AGENDA IRVINE RANCH WATER DISTRICT SUPPLY RELIABILITY PROGRAMS COMMITTEE THURSDAY, APRIL 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.			
<u>ATTENDANCE</u>	Committee Chair: Committee Member:	Doug Reinhart Peer Swan	t	
ALSO PRESENT	Paul Cook Neveen Adly Kellie Welch Natalie Palacio		Paul Weghorst Fiona Sanchez 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 April 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. <u>WATER BANKING PROJECT FACILITIES, CAPACITIES, OPERATIONS</u> AND PROGRAMS – PALACIO / WELCH / SANCHEZ / WEGHORST

Recommendation: Receive and file.

6. <u>UPDATE ON RECENT KERN RIVER COURT RULING – LINDSAY /</u> WELCH / SANCHEZ / WEGHORST

Recommendation: Receive and file.

OTHER BUSINESS

- 7. Receive Oral Updates from District's liaison to Dudley Ridge Water District and provide information on relevant activities.
- 8. Directors' Comments
- CLOSED SESSION
 - A. CONFERENCE WITH LEGAL COUNSEL ANTICIPATED LITIGATION Initiation of litigation pursuant to Government Code § 54956.9(d)(4): (1 case).
- 10. OPEN SESSION
- 11. Adjourn

April 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 an overview of 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. Since last month's update, there are no changes to Exhibits "B" and "C". A potential increase of 5,333 AF in 2023 State Water Project (SWP) deliveries to IRWD's unbalanced exchange program with Antelope Valley-East Kern Water Agency (AVEK) is pending decisions to be made by the California Department of Water resources. The potential increase would occur as a result of AVEK's request that Rosedale-Rio Bravo Water Storage District (Rosedale) reclassify 5,333 AF of previously banked water to the IRWD/AVEK unbalanced exchange program.

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

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Metropolitan Water District's system, Kern County, or owed to IRWD by Dudley Ridge Water District (Dudley Ridge). The table also provides details related to the exportability of IRWD's supplies. There were no changes to Exhibit "D" from last month.

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" includes current estimated 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, Buena Vista Water Storage District, Dudley Ridge, Metropolitan, and Antelope Valley-East Kern Water Agency (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 2022 and 2023 operations once all invoices have been received from Rosedale.

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.

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Forecasted 2024 Water Recharge Activities:

Projected deliveries to IRWD's Water Bank in 2024 are depicted in Exhibit "S". Staff will update the forecasted delivery amounts shown in Exhibit "S" as more information becomes available. Anticipated water bank deliveries in 2024 are as follows:

- AVEK Unbalanced Exchange Program: Early this year AVEK informed staff that it may deliver up to 13,000 AF of SWP Table A water to the IRWD Water Bank but has not provided any further information. Deliveries from AVEK have been removed from Exhibit "S" until further communication has been received from AVEK.
- Homer Capacity Exchange Program: In 2023, IRWD recharged approximately 1,800 AF of water into storage at the IRWD Water Bank using Homer's Cross Valley Canal capacity. Consistent with the terms of the Pilot Capacity Exchange Program, Homer can use recharge capacity at the IRWD Water Bank to recharge an equal amount of its supplies in 2024.
- <u>Silvertip Unbalanced Exchange Program:</u> Staff estimates that Silvertip may deliver up to 4,000 AF of SWP supplies to the IRWD Water Bank in 2024. The preparation of the necessary DWR agreement and securing the approval of Metropolitan and the Kern County Water Agency could require up to five months to finalize.
- Santa Clara Valley Water District Unbalanced Exchange Program: Santa Clara Valley Water District informed staff that it expects to have up to 20,000 AF of SWP Table A Water available for delivery to the IRWD Water Bank in 2024. Staff anticipates that the necessary DWR agreements and approvals may be secured by June allowing deliveries to begin at that time.
- IRWD's SWP Table A Allocation: Last month, DWR announced an increase in the 2024 SWP Table A allocation from 15% to 30%. Staff anticipates that IRWD will take delivery of its Table A water from Dudley Ridge once the allocation amount has been finalized later in the year. Metropolitan could choose to take this water directly into Southern California.

At the meeting, staff will update the Committee on water supply conditions in California.

FIS	$C\Delta I$	IMP	ACTS:
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None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

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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 (updated 8 Feb 2024)
- Exhibit "S" Actual and Forecasted 2024 Recharge Operations

Exhibit "A"

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

		RSHIP AND LL INFO		ALLOCA	ATED CAPACI	TY (AF)		1 st PRIORITY RECOVERY CONDITIONS (CFS)			2 nd PRIORITY RECOVERY CONDITIONS (CFS)	
WATER BANKING PROJECT	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	
Powto ou Como citico 3			38,000	22,300	9,500	10,850	0	35.5	25.0	1		
Partner Capacities		\	88,000	22,300	9,500	17,900	-	34.5	25.0		<u>-</u>	
IRWD Capacities (does not include Kern \	vater Bank c	apacities)	88,000	22,300	9,300	17,900	7,500	34.5	25.0		-	
IRWD's	recovery d	<i>luring</i> 6 mon	th partner rec	overy period	(AF)			12,420	9,000	-	-	
IRWD's	recovery	after 6 mont	h partner reco	overy 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 monthy recharge amount assuming 0.3 ft/day average recharge rate (AF) Stockdale West monthy recharge amount assuming 0.3 ft/day average recharge rate (AF)							· · · · · · · · · · · · · · · · · · ·	518 331				

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.

²IRWD has use of Acquired Storage and Drought Relief Project wells until January 12, 2039, unless the term of the agreement is extended.

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

⁴Kern 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.

