

AGENDA
IRVINE RANCH WATER DISTRICT
SUPPLY RELIABILITY PROGRAMS COMMITTEE
WEDNESDAY, APRIL 27, 2022

This meeting will be held in-person at the District’s headquarters located at 15600 Sand Canyon Avenue, Irvine, California. 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=m476931bf8beccdd91f1e16300d150b33>

Meeting Number (Access Code): 2482 316 6983

Meeting Password: YWuKgpPA438

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

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

CALL TO ORDER 11:30 a.m.

<u>ATTENDANCE</u>	Committee Chair: Douglas Reinhart	_____
	Member: Peer Swan	_____

<u>ALSO PRESENT</u>	Paul Cook	_____	Paul Weghorst	_____
	Rob Jacobson	_____	Fiona Sanchez	_____
	Kellie Welch	_____	Christine Compton	_____
	Natalie Palacio	_____	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 9:00 a.m. on Wednesday, April 27, 2022.

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.

PRESENTATION

5. UPDATE ON DUDLEY RIDGE WATER DISTRICT ACTIVITIES

Patrick O'Dowd will provide the Committee an update on activities of interest at the Dudley Ridge Water District.

INFORMATION

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

Recommendation: Receive and file.

7. OVERVIEW OF KERN FAN PROJECT AGREEMENTS RELATED TO IRWD RELIABILITY – SANCHEZ / WEGHORST

Recommendation: That the Committee provide input on the options, water management tools and necessary agreements that would enhance IRWD's water supply reliability from the development and implementation of the Kern Fan Project. Terms for any of the associated agreements would be presented to the Committee at a later date.

ACTION

8. AMENDMENT NO. 1 TO AGREEMENT FOR PLANNING AND ENVIRONMENTAL REVIEW OF DELTA CONVEYANCE PROJECT – WELCH / SANCHEZ / WEGHORST

Recommendation: That the Board authorize the General Manager to execute Amendment No. 1 to the Agreement Between Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District for Preliminary Planning and Design Costs Related to a Potential Delta Conveyance Project, subject to non-substantive changes approved by legal counsel.

ACTION (CONTINUED)

9. ONE-FOR-ONE EXCHANGE WITH DUDLEY RIDGE WATER DISTRICT –
WELCH / SANCHEZ / WEGHORST

Recommendation: That the Board approve delivery of up to 5,000 acre-feet of IRWD’s stored non-SWP water for use by Dudley Ridge Water District landowners in Kern County in exchange for State Water Project Table A water from Dudley Ridge Water District consistent with the terms of the 2017 Agreement Between Dudley Ridge Water District and Irvine Ranch Water District for Long-Term Exchange Program.

OTHER BUSINESS

10. Directors’ Comments

11. 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.

Note: This page is intentionally left blank.

April 27, 2022

Prepared by: N. Palacio / K. Welch

Submitted by: F. Sanchez / P. Weghorst

Approved by: Paul A. Cook *PA*

SUPPLY RELIABILITY PROGRAMS COMMITTEE

WATER BANKING PROJECT FACILITIES, CAPACITIES, OPERATIONS AND PROGRAMS

SUMMARY:

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

BACKGROUND:

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

Capacity and Operations Tables:

A table presenting storage, recharge, and recovery capacities of existing and planned IRWD water banking projects, including capacities available to IRWD in the Kern Water Bank, is provided as Exhibit "A". The recovery capacities have been updated to include the average daily production rates through March 31, 2022.

Exhibits "B" and "C" provide an update on water banking recovery and recharge operations, as well as the balance of the water stored in the Kern Water Bank. Exhibit "B" provides before-loss estimates of water recharged at the water banking projects, and Exhibit "C" provides after-loss estimates of water recharged at the projects. Both Exhibits "B" and "C" include columns that provide totals for each water type and storage location. Changes to Exhibits "B" and "C" include a decrease in the State Water Project (SWP) allocation from 15% to 5% for 2022.

Summary of Programs:

A table presenting a summary of IRWD's water purchase and exchange programs is presented as Exhibit "D". The table lists each purchase and exchange program that IRWD has entered and presents information related to the type of exchange, year executed, agreement type and water type. IRWD and partner shares are listed and show 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'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 in Exhibit "D" correspond with changes made to Exhibits "B" and "C".

Exhibit "E" graphically depicts how storage of SWP and non-SWP water has changed in the Strand and Stockdale Integrated Banking Projects through time. 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 provided as Exhibits "A", "B", "C", "D" and "F", as well as the figure provided as Exhibit "E", staff has prepared maps that depict project wells and pipelines, recharge basins and Cross Valley Canal turnout locations, along with the most current recharge rates. These maps are provided as Exhibits "G", "H" and "I", respectively. The facilities shown on the maps are associated with the Strand Ranch, Stockdale West, Stockdale East and Drought Relief Projects.

Program Agreement Diagrams:

Schematic diagrams have been prepared that depict IRWD water banking and exchange programs with Rosedale-Rio Bravo Water Storage District, Buena Vista Water Storage District, Dudley Ridge and Metropolitan. These diagrams are provided as Exhibits "J", "K", "L", "M", "N" and "O", 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 is provided as Exhibit "P". 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, 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 2022 Metropolitan Full Service Untreated Tier-1 Rate and a capital cost of water. The costs of water are presented on a dollar per acre-foot basis. The cost of water will be updated periodically and presented to the Committee.

Other Program Opportunities:

IRWD has been pursuing additional opportunities to secure water for recharge. At the Committee meeting, staff will provide an update on efforts to enter into water banking partnerships with Mojave Water Agency and Santa Clarita Valley Water Agency.

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 Cross Valley Canal 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” – Cost of Water Table

Note: This page is intentionally left blank.

Exhibit "A"

TABLE 1

Current and Anticipated Water Banking Projects

Recharge, Storage and Recovery Capacities

April 27, 2022

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 - 3/31/2022)	RECOVERY CAPACITY AS PLANNED	RECOVERY CAPACITY CURRENT CONDITIONS
Strand Ranch	Yes	7	50,000	17,500	-	17,500	-	40.0	21.6	-	-
Stockdale West	Yes	3	26,000	27,100	-	11,250	-	15.0	11.7	-	-
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	16.8	-	-
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	50.1	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.

Note: This page is intentionally left blank.

Exhibit "B"

TABLE 2

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

April 27, 2022

TRANSACTIONS	WATER BANKING ENTITY					TOTAL BY WATER TYPE AND STORAGE LOCATION
	IRWD		BUENA VISTA (BVWSD)	CENTRAL COAST (CCWA)	DUDLEY RIDGE WATER DISTRICT (DRWD) ³	
	SWP ¹	NON-SWP ²	NON-SWP	SWP	SWP	
BEGINNING WATER IN STORAGE 2021 (AF)						
Total Kern Water Bank (estimated)	-	4,683	-	-	-	4,683
Total MWD System ⁴	8,027	-	-	-	200	8,227
Total Kern County	5,210	24,855	3,935	647	3,761	38,408
TOTAL STORED WATER (1/1/2021)	13,237	29,538	3,935	647	3,961	51,318
(RECOVERY) AND RECHARGE IN 2021 (AF)						
KWB Recovery for use on Jackson Ranch ⁵	-	(388)	-	-	-	(388)
SWP Table A	-	-	-	(556)	-	(556)
2021 SWP Allocation (5 %) ^{3, 6}	35	-	-	-	35	70
Kern River Water	-	(10,000)	(2,681)	-	-	(12,681)
SWP Water Sale to DRWD Landowners ⁷	-	(439)	-	-	(3,468)	(3,907)
2018 Reserve Water	12				12	24
DRWD 1-for-1 Long Term Exchange Credit ⁸	10,000	-	-	-	-	10,000
TOTAL 2021 TRANSACTIONS	10,047	(10,827)	(2,681)	(556)	(3,421)	(7,438)
Total Kern Water Bank	-	4,295	-	-	-	4,295
Total MWD System	8,062	-	-	-	-	8,062
Total Kern County	5,222	14,416	-	-	12	19,650
Total DRWD 1-for-1 Long Term Exchange Credit	10,000	-	-	-	-	10,000
TOTAL STORED WATER (1/1/2022)	23,284	18,711	-	-	12	42,007
(RECOVERY) AND RECHARGE IN 2022 (AF)						
Water to Jackson Ranch	-	-	-	-	-	-
2022 SWP Allocation (5 %)	44	-	-	-	44	87
Recovery of Banked SWP Water for MWD (estimated)	(3,927)	-	-	-	-	(3,927)
MWD Credit for SWP Water (estimated)	3,927	-	-	-	-	3,927
TOTAL ESTIMATED 2022 TRANSACTIONS	44	-	-	-	44	87
ESTIMATED WATER IN STORAGE 2022 (AF)						
Total Kern Water Bank	-	4,295	-	-	-	4,295
Total MWD System	12,032	-	-	-	44	12,076
Total Kern County	1,295	14,416	-	-	12	15,723
Total DRWD 1-for-1 Long Term Exchange Credit	10,000	-	-	-	-	10,000
TOTAL ESTIMATED STORED WATER TO DATE	23,327	18,711	-	-	56	42,094

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 2,842 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. IRWD's 2013-2016 SWP allocation amounts are stored in the MWD system. IRWD's 2017 through 2020 SWP allocation water is stored in Kern County. Half of IRWD's 2021 SWP allocation is stored in the MWD system, the other half was delivered to DRWD as part of the SWP Water Sale to DRWD landowners

⁴ Beginning balance of water stored in MWD system includes: 4,000 AF from 2014 Exchange, 2,853 AF of 2014 borrowed SWP, 1,186 AF of IRWD's 2013-2016 SWP allocations through DRWD.

⁵ Water recovered from IRWD's Kern Water Bank account for use on Jackson Ranch.

⁶ 17 AF of IRWD's 2021 SWP Allocation was used to fulfill an obligation to Pastoria.

⁷ Kern County Water Agency approved the recovery of 3,672 AF for the SWP Water Sale to DRWD landowners. In order to make up the difference between the approved amount of 3,672 AF and the amount after losses (3,233 AF), IRWD was able to use 439 AF from its Article 21 water acquired from Semitropic as part of the sale.

⁸ 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.

Note: This page is intentionally left blank.

Exhibit "C"

TABLE 3
IRWD's Water Banking Storage, Recharge and Recovery Operations - AFTER LOSSES
 April 27, 2022

TRANSACTIONS	WATER BANKING ENTITY					TOTAL BY WATER TYPE AND STORAGE LOCATION
	IRWD		BUENA VISTA (BVWSD)	CENTRAL COAST (CCWA)	DUDLEY RIDGE WATER DISTRICT (DRWD) ³	
	SWP ¹	NON-SWP ²	NON-SWP	SWP	SWP	
BEGINNING WATER IN STORAGE 2021 (AF)						
Total Kern Water Bank	-	4,215	-	-	-	4,215
Total MWD System ⁴	8,027	-	-	-	200	8,227
Total Kern County	4,177	20,931	2,681	556	3,233	31,578
TOTAL STORED WATER (1/1/2021)	12,204	25,146	2,681	556	3,433	44,019
(RECOVERY) AND RECHARGE IN 2021 (AF)						
KWB Recovery for use on Jackson Ranch ⁵	-	(388)	-	-	-	(388)
SWP Table A	-	-	-	(556)	-	(556)
2021 SWP Allocation (5%) ^{3, 6}	35	-	-	-	35	70
Kern River Water	-	(10,000)	(2,681)	-	-	(12,681)
SWP Water Sale to DRWD Landowners ⁷	-	(439)	-	-	(3,468)	(3,907)
2018 Reserve Water	11	-	-	-	11	22
DRWD 1-for-1 Long Term Exchange Credit ⁸	10,000	-	-	-	-	10,000
TOTAL 2021 TRANSACTIONS	10,046	(10,827)	(2,681)	(556)	(3,422)	(7,440)
Total Kern Water Bank	-	3,827	-	-	-	3,827
Total MWD System	8,062	-	-	-	-	8,062
Total Kern County	4,188	10,492	-	-	11	14,691
Total DRWD 1-for-1 Long Term Exchange Credit	10,000	-	-	-	-	10,000
TOTAL STORED WATER (1/1/2022)	22,250	14,319	-	-	11	36,579
(RECOVERY) AND RECHARGE IN 2022 (AF)						
Water to Jackson Ranch	-	-	-	-	-	-
2022 SWP Allocation (5 %)	44	-	-	-	44	87
Recovery of Banked SWP Water for MWD (estimated)	(3,927)	-	-	-	-	(3,927)
MWD Credit for SWP Water (estimated)	3,927	-	-	-	-	3,927
TOTAL ESTIMATED 2022 TRANSACTIONS	44	-	-	-	44	87
ESTIMATED WATER IN STORAGE 2022 (AF)						
Total Kern Water Bank	-	3,827	-	-	-	3,827
Total MWD System	12,032	-	-	-	44	12,076
Total Kern County	261	10,492	-	-	11	10,764
Total DRWD 1-for-1 Long Term Exchange Credit	10,000	-	-	-	-	10,000
TOTAL ESTIMATED STORED WATER TO DATE	22,293	14,319	-	-	55	36,667

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); KWB losses are 10%; no losses for water directly delivered to MWD system.

-MWD = Metropolitan Water District of Southern California.

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

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

³ DRWD water supply will be returned by MWD or IRWD's Strand Ranch to IRWD's Jackson Ranch. IRWD's 2013-2016 SWP allocation amounts are stored in the MWD system. IRWD's 2017 through 2020 SWP allocation water is stored in Kern County. Half of IRWD's 2021 SWP allocation is stored in the MWD system, the other half was delivered to DRWD as part of the SWP Water Sale to DRWD landowners, therefore no losses are taken on the water.

⁴ Beginning balance of water stored in MWD system includes 4,000 AF of 2014 Exchange, 2,853 AF of 2014 borrowed SWP, 1,186 AF of IRWD's 2013-2016 SWP allocations through DRWD.

⁵ Water recovered from IRWD's Kern Water Bank account for use on Jackson Ranch.

⁶ 17 AF of IRWD's 2021 SWP Allocation was used to fulfill an obligation to Pastoria.

