

AGENDA
IRVINE RANCH WATER DISTRICT
SUPPLY RELIABILITY PROGRAMS COMMITTEE
THURSDAY, NOVEMBER 16, 2017

CALL TO ORDER 3:30 p.m., Committee Room, Second Floor, District Office
15600 Sand Canyon Avenue, Irvine, California

ATTENDANCE Committee Chair: Mary Aileen Matheis _____
Member: Douglas Reinhart _____

<u>ALSO PRESENT</u>	Paul Cook	_____	Kellie Welch	_____
	Rob Jacobson	_____	Patrick Sheilds	_____
	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.

INFORMATION

- | | | |
|----|--|--|
| 5. | <u>WATER BANKING PROJECT FACILITIES, CAPACITIES, OPERATIONS AND PROGRAMS OVERVIEW – JOHNSON/WELCH/SANCHEZ/WEGHORST</u> | |
|----|--|--|

Recommendation: Receive and file.

ACTION

- | | | |
|----|--|--|
| 6. | <u>CONCEPTUAL TERMS FOR INTERIM AGREEMENT TO DEVELOP THE KERN FAN GROUNDWATER STORAGE PROJECT – WELCH/SANCHEZ/WEGHORST</u> | |
|----|--|--|

Recommendation: That the Committee provide input on the conceptual terms for an Interim Agreement with Rosedale-Rio Bravo Water Storage District that would provide for early project planning activities and lead to the formation of a Joint Powers Authority that would oversee the planning, design, construction and operation of the Kern Fan Project, and authorize staff and legal counsel to work with Rosedale and its legal counsel to refine the terms of the Interim Agreement for further review by the Committee.

OTHER BUSINESS

7. A. Directors' Comments

B. Closed Session

CONFERENCE WITH REAL PROPERTY NEGOTIATORS - Pursuant to
Government Code Section 54956.8:

Property: Parcels 827-090-004, 827-090-012, 827-090-013, 827-180-001, 827-180-002, County of Riverside

Agency negotiator: Paul Cook, General Manager

Negotiating parties: Joseph Albert Deconinck

Under negotiation: Price and Terms of Payment

C. 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.

November 16, 2017 *df*
Prepared by: D. Johnson/K. Welch *vw*
Submitted by: F. Sanchez/P. Weghorst *fmw*
Approved by: Paul Cook *[Signature]*

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, exchange programs and operations 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 increase recharge rates and to secure additional water for recharge at IRWD's water banking projects.

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 related to current recharge activities, a study to increase recharge rates and ongoing efforts to secure additional water for recharge at IRWD's water banking projects.

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 and 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. The recharge values shown in Exhibit "C" may be subject to further adjustments for Cross Valley Canal (CVC) conveyance losses. Both Exhibits "B" and "C" include a column that provides totals for each water type and storage location.

2017 Recharge Operations Update:

Exhibits "B" and "C" provide current estimates of the amounts and types of water that have been recharged in 2017. A total of 19,869 acre-feet (AF) of water has been delivered to IRWD's water banking projects as follows:

To Strand and Stockdale West Projects:

- 13,654 AF of high flow Kern River Water from Buena Vista Water Storage District;
- 1,574 AF of State Water Project (SWP) Table A water from Dudley Ridge Water District (DRWD);

- 3,488 AF of SWP Article 21 water from DRWD; and
- 578 AF of SWP Table A water from Carpinteria Valley Water District.

To Kern Water Bank:

- 575 AF of SWP Article 21 water combined with other non-SWP supplies.

Current Recharge Rates:

Rosedale-Rio Bravo Water Storage District is currently using the Strand and Stockdale West facilities as necessary to recharge water on its own behalf. The recharge rate at the south recharge basins on the Strand Ranch continues to be approximately 0.27 feet per day. The recharge rate on the north recharge basins continues to be approximately 0.36 feet per day. Staff is working with Rosedale to conduct an infiltration investigation of the south Strand Ranch basins as described below.

Strand Pond Infiltration Study:

Staff has been coordinating with Rosedale to conduct a pond infiltration study of the recharge basins on the south side of the Strand Ranch. On November 1, 2017, Rosedale initiated the study to establish baseline recharge rates. On November 10, water deliveries were terminated into recharge basins numbered 4, 5 and 6 on the Strand Ranch. The location of these three basins are shown on Exhibits "E" and "F". These three basins are being allowed to dry in preparation for testing different methods of increasing recharge rates. In conducting these tests, Rosedale will contract to have approximately three inches of silt removed from one of the dried out basins. On the second dried basin, Rosedale will contract to scrape off a fine layer of silt and then to rip the bottom of the basin to a depth of 30 inches. The third dried basin will be allowed to dry and crack with no further treatment. Recharge water will then be reintroduced to each of the basins and recharge rates at each of the three test basins will be compared by taking flow and water level measurements. At the meeting, staff will update the Committee on recent activities related to the study. Staff expects to report the results of the Strand Pond Infiltration Study to the Committee in December.

2018 Recharge Opportunities:

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

- Antelope Valley-East Kern Water Agency;
- Central Coast Water Authority;
- Dudley Ridge Water District;
- Metropolitan Water District of Southern California; and
- Other Opportunities.

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 CVC turnout locations, and current 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, Buena Vista Water Storage District, DRWD and Metropolitan Water District of Southern California. 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 Metropolitan
- Exhibit “K” – Diagram of Template Wheeling Agreement with Metropolitan

Exhibit "A"

TABLE 1
Current and Anticipated Water Banking Projects
Recharge, Storage and Recovery Capacities
November 16, 2017

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		7	8	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	-	-

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
November 16, 2017

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 2016 (AF)						
Total Kern Water Bank	-	4,741	-	-	-	4,741
Total MWD System ⁴	8,349	-	-	-	649	8,998
Total Kern County	437	10,835	-	-	-	11,272
TOTAL STORED WATER (1/1/2016)	8,786	15,576	-	-	649	25,011
(RECOVERY) AND RECHARGE IN 2016 (AF)						
Kern Water Bank	-	24	-	-	-	24
2016 SWP Allocation (MWD system) ³	524	-	-	-	525	1,049
TOTAL 2016 TRANSACTIONS	524	24	-	-	525	1,073
Total Kern Water Bank	-	4,765	-	-	-	4,765
Total MWD System	8,873	-	-	-	1,174	10,047
Total Kern County	437	10,835	-	-	-	11,272
TOTAL STORED WATER (1/1/2017)	9,310	15,600	-	-	1,174	26,084
(RECOVERY) AND RECHARGE IN 2017 (AF)						
Kern Water Bank Deliveries ⁵	529	46	-	-	-	575
2017 SWP Allocation (85%) ³	787	-	-	-	787	1,574
2017 SWP Article 21 ⁶	1,744	-	-	-	1,744	3,488
SWP Table A (CCWA 2017 Exch.)	289	-	-	289	-	578
High Flow Kern River	-	6,827	6,827	-	-	13,654
TOTAL ESTIMATED 2017 TRANSACTIONS	3,349	6,873	6,827	289	2,531	19,869
ESTIMATED WATER IN STORAGE 2017 (AF)						
Total Kern Water Bank	529	4,811	-	-	-	5,340
Total MWD System	8,873	-	-	-	1,174	10,047
Total Kern County	3,257	17,662	6,827	289	2,531	30,566
TOTAL ESTIMATED STORED WATER TO DATE	12,659	22,473	6,827	289	3,705	45,953

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.