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

				WATER BAN	IKING ENTITY			
			BUENA VISTA	CENTRAL COAST	ANTELOPE VALLEY-		DUDLEY RIDGE WATER	TOTAL BY WATER TYPE
TRANSACTIONS	IR	WD	(BVWSD)	(CCWA)	EAST KERN (AVEK)	SILVERTIP	DISTRICT (DRWD) ³	AND STORAGE
	SWP ¹	NON-SWP ²	NON-SWP	SWP	SWP	SWP	SWP	LOCATION
	·			BEGINNING WATER I	N 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	-	-	-	-	1	-	16,500
TOTAL STORED WATER (1/1/2023)	29,916	13,392	225	-			43	43,576
				(RECOVERY) AND RE	CHARGE IN 2023 (AF)			
KWB Recovery for use on Jackson Ranch ⁶	-	(232)	-	-	-	-	-	(232)
KWB Deliveries ⁷		803				-		803
2023 SWP Allocation (100%) Est.	875	- 1	-	-	-	-	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
DRWD 1-for-1 Long Term Exchange (Recharge) Est.	9,358	-	-	-	-	-	-	9,358
TOTAL 2023 TRANSACTIONS	10,471	11,571	11,000	225	-		874	34,141
Total Kern Water Bank ⁴	-	4,322	-	-	-	-	-	4,322
Total MWD System	12,033	-	-	-	-	-	43	12,076
Total Kern County	11,854	20,641	11,225	225	-	-	874	44,819
Total DRWD 1-for-1 Long Term Exchange Credit ⁵	7,142	-	-	-	-	1	-	7,142
TOTAL STORED WATER (1/1/2024)	31,029	24,963	11,225	225			917	68,359
				(RECOVERY) AND RE	CHARGE IN 2024 (AF)		1	1
KWB Recovery for use on Jackson Ranch ⁶ Est.	-	-	-	-	-	-	-	-
2024 SWP Allocation (30%)		-	-	-	-	-		-
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.	2,200	-	=	=	=	-	-	2,200
TOTAL ESTIMATED 2024 TRANSACTIONS	2,200	-	-	=	-	-	-	2,200
				ESTIMATED WATER I	IN STORAGE 2024 (AF)		1	T
Total Kern Water Bank ⁴	-	4,322		-	-	-	-	4,322
Total MWD System	12,033	-	=	=	=	-	43	12,076
Total Kern County	14,054	20,641	11,225	225	=	-	874	47,019
Total DRWD 1-for-1 Long Term Exchange Credit ⁵	4,942	-	-	-	-	-	-	4,942
TOTAL ESTIMATED STORED WATER TO DATE	31,029	24,963	11,225	225	=	-	917	68,359

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.

 $^{^{\}rm 6}\,\text{Water}$ 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.

TABLE 3 IRWD's Water Banking Storage, Recharge and Recovery Operations - AFTER LOSSES April 18, 2024

			WATER BANKING ENTITY							
TRANSACTIONS	IRV	VD.	BUENA VISTA	CENTRAL COAST	ANTELOPE VALLEY-EAST	SILVERTIP	DUDLEY RIDGE WATER	TOTAL BY WATER TYPE AND STORAGE		
MANSACHONS			(BVWSD)	(CCWA)	KERN (AVEK)	SILVLITIF	DISTRICT (DRWD) ³	LOCATION		
	SWP ¹	NON-SWP ²	NON-SWP	SWP	SWP	SWP	SWP	LOCATION		
			l	BEGINNING WATER IN	STORAGE 2023 (AF)					
Total Kern Water Bank⁴	-	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 REC	CHARGE 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		
DRWD 1-for-1 Long Term Exchange (Recharge) Est.	8,022	-	-	-	-	-	-	8,022		
TOTAL 2023 TRANSACTIONS	8,977	9,921	9,926	193	-	-	749	29,766		
Total Kern Water Bank	-	4,242	-	-	-	-	-	4,242		
Total MWD System	12,033	-	-	-	=	-	43	12,076		
Total Kern County	9,321	15,135	10,151	193	-	-	749	35,549		
Total DRWD 1-for-1 Long Term Exchange Credit	6,978	-	-	-	-	-	-	6,978		
TOTAL STORED WATER (1/1/2024)	28,332	19,377	10,151	193		-	792	58,845		
				(RECOVERY) AND REC	HARGE IN 2024 (AF)					
KWB Recovery for use on Jackson Ranch ⁶ Est.	-	-	-	-	-	-	-	-		
2024 SWP Allocation (30%)	-	-	-	-	-	-	-	-		
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.	1,886	-	-	-	-	-	-	1,886		
TOTAL ESTIMATED 2024 TRANSACTIONS	1,886	-	-	-	-		-	1,886		
				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	11,207	15,135	10,151	193	-	-	749			
Total DRWD 1-for-1 Long Term Exchange Credit	5,092	-		-	-		-	5,092		
TOTAL ESTIMATED STORED WATER TO DATE	28,332	19,377	10,151	193	-	-	792	58,845		

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.