⁷ Kern County Water Agency approved the recovery of 3,672 AF for the SWP Water Sale to DRWD landowners. In order to make up the difference between the approved amount of 3,672 AF and the amount after losses (3,233 AF), IRWD was able to use 439 AF from its Article 21 water acquired from Semitropic as part of the sale.

⁸ 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.

Note: This page is intentionally left blank.

Exhibit "D"

TABLE 4

Status of IRWD Purchase and Exchange Programs (AFTER LOSSES)

April 27, 2022

PARTNER	EXCHANGE RATIO	YEAR EXECUTED	AGREEMENT TYPE	WATER TYPE	PARTNER WATER		IRWD WATER								
					PARTNER SHARE (AF)	PARTNER BALANCE (AF)	IRWD SHARE (AF)	IRWD BALANCE				EXPORTABILITY			SELLABLE (Y/N)
								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)	
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	21,248		20,186		8,089		8,089		8,089		
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 ² (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 ³	1-for-1	2014	Short-Term	SWP Table A	NA	NA	4,000	4,000			4,000	4,000			No
Dudley Ridge Water District ⁴ (SWPAO #17030)	2-for-1	2018	SWPAO	SWP Table A	1,066	55	1,066	1,055	11		1,066	1,066		55	Yes
Central Coast Water Agency	2-for-1	2017	Short-Term	SWP Table A	258	-	258	258			258	258			No
Dudley Ridge Water District ⁵	1-for-1	2017	Long-Term	SWP Table A						10,000	10,000	10,000			No
Central Coast Water Agency	2-for-1	2019	Short-Term	SWP Table A	298	-	298	298	-		298	298			No
Total:					33,537	55	39,225	12,033	10,753	10,000	32,786	22,044	10,742	55	

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 Only the portion of water stored for use on Jackson Ranch in DRWD is sellable.

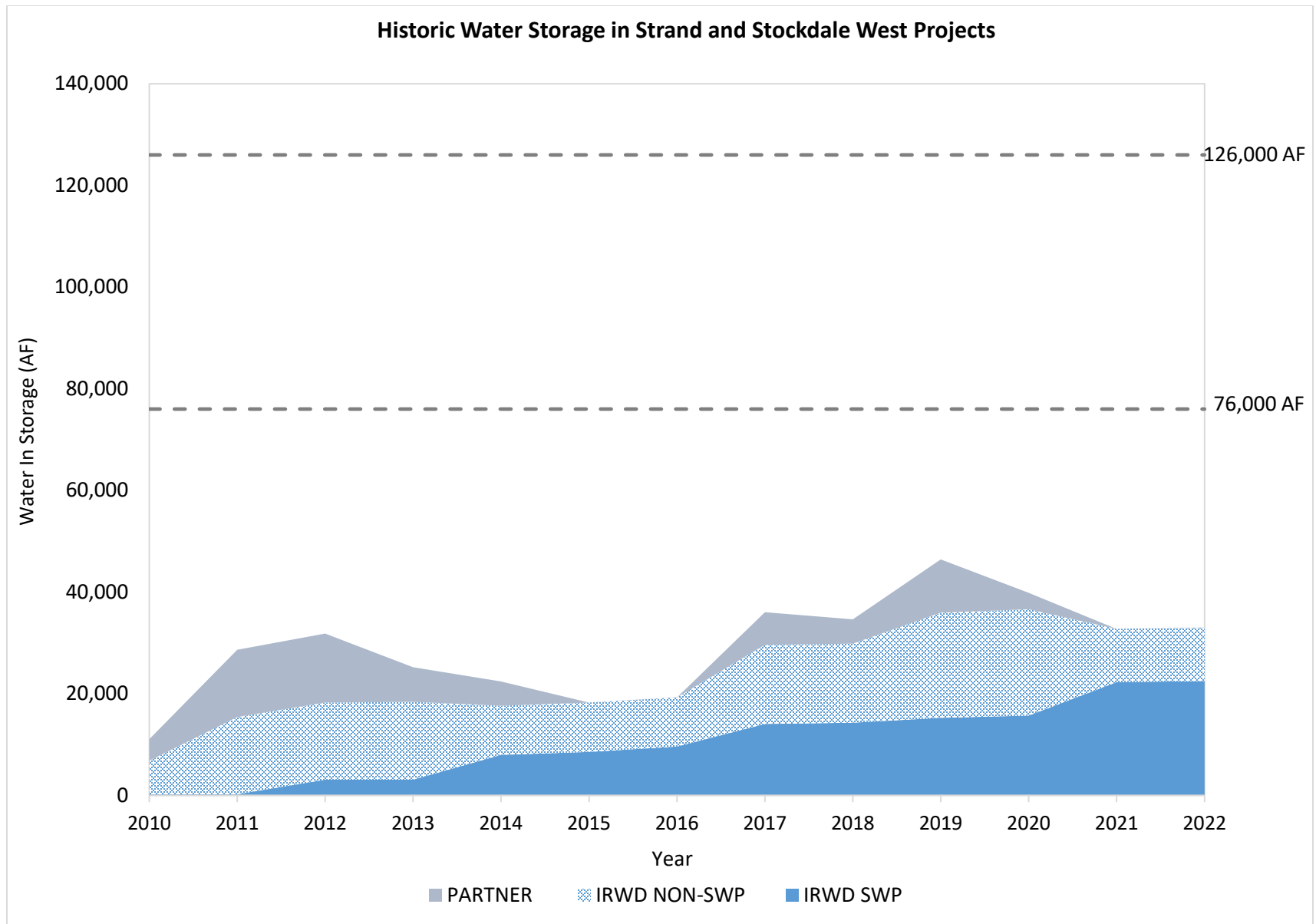
³ Source of water was Buena Vista Water Storage District Kern River high flow water.

⁴ Assumes MWD will take delivery of 2022 SWP Table A Allocation.

⁵ Estimated amount of Table A to be returned to IRWD from Dudley Ridge Water District under the 1-for-1 exchange program.

Note: This page is intentionally left blank.

Exhibit “E”



*After losses

Note: This page is intentionally left blank.

Exhibit "F"

TABLE 5

IRWD Dedicated Water Banking Capacities for Existing and Proposed Exchange Programs

April 27, 2022

Program	Dedicated Storage Capacity Strand Ranch (AF)	STORAGE CAPACITY 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

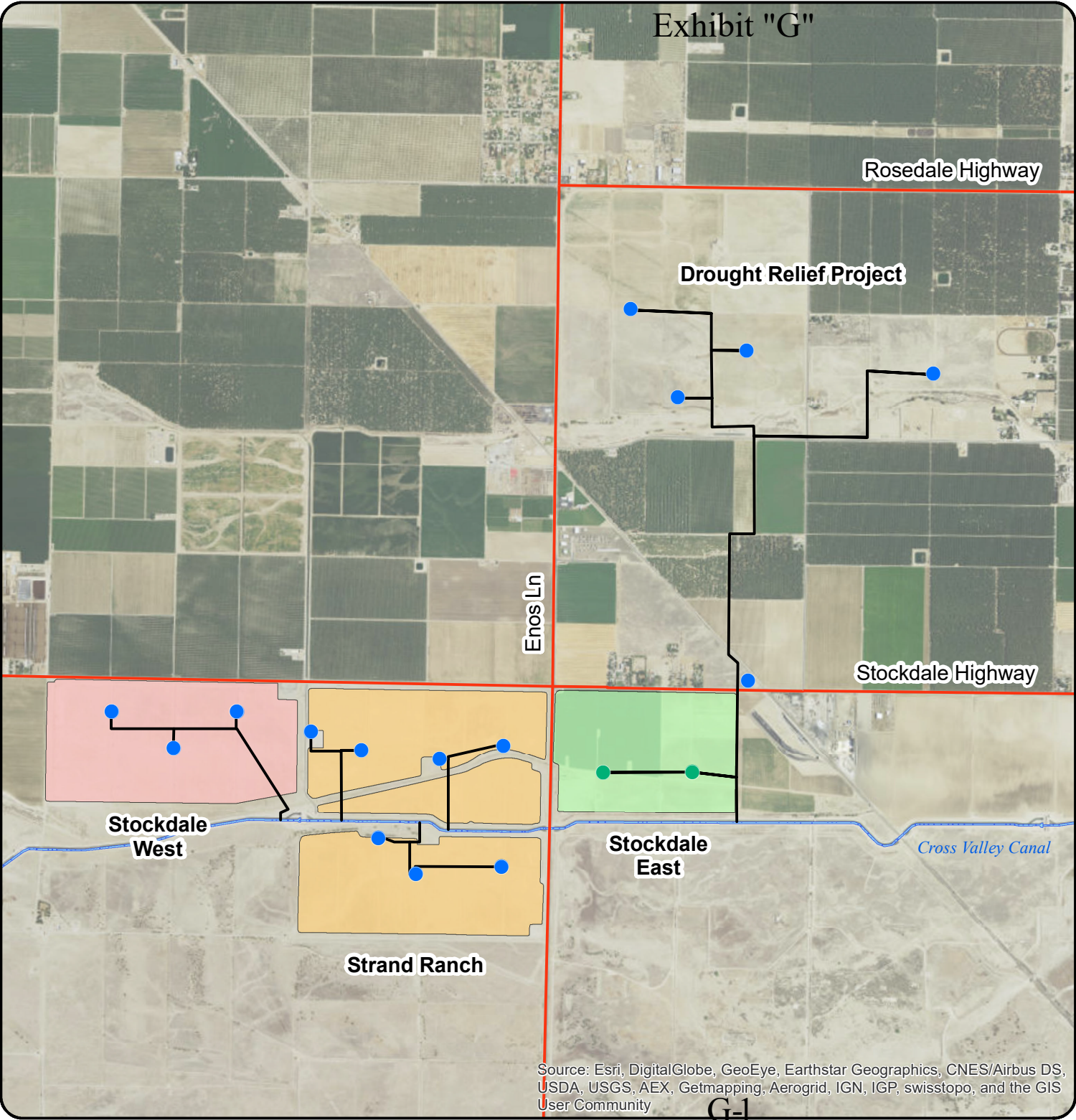
RECHARGE CAPACITY

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	-	-

Note: This page is intentionally left blank.

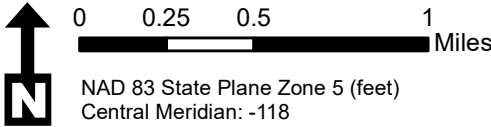


**Location Map:
IRWD Water Banking Projects
Wells and Turnin Pipelines**

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.



Note: This page is intentionally left blank.

Exhibit "H"

Rosedale Highway



Irvine Ranch
WATER DISTRICT

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

MAP FEATURES

- ▲ Turnouts
- Stockdale West
- Strand Ranch

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

Existing Siphon
50 CFS Capacity
From Strand

Stockdale West
Turnout
100 CFS Capacity

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

Cross Valley Canal

Enos Ln

Stockdale Highway

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

User Community



0 0.25 0.5 1
Miles

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

Note: This page is intentionally left blank.

Exhibit "I"

Rosedale Highway



Location Map: IRWD Water Banking Projects Recharge Rates

MAP FEATURES

- ▲ Turnouts
- Stockdale West
- Strand Ranch

Stockdale West
0.11 feet/day
15 CFS

Strand Ranch North
0.29 feet/day
40 CFS

Stockdale Highway

Cross Valley Canal

Strand Ranch South
0.13 feet/day
15 CFS

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

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



0 0.25 0.5 1
Miles

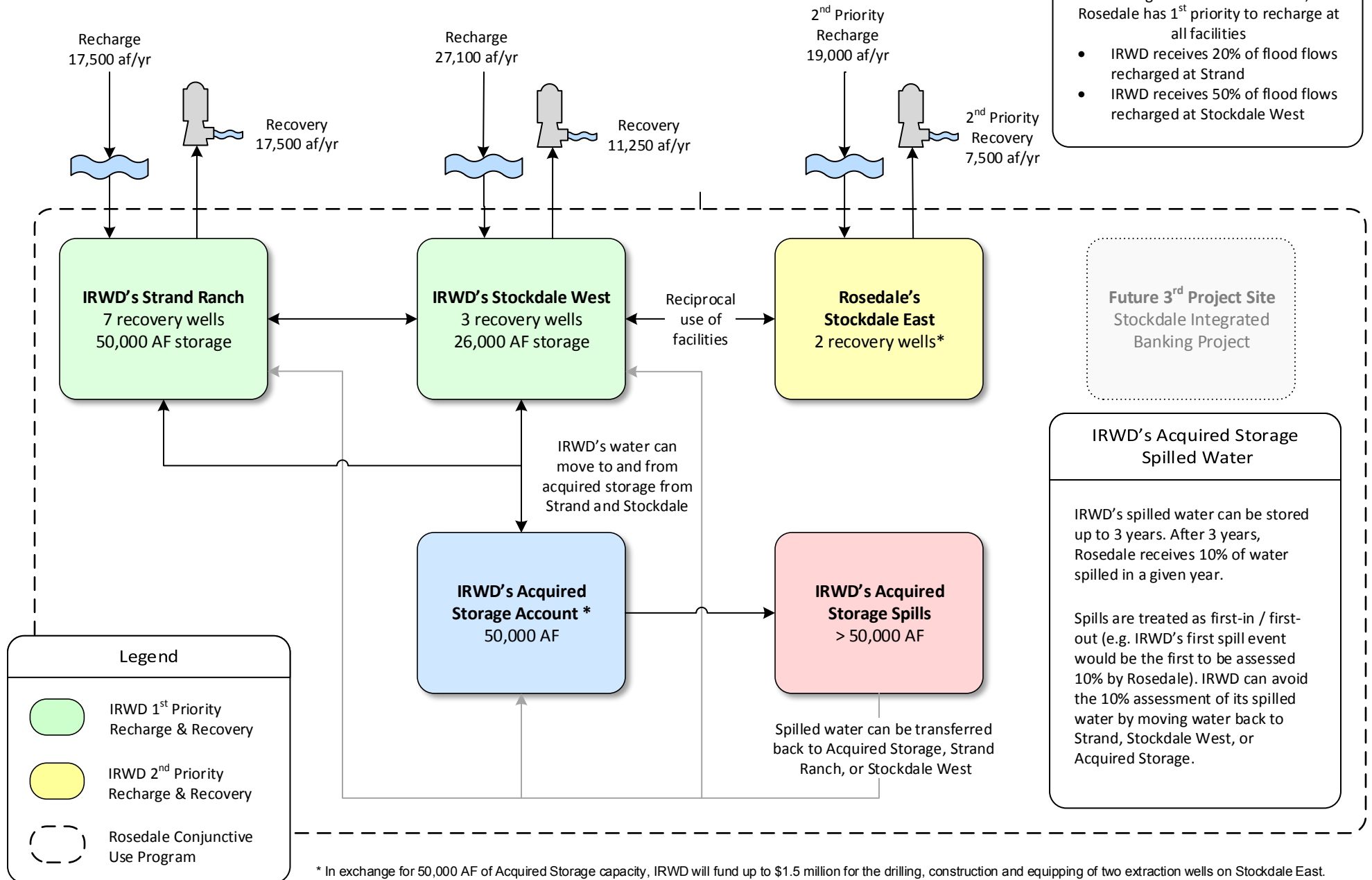
NAD 83 State Plane Zone 5 (feet)
Central Meridian: -118

Note: This page is intentionally left blank.

