

AGENDA
IRVINE RANCH WATER DISTRICT
SUPPLY RELIABILITY PROGRAMS COMMITTEE
THURSDAY, FEBRUARY 17, 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=m93de81a78cbbb21fbc6b186cef7662a2>

Meeting Number (Access Code): 2497 039 7296

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 1:30 p.m.

ATTENDANCE 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 Thursday, February 17, 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.

INFORMATION

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

Recommendation: Receive and file.

ACTION

6. PARTICIPATION IN SITES RESERVOIR AND INTEGRATION WITH KERN FAN GROUNDWATER STORAGE PROJECT – WELCH / SANCHEZ / WEGHORST

Recommendation: That the Board authorize the General Manager to execute the Third Amendment to the 2019 Reservoir Project Agreement by and among the Sites Project Authority and the Project Agreement Members and approve a budget increase to Project 11746 included in Fiscal Year 2021-22 Capital Budget in the amount of \$535,000.

OTHER BUSINESS

7. Directors' Comments
8. 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.

February 17, 2022

Prepared by: N. Palacio / K. Welch

Submitted by: F. Sanchez / P. Weghorst

Approved by: Paul A. Cook 

SUPPLY RELIABILITY PROGRAMS COMMITTEE

WATER BANKING PROJECT FACILITIES, CAPACITIES, OPERATIONS AND PROGRAMS

SUMMARY:

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

BACKGROUND:

To facilitate 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". Exhibit "A" has been updated to include the average daily recovery capacity rates from January 2021 through January 2022 under the "Estimated Recovery Capacity" column.

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 shown in red on Exhibits "B" and "C" reflect unpurchased Reserve water from 2018 being credited back to IRWD and Dudley Ridge Water District, as well as an increase in the State Water Project (SWP) allocation from 0% to 15% for 2022. Exhibit "C" shows no losses taken on the 2022 SWP Table A water presuming Metropolitan Water District (Metropolitan) will likely take delivery of this water. The changes also show continued recovery of IRWD's banked SWP water that Metropolitan is borrowing consistent with the terms of a recent letter agreement. The estimated recovery through February is 3,927 AF, completing the recovery of banked SWP water for Metropolitan.

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 participated in 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 shown in red on Exhibit "D" correspond with the changes made to Exhibits "B" and "C".

Exhibit "E" graphically depicts how storage of SWP and non-SWP water has changed 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", maps are included to show project wells and pipelines, recharge basins and Cross Valley Canal turnout locations, along with the most current recharge rates. The 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. Changes to Exhibit "P" include the addition of the \$0.97 per acre-foot surcharge assessed by the Santiago Aqueduct Commission for bringing in water to the Baker Treatment Plant and the removal of recovery costs for program water that either Metropolitan took direct delivery of or for which Metropolitan will pay the recovery costs for. The cost of water shown in Exhibit "P" will be updated periodically.

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 pursue 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 and Diagram of One-year Program to Augment Recharge Using Stockdale West Recharge Facilities with Buena Vista

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” – IRWD Water Banking Program Costs of Water Summary

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Exhibit "A"

TABLE 1

Current and Anticipated Water Banking Projects

Recharge, Storage and Recovery Capacities

February 17, 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 - 1/31/2022)	RECOVERY CAPACITY AS PLANNED	RECOVERY CAPACITY CURRENT CONDITIONS
Strand Ranch	Yes	7	50,000	17,500	-	17,500	-	40.0	21.9	-	-
Stockdale West	Yes	3	26,000	27,100	-	11,250	-	15.0	11.9	-	-
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	17.0	-	-
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	50.8	10.0	9.0
Partner Capacities ³			38,000	22,300	9,500	10,850	0	35.5	25.0	-	-
IRWD Capacities (does not include Kern Water Bank capacities)			88,000	22,300	9,500	17,900	7,500	34.5	25.0	-	-
IRWD's recovery <i>during</i> 6 month partner recovery period (AF)								12,420	9,000	-	-
IRWD's recovery <i>after</i> 6 month partner recovery period (AF)								5,480	6,733	-	-
TOTALS (AF)								17,900	15,733	-	-
Number of months needed to recover IRWD's total AF after partners' recovery (Assumes IRWD has use of total recovery capacity after partners' recovery)								8.6	10.2	-	-
Strand Ranch monthly recharge amount assuming 0.3 ft/day average recharge rate (AF)										4,518	
Stockdale West monthly recharge amount assuming 0.3 ft/day average recharge rate (AF)										2,331	

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

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

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

⁴ Kern Water Bank capacities based on 6.58% of Dudley Ridge Water District's 9.62% share of the Kern Water Bank. Annual recharge amount is based on an average of recharge rates for high and low groundwater level conditions. 5,000 AF of recovery capacity may be available for second priority use.

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Exhibit "B"

TABLE 2

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

February 17, 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	-	(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 (15 %)	131	-	-	-	131	262
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	131	-	-	-	131	262
ESTIMATED WATER IN STORAGE 2022 (AF)						
Total Kern Water Bank	-	4,295	-	-	-	4,295
Total MWD System	12,120	-	-	-	131	12,251
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	23,415	18,711	-	-	143	42,269

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.

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Exhibit "C"

TABLE 3

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

February 17, 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 (15 %)	131	-	-	-	131	262
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	131	-	-	-	131	262
ESTIMATED WATER IN STORAGE 2022 (AF)						
Total Kern Water Bank	-	3,827	-	-	-	3,827
Total MWD System	12,120	-	-	-	131	12,251
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	22,381	14,319	-	-	142	36,841

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.

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Exhibit "D"

TABLE 4
Status of IRWD Purchase and Exchange Programs (AFTER LOSSES)
February 17, 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	1,153	142	1,153	1,142	11		1,153	1,153		142	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:					33,624	142	39,312	12,120	10,753	10,000	32,873	22,131	10,742	142	

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.

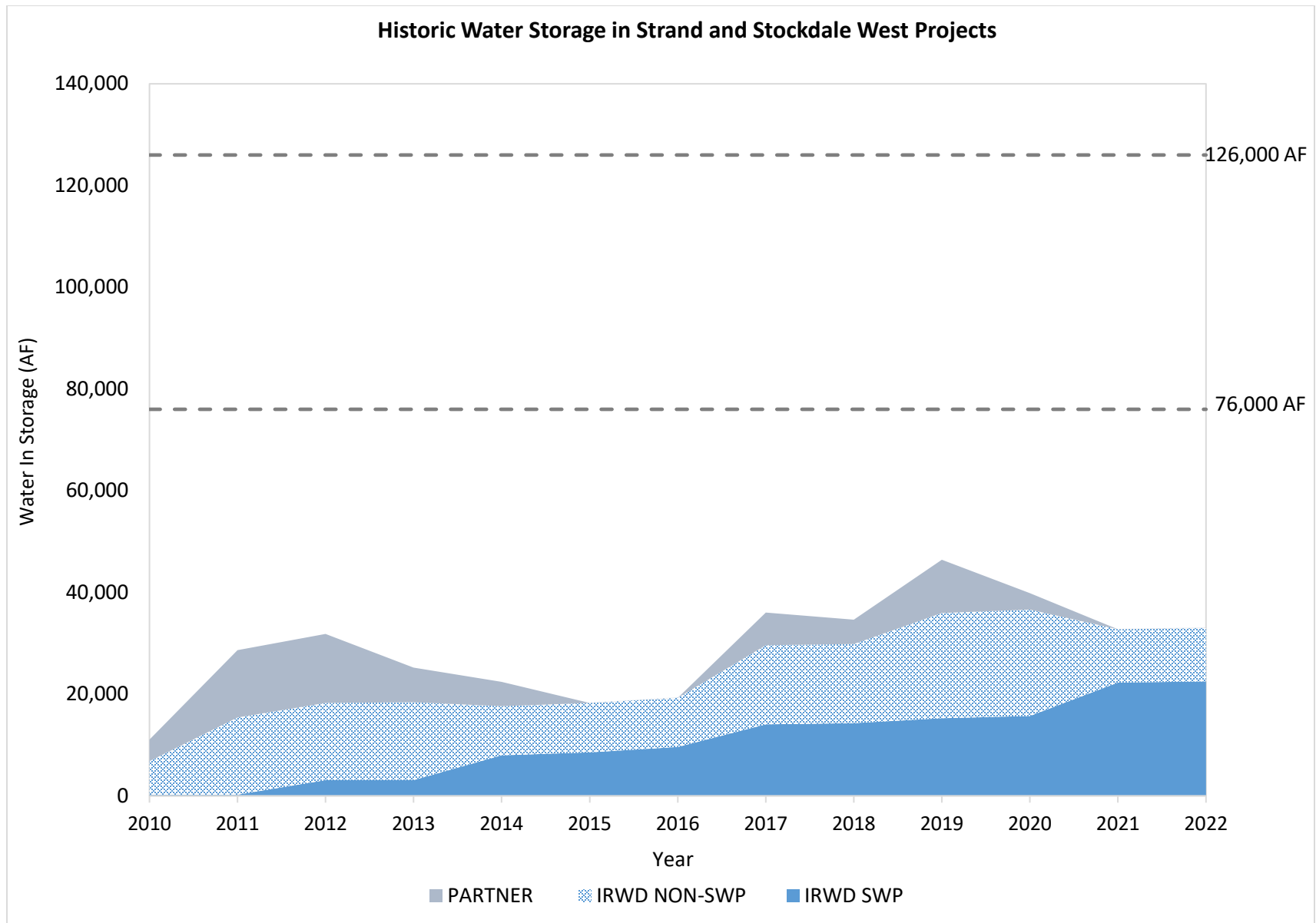
³ Source of water was Buena Vista Water Storage District Kern River high flow water.

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.

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Exhibit “E”



*After losses

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Exhibit "F"

TABLE 5
IRWD Dedicated Water Banking Capacities for Existing and Proposed Exchange
Programs
January 20, 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

