

AGENDA
IRVINE RANCH WATER DISTRICT
SUPPLY RELIABILITY PROGRAMS COMMITTEE
THURSDAY, JUNE 21, 2018

CALL TO ORDER 3:00 p.m., Committee Room, Second Floor, District Office
15600 Sand Canyon Avenue, Irvine, California

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

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

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

- | | |
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| <p>5. <u>SANTA ANA RIVER CONSERVATION AND CONJUNCTIVE USE PROGRAM (SARCCUP) PRESENTATION</u></p> <p>Adam Hutchinson, Orange County Water District, will present information pertaining to the SARCCUP.</p> | |
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INFORMATION

- | | |
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| <p>6. <u>WATER BANKING PROJECT FACILITIES, CAPACITIES, OPERATIONS, AND PROGRAMS OVERVIEW – JOHNSON/WELCH/SANCHEZ/ WEGHORST</u></p> <p>Recommendation: Receive and file.</p> | |
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INFORMATION (Continued)

7. KERN FAN GROUNDWATER STORAGE PROJECT UPDATE – WELCH/
SANCHEZ/WEGHORST

Recommendation: Receive and file.

ACTION

8. UPDATE ON THE KERN FAN GROUNDWATER STORAGE PROJECT
AGREEMENT – WELCH/SANCHEZ/WEGHORST

Recommendation: That the Committee provide input on Rosedale-Rio Bravo Water Storage District's proposed modifications to the Kern Fan Groundwater Storage Project Agreement and authorize staff and special legal counsel to work with Rosedale to finalize the agreement for consideration by the IRWD Board of Directors.

OTHER BUSINESS

9. Directors' Comments.

10. CLOSED SESSION CONFERENCE WITH REAL PROPERTY NEGOTIATORS - Government Code Sec. 54956.8 - Related to Potential Sale of Rights to Water in the IRWD Water Bank to Municipal Water District of Orange County.

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

Negotiating parties: Municipal Water District of Orange County.

Under negotiation: Price and terms of payment of acquisition of rights to water.

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 at the entrance of the meeting room at the District Office. The Irvine Ranch Water District Committee Room is wheelchair accessible. If you require any special disability-related accommodations (e.g., access to an amplified sound system, etc.), please contact the District Secretary at (949) 453-5300 during business hours at least seventy-two (72) hours prior to the scheduled meeting. This agenda can be obtained in an alternative format upon written request to the District Secretary at least seventy-two (72) hours prior to the scheduled meeting.

June 21, 2018

Prepared by: D. Johnson/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 OVERVIEW

SUMMARY:

Staff has prepared information related to IRWD's water banking facilities, capacities, operations and exchange programs that may serve as reference during Committee meetings. The information is presented in a format that can be updated as necessary to reflect changes in IRWD's projects, programs and operations. At the Committee meeting, staff will review this information and provide an update on ongoing efforts to secure additional water for recharge at IRWD's water banking projects as well as expected recovery operations for the year.

BACKGROUND:

To assist with the facilitation of Committee meeting discussions, staff has prepared reference materials in tabular, map and schematic formats that describe IRWD's water banking facilities, capacities, operations and exchange programs. The reference materials will be updated, as needed, to reflect changes to the projects, programs and operations. Following is an overview of the reference materials provided. Information is also provided regarding IRWD's 2018 water banking operations.

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 attached as Exhibit "A". Exhibits "B" and "C" provide an update on water banking recovery and recharge operations, as well as the balance of the water stored in the Kern Water Bank. Exhibit "B" provides before-loss estimates of water recharged at the water banking projects, and Exhibit "C" provides after-loss estimates of water recharged at the projects. Both Exhibits "B" and "C" include a column that provides totals for each water type and storage location.

2018 Recharge Opportunities:

On May 21, 2018, the Department of Water Resources announced an increase to the allocation of 2018 State Water Project (SWP) supplies to 35%, up from the 20% initial allocation. As a result of the increased SWP allocation and increased storage levels in the Metropolitan Water District of Southern California (Metropolitan) reservoirs, Metropolitan has notified staff that it will not have a need for of IRWD's SWP supplies through Dudley Ridge Water District (DRWD) for 2018. Accordingly, staff will coordinate the delivery of IRWD's 2018 SWP supplies (621 AF) into storage at the Strand Ranch Integrated Banking Project.

Staff has been pursuing additional opportunities to secure recharge water for 2018. At the Committee meeting, staff will provide an update on efforts to secure water from:

- Dudley Ridge Water District;
- Antelope Valley-East Kern Water Agency;
- Mohave Water Agency; and
- Other Opportunities.

2018 Recovery Operations:

In March 2018, Buena Vista Water Storage District (BVWSD) requested recovery of its 6,199 acre-feet (AF) of water that was stored at the Strand and Stockdale Integrated Banking Projects in 2017. After obtaining approval for the request, Rosedale-Rio Bravo Water Storage District (Rosedale) began utilizing the Strand and Stockdale wells on May 4 to recover BVWSD water. On May 22, staff suspended recovery of BVWSD's water because BVWSD determined that the increase in SWP allocation to 35% will provide BVWSD with sufficient water supplies for the year. Rosedale reported that 1,667 AF was recovered and delivered to BVWSD from May 4 to May 22, leaving a balance of 4,532 AF in storage for BVWSD.

Project Maps:

To support the tables provided as Exhibits "A", "B" and "C", staff has prepared maps that depict project wells and pipelines, recharge basins and Cross Valley Canal turnout locations, along with the most recent recharge rates. These maps are provided as Exhibits "D", "E" and "F", respectively. The facilities shown on these maps are associated with the Strand Ranch, Stockdale West, Stockdale East and Rosedale Drought Relief Projects.

Program Agreement Diagrams:

Schematic diagrams have been prepared that depict the IRWD water banking and exchange programs with Rosedale, BVWSD, DRWD, and Metropolitan. These diagrams are provided as Exhibits "G", "H", "I", "J", and "K" as described in the List of Exhibits.