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)



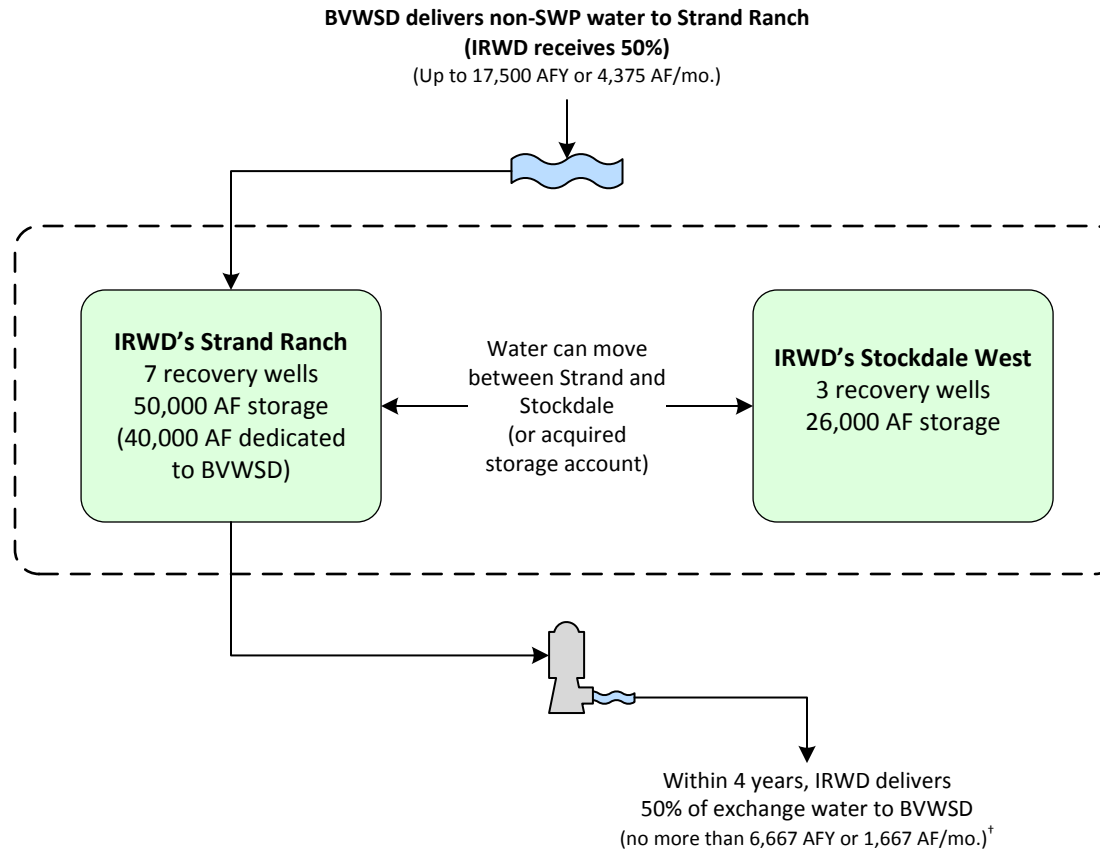
* In exchange for 50,000 AF of Acquired Storage capacity, IRWD will fund up to \$1.5 million for the drilling, construction and equipping of two extraction wells on Stockdale East.

Note: This page is intentionally left blank.

Exhibit "K"

Buena Vista Water Storage District Long Term Water Exchange Program

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



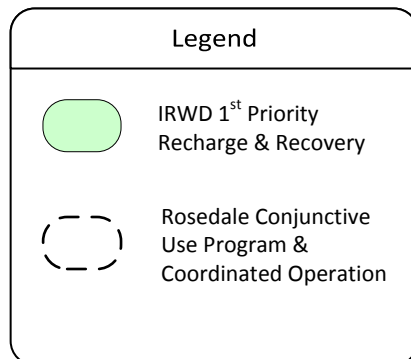
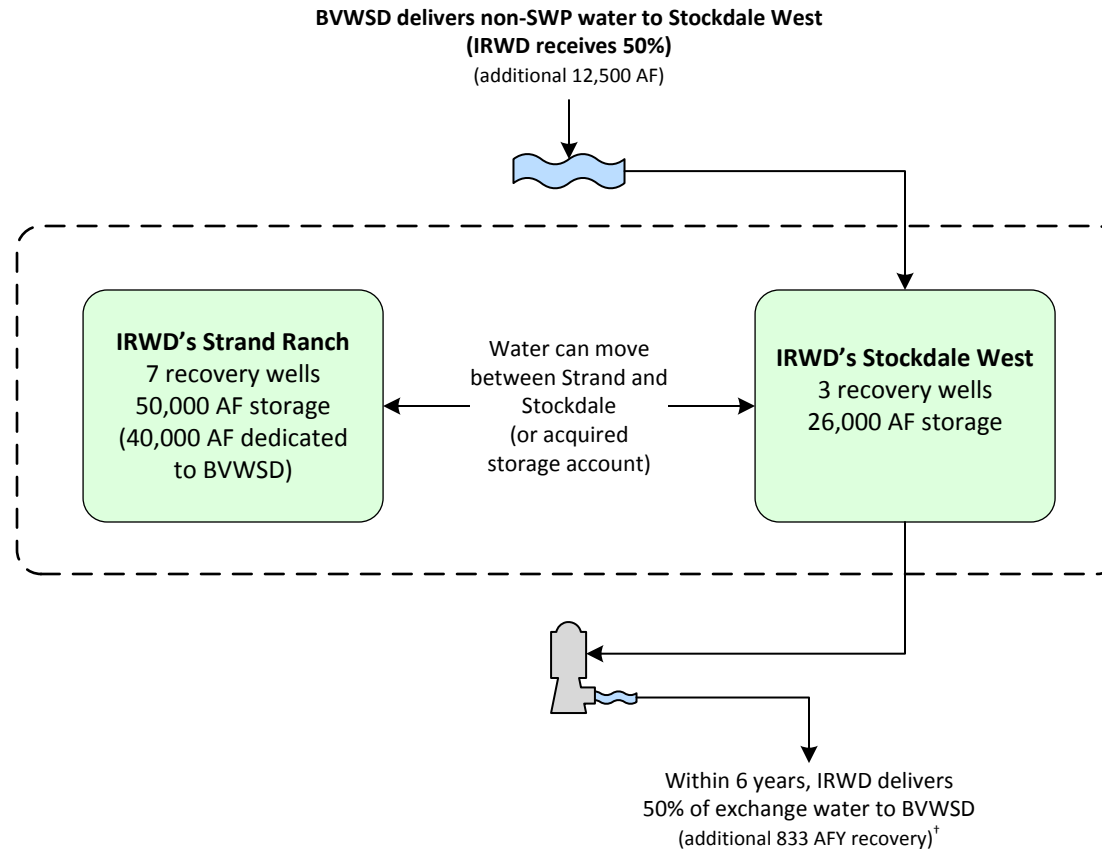
Legend	
	IRWD 1 st Priority Recharge & Recovery
	Rosedale Conjunctive Use Program & Coordinated Operation

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

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

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

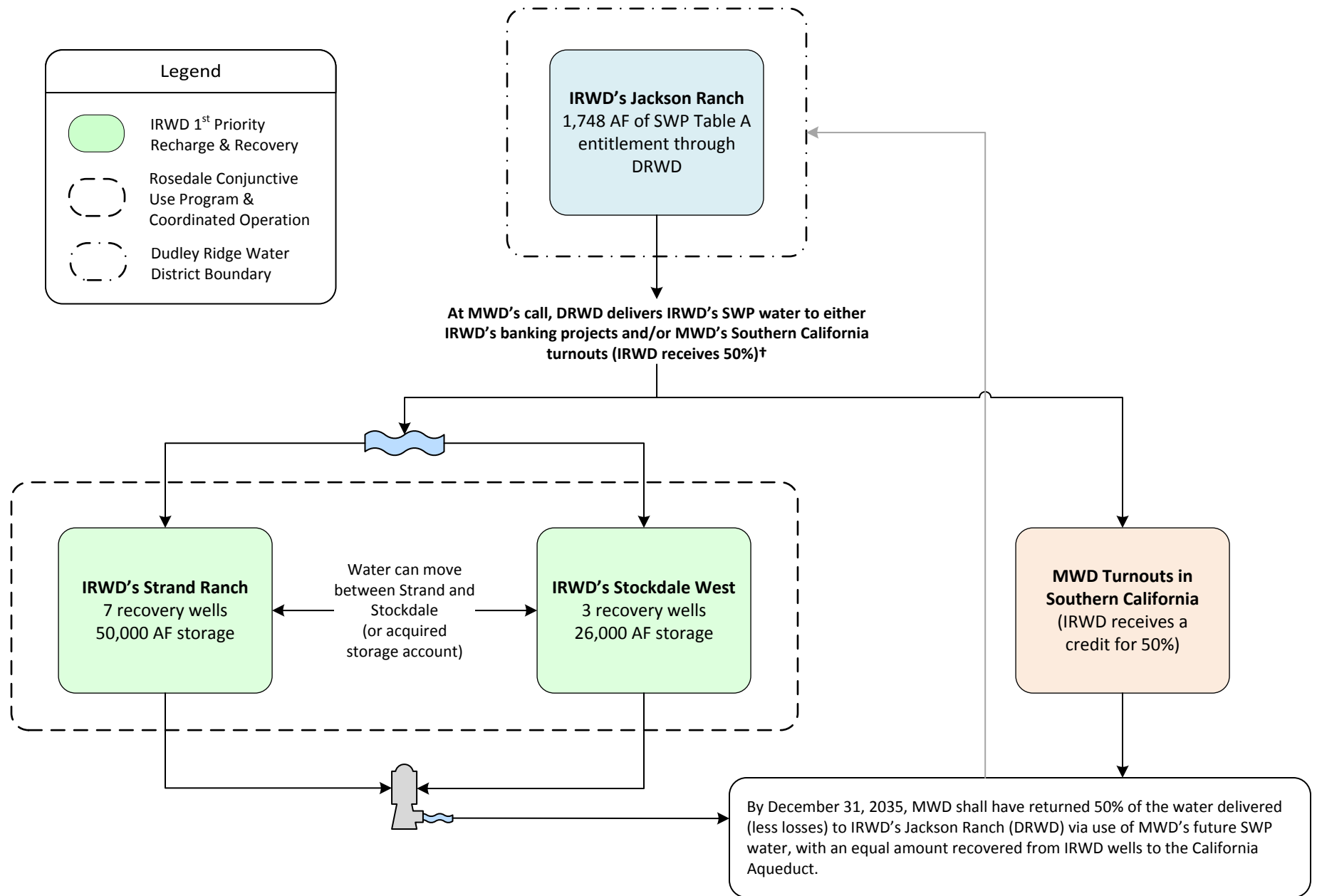
Effective 4/1/2017 through 3/30/2018



[†]IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31st of the 6th year following the associated recharge event. IRWD pays for recovery of water returned to BV. Water to be remitted back to BV may remain in storage at Strand Ranch beyond the 6th year, in exchange for a greater percent being transferred to IRWD as compensation per the table shown to the right:

Year Following Recharge Event	Percent Transferred to IRWD	Percent Returned to BV During or Before Indicated Year
1	50%	50%
2	50%	50%
3	50%	50%
4	50%	50%
5	50%	50%
6	50%	50%
7	75%	25%
8	100%	0%
9	100%	0%

Exhibit "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.

Note: This page is intentionally left blank.