¹IRWD'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

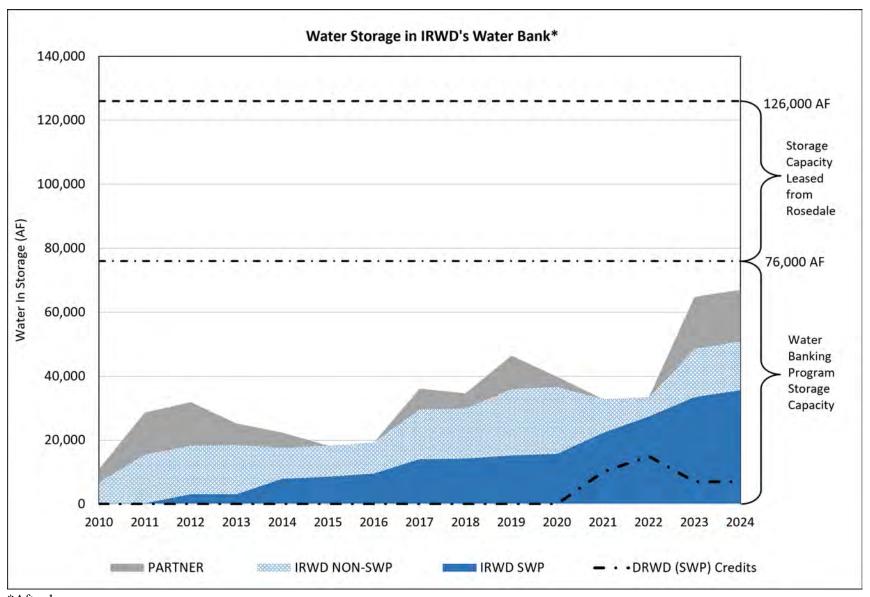
⁶Water recovered from IRWD's Kern Water Bank account for use on Jackson Ranch.

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. 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.

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

					PARTNEI	R WATER					IRW	D WATER				
		YEAR	AGREEMENT		PARTNER	PARTNER	IRWD			RWD BALAN				EXPORTABII	ITY	
PARTNER	EXCHANGE RATIO	EXECUTED	TYPE	WATER TYPE	SHARE (AF)	BALANCE (AF)	SHARE (AF)	IN MWD SYSTEM (AF)	STORED IN Strand and Stockdale	KERN (AF) Kern Fan (W.Enos)	OWED BY DUDLEY RIDGE WD	TOTAL (AF)	EXPORTABLE TO IRWD (AF)	NON- EXPORTABLE (AF)	FOR USE ON JACKSON RANCH (DRWD)	SELLABLE (Y/N)
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
D	2-for-1	2010	Pilot	Kern River	4,108		3,903									V
Buena Vista Water Storage District ¹	2-for-1	2011	Long-Term	Kern River	29,369	8,121	27,900		10,803	0		10,803		10,803		Yes
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
Dudlou Bidge Meter District (CMDAO #12012)	2-for-1	2012	SWPAO	SWP Table A	1,876		1,876	1,876				1,876	1,876			Yes
Dudley Ridge Water District (SWPAO #13012)	2-101-1	2013	SWPAU	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
3,2	1-for-1	2017	T	SWP Table A	NA	NA	9,908		9,682	226		9,908	45.000			No
Dudley Ridge Water District ³ (SWPAO #19001)	1-for-1	2017	Long-Term	Credit	NA	NA	5,092				5,092	5,092	15,000			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
				Total:	44,619	11,136	64,907	12,033	25,455	887	5,092	43,467	28,082	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.



^{*}After losses

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

STORAGE CAPACITY

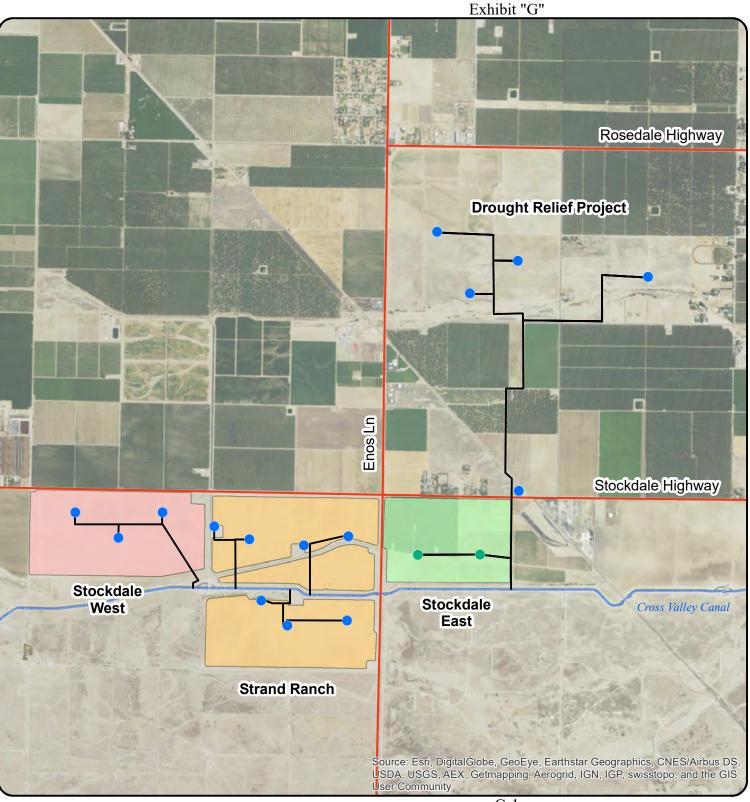
Program	Dedicated Storage Capacity Strand Ranch (AF)	Dedicated Storage Capacity Stockdale West (AF)	Dedicated Storage Capacity Leased Storage Account (AF)	Kern Water Bank Storage Capacity (AF)
Total Capacity	50,000	26,000	50,000	9,495
BVWSD	40,000	•	-	-
DRWD	10,000	-	-	-
AVEK	-	20,000	-	-
Total Dedicated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

