

AGENDA
IRVINE RANCH WATER DISTRICT
SUPPLY RELIABILITY PROGRAMS COMMITTEE
THURSDAY, JULY 16, 2020

Due to COVID-19, this meeting will be conducted as a teleconference pursuant to the provisions of the Governor's Executive Orders N-25-20 and N-29-20, which suspend certain requirements of the Ralph M. Brown Act. Members of the public may not attend this meeting in person.

Participation by members of the Committee will be from remote locations. Public access and participation will only be available telephonically/electronically.

To virtually attend the meeting and to be able to view any presentations or additional materials provided at the meeting, please join online via Webex using the link and information below:

Via Web:

<https://irwd.my.webex.com/irwd.my/j.php?MTID=m696edf0f92959cb4b0e238480ae2509d>

Meeting Number (Access Code): 126 132 4526
Meeting Password: bsKYBX3Rx82

After joining the meeting, in order to ensure all persons can participate and observe the meeting, please select the "Call in" option and use a telephone to access the audio for the meeting by using the call-in information and attendee identification number provided.

As courtesy to the other participants, please mute your phone when you are not speaking.

PLEASE NOTE: Participants joining the meeting will be placed into the Webex lobby when the Committee enters closed session. Participants who remain in the "lobby" will automatically be returned to the open session of the Committee once the closed session has concluded. Participants who join the meeting while the Committee is in closed session will receive a notice that the meeting has been locked. They will be able to join the meeting once the closed session has concluded.

CALL TO ORDER 3:00 p.m.

ATTENDANCE Committee Chair: Peer Swan _____
Member: Douglas Reinhart _____

<u>ALSO PRESENT</u>	Paul Cook	_____	Paul Weghorst	_____
	Rob Jacobson	_____	Fiona Sanchez	_____
	Kellie Welch	_____	Christine Compton	_____
	Ray Bennett	_____	Jo Ann Corey	_____
	Natalie Palacio	_____	_____	_____
	_____	_____	_____	_____

PUBLIC COMMENT NOTICE

If you wish to address the Committee on any item, please submit a request to speak via the “chat” feature available when joining the meeting virtually. Remarks are limited to three minutes per speaker on each subject. You may also submit a public comment in advance of the meeting by emailing comments@irwd.com before 12:00 p.m. on Thursday, July 16, 2020.

ALL VOTES SHALL BE TAKEN BY A ROLL CALL VOTE.

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, OPERATIONS AND PROGRAMS – PALACIO / WELCH / SANCHEZ / WEGHORST</u> | |
|--|--|

Recommendation: Receive and file.

ACTION

- | | |
|--|--|
| 6. <u>PRINCIPLES FOR COOPERATIVE WATER SUPPLY PROGRAM WITH ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT</u> | |
|--|--|

Recommendation: That the Committee provide input on the Draft Principles for a Cooperative Water Supply Program with IRWD and Rosedale-Rio Bravo Water Storage District.

OTHER BUSINESS

7. CONFERENCE WITH REAL PROPERTY NEGOTIATORS – Pursuant to Government Code Section 54956.8:

Property: Jackson Ranch (Portions of Sections 25, 26, 34, and 35 of T23S R19E MDB&M)

Agency negotiators: Paul Cook, General Manager and
Paul Weghorst, Executive Director of Water Policy

Negotiating parties: Dudley Ridge Water District

Under negotiation: Price and Terms of Payment

8. Open Session
9. Directors' Comments
10. 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 electronically via the Webex meeting noted. Upon request, the District will provide for written agenda materials in appropriate alternative formats, and reasonable disability-related modification or accommodation to enable individuals with disabilities to participate in and provide comments at public meetings. Please submit a request, including your name, phone number and/or email address, and a description of the modification, accommodation, or alternative format requested at least two days before the meeting. Requests should be emailed to comments@irwd.com. Requests made by mail must be received at least two days before the meeting. Requests will be granted whenever possible and resolved in favor of accessibility.

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July 16, 2020

Prepared by: N. Palacio / K. Welch

Submitted by: F. Sanchez / P. Weghorst

Approved by: Paul A. Cook



SUPPLY RELIABILITY PROGRAMS COMMITTEE

WATER BANKING PROJECT FACILITIES, CAPACITIES, OPERATIONS AND PROGRAMS

SUMMARY:

Staff has prepared information related to IRWD's water banking facilities, capacities, operations and exchange programs. The information is regularly updated to reflect changes in the status of IRWD's projects, programs and operations. At the Committee meeting, staff will review this information and provide an update on efforts to secure additional water for recharge at IRWD's water banking projects.

BACKGROUND:

To facilitate the discussion with the Committee, staff has prepared reference materials in tabular, map and schematic formats to describe IRWD's water banking facilities, capacities, operations, storage and exchange programs. The reference materials are updated regularly to reflect changes in the status of the projects, programs and operations. The following is an overview of the reference materials.

Capacity and Operations Tables:

A table presenting storage, recharge and recovery capacities of existing and planned IRWD water banking projects, including capacities available to IRWD in the Kern Water Bank, is provided as Exhibit "A". Exhibits "B" and "C" provide an update on water banking recovery and recharge operations, as well as the balance of the water stored in the Kern Water Bank. Exhibit "B" provides before-loss estimates of water recharged at the water banking projects, and Exhibit "C" provides after-loss estimates of water recharged at the projects. Both Exhibits "B" and "C" include a column that provides totals for each water type and storage location. Changes shown in red on Exhibits "B" and "C" reflect water recovered for Buena Vista Water Storage District.

Exhibit "D" graphically depicts how storage of State Water Project and non-SWP water has changed in the Strand and Stockdale Integrated Banking Projects over time. The table provided as Exhibit "E" shows how capacities in the water banking projects have been dedicated to IRWD's existing and proposed exchange programs.

Project Maps:

To support the tables provided as Exhibits "A", "B", "C" and "E", as well as the figure provided as Exhibit "D", staff has prepared maps that depict project wells and pipelines, recharge basins and Cross Valley Canal turnout locations, along with the most current recharge rates. These maps are provided as Exhibits "F", "G" and "H", respectively. The facilities shown on the maps

are associated with the Strand Ranch, Stockdale West, Stockdale East and Drought Relief Projects.

Program Agreement Diagrams:

Schematic diagrams have been prepared that depict IRWD water banking and exchange programs with Rosedale-Rio Bravo Water Storage District, Buena Vista Water Storage District, Dudley Ridge Water District (DRWD), and Metropolitan Water District of Southern California. These diagrams are provided as Exhibits “I”, “J”, “K”, “L”, “M” and “N”, as described in the List of Exhibits.

Other Recharge Opportunities:

IRWD has been pursuing additional opportunities to secure water for recharge. At the Committee meeting, staff will provide an update on efforts to secure water from Dudley Ridge Water District, and other sources.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit “A” – Recharge, Storage and Recovery Capacities of Current and Anticipated Water Banking Projects

Exhibit “B” – Water Banking Storage, Recharge and Recovery Operations before Losses

Exhibit “C” – Water Banking Storage, Recharge and Recovery Operations after Losses

Exhibit “D” – Historic Water Storage in Strand and Stockdale Projects

Exhibit “E” – Dedicated Capacities of Current Water Banking Projects

Exhibit “F” – Map of Water Banking Project Wells and Pipelines

Exhibit “G” – Map of Water Banking Recharge Basins and Cross Valley Canal Turnout Facilities

Exhibit “H” – Map of Water Banking Recharge Rates

Exhibit “I” – Diagram of IRWD-Rosedale Water Banking and Exchange Program Agreements

Exhibit “J” – Diagram of Long-Term Water Exchange Program with BVWSD and Diagram of One-Year Program to Augment Recharge Using Stockdale West Recharge Facilities with BVWSD

Exhibit “K” – Diagram of Unbalanced Exchange Program Diagram with DRWD

Supply Reliability Programs Committee: Water Banking Project Facilities, Capacities,
Operations and Programs

July 16, 2020

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Exhibit “L” – Diagram of Coordinated Operating, Water Storage, Exchange and Delivery
Agreement with Metropolitan Water District

Exhibit “M” – Diagram of Template Wheeling Agreement with Metropolitan Water District

Exhibit “N” – Diagram of Dudley Ridge Water District One-For-One Exchange

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Exhibit "A"