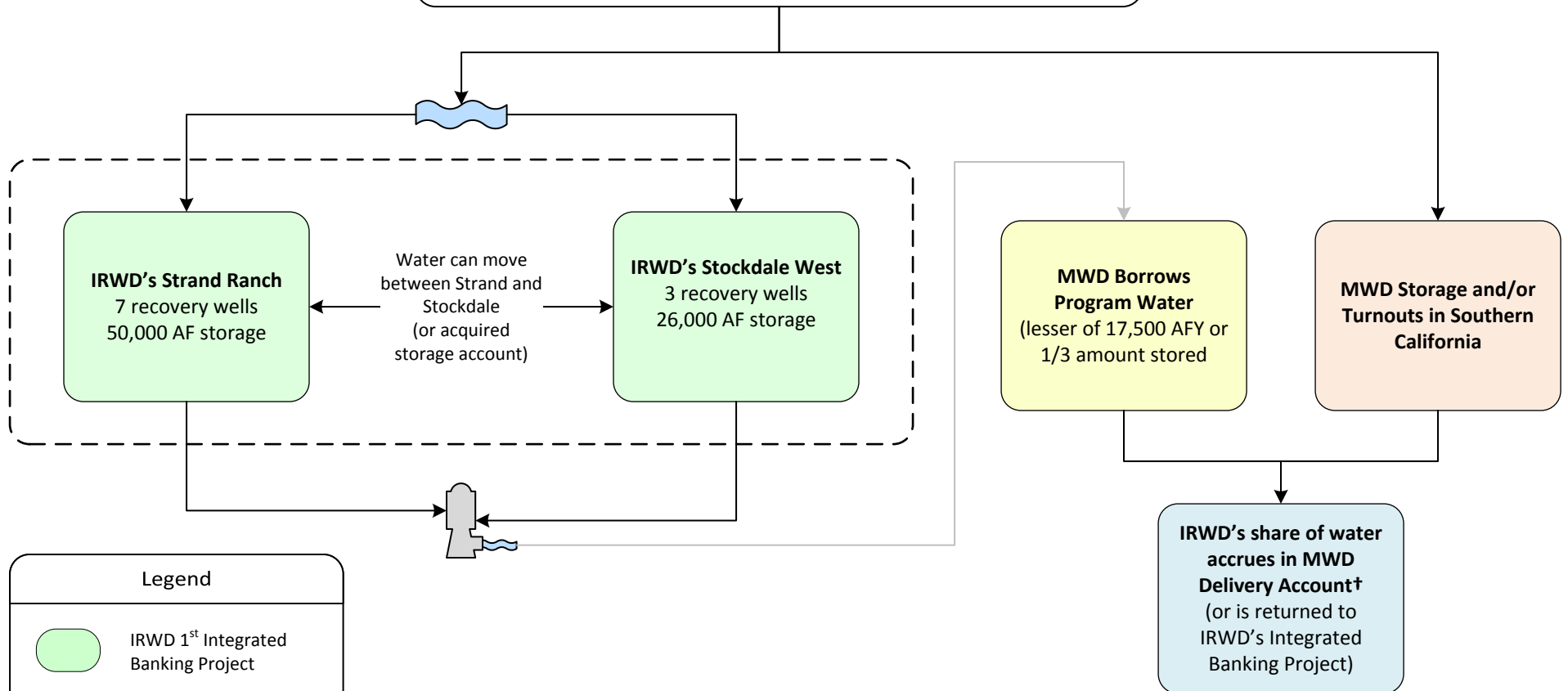
Exhibit "M"

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

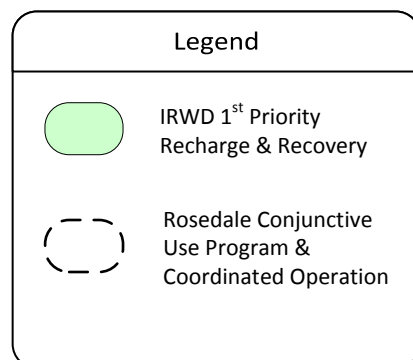
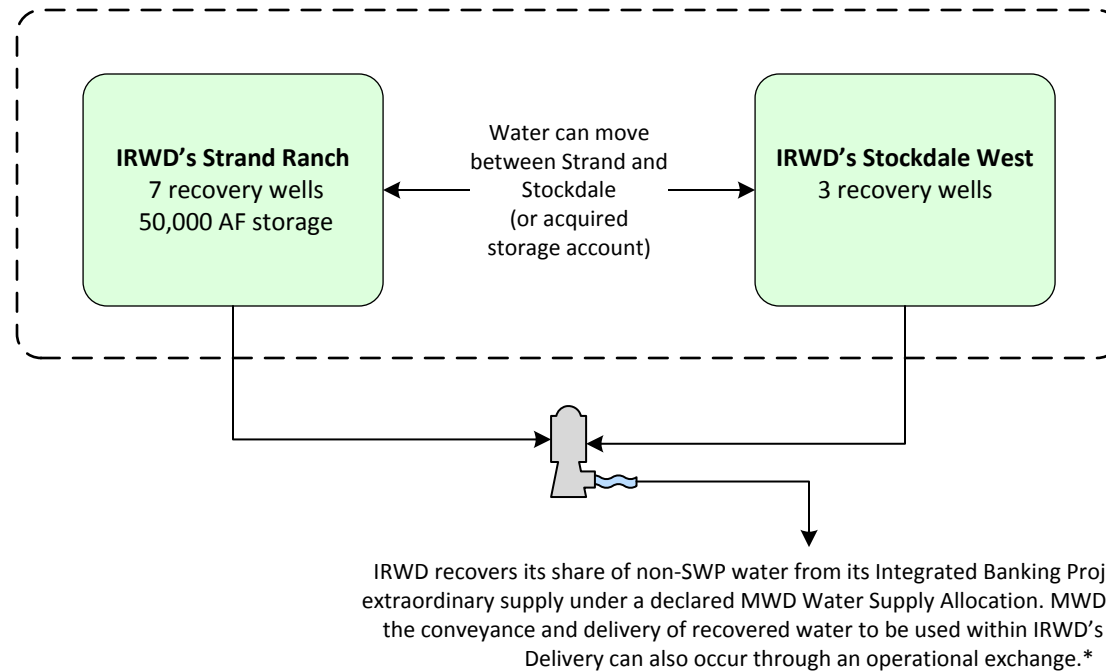
MWD has three options for the use and storage of Program Water:

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



Note: This page is intentionally left blank.

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



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

Note: This page is intentionally left blank.

Exhibit "O"

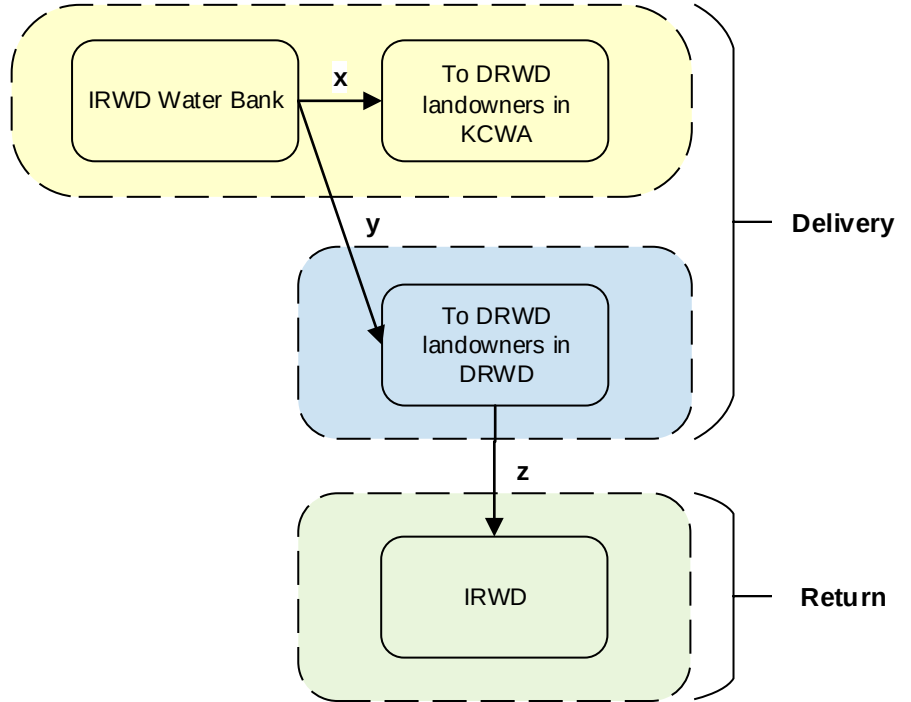
Dudley Ridge Water District Long Term 1-for-1 Water Exchange Program Effective 5/31/2017 through 11/4/2035

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

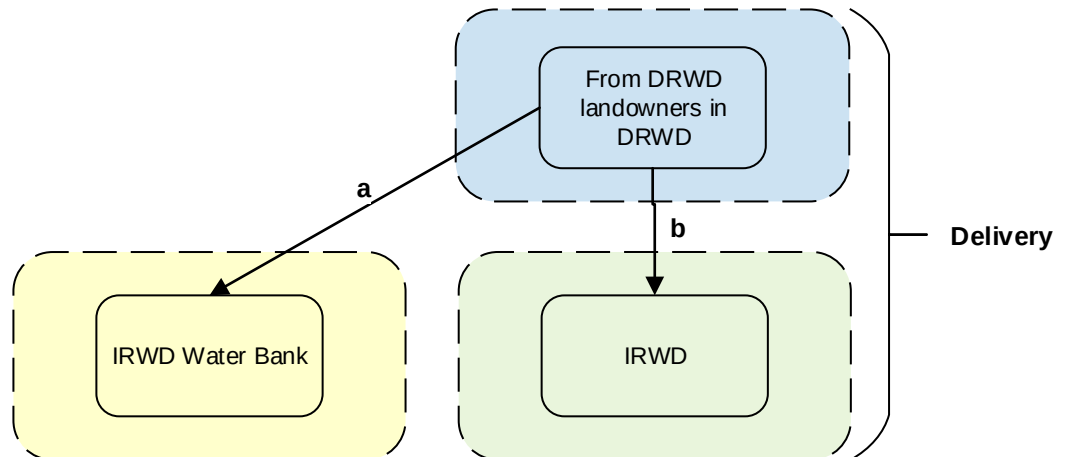
Per Section 4.1.3, z can be delivered to IRWD via in-ground transfer to IRWD, SWP delivery to IRWD banking facilities, or SWP delivery to MWDSC



Scenario B

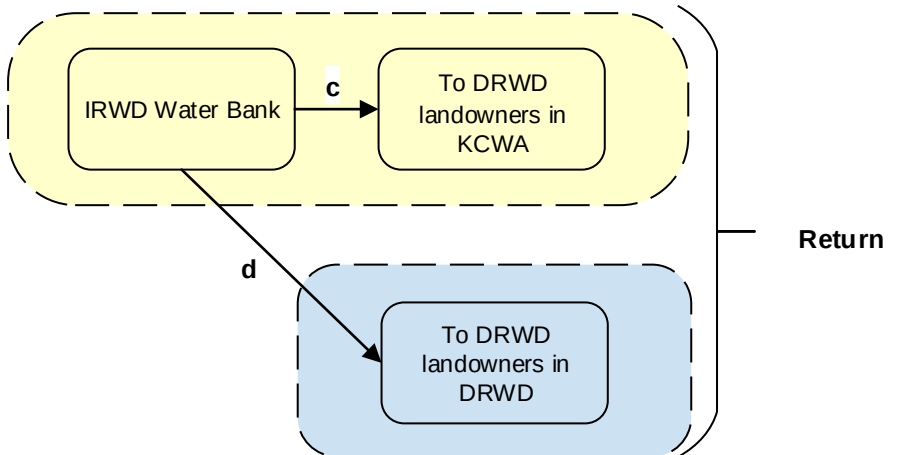
(Per Sections 2, 3, and 4.1.2)

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



Legend

	KCWA Service Area
	DRWD Service Area
	IRWD Service Area



Note: This page is intentionally left blank.

Exhibit "P"

TABLE 6

IRWD Water Banking Program Costs of Water Summary

April 27, 2022

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 (\$/AF) (F)	2022 MWD Tier 1 Untreated Rate + SAC Surcharge ⁵ (\$/AF) (G)	Cost of Water in IRWD Service Area (\$/AF) (H)
						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	\$ 100.00	\$ 799.97	\$ 1,214.31
Buena Vista ¹	2017-2021	Kern River	11,256	\$158.77	\$ 48.36	\$207.13	\$ 190.00	\$ 397.13	\$ 100.00	\$ 799.97	\$ 1,297.10
AVEK	2012-2014	SWP Table A	2,229	\$ 11.70	\$ 48.36	\$ 60.06	\$ 190.00	\$ 250.06	\$ 100.00	\$ 799.97	\$ 1,150.03
AVEK ⁶	2012-2014	SWP Table A	108	\$ 11.70	\$ 48.36	\$ 60.06	\$ 190.00	\$ 250.06	\$ -	\$ 799.97	\$ 1,050.03
Carpinteria	2010-2015	SWP Table A	874	\$ 27.04	\$ 48.36	\$ 75.40	\$ 190.00	\$ 265.40	\$ 100.00	\$ 799.97	\$ 1,165.37
Carpinteria ⁶	2010-2015	SWP Table A	31	\$ 27.04	\$ 48.36	\$ 75.40	\$ 190.00	\$ 265.40	\$ -	\$ 799.97	\$ 1,065.37
Central Coast ⁶	2017-2021	SWP Table A	556	\$ 30.34	\$ 48.36	\$ 78.70	\$ 190.00	\$ 268.70	\$ -	\$ 799.97	\$ 1,068.67
DRWD ⁶	2014-2021	SWP Table A /Article 21	4,452	\$373.81	\$ 48.36	\$422.17	\$ 190.00	\$ 612.17	\$ -	\$ 799.97	\$ 1,412.14

32,338

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

² Variable Costs include Rosedale variable operating costs, Rosedale administration fees, CVC pumping, operating and stand-by fees, and KCWA fees. (Net of partner payments to IRWD for their share of water)

³ Fixed costs include Rosedale fixed operating costs, property taxes, PG&E standby costs, GSP fees, CVC expansion costs and other minor fix costs

⁴ Capital component does not include land costs.

⁵ Assumes IRWD would take delivery as extraordinary supply through Irvine Lake to the Baker Water Treatment Plant.

⁶ No recovery costs for DRWD water delivered in 2014-2016 and water recovered in 2022 as part of MWD borrowing.

Note: This page is intentionally left blank.

April 27, 2022
Prepared and
Submitted by: F. Sanchez / P. Weghorst
Approved by: Paul A. Cook *PAC*

SPECIAL SUPPLY RELIABILITY PROGRAMS COMMITTEE

OVERVIEW OF KERN FAN GROUNDWATER STORAGE PROJECT AND WATER MANAGEMENT TOOLS TO ENHANCE IRWD SUPPLY RELIABILITY

SUMMARY:

IRWD and Rosedale-Rio Bravo Water Storage District formed the Groundwater Banking Joint Powers Authority (GBJPA) to plan, design, construct, and operate the Kern Fan Groundwater Storage Project (Kern Fan Project). At the Committee meeting, staff will provide an overview of the Kern Fan Project along with an update on the various options, water management tools, and associated agreements that would be necessary to enhance IRWD's water supply reliability utilizing this project.

BACKGROUND:

The Water Quality, Supply and Infrastructure Improvement Act of 2014, also known as Proposition 1, provides \$2.7 billion for public benefits associated with water storage projects that will provide specific public and ecosystem benefits. The California Water Commission (CWC) is administering Prop 1 grant funding for the planning, design, and construction of water storage projects through the Water Storage Investment Program (WSIP). In July 2018, the CWC conditionally awarded \$67.5 million in grant funding to the project. The conditional funding was adjusted in January 2021 for inflation and to allocate additional available funds. It was further adjusted for inflation in March 2022 to a new total funding of \$89.1 million.