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” – Map of Water Banking Project Wells and Pipelines
- Exhibit “E” – Map of Water Banking Recharge Basins and Cross Valley Canal Turnout Facilities
- Exhibit “F” – Map of Water Banking Recharge Rates
- Exhibit “G” – Diagram of IRWD-Rosedale Water Banking and Exchange Program Agreements
- Exhibit “H” – 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 “I” – Diagram of Unbalanced Exchange Program Diagram with DRWD
- Exhibit “J” – Diagram of Coordinated Operating, Water Storage, Exchange and Delivery Agreement with MWD
- Exhibit “K” – Diagram of Template Wheeling Agreement with MWD

Exhibit "A"

TABLE 1
Current and Anticipated Water Banking Projects
Recharge, Storage and Recovery Capacities
 June 21, 2018

WATER BANKING PROJECT	OWNERSHIP AND WELL INFO			ALLOCATED CAPACITY (AF)					1 ST PRIORITY RECOVERY CONDITIONS (CFS)		2 ND PRIORITY RECOVERY CONDITIONS (CFS)	
	IRWD OWNED	WELLS EXISTING	WELLS PROPOSED OR UNDER CONST.	TOTAL STORAGE CAPACITY	ANNUAL RECHARGE 1 ST PRIORITY	ANNUAL RECHARGE 2 ND PRIORITY	ANNUAL RECOVERY 1 ST PRIORITY	ANNUAL RECOVERY 2 ND PRIORITY	RECOVERY CAPACITY AS PLANNED ¹	ESTIMATED RECOVERY CAPACITY (DEC. 2016 CONDITIONS) ²	RECOVERY CAPACITY AS PLANNED	RECOVERY CAPACITY CURRENT CONDITIONS
Strand Ranch	Yes	7	-	50,000	17,500	-	17,500	-	40.0	27.0	-	-
Stockdale West	Yes	3	-	26,000	27,100	-	11,250	-	15.0	-	-	-
Stockdale East	No	-	2	-	-	19,000	-	7,500	-	-	10.0	-
IRWD Acquired Storage Account ³	No	-	-	50,000	-	-	-	-	-	-	-	-
Drought Relief Project Wells ³	No	-	3	-	-	-	-	-	15.0	-	-	-
Kern Water Bank Storage Account ⁵	No	-	-	9,495	3,200	-	6,330	-	-	-	-	-
TOTALS		10	5	126,000	44,600	19,000	28,750	7,500	70.0	27.0	10.0	0.0
Partner Capacities ⁴				36,000	22,300	9,500	12,000	0	35.5	27.0	-	-
IRWD Capacities				90,000	22,300	9,500	16,750	7,500	34.5	0.0	-	-
IRWD's recovery <i>during</i> 6 month partner recovery period (AF)									12,420	0.0	-	-
IRWD's recovery <i>after</i> 6 month partner recovery period (AF)									4,330	6,733	-	-
TOTALS (AF)									16,750	6,733	-	-
Number of months needed to recover IRWD's total AF after partners' recovery (Assumes IRWD has use of total recovery capacity after partners' recovery)									8.1	14.0	-	-
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 Strand Ranch wells currently idle.

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

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

⁵ 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. Not included in storage capacity, recharge, and recovery totals to match IRWD's Water Banking Policy Position Paper (10/26/2015).

Exhibit "B"

TABLE 2
IRWD's Water Banking Storage, Recharge and Recovery Operations - BEFORE LOSSES
June 21, 2018

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 2017 (AF)						
Total Kern Water Bank	-	4,581	-	-	-	4,581
Total MWD System ⁴	8,873	-	-	-	1,174	10,047
Total Kern County	437	10,835	-	-	-	11,272
TOTAL STORED WATER (1/1/2016)	9,310	15,416	-	-	1,174	25,900
(RECOVERY) AND RECHARGE IN 2017 (AF)						
Kern Water Bank Deliveries	-	75	-	-	-	75
2017 SWP Allocation (85%) ³	787	-	-	-	787	1,574
2017 SWP Article 21 ⁵	1,744	-	-	-	1,744	3,488
SWP Table A (CCWA 2017 Exch.)	289	-	-	289	-	578
High Flow Kern River	-	6,869	6,869	-	-	13,738
MWD Water to Jackson Ranch ⁶	-	-	-	-	(143)	(143)
TOTAL 2016 TRANSACTIONS	2,820	6,944	6,869	289	2,388	19,310
Total Kern Water Bank	-	4,656	-	-	-	4,656
Total MWD System	8,873	-	-	-	1,174	10,047
Total Kern County	3,257	17,704	6,869	289	2,388	30,507
TOTAL STORED WATER (1/1/2018)	12,130	22,360	6,869	289	3,562	45,210
(RECOVERY) AND RECHARGE IN 2018 (AF)						
Kern Water Bank Deliveries	-	-	-	-	-	-
2018 SWP Allocation (35%) ³	310	-	-	-	310	620
High Flow Kern River	-	-	(1,667)	-	-	(1,667)
TOTAL ESTIMATED 2018 TRANSACTIONS	310	-	(1,667)	-	310	(1,047)
ESTIMATED WATER IN STORAGE 2018 (AF)						
Total Kern Water Bank	-	4,656	-	-	-	4,656
Total MWD System	8,873	-	-	-	1,174	10,047
Total Kern County	3,567	17,704	5,202	289	2,698	29,460
TOTAL ESTIMATED STORED WATER TO DATE	12,440	22,360	5,202	289	3,872	44,163

NOTES:

-MWD = Metropolitan Water District of Southern California.

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

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

³ DRWD water supply will be returned by MWD or IRWD's Strand Ranch to IRWD's Jackson Ranch. IRWD's 2013-2016 SWP allocation amounts are stored in the MWD system. IRWD's 2017 SWP allocation water is stored in Kern County; assumes 2018 SWP water will be stored in Kern County.

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

⁵ Article 21 was delivered to Strand Ranch/Stockdale West from 3/8/17 - 3/22/17. Deliveries made pursuant to the DRWD/MWD Unbalanced Exchange Program.

⁶ Water returned to Kings County by MWD for use on IRWD's Jackson Ranch.