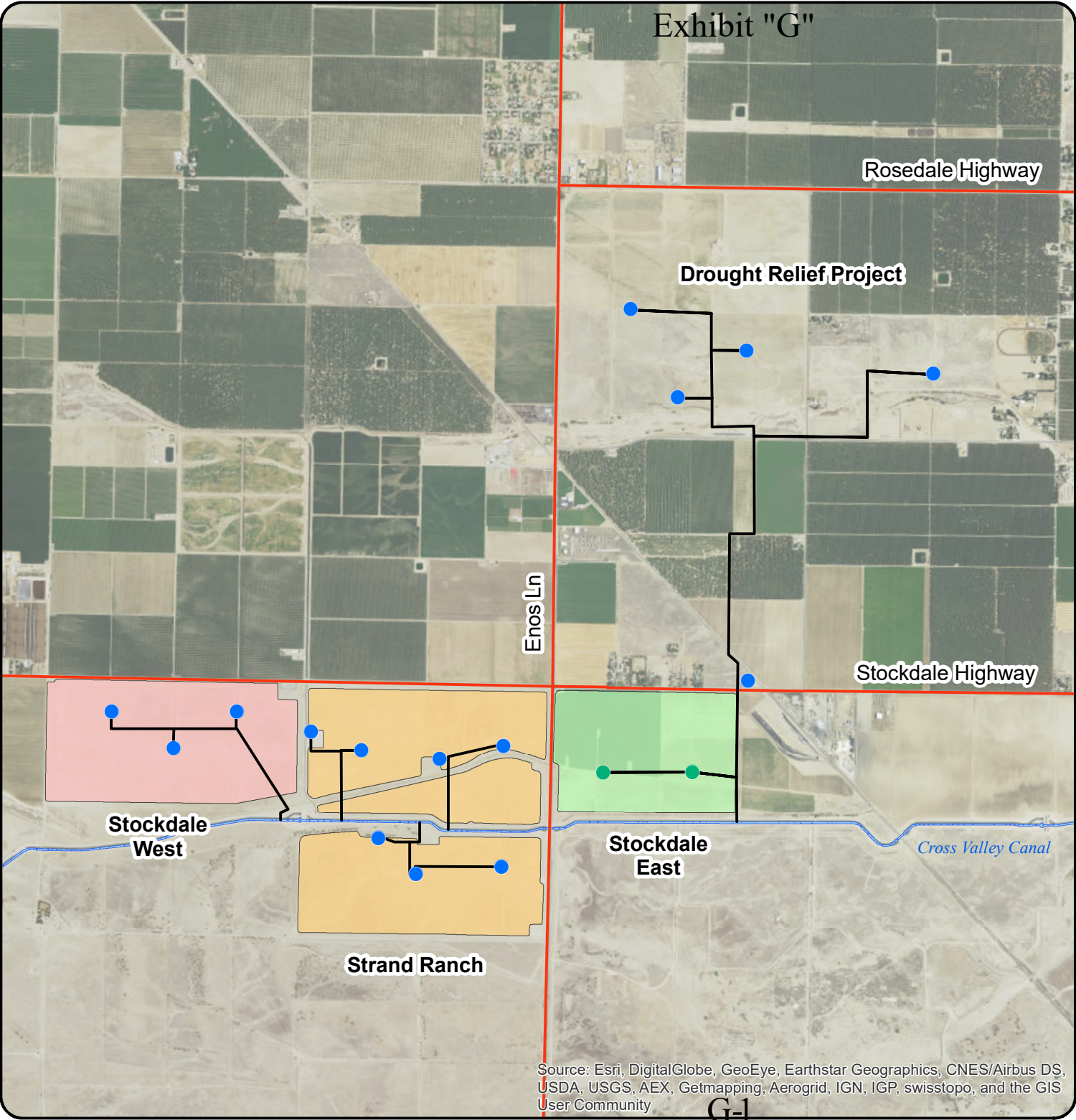
RECHARGE CAPACITY

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	-	-

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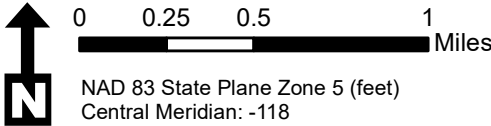


**Location Map:
IRWD Water Banking Projects
Wells and Turnin Pipelines**

MAP FEATURES

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

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



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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

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Exhibit "I"

Rosedale Highway



Location Map: IRWD Water Banking Projects Recharge Rates

MAP FEATURES

- ▲ Turnouts
- Stockdale West
- Strand Ranch

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

Stockdale West
0.11 feet/day
15 CFS

Strand Ranch North
0.29 feet/day
40 CFS

Strand Ranch South
0.13 feet/day
15 CFS

Stockdale Highway

Cross Valley Canal

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



0 0.25 0.5 1
Miles

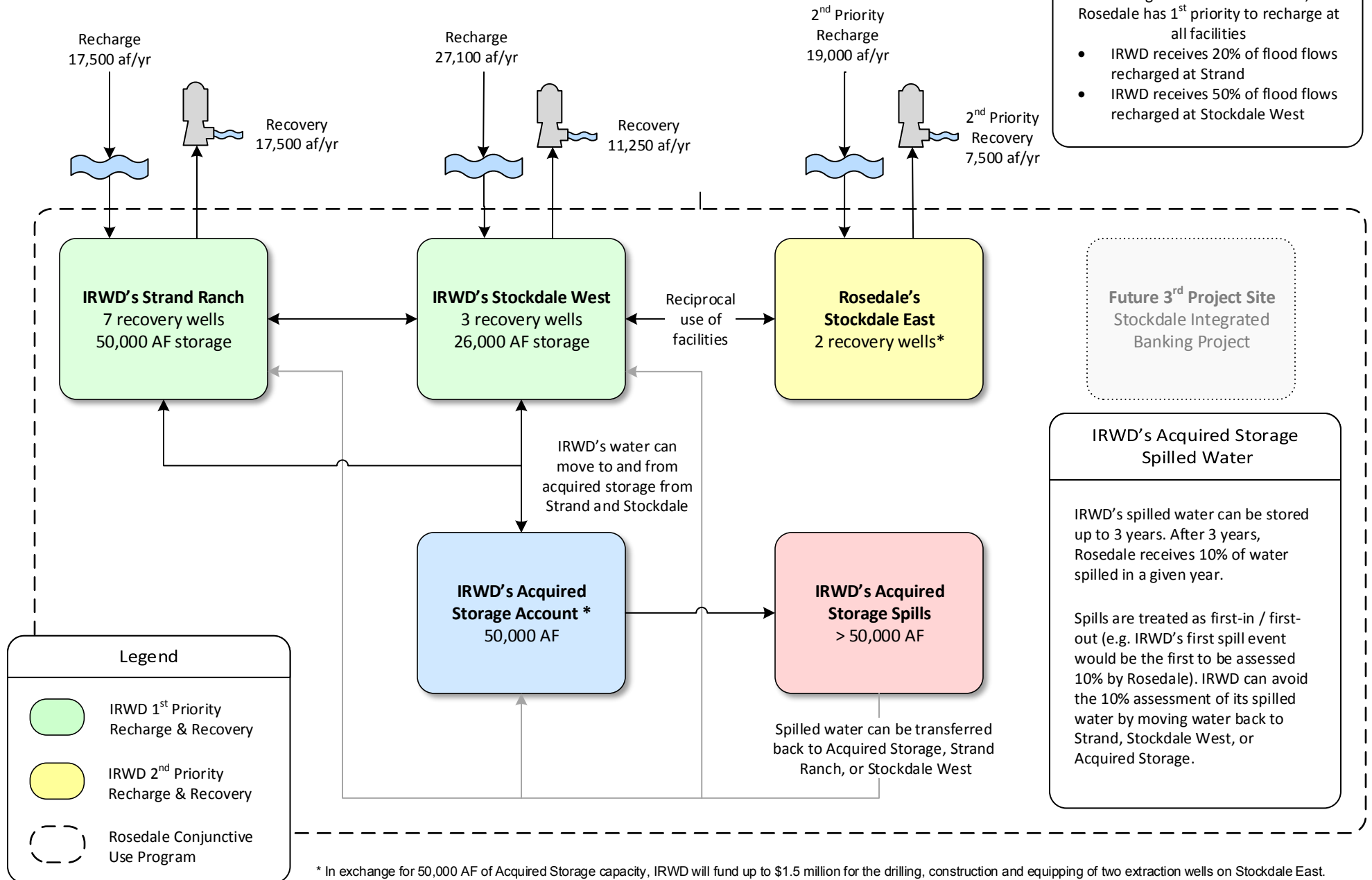
NAD 83 State Plane Zone 5 (feet)
Central Meridian: -118

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Exhibit "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)



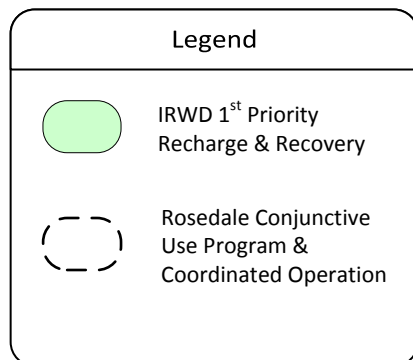
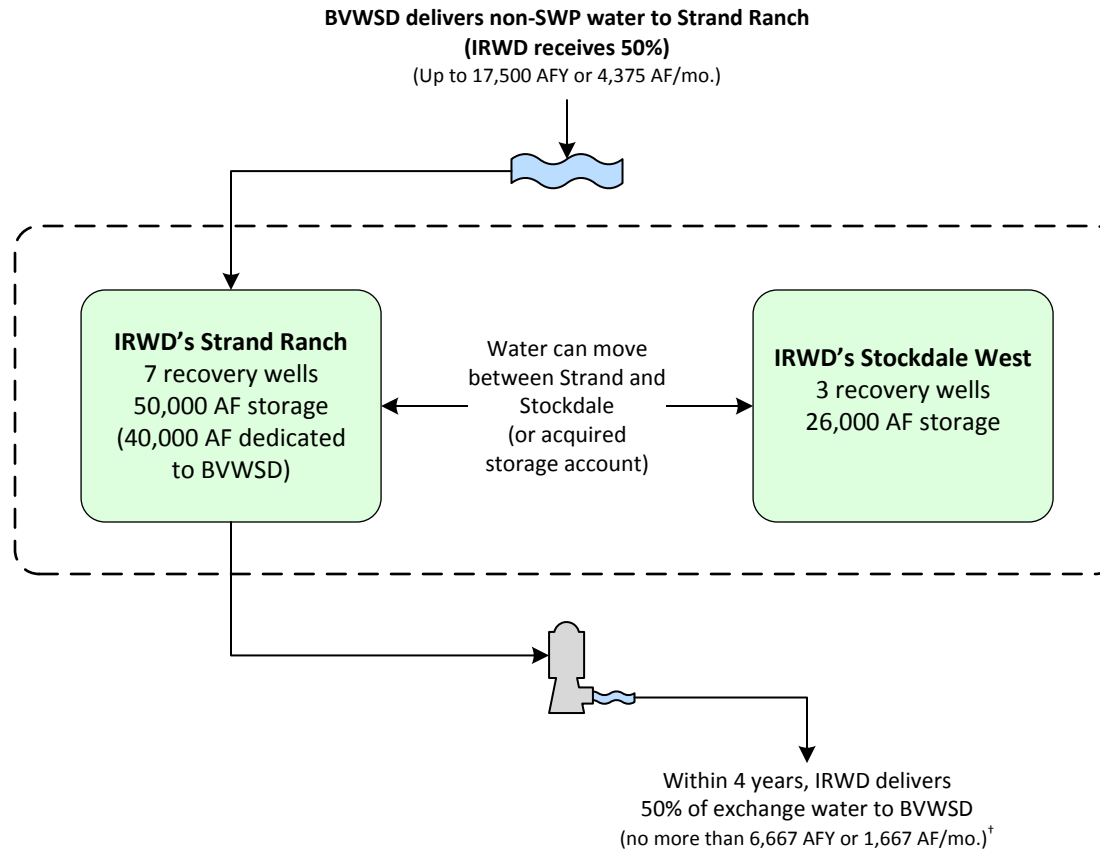
* In exchange for 50,000 AF of Acquired Storage capacity, IRWD will fund up to \$1.5 million for the drilling, construction and equipping of two extraction wells on Stockdale East.