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 amounts delivered to Kern Water Bank are estimated.

⁶ 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.

Exhibit "C"

TABLE 3
IRWD's Water Banking Storage, Recharge and Recovery Operations - AFTER LOSSES
November 16, 2017

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 2016 (AF)						
Total Kern Water Bank	-	4,267	-	-	-	4,267
Total MWD System ⁴	7,393	-	-	-	649	8,042
Total Kern County	389	9,675	-	-	-	10,064
TOTAL STORED WATER (1/1/2016)	7,782	13,942	-	-	649	22,373
(RECOVERY) AND RECHARGE IN 2016 (AF)						
Kern Water Bank	-	22	-	-	-	22
2016 SWP Allocation (MWD system) ³	524	-	-	-	525	1,049
TOTAL 2016 TRANSACTIONS	524	22	-	-	525	1,071
Total Kern Water Bank	-	4,289	-	-	-	4,289
Total MWD System	7,917	-	-	-	1,174	9,091
Total Kern County	389	9,675	-	-	-	10,064
TOTAL STORED WATER (1/1/2017)	8,306	13,964	-	-	1,174	23,444
(RECOVERY) AND RECHARGE IN 2017 (AF)						
Kern Water Bank Deliveries ⁵	476	41	-	-	-	518
2017 SWP Allocation (85%) ³	669	-	-	-	708	1,377
2017 SWP Article 21 ⁶	1,479	-	-	-	1,566	3,044
SWP Table A (CCWA 2017 Exch.)	246	-	-	246	-	491
High Flow Kern River	-	5,803	6,144	-	-	11,947
TOTAL ESTIMATED 2017 TRANSACTIONS ⁷	2,869	5,844	6,144	246	2,274	17,377
ESTIMATED WATER IN STORAGE 2017 (AF)						
Total Kern Water Bank	476	4,330	-	-	-	4,806
Total MWD System	7,917	-	-	-	1,174	9,091
Total Kern County	2,782	15,478	6,144	246	2,274	26,924
TOTAL ESTIMATED STORED WATER TO DATE	11,175	19,808	6,144	246	3,448	40,821

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.

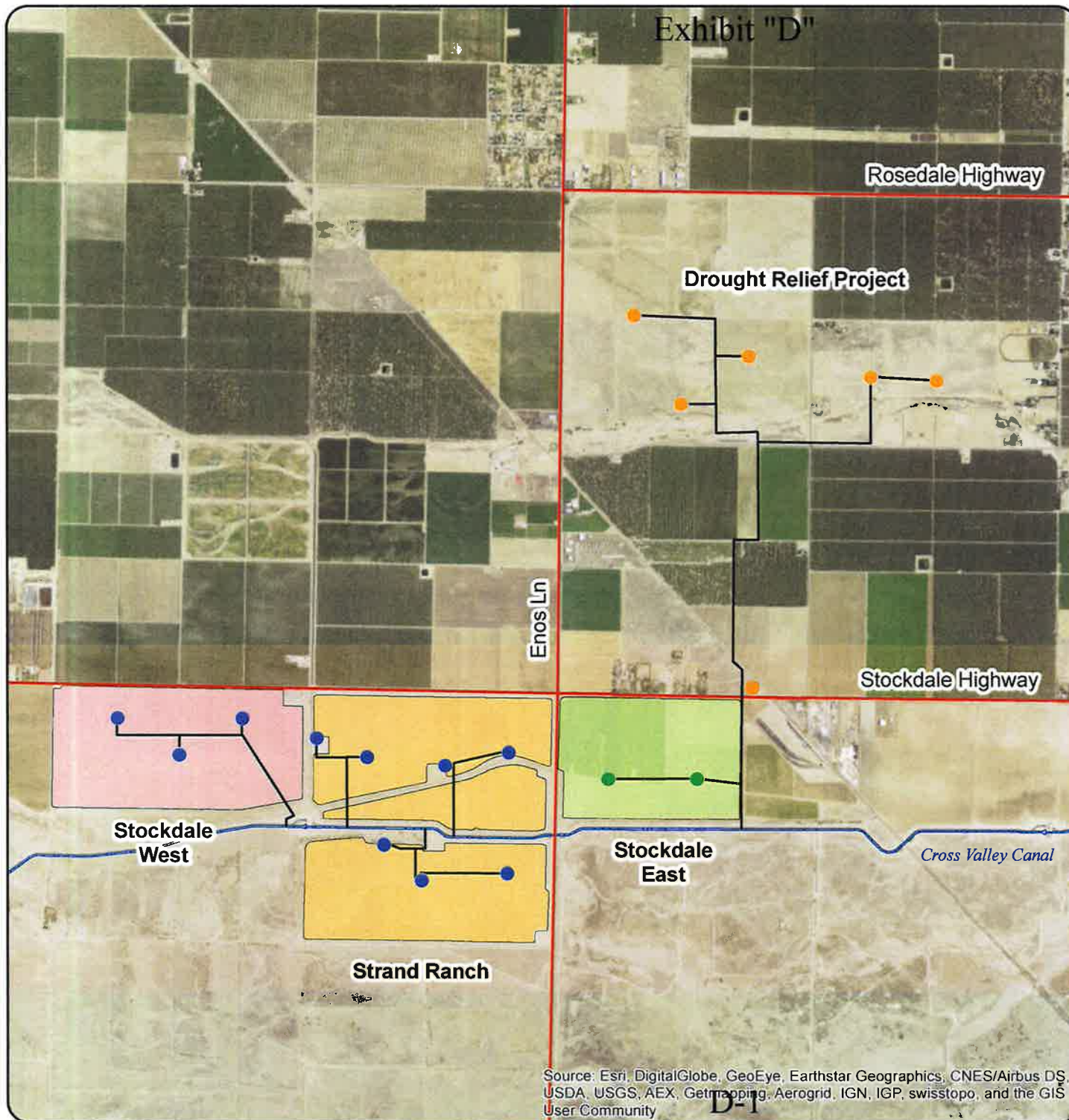
³ DRWD water supply will be returned by MWD or IRWD's Strand Ranch to IRWD's Jackson Ranch. IRWD's 2013-2016 SWP allocation amounts are stored in the MWD system. IRWD's 2017 SWP allocation water is stored in Kern County.