Overview of Kern Fan Project:

In July 2020, IRWD and Rosedale formed the GBJPA that will plan, design, construct, and operate the Kern Fan Project. The proposed project will develop a regional water bank in the Kern Fan area to capture, recharge and store Article 21 water from the State Water Project (SWP) during wet hydrologic periods. The preliminary Kern Fan Project location map is provided as Exhibit "A".

The stored water would be recovered when needed to provide ecosystem supply, emergency supply, and water supply benefits to the State of California, IRWD, and Rosedale. Project operations would be coordinated with the SWP through an exchange agreement with the California Department of Water Resources (DWR). The diversion and storage of Section 215 water from the Central Valley Project (CVP) Friant Division could also provide a significant wet year water supply for the Kern Fan Project. A portion of this water would be used to provide benefits to Reclamation in exchange for federal funding. A schematic of the Kern Fan Project is provided as Exhibit "B".

IRWD Water Supply Reliability:

IRWD has historically acquired additional water supplies through water banking agreements with other water districts for the exchange of stored water on an unbalanced basis. An unbalanced exchange involves recharging and storing available water on behalf of another water agency and returning up to one-half of the water back to that water agency at a later date. In return for storage, the remaining half of the water accrues to the water banking agency. SWP and Section 215 water available for exchange could be acquired for the Kern Fan Project. The 2021 Water Management Amendment to the SWP Contract provides additional water management tools that could help facilitate either exchanges or transfers needed to enhance IRWD's water supply reliability through the Kern Fan Project. Banking of water through the execution of exchanges or transfers involving SWP water approved by DWR would require the cooperation and agreement of the State Water Contractor, DWR, Kern County Water Agency (KCWA), Dudley Ridge Water District, and Metropolitan Water District (MWD). As a representative for the GBJPA, Rosedale would enter into an agreement with Reclamation for delivery of Section 215 water.

Water procured by IRWD for delivery to its service area could be provided from the proposed Kern Fan Project facilities or IRWD's existing Water Banks. The delivery would be subject to supply and conveyance capacity availability and approval by MWD and KCWA. IRWD's share of Section 215 water that would be captured and stored by the project would be made available for delivery to IRWD's service area through exchanges that ensure the Section 215 water is used in the CVP Place of Use.

At the meeting staff will provide a general project overview and then present a more focused discussion of the project components, options, water management tools, and associated agreements that would enhance IRWD's water supply reliability. At future Committee meetings, staff will present more detailed discussions on the other Kern Fan Project components.

FISCAL IMPACTS:

The CWC has been awarded conditional funding to the Kern Fan Project in the amount of \$89.1 million. IRWD and Rosedale will fund the remaining cost of the Kern Fan Project.

ENVIRONMENTAL COMPLIANCE:

An Environmental Impact Report (EIR) for the Kern Fan Groundwater Storage Project was prepared, certified, and approved in compliance with 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. The Groundwater Banking Joint Powers Authority, as lead agency, filed a Notice of Determination for the Kern Fan Groundwater Storage Project with the County of Kern. Rosedale, as a responsible agency, filed a Notice of Determination 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 Committee provide input on the options, water management tools and necessary agreements that would enhance IRWD's water supply reliability from the development and implementation of the Kern Fan Project. Terms for any of the associated agreements would be presented to the Committee at a later date.

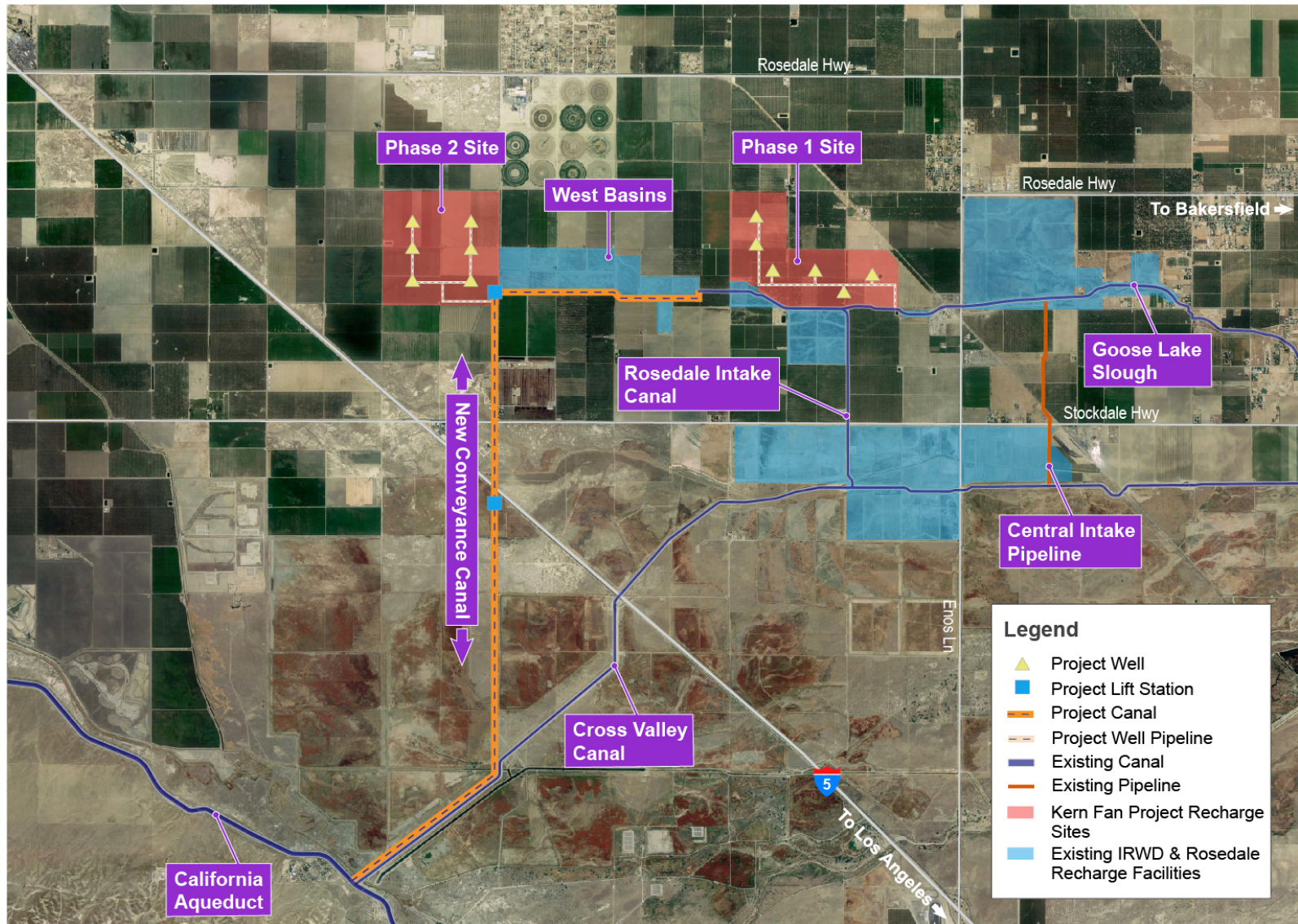
LIST OF EXHIBITS:

Exhibit "A" – Preliminary Kern Fan Project Location Map
Exhibit "B" Kern Fan Project Overview Schematic

Note: This page is intentionally left blank.

Exhibit "A"

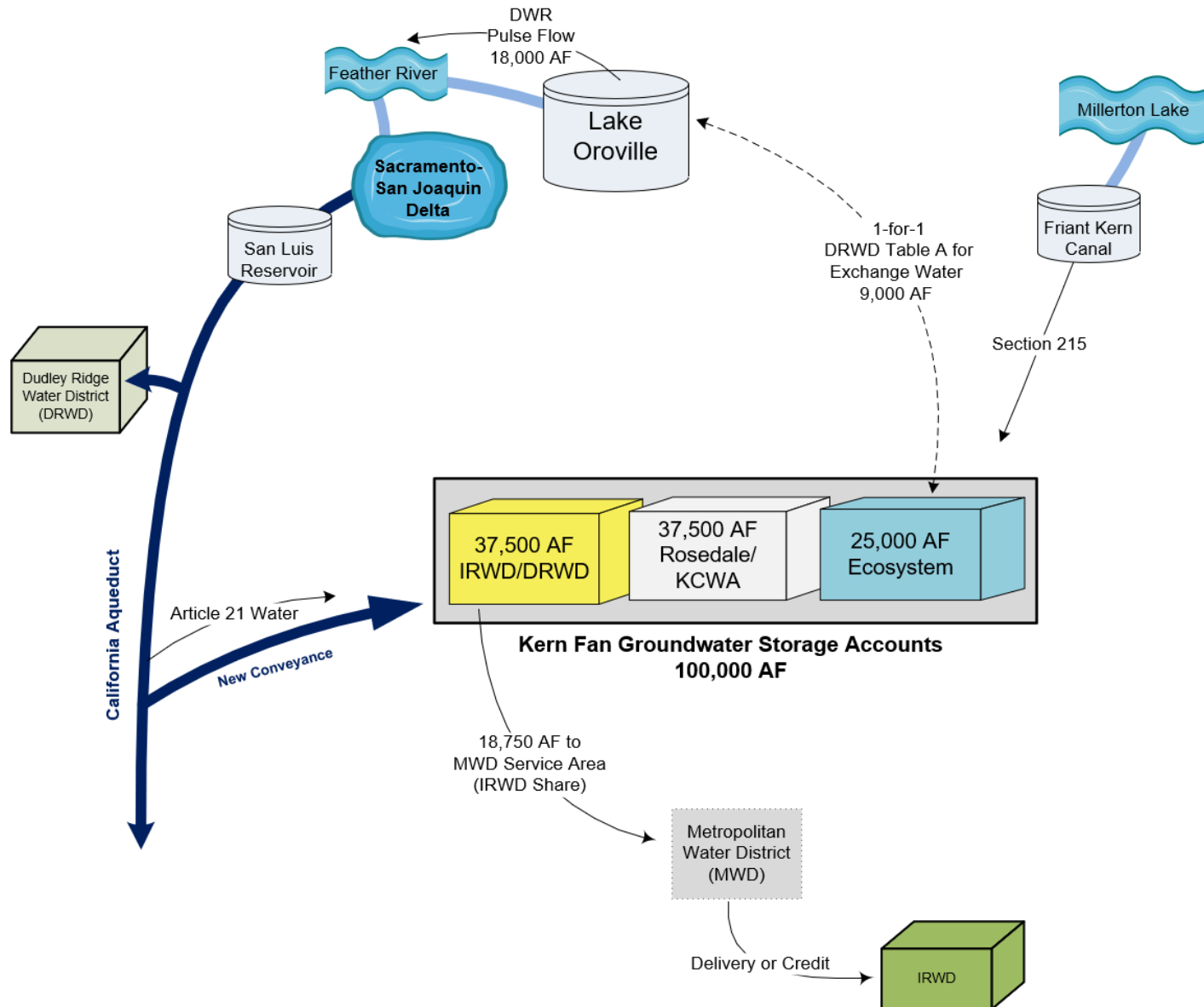
Preliminary Kern Fan Project Location Map



Note: This page is intentionally left blank.

Exhibit “B”

Kern Fan Groundwater Storage Project Overview



Note: This page is intentionally left blank.

April 27, 2022

Prepared by: K. Welch

Submitted by: F. Sanchez / P. Weghorst

Approved by: Paul A. Cook 

SUPPLY RELIABILITY PROGRAMS COMMITTEE

AMENDMENT NO. 1 TO AGREEMENT FOR PLANNING AND ENVIRONMENTAL REVIEW OF DELTA CONVEYANCE PROJECT

SUMMARY:

In February 2021, the District entered into an agreement with Rosedale-Rio Bravo Water Storage District to participate in the planning of the proposed Delta Conveyance Project (DCP) through the Kern County Water Agency (KCWA). The DCP would allow IRWD to receive water supply benefits from the State Water Project and potentially secure water supplies from north of the San Joaquin-Sacramento Delta (the Delta) for delivery to IRWD's Water Banks with fewer restrictions and reduced carriage losses. To continue IRWD's participation over the next two years, Rosedale has requested that IRWD execute Amendment No. 1 to the agreement. Staff recommends the Board authorize the General Manager to execute Amendment No. 1 to the Agreement Between Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District for Preliminary Planning and Design Costs Related to a Potential Delta Conveyance Project, subject to non-substantive changes approved by legal counsel.

BACKGROUND:

As originally proposed in 2009, the California WaterFix was the state's plan to upgrade outdated infrastructure in the Delta. The California Department of Water Resources (DWR) withdrew permits for the WaterFix in May 2019 and initiated environmental review and planning of a smaller DCP. DWR would construct the proposed DCP to add new diversions in the north Delta and a 6,000 cubic feet per second (cfs) tunnel to facilitate water deliveries in the State Water Project (SWP). In 2020, DWR requested that SWP contractors fund the planning and environmental review of the DCP over four years through 2024. Several SWP contractors, including KCWA, chose to enter into a DWR funding agreement for two years and then reevaluate continued participation. As a member unit of KCWA, Rosedale entered into an agreement with KCWA to fund its share of the planning costs.

IRWD Participation in DCP Planning – through Rosedale:

In December 2020, IRWD entered into agreement with Rosedale to participate in the DCP planning for an assigned share associated with 2,000 acre-feet (AF) of base Table A water. Under the agreement, IRWD would pay a share of planning and environmental review costs in the amount of \$198,000, to be paid over four years. IRWD would receive DCP benefits from a portion of KCWA member units that chose not to participate in the project. Through a future agreement, Rosedale would assign IRWD a DCP conveyance capacity in the amount of 3.0 cfs. With an assignment of DCP costs and benefits through Rosedale, IRWD would be entitled to an incremental increase in Table A water, would have the ability to use 3.0 cfs of dedicated DCP tunnel capacity, and have access to unused capacity when available.

DWR has requested SWP contractors that only committed to two years of planning, such as KCWA, to make a commitment for the final two years. KCWA has requested that its participating member units execute an amendment to their respective agreements to commit the funding for the final two years of planning work. On April 11, 2022, Rosedale's Board authorized the additional two-year commitment. Under IRWD and Rosedale's agreement, IRWD committed to four years of planning in the amount of \$198,000 and this has not changed. Rosedale has requested that IRWD and Rosedale execute Amendment No. 1 to the agreement in which the parties acknowledge and agree that Rosedale and KCWA have committed to the additional two years. A copy of Amendment No. 1 to the agreement is provided as Exhibit "A". IRWD's legal counsel has reviewed the draft Amendment No. 1 and included recitals for clarification.