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Exhibit "K"

Buena Vista Water Storage District Long Term Water Exchange Program

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

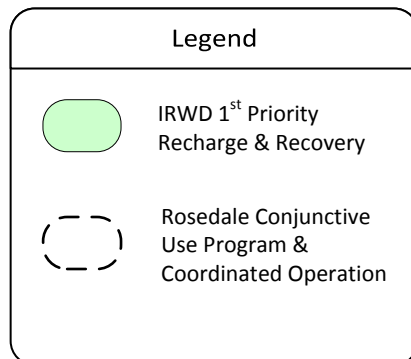
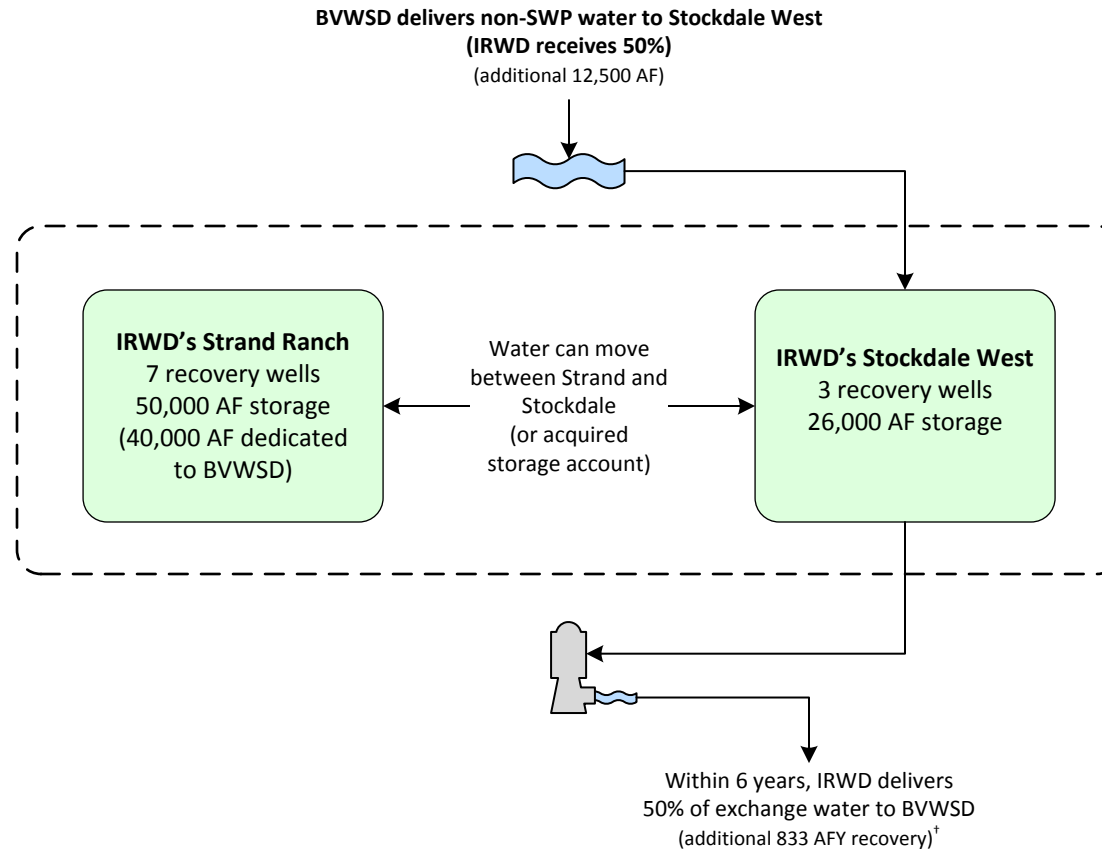


[†]IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31st of the 4th year following the associated recharge event. IRWD pays for recovery of water returned to BV. Water to be remitted back to BV may remain in storage at Strand Ranch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

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

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

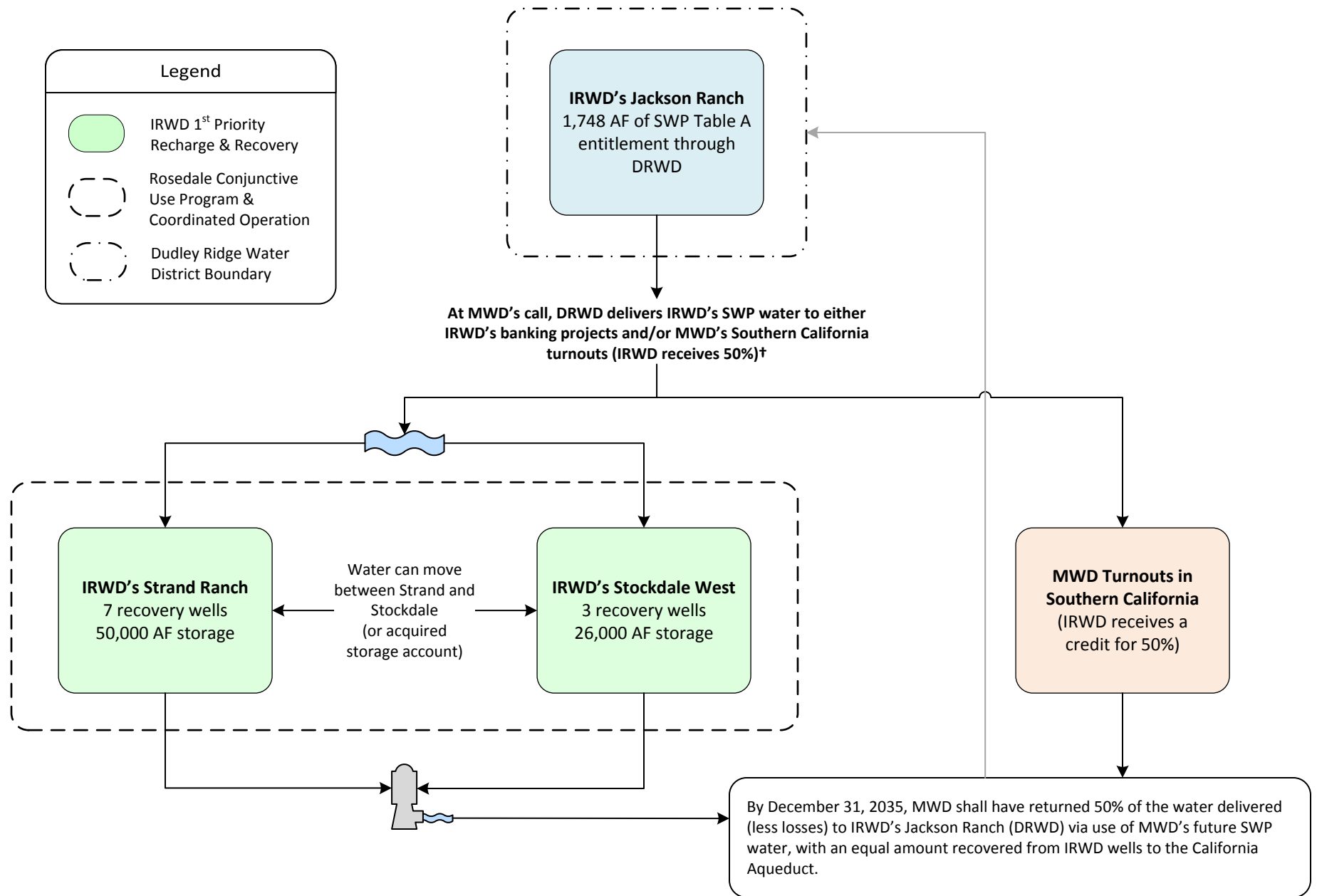
Effective 4/1/2017 through 3/30/2018



[†]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.

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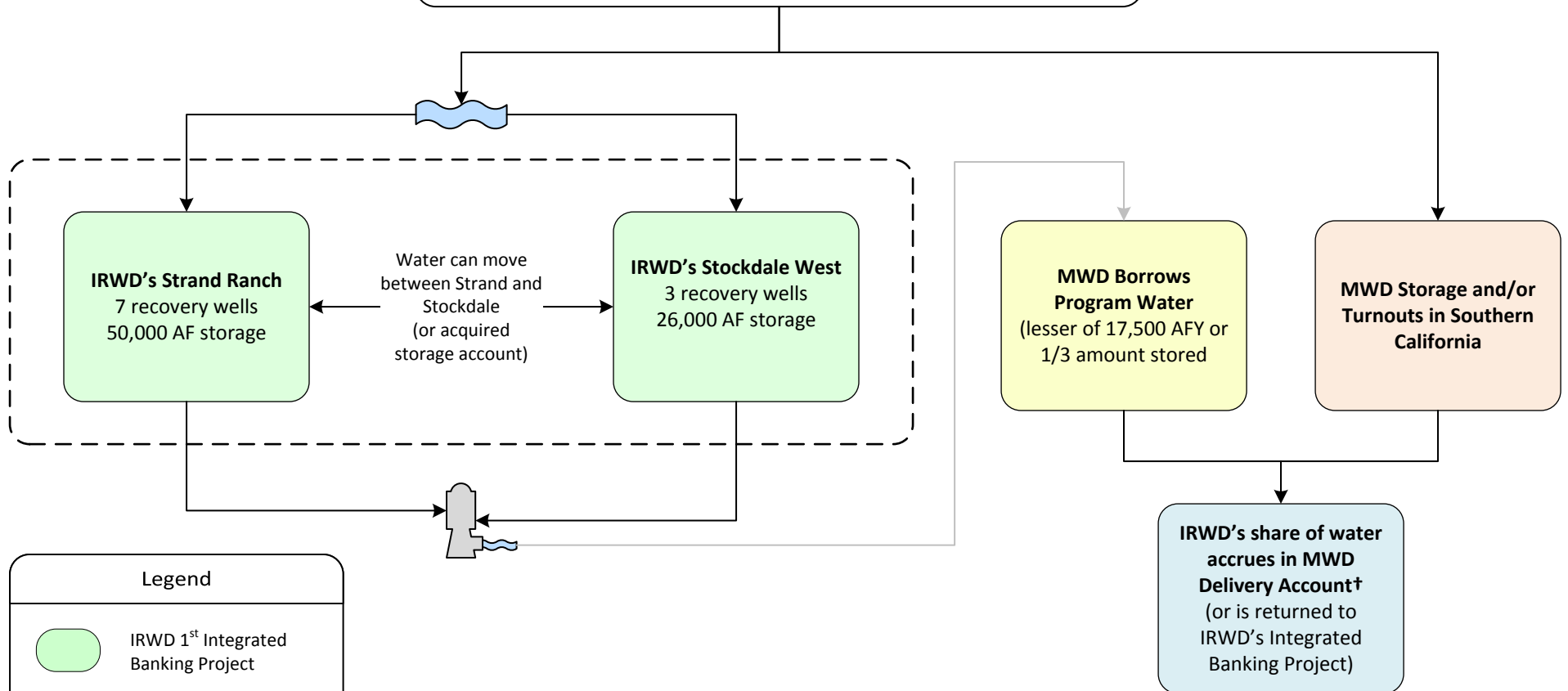
Exhibit "M"

