

AGENDA
IRVINE RANCH WATER DISTRICT
SUPPLY RELIABILITY PROGRAMS COMMITTEE
THURSDAY, JANUARY 18, 2024

This meeting will be held in-person at the District’s headquarters located at 15600 Sand Canyon Avenue, Irvine, California. The meeting will be held in the second floor SC Committee Room. The meeting will also be broadcasted via Webex for those wanting to observe the meeting virtually.

To observe this meeting virtually, please join online using the link and information below:

Via Web: <https://irwd.webex.com/irwd/j.php?MTID=m4fd1880315c0b5f8b2e94d9c93122f9d>

Meeting Number (Access Code): 2489 978 3480

Meeting Password: M3RacpmX3b3

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

PLEASE NOTE: Participants joining the meeting will be placed into the Webex lobby when (if) 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 1:30 p.m.

ATTENDANCE Committee Chair: Doug Reinhart _____
 Alternate Member: Peer Swan _____

ALSO PRESENT Paul Cook _____ Paul Weghorst _____
 Neveen Adly _____ Fiona Sanchez _____
 Kent Morris _____ Kellie Welch _____
 Natalie Palacio _____ Robert Huang _____
 Marina Lindsay _____ _____
 _____ _____ _____

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. Public comments 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 5:00 p.m. on January 17, 2024.

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. WATER BANKING PROJECT FACILITIES, CAPACITIES, OPERATIONS AND PROGRAMS – PALACIO / WELCH / SANCHEZ / WEGHORST

Recommendation: Receive and file.

ACTION

6. DRAFT TERMS FOR EXCHANGE PROGRAM WITH SANTA CLARA VALLEY WATER DISTRICT – WELCH / SANCHEZ / WEGHORST

Recommendation: That the Board authorize the General Manager to execute an Exchange Program Agreement with Santa Clara based on the draft terms presented, subject to substantive changes approved by the Supply Reliability Programs Committee and special legal counsel.

OTHER BUSINESS


7. Receive Oral Updates from District’s liaison to Dudley Ridge Water District and provide information on relevant activities.
8. Directors’ Comments
9. 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.

January 18, 2024

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 information on IRWD's forecasted monthly recharge operations for 2024.

BACKGROUND:

Staff has prepared reference materials in tabular, map, and schematic formats to describe IRWD's water banking facilities, capacities, operations, storage, and exchange programs. These 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 as well as forecasted recharge operations for calendar year 2024 at the IRWD Water Bank.

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 (KWB), 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 and in storage at the water banking projects, and Exhibit "C" provides after-loss estimates of water recharged and in storage at the projects. Changes shown in red on Exhibits "B" and "C" shown for 2023 include the recovery of 232 AF of water in 2023 from IRWD's KWB account for use on the Jackson Ranch, the delivery of 803 AF of Article 21 water to the KWB, and the delivery of 3,424 AF of Antelope Valley-East Kern Water Agency (AVEK) water through the end of December 2023. The 2023 deliveries shown on Exhibits "B" and "C" have not been finalized and may be subject to minor changes based on final reconciliation with Kern County Water Agency (KCWA) and Department of Water Resources (DWR).

Exhibits "B" and "C" also reflect that since January 11, 2024, Dudley Ridge Water District (Dudley Ridge) has delivered 952 AF of State Water Project (SWP) Table A water to continue fulfilling its obligation to IRWD under the 1-for-1 long term exchange program. Additional Dudley Ridge deliveries anticipated in 2024 are detailed in Exhibit "S".

Summary of Programs:

A table summarizing IRWD’s water purchase and exchange programs is presented as Exhibit “D”. This table lists each water purchase and exchange program IRWD has entered into and presents information related to the type of exchange, year executed, agreement type, and water type. IRWD and partner shares are listed, and the table shows the total amount of water included in each program. The balances listed for IRWD, and its partners show the amount of water remaining in storage, with IRWD’s balances specifying whether the water is stored in Metropolitan Water District’s system, Kern County, or owed to IRWD by Dudley Ridge. The table also provides details related to the exportability of IRWD’s supplies. Changes shown in red on Exhibit “D” correspond with the changes made to Exhibits “B” and “C.”

Exhibit “E” graphically depicts how storage of SWP and non-SWP water has changed annually in the Strand and Stockdale Integrated Banking Projects. Exhibit “E” also depicts the balance of water owed to IRWD by Dudley Ridge. The table provided as Exhibit “F” 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 and figures provided as Exhibits “A”, “B”, “C”, “D”, “E”, and “F”, staff has prepared maps depicting project wells, pipelines, recharge basins, and Cross Valley Canal turnout locations, along with the most current recharge rates. These maps are provided as Exhibits “G”, “H”, and “I”, respectively. Exhibit “I” has been updated with current recharge rates at the IRWD Water Bank. 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, Dudley Ridge, Metropolitan, and AVEK. These diagrams are provided as Exhibits “J”, “K”, “L”, “M”, “N”, “O”, and “P” as described in the List of Exhibits.

Cost of Water Table:

A table presenting a summary of the costs of water from each of IRWD’s unbalanced exchange partnerships through the year 2021 is provided as Exhibit “Q”. The table lists each of IRWD’s unbalanced exchange partnerships and presents information related to the period over which water was acquired, water type, IRWD’s share of water, and various cost components as well as the total cost of water delivered to IRWD’s service area. Cost components include fixed and variable operating costs, estimated future IRWD recovery costs, the 2024 Metropolitan Full Service Untreated Tier-1 Rate, and a capital cost of water. The variable costs include an administrative fee issued by the Kern County Water Agency for staff time related to processing Transaction Request Forms. The costs of water are presented on a dollar per acre-foot basis.

Exhibit “Q” will be updated to reflect 2023 operations once all invoices have been received from Rosedale-Rio Bravo Water District for the recharge of IRWD’s various 2023 supplies.

IRWD’s Coordinated Agreement with Metropolitan:

An overview of IRWD’s Coordinated Operating, Water Storage, Exchange, and Delivery Agreement with Metropolitan and Municipal Water District of Orange County (Coordinated Agreement) is provided as Exhibit “R”. The benefits to IRWD are foundational to the success of IRWD’s water banking project and programs.

Forecasted 2024 Water Recharge Activities:

Exhibit “S” depicts forecasted IRWD Water Bank recharge operations for 2024. Currently Dudley Ridge is delivering SWP Table A water to the IRWD Water Bank at a rate of 60 cfs, or approximately 120 AF per day. IRWD expects that Dudley Ridge will fulfill its remaining obligation to IRWD under the 1-for-1 long term exchange program over the next few months. Other anticipated water bank deliveries in 2024 are as follows:

- AVEK Unbalanced Exchange Program: AVEK has informed staff that it may deliver up to 13,000 AF of SWP Table A water to the IRWD Water Bank.
- Homer Capacity Exchange Program: In 2023, IRWD recharged 1,800 AF of water from into storage at the IRWD Water Bank, using Homer’s Cross Valley Canal capacity. In 2024, consistent with the terms of the Capacity Exchange Program, Homer can use recharge capacity at the IRWD Water Bank to recharge 1,800 AF of its supplies.
- Silvertip Unbalanced Exchange Program: Staff expects that Silvertip may deliver up to 4,000 AF of SWP Table A water to the IRWD Water Bank.
- IRWD’s SWP Table A Allocation: The 2024 SWP Table A allocation is currently 10%. Staff anticipates that IRWD will take delivery of its Table A water from Dudley Ridge once the allocation has been finalized later in the year.

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” – Status of IRWD Purchase and Exchange Programs
- Exhibit “E” – Historic Water Storage in Strand and Stockdale Projects
- Exhibit “F” – Dedicated Capacities of Current Water Banking Projects
- Exhibit “G” – Map of Water Banking Project Wells and Pipelines
- Exhibit “H” – Map of Water Banking Recharge Basins and Turnout Facilities
- Exhibit “I” – Map of Water Banking Recharge Rates
- Exhibit “J” – Diagram of IRWD-Rosedale Water Banking and Exchange Program Agreements
- Exhibit “K” – Diagram of Long-term Water Exchange Program with Buena Vista Water Storage District and Diagram of One-year Program to Augment Recharge Using Stockdale West Recharge Facilities with Buena Vista Water Storage District
- Exhibit “L” – Diagram of Unbalanced Exchange Program Diagram with Dudley Ridge
- Exhibit “M” – Diagram of Coordinated Operating, Water Storage, Exchange, and Delivery Agreement with Metropolitan
- Exhibit “N” – Diagram of Template Wheeling Agreement with Metropolitan
- Exhibit “O” – Diagram of Dudley Ridge One-for-One Exchange
- Exhibit “P” – Diagram of Long-term Water Exchange Program with Antelope Valley-East Kern
- Exhibit “Q” – Cost of Water Tables
- Exhibit “R” – Summary of IRWD’s Coordinated Operating, Water Storage, Exchange and Delivery Agreement with Metropolitan and MWDOC
- Exhibit “S” – Forecasted 2024 Recharge Operations

Exhibit "A"

TABLE 1
Current and Anticipated Water Banking Projects
Recharge, Storage and Recovery Capacities
 January 18, 2024

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	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 (Average Daily Production 1/1/2021 - 7/31/2022)	RECOVERY CAPACITY AS PLANNED	RECOVERY CAPACITY CURRENT CONDITIONS
Strand Ranch	Yes	7	50,000	17,500	-	17,500	-	40.0	20.5	-	-
Stockdale West	Yes	3	26,000	27,100	-	11,250	-	15.0	11.6	-	-
Stockdale East	No	2	-	-	19,000	-	7,500	-	-	10.0	9.0
IRWD Acquired Storage Account ²	No	-	50,000	-	-	-	-	-	-	-	-
Drought Relief Project Wells ²	No	3	-	-	-	-	-	15.0	16.5	-	-
Kern Water Bank Storage Account ⁴	No	-	9,495	3,200	-	1,520	<5,000	-	-	-	-
TOTALS		15	135,495	47,800	19,000	30,270	12,500	70.0	48.6	10.0	9.0
Partner Capacities ³			38,000	22,300	9,500	10,850	0	35.5	25.0	-	-
IRWD Capacities (does not include Kern Water Bank 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	

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

³ One half of storage capacity at Stockdale West and Strand Ranch will be allocated for partners.

⁴ 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. 5,000 AF of recovery capacity may be available for second priority use.