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 amounts delivered to Kern Water Bank are estimated.

⁶ 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.

⁷ 2017 transactions may be adjusted for conveyance losses in CVC.



Irvine Ranch
WATER DISTRICT

Location Map: IRWD Water Banking Projects Wells and Turnin Pipelines

MAP FEATURES

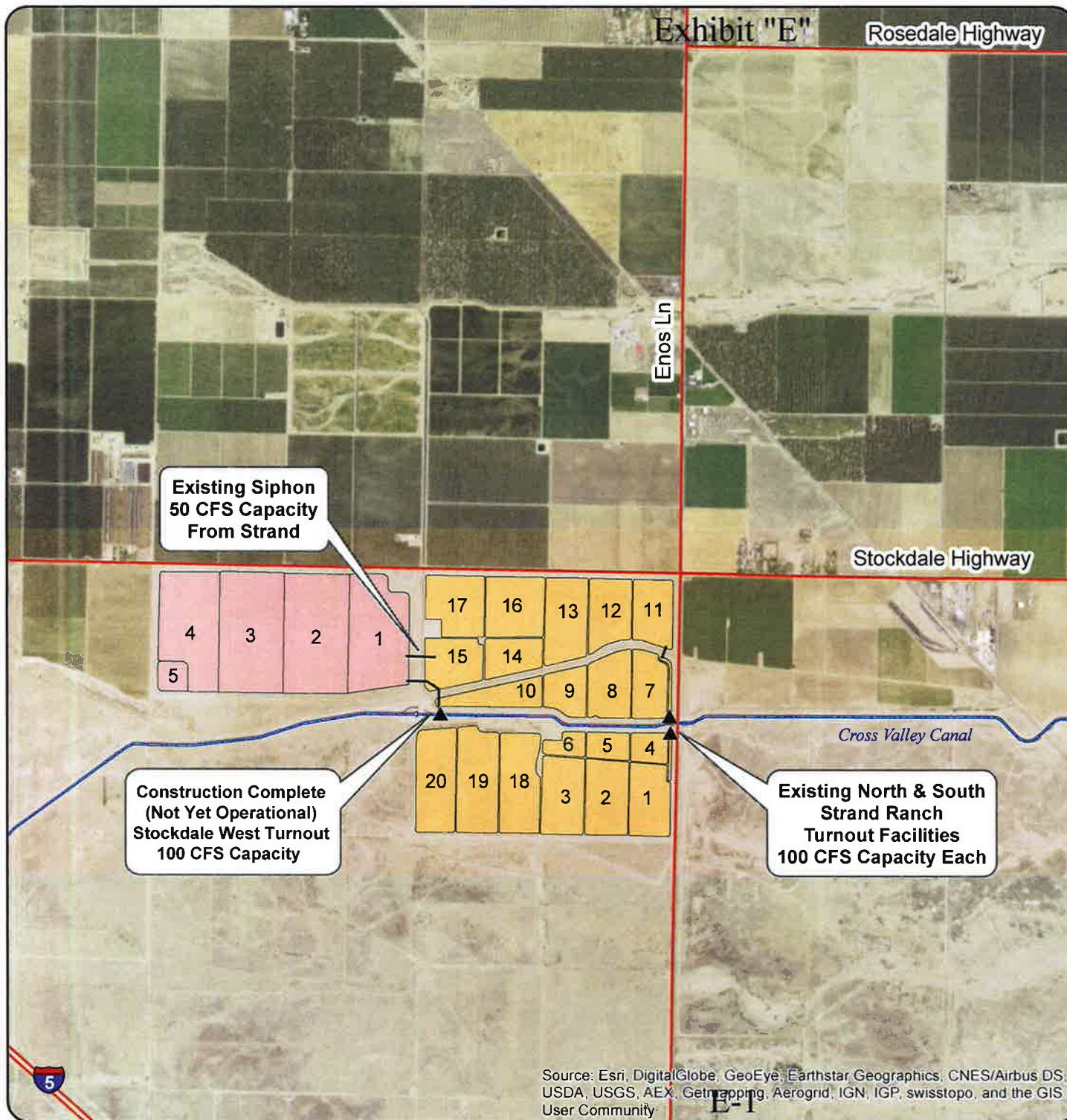
- Existing Extraction Well
- Planned Extraction Well
- Well Under Construction
- Well Discharge Pipelines
- Stockdale East
- Stockdale West
- Strand Ranch