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

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

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

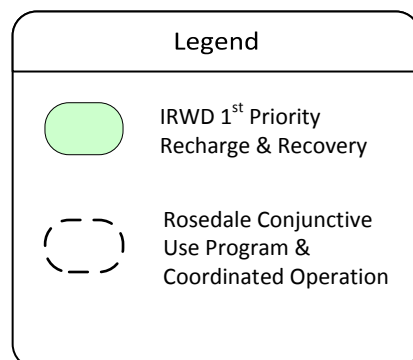
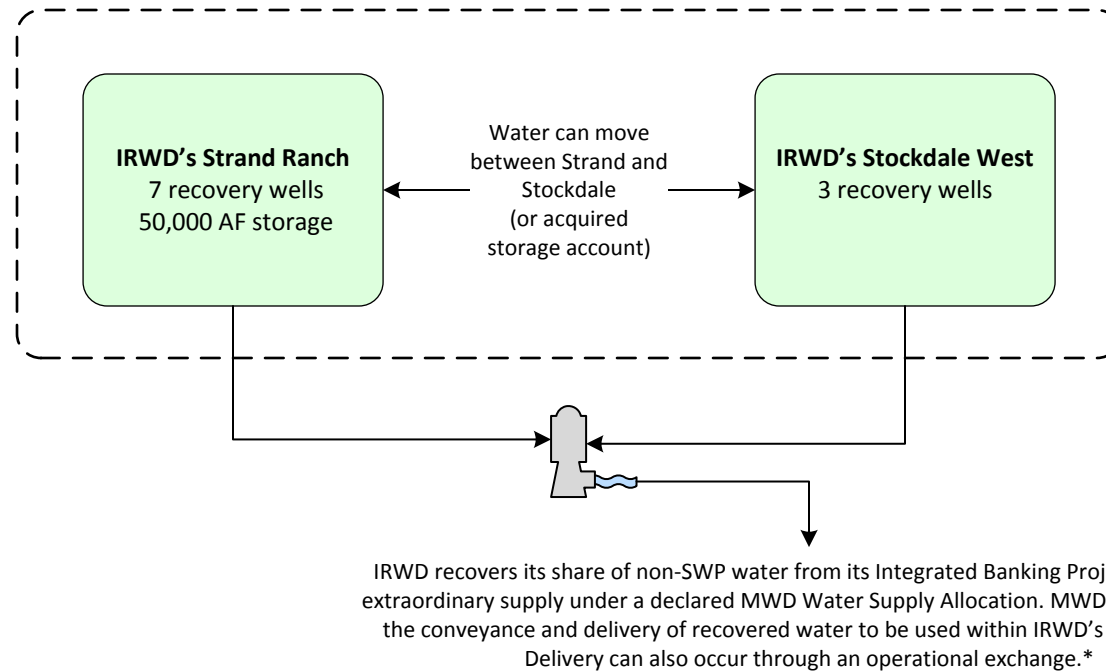
- Storage of water in IRWD's Integrated Banking Project
- Delivery to Southern California for immediate use and/or storage in MWD system
- Borrow a portion of Program water, with accrual in MWD Delivery Account



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

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Exhibit "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.

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Exhibit "O"

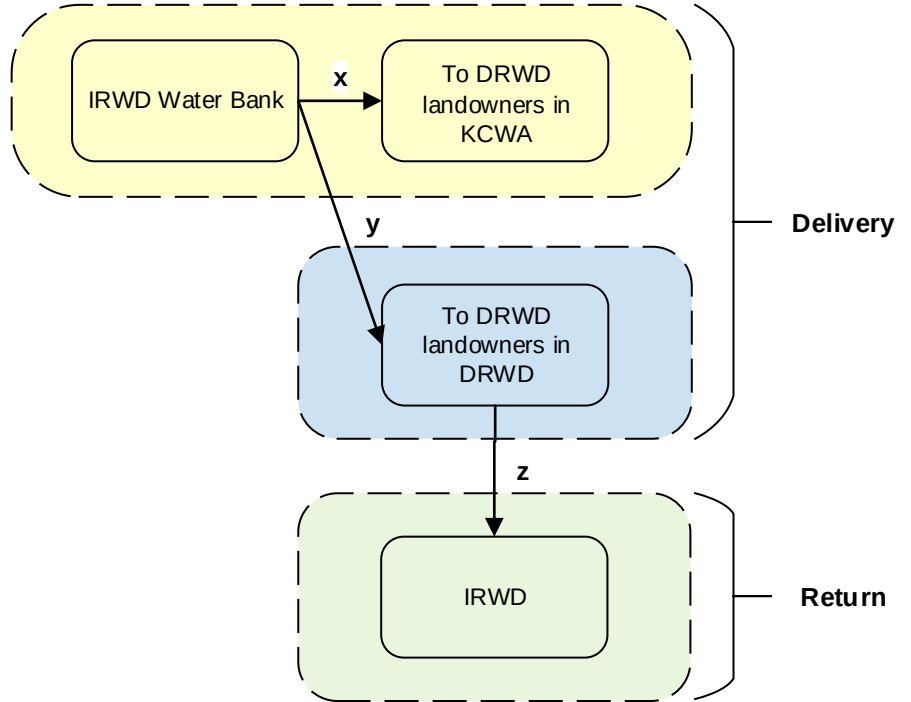
Dudley Ridge Water District Long Term 1-for-1 Water Exchange Program Effective 5/31/2017 through 11/4/2035

Scenario A

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

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

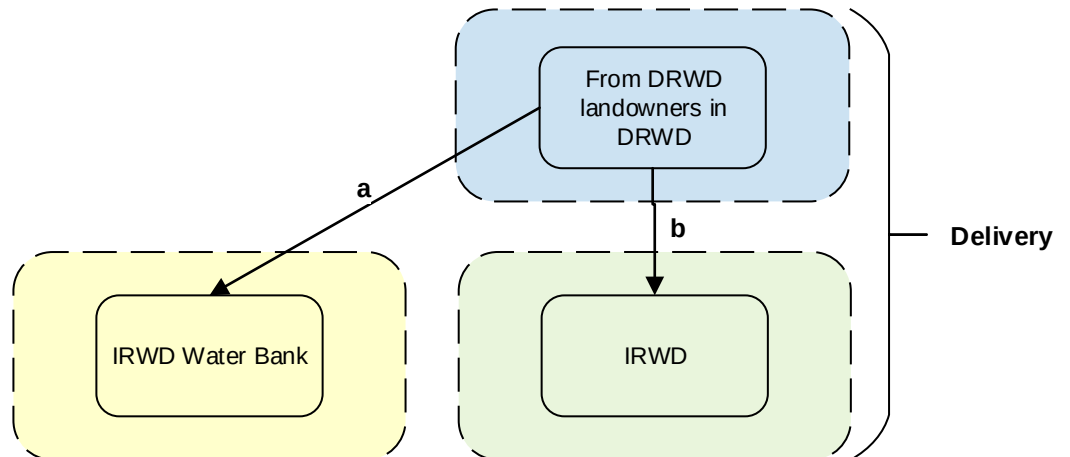
Per Section 4.1.3, z can be delivered to IRWD via in-ground transfer to IRWD, SWP delivery to IRWD banking facilities, or SWP delivery to MWDSC



Scenario B

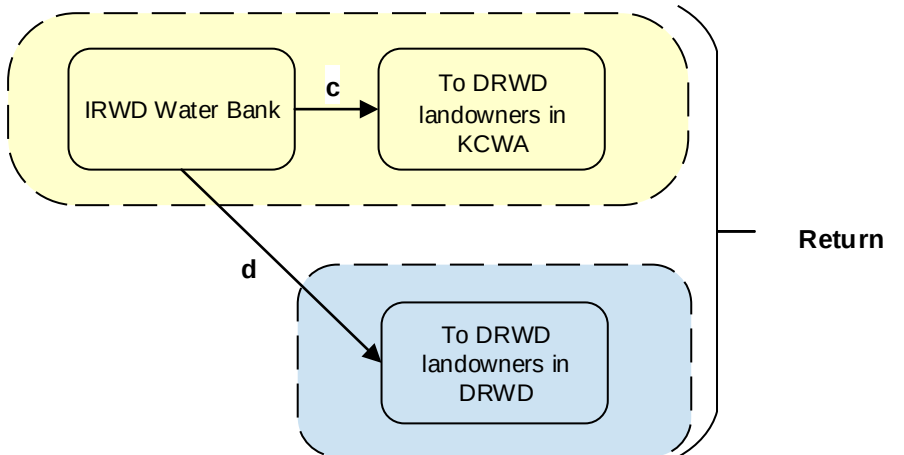
(Per Sections 2, 3, and 4.1.2)

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



Legend

	KCWA Service Area
	DRWD Service Area
	IRWD Service Area



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Exhibit "P"

TABLE 6

IRWD Water Banking Program Costs of Water Summary

February 17, 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.

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February 17, 2022
Prepared by: K. Welch
Submitted by: F. Sanchez / P. Weghorst
Approved by: Paul A. Cook 

SUPPLY RELIABILITY PROGRAMS COMMITTEE

PARTICIPATION IN SITES RESERVOIR AND INTEGRATION WITH THE KERN FAN GROUNDWATER STORAGE PROJECT

SUMMARY:

IRWD is currently participating in the planning and environmental review of the Sites Reservoir Project associated with 1,000 acre-feet (AF) of annual release capacity and 6,234 AF of storage capacity in the project. This capacity would allow IRWD to secure a small schedulable water supply from the reservoir for the Kern Fan Groundwater Storage Project (Kern Fan Project). IRWD's current commitment to the project includes participation in a one-year work plan to conduct planning activities for the Sites Reservoir. Staff will provide an overview of the Sites Reservoir Project, relevant IRWD's policy positions, expected water supply yields from Sites Reservoir, potential integration of Sites Reservoir operations with the Kern Fan Project, and an economic analysis of costs and benefits to IRWD. Based on this analysis, staff recommends that IRWD continue its participation in the Sites Reservoir and due diligence investigations, and that the Board:

- Authorize the General Manager to execute the Third Amendment to the 2019 Reservoir Project Agreement by and Among and Sites Reservoir Authority and the Project Agreement Members, and
- Approve a budget increase to Project 11746 included in Fiscal Year 2021-22 Capital Budget in the amount of \$535,000.

BACKGROUND:

IRWD's Potable Water Supply Reliability Policy Position Paper, provided as Exhibit "A", specifies that the evaluation of IRWD water supply reliability should take into consideration worst case factors such as long-term drought on the Colorado River, the risk of Sacramento-San Joaquin River Delta levee failures, and reductions in water available from the Orange County Groundwater Basin. The paper also calls for IRWD to participate in cost-effective water supply projects that are geographically and functionally diverse in response to needs identified in IRWD's evaluation of water supply reliability. The paper states that participation in surface and groundwater storage projects should be considered by IRWD. Since this paper was adopted by the Board, IRWD has been expanding its groundwater banking projects in Kern County through the development of the Kern Fan Project. IRWD has also been participating in the development of the Sites Reservoir Project.

In March 2020, IRWD completed an evaluation of IRWD's water supply reliability that affirmed the need for IRWD's water banking programs to meet District demands, taking into consideration the worst-case factors listed above. This evaluation identified the need for 17,000 acre-feet per year from the proposed Kern Fan Project for use in meeting IRWD's imported demands in the year 2035 under the worst-case scenario. This need assumes that the

Syphon Reservoir Improvement Project would be operational and that IRWD would continue to be subject to the recycled water penalty imposed by Orange County Water District.

Securing Supplies for Kern Fan Project:

In November 2020, the Board adopted an updated Policy Position on Water Banking, Transfers and Wheeling that provides guidance to the development of the Kern Fan Project. This policy paper, provided as Exhibit “B”, takes into consideration the March 2020 needs analysis described above. The paper describes how increased costs and competition for water supplies in the state of California will require IRWD to adopt different strategies to continue securing water for IRWD’s existing water banking projects and the Kern Fan Project while minimizing its cost of water. The policy paper calls for increased consideration of reliance on smaller, schedulable sources of supply.