TABLE 1
Current and Anticipated Water Banking Project
Recharge, Storage and Recovery Capacities
July 16, 2020

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 OR UNDER CONST.	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	ESTIMATED RECOVERY CAPACITY (APR. 2019 CONDITIONS) ²	RECOVERY CAPACITY AS PLANNED	RECOVERY CAPACITY CURRENT CONDITIONS
Strand Ranch	Yes	7	-	50,000	17,500	-	17,500	-	40.0	40.0	-	-
Stockdale West	Yes	3	-	26,000	27,100	-	11,250	-	15.0	15.0	-	-
Stockdale East	No	-	2	-	-	19,000	-	7,500	-	-	10.0	-
IRWD Acquired Storage Account ³	No	-	-	50,000	-	-	-	-	-	-	-	-
Drought Relief Project Wells ³	No	3	-	-	-	-	-	-	15.0	15.0	-	-
Kern Water Bank Storage Account ⁵	No	-	-	9,495	3,200	-	6,330	-	-	-	-	-
TOTALS		13	2	126,000	44,600	19,000	28,750	7,500	70.0	70.0	10.0	0.0
Partner Capacities ⁴				38,000	22,300	9,500	10,850	0	35.5	25.0	-	-
IRWD Capacities				88,000	22,300	9,500	17,900	7,500	34.5	25.0	-	-
IRWD's recovery <i>during</i> 6 month partner recovery period (AF)									12,420	9,000	-	-
IRWD's recovery <i>after</i> 6 month partner recovery period (AF)									5,480	6,733	-	-
TOTALS (AF)									17,900	15,733	-	-
Number of months needed to recover IRWD's total AF after partners' recovery (Assumes IRWD has use of total recovery capacity after partners' recovery)									8.6	10.2	-	-
Strand Ranch monthly recharge amount assuming 0.3 ft/day average recharge rate (AF)											4,518	
Stockdale West monthly recharge amount assuming 0.3 ft/day average recharge rate (AF)											2,331	

¹Based 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.

²SUP-1, SWEX-2, and SREX-6 are currently down.

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

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

⁵Kern 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. Not included in storage capacity, recharge, and recovery totals to match IRWD's Water Banking Policy Position Paper.

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Exhibit "B"

TABLE 2

IRWD's Water Banking Storage, Recharge and Recovery Operations - BEFORE LOSSES

July 16, 2020

TRANSACTIONS	WATER BANKING ENTITY					TOTAL BY WATER TYPE AND STORAGE LOCATION
	IRWD		BUENA VISTA (BVWSD)	CENTRAL COAST (CCWA)	DUDLEY RIDGE WATER DISTRICT (DRWD) ³	
	SWP ¹	NON-SWP ²	NON-SWP	SWP	SWP	
BEGINNING WATER IN STORAGE 2019 (AF)						
Total Kern Water Bank	-	4,656	-	-	-	4,656
Total MWD System ⁴	8,349	-	-	-	879	9,228
Total Kern County	3,567	17,704	5,202	289	2,698	29,460
TOTAL STORED WATER (1/1/2019)	11,916	22,360	5,202	289	3,577	43,344
(RECOVERY) AND RECHARGE IN 2019 (AF)						
MWD Water to Jackson Ranch ⁵	-	-	-	-	(440)	(440)
Kern Water Bank Deliveries ⁶		97				97
2019 SWP Allocation (75%) ³	656	-	-	-	656	1,311
Kern River Water	-	5,975	5,975	-	-	11,949
SWP Table A (CCWA 2019 Exch.)	347			347	-	694
TOTAL 2019 TRANSACTIONS	1,003	6,072	5,975	347	216	13,611
Total Kern Water Bank	-	4,753	-	-	-	4,753
Total MWD System	8,349	-	-	-	439	8,788
Total Kern County	4,570	23,679	11,177	636	3,354	43,414
TOTAL STORED WATER (1/1/2020)	12,919	28,432	11,177	636	3,793	56,955
(RECOVERY) AND RECHARGE IN 2020 (AF)						
MWD Water to Jackson Ranch (estimated)	-	-	-	-	-	-
Kern Water Bank Deliveries	-	-	-	-	-	-
2020 SWP Allocation (20 %) ³	175	-	-	-	175	350
Kern River Water	-	-	(7,500)	-	-	(7,500)
TOTAL ESTIMATED 2020 TRANSACTIONS	175	-	(7,500)	-	175	(7,150)
ESTIMATED WATER IN STORAGE 2020 (AF)						
Total Kern Water Bank	-	4,753	-	-	-	4,753
Total MWD System	8,349	-	-	-	439	8,788
Total Kern County	4,745	23,679	3,677	636	3,529	36,264
TOTAL ESTIMATED STORED WATER TO DATE	13,094	28,432	3,677	636	3,968	49,805

NOTES:

-MWD = Metropolitan Water District of Southern California.

¹ IRWD's SWP includes 437 AF from CVWD that stays in Kern County.

² IRWD's Non-SWP total includes 3,158 AF of Kern County Water Agency Article 21 Water.

³ DRWD water supply will be returned by MWD or IRWD's Strand Ranch to IRWD's Jackson Ranch. IRWD's 2013-2016 SWP allocation amounts are stored in the MWD system. IRWD's 2017 through 2019 SWP allocation water is stored in Kern County. It is assumed that IRWD's 2020 SWP allocation will be stored in Kern County.

⁴ Beginning balance of water stored in MWD system includes: 4,494 AF from 2014 Exchange, 3,206 AF of 2014 borrowed SWP, 649 AF of IRWD's 2013-2016 SWP allocations through DRWD.

⁵ Water returned to DRWD by MWD for use on IRWD's Jackson Ranch.

⁶ A portion of IRWD's 2019 SWP deliveries from DRWD include 97 AF of Article 21 water, which was delivered to the Kern Water Bank.

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Exhibit "C"

TABLE 3
IRWD's Water Banking Storage, Recharge and Recovery Operations - AFTER LOSSES
 July 16, 2020

TRANSACTIONS	WATER BANKING ENTITY					TOTAL BY WATER TYPE AND STORAGE LOCATION
	IRWD		BUENA VISTA (BVWSD)	CENTRAL COAST (CCWA)	DUDLEY RIDGE WATER DISTRICT (DRWD) ³	
	SWP ¹	NON-SWP ²	NON-SWP	SWP	SWP	
BEGINNING WATER IN STORAGE 2019 (AF)						
Total Kern Water Bank	-	4,233	-	-	-	4,233
Total MWD System ⁴	7,393	-	-	-	879	8,272
Total Kern County	3,046	15,564	4,532	246	2,395	25,783
TOTAL STORED WATER (1/1/2019)	10,439	19,797	4,532	246	3,274	38,288
(RECOVERY) AND RECHARGE IN 2019 (AF)						
MWD Water to Jackson Ranch ⁵	-	-	-	-	(440)	(440)
Kern Water Bank Deliveries ⁷	-	87	-	-	-	87
2019 SWP Allocation (75%) ³	557	-	-	-	557	1,114
Kern River Water	-	5,078	5,377	-	-	10,455
SWP Table A (CCWA 2019 Exch.)	298	-	-	298	-	595
TOTAL 2019 TRANSACTIONS	855	5,166	5,377	298	117	11,812
Total Kern Water Bank	-	4,320	-	-	-	4,320
Total MWD System	7,393	-	-	-	439	7,832
Total Kern County	3,901	20,642	9,909	543	2,952	37,947
TOTAL STORED WATER (1/1/2020)	11,294	24,963	9,909	543	3,391	50,100
(RECOVERY) AND RECHARGE IN 2020 (AF)						
MWD Water to Jackson Ranch (estimated)	-	-	-	-	-	-
Kern Water Bank Deliveries	-	-	-	-	-	-
2020 SWP Allocation (20%) ³	150	-	-	-	150	300
Kern River Water	-	-	(7,500)	-	-	(7,500)
TOTAL ESTIMATED 2020 TRANSACTIONS ⁶	150	-	(7,500)	-	150	(7,200)
ESTIMATED WATER IN STORAGE 2020 (AF)						
Total Kern Water Bank	-	4,320	-	-	-	4,320
Total MWD System	7,393	-	-	-	439	7,832
Total Kern County	4,051	20,642	2,409	543	3,102	30,747
TOTAL ESTIMATED STORED WATER TO DATE	11,444	24,963	2,409	543	3,541	42,900

NOTES:

-Water in storage has been adjusted to account for losses. IRWD's water stored in Kern County is adjusted 15% for losses (5% for out of county loss, 6% surface loss, and 4% reserve loss); Water stored for DRWD and BVWSD in Kern County is adjusted 10% (6% for surface loss and 4% for reserve loss); KWB losses are 10%; no losses for water directly delivered to MWD system.