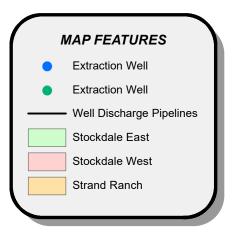
RECOVERY CAPACITY

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

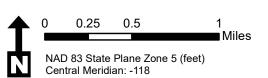


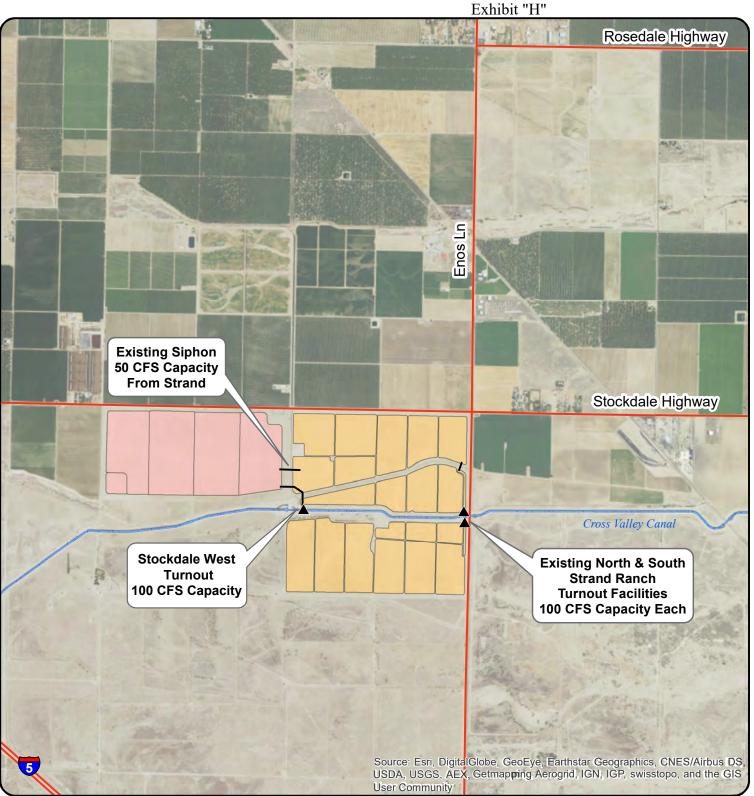


Location Map: IRWD Water Banking Projects Wells and Turnin Pipelines



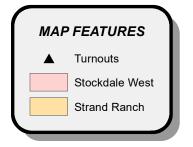
This figure shows the location of IRWD's water banking project sites and extraction wells.



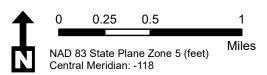


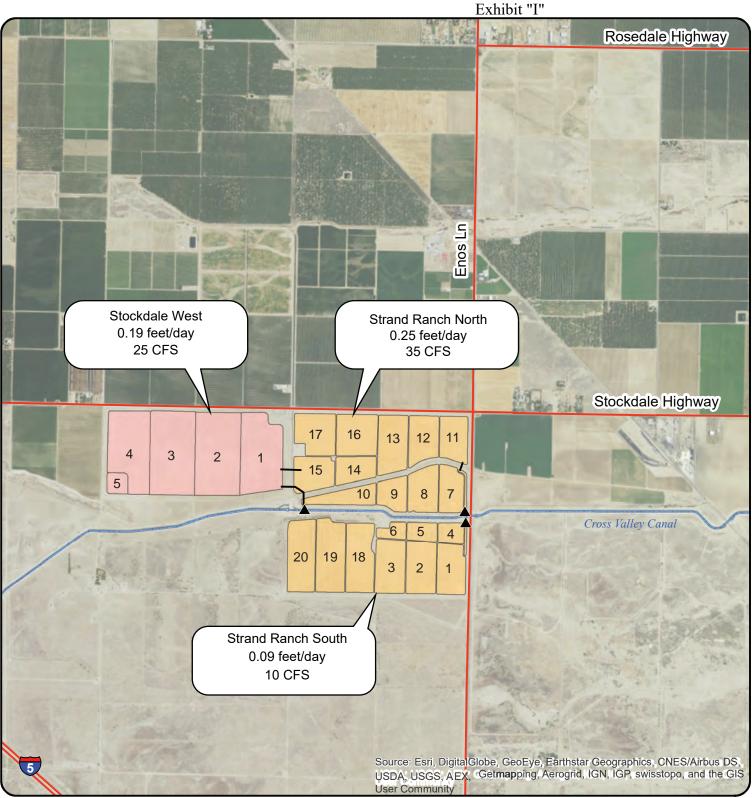


Location Map: IRWD Water Banking Projects Recharge Basins &Turnout Facilities



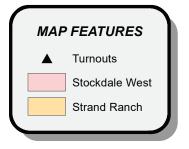
This figure shows the location of recharge basins, pipelines and turnout facilities.







Location Map: IRWD Water Banking Projects Recharge Rates



This figure shows the location of recharge basins and their associated recharge rates as of January 4, 2024