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Exhibit "B"

TABLE 2
IRWD's Water Banking Storage, Recharge and Recovery Operations - BEFORE LOSSES
 January 18, 2024

TRANSACTIONS	WATER BANKING ENTITY							TOTAL BY WATER TYPE AND STORAGE LOCATION
	IRWD		BUENA VISTA (BVWSD)	CENTRAL COAST (CCWA)	ANTELOPE VALLEY- EAST KERN (AVEK)	SILVERTIP	DUDLEY RIDGE WATER DISTRICT (DRWD) ³	
	SWP ¹	NON-SWP ²	NON-SWP	SWP	SWP	SWP	SWP	
BEGINNING WATER IN STORAGE 2023 (AF)								
Total Kern Water Bank ⁴	-	3,751	-	-	-	-	-	3,751
Total MWD System	12,033	-	-	-	-	-	43	12,076
Total Kern County	1,383	9,641	225	-	-	-	-	11,249
Total DRWD 1-for-1 Long Term Exchange Credit ⁵	16,500	-	-	-	-	-	-	16,500
TOTAL STORED WATER (1/1/2023)	29,916	13,392	225	-	-	-	43	43,576
(RECOVERY) AND RECHARGE IN 2023 (AF)								
KWB Recovery for use on Jackson Ranch ⁶	-	(232)	-	-	-	-	-	(232)
KWB Deliveries ⁷	-	803	-	-	-	-	-	803
2023 SWP Allocation (100%) Est.	875	-	-	-	-	-	874	1,749
2020 Reserve Water	13	-	-	-	-	-	-	13
BV Long Term Program Kern River Water Est.	-	8,750	8,750	-	-	-	-	17,500
BV 2023 Recharge Kern River Water Est.	-	2,250	2,250	-	-	-	-	4,500
CCWA 2023 Short Term Exchange Est.	225	-	-	225	-	-	-	450
AVEK Long Term Exchange Est.	3,425	-	-	-	3,424	-	-	6,849
DRWD 1-for-1 Long Term Exchange (Recharge) Est.	9,358	-	-	-	-	-	-	9,358
TOTAL 2023 TRANSACTIONS	13,896	11,571	11,000	225	3,424	-	874	40,990
Total Kern Water Bank ⁴	-	4,322	-	-	-	-	-	4,322
Total MWD System	12,033	-	-	-	-	-	43	12,076
Total Kern County	15,279	20,641	11,225	225	3,424	-	874	51,668
Total DRWD 1-for-1 Long Term Exchange Credit ⁵	7,142	-	-	-	-	-	-	7,142
TOTAL STORED WATER (1/1/2024)	34,454	24,963	11,225	225	3,424	-	917	71,784
(RECOVERY) AND RECHARGE IN 2024 (AF)								
KWB Recovery for use on Jackson Ranch ⁶ Est.	-	-	-	-	-	-	-	-
2024 SWP Allocation (10%)	-	-	-	-	-	-	-	-
BV Long Term Program Kern River Water Est.	-	-	-	-	-	-	-	-
AVEK Long Term Exchange Est.	-	-	-	-	-	-	-	-
Silver Tip 2023 Short Term Exchange	-	-	-	-	-	-	-	-
DRWD 1-for-1 Long Term Exchange (Recharge) Est.	952	-	-	-	-	-	-	952
TOTAL ESTIMATED 2024 TRANSACTIONS	952	-	-	-	-	-	-	952
ESTIMATED WATER IN STORAGE 2024 (AF)								
Total Kern Water Bank ⁴	-	4,322	-	-	-	-	-	4,322
Total MWD System	12,033	-	-	-	-	-	43	12,076
Total Kern County	16,231	20,641	11,225	225	3,424	-	874	52,620
Total DRWD 1-for-1 Long Term Exchange Credit ⁵	6,190	-	-	-	-	-	-	6,190
TOTAL ESTIMATED STORED WATER TO DATE	34,454	24,963	11,225	225	3,424	-	917	75,208

NOTES: MWD = Metropolitan Water District of Southern California.

¹ IRWD's SWP includes 295 AF from CVWD that stays in Kern County.

² IRWD's Non-SWP total includes 2,403 AF, net of losses, 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. MWD took delivery of IRWD's 2022 SWP allocation in June 2022.

⁴ IRWD's KWB Account balance includes SWP, Friant and Kern River water. The KWB account balance is included in the Non-SWP column because it is not exportable to IRWD's service area.

⁵ Per the DRWD Long-Term 1-for-1 Exchange Program, Non-SWP water delivered to DRWD landowners will be returned to IRWD as SWP water at a later date. To account for the SWP water that will be returned at a later date, the amount of water owed will be shown as a credit. Total assumes all water is returned to IRWD Water Bank which adds in a 10% loss factor.

⁶ Water recovered from IRWD's Kern Water Bank account for use on Jackson Ranch.

⁷ A portion of IRWD's 2023 SWP deliveries from DRWD include 803 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
 January 18, 2024

TRANSACTIONS	WATER BANKING ENTITY							TOTAL BY WATER TYPE AND STORAGE LOCATION
	IRWD		BUENA VISTA (BVWSD)	CENTRAL COAST (CCWA)	ANTELOPE VALLEY-EAST KERN (AVEK)	SILVERTIP	DUDLEY RIDGE WATER DISTRICT (DRWD) ³	
	SWP ¹	NON-SWP ²	NON-SWP	SWP	SWP	SWP	SWP	
BEGINNING WATER IN STORAGE 2023 (AF)								
Total Kern Water Bank ⁴	-	3,751	-	-	-	-	-	3,751
Total MWD System	12,033	-	-	-	-	-	43	12,076
Total Kern County	344	5,705	225	-	-	-	-	6,274
Total DRWD 1-for-1 Long Term Exchange Credit ⁵	15,000	-	-	-	-	-	-	15,000
TOTAL STORED WATER (1/1/2023)	27,377	9,456	225	-	-	-	43	37,101
(RECOVERY) AND RECHARGE IN 2023 (AF)								
KWB Recovery for use on Jackson Ranch ⁶	-	(232)	-	-	-	-	-	(232)
KWB Deliveries ⁷	-	723	-	-	-	-	-	723
2023 SWP Allocation (100%) Est.	750	-	-	-	-	-	749	1,499
2020 Reserve Water	12	-	-	-	-	-	-	12
BV Long Term Program Kern River Water Est.	-	7,501	7,896	-	-	-	-	15,397
BV 2023 Recharge Kern River Water Est.	-	1,929	2,030	-	-	-	-	3,959
CCWA 2023 Short Term Exchange Est.	193	-	-	193	-	-	-	386
AVEK Long Term Exchange Est.	2,936	-	-	-	2,935	-	-	5,871
DRWD 1-for-1 Long Term Exchange (Recharge) Est.	8,022	-	-	-	-	-	-	8,022
TOTAL 2023 TRANSACTIONS	11,913	9,921	9,926	193	2,935	-	749	35,637
Total Kern Water Bank	-	4,242	-	-	-	-	-	4,242
Total MWD System	12,033	-	-	-	-	-	43	12,076
Total Kern County	12,257	15,135	10,151	193	2,935	-	749	41,420
Total DRWD 1-for-1 Long Term Exchange Credit	6,978	-	-	-	-	-	-	6,978
TOTAL STORED WATER (1/1/2024)	31,268	19,377	10,151	193	2,935	-	792	64,716
(RECOVERY) AND RECHARGE IN 2024 (AF)								
KWB Recovery for use on Jackson Ranch ⁶ Est.	-	-	-	-	-	-	-	-
2024 SWP Allocation (10%)	-	-	-	-	-	-	-	-
BV Long Term Program Kern River Water Est.	-	-	-	-	-	-	-	-
AVEK Long Term Exchange Est.	-	-	-	-	-	-	-	-
Silver Tip 2023 Short Term Exchange	-	-	-	-	-	-	-	-
DRWD 1-for-1 Long Term Exchange (Recharge) Est.	816	-	-	-	-	-	-	816
TOTAL ESTIMATED 2024 TRANSACTIONS	816	-	-	-	-	-	-	816
ESTIMATED WATER IN STORAGE 2024 (AF)								
Total Kern Water Bank	-	4,242	-	-	-	-	-	4,242
Total MWD System	12,033	-	-	-	-	-	43	12,076
Total Kern County	13,073	15,135	10,151	193	2,935	-	749	42,236
Total DRWD 1-for-1 Long Term Exchange Credit	6,162	-	-	-	-	-	-	6,162
TOTAL ESTIMATED STORED WATER TO DATE	31,268	19,377	10,151	193	2,935	-	792	64,716

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 BVWSD in Kern County is adjusted 10% (6% for surface loss and 4% for reserve loss); no losses for water directly delivered to MWD system.

MWD = Metropolitan Water District of Southern California.

¹ IRWD's SWP includes 251 AF from CVWD that stays in Kern County.

² IRWD's Non-SWP total includes 2,403 AF of Kern County Water Agency Article 21 Water.

³ DRWD water will be returned by MWD or IRWD's Strand Ranch to IRWD's Jackson Ranch. MWD took delivery of IRWD's 2022 SWP allocation in June 2022. MWD will not take delivery of IRWD's 2023 SWP Allocation.

⁴ IRWD's KWB Account balance includes SWP, Friant and Kern River water. The KWB account balance is included in the Non-SWP column because it is not exportable to IRWD's service area. The 2022 beginning KWB balance was revised by DRWD based on KCWA 2021 end of year balances.

⁵ Per the DRWD Long-Term 1-for-1 Exchange Program, Non-SWP water delivered to DRWD landowners will be returned to IRWD as SWP water at a later date. To account for the SWP water that will be returned at a later date, the amount of water owed will be shown as a credit. Total assumes all water is returned to IRWD Water Bank which adds in a 10% loss factor. Final amounts may be subject to additional CVC losses.

⁶ Water recovered from IRWD's Kern Water Bank account for use on Jackson Ranch.

⁷ A portion of IRWD's 2023 SWP Deliveries from DRWD include 723 AF of Article 21, after losses, which was delivered to the Kern Water Bank.

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Exhibit "D"

TABLE 4
Status of IRWD Purchase and Exchange Programs (AFTER LOSSES)
 January 18, 2024

PARTNER	EXCHANGE RATIO	YEAR EXECUTED	AGREEMENT TYPE	WATER TYPE	PARTNER WATER		IRWD WATER									SELLABLE (Y/N)
					PARTNER SHARE (AF)	PARTNER BALANCE (AF)	IRWD SHARE (AF)	IRWD BALANCE			EXPORTABILITY					
								IN MWD SYSTEM (AF)	STORED IN KERN (AF)		OWED BY DUDLEY RIDGE WD	TOTAL (AF)	EXPORTABLE TO IRWD (AF)	NON-EXPORTABLE (AF)	FOR USE ON JACKSON RANCH (DRWD)	
							Strand and Stockdale	Kern Fan (W.Enos)								
Semitropic Water Storage District	NA	2008	Purchase	SWP Article 21	NA	NA	2,842		2,403			2,403		2,403		Yes
Carpinteria Valley Water District	2-for-1	2008	Short-Term	SWP Table A	277		250		250			250		250		Yes
Buena Vista Water Storage District ¹	2-for-1	2010	Pilot	Kern River	4,108		3,903									Yes
	2-for-1	2011	Long-Term	Kern River	29,369	8,121	27,900		10,803	0		10,803		10,803		
Antelope Valley East Kern Water Agency	2-for-1	2011	Pilot	SWP Table A	2,229		2,337	2,337				2,337	2,337			No
Carpinteria Valley Water District	2-for-1	2011	Pilot	SWP Table A	624		655	655				655	655			No
Dudley Ridge Water District (SWPAO #13012)	2-for-1	2013	SWPAO	SWP Table A	1,876		1,876	1,876				1,876	1,876			Yes
				SWP Article 21	1,553		1,554	1,554				1,554	1,554			Yes
Metropolitan Water District ²	1-for-1	2014	Short-Term	SWP Table A	NA	NA	4,000	4,000				4,000	4,000			No
Dudley Ridge Water District (SWPAO #17030)	2-for-1	2018	SWPAO	SWP Table A	1,803	792	1,887	1,055	831			1,887	1,887		792	Yes
Central Coast Water Authority (SWPAO #17001)	2-for-1	2017	Short-Term	SWP Table A	258		258	258				258	258			No
Dudley Ridge Water District ³ (SWPAO #19001)	1-for-1	2017	Long-Term	SWP Table A	NA	NA	8,838		8,612	226		8,838	15,000			No
				Credit	NA	NA	6,162			6,162	6,162					No
Central Coast Water Authority (SWPAO #19031)	2-for-1	2019	Short-Term	SWP Table A	298		323	298	25			323	323			No
Buena Vista Water Storage District ¹	2-for-1	2023	Short-Term	Kern River	2,030	2,030	1,929		1,268	661		1,929		1,929		Yes
Central Coast Water Authority (SWPAO #23012)	2-for-1	2023	Short-Term	SWP Table A	193	193	193		193			193	193			No
Antelope Valley East Kern Water Agency	2-for-1	2018	Long-Term	SWP Table A	2,935	2,935	2,936		2,041	895		2,936	2,936			No
Total:					47,554	14,071	67,843	12,033	26,426	1,782	6,162	46,403	31,018	15,385	792	NA