In the future, IRWD and Rosedale would enter into a separate agreement to formally assign DCP benefits to IRWD should KCWA agree to continue with its participation in the DCP beyond the planning and environmental phase.

IRWD Participation in DCP Planning – through Dudley Ridge Water District:

Since 2021, IRWD also has been participating in the DCP planning through its land ownership within Dudley Ridge Water District (DRWD). If DRWD decides to continue its participation in the project through construction, IRWD would receive 2.6 cfs of capacity in the DCP tunnel. DRWD landowners pay for planning and environmental review costs through an assessment of a \$50 per acre-foot (AF) charge on Table A deliveries. IRWD will pay this assessment until it has finished paying its \$166,000 share of DRWD's costs. This share in the costs is associated with IRWD's 1,749 AF of base Table A amounts in DRWD. Currently, the DRWD Board is considering its continued participation in the DCP planning through 2024.

FISCAL IMPACTS:

The planning and environmental review of the DCP is included in the FY 2022-23 Capital Budget. The estimated cost of IRWD's participation in the DCP Planning is \$198,000 to be paid over four years through 2024.

ENVIRONMENTAL COMPLIANCE:

This item is not a project as defined in the California Environmental Quality Act (CEQA), Code of Regulations, Title 14, Chapter 3, Section 15378.

RECOMMENDATION:

That the Board authorize the General Manager to execute Amendment No. 1 to the Agreement Between Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District for Preliminary Planning and Design Costs Related to a Potential Delta Conveyance Project, subject to non-substantive changes approved by legal counsel.

LIST OF EXHIBITS:

Exhibit “A” – Amendment No. 1 to the Agreement Between Rosedale-Rio Bravo Water Storage
District and Irvine Ranch Water District for Preliminary Planning and Design
Costs Related to a Potential Delta Conveyance Project

Note: This page is intentionally left blank.

EXHIBIT "A"

AMENDMENT NO 1

TO

AGREEMENT BETWEEN ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

AND

IRVINE RANCH WATER DISTRICT

FOR PRELIMINARY PLANNING AND DESIGN COSTS

RELATED TO A POTENTIAL DELTA CONVEYANCE PROJECT

This *Amendment No. 1 to Agreement for Preliminary Planning, Environmental Review and Design Costs Related to a Potential Delta Conveyance Project* ("Amendment") is made by and between the ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT ("Rosedale") and IRVINE RANCH WATER DISTRICT ("IRWD"), each referred to as a "Party" and collectively as "Parties."

WHEREAS, on February 25, 2021, the Parties entered into an *Agreement for Preliminary Planning, Environmental Review and Design Costs Related to a Potential Delta Conveyance Project* ("Agreement") under which IRWD agreed to pay a proportionate share of costs up to approximately \$198,000 for 2021 through 2024 charged to Rosedale by Kern County Water Agency ("Agency") pursuant to the *Contract Between Kern County Water Agency and its Member Units for Preliminary Planning and Design Costs Related to a Potential Delta Conveyance Project* ("Agency Contract");

WHEREAS, the Agency, Rosedale and other Member Units participating in the potential Delta conveyance project ("DCP") subsequently limited their funding to cover the Department of Water Resources' ("DWR") costs for the environmental review, planning and design costs of a potential Delta conveyance project ("DCP") to covering years 2021 and 2022, which reduced Rosedale's request for funding from IRWD;

WHEREAS, pursuant to the Agency Contract, the Agency has requested that the Agency's member units (including Rosedale) execute an Amendment No. 1 to the Agency Contract under which the member units signing such Amendment No. 1 shall commit to provide additional funding to cover DWR's costs for the environmental review, planning and design costs of a potential DCP during 2023 and 2024;

WHEREAS, Pursuant to Paragraph 5 of the Agreement, prior to Rosedale's making a commitment to the Agency to provide additional funding for preliminary planning, environmental review and design of the potential DCP for the benefit of IRWD, Rosedale and IRWD shall review the progress of the environmental review, planning and design of a potential DCP and shall collectively determine whether additional funds shall be contributed without obligation of IRWD to contribute any additional funds; and

WHEREAS, the Parties have met and conferred on those items specified in Paragraph 5 of the Agreement, and desire to commit additional funding for the environmental review, planning and design costs of a potential DCP during 2023 and 2024.

NOW, THEREFORE, it is hereby mutually agreed by the Parties as follows:

1. Upon Rosedale's execution of Amendment No. 1 of the Agency Contract, Paragraph 5 of the Agreement shall be amended as follows (strikeouts shown in ~~strikeout~~ and additions underlined):

Rosedale shall provide IRWD with monthly updates on the environmental review, planning and design of the potential Delta conveyance project, including budget and progress updates if available. The Parties have collectively determined to commit additional funding for the environmental review, planning and design costs of a potential Delta conveyance project during 2023 and 2024 for a total IRWD contribution of up to approximately \$198,000 for the period 2021 through 2024. Prior to Rosedale's making a commitment to the Agency to provide any additional funding for preliminary planning, environmental review and design of the potential Delta conveyance project for the benefit of IRWD beyond 2024, Rosedale and IRWD shall review the progress of the environmental review, planning and design of a potential Delta conveyance project and shall collectively determine whether additional funds shall be contributed without obligation of IRWD to contribute any additional funds. Any additional funds to be provided by IRWD shall be subject to an executed amendment to this Agreement.

2. All other provisions of the *Agreement for Preliminary Planning, Environmental Review and Design Costs Related to a Potential Delta Conveyance Project* shall remain in full force and effect.

IN WITNESS WHEREOF, each Party has executed this Agreement on the date set forth below its signature.

Irvine Ranch Water District

Rosedale-Rio Bravo Water Storage District

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____

DRAFT

Note: This page is intentionally left blank.

April 27, 2022

Prepared by: K. Welch

Submitted by: F. Sanchez / P. Weghorst

Approved by: Paul A. Cook 

SUPPLY RELIABILITY PROGRAMS COMMITTEE

ONE-FOR-ONE EXCHANGE WITH DUDLEY RIDGE WATER DISTRICT

SUMMARY:

The IRWD long-term unbalanced exchange program with Buena Vista Water Storage District allows Buena Vista to store its high flow Kern River supplies on a two-for-one basis in IRWD's Strand Ranch Integrated Banking Project. These Kern River supplies are referred to as "non-State Water Project (SWP)" supplies that are not exportable to IRWD's service area. In 2017, IRWD entered into a long-term one-for-one exchange agreement with Dudley Ridge Water District. This agreement allows IRWD to exchange its stored non-SWP supplies for an equal amount of Dudley Ridge's exportable SWP Table A water.

As a result of the continued dry conditions statewide, Dudley Ridge landowners are evaluating their water needs for the year and are interested in using IRWD's non-SWP supplies in Kern County consistent with the exchange agreement. Staff recommends the Board approve delivery of up to 5,000 acre-feet (AF) of IRWD's stored non-SWP water for use in Kern County by Dudley Ridge landowners. In exchange, Dudley Ridge would return an equal amount of exportable Table A water to IRWD within five years. This water would then be banked for later use in IRWD's service area.

BACKGROUND:

IRWD's long-term unbalanced exchange program with Buena Vista provides IRWD access to high-flow Kern River water supplies for storage in IRWD's Water Bank. These Kern River supplies are referred to as non-SWP supplies that are not exportable to IRWD's service area. IRWD currently has 8,089 AF of non-SWP supplies in storage at the Water Bank.

In 2017, IRWD entered into a mutually beneficial long-term one-for-one exchange program with Dudley Ridge that allows IRWD to exchange its non-SWP water for an equal amount of Dudley Ridge's exportable SWP Table A water. This agreement, provided as Exhibit "A", allows IRWD to make up to 40,000 AF of non-SWP water available for delivery to Dudley Ridge landowners. This exchange program allows IRWD, in drought years, to provide non-SWP water supplies to Dudley Ridge landowners with agricultural operations in Kern County in exchange for SWP Table A water delivered back to IRWD within five years. This Table A water can then be stored in IRWD's Water Bank for later use in IRWD's service area.

Proposed 2022 One-for-One Exchange:

With the current dry conditions throughout the state, the California Department of Water Resource's final SWP allocation for 2022 is 5%. Dudley Ridge landowners are currently evaluating their water needs for the year and are interested in using IRWD's non-SWP supplies in Kern County consistent with the one-for-one exchange agreement. Staff recommends that the Board approve delivery of up to 5,000 AF of IRWD's stored non-SWP water for use by Dudley Ridge landowners in Kern County.

These deliveries would be made over the summer months. In exchange, Dudley Ridge would return an equal amount of Table A water to IRWD within five years when the SWP allocation is 65% or greater. IRWD would benefit from the exchange by being able to use the SWP water in IRWD's service area consistent with IRWD's Coordinated Operating and Exchange Agreement with Metropolitan Water District and MWDOC.

FISCAL IMPACTS:

All costs associated with the one-one-exchange program are allocated on an equitable basis between IRWD and Dudley Ridge as set forth in the exchange program agreement. IRWD is responsible for all costs for the acquisition, storage, recovery, and conveyance of non-SWP water made available to Dudley Ridge. DRWD is responsible for all costs for the acquisition, conveyance, and recharge of SWP water returned to IRWD. Per the terms of the agreement, costs are reconciled and equalized once the water is returned.

ENVIRONMENTAL COMPLIANCE:

Both the Strand Ranch and Stockdale Integrated Banking Projects are subject to the California Environmental Quality Act (CEQA). In compliance with CEQA, the California Public Resources Code Section 21000 et. seq., and per the California CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3, Rosedale-Rio Bravo Water Storage as a lead agency, filed Notices of Determinations with the County of Kern and with the California State Clearinghouse for the Strand Ranch Integrated Banking Project Final Environmental Impact Report (EIR) and the Stockdale Integrated Banking Project Final EIR. IRWD, as a Responsible Agency, filed Notices of Determinations with the Counties of Orange and Kern and with the California State Clearinghouse for both the Strand Ranch and Stockdale Integrated Banking Projects Final EIRs.

RECOMMENDATION:

That the Board approve delivery of up to 5,000 acre-feet of IRWD's stored non-SWP water for use by Dudley Ridge Water District landowners in Kern County in exchange for exportable State Water Project Table A water from Dudley Ridge Water District consistent with the terms of the 2017 Agreement Between Dudley Ridge Water District and Irvine Ranch Water District for Long-Term Exchange Program.

LIST OF EXHIBITS:

Exhibit "A" – 2017 Agreement Between Dudley Ridge Water District and IRWD for Long-Term Exchange Program

Exhibit "A"

2017 AGREEMENT BETWEEN DUDLEY RIDGE WATER DISTRICT AND IRVINE RANCH WATER DISTRICT FOR LONG-TERM EXCHANGE PROGRAM

THIS AGREEMENT (the "Agreement"), dated this 31 day of May, 2017, is made and entered into by and between DUDLEY RIDGE WATER DISTRICT ("DRWD") and IRVINE RANCH WATER DISTRICT ("IRWD"), each of the foregoing a California Water District formed under and existing pursuant to Section 34000 *et seq.* of the California Water Code (together, the "Parties" and each a "Party").

RECITALS:

WHEREAS, IRWD has developed and continues to develop the Integrated Banking Project (defined below) in Kern County with storage, recharge and recovery capacities which it operates with Rosedale-Rio Bravo Water Storage District ("Rosedale"); and

WHEREAS, DRWD as an agricultural district holds a long-term Water Supply Contract with the California Department of Water Resources ("DWR") dated December 13, 1963, as amended, pursuant to which it is entitled to receive certain quantities of water from the State Water Project ("SWP"), including without limitation water derived from DRWD's Table A Amount ("Table A Water"); and

WHEREAS, IRWD has entered into the agreement entitled "Coordinated Operating, Water Storage, Exchange and Delivery Agreement" dated as of April 21, 2011 (the "COA"), by and among the Metropolitan Water District of Southern California ("Metropolitan"), the Municipal Water District of Orange County and IRWD; and

WHEREAS, each Party seeks to increase its flexibility and improve water management and reliability by implementing a long term exchange program beginning in 2017, in which IRWD, as a landowner in DRWD, will, at its discretion, recover up to 40,000 acre feet of non-SWP water from the Integrated Banking Project for delivery to DRWD, for use within DRWD's service area or within Kern County, in exchange for which IRWD will receive an equal amount of DRWD's Table A Water in accordance with the COA as provided herein; and

WHEREAS, DRWD will implement such program as a part of, and consistent with, the 2015 Update to its 2012 Agricultural Water Management Plan ("2015 AWMP"); and

WHEREAS, IRWD and DRWD desire to enter into this Agreement for the purpose of setting forth the terms and conditions of the Exchange Program (defined below); and

WHEREAS, Kern County Water Agency ("KCWA") supports a portion of IRWD's non-SWP water originating from Kern River supplies to be used by DRWD landowners within DRWD's service area or within Kern County.

WHEREAS, the Parties intend that this Agreement shall be consistent with that certain Water Banking and Exchange Program Agreement between Rosedale and IRWD dated as of January 13, 2009, as amended (the "Banking Agreement"), and that certain Water Banking, Recovery and Exchange Program Agreement [Stockdale West and Stockdale East Properties] between Rosedale and IRWD dated as of February 4, 2016, understanding that DRWD is not a party to nor bound by either of such agreements.

NOW, THEREFORE, in consideration of the promises and covenants herein contained, DRWD and IRWD agree as follows:

AGREEMENT:

Section 1. Definitions of Certain Terms.

1.1 COA means the agreement entitled "Coordinated Operating, Water Storage, Exchange and Delivery Agreement", dated as of April 21, 2011, by and among Metropolitan, the Municipal Water District of Orange County and IRWD.

1.2 Exchange Program means the program generally described in Section 2 and implemented under this Agreement.

1.3 Exchange Water means the amount of up to 40,000 acre feet of non-SWP water that IRWD determines, at its discretion, is available to recover from the Integrated Banking Project for delivery to DRWD under the Exchange Program while this Agreement is in effect.