-MWD = Metropolitan Water District of Southern California.

¹ IRWD's SWP includes 389 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 or IRWD's Strand Ranch to IRWD's Jackson Ranch. IRWD's 2013-2016 SWP allocation amounts are stored in the MWD system. IRWD's 2017 through 2019 SWP allocation water is stored in Kern County. It is assumed that IRWD's 2020 SWP allocation will be stored in Kern County.

⁴ Beginning balance of water stored in MWD system includes (net of CVC losses): 3,920 AF of 2014 Exchange, 2,824 AF of 2014 borrowed SWP, 649 AF of IRWD's 2013-2016 SWP allocations through DRWD.

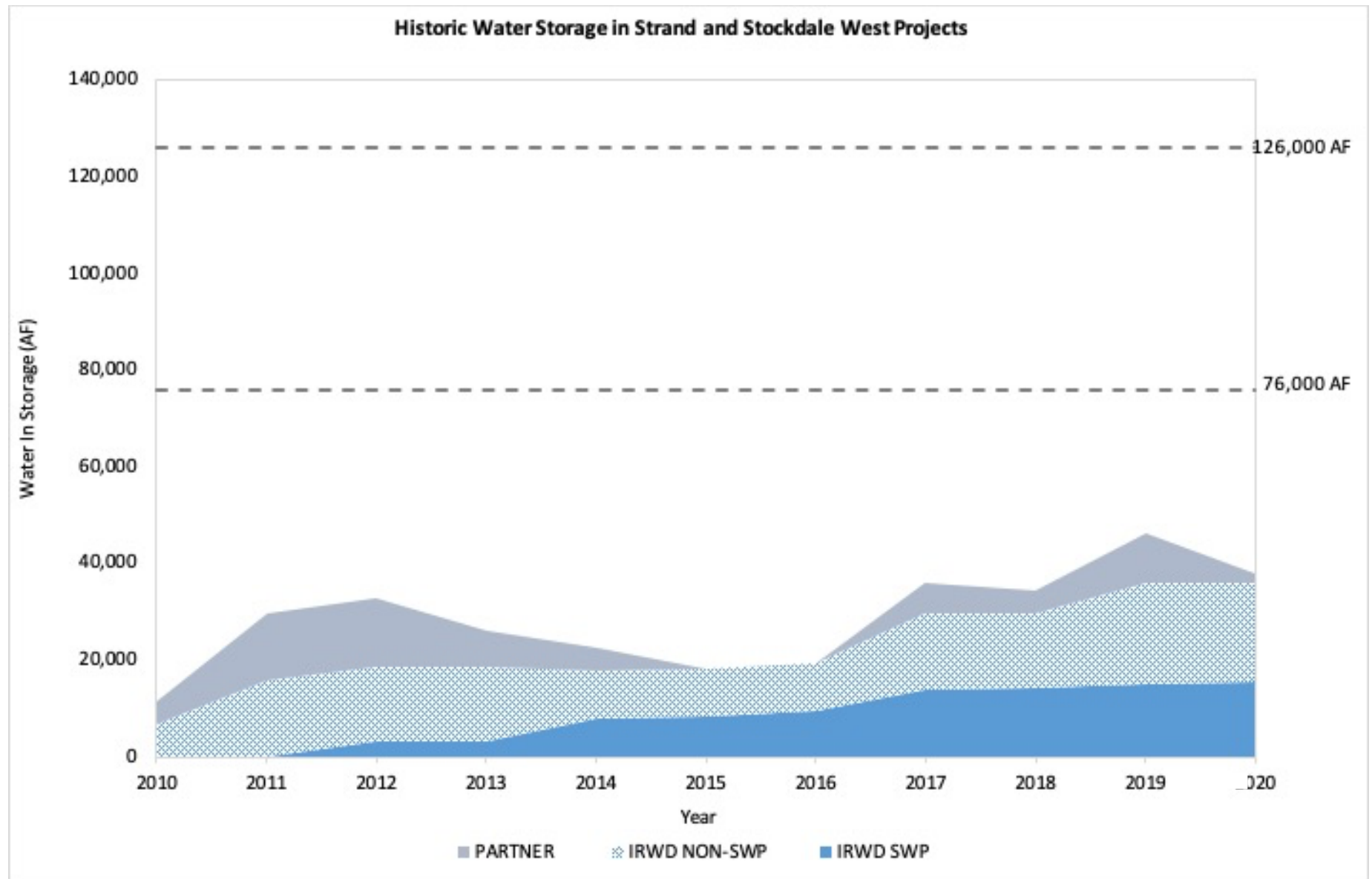
⁵ Water returned to DRWD by MWD for use on IRWD's Jackson Ranch.

⁶ 2020 transactions may be adjusted for conveyance losses in CVC.

⁷ A portion of IRWD's 2019 SWP deliveries from DRWD include 97 AF of Article 21 water, which was delivered to the Kern Water Bank.

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Exhibit “D”



*After losses

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Exhibit "E"

TABLE 1
IRWD Dedicated Water Banking Capacities for
Existing and Proposed Exchange Programs
July 16, 2020

Program	Dedicated Storage Capacity Strand Ranch (AF)	Dedicated Storage Capacity Stockdale West (AF)	Dedicated Storage Capacity Leased Storage Account (AF)	Kern Water Bank Storage Capacity (AF)
Total Capacity	50,000	26,000	50,000	9,495
BVWSD	40,000	-	-	-
DRWD	10,000	-	-	-
AVEK	-	20,000	-	-
CVWD	-	5,000	-	-
Total Dedicated	50,000	25,000	-	-
Total Remaining	-	1,000	50,000	9,495

RECHARGE CAPACITY

Program	Dedicated Recharge Capacity Strand Ranch (AF)	Dedicated Recharge Capacity Stockdale West (AF)	Dedicated Recharge Capacity Leased Storage Account (AF)	Kern Water Bank Recharge Capacity (AF)
Total Capacity	17,500	27,100	-	3,200
BVWSD	17,500	-	-	-
DRWD	-	-	-	-
AVEK	-	20,000	-	-
CVWD	-	5,000	-	-
Total Dedicated	17,500	25,000	-	-
Total Remaining	-	2,100	-	3,200

RECOVERY CAPACITY

Program Partner	Dedicated Recovery Capacity Strand Ranch (AF)	Dedicated Recovery Capacity Stockdale West (AF)	Dedicated Recovery Capacity Leased Storage Account (AF)	Kern Water Bank Recovery Capacity (AF)
Total Capacity	17,500	11,250	-	6,330
BVWSD	6,667	-	-	-
DRWD	-	-	-	-
AVEK	-	3,333	-	-
CVWD	-	833	-	-
IRWD	10,833	7,084	-	6,330
Total Dedicated	17,500	11,250	-	6,330
Total Remaining	-	-	-	-

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Exhibit "F"