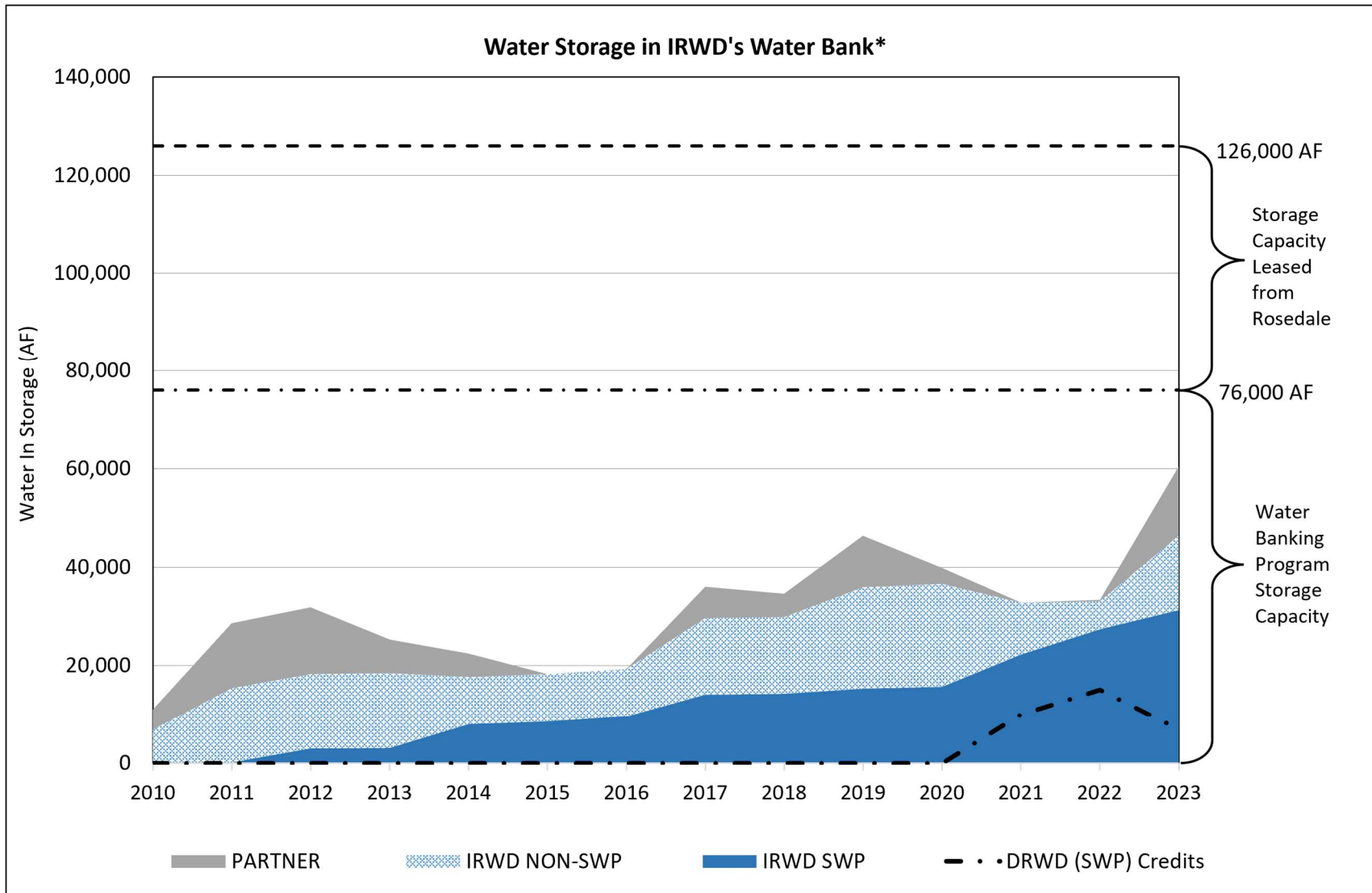
¹ Water acquired through BVWSD will be exportable after it is exchanged for SWP Table A through 1-for-1 exchange with Dudley Ridge Water District.

² Source of water was Buena Vista Water Storage District Kern River high flow water

³ To account for the SWP water that will be returned to IRWD, the amount of water owed is shown as a credit. The total net of losses is 15,000 AF.

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Exhibit "E"



*After losses

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Exhibit "F"

TABLE 5
IRWD Dedicated Water Banking Capacities for Existing and Proposed Exchange Programs
 January 18, 2024

STORAGE CAPACITY

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	-	-
Total Dedicated	50,000	20,000	-	-
Total Remaining	-	6,000	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	-	-
Total Dedicated	17,500	20,000	-	-
Total Remaining	-	7,100	-	3,200

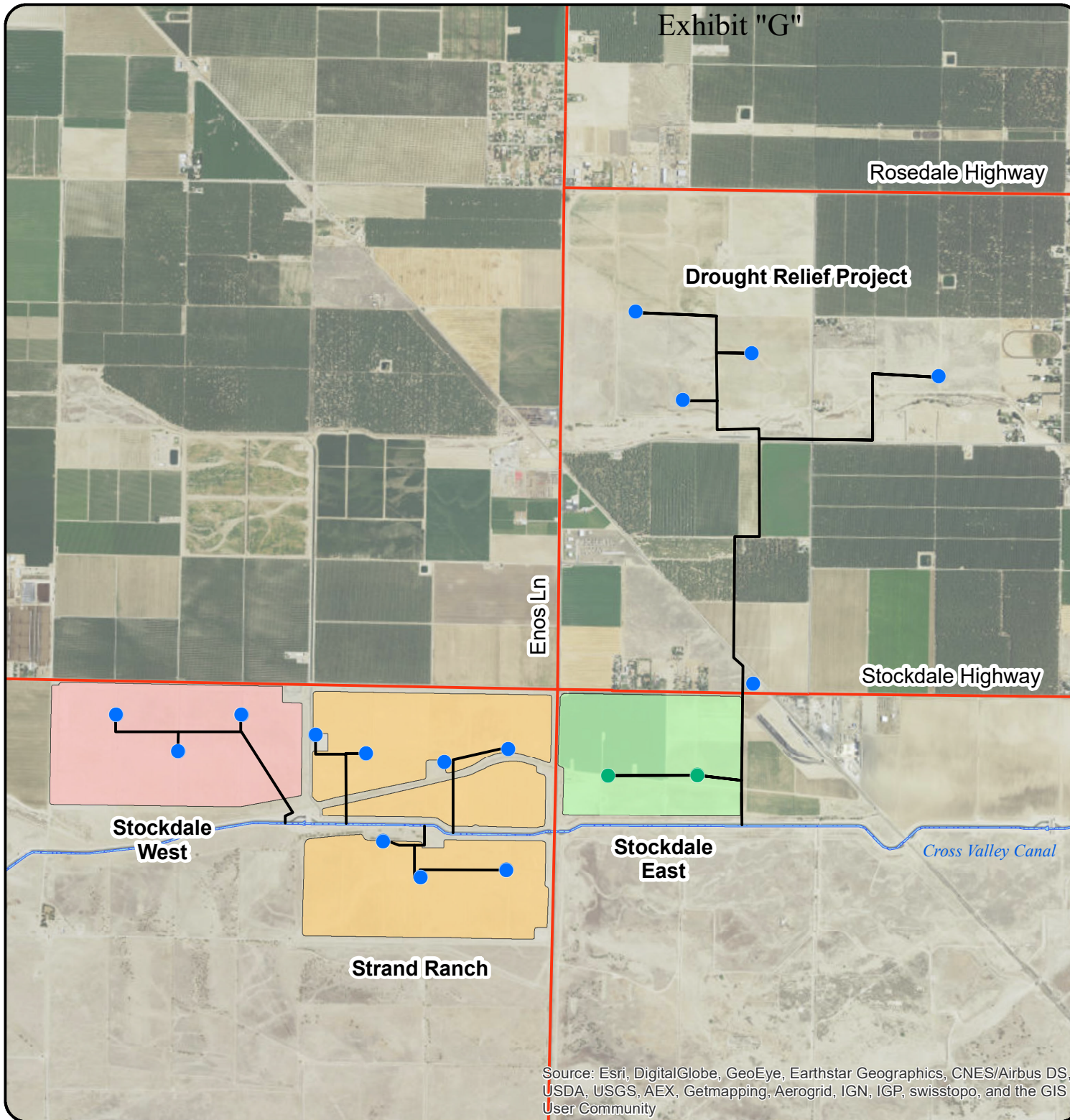
RECOVERY CAPACITY

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	-	1,520
BVWSD	6,667	-	-	-
DRWD	-	-	-	-
AVEK	-	3,333	-	-
IRWD	10,833	7,084	-	1,520
Total Dedicated	17,500	10,417	-	1,520
Total Remaining	-	833	-	-

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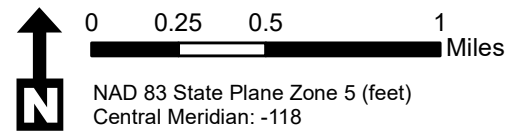
Location Map: IRWD Water Banking Projects Wells and Turnin Pipelines



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.