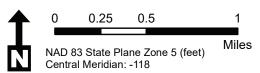
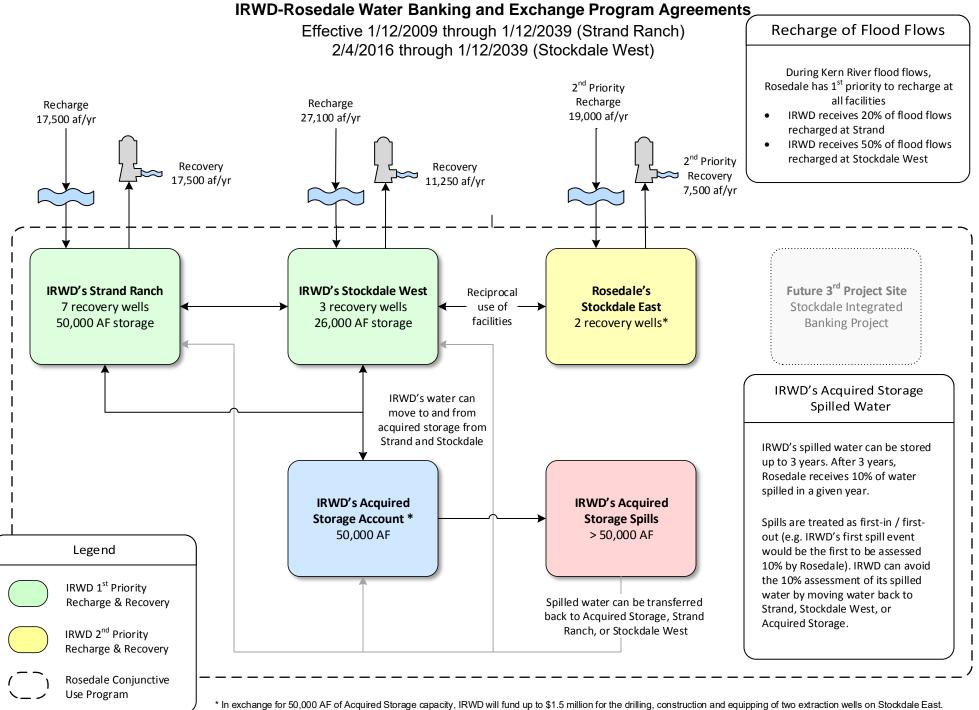


Exhibit "J"

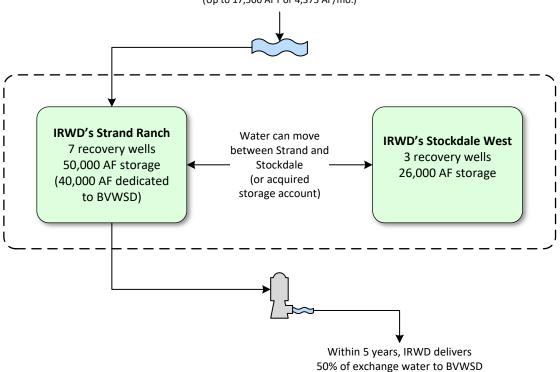


Buena Vista Water Storage District Long Term Water Exchange Program

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.)



Legend

IRWD 1st 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 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%

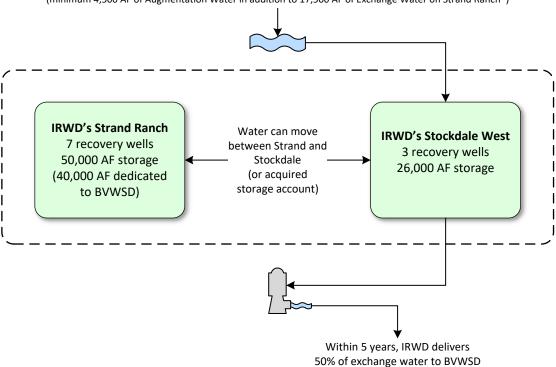
(no more than 6,667 AFY or 1,667 AF/mo.)

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

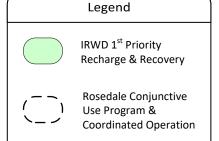
Effective 6/28/2023 through 12/31/2023

BVWSD delivers non-SWP water to Stockdale West (IRWD receives 50%)

(minimum 4,500 AF of Augmentation Water in addition to 17,500 AF of Exchange Water on Strand Ranch*)



(additional 750 AFY recovery)



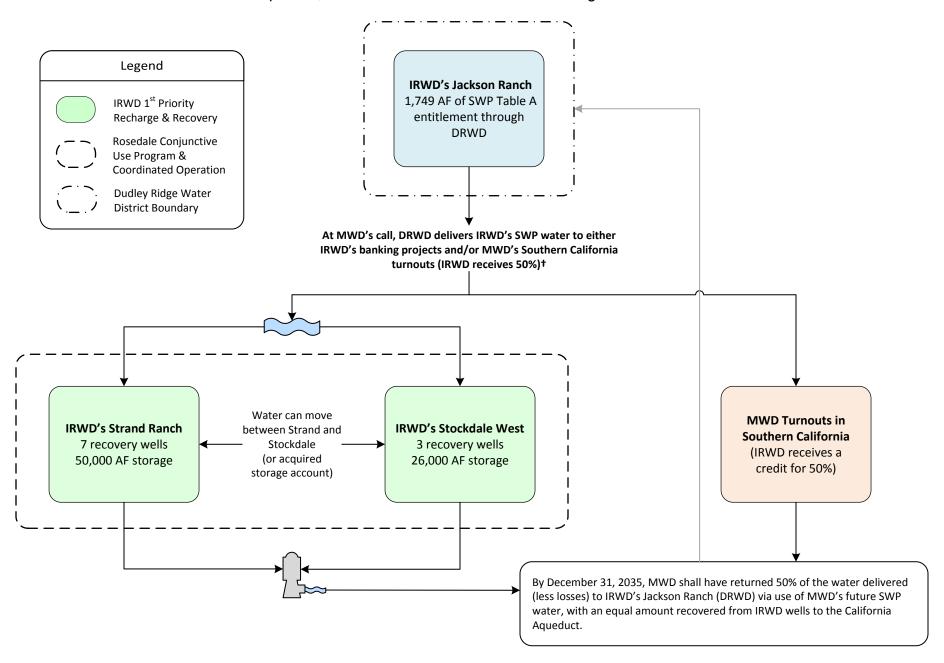
* IRWD agrees to pay BV \$25 per AF for IRWD's share of the Augmentation Water and Exchange Water

[†]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.