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

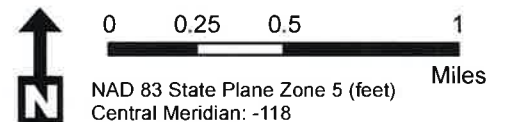


**Location Map:
IRWD Water Banking Projects
Recharge Basins & Turnout
Facilities**

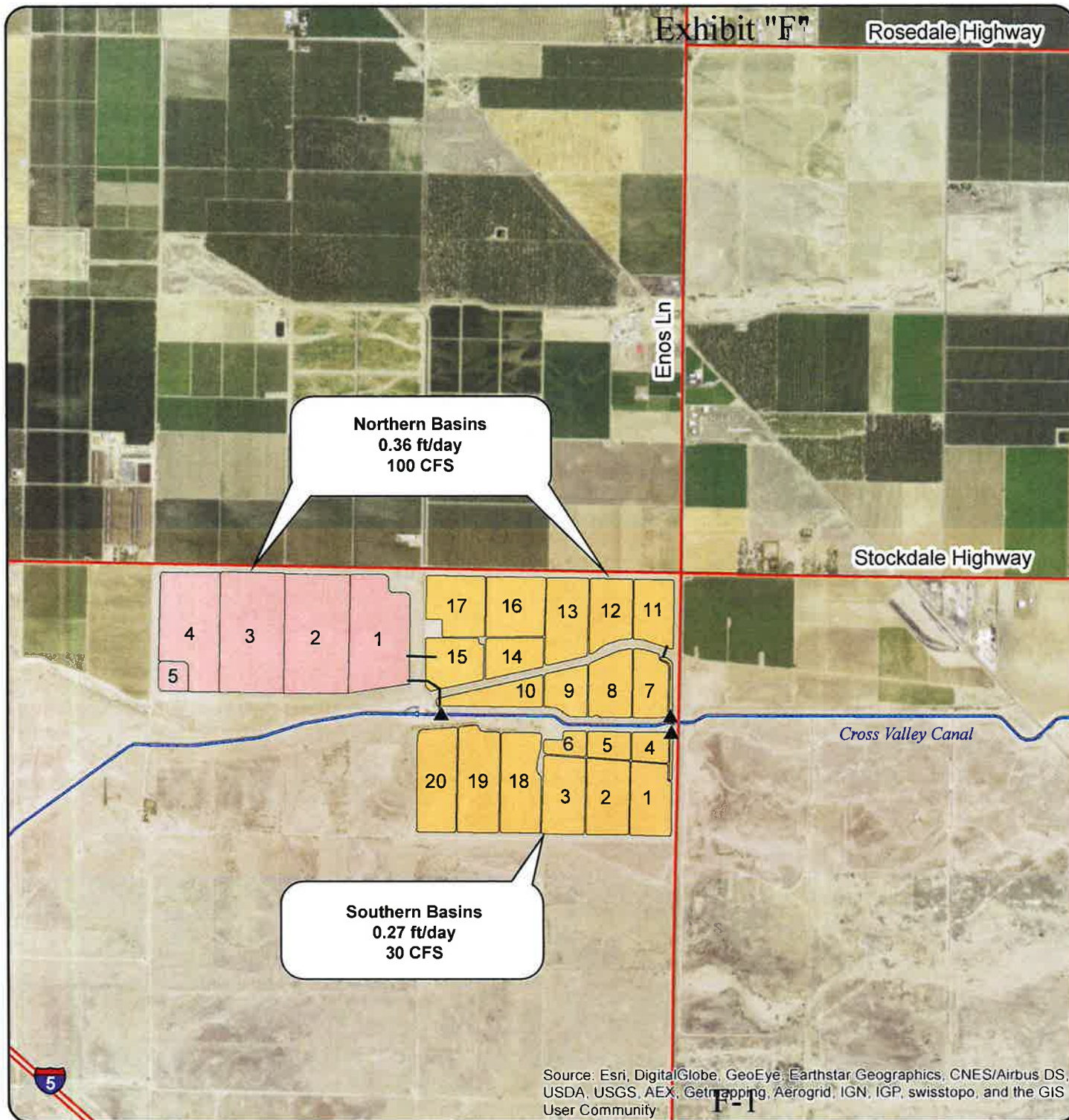
MAP FEATURES

- ▲ Turnouts
- Stockdale West
- Strand Ranch

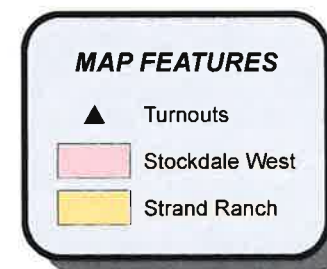
This figure shows the location of recharge basins as well as existing and anticipated pipelines and turnout facilities.



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



**Location Map:
IRWD Water Banking Projects
Recharge Rates**



This figure shows the location of recharge basins and their associated recharge rates as of October/ November 2017.

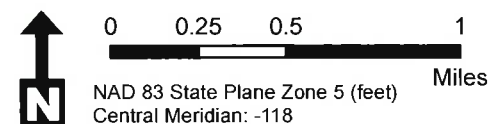


Exhibit "G"

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)