IRWD’s participation in the Sites Reservoir Project would provide for a water supply that can be integrated into the operations of the Kern Fan Project. Integration would result in a schedulable supply that would not interfere with the conveyance and recharge of wet-year supplies that have been identified for the project. IRWD’s participation in the Sites Reservoir Project would be consistent with both the water supply reliability and water banking policy position papers described above.

Overview of Sites Reservoir Project:

The proposed Sites Reservoir will provide 1.5 million AF of off-stream storage in the Sacramento Valley that would divert and store stormwater flows from the Sacramento River after all other water rights and regulatory requirements are met. The stored water would be used to benefit California communities, farms, and businesses as well as for environmental purposes. A map showing the project location is provided as Exhibit “C”.

The estimated project costs of the Sites Reservoir Project total \$3.9 billion. The Sites Reservoir Project is eligible for \$836 million of funding through the Proposition 1 Water Storage Investment Program. It has also received approval for federal funding of \$100 million through the Water Infrastructure Improvements for the Nation Act (WIIN Act) committed to date; this amount could increase to up to 25% of total capital costs. IRWD’s limited share (0.6% of capacity) of the overall Sites Reservoir Project equates to approximately \$17 million of capital funding. If IRWD were to participate in the construction and operation of Sites Reservoir, it would participate on a pay-go basis and not be a participant in group financing.

IRWD Participation in Sites Reservoir Project:

In January 2020, the Board approved a Target Activity for IRWD to “identify and begin to secure additional water sources for the Kern Fan Project through statewide system integration arrangements”. In December 2020, the Board approved IRWD’s participation in the Sites Reservoir Project corresponding to 1,000 AF of release capacity and 6,234 AF of storage capacity in the reservoir, representing approximately 0.6% of the overall Sites Reservoir. The District’s participation has been limited to a one-year work plan including planning and

environmental review of the Sites Reservoir Project through December 31, 2021. IRWD's share of the cost of this work has been \$208,500. The Board also approved budget for conducting due diligence investigations including hydrologic and financial modeling of the Sites Reservoir Project. The due diligence investigations have evaluated integration with the Kern Fan Project.

Due Diligence Findings for Integration with Kern Fan Project:

MBK Engineers has performed due diligence investigations involving complex hydrologic modeling that evaluated the ability to aggressively cycle water in and out of IRWD's storage capacity in the Sites Reservoir by integrating deliveries into the Kern Fan Project. Consultants at M.Cubed performed economic analyses of the integration of Sites Reservoir with the Kern Fan Project and the costs that IRWD's service area would avoid as a result of these projects. At the meeting, staff will present the findings of these due diligence investigations.

Third Amendment to Sites Reservoir Agreement:

IRWD's participation in the current work plan under Amendment No. 2 of the Sites Reservoir Project Agreement ended December 31, 2021. The Sites Authority and Reservoir Committee has approved a new work plan to continue the project planning and environmental activities. Participation in the new work plan is covered by a Third Amendment to Sites Reservoir Project Agreement, which is provided as Exhibit "D". This amendment has been reviewed by IRWD's special legal counsel at Kronick Moskovitz. IRWD's cost share of the Third Amendment work plan is \$400,000. Payments would be made in three installments: \$100,000 due in April 2022, \$140,000 due in January 2023, and \$160,000 due in January 2024.

The proposed Third Amendment covers continuation of project planning through December 31, 2024. These efforts include completion of the Environmental Impact Report/Environmental Impact Statement (EIR/EIS), securing permits and water rights, and advancing design sufficient to make the project ready to secure financing.

FISCAL IMPACTS:

The planning and environmental review of Sites Reservoir Project for the planning work completed in December 2021 was included in the FY 2021-22 Capital Budget. The cost of IRWD's continued participation in the Third Amendment work plan is \$400,000. Staff estimates an additional \$75,000 in outside consulting costs, \$50,000 in staff costs and \$10,000 in legal costs associated with the due diligence over the next three years. Staff requests a budget increase to Project 11746 in the amount of \$535,000 to include the estimated costs of IRWD's continued participation in the Sites Reservoir through December 2024.

ENVIRONMENTAL COMPLIANCE:

The Sites Reservoir Authority issued a draft Revised Environmental Impact Report/Supplemental Environmental Impact Study for Sites Reservoir Project on November 12, 2021.

Supply Reliability Programs Committee: Participation in Sites Reservoir and Integration with the Kern Fan Groundwater Storage Project

February 17, 2022

Page 4

RECOMMENDATION:

That the Board authorize the General Manager to execute the Third Amendment to the 2019 Reservoir Project Agreement by and among the Sites Reservoir Authority and the Project Agreement Members and approve a budget increase to Project 11746 included in the Fiscal Year 2021-22 Capital Budget in the amount of \$535,000.

LIST OF EXHIBITS:

Exhibit “A” – IRWD Policy Position on Potable Water Supply Reliability

Exhibit “B” – IRWD Policy Position on Water Banking, Transfers and Wheeling

Exhibit “C” – Location Map of Sites Reservoir Project

Exhibit “D” – Third Amendment to 2019 Reservoir Project Agreement by and among the Sites Reservoir Authority and the Project Agreement Members

IRVINE RANCH WATER DISTRICT
POTABLE WATER SUPPLY RELIABILITY POLICY

Revised: November 10, 2014

Issue Summary:

Providing for a reliable and safe water supply is the primary mission of Irvine Ranch Water District (IRWD). IRWD must be able to provide sufficient water to its service area in order to meet customer water demands under reasonably foreseeable hydrological and system outage conditions. As water demand increases with new development, the ability for the District to continue to reliably meet water demands with existing supplies under extreme circumstances could be compromised. Threats to water supply reliability include potential system outages, environmental flow curtailments, earthquakes, severe drought and climate change.

Overall water supply reliability is accomplished by developing projects that improve both system and supply reliability. System reliability refers to the security and integrity of IRWD facilities that are treating and delivering water inside of IRWD. Supply reliability refers to the availability, security and integrity of supply sources and facilities not owned by IRWD that are relied on to deliver water to IRWD. IRWD should develop specific targets for both system and supply reliability. These targets should be periodically reviewed and adjusted based on new information and changing conditions. These targets will result in the selection of water supply capital projects that efficiently satisfy the reliability needs of the District.

Background:

In January 2008, the Board authorized the preparation of a Water Supply Reliability Study. The preliminary findings of the study were presented to the Board at a workshop on April 28, 2008. A report was prepared based on comments received from the Board. The Board received and filed the Water Supply Reliability Study on July 28, 2008. The intent of the study was to assist the District in defining appropriate levels of potable water reliability under different water supply and demand scenarios consistent with the Board's and IRWD customers' expectations. The study included analyses of how imported water supply shortages, climate change, facility outages and emergencies could affect demands, supplies, and major conveyance facilities. The study provided the technical basis for the August 8, 2008 Potable Water Supply Reliability Policy Position paper.

The Water Supply Reliability Study will be periodically updated and brought to the Board as assumptions change over time or as alternative potable water supply capital projects are developed. Recently, staff issued a request for proposals for an update and an enhanced approach to the study. Concurrently, the Municipal Water District of Orange County (MWDOC) has awarded a contract to perform a county-wide study of water supply and system reliability that will be performed with the participation of the Orange County retail and wholesale water agencies. In preparing to update the District's Water Supply Reliability Study and to guide staff's participation in the county-wide collaborative effort, staff has updated the District's Potable Water Supply Reliability Policy Principles paper.

Overview of Water Supply Reliability Study:

Outages of key supply facilities can result from a variety of reasons, including earthquakes, terrorist acts, or unplanned facility failures. The 2008 Water Supply Reliability Study assumed that facility shutdowns at the Diemer Water Treatment Plant (Diemer WTP) would last for one month. This is consistent with the documented outage duration for a single complex event in MWD's Infrastructure Reliability and Protection Plan (IRPP). It was assumed that a failure of the Dyer Road Well Field (DRWF) pipeline would last up to 15 days. Because of the emergency nature of catastrophic events, it is expected that some levels of extraordinary conservation (or demand restrictions) would take place. Even with such emergency conservation, the analysis showed that there would be maximum day shortages of over 60 cfs for a Diemer WTP outage and over 30 cfs for a DRWF pipeline outage.

Supply reliability results are based on probability distributions of demands and supplies under different weather, hydrological and environmental restriction scenarios. The Water Supply Reliability Study indicated that there is an approximately equal impact to IRWD's reliability as a result of environmental flow restrictions on the State Water Project (SWP) and climate change impacts on system demand and total imported water supply. When both of these constraints are considered and no new projects are implemented, shortfalls in the IRWD system would occur almost 90% of the time, averaging approximately 12,000 AFY, and ranging from zero up to 25,000 AFY. The 2008 study concluded that a minimum of 25,000 AFY of additional water supply should be developed to meet projected build-out demands under potential environmental flow restrictions in the Bay-Delta and/or climate change impacts on the SWP and Colorado River Aqueduct imported supplies.

Considerations for Reliability Study Update:

The District's Wells 21 and 22 Treatment Plant and the Baker Potable Water Treatment Plant Projects as well as IRWD's water banking projects in Kern County will result in a significant reduction in the need for development of additional supplies that were identified in the 2008 study. However, there are other factors that were not considered in the 2008 Water Supply Reliability Study that could offset the benefits of these projects with additional risk and uncertainty to IRWD's water supplies. These other factors include:

- Uncertainty in whether the alternative conveyance for the Bay Delta Conservation Plan (BDCP) will ever be permitted and constructed;
- Potential for long-term drought on the Colorado River;
- The risk of San Joaquin River Delta levee failures during a significant earthquake;
- Failure of the Edmonston Pumping Plant that is located near the south end of the California Aqueduct which lifts water 1,926 feet (600 m) to cross the Tehachapi Mountains; and
- Potential reductions in flows available for recharge in the Orange County basin.

Policy Principles:

Based on the 2008 Water Supply Reliability Study and the additional risk and uncertainty issues that could affect IRWD's water supplies as described above, staff has developed principles that will define the District's policy for potable water supply reliability and will also guide updating and enhancement of the District's Water Supply Reliability Study and staff participation in a county wide study of water supply and system reliability. The District's policy will also provide guidance in the development of future water supply projects. The policy principles are as follows:

- Water supply and system reliability studies should take into consideration the frequencies, magnitudes, probabilities, timing and durations associated with events that could affect reliability.
- Evaluation of IRWD water supplies and related system reliability should separately and in combination (where appropriate) take into consideration factors such as long term drought on the Colorado River, difficulties in approving and constructing an alternate conveyance to bypass flows around the Delta, the risk of Delta levee failures, local and regional earthquakes, SWP and Colorado River facility failures, long-term climate change and reductions in water available for recharge in to the Orange County basin.
- Forecasts of supply and system reliability should take into consideration the benefits of IRWD's existing Strand Ranch Integrated Banking Project, the proposed Stockdale Integrated Banking Project, any reasonably foreseeable expansion of these projects and related partnership, exchange and wheeling programs in offsetting potential future impacts to IRWD's import water supplies.
- Future water demands should be estimated using reasonable duty factors tied to ultimate land use categories using a multi-parameter regression analysis which accounts for variations in weather. The duty factors should account for increased conservation and the continued expansion of recycled water.
- The combination of existing and future water supply projects should meet 80% of maximum day demands at build-out 95% of the time using the worst case and reasonably foreseeable system outage scenarios.
- IRWD's system capacity should meet estimated maximum day demands at build-out 95% of the time using reasonably foreseeable outage scenarios.
- Projects should be selected on the basis of meeting specific reliability criteria and should demonstrate that they are cost effective. Projects that provide shared supply and system benefits to IRWD and other agencies in Orange County, in a cost effective way, should be considered in the selection process.
- System and supply reliability projects should be geographically and functionally diverse and should draw from diverse supply sources to maximize system reliability. Additional

wells, expansion of water banking projects, surface and groundwater storage, local surface water treatment plants, desalination treatment, new imported supply sources and improved imported water transmission facilities should be considered to meet the system reliability target. Participation in projects that are developed on a regional basis should be available to agencies on an optional basis.