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

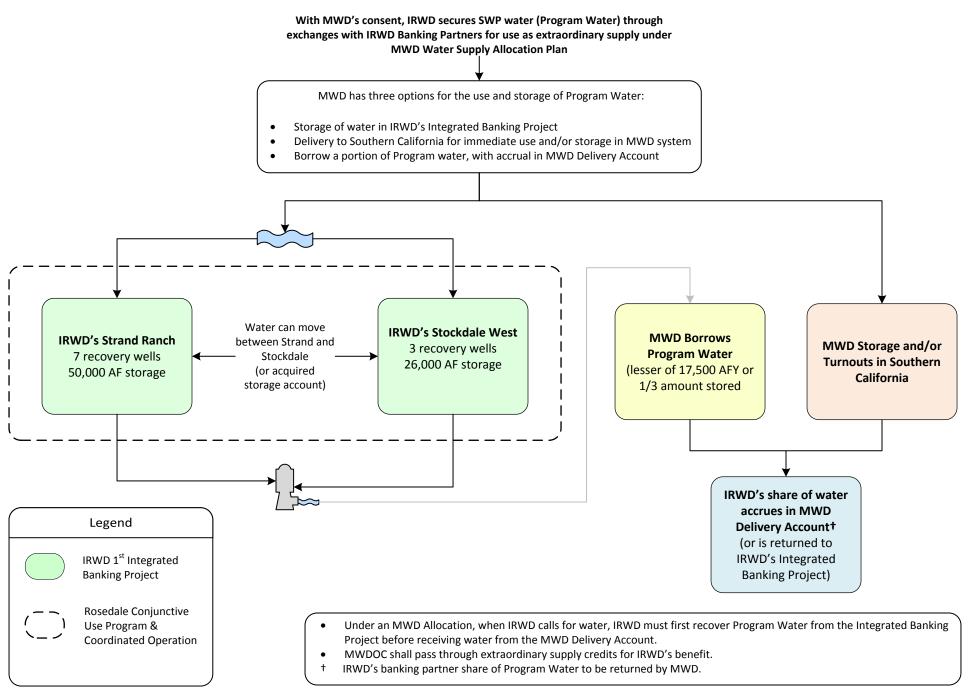
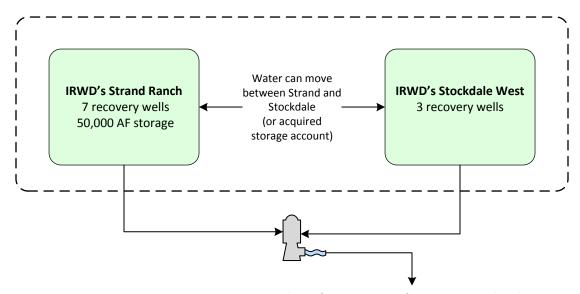


Exhibit "N"

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.*

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

*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.

Dudley Ridge Water District Long Term 1-for-1 Water Exchange Program

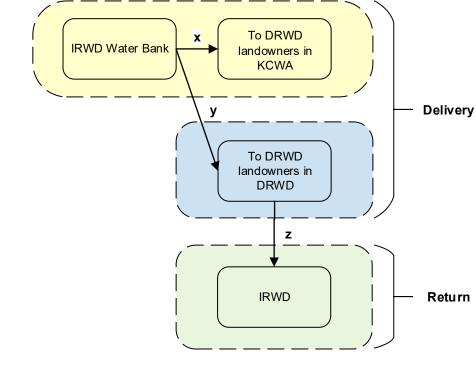
Effective 5/31/2017 through 11/4/2035



(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

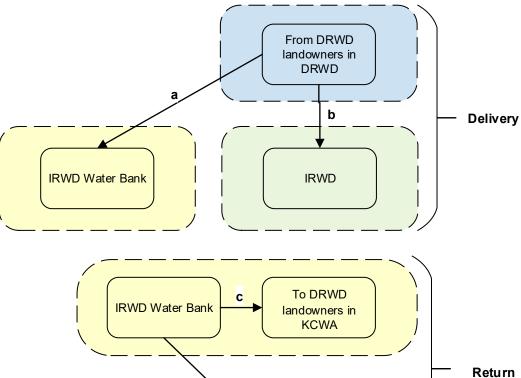
Per Section 4.1.3, z can be delivered to IRWD via in-ground transfer to IRWD, SWP delivery to IRWD banking facilitites, or SWP delivery to MWDSC



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

To DRWD landowners in

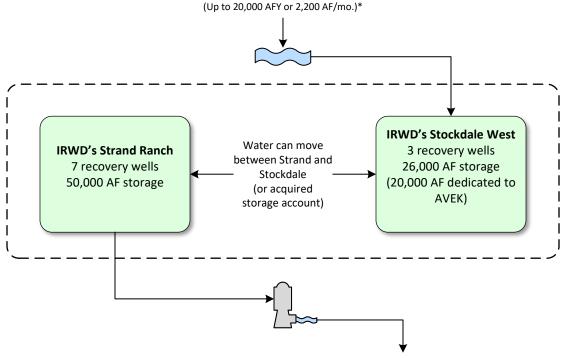
DRWD

Exhibit "P" Antelope Valle-East Kern Water Agency (AVEK) Long Term Water Exchange Program

Effective 12/21/2018 through 12/31/2035

AVEK delivers SWP water to IRWD Water Bank

(IRWD receives 50%)



Within 7 years, IRWD delivers 50% of exchange water to AVEK (No more than 1/3 of AVEK's share of capacity and not to exceed 3,333 AF in a given year.)

