0	18.6	10.0	0.0
Partner Capacities ⁴				38,000	-	-	9,583	-	35.5	35.5	-	-
IRWD Capacities				97,495	-	-	25,497	-	34.5	0.0	-	-
IRWD's recovery <i>during</i> 6 month partner recovery period (AF)									12,420	0.0	-	-
IRWD's recovery <i>after</i> 6 month partner recovery period (AF)									13,077	6,733	-	-
TOTALS (AF)									25,497	6,733	-	-
Number of months needed to recover IRWD's total AF after partners' recovery (Assumes IRWD has use of total recovery capacity after partners' recovery)									12.2	18.1	-	-

¹ Based on designed Strand recovery capacity assuming 370' bgs. Assumes 5 cfs for each of the Stockdale West and Drought Relief wells in order to meet IRWD's Water Banking, Transfers, and Wheeling policy position. Assumes partners' water is recovered over 6 months.

² Strand Ranch wells currently idle.

³ IRWD has use of Acquired Storage and Drought Relief Project wells until January 12, 2039, unless the term of the agreement is extended.

⁴ One half of storage capacity at Stockdale West and Strand Ranch will be allocated for partners.

⁵ Kern Water Bank capacities based on 6.58% of Dudley Ridge Water District's 9.62% share of the Kern Water Bank. Annual recharge amount is based on an average of recharge rates for high and low groundwater level conditions.

Exhibit "B"

TABLE 2
Water Banking Recovery & Recharge Operations
June 16, 2016

TRANSACTIONS	WATER BANKING ENTITY				
	IRWD		BUENA VISTA (BVWSD)	CARPINTERIA VALLEY (CVWD)	DUDLEY RIDGE WATER DISTRICT (DRWD) ³
	SWP ¹	NON-SWP ²	NON-SWP	SWP	SWP
BEGINNING WATER IN STORAGE 2015 (AF)					
Total Kern Water Bank	-	4,016	-	-	-
Total MWD System ⁵	7,327	-	-	-	-
Total Kern County	249	9,675	4,341	413	474
TOTAL STORED WATER (1/1/2015)	7,576	13,691	4,341	413	474
(RECOVERY) AND RECHARGE IN 2015 (AF)					
CVWD	-	-	-	(413)	-
BVWSD	-	-	(4,341)	-	-
Kern Water Bank	-	251	-	-	-
2015 SWP Allocation ⁵	175	-	-	-	175
Reserve Water Available in 2015 ⁶	140	-	-	-	-
TOTAL 2015 TRANSACTIONS	315	251	(4,341)	(413)	175
Total Kern Water Bank	-	4,267	-	-	-
Total MWD System	7,502	-	-	-	-
Total Kern County	389	9,675	-	-	649
TOTAL STORED WATER (1/1/2016)	7,891	13,942	-	-	649
(RECOVERY) AND RECHARGE IN 2016 (AF)					
Recharge	TBD	TBD	-	-	-
Kern Water Bank	-	-	-	-	-
2016 SWP Allocation (current 60%) ⁵	524	-	-	-	525
TOTAL ESTIMATED 2016 TRANSACTIONS	524	-	-	-	525
Total Kern Water Bank	-	4,267	-	-	-
Total MWD System	8,026	-	-	-	-
Total Kern County	389	9,675	-	-	1,174
TOTAL ESTIMATED STORED WATER (1/1/2017)	8,415	13,942	-	-	1,174

NOTES:

-Water in storage has been adjusted to account for losses.

-MWD = Metropolitan Water District of Southern California.

¹ IRWD's SWP includes 229 AF from CVWD that stays in Kern County.

² IRWD's Non-SWP total includes 2,842 AF of Kern County Water Agency Article 21 Water.

³ DRWD water supply will be returned by MWD to IRWD's Jackson Ranch.

⁵ MWD is storing IRWD's share of 2013-2015 SWP allocation (649 AF) and assumes MWD will store 2016 SWP allocation amounts in MWD's system and not at Strand Ranch.

⁶ 4% of banked water is placed into a reserve to account for actual or potential losses. The reserve water may be purchased within 3 years following the end of the calendar year in which the water was banked. If the water is not purchased at the end of 3 years, it is made available for recovery.

Exhibit "C"

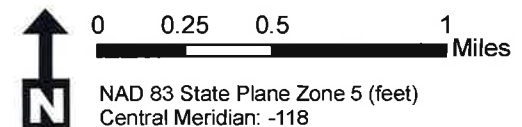


Location Map: IRWD Water Banking Projects Wells and Turn-in Pipelines

MAP FEATURES

- Existing Extraction Well
- Planned Extraction Well
- Well Discharge Pipelines
- Stockdale East
- Stockdale West
- Strand Ranch

This figure shows the location of IRWD's water banking project sites as well as existing and proposed extraction wells.