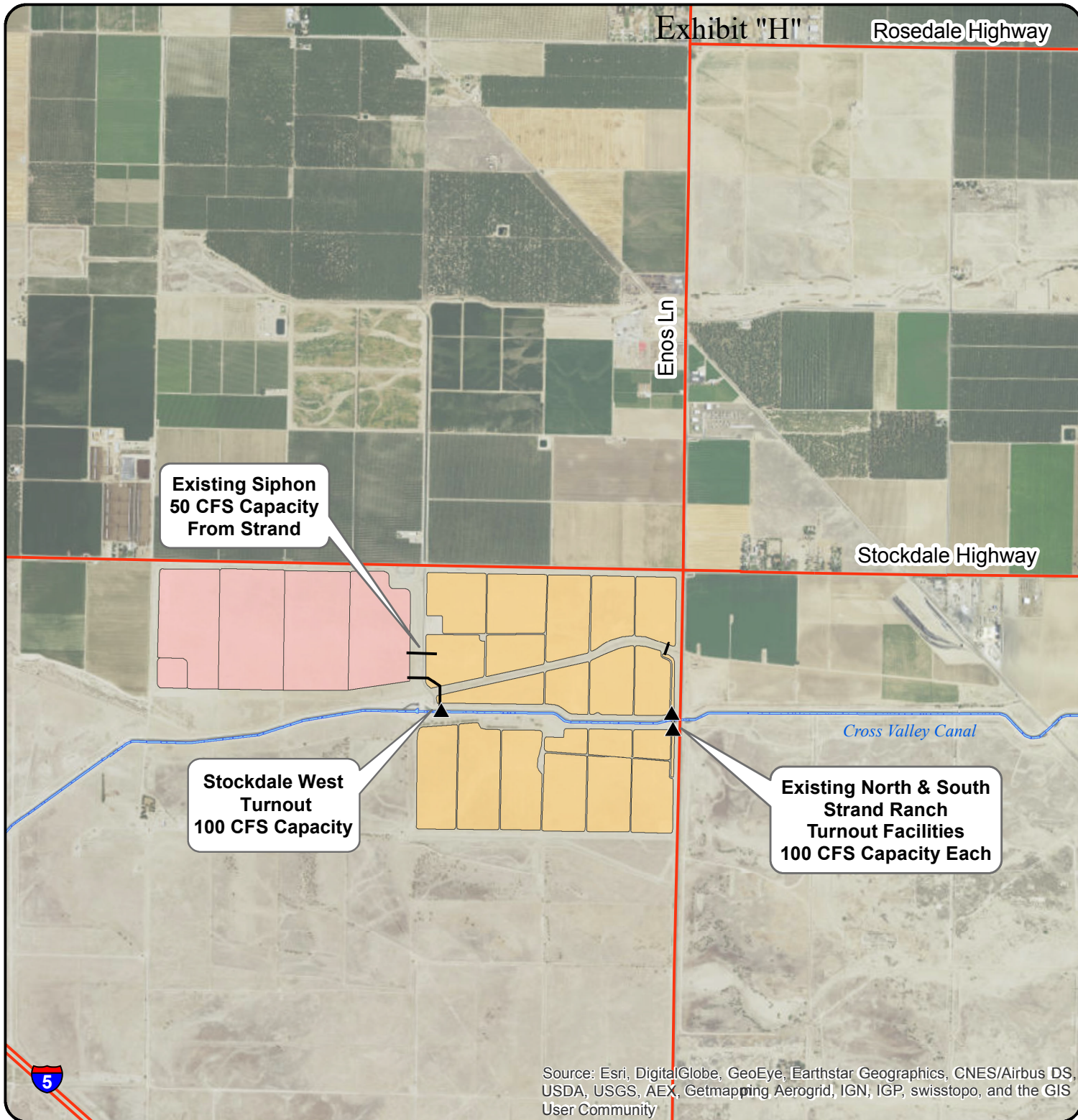


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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



**Existing Siphon
50 CFS Capacity
From Strand**

**Stockdale West
Turnout
100 CFS Capacity**

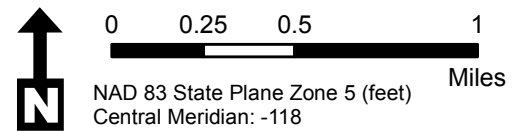
**Existing North & South
Strand Ranch
Turnout Facilities
100 CFS Capacity Each**

MAP FEATURES

- ▲ Turnouts
- Stockdale West
- Strand Ranch

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

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



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Location Map: IRWD Water Banking Projects Recharge Rates

MAP FEATURES

- ▲ Turnouts
- Stockdale West
- Strand Ranch

Stockdale West
0.19 feet/day
25 CFS

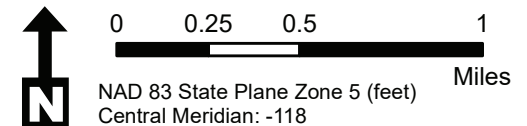
Strand Ranch North
0.18 feet/day
25 CFS

Strand Ranch South
0.09 feet/day
10 CFS

Stockdale Highway

Cross Valley Canal

This figure shows the location of recharge basins and their associated recharge rates as of January 11, 2024



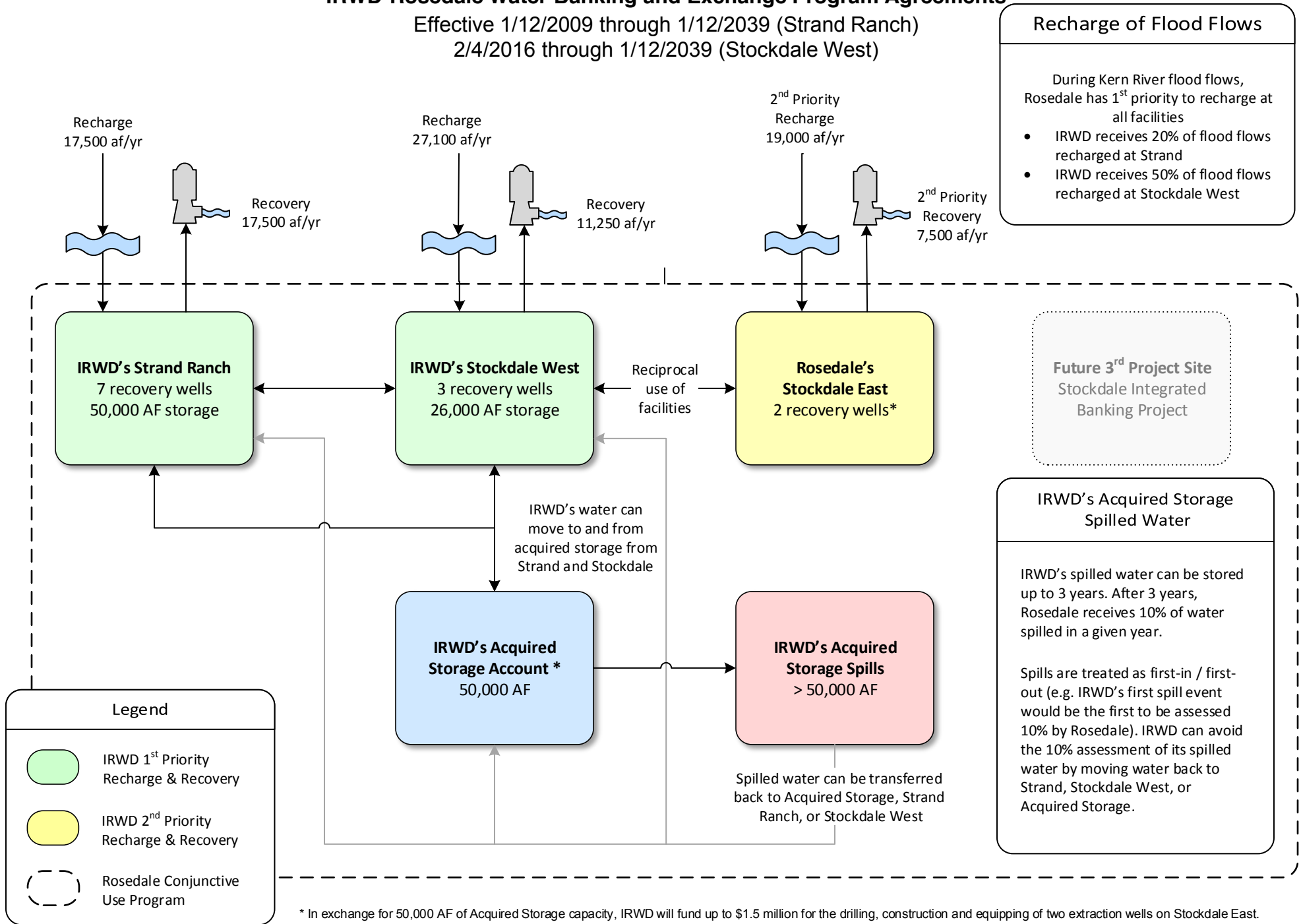
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Exhibit "J"

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)



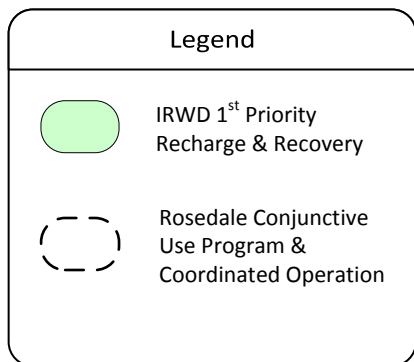
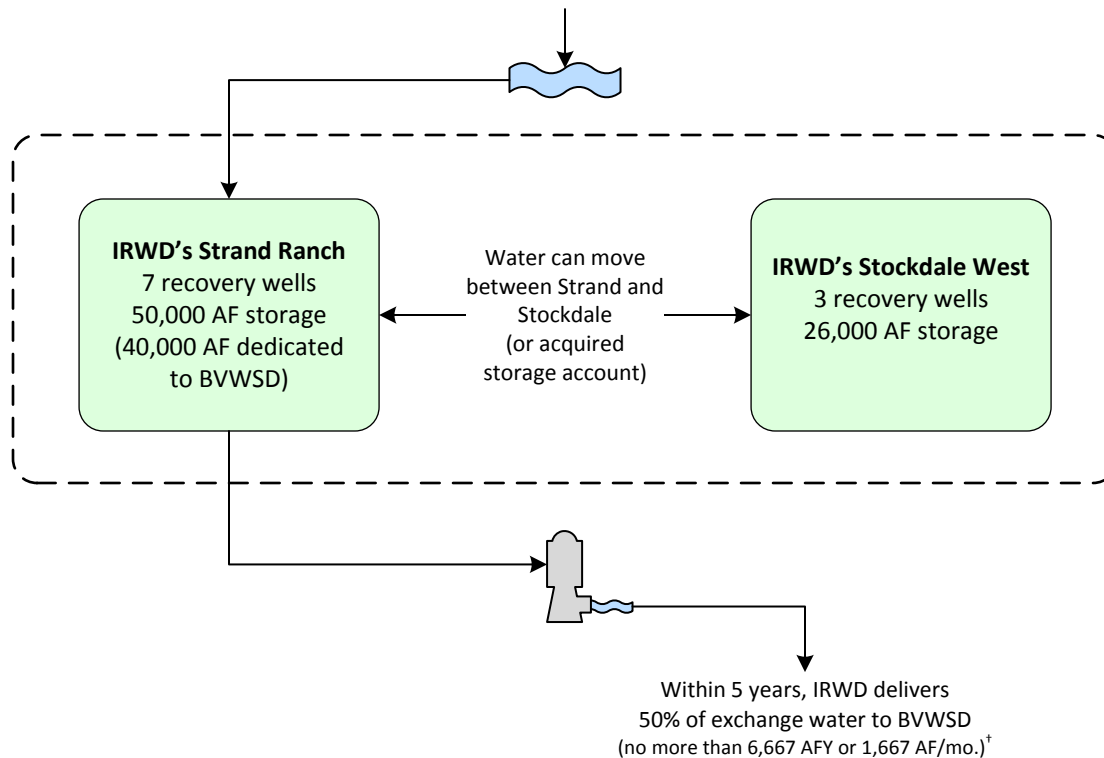
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Exhibit "K"

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
(IRWD receives 50%)
 (Up to 17,500 AFY or 4,375 AF/mo.)