Legend



IRWD 1st Priority Recharge & Recovery



Rosedale Conjunctive
Use Program &
Coordinated Operation

*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.

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

Program Partner	Time Period	Water Type	IRWD Amount (AF)	Variable costs ² (\$/AF)	Fixed Cost Component ³ (\$/AF) (B)	Fixed & Variable (\$/AF)	Com _l (\$	apital ponent ⁴ 5/AF) (D)	Cost of Water (\$/AF)	Re of	timated ecovery Water ⁵ (\$/AF)	2024 MWD Tier 1 Untreated Rate + SAC Surcharge ⁶ (\$/AF) (G)	Cost of Water in IRWD Service Area (\$/AF)
						A+B			C+D				E+F+G
Buena Vista	2010-2015	Kern River	12,832	\$ 75.98	\$ 48.36	\$124.34	\$	190.00	\$ 314.34	\$	120.00	\$ 903.99	\$ 1,338.33
Buena Vista ¹	2017-2021	Kern River	11,256	\$159.16	\$ 48.36	\$207.52	\$	190.00	\$ 397.52	\$	120.00	\$ 903.99	\$ 1,421.51
AVEK	2012-2014	SWP Table A	2,229	\$ 11.70	\$ 48.36	\$ 60.06	\$	190.00	\$ 250.06	\$	120.00	\$ 903.99	\$ 1,274.05
AVEK ⁷	2012-2014	SWP Table A	108	\$ 11.70	\$ 48.36	\$ 60.06	\$	190.00	\$ 250.06	\$	-	\$ 903.99	\$ 1,154.05
Carpinteria	2010-2015	SWP Table A	874	\$ 27.04	\$ 48.36	\$ 75.40	\$	190.00	\$ 265.40	\$	120.00	\$ 903.99	\$ 1,289.39
Carpinteria ⁷	2010-2015	SWP Table A	31	\$ 27.04	\$ 48.36	\$ 75.40	\$	190.00	\$ 265.40	\$	-	\$ 903.99	\$ 1,169.39
Central Coast ⁷	2017-2021	SWP Table A	556	\$ 30.34	\$ 48.36	\$ 78.70	\$	190.00	\$ 268.70	\$	-	\$ 903.99	\$ 1,172.69
DRWD ⁷	2014-2021	SWP Table A /Article 21 Total	4,452 32,338	\$362.67	\$ 48.36	\$411.03	\$	190.00	\$ 601.03	\$	-	\$ 903.99	\$ 1,505.02

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. The SAC surcharge rate as of 6/30/2023 was \$0.99 per AF.

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

Summary of IRWD's Coordinated Operating, Water Storage, Exchange and Delivery Agreement with Metropolitan Water District and Municipal Water District of Orange County (MWDOC) (February 8, 2024)

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 \$182/AF, not DWR's current power costs of \$330/AF² (\$148/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 \$903/AF, for deliveries at its service connections allowing IRWD to avoid higher Metropolitan wheeling charges.
- 10. IRWD only pays once for supply at the current Tier-1 Supply Rate of \$332/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.

Melded system and actual power costs were taken from Metropolitan's Fiscal Years 2022-23 and 2023-24 Biennial Budget Report and 2022 Cost of Service Study.

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.

Summary of IRWD's Coordinated Operating, Water Storage, Exchange and Delivery Agreement with Metropolitan and MWDOC February 8, 2024 Page 2 of 2

Summary of Benefits to MWD:

- 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.

IRWD 2024 Recharge Operations- BEFORE LOSSES

April 18, 2024

Actual and Forecasted Amounts:

											Expected
	IRWD		Buena			Valley				Expected	Recharge
	Table A (AF)	DRWD 1:1 (AF)	Vista (AF)	AVEK (AF)	Homer (AF)	Water (AF)	Silver Tip (AF)	Total (AF)	Status	Recharge ¹ (AF)	Rate (CFS)
Month											
January	-	2,200	-	-	-	-	-	2,200	prelim	2,200	80
February	-	-	-	-	-	-	-	-	prelim	-	70
March	-	-	-	-	-	-	-	-	prelim	-	60
		2,200						2,200		2,200	
April	-	-	-	-	-	-	-	-		-	60
May	-	-	-	-	-	-	2,000	2,000		2,000	60
June	-	-	-	-	-	3,570	-	3,570		3,570	60
July	-	-	-	-	-	3,689	-	3,689		3,689	60
August	-	-	-	-	-	3,689	-	3,689		3,689	60
September	-	-	-	-	-	3,570	-	3,570		3,570	60
October	-	-	-	-	-	3,689	-	3,689		3,689	60
November	392	-	-	-	1,800	1,378	-	3,570		3,570	60
December	133	-	-	-	-	-	2,000	2,133		2,133	60
	525	2,200	-	-	1,800	19,587	4,000	28,112		28,112	
Recharge goal:	525	7,142	-	-	1,800	20,000	4,000	33,467			

April 18, 2024

Prepared by: M. Lindsay / K. Welch Submitted by: F. Sanchez / P. Weghorst

Approved by: Paul A. Cook

SUPPLY RELIABILITY PROGRAMS COMMITTEE

UPDATE ON RECENT KERN RIVER COURT RULING

SUMMARY:

In November 2022, public interest groups in Kern County sued the City of Bakersfield on the grounds that the City's Kern River diversions cause harm to fish habitat in the Bakersfield area. At the Committee meeting, staff will provide an update on the ruling and IRWD's special legal counsel will present an overview of possible impacts to water availability to the Kern River water rights holders and the IRWD's Water Bank.