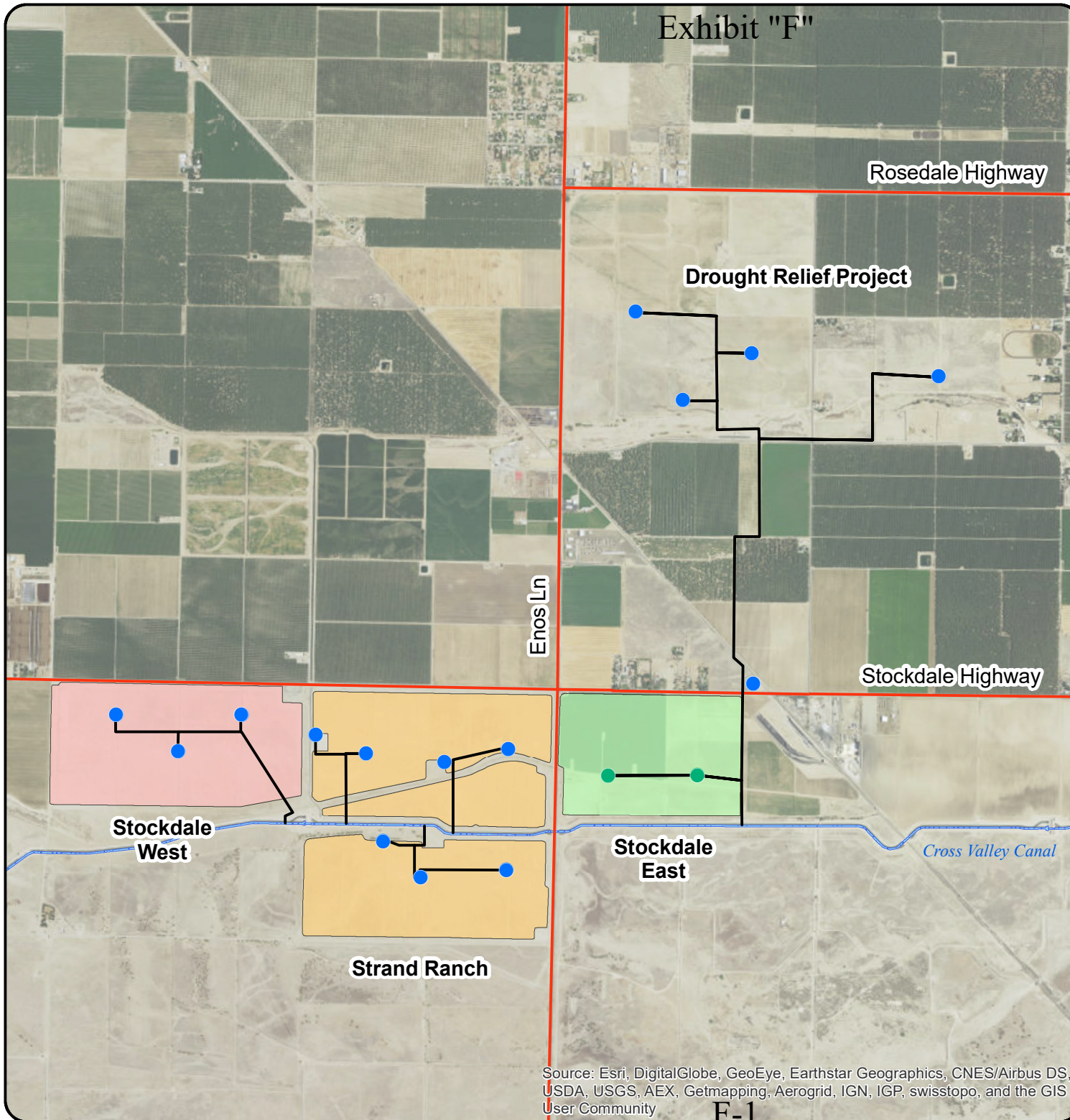
Irvine Ranch
WATER DISTRICT

Location Map: IRWD Water Banking Projects Wells and Turnin Pipelines

MAP FEATURES

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

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



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

F-1



0 0.25 0.5 1 Miles

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

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Exhibit "G"

Rosedale Highway



Irvine Ranch
WATER DISTRICT

Location Map: IRWD Water Banking Projects Recharge Basins & Turnout Facilities

MAP FEATURES

- ▲ Turnouts
- Stockdale West
- Strand Ranch

This figure shows the location of
recharge basins, pipelines and
turnout facilities.

Existing Siphon
50 CFS Capacity
From Strand

Stockdale West
Turnout
100 CFS Capacity

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

Cross Valley Canal

Enos Ln

Stockdale Highway

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

G-1



0 0.25 0.5 1
Miles

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

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Exhibit "H"

Rosedale Highway



Location Map: IRWD Water Banking Projects Recharge Rates

MAP FEATURES

- ▲ Turnouts
- Stockdale West
- Strand Ranch

This figure shows the location of recharge basins and their associated recharge rates as of June 18, 2019.

Stockdale West
0.11 feet/day
15 CFS

Strand Ranch North
0.29 feet/day
40 CFS

Strand Ranch South
0.13 feet/day
15 CFS

Stockdale Highway

Cross Valley Canal

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



0 0.25 0.5 1
Miles

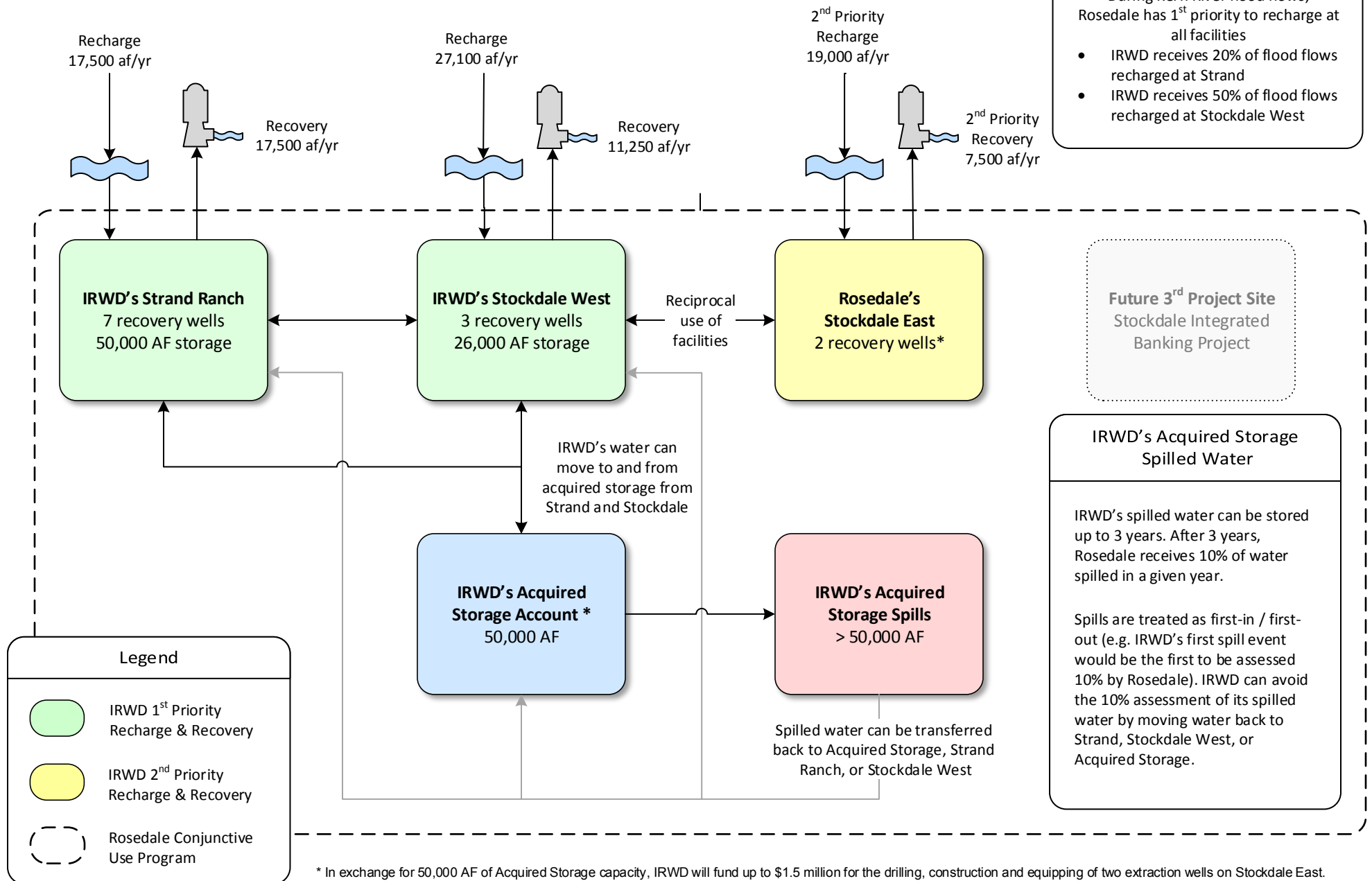
NAD 83 State Plane Zone 5 (feet)
Central Meridian: -118

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Exhibit "I"

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)