Exhibit "C"

TABLE 3
IRWD's Water Banking Storage, Recharge and Recovery Operations - AFTER LOSSES
 June 21, 2018

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 2017 (AF)						
Total Kern Water Bank	-	4,165	-	-	-	4,165
Total MWD System ⁴	7,917	-	-	-	1,174	9,091
Total Kern County	389	9,675	-	-	-	10,064
TOTAL STORED WATER (1/1/2017)	8,306	13,840	-	-	1,174	23,320
(RECOVERY) AND RECHARGE IN 2017 (AF)						
Kern Water Bank Deliveries	-	68	-	-	-	68
2017 SWP Allocation (85%) ³	669	-	-	-	708	1,377
2017 SWP Article 21 ⁵	1,479	-	-	-	1,566	3,044
SWP Table A (CCWA 2017 Exch.)	246	-	-	246	-	491
High Flow Kern River	-	5,889	6,199	-	-	12,088
MWD Water to Jackson Ranch ⁶	-	-	-	-	(143)	(143)
TOTAL 2017 TRANSACTIONS	2,393	5,957	6,199	246	2,131	16,925
Total Kern Water Bank	-	4,233	-	-	-	4,233
Total MWD System	7,917	-	-	-	1,174	9,091
Total Kern County	2,782	15,564	6,199	246	2,131	26,921
TOTAL STORED WATER (1/1/2018)	10,699	19,797	6,199	246	3,305	40,245
(RECOVERY) AND RECHARGE IN 2018 (AF)						
Kern Water Bank Deliveries	-	-	-	-	-	-
2018 SWP Allocation (35%) ³	264	-	-	-	264	528
High Flow Kern River	-	-	(1,667)	-	-	(1,667)
TOTAL ESTIMATED 2018 TRANSACTIONS ⁷	264	-	(1,667)	-	264	(1,139)
ESTIMATED WATER IN STORAGE 2018 (AF)						
Total Kern Water Bank	-	4,233	-	-	-	4,233
Total MWD System	7,917	-	-	-	1,174	9,091
Total Kern County	3,046	15,564	4,532	246	2,395	25,782
TOTAL ESTIMATED STORED WATER TO DATE	10,963	19,797	4,532	246	3,569	39,106

NOTES:

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

-MWD = Metropolitan Water District of Southern California.

¹ IRWD's SWP includes 389 AF from CVWD that stays in Kern County.

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

³ DRWD water supply will be returned by MWD or IRWD's Strand Ranch to IRWD's Jackson Ranch. IRWD's 2013-2016 SWP allocation amounts are stored in the MWD system. IRWD's 2017 SWP allocation water is stored in Kern County; assumes 2018 SWP water will be stored in Kern County.

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

⁵ Article 21 was delivered to Strand Ranch/Stockdale West from 3/8/17 - 3/22/17. Deliveries made pursuant to the DRWD/MWD Unbalanced Exchange Program. 9 AF of additional CVC losses, split among IRWD and DRWD, are reflected in these amounts.

⁶ Water returned to Kings County by MWD for use on IRWD's Jackson Ranch.

⁷ 2018 transactions may be adjusted for conveyance losses in CVC.

Exhibit "D"



Irvine Ranch
WATER DISTRICT

Location Map: IRWD Water Banking Projects Wells and Turnin Pipelines

MAP FEATURES

- Existing Extraction Well
- Planned Extraction Well
- Well Under Construction
- Well Discharge Pipelines
- Stockdale East
- Stockdale West
- Strand Ranch

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



0 0.25 0.5 1 Miles

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

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

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Exhibit "E"

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 as well as existing and anticipated 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

Stockdale Highway

Cross Valley Canal

Enos Ln

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

Exhibit "F"

Rosedale Highway



Irvine Ranch
WATER DISTRICT

Location Map: IRWD Water Banking Projects Recharge Rates

MAP FEATURES

- ▲ Turnouts
- Stockdale West
- Strand Ranch

Northern Basins
0.36 ft/day
100 CFS

Stockdale Highway

Cross Valley Canal

Southern Basins
0.27 ft/day
30 CFS

This figure shows the location of recharge basins and their associated recharge rates as of early December 2017. Recharge rates will be updated when recharge begins in 2018.

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

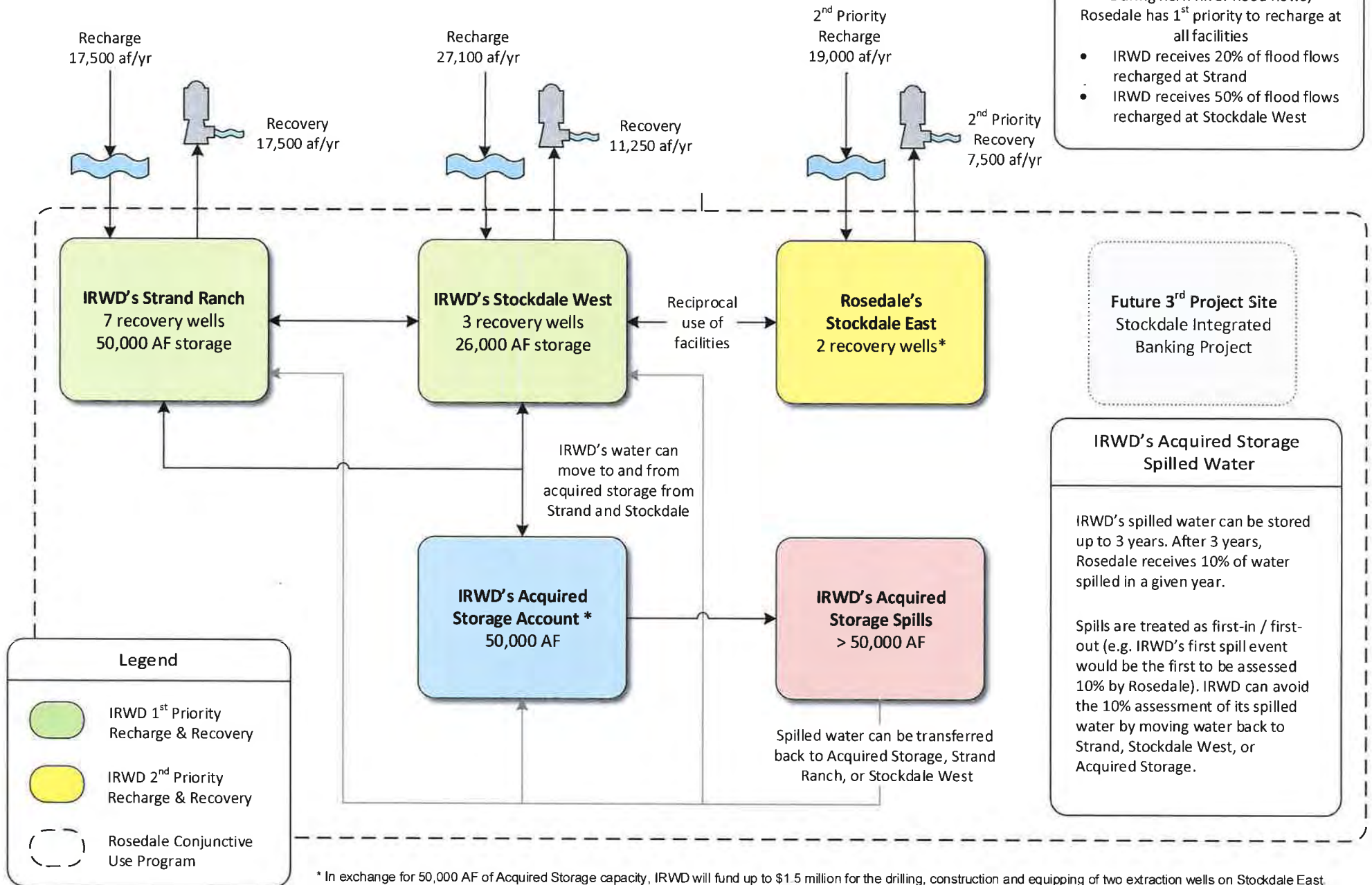
NAD 83 State Plane Zone 5 (feet)
Central Meridian: -118