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Exhibit "D"

Rosedale Highway



**Location Map:
IRWD Water Banking Projects
Turnout Facilities**

MAP FEATURES

- ▲ Turnouts
- Stockdale East
- Stockdale West
- Strand Ranch

**Existing Siphon
50 CFS Capacity
From Strand**

**Planned
Stockdale West
Turnout Facility
100 CFS Capacity**

**Existing North & South
Strand Ranch
Turnout Facilities
100 CFS Capacity Each**

Stockdale Highway

Cross Valley Canal

Enos Ln

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community



0 0.25 0.5 1

NAD 83 State Plane Zone 5 (feet)
Central Meridian: -118

Miles

Exhibit "E"

IRWD-Rosedale Water Banking and Exchange Program Agreements

Effective 1/12/2009 through 1/12/2039 (Strand Ranch)

2/4/2016 through 1/12/2039 (Stockdale West)

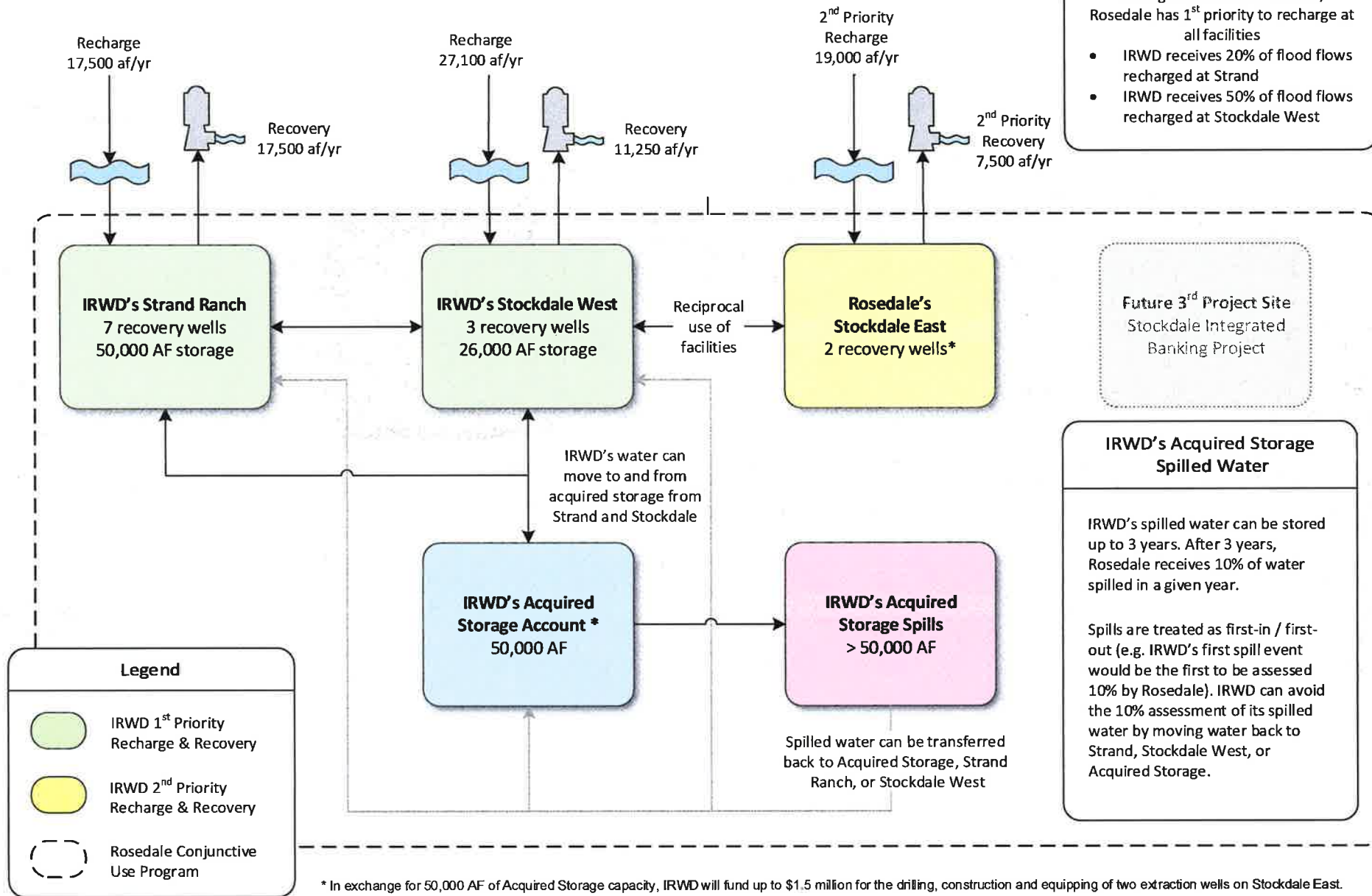
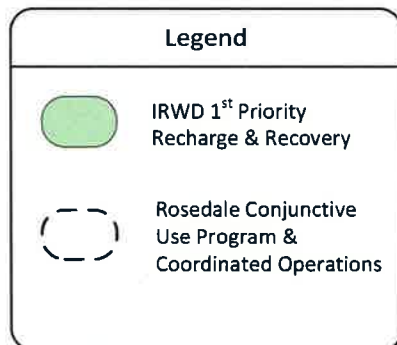
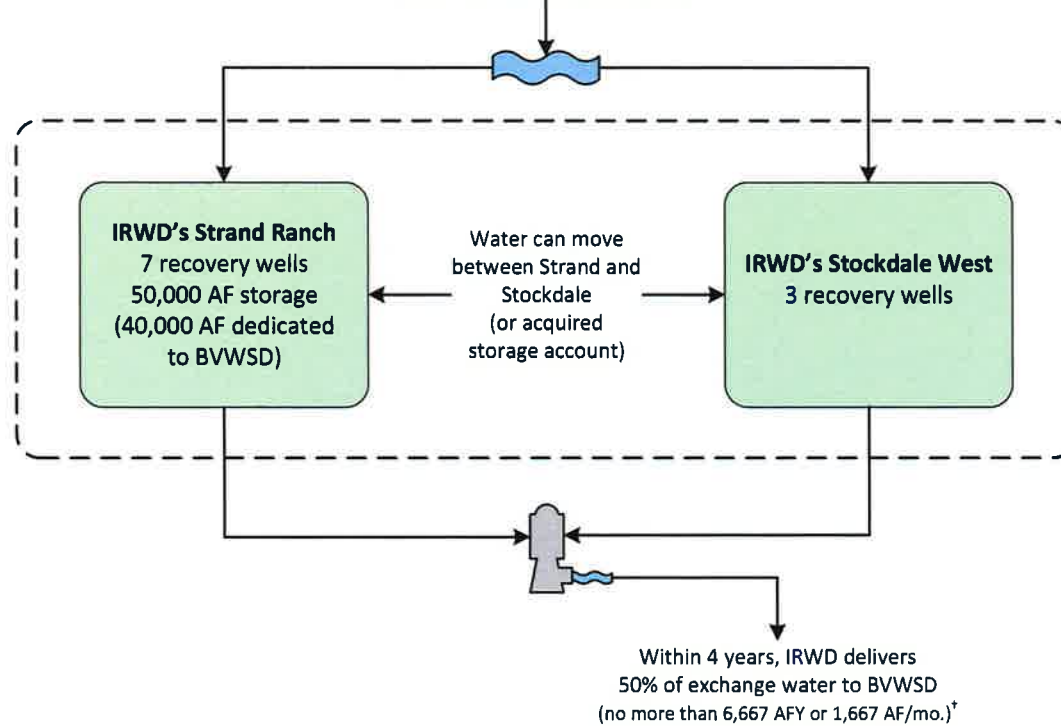


Exhibit "F"

Buena Vista Water Storage District Long Term Water Exchange Program

Effective 1/1/2011 through 1/12/2039

BVWSD delivers non-SWP water to Strand Ranch or to
Stockdale West through Rosedale coordinated operations
(IRWD receives 50%)
(Up to 17,500 AFY or 4,375 AF/mo.)



[†]IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31st of the 4th year following the associated recharge event. IRWD pays for recovery of water returned to BV. Water to be remitted back to BV may remain in storage at Strand Ranch beyond the 4th year, in exchange for a greater percent being transferred to IRWD as compensation per the table shown to the right:

Year Following Recharge Event	Percent Transferred to IRWD	Percent Returned to BV During or Before Indicated Year
1	50%	50%
2	50%	50%
3	50%	50%
4	50%	50%
5	60%	40%
6	70%	30%
7	80%	20%
8	90%	10%
9	100%	0%

Exhibit "G"
Dudley Ridge Water District (DRWD) Unbalanced Exchange Program
Up to 8,700 AF delivered from 12/16/2013 through 12/31/2017