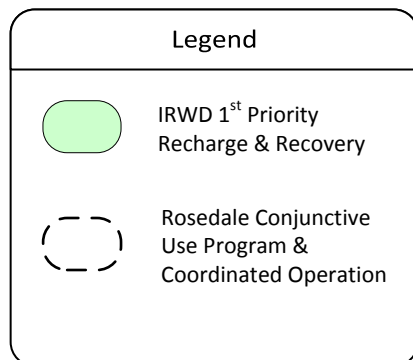
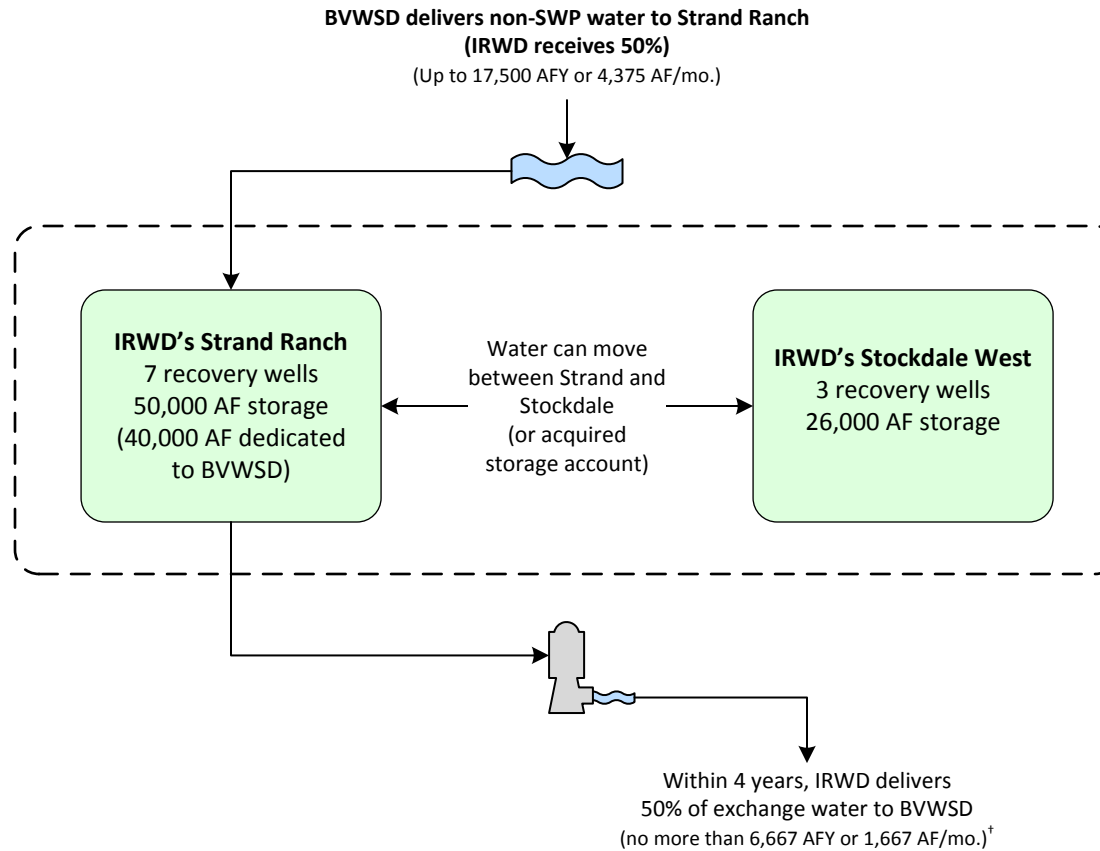


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Exhibit "J"

Buena Vista Water Storage District Long Term Water Exchange Program

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

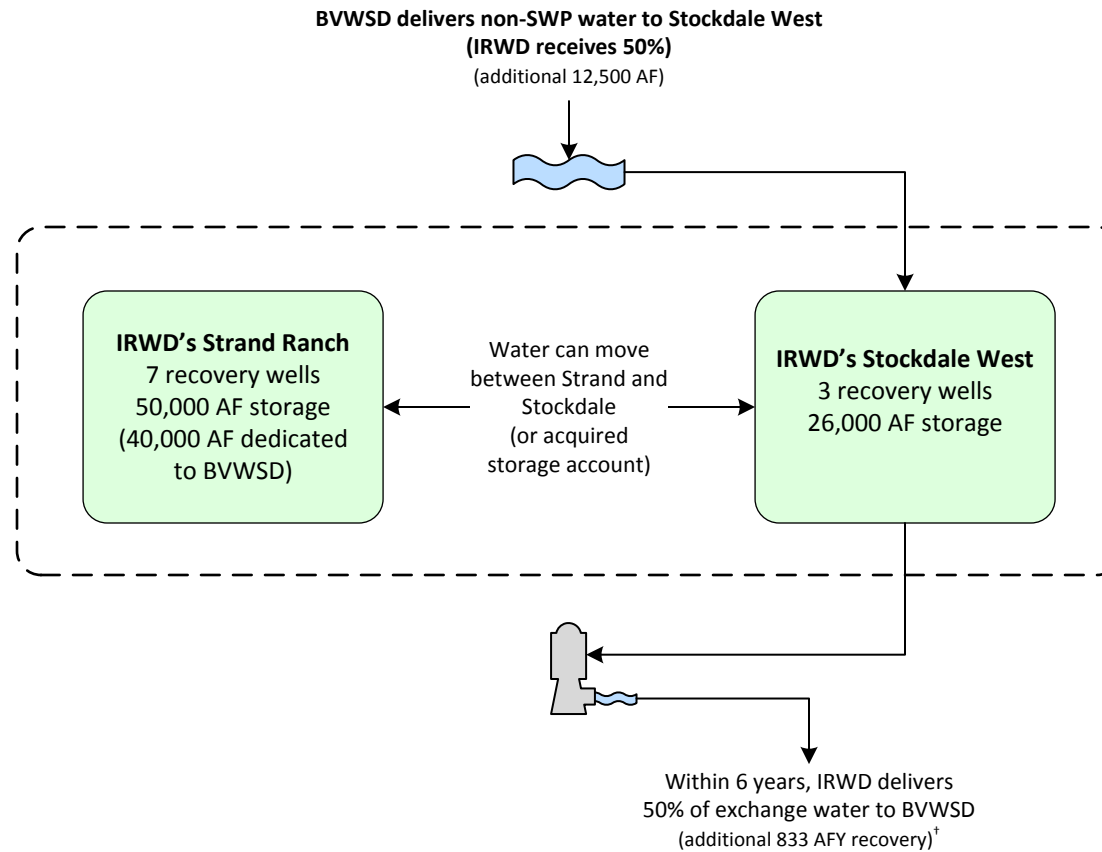




[†]IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31st of the 4th year following the associated recharge event. IRWD pays for recovery of water returned to BV. Water to be remitted back to BV may remain in storage at Strand Ranch 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%

Buena Vista Water Storage District One-Year Program to Augment Recharge Using Stockdale West Recharge Facilities

Effective 4/1/2017 through 3/30/2018



Legend	
	IRWD 1 st Priority Recharge & Recovery
	Rosedale Conjunctive Use Program & Coordinated Operation