F-1

Exhibit "G"

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)

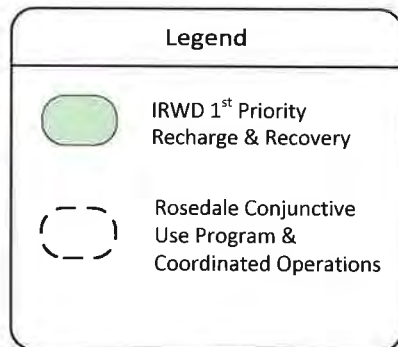
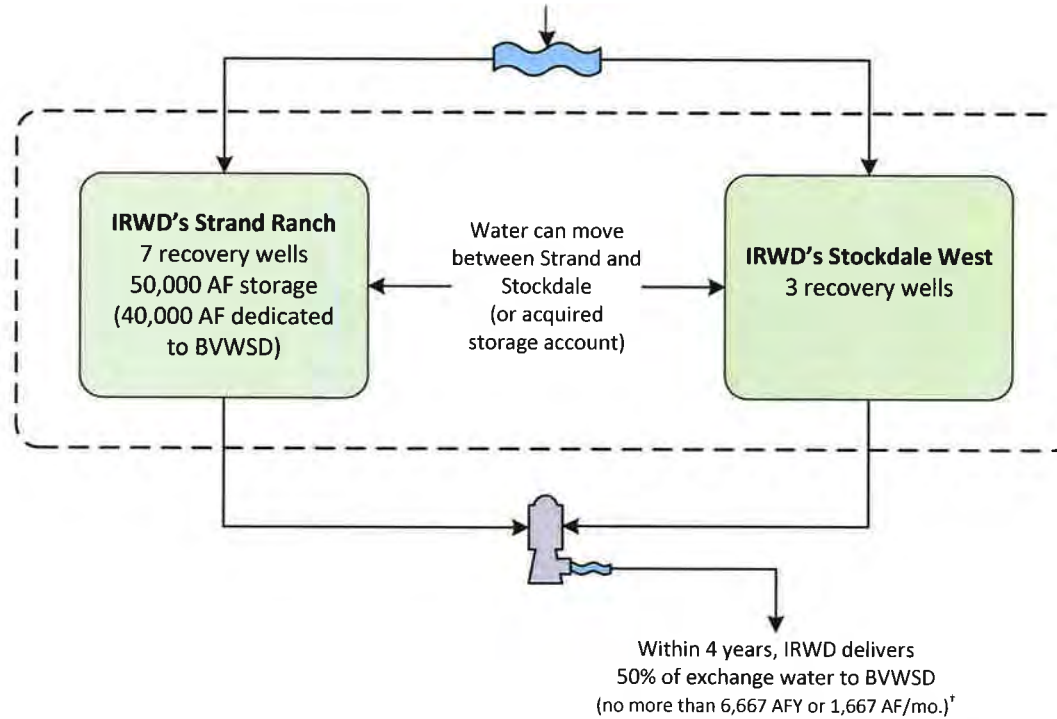


* In exchange for 50,000 AF of Acquired Storage capacity, IRWD will fund up to \$1.5 million for the drilling, construction and equipping of two extraction wells on Stockdale East.

Exhibit "H"

Buena Vista Water Storage District Long Term Water Exchange Program Effective 1/1/2011 through 1/12/2039

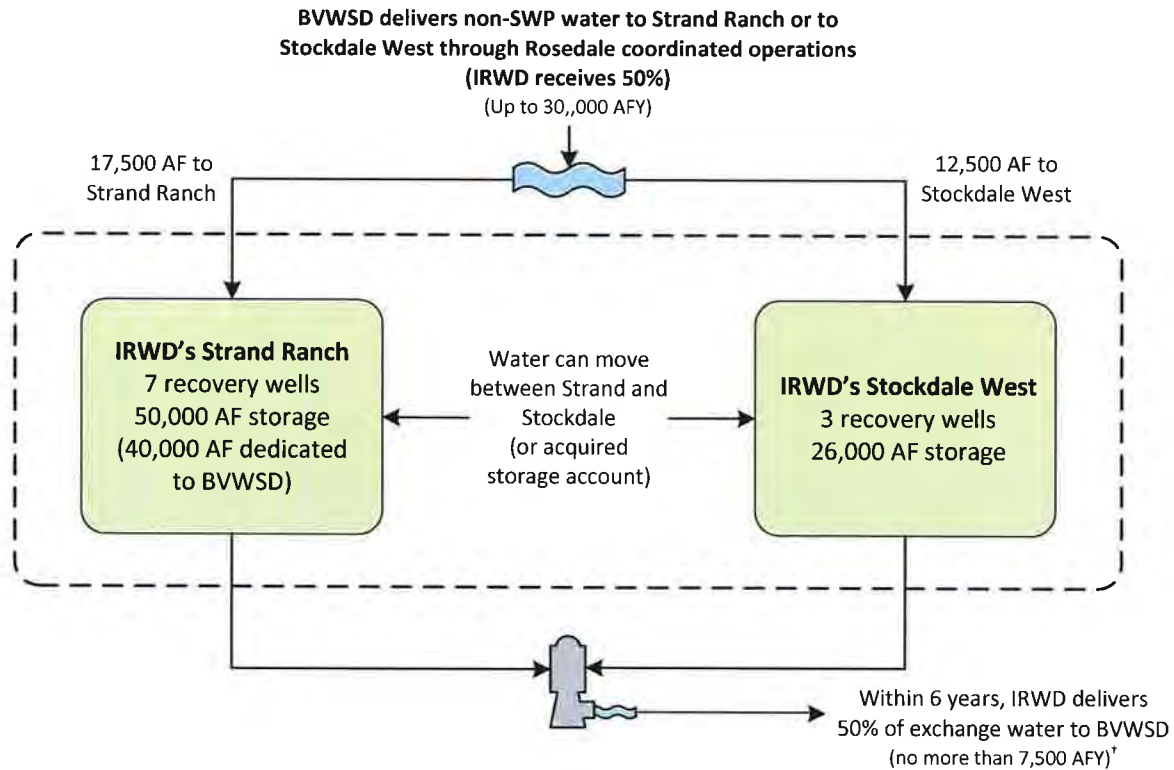
BVWSD delivers non-SWP water to Strand Ranch or to
Stockdale West through Rosedale coordinated operations
(IRWD receives 50%)
(Up to 17,500 AFY or 4,375 AF/mo.)