1.4 Integrated Banking Project means, consistent with the COA, the project described in the Banking Agreement and such other banking assets or components or interests as IRWD may determine to operate in conjunction with the recharge, storage and recovery facilities on the property known as "Strand Ranch" and other property.

1.5 DRWD POD means the Integrated Banking Project turn-ins on the Cross Valley Canal (the "CVC"), to which IRWD delivers Exchange Water to DRWD or for its account pursuant to Section 3.

1.6 IRWD POD means the Integrated Banking Project turn-outs in Reach 2 of the CVC to which DRWD delivers Return Water to IRWD or for its account pursuant to the option for physical delivery of Return Water to the Integrated Banking Project described in Section 4.1.

1.7 Return Water means Table A Water or other SWP supplies available to or controlled by DRWD that will be delivered to IRWD in exchange for Exchange Water as provided herein.

1.8 Table A Water means water derived from DRWD's Table A Amount under DRWD's long-term Water Supply Contract with DWR.

Section 2. Exchange Program. IRWD shall make up to 40,000 AF of Exchange Water available at IRWD's discretion for delivery to DRWD over the term of this Agreement when and if DRWD requests Exchange Water and such request is approved by IRWD, in exchange for an equal amount of Return Water, to be delivered by DRWD to IRWD pursuant to Section 4 of this Agreement. IRWD may use for this purpose any water supplies that IRWD banks under a program that may be recovered and delivered to or as directed by DRWD in a manner acceptable to DRWD for its use either in or out of Kern County.

Section 3. Conveyance of Exchange Water.

3.1 IRWD will utilize its recovery capacity to recover and deliver the Exchange Water to the DRWD POD.

3.2 DRWD will take possession of the Exchange Water at the DRWD POD, when it is physically able to take delivery of Exchange Water, and will be responsible for conveying the Exchange Water for use by DRWD landowners.

Section 4. Return Water.

4.1 General. The timing and the location for the delivery of Return Water shall be as provided in this Section 4.1.

4.1.1 Within five (5) years of receiving a delivery of Exchange Water (the "Return Period"), and when the June 1 SWP allocation is 65% or greater, at a time of the year selected by DRWD, DRWD shall deliver an equivalent amount of Return Water, as provided herein, to IRWD. If the Return Period ends without a year with a June 1 SWP allocation of 65% or greater, then the Return Period will be extended one year at a time until a year occurs with the June 1 SWP allocation of 65% or greater which will trigger the delivery of the Return Water to IRWD. No more than five (5) one-year extensions would be provided. In the event five (5) extensions occur, DRWD's delivery of the Return Water shall be completed prior to the end of the fifth extension year. DRWD may also deliver Return Water to IRWD in any year when the June 1 SWP allocation is less than 65%.

4.1.2 With IRWD's approval, at the request of DRWD, DRWD may also pre-deliver Return Water prior to receiving a delivery of Exchange Water, up to an amount equal to, but not greater than, the amount of non-SWP water then stored by IRWD in the Integrated Banking Project. Within five (5) years of receiving a pre-delivery of Return Water, at a time of year selected by IRWD, and when DRWD is physically able to take delivery of Exchange Water and has demand therefor, IRWD shall, unless otherwise mutually agreed upon by IRWD and DRWD, deliver an equivalent amount of Exchange Water, as provided in Section 3. Exchange Water delivered as a result of a pre-delivery of Return Water shall be at an annual rate of twenty (20) percent of the pre-delivered amount until the return obligation has been fulfilled. At DRWD's request, IRWD may at IRWD's sole discretion provide Exchange Water at an increased rate per year. If by the end of the fifth year of a pre-delivery of Return Water, DRWD has not had the physical ability and demand to take delivery of all Exchange Water, then not more than one additional year would be allowed for Exchange Water deliveries.

4.1.3 Delivery of Return Water shall be made by either (i) if preferred by DRWD, an in-ground transfer of DRWD Table A Water from DRWD's Kern Water Bank account to the Integrated Banking Project, or otherwise (ii) as directed by Metropolitan, (A) delivery of Return Water from the California Aqueduct to the IRWD POD or (B) delivery to Metropolitan for subsequent delivery to Southern California. DRWD shall provide thirty (30) days written notice to IRWD before it delivers Return Water and will confer with IRWD as to the date(s) and location(s) of delivery.

4.2 Return Water To Constitute Program Water. The Parties acknowledge and agree that Return Water shall be deemed by IRWD to be Program Water, as defined in the COA, including Return Water delivered by in-ground transfer as provided in clause (i) of Section 4.1 and Return Water delivered as directed by Metropolitan as provided in clause (ii) of Section 4.1. However, all obligations to comply with the COA with respect to Return Water shall be borne by IRWD.

4.2.1 In accordance with the COA, Program Water delivered to the Metropolitan service area shall be under the control of Metropolitan, and any transfer, exchange or other transaction for water to be moved to Metropolitan's service area or to be made Program Water requires Metropolitan's prior consent; Metropolitan's consent to the Exchange Program shall be obtained as provided in Section 7 below.

4.2.2 Any provisions of Sections 10.2 and 10.3 to the contrary notwithstanding, control, carriage, handling, use, disposal, or distribution of water that has been delivered to Metropolitan for subsequent delivery to Southern California turnouts shall be governed as provided in the COA and DRWD shall have no responsibility therefor.

Section 5. Delivery Schedule.

5.1 General. As and when requested by DRWD and approved by IRWD, and pursuant to a schedule established pursuant to Section 5.2, IRWD may deliver Exchange Water and DRWD may pre-deliver Return Water within the first fifteen (15) years of the execution of this Agreement. DRWD shall provide Return Water on a first-in and first-out basis as provided in Section 4 and any pre-delivered Return Water shall be credited to DRWD as directed by DRWD for such purpose. All Return Water shall be delivered to IRWD by the end of the term of this Agreement. All Exchange Water to be provided upon the pre-delivery of Return Water shall be delivered as provided in Section 3 by the end of the term of this Agreement.

5.2 Exchange Water. At DRWD's request, IRWD will provide a preliminary accounting of the amount of Exchange Water that IRWD has determined to be available. In any calendar year when DRWD requests and IRWD approves an Exchange Water delivery, DRWD shall supply a preliminary delivery schedule with dates and amounts to IRWD by May 1. IRWD will confirm its determination of the quantity of Exchange Water available, the Parties will meet and confer as necessary and shall finalize the delivery schedule by June 1 of such calendar year. Exchange Water delivery shall be scheduled in coordination with the KCWA.

5.3 Return Water. The delivery of Return Water shall be scheduled in accordance with the applicable agreements governing Table A Water and the COA, and also in coordination with KCWA when the Return Water is returned to the Integrated Banking Project.

Section 6. Losses. Losses will be accounted for on an equitable basis. Exchange Water will be delivered to DRWD's POD net of losses determined in accordance with the applicable "Memorandum of Understanding" between Rosedale and adjoining entities which amount to 15 percent for water that was diverted to the Integrated Banking Project by IRWD. DRWD may incur other losses up to 2 % through the CVC conveyance as assigned by KCWA or any other losses that may be incurred with delivery to DRWD's service area. To ensure a 1-for-1 exchange, all Return Water (including water pre-delivered in accordance with this Agreement) will be delivered to IRWD considering applicable losses, such that the quantity of Return Water delivered by in-ground transfer or delivered to the IRWD POD or to the point where Metropolitan takes control of the water under the COA if delivered to Southern California, as determined pursuant to Section 4.1, is equal to the amount necessary to provide for the applicable losses associated with the method of return. For example, if the Return Water is delivered by in-ground transfer or delivered to Southern California, then there would be no losses to provide for. If the Return Water is delivered to the IRWD POD by DRWD, then 10% losses associated with the Memorandum of Understanding will need to be provided for in the Return Water deliveries. Exhibit "A" provides the adjustment factors to be used in providing for losses for each method of delivering Return Water. Exhibit "A" also includes examples of adjusting for losses associated with each method of making Return Water deliveries to ensure a 1-for-1 exchange. IRWD may incur other losses up to 2 % through the CVC conveyance as assigned by KCWA or any other losses that may be incurred with delivery to the IRWD POD.

Section 7. Coordination of Approvals and Agreements.

7.1 Coordination and Costs. The Exchange Program will require approvals from DWR, KCWA, and Metropolitan. IRWD and DRWD shall jointly coordinate using their respective staff resources in the development of all agreements necessary to deliver Exchange Water to DRWD and to deliver Return Water to IRWD. IRWD and DRWD shall each be responsible for their own costs associated with such coordination. IRWD and DRWD shall each execute reasonable indemnification agreements, consistent with their respective responsibilities as set forth in Section 10, to the extent required in connection with such approvals; provided, that neither Party shall be required to execute any such agreement that is unacceptable to its board of directors.

7.2 Contingent Effectiveness. The effectiveness of this Agreement shall be contingent upon consent to the herein-described Exchange Program by Metropolitan, as indicated by its signature below, and approval of the herein-described Exchange Program by DWR as required for SWP delivery between SWP contractors, and approval by KCWA to the extent required by such DWR authorizing agreement(s). If within one (1) year of the execution of this Agreement by the Parties (the "Contingent Effectiveness Period"), any of the approvals described in the preceding sentence are not obtained, this Agreement shall cease to be effective; provided, the Parties may mutually agree to and make any modifications of this Agreement that they determine are necessary to gain such consent or approval.

Section 8. Costs.

8.1 Per Acre Foot Costs. All per acre foot costs associated with the Exchange Program will be paid as set forth in this Section. An illustrative table that assumes that Return Water is delivered to the IRWD POD using current approximate costs is set forth in Exhibit "B" attached and incorporated herein. As indicated in Exhibit "B", the use of assumed non-SWP water costs and SWP allocation percentage reflect the Parties' overall intent to approximately equalize to each Party the per acre foot cost, and if the assumptions materially change, the Parties agree to make adjustments to the cost responsibilities in Sections 8.1.1 and 8.1.2 to approximately equalize the allocation of costs. The costs listed in Exhibit "B" are by way of example and not limitation, and if a new per acre foot cost attributed to the Exchange Program is incurred that was not anticipated in the costs listed in Exhibit "B", each of the Parties shall be responsible for one-half of the new cost unless the Parties agree otherwise.

8.1.1 Exchange Water Costs. Notwithstanding any other provision of this Agreement, IRWD shall be responsible for all per acre foot costs for acquisition and storage of Exchange Water prior to its delivery to the DRWD POD. IRWD shall be responsible for all costs of recovery of the Exchange Water, including recovery operation and maintenance, Rosedale administrative charges for recovery and CVC conveyance to the DRWD POD. Each of the Parties shall be responsible for one-half of all KCWA fees, including transaction set-up fees, per acre foot transaction request fees and third-party out-of-county fees.

8.1.2 Return Water Costs. Notwithstanding any other provision of this Agreement, DRWD shall be responsible for all per acre foot costs for Return Water. DRWD shall be responsible for all costs of delivery of the Return Water to the IRWD POD, including CVC pumping to the IRWD POD, CVC conveyance to the IRWD POD, and Rosedale administrative charges for recharge in the Integrated Banking Project. For water delivered to the IRWD POD via the CVC or to Southern California, the water delivery costs charged by the DWR (variable OMP&R and off-Aqueduct charges) are to be paid by Metropolitan under the COA. The costs of providing for applicable losses upon the delivery of Return Water to the IRWD POD can be allocated to equalize the cost per acre foot paid by the Parties as shown in the example provided as Exhibit "B".

8.2 Out of Pocket Costs Other Than Coordination Costs Or Per Acre Foot Costs. Without limiting the generality of Section 10.1 of this Agreement in any way, each Party shall bear its own expenses and costs incurred in connection with activities undertaken by such Party relating to the Exchange Program, except for costs of coordination otherwise provided for in Section 7.1 or per acre foot costs described and otherwise provided for in Section 8.1. A Party's expenses to be borne by such Party under this Section include without limitation (i) actual out-of-pocket expenses incurred by such Party (including costs of its staff), (ii) the actual amount of legal fees, consulting fees and similar third-party charges incurred by such Party in connection with the Exchange Program, including without limitation the costs incurred by such Party in connection with preparing and reviewing any environmental documentation, (iii) all costs of litigation (including without limitation attorneys' fees) actually incurred by such Party in defending any action brought by a third party as the result of or challenging such Party's actions in connection with the Exchange Program, and (iv) damages actually payable by such Party relating to any activities such Party undertakes in connection with the Exchange Program, except

to the extent such damages were the direct result of the willful misconduct of the other Party that would otherwise be indemnified under Section 10 unless otherwise mutually agreed by the Parties.

8.3 Payments. The Parties agree to promptly process statements, invoices, payments, and reimbursements as needed to effectuate this Section 8 and Section 7.1.

Section 9. Environmental Compliance. On May 27, 2008 Rosedale certified an environmental impact report (SCH 2007041080) for the Integrated Banking Project (“Strand Ranch EIR”) and subsequently on said date IRWD approved the Strand Ranch EIR as a responsible agency. On January 14, 2010 IRWD certified a Negative Declaration (SCH 2009111097) for the IRWD / Jackson Ranch Water Allocation Project (“Jackson ND”). On December 8, 2015 Rosedale certified an environmental impact report (SCH 2010091076) for the Stockdale Integrated Banking Project (“Stockdale EIR”) and subsequently on December 14, 2015 IRWD approved the Stockdale EIR as a responsible agency. The Strand Ranch and Stockdale EIRs evaluated, among other things, the banking project facilities and the delivery of water from the facilities to IRWD for use in the IRWD service area.

DRWD has adopted a Negative Declaration (SCH 201621110) for DRWD’s 2015 AWMP that addresses long-term banking and exchange programs, including the (a) IRWD Strand Ranch and Stockdale Integrated Banking Projects, (b) transfers with other SWP contractors or their member units, and (3) transfers with other SWP contractors or their member units with established water banking or exchange programs. Accordingly DRWD has determined that the Exchange Program has been adequately addressed by California Environmental Quality Act (“CEQA”) action(s). Additionally, not as a requirement, but as an accommodation to approval agencies, DRWD has adopted a Notice of Exemption prior to DRWD taking action on this Agreement.

Section 10. Indemnification.