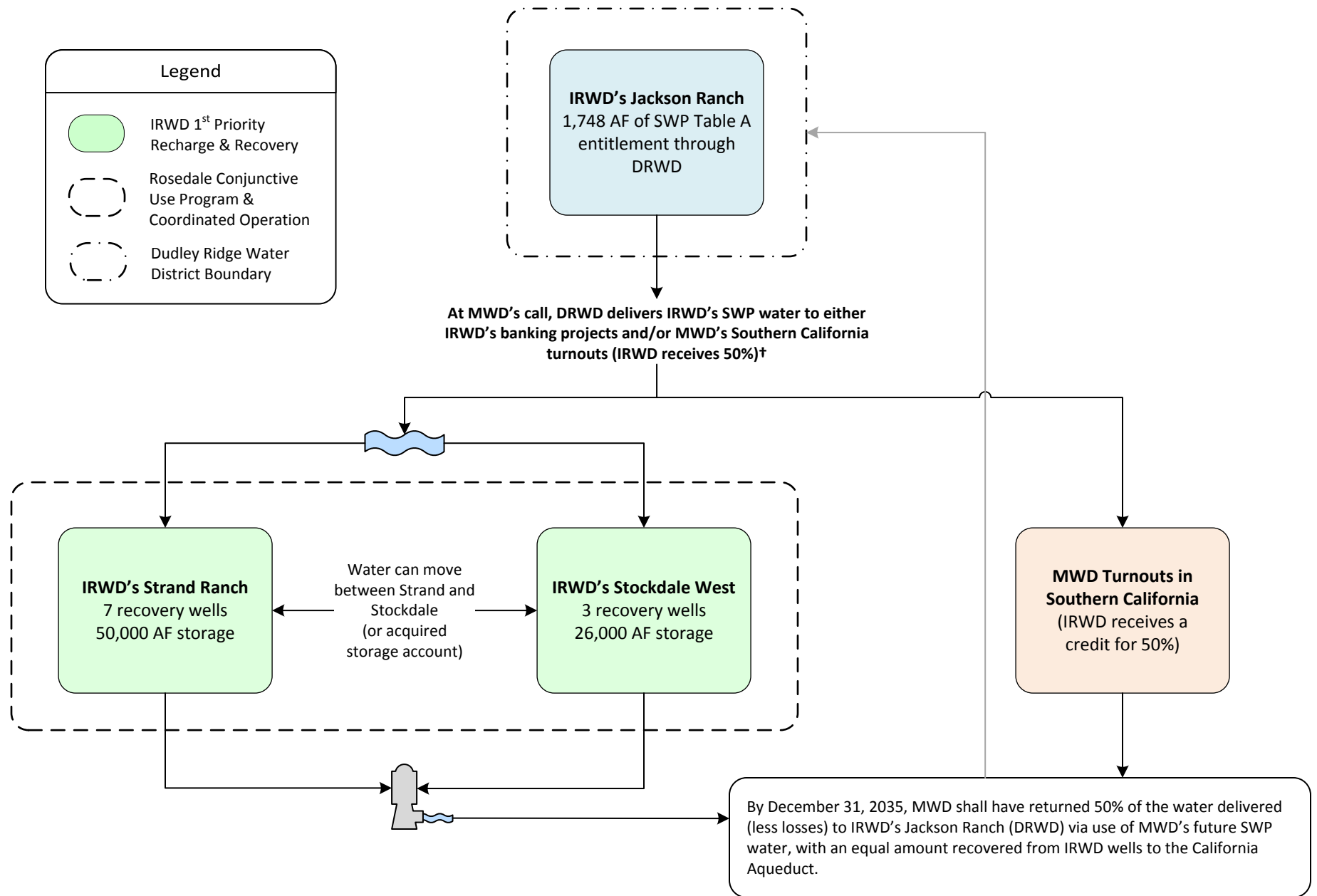
[†]IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31st of the 6th year following the associated recharge event. IRWD pays for recovery of water returned to BV. Water to be remitted back to BV may remain in storage at Strand Ranch beyond the 6th 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	50%	50%
6	50%	50%
7	75%	25%
8	100%	0%
9	100%	0%

Exhibit "K"

Dudley Ridge Water District (DRWD) Unbalanced Exchange Program

Up to 12,240 AF delivered from 6/7/2018 through 12/31/2027



†Consistent with IRWD-MWD coordinated operating agreement.

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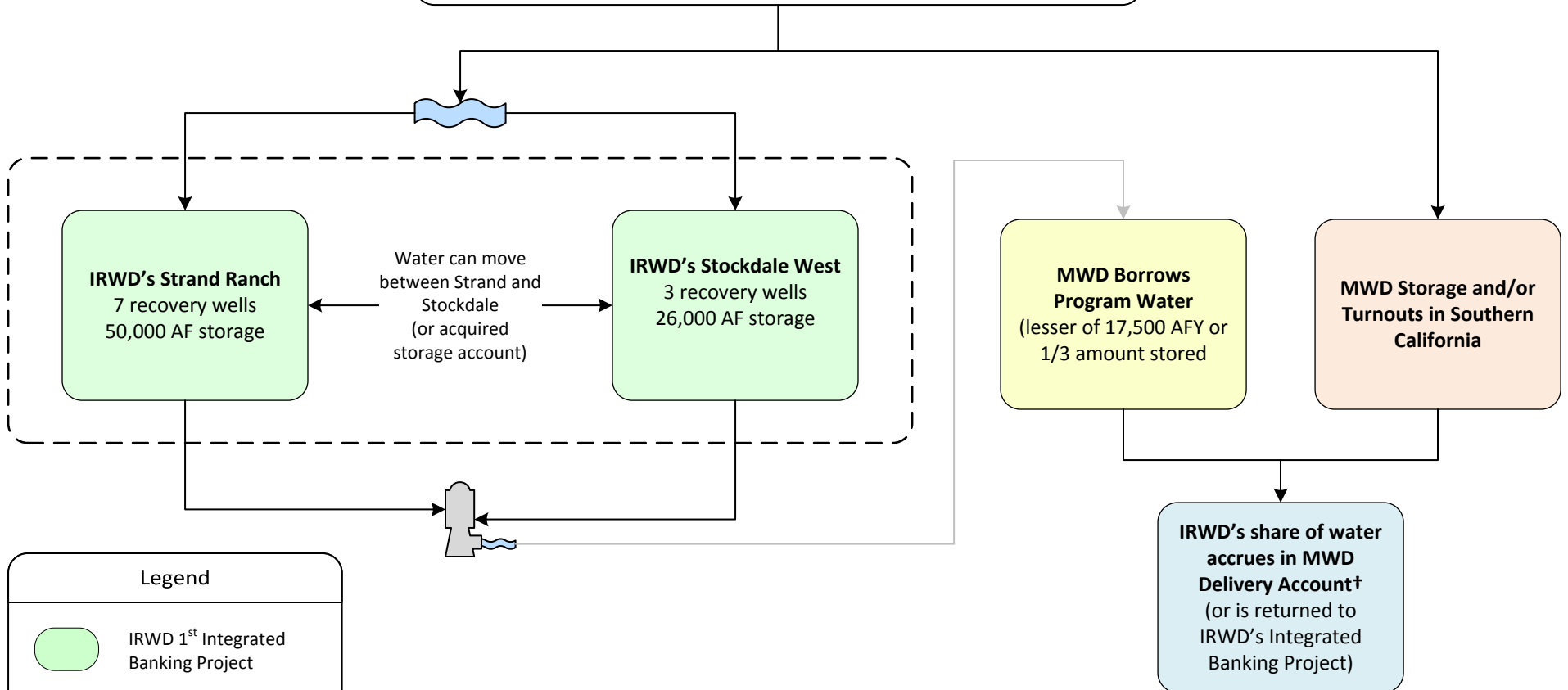
Exhibit "L"

Coordinated Operating, Water Storage, Exchange and Delivery Agreement Between MWD, MWDOC and IRWD Effective 5/1/2011 through 11/4/2035

With MWD's consent, IRWD secures SWP water (Program Water) through exchanges with IRWD Banking Partners for use as extraordinary supply under MWD Water Supply Allocation Plan

MWD has three options for the use and storage of Program Water:

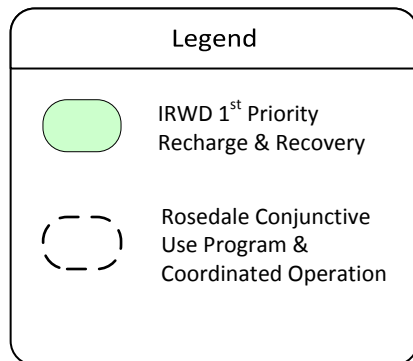
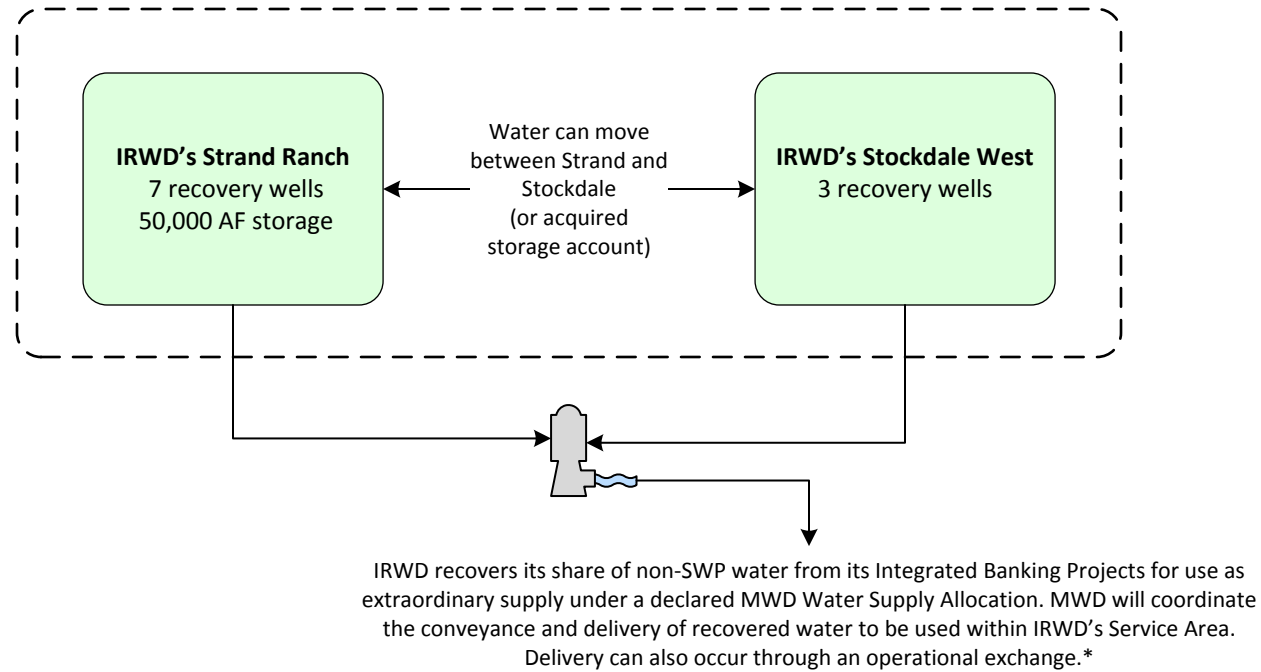
- Storage of water in IRWD's Integrated Banking Project
- Delivery to Southern California for immediate use and/or storage in MWD system
- Borrow a portion of Program water, with accrual in MWD Delivery Account



- Under an MWD Allocation, when IRWD calls for water, IRWD must first recover Program Water from the Integrated Banking Project before receiving water from the MWD Delivery Account.
- MWDOC shall pass through extraordinary supply credits for IRWD's benefit.
- † IRWD's banking partner share of Program Water to be returned by MWD.

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Exhibit "M"
Agreement for Conveyance of Water Between MWD, MWDOC, and IRWD (Wheeling Agreement)
Template for future agreements



*The recovered water must be used within IRWD's service area. IRWD to pay MWD wheeling charges, including system access rate, water stewardship rate, and treatment surcharge (if applicable), for each acre foot of recovered water wheeled by MWD. IRWD will pay the actual costs of power incurred by MWD to convey recovered water in the California Aqueduct to IRWD delivery points.

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Exhibit "N"

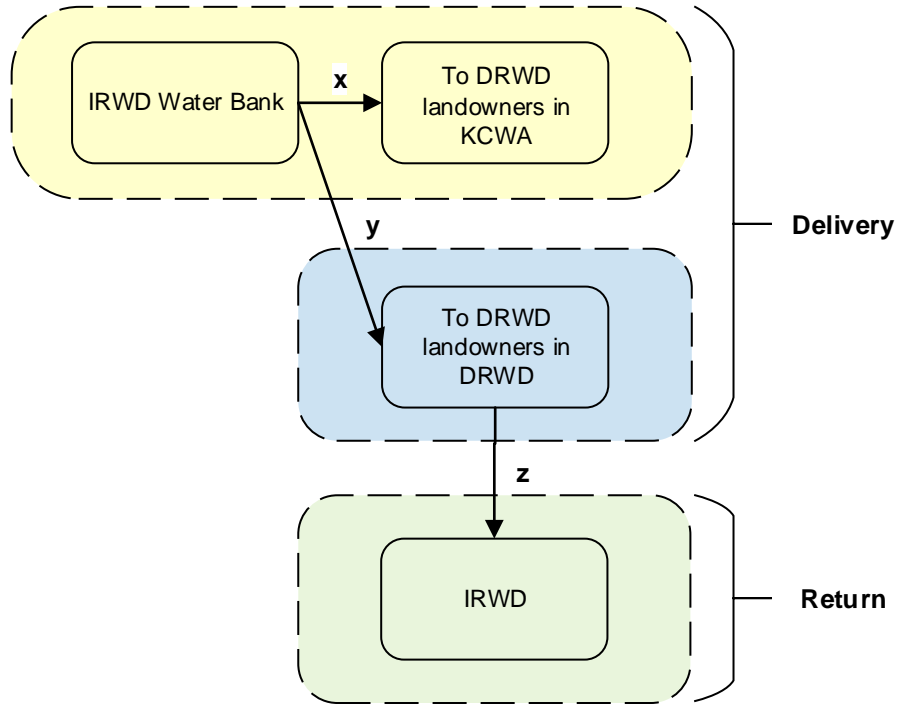
Dudley Ridge Water District Long Term 1-for-1 Water Exchange Program Effective 5/31/2017 through 11/4/2035

Scenario A

(Per Sections 2, 3, 4.1.1, and 4.1.3)

x= Non-Project Water required to stay in Kern County
y= Non-Project Water allowed to leave Kern County
z= DRWD Table A Water equal to x+y less applicable losses, if any

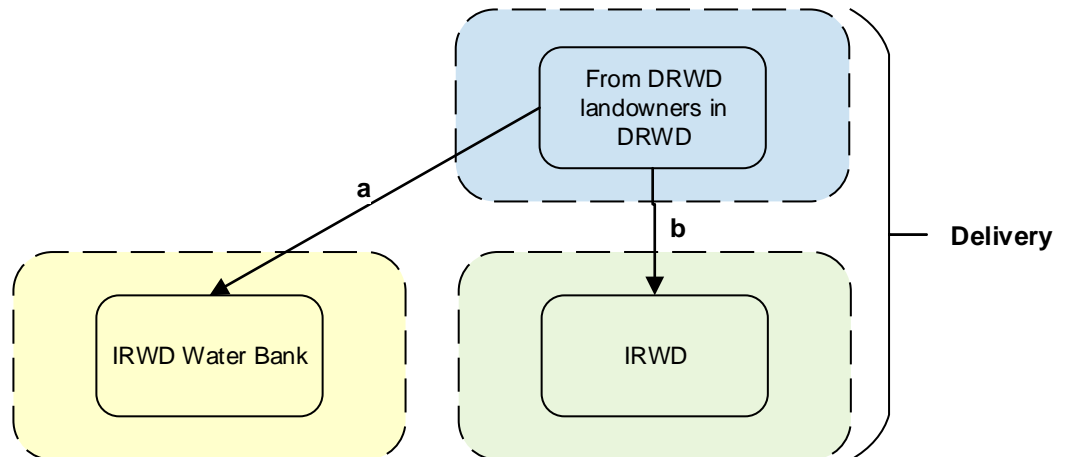
Per Section 4.1.3, z can be delivered to IRWD via in-ground transfer to IRWD, SWP delivery to IRWD banking facilities, or SWP delivery to MWDSC



Scenario B

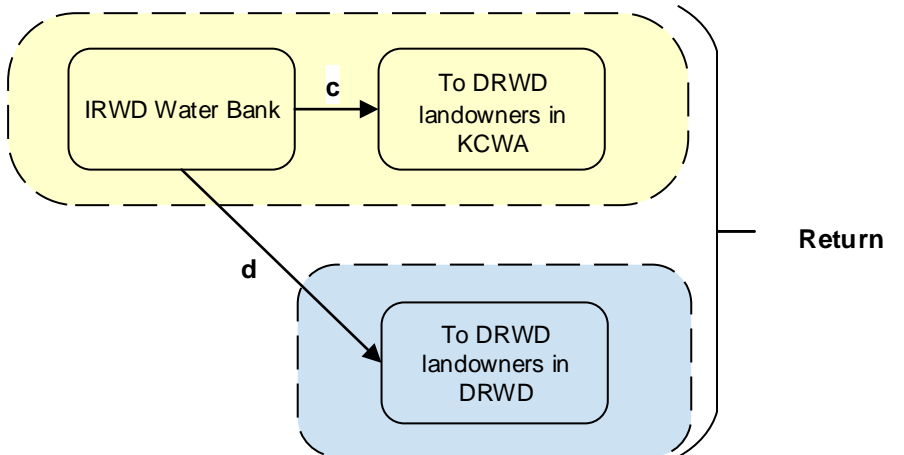
(Per Sections 2, 3, and 4.1.2)