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

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

Buena Vista Water Storage District One-Year Program to Augment Recharge Using Stockdale West Recharge Facilities Effective 4/1/2017 through 3/20/2018



Modified for 1-Year Recharge Program Only

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%

*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:

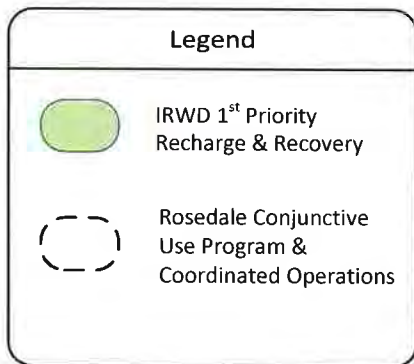


Exhibit "I"
Dudley Ridge Water District (DRWD) Unbalanced Exchange Program
Up to 12,240 AF delivered from 2/15/2018 through 12/31/2027

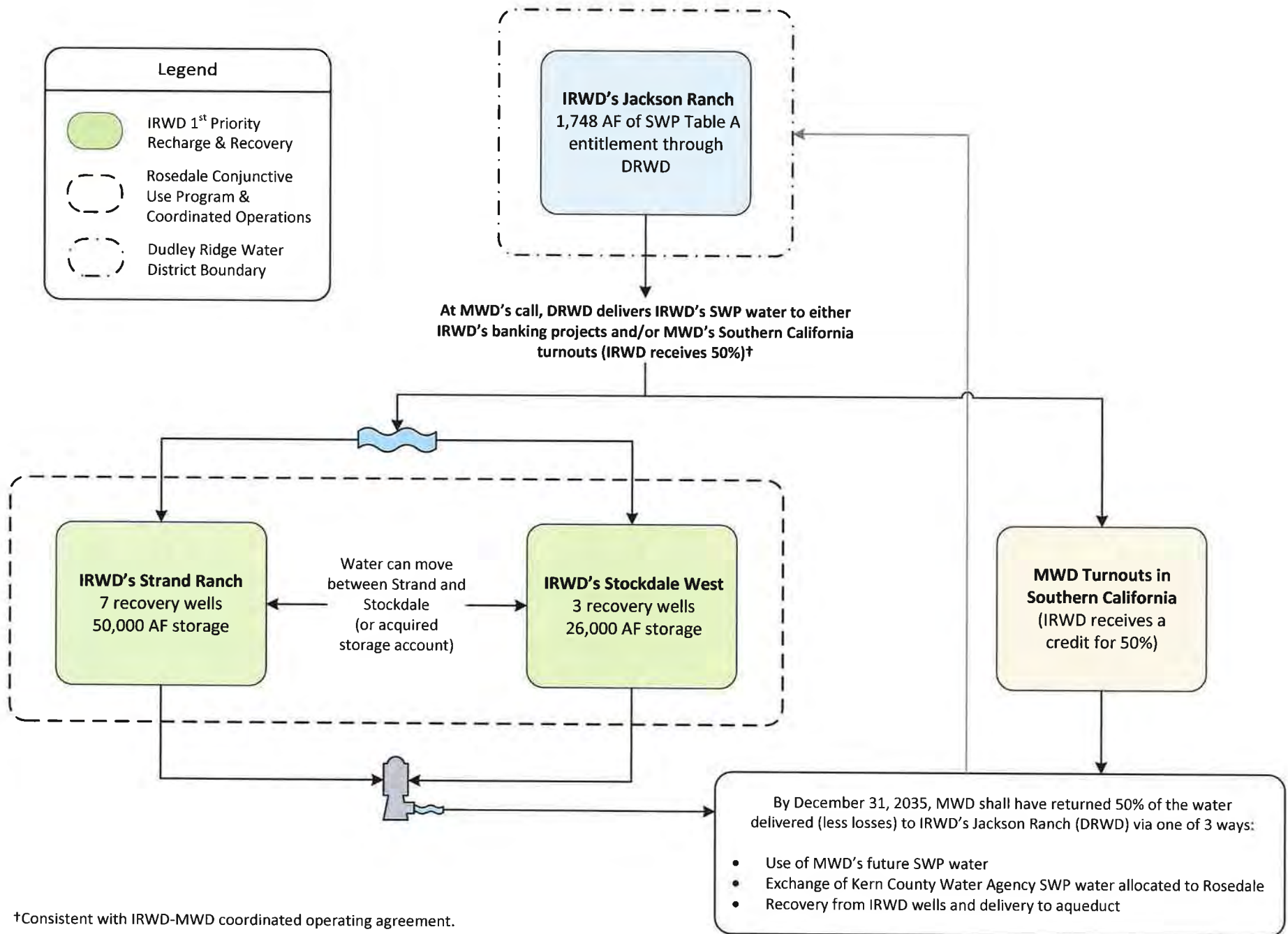


Exhibit "J"