- Cost effective projects that provide both system and supply reliability should be given the highest priority for implementation. Consideration should also be given to cost effective projects that provide shared benefits to other agencies in Orange County.
- System and supply reliability projects should be given the highest priority. Projects required to meet the minimum system and supply reliability targets, taking into consideration all foreseeable factors that could affect IRWD's reliability and its ability to manage demands, should be operational by 2020.
- Local base loaded supply projects that exceed the cost of import water from Metropolitan Water District of Southern California (MWD) over extended time horizons should not be considered when import water is available from MWD. Such projects would disproportionately benefit other agencies over IRWD.
- Maintaining the minimum levels of system and supply reliability at build out requires the development of additional capital projects. Incremental future development creates the need for these additional system and supply reliability projects through increases in water demand. Reliability projects should therefore be financed from bond proceeds to be paid back through property taxes and connection fees on new development.
- County wide evaluations and studies of water supply and system reliability should occur through the collaborations of all retail and wholesale agencies in the county. Such collaborative studies should be conducted in a manner that is consistent with the roles, responsibilities and policies of participating agencies and should not direct the actions of any agency. The studies should not over-reach into IRWD roles and responsibilities.
- Development of non-potable water supply projects and water use efficiency and conservation can offset potable water demand and reduce demand pressure on existing facilities. Non-potable water supply projects, such as the expansion of recycled water, should be evaluated as part of efforts to expand countywide water supply and system reliability.

Exhibit "B"

IRVINE RANCH WATER DISTRICT POLICY POSITION WATER BANKING, TRANSFERS AND WHEELING

Revised: November 23, 2020

Issue Summary:

The Irvine Ranch Water District is further diversifying its water supply portfolio by developing water banking facilities in the Kern Fan area located in the southern San Joaquin Valley in Kern County. Water supplies continue to be stressed in California due to implementation of the Sustainable Groundwater Management Act (SGMA), increased competition for water supplies, potential shortages from the Colorado River, supply limitations from and environmental constraints in the Sacramento-San Joaquin Delta (Delta), potential climate change and reoccurring droughts. Under such conditions, water banking recharge, storage and recovery programs will continue to provide a cost effective and reliable supplemental source of water that can be relied upon during majors droughts and periods of supply interruptions. The development of and participation in water banking programs and other types of emergency supply projects by retail water agencies should be encouraged throughout the State. This policy position paper provides Policy Principles for the implementation of the IRWD water banking program as well as other banking programs in the Metropolitan Water District of Southern California (MWD) service area.

IRWD Supply Diversity Requirements:

IRWD's primary mission is to provide a safe and reliable water supply to its customers. IRWD's water supply reliability is directly related to supply diversity. Along with the implementation of numerous water use efficiency programs, IRWD has developed and continues to develop a diverse mix of local and non-local supplies including high quality groundwater, impaired groundwater, and recycled water – all of which reduce IRWD's dependence on imported water.

In March 2020, IRWD completed a Water Supply Reliability Evaluation that affirmed the need for IRWD's water banking programs to meet District demands during future droughts and major supply interruptions. Current demand projections indicate that IRWD has a long-term need to store supplemental water that could be called upon during drought conditions or major supply interruptions. In the event of a major and prolonged supply interruption, such as an earthquake that significantly damages the levees in the Delta, this stored water would be available to fulfill IRWD's estimated needs for imported water over three years. IRWD's water banking programs make IRWD more resilient during major shortages. IRWD's water banking program is a cost effective and environmentally sound method to store and recover supplemental water to meet such long-term supply reliability requirements.

Key Elements of IRWD's Water Banking Program:

Since 2005, IRWD has made significant progress in the development of its water banking program and in securing associated supplemental supplies. IRWD has purchased land, constructed facilities, and is now operating the Strand and Stockdale Integrated Banking Projects through a long-term partnership with Rosedale-Rio Bravo Water Storage District. IRWD retains equity ownership of these water banking projects. IRWD has also partnered with Rosedale and

Santa Clarita Valley Water Agency to complete the construction of wells that ensure IRWD's ability to recover water for itself and its partners during peak demand periods.

Securing Water Supplies:

So far, IRWD has secured water supplies for its water banking projects through unbalanced exchange partnerships with other agencies. These partnerships allow agencies with surplus water to store water in IRWD's water banking projects in return for transferring 50 percent or more of the water to IRWD. Such exchanges are called unbalanced exchanges because only half or less of the water that is delivered into storage is returned to the originating agency.

Addressing Increased Competition:

SGMA was signed into law by Governor Jerry Brown in September 2014 for the purpose of developing and implementing sustainable groundwater management plans throughout California. By January 31, 2022, all high- and medium-priority groundwater basins must have in place a Groundwater Sustainability Plan and all basins in overdraft must achieve groundwater sustainability by year 2042. The implementation of these plans is increasing competition for water supplies and putting upward pressure on the cost of water as agencies work to optimize the use of surface supplies and expand water storage capabilities.

Other factors that will increase cost of water in the Kern Fan area include implementation of amendments to the State Water Project (SWP) Contract allowing compensation for transfers of water and the completion of the Isabella Lake Dam Safety Modification project, both of which will allow water right holders to better manage their supplies with a greater financial return. The use of transfers with associated financial compensation will become more flexible and easier to implement. Unbalanced exchanges will frequently include financial compensation components.

Increased competition for water supplies will require IRWD to adopt strategies to continue securing water for its Water Banking Projects while minimizing its cost of water. Strategies to be adopted by the IRWD Board of Directors could include leveraging IRWD's existing banked supplies to secure greater amounts of water and focusing on increasing the District's reliance on smaller schedulable sources of supply.

Wheeling and Exchange Agreements:

In 2011, IRWD, Metropolitan Water District of Southern California (MWD) and Municipal Water District of Orange County (MWDOC) executed a long-term Coordinated Operating, Exchange and Delivery Agreement (Coordinated Agreement) that facilitates the delivery of SWP supplies from IRWD's water banking projects to IRWD's service area. The agreement allows IRWD to secure SWP supplies with the concurrence of MWD, with MWD maintaining control of the introduction of these supplies into its service area. In 2014, IRWD, MWD and MWDOC developed and executed a template Wheeling Agreement that facilitated the delivery of non-SWP water into IRWD's service area. Water delivered to IRWD's service area, through the use of either of these agreements, is considered "Extraordinary Supply" by MWD during water supply allocation periods. It is IRWD's position, that the Coordinated Agreement and the

template Wheeling Agreement will be used by IRWD in the future to facilitate the delivery of water that is recovered from IRWD's water banking projects to IRWD's service area.

Supporting Extraordinary Supply Projects:

Other agencies in southern California are pursuing the development of Extraordinary Supply Projects that will require water purchase, wheeling and exchange capabilities. It is IRWD's position that MWD Member Agencies should support and not impede the ability of agencies to develop and implement agreements for purchasing water, implementing exchanges and wheeling of water associated with Extraordinary Supply Projects. Sponsors of all Extraordinary Supply Projects should work together to avoid impediments being imposed on projects.

Sharing Reliability Benefits:

The acquisition of supplemental supplies for IRWD's water banking projects is likely to require the use of unbalanced exchange concepts whereby IRWD stores water on behalf of another party in return for 50 percent or more of the water being transferred to IRWD. The storage and recovery of water for IRWD's exchange partners will take up capacity in IRWD's water banking projects that might otherwise be available for IRWD's use.

Recently, other agencies have expressed an interest in securing shared reliability from IRWD's water banking programs. It is IRWD's intent, after taking into consideration IRWD's reliability needs as well as hydrologic conditions, regional water supply conditions and storage levels, that IRWD will be able to enter into shared reliability program agreements that will allow other retail water agencies to receive reliability benefits from IRWD's water banking program. In exchange for receiving these benefits, the agencies would reimburse IRWD for its costs along with a proportional share of IRWD's capital investment in its water banking facilities.

Need for Expansion:

The implementation of future unbalanced exchanges and sharing of reliability benefits from IRWD's water banking projects will result in the need to expand IRWD's water banking capacities. In addition, potential climate change impacts could further increase the need to expand IRWD's water banking projects. Such expansions will ensure that IRWD can meet its water supply reliability requirements while meeting the requirements of its partners. IRWD and Rosedale are working to expand their respective water banking projects with the development of the Kern Fan Groundwater Storage Project (Kern Fan Project). IRWD and Rosedale will each have equity ownership in half of the project. IRWD and Rosedale have been conditionally approved to receive \$67.5 million in Proposition 1 Water Storage Investment Program funding for the Kern Fan Project. The agencies are currently pursuing up to \$63 million in Water Infrastructure Improvements for the Nation Act funding for the project.

Offsetting Capital Investments:

When IRWD has enough water in storage to meet its Extraordinary Supply Needs as well as the needs of those agencies to which IRWD has committed to shared water supply reliability, then

IRWD could consider selling a portion of its banked supplies in dry years to offset its capital investment in the water banking projects. The use of this strategy would need to take into careful consideration of existing regional storage levels, current water supply conditions, IRWD's demands for imported water and expectations for future water supplies.

Objectives for Acquiring Supplemental Water Supplies:

IRWD's objectives for acquiring both short and long-term supplemental water supplies through water transfers, exchanges and other market transactions, that would be available to IRWD's water banking projects and other water supply reliability programs, excluding supplies needed to fulfill local operations (including irrigation), are as follows:

1. IRWD seeks to acquire low-cost and diverse supplemental sources of water such as high flow Kern River water, State Water Project supplies, water associated with pre-1914 rights, CVP supplies and water from other available sources depending on annual availability and conveyance capacity availability.
2. Generally, IRWD seeks to acquire up to 67% of its supplemental supplies during wet hydrologic periods subject to the conditions established by the water supplier and availability. IRWD does not intend to compete for supplemental supplies during dry years.
3. Over the long term, IRWD plans to acquire up to 33% of its supplemental supplies through smaller sustained, controllable and schedulable supply sources. Such supplies are expected to be acquired through the purchases of farm land that have water supply entitled to it and by securing rights to new water supplies and the ability to convey the water without significant losses. IRWD intends to preserve existing agricultural uses on purchased lands when possible, and will schedule excess water for direct or exchange delivery to its water banking and other water supply reliability programs through rotational fallowing or onsite conservation using methods that are implemented in coordination with the local community with the intent to minimize significant third-party impacts to local economies.

Policy Principles:

Based on the information provided above, the following IRWD policy principles have been developed. These principles provide guidance on issues related to water banking, transfers, exchanges, wheeling of water and Extraordinary Supply projects.