$a + b = c + d$
(less applicable losses, if any)



Legend

	KCWA Service Area
	DRWD Service Area
	IRWD Service Area




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July 16, 2020

Prepared by: F. Sanchez

Submitted by: F. Sanchez / P. Weghorst

Approved by: Paul A. Cook 

SUPPLY RELIABILITY PROGRAMS COMMITTEE

PRINCIPLES FOR COOPERATIVE WATER SUPPLY PROGRAM WITH ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

SUMMARY:

Since 2006, IRWD and Rosedale-Rio Bravo Water Storage District have partnered on projects including the Strand Ranch and Stockdale Integrated Banking Projects. IRWD and Rosedale are currently working together to develop the Kern Fan Groundwater Storage Project. All of these projects create opportunities to expand the partnership between IRWD and Rosedale through the development of cooperative water supply and exchange programs. To initiate the development of such programs, staff has prepared Draft Principles for a Cooperative Water Supply Program with Rosedale. Staff recommends the Committee provide input on the draft principles.

BACKGROUND:

In 2006, IRWD and Rosedale initiated a successful partnership with the implementation of the Strand Ranch Interim Recharge Demonstration Project. Since then, IRWD and Rosedale have partnered on several projects, including integrating IRWD's Strand Ranch and Stockdale West Banking Projects into Rosedale's Conjunctive Use Program as well as jointly pursuing the development of the Kern Fan Project. These accomplishments provide opportunities for the development of cooperative water supply programs.

IRWD's Water Banking Projects:

Following the success of the Demonstration Project, IRWD and Rosedale entered into an agreement for a long-term water banking project at the Strand Ranch in 2009. The construction of the Strand Ranch Integrated Banking Project was completed and operations integrated into Rosedale's Conjunctive Use Program in 2010. In December 2016, Rosedale and IRWD entered into an agreement for a long-term banking project using facilities constructed on IRWD's Stockdale West and Rosedale's Stockdale East properties. The resulting Stockdale Integrated Banking Project was also integrated into Rosedale's Conjunctive Use Program.

The Strand and Stockdale projects combined provide IRWD 126,000 acre-feet (AF) of storage capacity, 44,600 acre-feet per year (AFY) of recharge capacity, and 28,750 AFY of recovery capacity on a first priority basis. To facilitate use of these capacities in meeting IRWD's emergency water supply needs, IRWD has established unbalanced exchange programs with other agencies that provide high-flow Kern River water and State Water Project (SWP) supplies.

Rosedale's Conjunctive Use Program:

For the benefit of its landowners, Rosedale has developed several water banking projects and implemented its Conjunctive Use Program. Supplies are provided by participating water

agencies and include high-flow Kern River water, SWP water, and other sources. The Conjunctive Use Program and associated water banking projects provide Rosedale a maximum annual recharge capacity of more than 250,000 AF, a maximum annual recovery capacity of more than 60,000 AF and an underground storage capacity of more than 1,000,000 AF.

Kern Fan Groundwater Storage Project:

Since 2017, IRWD and Rosedale have been jointly planning the development of the Kern Fan Project that will capture, recharge and store SWP water and other supplies during conditions when surface water is abundant. Water would be extracted when needed to provide ecosystem, water supply, and emergency supply benefits. The Kern Fan Project will provide 100,000 AF of storage and include the construction of a new conveyance canal with a capacity of approximately 500 cubic feet per second (cfs) from the California Aqueduct. The project will also include construction of facilities to provide up to 100,000 AFY in recharge capacity and up to 70 cfs of recovery capacity. These capacities would be shared equally by IRWD and Rosedale in meeting their respective water supply needs as well as providing ecosystem benefits to the State of California in return for significant grant funding. It is anticipated that the operation of the Kern Fan Project, managed through a joint power authority, will be coordinated with Rosedale's Conjunctive Use Program.

Principles for a Cooperative Water Supply Program:

The projects described above demonstrate that IRWD and Rosedale have a well-established track record of implementing mutually beneficial water banking projects. Both agencies have successfully implemented water supply and exchange programs with other partners involving high-flow Kern River water and SWP water. These accomplishments provide opportunities for the development of cooperative water supply programs between the two agencies that are mutually beneficial. To initiate the development of such programs, staff has prepared the Draft Principles for a Cooperative Water Supply Program that are provided as Exhibit "A". Staff recommends the Committee provide input on the draft principles. It is anticipated that once finalized, the principles would be further developed into detailed terms for a Cooperative Water Supply Program Agreement that will be reviewed with the Committee and Rosedale in future meetings.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

An Environmental Impact Report (EIR) for the Strand Ranch Integrated Banking Project was prepared and certified, and approved in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended), codified at California Public Resources Code Sections 21000 et seq., and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 2. Rosedale, as lead agency, filed a Notice of Determination for the Strand Ranch Integrated

Banking Project with the County of Kern. IRWD, as a responsible agency, filed Notices of Determination with the County of Orange and with the County of Kern.

An EIR for the Stockdale Integrated Banking Project was prepared, certified and approved in compliance with CEQA of 1970 (as amended), codified at California Public Resources Code Sections 21000 et. seq., and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3. Rosedale, as lead agency, filed a Notice of Determination for the Stockdale Integrated Banking Project with the County of Kern. IRWD, as a responsible agency, filed Notices of Determination with the County of Orange and with the County of Kern. The Stockdale EIR includes a program-level analysis of impacts of a third project site, which could include portions of Phase 1 of the Kern Fan Groundwater Storage Project. A new EIR is being prepared for the construction and operation of Kern Fan Groundwater Storage Project Phase 1 and Phase 2 facilities. A Notice of Preparation of an EIR for the Kern Fan Groundwater Storage Project was released on April 7, 2020, and public comments were received.

RECOMMENDATION:

That the Committee provide input on the Draft Principles for a Cooperative Water Supply Program with IRWD and Rosedale-Rio Bravo Water Storage District.

LIST OF EXHIBITS:

Exhibit “A” – Draft Principles for a Cooperative Water Supply Program with Rosedale-Rio Bravo Water Storage District

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Exhibit “A”

DRAFT

Principles for Cooperative Water Supply Program Between Irvine Ranch Water District and Rosedale-Rio Bravo Water Storage District

July 16, 2020

GENERAL PRINCIPLES:

1. Irvine Ranch Water District (IRWD) and Rosedale-Rio Bravo Water Storage District (Rosedale) both own water banking projects in the Kern Fan.
2. IRWD owns and Rosedale-Rio Bravo Water Storage District (Rosedale) operates the Strand Ranch and Stockdale West water banking projects, both of which have been integrated into Rosedale’s Conjunctive Use Program.
3. Rosedale separately owns and operates several water banking projects associated with its Conjunctive Use Program.
4. IRWD and Rosedale have each individually implemented programs with agencies involving high-flow Kern River water and supplies from the State Water Project, and the two agencies are interested in implementing programs in the future to their mutual benefit.
5. IRWD and Rosedale are jointly developing the Kern Fan Groundwater Storage Project that will provide the ability for each agency to establish additional water supply and exchange programs, while also providing environmental benefits to the State of California.
6. IRWD and Rosedale intend to enter into a Cooperative Water Supply Program Agreement that will facilitate cooperation in the implementation of new water supply and exchange programs based on principles articulated below.

PROGRAM PRINCIPLES:

The implementation of the proposed Cooperative Water Supply Program would result in IRWD and Rosedale:

1. Regularly informing each other of water supply and exchange programs that they are pursuing.
2. Offering opportunities to participate in each other’s water supply and exchange programs as they are being developed.
3. Avoid competing or negatively impacting each other in the development of supply and exchange programs.

4. Pursue and support the development of mutually beneficial water supply and exchange programs.
5. Implement exchange opportunities designed to optimize each agency's water supply programs.