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

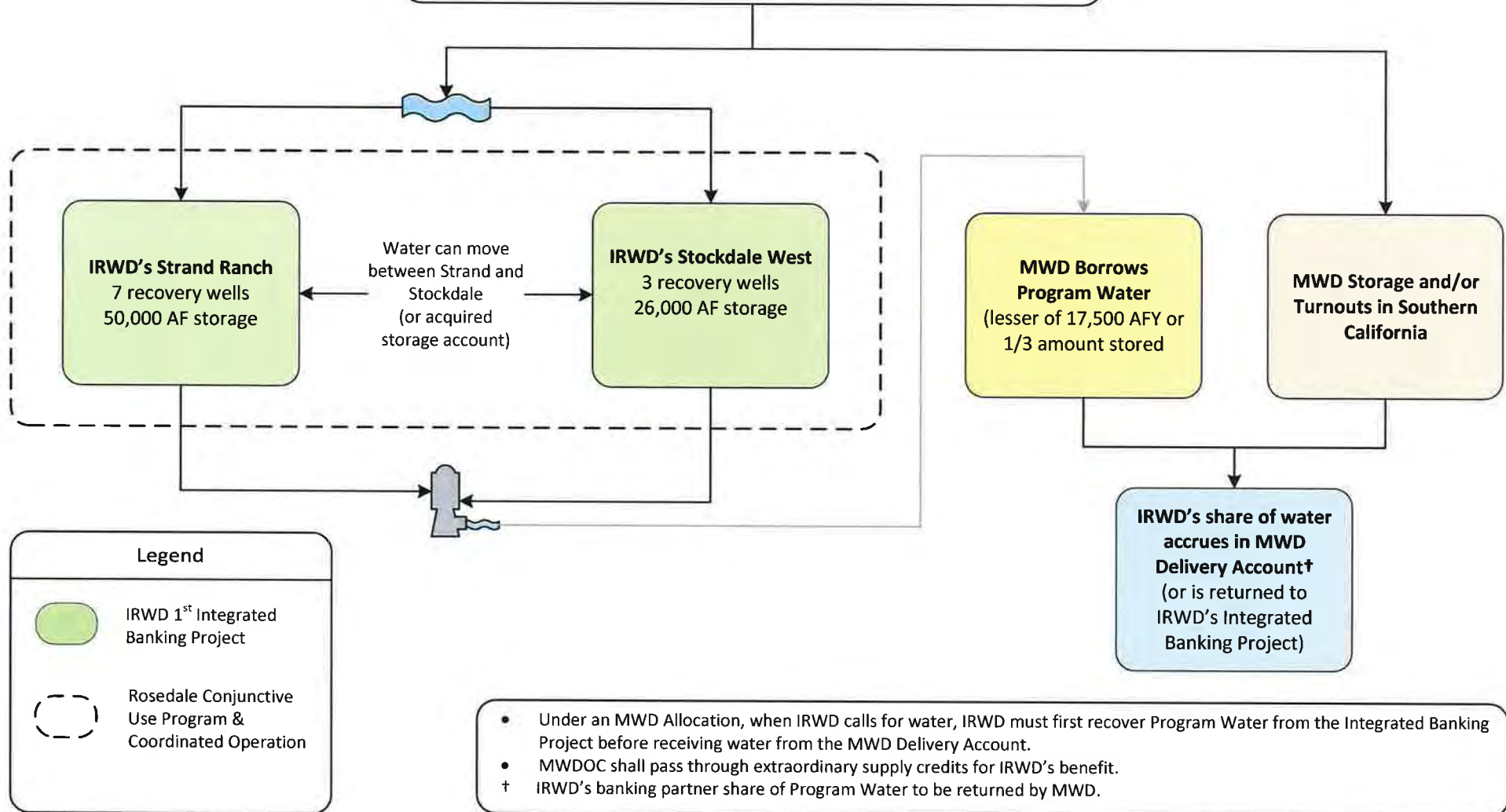
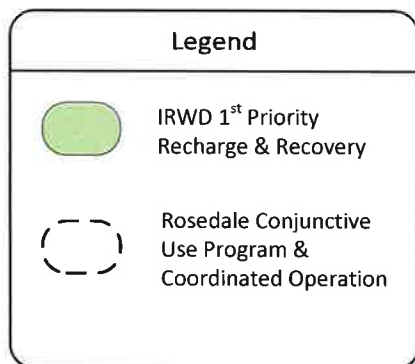
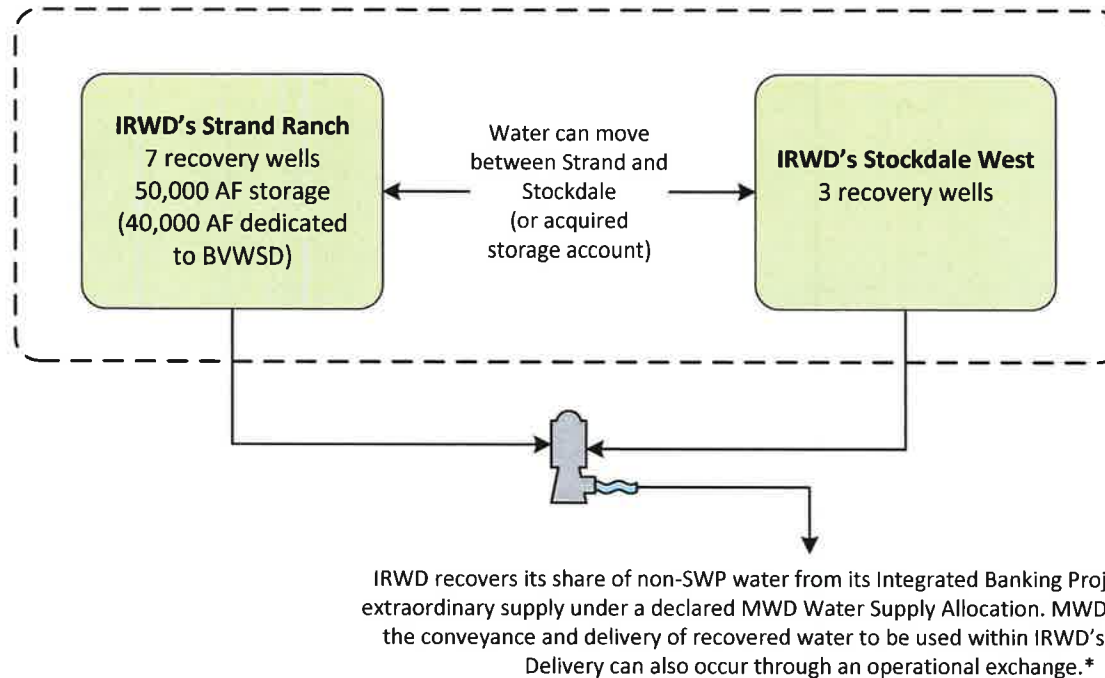


Exhibit "K"
Agreement for Conveyance of Water Between MWD, MWDOC, and IRWD (Wheeling Agreement)
Template for future agreements



*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.