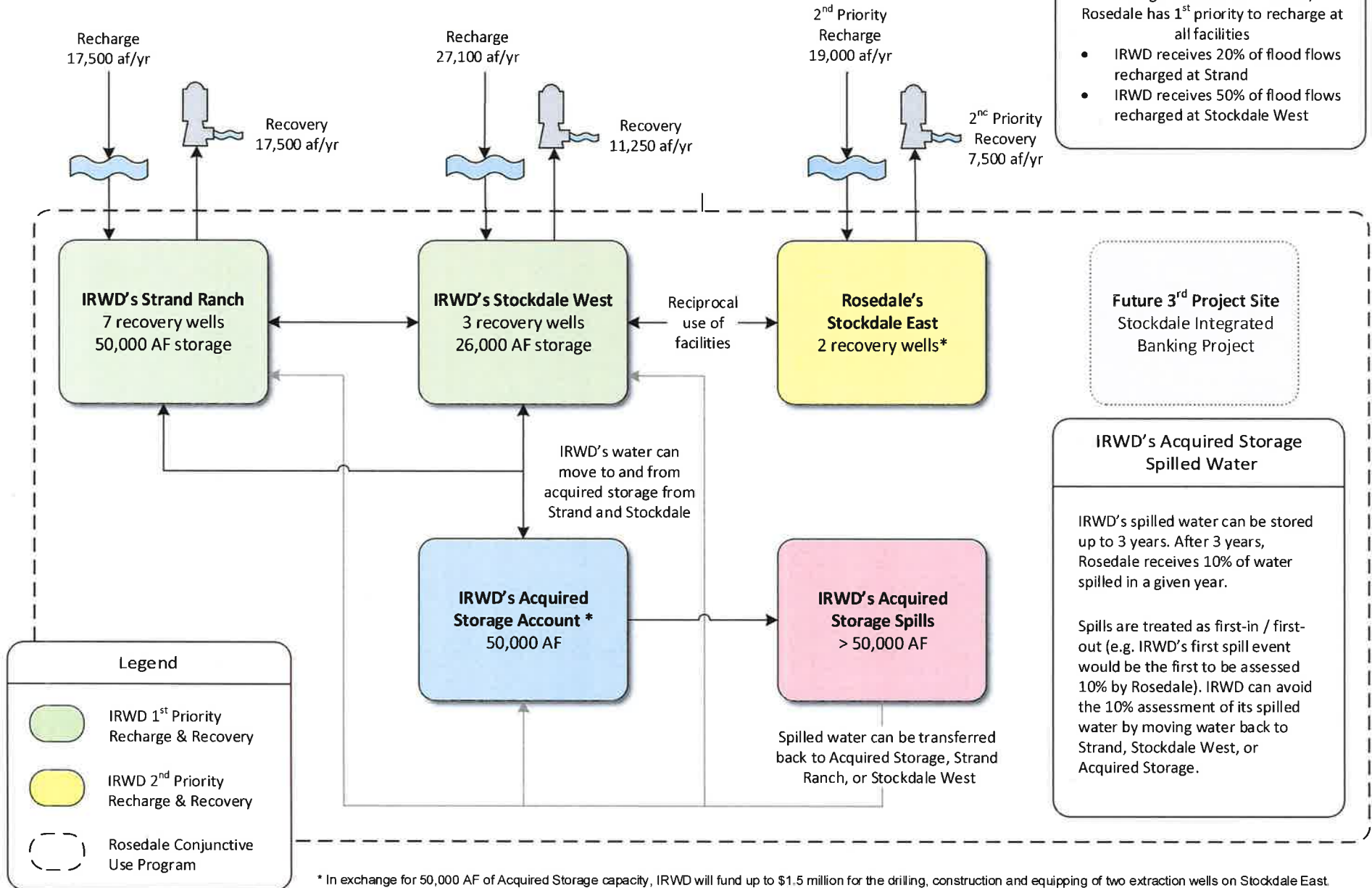
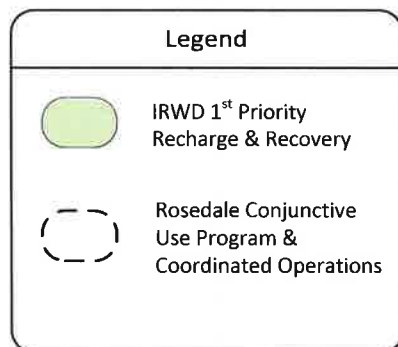
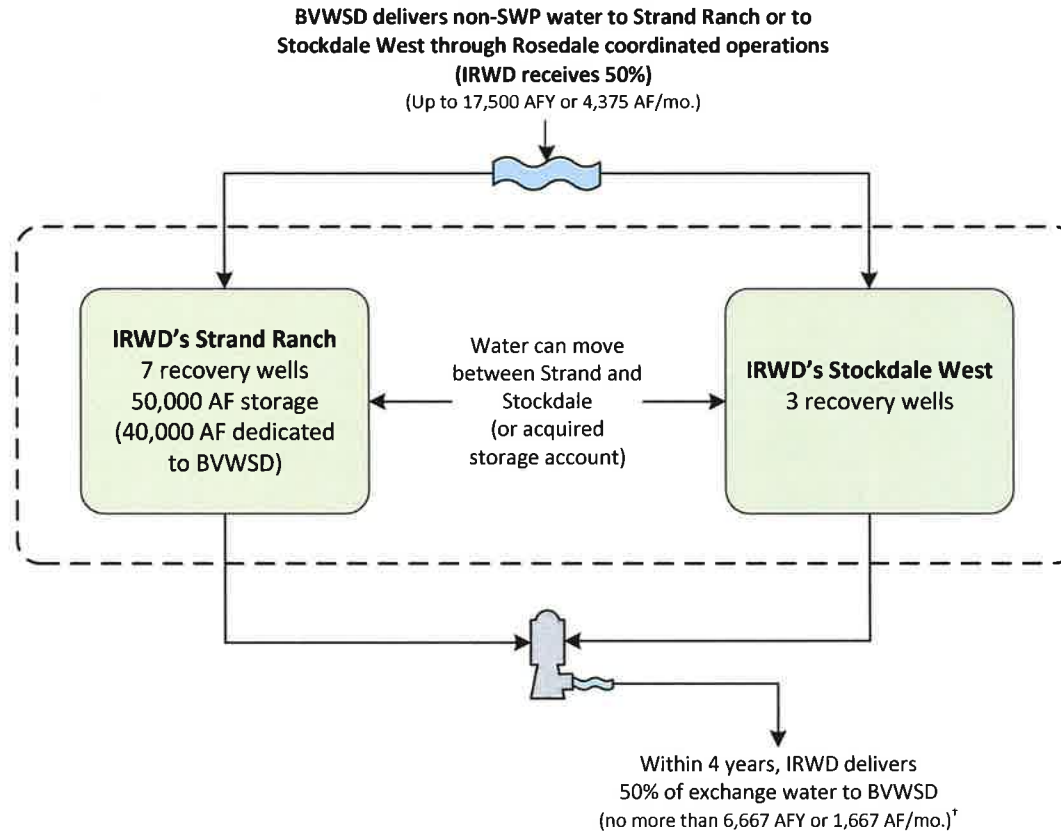


Exhibit "H"

Buena Vista Water Storage District Long Term Water Exchange Program

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

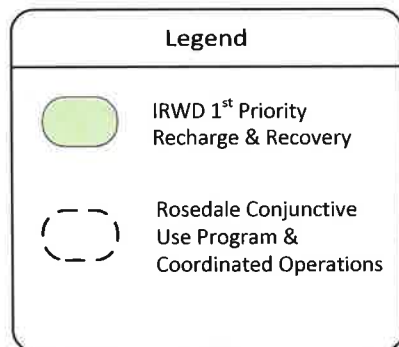
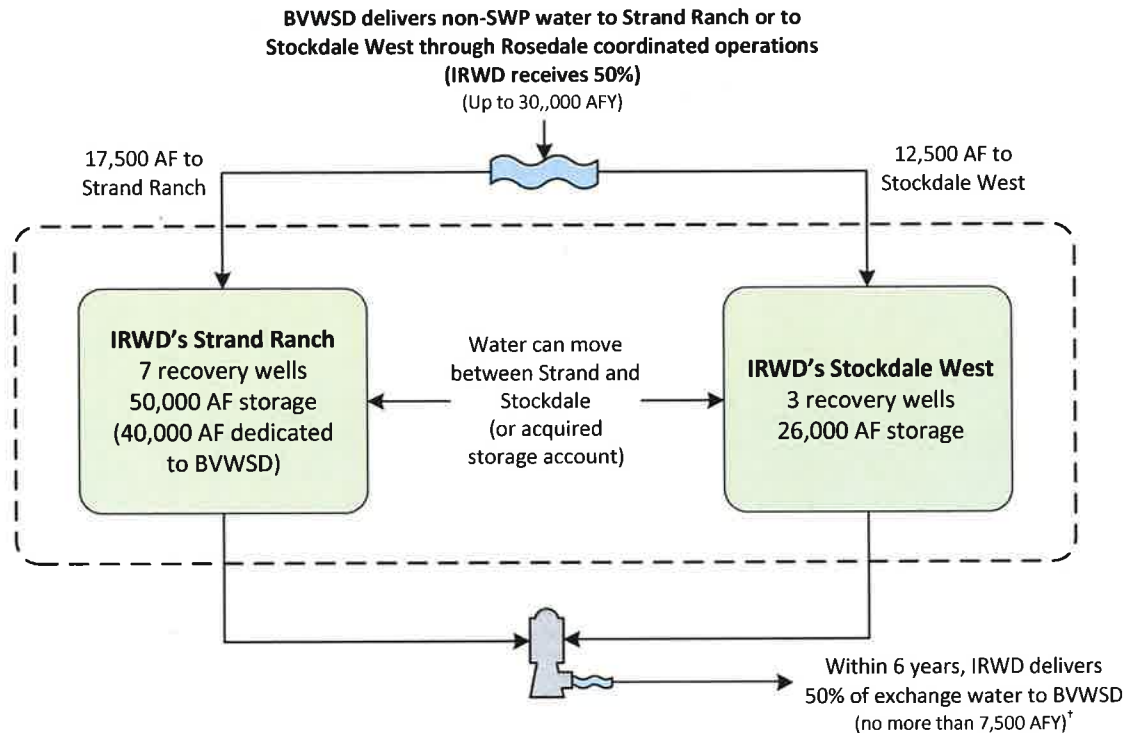


†IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31st of the 4th year following the associated recharge event. IRWD pays for recovery of water returned to BV. Water to be remitted back to BV may remain in storage at Strand Ranch beyond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

Exhibit "H"

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

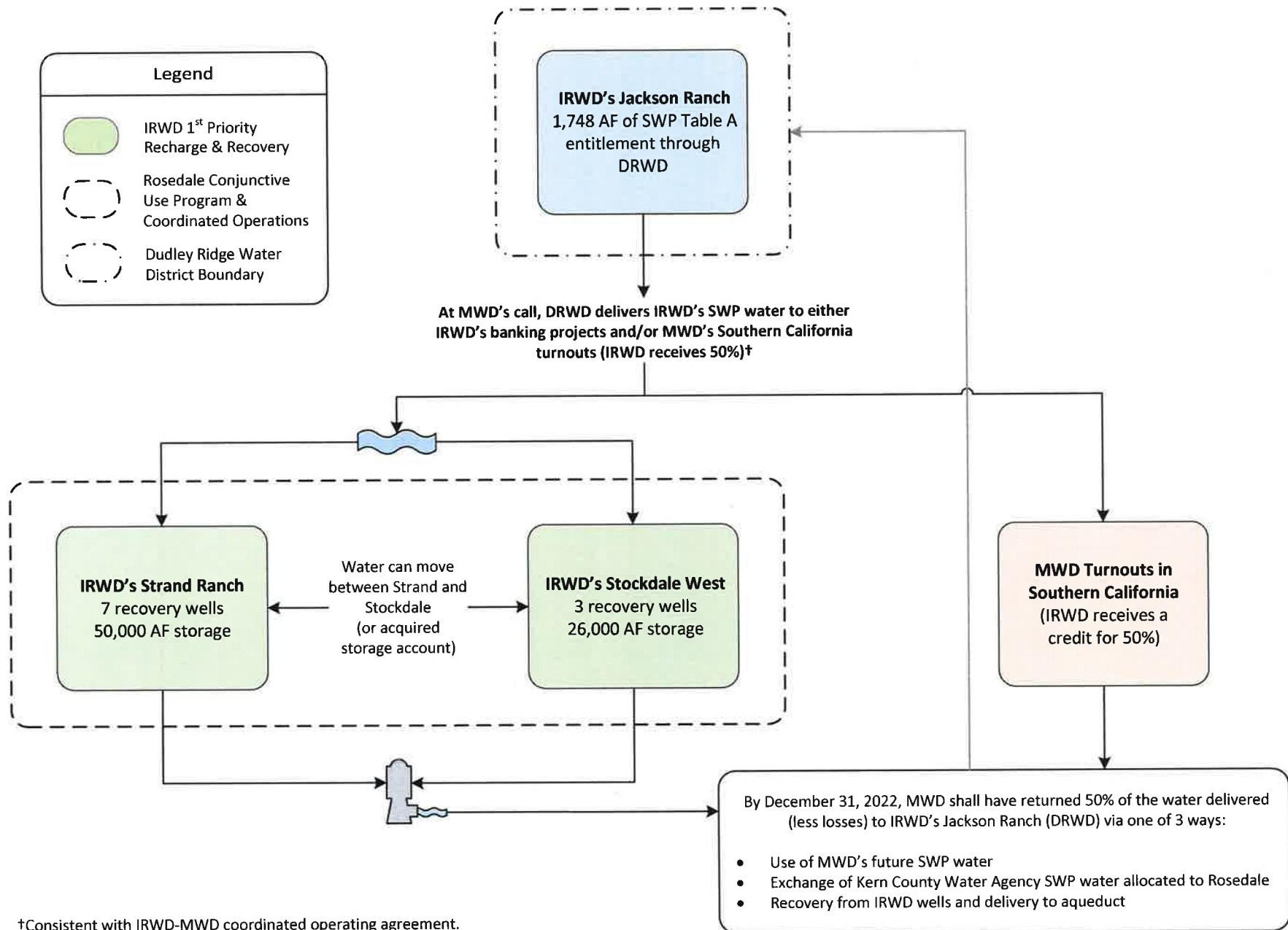


*IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31st of the 6th year following the associated recharge event. IRWD pays for recovery of water returned to BV. Water to be remitted back to BV may remain in storage at Strand Ranch beyond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

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%

Exhibit "I"
Dudley Ridge Water District (DRWD) Unbalanced Exchange Program
Up to 8,700 AF delivered from 12/16/2013 through 12/31/2017



†Consistent with IRWD-MWD coordinated operating agreement.