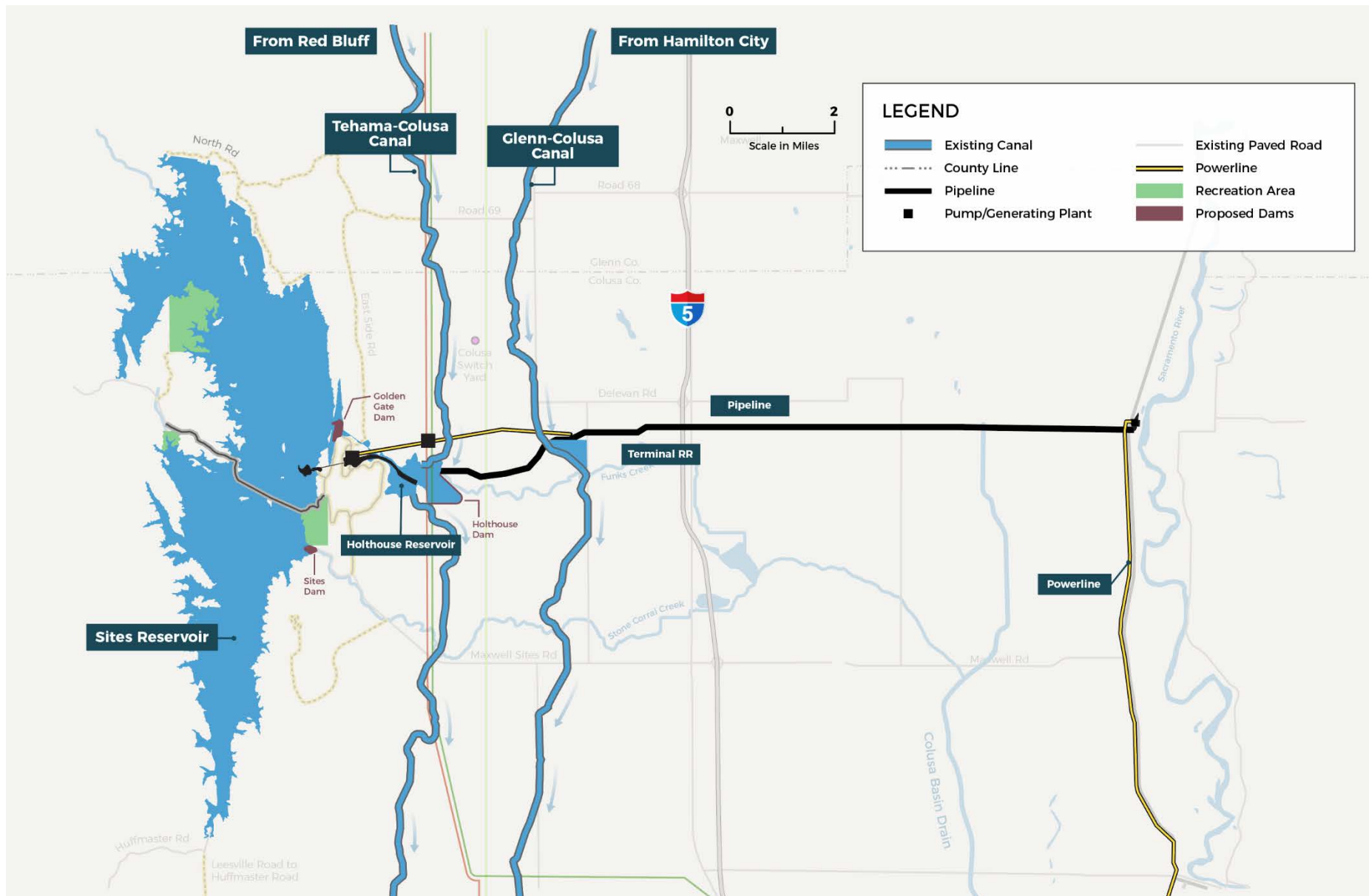
1. The State's water supplies are being impacted by reoccurring droughts, problems in the Delta, a growing population, competition for supplies, increasing costs of water, increasing regulatory pressure, potential climate change impacts, and an imbalance between available water supplies and available storage. As a result, IRWD needs supplemental supplies and storage facilities to bank the supplemental water supplies for use during dry periods.

2. Based on economic and environmental criteria, water banking programs involving storage in groundwater aquifers are preferred, having demonstrated that they are less expensive and preferable to surface storage.
3. A primary mission of IRWD is to provide a highly reliable supply of water. Reliability is enhanced by having multiple redundant sources of supply. To address this need, IRWD will develop diverse supplemental water supply sources and water banking capacities that will be sufficient to meet changes in IRWD's reliability needs in the future.
4. IRWD seeks to secure low-cost and diverse supplemental sources of wet year and smaller schedulable water supplies including high flow Kern River, State Water Project supplies, water with pre-1914 rights, CVP supplies and water from other available sources depending on annual availability and conveyance and/or exchange capacity that will allow IRWD to achieve its water supply reliability goals through the implementation its water banking program.
5. Because of the District's obligation to its customers, long-term equity ownership of water banking capacity as well as lands and projects that have water supplies entitled to them is strongly preferred over contract or lease arrangements. Equity partnerships that provide benefits to both the District and to local entities are preferred.
6. The District's water banking partners will benefit from the sharing of recharge, storage and recovery capacity through unbalanced exchanges and shared reliability benefit programs. In addition, due to potential climate change, the future intervals between wet years could become longer with increases in the rate of runoff. These issues may make it necessary for IRWD in the future to consider increasing recharge, storage and recovery capacities in its water banking program.
7. Expansion of water banking capacities may be considered through equity purchases of capacities available in existing water banking programs or development of partnerships for capacity expansion.
8. IRWD will support wheeling policies and rates adopted by MWD, MWD Member Agencies and other agencies to the extent they reflect cost of service approach. Any wheeling or exchange of water through MWD's conveyance facilities should be consistent with MWD's Administrative Code, must not financially impact MWD or its Member Agencies and should protect MWD's rights including its SWP contract.
9. MWD Member Agencies should support and not impede the ability of agencies to implement Extraordinary Supply projects and to wheel or exchange water through MWD's conveyance facilities.
10. IRWD will work with sponsors of other Extraordinary Supply projects and support exchanges of water that prevent or avoid impediments that threaten the feasibility or increase the costs of the projects.

11. IRWD will put all available supplemental water supplies to beneficial use using methods that are implemented in coordination with the communities that are local to the source waters and where necessary attempt to minimize significant third-party impacts while preserving the agricultural benefits of the contributing lands through temporary fallowing arrangements and / or water conservation efforts.
12. IRWD will seek partnerships that result in mutually beneficial exchange and transfer opportunities including the ability to enhance direct and in-lieu recharge or recovery operations associated with IRWD's water banking program.
13. IRWD will support and actively work with the State and the Federal governments and available legislative processes to streamline procedures for the implementation of short and long-term water transfers and exchanges as well as the formation of local, regional and statewide water marketing systems.
14. IRWD will support the development of water marketing systems in the State of California that are consistent with and do not expand existing lawful authorities, provide local and regional oversight of markets, encourage regional and statewide cooperation, protect existing land, water and capacity rights, attempt to protect communities from unreasonable third party and / or environmental impacts, do not interfere with contract rights and that result in streamlined abilities to effectuate water transfers, exchanges and wheeling of supplies among voluntary market participants.
15. To address increasing competition and costs for water, IRWD will consider leveraging its existing banked supplies to secure greater amounts of water while maximizing the exportability of water. IRWD will also consider increasing the District's reliance on small and schedulable sources of supplies.
16. IRWD will support sharing water supply reliability benefits from its water banking program after considering its own water supply reliability needs as well as hydrologic and regional water supply conditions including storage levels. .
17. When IRWD has enough water in storage to meet its current Extraordinary Supply Needs as well as the needs of the agencies to which IRWD has committed shared water supply reliability, then IRWD will consider selling a portion of its banked supplies in dry years to offset its capital investment in the water banking projects. Such sales would consider existing regional storage levels, current water supply conditions, IRWD's demands for imported water and expectations for future water supplies.

Exhibit "C"

Sites Reservoir Location Map



Note: This page is intentionally left blank.

Exhibit "D"

THIRD AMENDMENT TO 2019 RESERVOIR PROJECT AGREEMENT

BY AND AMONG
SITES PROJECT AUTHORITY

and

THE PROJECT AGREEMENT MEMBERS LISTED HEREIN

Dated as of January 1, 2022

THIS THIRD AMENDMENT TO 2019 RESERVOIR PROJECT AGREEMENT (this “Third Amendment”), dated as of January 1, 2022, by and among SITES PROJECT AUTHORITY, a joint powers authority duly organized and existing under the laws of the State of California (the “Authority”), and the project agreement members listed in the Agreement referenced below (the “Project Agreement Members”) amends that certain 2019 Reservoir Project Agreement dated as of April 1, 2019 (the “Original Agreement”), as previously amended by the First Amendment to 2019 Reservoir Project Agreement dated as of January 1, 2020 (the “First Amendment”) and by the Second Amendment to 2019 Reservoir Project Agreement dated as of July 1, 2020 (the “Second Amendment” and, together with the Original Agreement, the First Amendment and the Second Amendment, the “Agreement”), each by and among the Authority and the Project Agreement Members;

WITNESSETH:

WHEREAS, Authority and the Project Agreement Members have determined to approve an Amendment 3 Work Plan and to extend the term of the Agreement to December 31, 2024; and

WHEREAS, under Section 11 of the Agreement, the Agreement may be amended by a writing executed by the Authority and at least 75% of the total weighted vote of the then current Committee members as provided in Subsection 3(g); and

WHEREAS, except as provided below in Section 2.07 below, all acts, conditions and things required by law to exist, to have happened and to have been performed precedent to and in connection with the execution and the entering into of this Third Amendment do exist, have happened and have been performed in regular and due time, form and manner as required by law, and the parties hereto are now duly authorized to execute and enter into this Third Amendment;

NOW, THEREFORE, THIS THIRD AMENDMENT WITNESSETH, the Authority and the Project Agreement Members agree, as follows:

ARTICLE I

DEFINITIONS

Section 1.01. Definitions. All capitalized terms not otherwise defined herein shall have the meaning set forth in the Agreement.

ARTICLE II

AMENDMENTS TO AGREEMENT

Section 2.01. Project Agreement Members.

(a) Effective January 1, 2022, Exhibit A to the Agreement titled “Project Agreement Members” shall be removed and replaced with Exhibit A to this Third Amendment titled “Project Agreement Members.”

Section 2.02. Work Plan.

(a) Effective January 1, 2022, the Amendment 2 Work Plan attached as Exhibit B to the Second Agreement shall be supplemented by the Work Plan attached hereto as Exhibit B (the “Amendment 3 Work Plan”).

Section 2.03. Funding.

The Agreement is hereby amended to remove Section 4(a) in its entirety and replace it with the following:

“(a) Budget. The Committee shall, in cooperation with the Authority’s Board, provide and approve both a Fiscal Year operating budget and reestablish a Phase 2 budget target, annually or more frequently as needed. The Project Agreement Members shall contribute their respective pro-rata share of the budgeted sums reflected in the Amendment 3 Work Plan in accordance with Section 5 of this Project Agreement. The contribution with respect to the pro-rata budgeted sums reflected in the Amendment 3 Work Plan shall be payable by each Project Agreement Member in three installments. The first installment shall be in an amount equal to \$100 per acre-foot and shall be payable by no later than May 1, 2022. The second installment shall be in an amount equal to up to \$140 per acre-foot and shall be payable by no later than January 1, 2023. The third installment shall be in an amount equal to up to \$160 per acre-foot and shall be payable by no later than January 1, 2024. The obligation of the Project Agreement Members to make the second installment and third installment shall be conditioned upon the Authority and the Committee reapproving the Amendment 3 Work Plan or approving an amendment thereto by (i) an affirmative vote of at least 75% of the total number of Directors of the Authority Board and (ii) an affirmative vote of at least 75% of the total weighted vote as provided at Subsection 3(g) of the then-current Committee members, prior to January 1, 2023 or January 1, 2024, as applicable.”