BACKGROUND:

The IRWD Water Bank receives Kern River water supplies through a long-term banking agreement with Buena Vista Water Storage District (BVWSD). Through this agreement, IRWD receives one-half of BVWSD's high-flow Kern River water recharged at the Water Bank. Pursuant to the operating agreements between IRWD and Rosedale-Rio Bravo Water Storage District, IRWD also receives between 20 and 50 percent of all Kern River flood recharged at the Water Bank. Through participation in the Kern Water Bank (KWB), IRWD receives a share of high-flow Kern River supplies diverted to the KWB on behalf of Dudley Ridge Water District.

Kern River Water Rights Summary:

Current Kern River water rights holders include the City of Bakersfield, Kern Delta Water District, BVWSD, Kern County Water Agency, and North Kern Water Storage District. These water rights holders are entitled to diversions pursuant to pre-1914 water rights. Rosedale receives Kern River water through water service agreements with the City, BVWSD, and other Kern River interests. The City of Bakersfield is the operator of the Kern River, with responsibility to manage the river through the operation of six weirs that control, divert, and measure water flow. The diversion weirs are shown on the Kern River Operations Map provided as Exhibit "A".

Recent Kern River Court Case:

In November 2022, community and environmental groups comprised of Bring Back the Kern, Water Audit California and the Center for Biological Diversity brought legal action against the City of Bakersfield on the grounds that the City's diversion operations harm wildlife habitats and the river's natural ecosystem. The plaintiffs interpret that the six weirs are essentially dams and are not operated by the City of Bakersfield in a manner consistent with California Fish and Game Code 5937, which requires enough water to flow past dams to keep downstream fish populations in "good condition". Code 5937 is included as Exhibit "B".

Supply Reliability Programs Committee: Update on Recent Kern River Court Ruling April 18, 2024
Page 2

Recent Court Ruling:

In October 2023, Kern County Superior Court Judge Pulskamp issued a preliminary injunction prohibiting the City of Bakersfield from operating the six weirs in any manner that would reduce Kern River flows below the volume sufficient to keep fish downstream in good condition. The necessary flow rates would be negotiated by all parties in "good faith". In December 2023, the City of Bakersfield notified the parties that while the interim flow regime is being studied, enough water would be kept in the river so that visible flow reaches McClung weir, approximately 3 miles west of Allen Road as seen on Exhibit "A".

Ongoing Actions:

The City of Bakersfield, along with other water rights holders, has filed appeals hoping to dismiss all or parts of the lawsuit by arguing that the weirs on the river are not dams. In February 2024, Judge Pulskamp overruled the City's request to dismiss claims, thereby allowing the preliminary injunction to remain in effect. The litigation is ongoing.

At the Committee meeting, special legal counsel from Kronick Moskovitz Tiedemann & Girard will present an overview of the potential impacts of the ruling on water availability for the Kern River water rights holders and the IRWD Water Bank.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

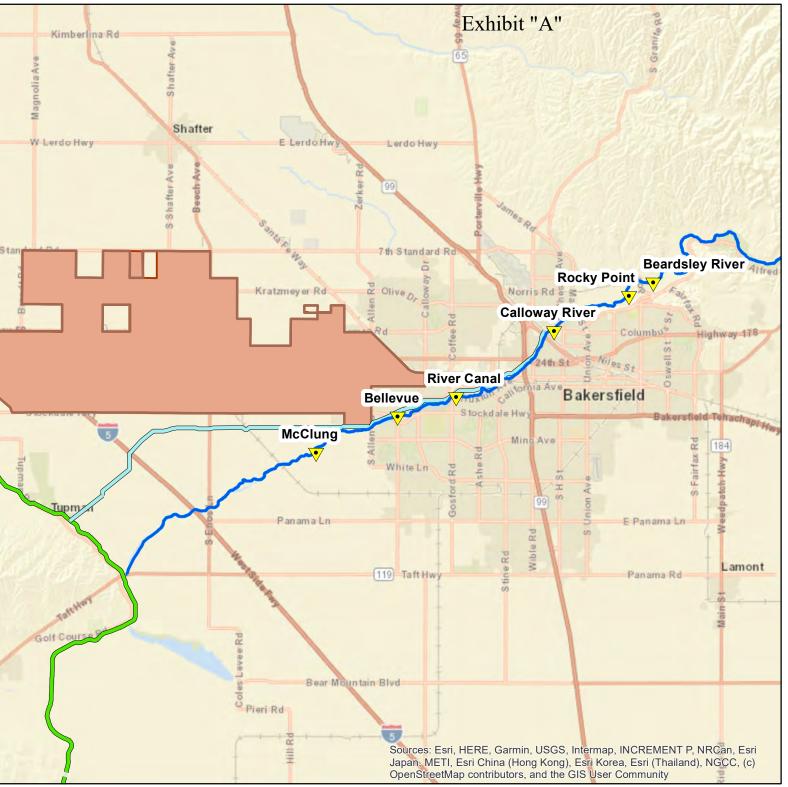
RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit "A" – Map of Kern River Operations

Exhibit "B" – California Fish and Game Code 5937





Kern River Operation Weirs





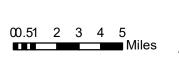


Exhibit "B"



State of California

FISH AND GAME CODE

Section 5937

5937. The owner of any dam shall allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around or through the dam, to keep in good condition any fish that may be planted or exist below the dam. During the minimum flow of water in any river or stream, permission may be granted by the department to the owner of any dam to allow sufficient water to pass through a culvert, waste gate, or over or around the dam, to keep in good condition any fish that may be planted or exist below the dam, when, in the judgment of the department, it is impracticable or detrimental to the owner to pass the water through the fishway.

(Enacted by Stats. 1957, Ch. 456.)