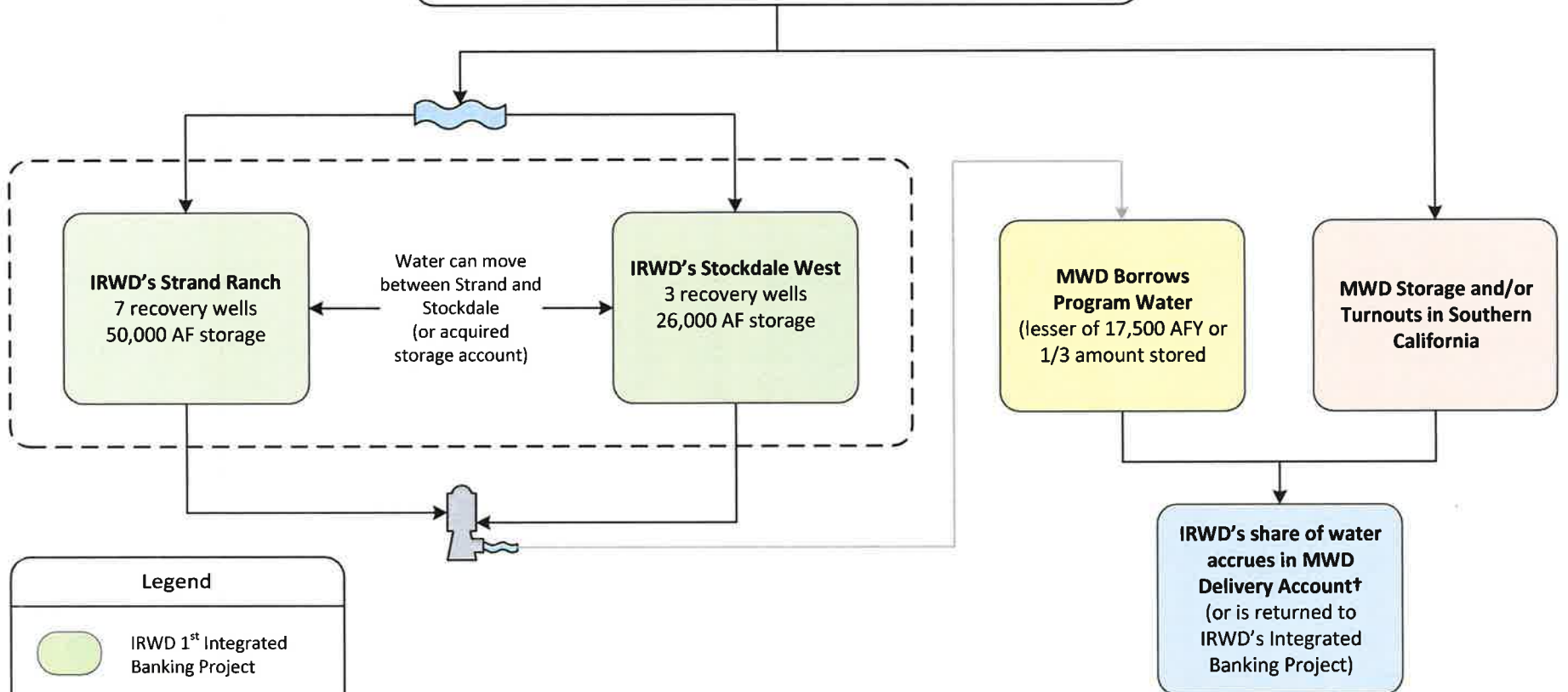
Exhibit "J"

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

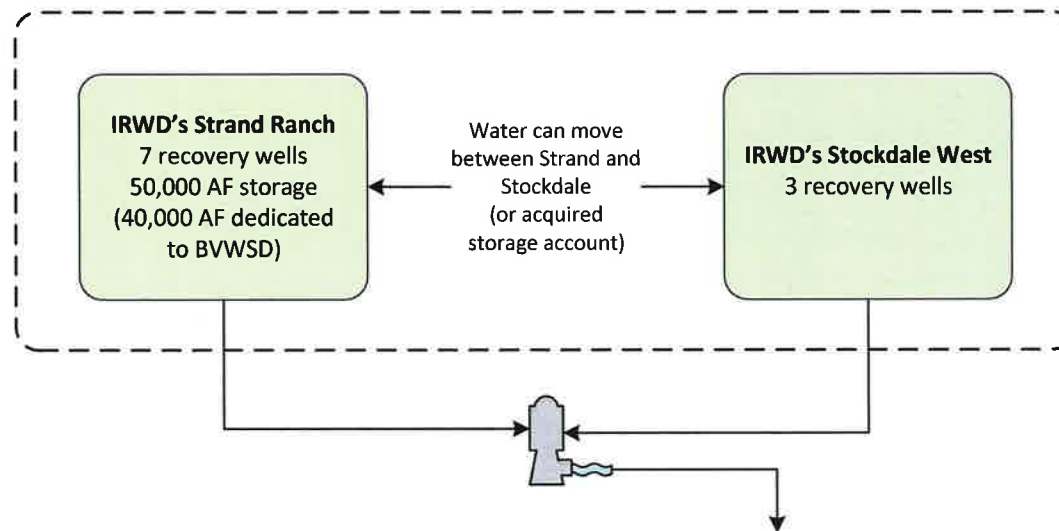


Legend

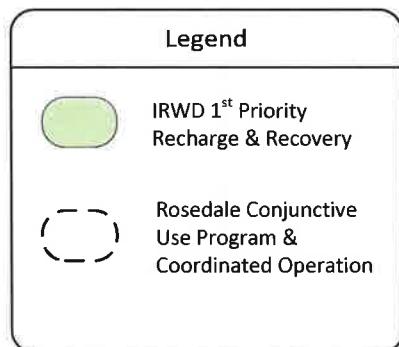
-  IRWD 1st Integrated Banking Project
-  Rosedale Conjunctive Use Program & Coordinated Operation

- 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.

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



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



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

November 16, 2017

Prepared by: K. Welch

Submitted by: F. Sanchez/P. Weghorst

Approved by: Paul A. Cook

SUPPLY RELIABILITY PROGRAMS COMMITTEE

CONCEPTUAL TERMS FOR INTERIM AGREEMENT TO DEVELOP THE KERN FAN GROUNDWATER STORAGE PROJECT

SUMMARY:

On August 14, 2017, Irvine Ranch Water District and Rosedale-Rio Bravo Water Storage District jointly submitted a grant application to the California Water Commission (CWC) for the proposed Kern Fan Groundwater Storage Project. Grant funds will be awarded by the CWC to qualified projects through its Water Storage Investment Program. In the event IRWD and Rosedale are awarded grant funding for the Kern Fan Project, staff has prepared conceptual terms for an Interim Agreement that would provide for early project planning activities and that would lead to the formation of a Kern Fan Project Joint Powers Authority (JPA). The purpose of this proposed JPA would be to oversee the planning, design, construction and operation of the project. Staff recommends that the Committee provide input regarding this approach, the conceptual terms for an Interim Agreement with Rosedale, and authorize staff and legal counsel to work with Rosedale and its legal counsel to refine the terms of the Interim Agreement for the further review by the Committee and then by the Board.

BACKGROUND:

Proposition 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. The CWC, through its Water Storage Investment Program (WSIP), will fund the public benefits associated with projects that meet established criteria pursuant to existing WSIP regulations. Currently, the CWC is evaluating applications that were submitted for 11 projects. One of the applications was submitted by IRWD and Rosedale for the proposed Kern Fan Project. Within the application for the Kern Fan Project, IRWD and Rosedale requested \$86 million in 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 by June 2018.