Section 2.04. Future Development of the Proposed Sites Reservoir Project.

The Agreement is hereby amended to add the below Sections 6(c), 6(d) and 6(e):

“(c) On or prior to March 31, 2022, each Project Agreement Member shall provide the Authority with a completed Project Agreement Member Project Payment Annex in the form attached hereto as Exhibit C. The Project Agreement Members, upon written request of the Authority, will meet with Authority staff from time to time, but not more often than once per calendar quarter, at which meeting, Authority staff will provide such Project Agreement Members with information regarding the then-current financing options being considered by the Authority and the expected terms of such financing options and the Project Agreement Member will provide updates regarding the status of the items identified in the Project Agreement Member Project Payment Annex.

(d) On or prior to June 30, 2023, each Project Agreement Member shall provide the Authority with a written update (the “Project Agreement Member Update”) with respect to the progress in the implementation of such repayment option, the remaining actions to be taken and the estimated completion dates.

For those Project Agreement Members that identified special benefit assessments or land based charges imposed in an improvement district as a source of repayment for an Authority

financing in its Project Agreement Member Payment Annex, the Project Agreement Member Update will also include a confirmation that such Project Agreement Member has the legal or contractual authority to discontinue water service to a water user that is delinquent in the payment of such special benefit assessment or land based charge, as applicable.

The Project Agreement Member Update will also include a confirmation that the Project Agreement Member has adopted a debt management policy that is compliant with California Government Code Section 8855(i), or, if such Project Agreement Member has not adopted such a debt management policy, the Project Agreement Member Update will include a statement that such Project Agreement Member expects to adopt such a debt management policy or an opinion from the general counsel to such Project Agreement Member to the effect that such a debt management policy is not required to be adopted by the Project Agreement Member to finance its share of the Project.

The Project Agreement Member Update shall also identify any change in the proposed source of repayment from the source identified in the Project Agreement Member Payment Annex previously submitted to the Authority.

(e) The Project Agreement Members that identified the repayment options of either special benefit assessments or land based charges imposed in an improvement district in their respective Project Agreement Member Payment Annexes agree to use best efforts to complete the necessary procedures to comply with the applicable requirements of Proposition 218 by no later than June 30, 2023.”

Section 2.05. Term. The Agreement is hereby amended to remove Section 8(b) in its entirety and replace it with the following:

“(b) The term of this Project Agreement shall continue until December 31, 2024. In the event that this Third Amendment is not approved by Project Agreement Members with the requisite percentage of the total weighted vote as set forth in the Agreement by March 31, 2022, the Agreement shall be revived immediately upon approval by such requisite percentage, without any additional approval of the Project Agreement Members, and this Third Amendment shall become effective.”

Section 2.06. Admission of New Project Agreement Members. The Agreement is hereby amended to add the following sentence to end of the paragraph included under Section 10 of the Agreement:

“The Authority shall have the right to charge Project Agreement Members executing the Agreement after a date determined by the Board a fee, which such fee shall be established by the Board, to compensate Project Agreement Members who executed the Agreement prior to a date determined by the Board, for providing funding for the initial phases of the Project.”

Section 2.07. California Environmental Quality Act. The Agreement is hereby amended to add the following Section 18:

“Section 18 California Environmental Quality Act

Notwithstanding any provision of this Agreement, the Authority and the Project Agreement Members fully reserve all of their respective rights, powers, authority and discretion with respect to

the proposed Project pursuant to the agencies' respective obligations and responsibilities under the California Environmental Quality Act ("CEQA"). This includes: (A) the power and discretion of the Authority as the lead agency, upon the completion of its CEQA review, to adopt feasible mitigation measures or a feasible project alternative, to approve the proposed Project based on the requisite CEQA findings, or to disapprove the proposed Project; and (B) the powers and discretion of the Project Agreement Members concerning the specific matters within their respective jurisdiction and authority acting as responsible agencies under CEQA. Any future decisions on whether to issue an approval of the proposed Project, and if so, how to issue such approval, will not be made until the agency making the decision has first completed its CEQA review of the proposed Project."

ARTICLE III

PROJECT AGREEMENT MEMBER PARTICIPATION

Section 3.01. Project Agreement Participation. Each Project Agreement Member shall specify its participation in the Sites Reservoir Project by indicating its storage amount in the Sites Reservoir Project on the signature page to this Third Amendment. Based upon the respective participation elections of the Project Agreement Members, the Authority shall update Exhibit A pursuant to Section 5 of the Agreement.

ARTICLE IV

MISCELLANEOUS

Section 4.01. Effectiveness of Agreement. Except as expressly amended by this Third Amendment, the Agreement is hereby ratified and confirmed and shall continue in full force and effect in accordance with the terms and provisions thereof. The amendments set forth in this Third Amendment shall be incorporated as part of the Agreement upon their effectiveness in accordance with Section 11 of the Agreement.

Section 4.02. Execution in Several Counterparts. This Third Amendment may be executed in any number of counterparts and each of such counterparts shall for all purposes be deemed to be an original; and all such counterparts, or as many of them as the Authority and the Project Agreement Members shall preserve undestroyed, shall together constitute but one and the same instrument.

Section 4.03. Laws Governing Third Amendment. The effect and meaning of this Third Amendment and the rights of all parties hereunder shall be governed by, and construed according to, the laws of the State.

IN WITNESS WHEREOF, the Authority and Project Agreement Members hereto, pursuant to resolutions duly and regularly adopted by their respective governing bodies, have caused their names to be affixed by their proper and respective officers on the date shown below:

Dated: _____

SITES PROJECT AUTHORITY

By: _____
Name: _____
Title: _____

[PROJECT AGREEMENT MEMBER]

Dated: _____

(Authority & Project Agreement Member)

By: _____
Name: _____
Title: _____

[PROJECT AGREEMENT MEMBER]
REPRESENTATIVES

The primary and alternate representatives of the [PROJECT AGREEMENT MEMBER] are identified below.

Primary Representative:

Alternate Representative:

ELECTION OF PARTICIPATION AMOUNT

[PROJECT AGREEMENT MEMBER] hereby elects to participate in the Sites Reservoir Project in the below amount.

**a) Annualized Acre-Foot
(acre-feet of releases)**

**b) Storage Allocation
(acre-feet of storage)**
*Box "a" * 6.234*

c) Total Budget Authorization
*Box "a" * \$400 per acre-foot*

EXHIBIT A

PROJECT AGREEMENT MEMBERS

Participant	Third Amendment Participation		
	Annualized Acre-Foot (Box “a”)	Storage Allocation (Box “b”)	Percent
American Canyon, City of	4,000	24,936	2.4%
Antelope Valley-East Kern Water Agency	500	3,117	0.3
Carter Mutual Water Company #	300	1,870	0.2
Coachella Valley Water District	10,000	62,340	6.0
Colusa County	10,000	62,340	6.0
Colusa County Water District	10,073	62,795	6.0
Cortina Water District	450	2,805	0.3
Davis Water District	2,000	12,468	1.2
Desert Water Agency	6,500	40,521	3.9
Dunnigan Water District	2,972	18,527	1.8
Glenn-Colusa Irrigation District	5,000	31,170	3.0
Irvine Ranch Water District	1,000	6,234	0.6
LaGrande Water District	1,000	6,234	0.6
Metropolitan Water District of S. CA	50,000	311,700	29.8
Reclamation District 108	4,000	24,936	2.4
Rosedale-Rio Bravo Water Storage District	500	3,117	0.3
San Bernardino Valley Municipal Water District	21,400	133,408	12.8
San Geronio Pass Water Agency	14,000	87,276	8.4
Santa Clara Valley Water District	500	3,117	0.3
Santa Clarita Valley Water Agency	5,000	31,170	3.0
Westside Water District	5,375	33,508	3.2
Wheeler Ridge-Maricopa Water Storage District	3,050	19,014	1.8
Zone 7 Water Agency	10,000	62,340	6.0
Total:	167,620	1,044,943	100.0

Participation Percentages exclude State of California and United States Bureau of Reclamation share of the Project.

Denotes a non-public agency. Refer to California Corporations Code Section 14300 et. seq. with additional requirements provided in both the Public Utilities Code and Water Code.

EXHIBIT B
AMENDMENT 3 WORK PLAN

Exhibit B
Reservoir Committee
2022, 2023 and 2024 Work Plan Summary

Reservoir Committee and Authority Board Annual Budget for FY 2022, FY 2023 and FY 2024 (\$000)

Work Plan	Subject Area	2022	2023	2024	Total
Revenue	Participation Revenue	\$16,762	\$23,467	\$26,819	\$67,048
	Authority Board Seats	\$505	\$505	\$505	\$1,515
	Federal Revenue	\$10,000	\$20,000	\$20,000	\$50,000
	State Revenue	\$18,300	\$0	\$0	\$18,300
	Carry-over Funds	\$6,000	\$0	\$0	\$6,000
Revenue Total		\$51,567	\$43,972	\$47,324	\$142,863
Expenses	Communications	(\$477)	(\$477)	(\$495)	(\$1,449)
	Engineering	(\$18,715)	(\$30,516)	(\$20,485)	(\$69,716)
	External Affairs	(\$273)	(\$273)	(\$282)	(\$828)
	General Project Activities	(\$620)	(\$545)	(\$565)	(\$1,730)
	Permitting	(\$7,503)	(\$4,731)	(\$2595)	(\$14,829)
	Planning	(\$5,092)	(\$1,212)	(\$278)	(\$6,582)
	Program Operations	(\$8,594)	(\$7,440)	(\$5690)	(\$21,724)
	Real Estate	(\$902)	(\$903)	(\$935)	(\$2,740)
Expenses Total		(\$42,176)	(\$46,097)	(\$31,325)	(\$119,598)
Grand Total		\$9,391	(\$2,125)	\$15,999	\$23,265

EXHIBIT C

FORM OF PROJECT AGREEMENT MEMBER PROJECT PAYMENT ANNEX

Project Agreement Member:

Date:

Expected Source(s) of Repayment For Authority Financing (Check Each Box That Applies):	☐ Amounts Collected Through Department of Water Resources State Water Project Annual Statement of Charges	☐ Water Rates and Charges (Proposition 218 Compliance Required)	☐ Water Rates and Charges (Proposition 218 Compliance Not Required)	☐ Special Benefit Assessment-Districtwide	☐ Special Benefit Assessment Levied by District on Certain Lands	☐ Land-Based Charges Imposed Within an Improvement District
If An Improvement District, Has It Been Formed?	☐ Yes	☐ No	If no, is it anticipated to be formed by June 30, 2023? ☐ Yes ☐ No			
If A Special Benefit Assessment, Has the Special Benefit Been Approved In An Amount To Pay Debt Service On The Authority Financing?	☐ Yes	☐ No	If no, is it anticipated to be presented for landowner approval by June 30, 2023? ☐ Yes ☐ No			
Does the District Have A Debt Management Policy Compliant With Section 8855(i) of the California Government Code?	☐ Yes	☐ No				