June 21, 2018

Prepared by: K. Welch

Submitted by: F. Sanchez/P. Weghorst

Approved by: Paul A. Cook *cc for PC.*

SUPPLY RELIABILITY PROGRAMS COMMITTEE

KERN FAN GROUNDWATER STORAGE PROJECT UPDATE

SUMMARY:

On August 14, 2017, IRWD and Rosedale-Rio Bravo Water Storage District (Rosedale) jointly submitted a grant application to the California Water Commission (CWC) for the proposed Kern Fan Groundwater Storage Project (Kern Fan Project). The application seeks Proposition 1 funds that are available from the CWC through the Water Storage Investment Program (WSIP). The CWC received applications for 12 projects, of which eight are deemed eligible to date. At the Committee meeting, staff will review with the Committee the CWC staff's latest technical review and scoring of the WSIP projects as well as an overview of the next steps in the process for the CWC to award funding to the projects.

BACKGROUND:

The CWC is currently considering the award of WSIP grant funding for the planning, design and construction of water storage projects that would provide specific public and ecosystem benefits. The funding source for the WSIP is Proposition 1, also known as the Water Quality, Supply and Infrastructure Improvement Act of 2014. The Act provides \$2.7 billion for public benefits associated with water storage projects. Of the \$2.7 billion, 2% is set aside for bond financing, and 2.5% is set aside for administrative costs, resulting in \$2.58 billion in project funding being available for storage projects. In August 2017, the CWC received 12 grant applications for WSIP funding.

IRWD and Rosedale jointly submitted a WSIP grant application for the Kern Fan Project, which was the only application received by the CWC in the groundwater storage category. The 11 other applications were submitted for five conjunctive use projects, two local surface storage projects, one regional surface storage project and three large surface storage projects that were identified in the Cal Fed process.

Kern Fan Project Overview:

The proposed Kern Fan Project would develop a regional water bank in the Kern Fan area to capture, recharge and store unallocated Article 21 water during wet hydrologic periods. The stored water would be extracted when needed to provide ecosystem, emergency supply and water supply benefits. Project operations would be coordinated with the State Water Project through the California Department of Water Resources and could be integrated with the operations of other projects, such as Sites Reservoir.

Within the joint project grant application, IRWD and Rosedale requested \$86 million in WSIP funding, which is 50% of the estimated total capital cost of \$172 million for the project. If awarded grant funding in the requested amount, IRWD and Rosedale will each fund \$43 million for the balance of the project's capital costs.

Project Eligibility and Public Benefits:

Pursuant to the WSIP regulations, CWC staff reviewed the 12 grant applications for completeness and initial eligibility. During this review, 11 of 12 projects were determined to meet the initial eligibility criteria to be considered for WSIP funding. In May 2018, the CWC completed a technical review and evaluation of the public benefits associated with each project. The CWC is required by regulation to evaluate the basis and rationale for the claimed public benefits and the monetary value of the benefits. The ratio of the value of the public benefits to the requested funding amount is defined as the Public Benefit Ratio (PBR). The CWC found that three of the projects had no public benefits and those projects were deemed ineligible for WSIP funding. The CWC determined the Kern Fan Project's final PBR score to be 1.05.

Remaining WSIP Components:

On May 25, 2018, CWC staff provided a technical review and preliminary scoring of the Kern Fan Project relative to three key components: Relative Environmental Value, Resiliency and Implementation Risk. On June 6, 2018, staff met with the CWC staff to discuss their technical review and scoring. Several key issues discussed included perceived inconsistencies in the CWC's scoring between similar projects, the cost-effectiveness of the Kern Fan Project and the appropriateness of the Kern Fan project analysis. The CWC's preliminary component scores for the Kern Fan Project are shown in the following table:

Kern Fan Project Preliminary Component Scores

Component	Max Value	Score
Public Benefit Ratio and Non-Monetized Benefits	33	12
Relative Environmental Value	27	13
Resiliency	25	12
Implementation Risk	15	11
Preliminary Public Investment Score		48

A summary of the Preliminary Public Investment Scores for all of the projects is provided in Exhibit "A". At the Committee meeting, staff will provide an overview of each scoring component.

On June 15, 2018, the CWC staff released documents addressing the following final components of the WSIP project evaluation process:

1. Determinations: The CWC must make nine determinations before assigning a maximum conditional eligibility amount for each project;
2. Additional Eligibility Requirement: The CWC must consider an additional eligibility requirement related to wild and scenic rivers.

These final components are described in further detail below.

Nine Required Determinations:

The WSIP regulations state that before the CWC assigns a maximum conditional funding eligibility amount to a project, the CWC must make nine determinations based on the CWC's technical review and the applicant's appeal information. The CWC must determine that:

1. The proposed project is cost effective;
2. The proposed project improves the operations of the State water system;
3. The proposed project provides measurable improvements to the Delta ecosystem or to the tributaries to the Delta;
4. The Program cost share is less than or equal to 50% of the proposed project's total capital costs, with the exception of conjunctive use projects and reservoir reoperation projects;
5. The Program funded ecosystem improvement benefits make up at least 50% of the total public benefits funded by the Program;
6. The proposed project appears to be feasible;
7. The proposed project will advance the long-term objectives of restoring ecological health and improving water management for beneficial uses in the Delta; and
8. The proposed project is consistent with all applicable laws and regulations.

All projects, including the Kern Fan Project, received affirmative determinations on all items except for the first, which addresses cost effectiveness. Only one project has been tentatively determined by CWC staff to be cost effective. At the Committee meeting, staff will present an overview of additional information that will be presented to the Commission on June 27 that will support the Commission making the determination that the Kern Fan Project is cost effective.

Wild and Scenic Rivers:

The Additional Eligibility Requirement relates to prohibiting the use of the WSIP funds for any project that could have an adverse effect on a wild and scenic river. CWC staff has identified that the Kern Fan Project, and all other projects being considered by the CWC, will not have any adverse effect on wild and scenic rivers.