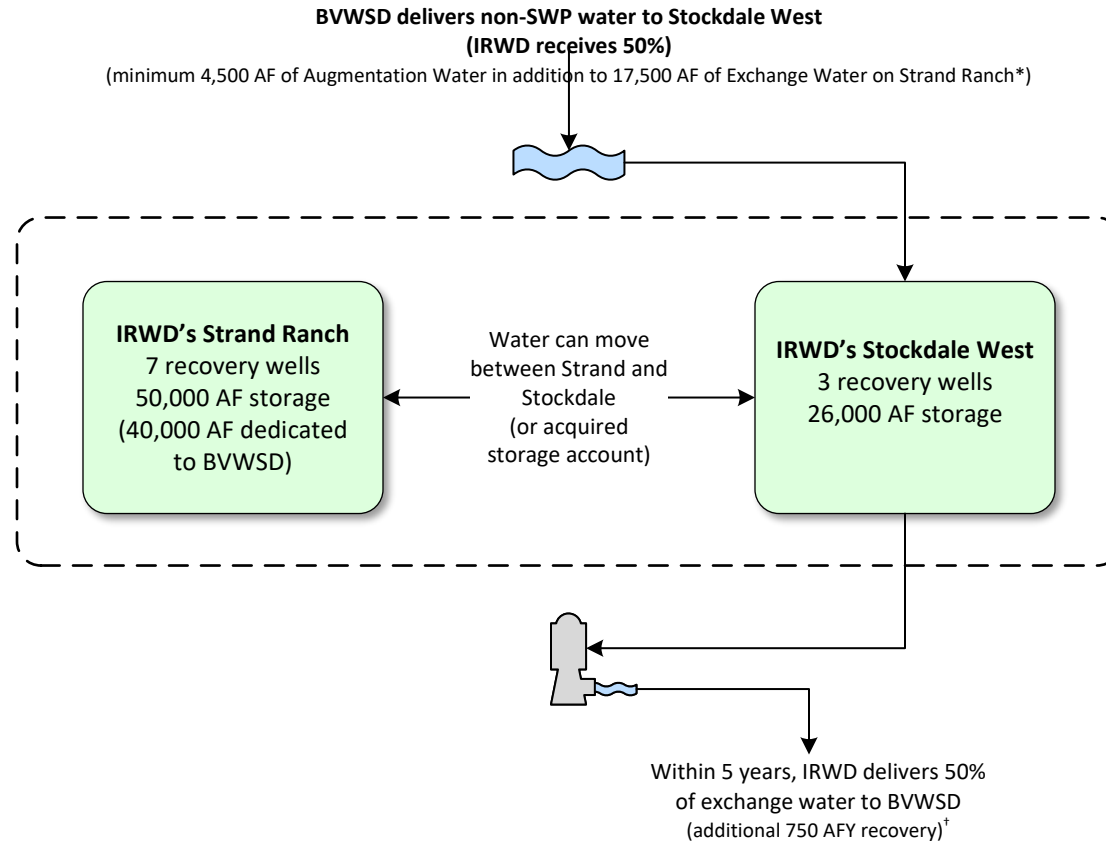


†IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31st of the 4th year following the associated recharge event. IRWD pays for recovery of water returned to BV. Water to be remitted back to BV may remain in storage at Strand Ranch beyond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

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

Effective 6/28/2023 through 12/31/2023



Legend

IRWD 1st Priority Recharge & Recovery

Rosedale Conjunctive Use Program & Coordinated Operation

* IRWD agrees to pay BV \$25 per AF for IRWD's share of the Augmentation Water and Exchange Water

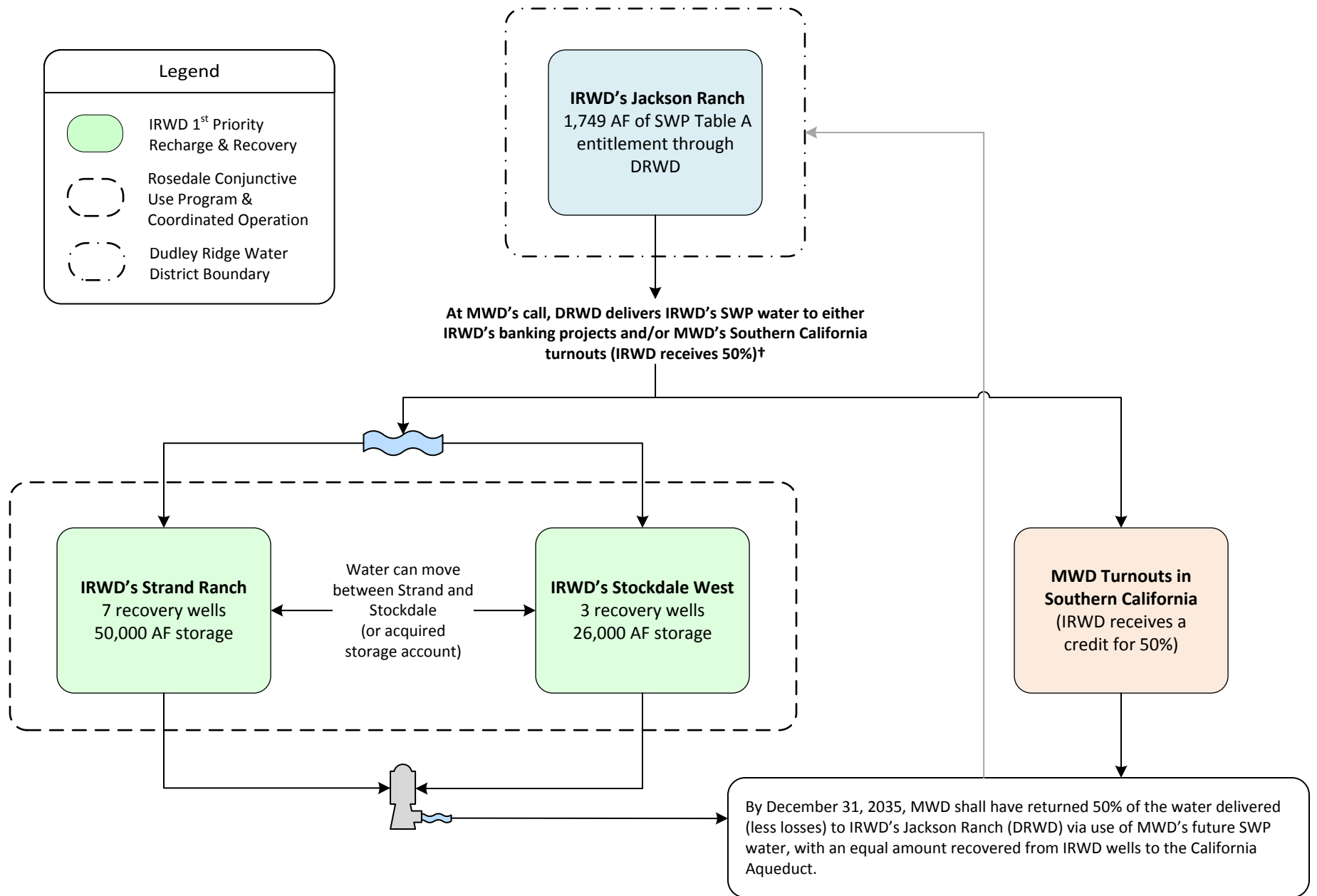
† IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31st of the 4th year following the associated recharge event. BV pays for recovery of its share of Augmentation Water. Water to be remitted back to BV may remain in storage at Strand 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 "L"

Dudley Ridge Water District (DRWD) Unbalanced Exchange Program

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



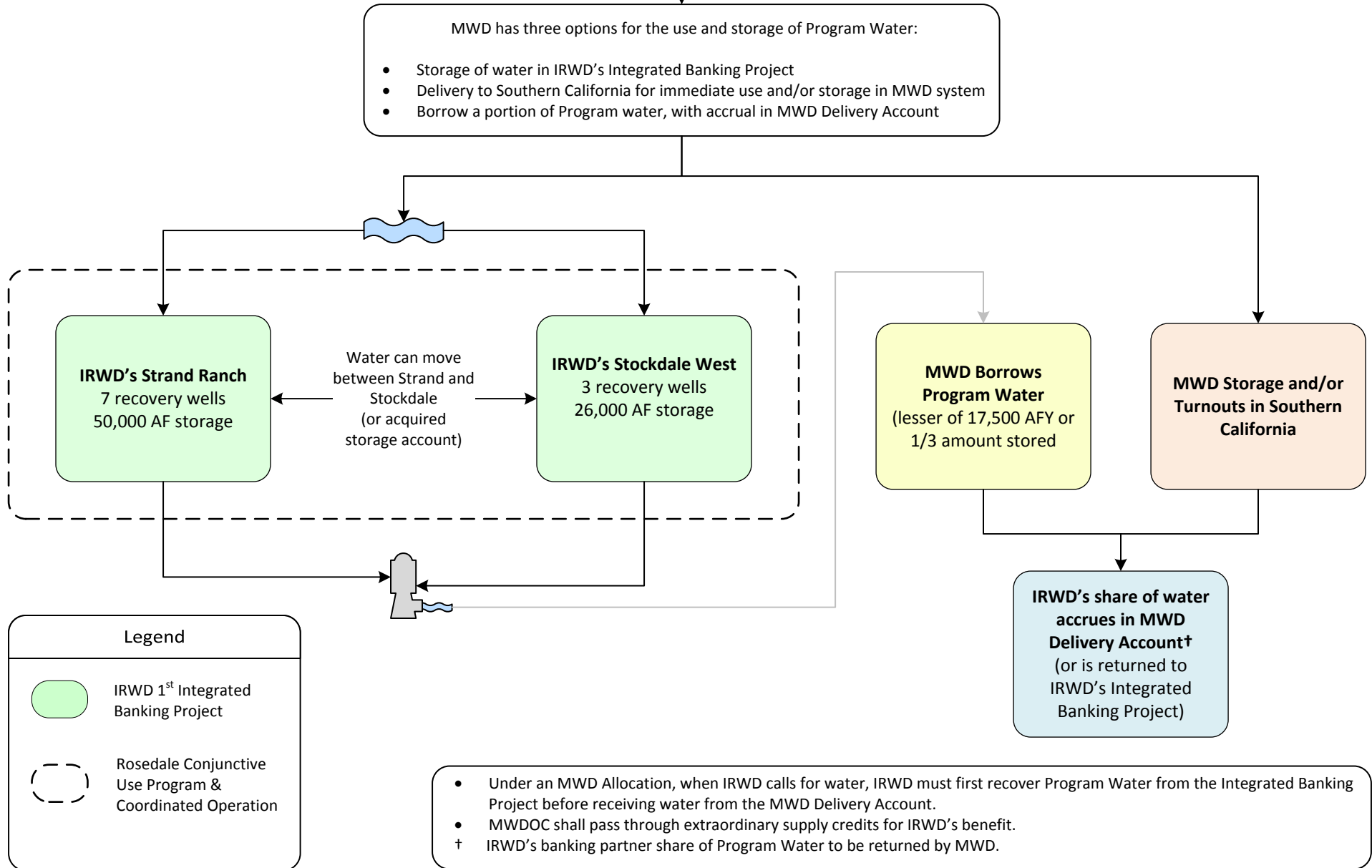
†Consistent with IRWD-MWD coordinated operating agreement.