10.1. In the event of an administrative challenge and/or litigation related to the Exchange Program, this Agreement or either of the Parties’ environmental compliance in connection therewith (a “Challenge”), the Parties will promptly meet and confer to perform a risk assessment of the Challenge and cooperate in good faith to determine how to proceed in light of the Challenge. In the event of a Challenge, either Party may at any time elect to terminate the Agreement by 20 days’ written notice to the other Party; provided, that upon any such termination, this Agreement shall remain in effect solely with respect to any Return Water that must be provided as of the date of the termination notice. If neither Party elects to terminate the Agreement and the Challenge is not withdrawn, the Parties shall jointly defend the Challenge with counsel mutually acceptable to the Parties. All out of pocket costs of the joint defense and any damages, awards or losses resulting therefrom shall be split equally by the Parties. Any costs associated with a Challenge incurred by counsel or other third parties engaged by only one of the Parties shall be borne solely by that Party.

10.2 IRWD, its officers, agents, and employees shall not be liable for the control, carriage, handling, use, disposal, or distribution of Exchange Water downstream of the DRWD POD, or for the control, carriage, handling, use, disposal, or distribution of Return Water upstream of the IRWD POD, nor for any claim of damage of any nature whatsoever, including

but not limited to property damage, personal injury or death, arising out of or connected with the control, carriage, handling, use, disposal or distribution of such water, unless such damages or claims are a result of negligent, intentional or reckless misconduct on the part of IRWD.

10.3 DRWD, its officers, agents, and employees shall not be liable for the control, carriage, handling, use, disposal, or distribution of Return Water downstream of the IRWD POD or downstream of the point of delivery of Return Water to Metropolitan for delivery to Southern California or for the control, carriage, handling, use, disposal, or distribution of Exchange Water upstream of the DRWD POD, nor for any claim of damage of any nature whatsoever, including, but not limited to, property damage, personal injury or death, arising out of or connected with the control, carriage, handling, use, disposal, or distribution of such water, unless such damages or claims are a result of negligent, intentional or reckless misconduct on the part of DRWD.

10.4 In-ground transfers which are accounting transfers not involving a physical delivery or POD are not deemed to be subject to the provisions of the preceding two paragraphs.

10.5 Neither IRWD nor DRWD shall be liable to the other for any claims related to the impairment of the quality of water as a result of storage in any Party's banking facilities or the aquifer from any cause.

10.6 Except as otherwise provided in Section 10.1, each Party shall at all times indemnify, defend and save the other Party free and harmless from, and pay in full, any and all causes of action, claims, liabilities, obligations, demands, losses, judgments, damages or expenses, including reasonable attorney fees and costs ("claims") in any manner arising out of or connected with the indemnifying Party's activities in its performance under the Agreement or its diversion, control, carriage, handling, use, disposal or distribution of water into and out of storage, and any claims relating to any third party claiming a prior right, or interference with their right, to water delivered from one Party to the other, and any claims made by landowners in the respective Party's service area as a result of activities of the indemnifying party or its diversion, control, carriage, handling, use, disposal or distribution of water into and out of storage, excepting any loss, damage or expense and claims for loss, damage or expense resulting in any manner from the negligent act or acts of the other Party, or its Board of Directors, officers, representatives, consultants, contractors, agents or employees.

10.7 In the event a Party entitled to indemnification is made a party to any action, lawsuit, or other adversarial proceeding alleging negligent or wrongful conduct on the part of an indemnifying Party, then (1) the indemnifying Party shall provide a defense to the other or, at the indemnitee's option, reimburse the indemnitee its costs of defense, including reasonable attorneys' fees, incurred in defense of such claims, and (2) the indemnifying Party shall promptly pay any final judgment or portion thereof rendered against the indemnitee(s).

Section 11. **Notices.** All written notices required to be given pursuant to the terms of the Agreement shall be either (i) personally delivered, (ii) deposited in the United States express mail or first class mail, registered or certified, return receipt requested, postage prepaid, (iii) delivered by overnight courier service, or (iv) delivered by facsimile transmission or e-mail, provided that the original of such notice is sent by certified United States mail, postage prepaid, or by overnight courier, no later than one (1) business day following such facsimile transmission

or email. All such notices shall be deemed delivered upon actual receipt (or upon first attempt at delivery pursuant to the methods specified in clauses (i), (ii) or (iii) above if the intended recipient refuses to accept delivery). All such notices shall be delivered to the addresses shown in the Agreement or to such other address as the receiving Party may from time to time specify by written notice to the other Party given in the manner provided herein.

Section 12. Mediation. The Parties agree that any and all disputes, claims or controversies regarding the Exchange Program or this Agreement shall be submitted to mediation in a mutually agreeable venue and if the matter is not resolved through mediation, then it may be submitted to any court of competent jurisdiction. Any affected Party may commence mediation by providing the other Party a written request for mediation, setting forth the subject of the dispute and the relief requested. The Parties shall cooperate with one another in selecting a mediator and in scheduling the mediation proceedings. The Parties covenant that they shall participate in the mediation in good faith, and that they shall share equally in costs charged by the mediator. All offers, promises, conduct and statements, whether oral or written, made in the course of the mediation by any of the Parties, their agents, employees, experts and attorneys, and by the mediator or any of the mediator's employees, are confidential, privileged and inadmissible for any purpose, including impeachment, in any arbitration or other proceeding involving the Parties, provided that evidence that is otherwise admissible or discoverable shall not be rendered inadmissible or non-discoverable as a result of its use in the mediation. The provisions of this Agreement with respect to mediation may be enforced by any Court of competent jurisdiction, and the Party seeking such enforcement shall be entitled to an award of all costs, fees and expenses, including attorneys' fees, to be paid by the Party against whom such enforcement is ordered.

Section 13. Entire Agreement. This Agreement constitutes the entire agreement between the IRWD and DRWD with respect to the subject matter hereof. This Agreement supersedes all prior negotiations, discussions, contracts, agreements or understandings between the parties hereto, and no evidence of any prior or contemporaneous parol agreement or understanding shall be admissible to vary its terms. This Agreement shall not be amended or modified in any way except by a written instrument executed by each party hereto. The foregoing notwithstanding, this Agreement shall not supersede the Agreement Between Dudley Ridge Water District and Irvine Ranch Water District, dated February 25, 2010.

Section 14. Termination For Breach. Either Party may terminate the Agreement if the other Party breaches any material obligation under the Agreement and such breach continues for a period of sixty (60) days, or such other period as may be reasonable under the circumstances, after the date on which written notice is issued by the non-breaching Party. The non-breaching Party shall be entitled to seek any and all legal or equitable damages and/or remedies as a result of the breaching Party's breach.

In the event that either IRWD or DRWD is in material default of the Agreement, the non-defaulting Party shall provide written notice to the defaulting Party, identifying with reasonable specificity the nature of the claimed default. If the defaulting Party has not cured the event(s) of material default which is (are) identified in the notice required by this section within twenty (20) business days after receipt of written notification, or such other period as is reasonable under the circumstances, the non-defaulting Party shall be entitled to any and all remedies which may be

available to it at law or in equity. This provision is not intended to provide a separate termination right, which is set forth in the first paragraph of this Section.

Section 15. Choice of Laws; Venue. The Agreement shall be governed and construed in accordance with the laws of the State of California. Venue for any action brought for the purpose of enforcing any provision of the Agreement shall be in Kern County, California.

Section 16. Cumulative Rights; Waiver. No failure by either Party to exercise, and no delay in exercising any rights, shall be construed or deemed to be a waiver thereof, nor shall any single or partial exercise by either Party preclude any other or future exercise thereof or the exercise of any other right. Any waiver of any provision or of any breach of any provision of this Agreement must be in writing, and any waiver by either party of any breach of any provision of this Agreement shall not operate as or be construed to be a waiver of any other breach of that provision or of any breach of any other provision of this Agreement.

Section 17. Further Action. The Parties agree to and shall take such further action and execute and deliver such additional documents as may be reasonably required to effectuate the Exchange Program, consistent with each and all of the terms and conditions of this Agreement.

Section 18. Assignment. Neither Party shall assign or otherwise transfer its rights or obligations in, under or to the Exchange Program or this Agreement, in whole or in part, without the prior written consent of the other Party, which may be withheld in such other Party's sole and absolute discretion.

Section 19. Force Majeure; Change In Law. The respective obligations of each Party hereto shall be suspended while it is prevented from complying by acts of God; war; riots; civil insurrection; acts of civil or military authority; fires; floods; earthquakes; labor accidents or incidents; rules and regulations of any federal, state, or other governmental agency (other than the Parties themselves); changes in law, rules, or regulations of any federal, state or other governmental agency (other than the Parties themselves); or other cause of the same or other character any of which are beyond the reasonable control of such Party (collectively, "Force Majeure"). In the event of a suspension due to the foregoing, the Party whose obligations are suspended shall promptly notify the other Party in writing of such suspension and the cause and estimated duration of such suspension.

The Party providing such notice shall be excused from fulfilling its obligations under the Agreement until such time as the Force Majeure has ceased to prevent performance or other remedial action is taken, at which time the Party shall promptly notify the other Party of the resumption of its obligations under the Agreement. Any Party rendered unable to fulfill any of its obligations by reason of a Force Majeure shall exercise due diligence to remove such inability with reasonable dispatch within a reasonable time period and mitigate the effects of the Force Majeure. The relief from performance shall be of no greater scope and of no longer duration than is required by the Force Majeure.

Section 20. Interpretation. It is agreed and acknowledged by the parties that the Agreement has been arrived at through negotiation involving their respective counsel, and that each Party has had a full and fair opportunity to revise the terms of the Agreement. Consequently, the

//

DUDLEY RIDGE WATER DISTRICT

By 
Manager-Engineer

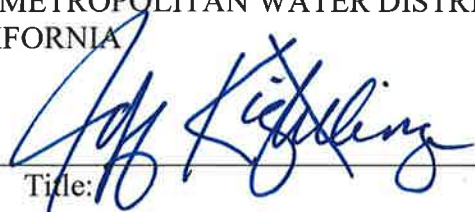
IRVINE RANCH WATER DISTRICT

By 
General Manager

CONSENT:

In accordance with Paragraph 3.2 of that agreement entitled "Coordinated Operating, Water Storage, Exchange and Delivery Agreement," (the "COA") dated as of April 21, 2011, by and among The Metropolitan Water District of Southern California ("Metropolitan"), the Municipal Water District of Orange County and the Irvine Ranch Water District, and in accordance with Section 15(d) of Metropolitan's State Water Project Contract with the California Department of Water Resources, THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA hereby provides its written consent to IRWD's acquisition of State Water Project Water on Metropolitan's behalf as described in the Exchange Program defined herein, so long as that water meets the requirements of the COA.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

By: 
Title:

By: _____
Secretary

EXHIBIT “A”

Adjustment Factors for Losses Associated with Methods of Delivery of Return Water to Ensure a 1-for-1 Exchange¹

Method of Delivery of Return Water	In-ground Transfer from Kern Water Bank to IRWD Integrated Banking Project	Metropolitan Takes Delivery to Southern California	Delivery to IRWD Integrated Banking Project via Cross Valley Canal ²
Adjustment Factor for Losses	1.0	1.0	1.10

1/ IRWD and DRWD may each incur their own conveyance losses up to 2% through the Cross Valley as assigned by KCWA.

2/ Deliveries to the IRWD Integrated Banking Project are subject to losses defined in the “Memorandum of Understanding” between Rosedale and adjoining entities. Accordingly, Return Water deliveries to the Integrated Banking Project by DRWD as a *SWP Agricultural Contractor* will be subject to 10% losses.

Example 1: If IRWD provides Exchange Water in an amount of 1,000 AF and Return Water is delivered to IRWD’s Integrated Banking Project via the Cross Valley Canal, then the following calculations would provide for Memorandum of Understanding losses upon the delivery of Return Water (10% percent losses would be required):

Exchange Water delivered = 1,000 AF
Return Water delivered = 1,000 AF * 1.10 = 1,100 AF
Net Return Water = 1,000 AF

Example 2: If IRWD provides Exchange Water in an amount of 1,000 AF and Return Water is delivered through in-ground transfer, then the following calculations would provide for losses upon the delivery of Return Water:

Exchange Water delivered = 1,000 AF
Return Water delivered = 1,000 AF * 1.0 = 1,000 AF
Net Return Water = 1,000 AF

Example 3: If IRWD provides Exchange Water in an amount of 1,000 AF and Return Water is delivered to Southern California, then the following calculations would provide for losses upon the delivery of Return Water:

Exchange Water delivered = 1,000 AF
Return Water delivered = 1,000 AF * 1.0 = 1,000 AF
Net Return Water = 1,000 AF

EXHIBIT “B”

Example of Equalizing the Cost Per Acre-Foot Associated with the Exchange Program

All per acre foot costs associated with the Exchange Program will be paid as set forth in Section 8. An illustrative table using current approximate costs for Exchange Water delivered to DRWD and Return Water delivered (or pre-delivered) to IRWD’s Integrated Banking Project via Cross Valley Canal is set forth in this Exhibit B

Estimated per Acre-Foot Costs by Participant (in current dollars)

	DRWD	IRWD	Metropolitan
Exchange Water Costs			
Stored Exchange Water		\$ 84.00	
KCWA Fees: transaction set up fee, per AF transaction request fees, third party out of county fee	\$ 2.50	\$ 2.50	
Recovery of Exchange Water		\$ 72.00	
Recovery operations, maintenance costs		\$ 2.00	
Rosedale admin. charge for recovery at Integrated Banking Project		\$ 3.00	
CVC conveyance of Exchange Water to DRWD		\$ 3.00	
Return Water Costs			
DRWD Table A (assumes 65% SWP allocation)	\$151.00		
Water Toll			\$ 28.00
CVC pumping to Integrated Banking Project	\$ 7.00		
CVC conveyance of Return Water to Integrated Banking Project	\$ 3.00		
Rosedale admin charge for recharge at Integrated Banking Project	\$ 3.00		
Estimated cost with 10% losses associated with delivery of Return Water to Integrated Banking Project via the Cross Valley Canal. Calculated in this example as: $(\$151 + \$7 + \$3 + \$3) * 0.10 / 2$	\$ 8.20	\$ 8.20	
Totals	\$ 174.70	\$ 174.70	\$ 28.00