Next Steps:

At the upcoming CWC meetings of June 27 through June 29, 2018, the CWC will hear the CWC staff's report on the preliminary scores and determinations. At the meeting, each project applicant will be allowed to make a presentation in support of the Commission making revisions to the scores and determinations. At the three day meeting, the Commission is expected to approve final project application scores and determinations. The CWC is expected to announce preliminary maximum conditional funding amounts for each project in July 2018.

FISCAL IMPACTS:

If the CWC awards WSIP funding to IRWD and Rosedale for the Kern Fan Project, a request for funding of the District's cost share for the project will be included in the FY 2018-19 Capital Budget.

ENVIRONMENTAL COMPLIANCE:

A Final Environmental Impact Report (EIR) for the Stockdale Integrated Banking 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. Rosedale, as lead agency, filed a Notice of Determination for the Stockdale Integrated Banking Project with the County of Kern. IRWD, as a responsible agency, filed Notices of Determination with the County of Orange and with the County of Kern. The EIR includes a program-level analysis of impacts of a third project site which will make up phase 1 of the Kern Fan Project. When the third Stockdale project site is identified, subsequent project-level environmental review will be necessary prior to implementation of the phase one project. It is expected that a new EIR will be required for the construction and operation of the second phase facilities contemplated in the proposed Kern Fan Project.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit "A" – Summary of Proposition 1 WSIP Application Preliminary Public Investment Scores



Summary of Water Storage Investment Program Application Preliminary Scores

Preliminary Component Scores					Preliminary Expected Return for Public Investment Score (Maximum 100)
Project	Public Benefit Ratio and Non-Monetized Benefit (Maximum 33)	Relative Environmental Value (Maximum 27)	Resiliency (Maximum 25)	Implementation Risk (Maximum 15)	
Chino Basin Conjunctive Use Program	23	24	12	10	69
Kern Fan Groundwater Storage Project	12	13	12	11	48
Los Vaqueros Reservoir Expansion Project	23	17	22	14	76
Pacheco Reservoir Expansion Project	27	21	23	11	82
Sites Project	13	15	21	12	61
South County Ag Program	12	27	20	15	74
Temperance Flat Reservoir Project	33	10	19	9	71
Willow Springs Water Bank	12	17	14	10	53

The Preliminary Expected Return for Public Investment Score is the sum of all component scores.
Example component score calculations are provided in the Component Score Calculation Excel workbook.

June 21, 2018

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SUPPLY RELIABILITY PROGRAMS COMMITTEE

UPDATE ON THE KERN FAN GROUNDWATER STORAGE PROJECT AGREEMENT

SUMMARY:

In August 2017, Irvine Ranch Water District and Rosedale-Rio Bravo Water Storage District (Rosedale) jointly submitted a grant application to the California Water Commission (CWC) for the proposed Kern Fan Groundwater Storage Project (Kern Fan Project). Grant funds will be awarded by the CWC to qualified projects through its Water Storage Investment Program. In anticipation of being awarded grant funding for the Kern Fan Project, a draft agreement has been prepared that would provide for IRWD and Rosedale to perform early activities and that would establish the terms for the formation of a Joint Powers Authority (JPA). Rosedale has reviewed the draft agreement and submitted suggested revisions to the agreement. At the Committee meeting, staff will present an overview of Rosedale's suggested revisions. Staff recommends that the Committee provide feedback on Rosedale's proposed revisions to the Kern Fan Groundwater Storage Project Agreement and authorize staff and special legal counsel to work with Rosedale to finalize the agreement for consideration by the IRWD Board of Directors.

BACKGROUND:

Proposition 1 (Prop 1), also known as the Water Quality, Supply and Infrastructure Improvement Act of 2014, dedicated \$2.7 billion for investments in new water storage projects. In August 2017, IRWD and Rosedale jointly submitted an application for the proposed Kern Fan Project with a request for \$86 million in Prop 1 grant funding. This amount equates to 50% of the total estimated \$172 million capital cost for the project. The CWC plans to release its final project funding decisions in July 2018.

In anticipation of IRWD and Rosedale being awarded grant funding for the Kern Fan Project, staff worked with Rosedale to prepare draft terms for an agreement that would provide for early activities and that would establish the basis for the formation of the Kern Fan Project JPA. The Committee has provided input to the development of the draft terms on multiple occasions. The JPA would carry out functions necessary to implement the Kern Fan Project including land acquisition and ownership, environmental review, permitting, planning, design, construction and operations.

Kern Fan Project Agreement:

Staff worked with special legal counsel, at Kronick Moskowitz Tiedemann & Girard to prepare a draft agreement based on the draft terms. The draft agreement was reviewed with the Committee on May 17, 2018. Based on the Committee's input, revisions were made to the agreement and presented to Rosedale for review and comment.

Rosedale has reviewed the draft agreement and submitted suggested revisions to the agreement that were too late to be included with this item. At the Committee meeting, staff will present an overview of Rosedale's suggested revisions. Staff recommends that the Committee provide feedback on Rosedale's proposed revisions to the Kern Fan Groundwater Storage Project Agreement and authorize staff and special legal counsel to work with Rosedale to finalize the agreement for consideration by the IRWD Board of Directors.

FISCAL IMPACTS:

If the CWC awards a grant to IRWD and Rosedale for the Kern Fan Project, staff will request funding of the District's estimated \$43 million cost share for the project to be included in the FY 2018-19 Capital Budget.

ENVIRONMENTAL COMPLIANCE:

A Final Environmental Impact Report (EIR) for the Stockdale Integrated Banking 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. Rosedale, as lead agency, filed a Notice of Determination for the Stockdale Integrated Banking Projects with the County of Kern. IRWD, as a responsible agency, filed Notices of Determination with the County of Orange and with the County of Kern. The EIR includes a program-level analysis of impacts of a third project site. This third project site is contemplated to be incorporated into phase one of the Kern Fan Project. When the third project site is identified, subsequent project-level environmental review will be necessary prior to implementation of the phase one project. It is expected that a new EIR will be required for the construction and operation of the second phase facilities contemplated in the proposed Kern Fan Project.

RECOMMENDATION:

That the Committee provide input on Rosedale-Rio Bravo Water Storage District's proposed modifications to the Kern Fan Groundwater Storage Project Agreement and authorize staff and special legal counsel to work with Rosedale to finalize the agreement for consideration by the IRWD Board of Directors.

LIST OF EXHIBITS:

None.