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Exhibit "M"

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

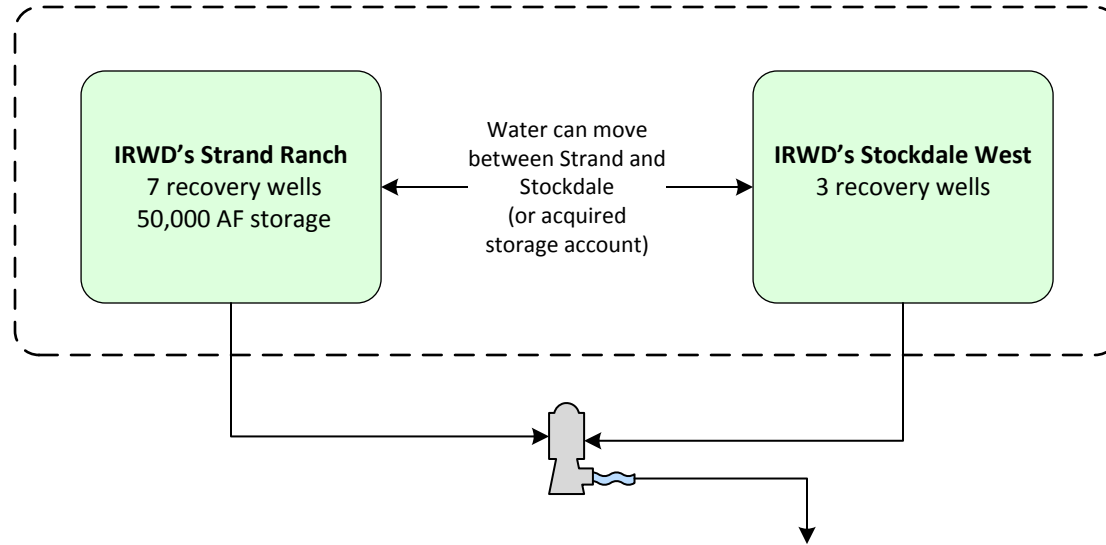
With MWD's consent, IRWD secures SWP water (Program Water) through exchanges with IRWD Banking Partners for use as extraordinary supply under MWD Water Supply Allocation Plan



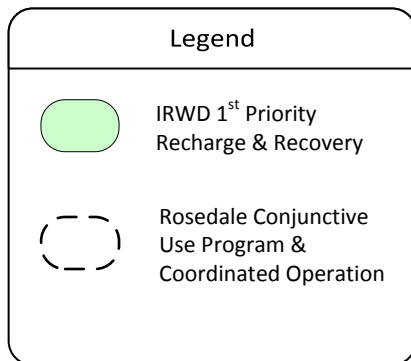
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Exhibit "N"

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



IRWD recovers its share of non-SWP water from its Integrated Banking Projects for use as extraordinary supply under a declared MWD Water Supply Allocation. MWD will coordinate the conveyance and delivery of recovered water to be used within IRWD's Service Area. Delivery can also occur through an operational exchange.*



*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 "O"

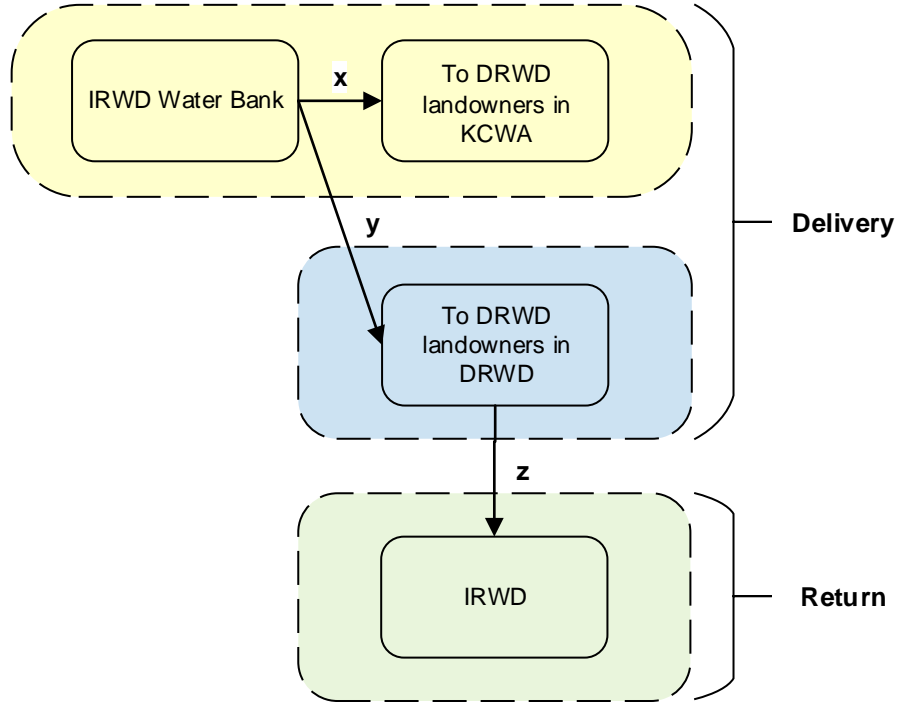
Dudley Ridge Water District Long Term 1-for-1 Water Exchange Program Effective 5/31/2017 through 11/4/2035

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

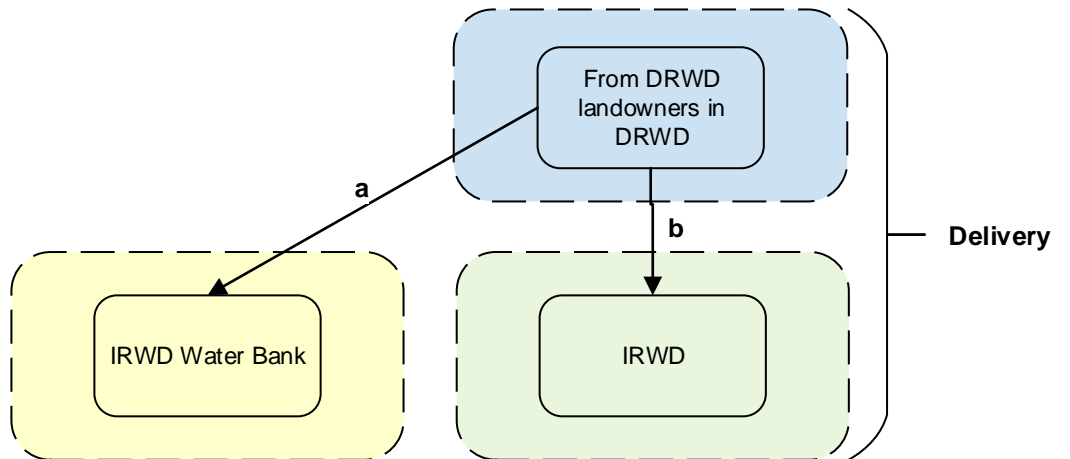
Per Section 4.1.3, z can be delivered to IRWD via in-ground transfer to IRWD, SWP delivery to IRWD banking facilities, or SWP delivery to MWDSC



Scenario B

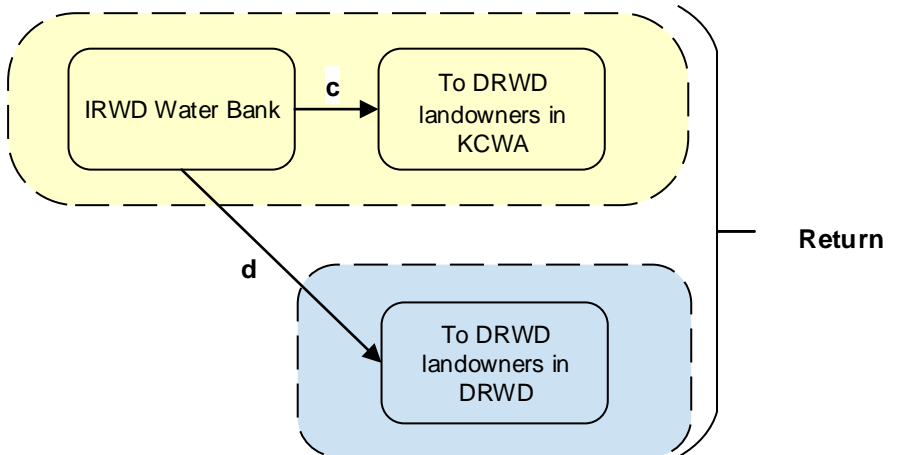
(Per Sections 2, 3, and 4.1.2)

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



Legend

- KCWA Service Area
- DRWD Service Area
- IRWD Service Area

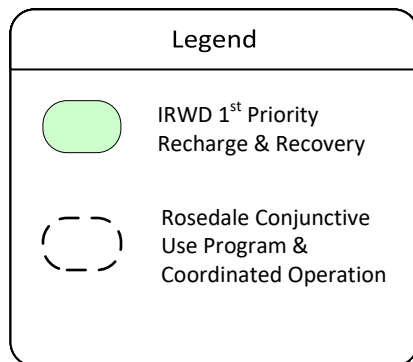
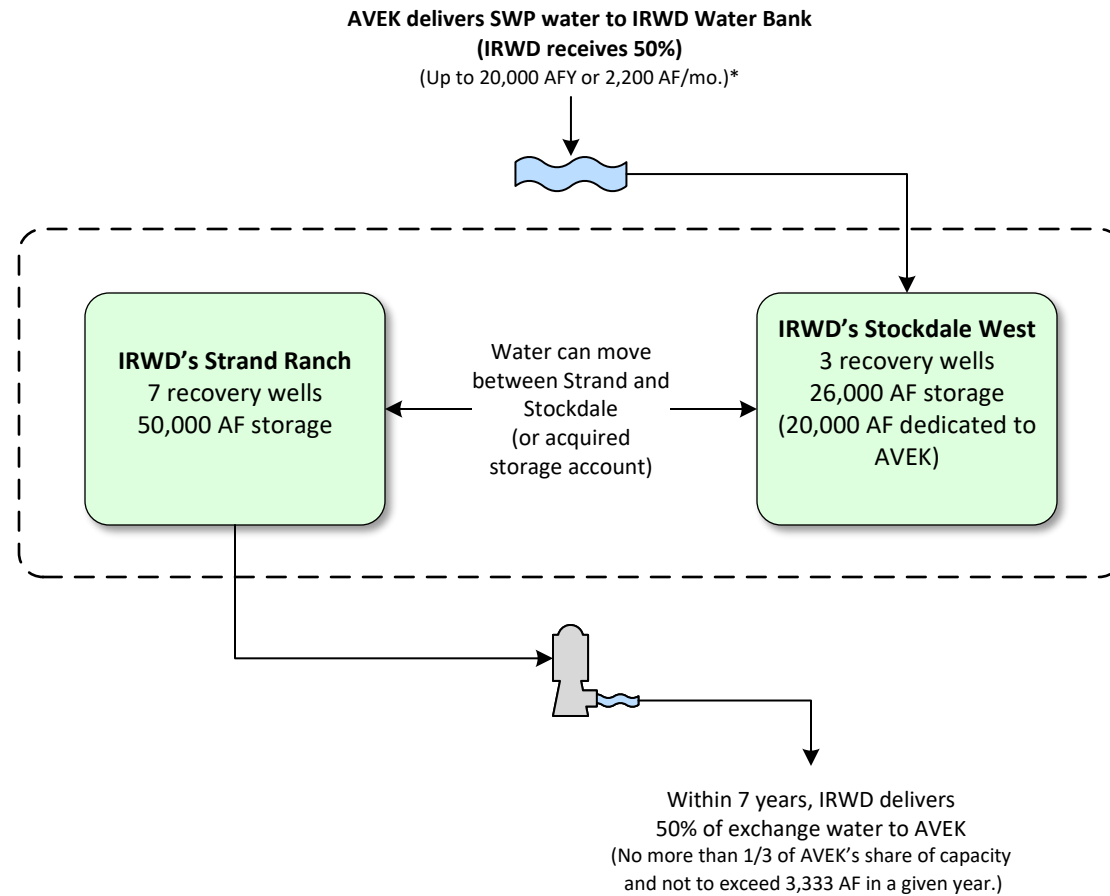


†The cost of water exchanged between IRWD and DRWD will be equalized

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Exhibit "P"

Antelope Valley-East Kern Water Agency (AVEK) Long Term Water Exchange Program Effective 12/21/2018 through 12/31/2035



*Up to 20,000 AF per year of AVEK Exchange Water may be delivered to IRWD for recharge using recharge facilities at the Strand Ranch and Stockdale West for storage in the Stockdale West Bank. IRWD shall remit one-half of stored supplies less one half of losses back to AVEK no later than December 31st of the 7th year, following the associated recharge event.

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Exhibit "Q"

TABLE 6
IRWD Water Banking Program Costs of Water Summary
 January 18, 2024

Program Partner	Time Period	Water Type	IRWD Amount (AF)	Variable costs ² (\$/AF) (A)	Fixed Cost Component ³ (\$/AF) (B)	Fixed & Variable (\$/AF) (C)	Capital Component ⁴ (\$/AF) (D)	Cost of Water (\$/AF) (E)	Estimated Recovery of Water ⁵ (\$/AF) (F)	2024 MWD Tier 1 Untreated Rate + SAC Surcharge ⁶ (\$/AF) (G)	Cost of Water in IRWD Service Area (\$/AF) (H)
						<i>A+B</i>		<i>C+D</i>			<i>E+F+G</i>
Buena Vista	2010-2015	Kern River	12,832	\$ 75.98	\$ 48.36	\$124.34	\$ 190.00	\$ 314.34	\$ 120.00	\$ 903.00	\$ 1,337.34
Buena Vista ¹	2017-2021	Kern River	11,256	\$ 159.16	\$ 48.36	\$207.52	\$ 190.00	\$ 397.52	\$ 120.00	\$ 903.00	\$ 1,420.52
AVEK	2012-2014	SWP Table A	2,229	\$ 11.70	\$ 48.36	\$ 60.06	\$ 190.00	\$ 250.06	\$ 120.00	\$ 903.00	\$ 1,273.06
AVEK ⁷	2012-2014	SWP Table A	108	\$ 11.70	\$ 48.36	\$ 60.06	\$ 190.00	\$ 250.06	\$ -	\$ 903.00	\$ 1,153.06
Carpinteria	2010-2015	SWP Table A	874	\$ 27.04	\$ 48.36	\$ 75.40	\$ 190.00	\$ 265.40	\$ 120.00	\$ 903.00	\$ 1,288.40
Carpinteria ⁷	2010-2015	SWP Table A	31	\$ 27.04	\$ 48.36	\$ 75.40	\$ 190.00	\$ 265.40	\$ -	\$ 903.00	\$ 1,168.40
Central Coast ⁷	2017-2021	SWP Table A	556	\$ 30.34	\$ 48.36	\$ 78.70	\$ 190.00	\$ 268.70	\$ -	\$ 903.00	\$ 1,171.70
DRWD ⁷	2014-2021	SWP Table A /Article 21	4,452	\$ 362.67	\$ 48.36	\$411.03	\$ 190.00	\$ 601.03	\$ -	\$ 903.00	\$ 1,504.03
Total			32,338								

¹ Water purchased in 2019 includes commodity charge of \$110/AF

² Variable Costs shown above are based on actual costs. The different components and average costs included in the variable cost are as follows: recharge variable operating costs (\$5.00/AF), Rosedale administration fees (\$3.00/AF), CVC pumping (\$9.00/AF), operating and stand-by fees (\$3.50/AF), and KCWA fees (\$5.00/AF) plus \$3,000 per transaction request. IRWD pays Buena Vista recovery costs. (Net of partner payments to IRWD for their share of water)

³ Fixed costs include IRWD share of fixed operating costs (\$25.00/AF), annual property taxes (\$88,000), PG&E standby costs (up to \$5,000/year), GSP fees (\$8,450/year) and CVC expansion costs (\$28,000/year)

⁴ Capital component does not include land costs, grants received, and revenue from DRWD water sold in 2021. Add \$60/AF to include these costs.

⁵ Increased PG&E costs for recovering water.

⁶ Assumes IRWD would take delivery as extraordinary supply through Irvine Lake to the Baker Water Treatment Plant.

⁷ No recovery costs for DRWD water delivered in 2014-2016 and water recovered in 2022 as part of MWD borrowing.

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Exhibit “R”

Summary of IRWD’s Coordinated Operating, Water Storage, Exchange and Delivery Agreement with Metropolitan Water District and Municipal Water District of Orange County (MWDOC)

Agreement approved (unanimously) by the IRWD Board on November 22, 2010;
Agreement Term: April 21, 2011 to November 4, 2035

Summary of Benefits to IRWD:

1. IRWD benefits from all State Water Project (SWP) water IRWD secures; Metropolitan’s borrowing of this water is temporary.
2. On behalf of IRWD, Metropolitan uses its SWP exchange and conveyance capacities to move IRWD’s water for banking.
3. IRWD can “store” water in Metropolitan’s system as a credit, freeing up space in IRWD’s Water Bank with the water stored closer to the IRWD service area.
4. IRWD does not incur conveyance or evaporation losses on its water that is conveyed in Metropolitan’s system and stored in Metropolitan’s reservoirs.
5. IRWD avoids groundwater recovery (pumping) costs when Metropolitan issues a credit for IRWD’s SWP supplies in Southern California (currently \$122/AF¹).
6. IRWD pays Metropolitan’s melded system power rate – currently \$167/AF, not DWR’s current power costs of \$395/AF² (\$228/AF savings).
7. Deliveries are on-demand to IRWD at its service connections in Orange County, which are not subject to lower priorities for wheeling.
8. Metropolitan pays all SWP costs, including variable OMP&R supply costs, associated with SWP water secured by IRWD³.
9. IRWD pays Metropolitan’s Full-Service Tier-1 Untreated Rate, which is currently \$799/AF, for deliveries at its service connections allowing IRWD to avoid higher Metropolitan wheeling charges currently estimated at \$856/AF⁴.
10. IRWD only pays once for supply at the current Tier-1 Supply Rate of \$243/AF.
11. Deliveries to IRWD’s service area qualify as Extraordinary Supply during a Water Supply Allocation, allowing IRWD to avoid Metropolitan’s Allocation Surcharge of between \$1,480/AF and \$2,960/AF.
12. IRWD increases local water supply reliability for its ratepayers.

¹ Estimated from IRWD’s current groundwater pumping costs and Water Bank related operations costs. Metropolitan has the option to extinguish credits by returning water to the IRWD Water Bank. In recent borrowing letter agreement, Metropolitan agreed to waive its ability to return borrowed water to the Water Bank.

² Melded system and actual power costs were taken from Metropolitan’s April 2022 Bi-Annual Budget Report and 2022 Cost of Service Study.

³ Does not include fixed costs paid by IRWD’s unbalanced exchange partners. In 2014 and 2017, Metropolitan’s SWP costs were \$1,097/AF and \$359/AF, respectively.

⁴ The Coordinated Agreement requires IRWD to pay Metropolitan its Full-Service Tier 1 Rate for exchange deliveries at IRWD service connections. IRWD is expected to take delivery of such deliveries to the Baker Water Treatment Plant. Metropolitan’s current Tier-1 Untreated Rate = \$799/AF. Current Metropolitan wheeling charges of \$856/AF are estimated using Metropolitan’s current System Access Rate (\$389/AF), estimated demand management charge (\$72/AF), and actual power costs (\$395/AF).

Summary of Benefits to MWD:

1. Metropolitan maintains control of all SWP supplies entering its service area as required by its SWP Contract with California Department of Water Resources (DWR).
2. Metropolitan's investments in the SWP are protected by not causing a reduction in revenue received by Metropolitan for payment of SWP fixed charge obligations.
3. Metropolitan can temporarily borrow SWP water secured by IRWD.
4. Metropolitan is assured that IRWD is not competing for water supplies.
5. Increased regional water supply reliability.


Exhibit "S"

TABLE 7
IRWD 2024 Recharge Operations- BEFORE LOSSES
 January 18, 2024

Forecasted Amounts:

Month	IRWD Table A (AF)	DRWD 1:1 (AF)	Buena Vista (AF)	AVEK (AF)	Homer (AF)	Silver Tip (AF)	Total (AF)	Status	Expected Recharge (AF)	Expected Recharge Rate (CFS)
January		2,499					2,499		2,499	60
February		3,451					3,451		3,451	60
March		1,192		1,537	960		3,689		3,689	60
April				1,488	840	1,243	3,571		3,571	60
May				1,537		2,152	3,689		3,689	60
June				2,965		605	3,570		3,570	60
July				3,689			3,689		3,689	60
August	175			1,784			1,959		3,689	60
September							-		2,743	60
October							-		1,537	25
November							-		1,488	25
December							-		1,537	25
	175	7,142	-	13,000	1,800	4,000	26,117		35,154	
Recharge goal:	175	7,142	-	13,000	1,800	4,000	26,117			

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January 18, 2024
Prepared by: K. Welch
Submitted by: F. Sanchez / P. Weghorst
Approved by: Paul A. Cook 

SUPPLY RELIABILITY PROGRAMS COMMITTEE

DRAFT TERMS FOR EXCHANGE PROGRAM WITH SANTA CLARA VALLEY WATER DISTRICT

SUMMARY:

Staff has prepared draft terms for an Exchange Program that would allow Santa Clara Valley Water District (Valley Water), a State Water Project (SWP) contractor, to deliver water into storage at the IRWD Water Bank with one-half of the water being transferred to IRWD. The recharge and recovery of Valley Water's water would occur after meeting the needs of IRWD and its other exchange partners. Staff recommends that the Board authorize the General Manager to execute an agreement with Santa Clara Valley Water District based on the draft terms presented at the meeting, subject to substantive changes approved by the Supply Reliability Programs Committee and legal counsel.

BACKGROUND:

Valley Water is a SWP contractor with 100,000 acre-feet (AF) of SWP Table A water entitlement. In 2023, staff began discussions with Valley Water regarding their interest in storing a portion of its Table A water in the IRWD Water Bank. Recent discussions have focused on implementing an Exchange Program that would allow Valley Water to deliver this water into storage at the IRWD Water Bank on a 2-for-1 basis. Staff has developed draft terms for a proposed Exchange Program with Valley Water as described below. IRWD and its other exchange partners would not be impacted by the proposed program.

Exchange Program Terms:

Staff proposes to allocate 20,000 AF of storage capacity to this proposed Exchange Program. The proposed Exchange Program would allow Valley Water to deliver its SWP supplies to the IRWD Water Bank with Valley Water's share of the water limited by a maximum account balance of 10,000 AF. One-half of the water delivered by Valley Water would be transferred to IRWD through Metropolitan Water District. Delivery of Valley Water's Table A water into storage would occur after the recharge needs of IRWD and its other exchange partners have been met.

Valley Water's share of the water would be returned by the end of the seventh year after each recharge event by pumping wells at the IRWD Water Bank. The pumping of wells for Valley Water would occur after meeting the needs of IRWD and its other exchange partners. All of Valley Water's Table A water would need to be returned by the end of the program term of December 31, 2035. The proposed draft terms are provided as Exhibit "A". Staff recommends that the Board authorize the General Manager to execute an Exchange Program Agreement with Santa Clara Valley Water District based on the draft terms.

FISCAL IMPACTS:

IRWD and Valley Water would each be responsible for recharge and recovery costs associated with their respective share of the water delivered into storage under the Exchange Program. Valley Water would pay for all fixed SWP costs associated with making the water available for recharge, including the water that will be transferred to IRWD.

ENVIRONMENTAL COMPLIANCE:

Final Environmental Impact Reports for the Strand Ranch and Stockdale Integrated Banking Project were prepared, 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 3. Rosedale-Rio Bravo Water Storage District, as lead agency, filed Notices of Determination for both the Strand Ranch and Stockdale Integrated Banking Projects 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.

RECOMMENDATION:

That the Board authorize the General Manager to execute an Exchange Program Agreement with Santa Clara Valley Water District based on the draft terms presented, subject to substantive changes approved by the Supply Reliability Programs Committee and special legal counsel.

LIST OF EXHIBITS:

Exhibit "A" – Draft Terms for Exchange Program between Irvine Ranch Water District and Santa Clara Valley Water District

Exhibit “A”

Draft Terms for Exchange Program
Between Irvine Ranch Water District and Santa Clara Valley Water District
January 18, 2024

Parties	Irvine Ranch Water District (IRWD) and the Santa Clara Valley Water District (Valley Water)
Purpose	IRWD and Valley Water would implement an Exchange Program that would allow Valley Water to deliver State Water Project (SWP) water into storage at IRWD’s Strand and Stockdale Integrated Banking Projects (IRWD Water Bank) on a 2-for-1 basis. All recharge and recovery facilities at the IRWD Water Bank and any facilities operated in conjunction with the IRWD Water Bank could be used to deliver water in and out of storage.
Coordination with State Contractors and the State	<p>Valley Water has a long-term water supply contract with the California Department of Water Resources (DWR) that permits Valley Water to receive water supply, storage, and conveyance services from the SWP (Water Supply Contract).</p> <p>Metropolitan Water District of Southern California (Metropolitan) has a long-term Water Supply Contract with DWR. IRWD receives SWP supplies from Municipal Water District of Orange County (MWDOC), which is a member agency of Metropolitan.</p> <p>Kern County Water Agency (KCWA) also has a long-term Water Supply Contract with DWR. Consent from KCWA is required to deliver Valley Water’s water into storage in Kern County.</p> <p>IRWD and Valley Water would cooperate with DWR, KCWA, and Metropolitan in preparing all necessary agreements to facilitate the Exchange Program. IRWD and Valley Water shall each be responsible for their own costs associated with coordination.</p>
Program Term	The Program Term will last from the effective date of the Exchange Program Agreement through December 31, 2035.
IRWD’s Water Bank	The IRWD Water Bank, located in Kern County, is owned by IRWD and operated by Rosedale-Rio Bravo Water Storage District (Rosedale). IRWD holds first-priority rights to the use of the recharge and recovery facilities, except when the Kern River Watermaster offers water to all takers willing to sign a notice/order or the Kern River Watermaster offers Kern River water to the California Aqueduct/Kern River Intertie. Under such conditions, Rosedale has first-priority right to the use of the recharge facilities.
Storage Capacity	Up to 20,000 acre-feet (AF) of storage capacity (Total Program Storage Capacity) in the IRWD Water Bank would be dedicated to the Exchange Program using capacity not already allocated to other IRWD exchange programs. The Maximum Account Balance to be allocated for the storage of Valley Water’s share of the water stored in the IRWD Water Bank would be 10,000 AF. IRWD at its sole discretion could increase the Total Program Storage Capacity allocated to the Exchange Program with a proportional increase in Valley Water’s Maximum Account Balance. IRWD could also,

	<p>with 18 months-notice, reduce the Total Program Storage Capacity and Maximum Account Balance allocated to Valley Water should it not reasonably exercise its ability to deliver water into storage at the IRWD Water Bank.</p>
<p>Exchange Water</p>	<p>During the Program Term, Valley Water may deliver SWP water to the IRWD Water Bank available to Valley Water through its SWP Water Supply Contract with DWR (Exchange Water). One-half of the water would be stored on behalf of Valley Water for later recovery and use within Valley Water’s service area and half of the water would be deemed transferred to Metropolitan on behalf of IRWD. The volume of Valley Water’s share of the water would be restricted by its Maximum Account Balance with IRWD’s share being stored in the remaining portion of the Total Program Storage Capacity and other storage capacity available to IRWD. Both Valley Water and IRWD’s share of the water would be subject to losses as described below.</p> <p>Recharge capacity to accept the Exchange Water would be subject to scheduling and availability considering IRWD’s other exchange programs. The Parties would cooperate in scheduling the Exchange Water deliveries with both scheduled and expected deliveries associated with other IRWD deliveries and exchange programs. The recharge of Exchange Water would occur after the recharge needs of IRWD and its other exchange partners are met and would be subject to available recharge capacity, infiltration rates, available Cross Valley Water Canal (CVC) capacity, and terms of IRWD’s Coordinated Operating, Water Storage, Exchange and Delivery Agreement with Metropolitan and MWDOC (Coordinated Agreement).</p>
<p>Return Water</p>	<p>IRWD will return Valley Water’s share of the Exchange Water to Valley Water less losses by pumping wells at an annual rate of no more than one-third of Valley Water’s Maximum Account Balance not to exceed 3,333 AF per year. The return of Valley Water’s share of the water would be subject to scheduling, actual well pumping rates, and would occur after the recovery needs of IRWD and its other exchange partners are met. The Return Water shall be pumped and introduced into Reach 12E of the California Aqueduct, for exchange with SWP supplies. Valley Water shall coordinate with the DWR to effectuate any necessary exchange to accept delivery of Return Water to Valley Water’s service area. IRWD could allow Valley Water to recover more water in a year, if IRWD determines that the use of additional recovery capacity by Valley Water would not infringe on IRWD’s ability to recover water for itself and/or IRWD’s other partners.</p> <p>Valley Water’s share of water recharged and stored in any year may not remain in storage beyond the end of the seventh calendar year after the delivery of water into storage in the IRWD Water Bank. For example, if 10,000 AF of water (after losses) is delivered by Valley Water into storage in year 1, then Valley Water’s 5,000 AF share must be returned by the end of year 8. If another 10,000 AF of water (after losses) is delivered by Valley Water into storage in year 3, then Valley Water’s 5,000 AF share must be returned by the end of Year 10. All deliveries of Return Water would be complete by the end of Program Term.</p>

<p>Delivery Points</p>	<p>The IRWD Point of Delivery (IRWD POD) for the Exchange Water under this program shall be at an IRWD Water Bank turnout on the CVC. The Valley Water Point of Delivery (Valley Water POD) for the Return Water shall be at an IRWD Water Bank turn-in to the CVC. IRWD and Valley Water shall coordinate with KCWA for the conveyance of Exchange Water and Return Water utilizing the CVC. Valley Water shall coordinate any required approval with the DWR for delivery of Exchange Water and Return Water.</p>
<p>Losses</p>	<p>Water Banking losses shall be shared equally between IRWD and Valley Water (between 11 and 15%). Valley Water and IRWD each may incur additional conveyance losses of 1% to 2% in the CVC for conveyance of each agency’s share of the water, as measured by KCWA.</p>
<p>Recharge Costs</p>	<p>IRWD shall pay all costs assessed to IRWD by Rosedale for recharging water at the IRWD Water Bank. Valley Water would reimburse IRWD for 50% of these costs paid by IRWD upon delivery of Return Water to Valley Water. Costs are assessed by Rosedale consistent with that certain Water Banking and Exchange Program Agreement between Rosedale and IRWD dated January 13, 2009. These estimated costs may include Rosedale’s administrative charge of about \$4 per AF, third party wheeling charges assessed by KCWA of \$5 per AF, CVC Standby, actual CVC pumping and O&M costs of about \$15 per AF, and applicable fixed and variable O&M Water Bank costs of about \$3 per AF. Valley Water would also be responsible for paying one-half of the KCWA transaction request fee estimated at \$3,000.</p>
<p>Recovery Costs</p>	<p>Valley Water shall pay any costs assessed by Rosedale for the extraction of Return Water utilizing capacities within the IRWD Water Bank including costs associated with groundwater pumping, Rosedale’s administrative charge, other associated O&M costs, and any costs assessed by KCWA. Valley Water shall be responsible for any costs associated with the use of CVC pumping or CVC capacity for the conveyance of the Return Water. Valley Water would be responsible for paying a KCWA transaction request fee of \$3,000 associated with delivery of its Return Water.</p> <p>Valley Water shall be responsible for any costs assessed by Rosedale under the Long-Term Operations Plan for implementing provisions to prevent operation impacts. It is expected that banking projects, such as the IRWD Water Bank, may be required to contribute \$2.00 per AF for recovered water to a fund, which may be used to meet mitigation obligations.</p>
<p>SWP Fixed and Variable Costs</p>	<p>Metropolitan pays the DWR Variable Operation, Maintenance, Power, and Replacement (OMP&R) charges estimated at \$30 per AF associated with the delivery of the Exchange Water from the Delta to IRWD POD consistent with the Coordinated Agreement or as otherwise specified by DWR.</p> <p>For delivery of Return Water to the Valley Water POD and the subsequent exchange delivery to Valley Water’s service area, Valley Water will pay the DWR Variable OMP&R charges from the Delta.</p>

	Valley Water shall pay all fixed SWP costs associated with making Exchange Water available for recharge, including water that will be transferred to Metropolitan on behalf of IRWD.
Environmental Compliance	<p>Both parties shall comply with the California Environmental Quality Act (CEQA) and cooperate with one another with respect to CEQA compliance that may be required by DWR for the proposed Exchange Program. IRWD has already conducted an environmental review under CEQA for the Strand and Stockdale Integrated Banking Projects that takes into consideration the delivery, storage and recovery of SWP water. Rosedale certified and IRWD approved the CEQA documents for the Strand and Stockdale Integrated Banking Projects.</p> <p>Corresponding Notices of Determination were filed by both Rosedale and IRWD. IRWD and Valley Water will share equally any additional costs associated with any further environmental review or permitting deemed necessary for delivering Valley Water’s water into storage (however, none are expected). Both IRWD and Valley Water shall each be responsible for any other environmental review or permitting necessary to implement the Exchange Program within their own respective service areas.</p>
Water Rights	It is expressly agreed, understood, and acknowledged by IRWD and Valley Water that any existing or future delivery of Exchange Water to the IRWD Water Bank by Valley Water will not result in or be considered a sale or transfer of Valley Water’s contractual rights to SWP water or a sale or transfer of IRWD’s ownership in the IRWD Water Bank.
General Expenses	Each Party would be responsible for its own fees and expenses arising out of the negotiation and execution of the Exchange Program Agreement, obtaining necessary approvals and the like.
Future Opportunities	The Parties agree to evaluate and discuss potential amendments to the Exchange Program Agreement related to Exchange Program extensions or future opportunities which could include provisions for other types of available water or revisions for added flexibility and mutual benefit to the Parties.