Establishing a Joint Powers Authority:

One of the first steps in the implementation of the Kern Fan Project would be to acquire up to 1,280 acres of land in Rosedale's service area where the project would be constructed and operated. Rosedale has stated that IRWD's ownership of land in Rosedale's service area would result in potential issues that could be avoided if the project were implemented by IRWD and Rosedale through a JPA. This proposed JPA would be formed to exercise the powers common to the two agencies, Rosedale and IRWD, in implementing and operating the project. Staff has considered the steps associated with the formation of a Kern Fan Project JPA and has prepared terms for an Interim Agreement, as described below, which would facilitate the formation of the JPA as well as the implementation of the project.

Conceptual Terms for Interim Agreement:

In anticipation of IRWD and Rosedale being awarded grant funding for the Kern Fan Project, staff has prepared conceptual terms for an Interim Agreement that would provide for early project planning activities and that would lead to the formation of a JPA that would oversee the planning, design, construction and operation of the project. These conceptual terms are provided as Exhibit "A". The terms outline the principles for implementation of the Kern Fan Project and incorporate the following major elements:

- The formation of a Kern Fan Project JPA by IRWD and Rosedale, which would act as the governing entity overseeing the project;
- JPA ownership of land, facilities and capacities associated with the Kern Fan Project;
- Elements for participation in the WSIP regarding allocation of capacities and water for public and ecosystem benefit purposes;
- Provisions to cost share early planning activities that would need to be completed prior to the formation of the JPA; and
- Rosedale and IRWD use of unused available capacities at the Kern Fan Project in coordination with other independent operating programs and projects.

At the Committee meeting, staff will discuss in more detail the conceptual terms provided in Exhibit "A". Staff recommends that the Committee provide input on the conceptual terms.

FISCAL IMPACTS:

If the CWC awards a grant to IRWD and Rosedale for the Kern Fan Project, a request for funding of the District's estimated \$43 million cost share for the project will be included in the proposed 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 a 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 the conceptual terms for an Interim Agreement with Rosedale-Rio Bravo Water Storage District that would provide for early project planning activities and lead to the formation of a Joint Powers Authority that would oversee the planning, design, construction and operation of the Kern Fan Project; and authorize staff and legal counsel to work with Rosedale and its legal counsel to refine the terms of the Interim Agreement for further review by the Committee.

LIST OF EXHIBITS:

Exhibit "A" – Summary of Conceptual Terms for an Interim Agreement for Implementation of the Kern Fan Groundwater Storage Project

EXHIBIT “A”

DRAFT

Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District

Summary of Conceptual Terms for an Interim Agreement for Implementation of the Kern Fan Groundwater Storage Project (November 16, 2017)

GENERAL TERMS

Parties:	Rosedale-Rio Bravo Water Storage District (“Rosedale”) and Irvine Ranch Water District (“IRWD”).
Description:	Rosedale and IRWD seek to develop the Kern Fan Groundwater Storage Project (“Kern Fan Project”) that will recharge and store up to 100,000 acre-feet (AF) of water during wet periods in the Kern County Groundwater Basin. The water would be available for subsequent recovery and use for public and non-public benefits consistent with the requirements of the California Water Commission (CWC) and the Water Storage Investment Program (WSIP). The Kern Fan Project facilities shall also be available to the Parties for the implementation of programs that are independent of the WSIP related aspects of the Kern Fan Project.
Joint Powers Authority:	Rosedale and IRWD intend to create a Joint Powers Authority (“JPA”), as a separate, legal public entity to govern the Kern Fan Project. The purpose of the JPA would be to combine the individual powers of Rosedale and IRWD to plan, design, construct and operate the Kern Fan Project. The JPA would be established through a joint powers agreement (“JPA Agreement”). The JPA Agreement shall be based on the agreed upon terms and conditions set forth in the Interim Agreement.
Governance:	To be determined.

Interim

Agreement:

An Interim Agreement is needed that that would lead to the formation of the JPA that would oversee the planning, design, construction and operation of the project as well as facilitate Early Planning Activities (described below) that are necessary by the Parties prior to execution of the JPA Agreement. The Conceptual Terms provide the basis for the development of the Interim Agreement.

Authority

of the JPA:

The JPA will be authorized to carry out the functions necessary to implement the Kern Fan Project including: acquisition and ownership of land, easements, facilities and capacities as well as the design, construction, operation, maintenance and replacement of facilities. The JPA would administer the project; execute and administer grant agreements with the CWC and others; and execute and administer any required agreements related to the operation of the project including any agreements with the California Department of Water Resources (DWR) and other state resource agencies.

Interim

Agreement

Effective Date:

The date of execution of the Interim Agreement, which shall be subject to the award of grant funding to IRWD and Rosedale for the proposed Kern Fan Project.

Interim

Agreement

Term:

The Interim Agreement shall terminate upon execution of the JPA Agreement or earlier as mutually agreed upon by the Parties.

JPA Agreement

Effective Date:

The date of execution of the JPA Agreement, which shall be subject to the certification of a Final Environmental Impact Report (FEIR) for the Kern Fan Project and approval of the project.

JPA Agreement

Term:

The term of the JPA Agreement would commence on the JPA Agreement Effective Date and would terminate 30 years or as otherwise required for participation in the WSIP. The term of the JPA

Agreement could be extendable upon mutual written agreement of the parties. At the termination of the JPA Agreement and any subsequent extensions thereof, the JPA would cause the assignment of ownership of all Kern Fan Project property, facilities, and capacities to Rosedale and IRWD on an equal basis.

**Non-Binding
Effect:**

This Term Sheet is intended to be a non-binding statement of the conceptual terms of the proposed transaction. It is subject to the negotiation, execution and delivery of an Interim Agreement consistent with the basic terms and conditions set forth herein.

Grant Funding:

Rosedale and IRWD submitted an application for grant funding through the WSIP to receive up to \$86 million in grant funding for the planning, design and construction of the Kern Fan Project facilities. The CWC is expected to announce the award of funding to qualified projects by June 2018. The Parties would agree to cooperate in pursuing other grant opportunities.

Rosedale and IRWD

Funding:

Rosedale and IRWD shall each contribute up to \$43 million to the JPA for funding the planning, design and construction of the Kern Fan Project facilities, assuming \$86 million is awarded to the Kern Fan Project under the WSIP. If less than \$86 million is awarded to the Kern Fan Project, then Rosedale and IRWD shall either agree to proportionally scale down the project or equally share in any shortage in the award amount provided by the CWC.

**Early Planning
Activities:**

Rosedale and IRWD have identified certain activities related to securing the WSIP grant and project planning that would need to be completed prior to the potential formation of the JPA. These planning activities may include additional consultant work and analyses associated with securing a grant, preparing and executing an agreement with CWC, securing land purchase options, due diligence activities, performing hydrogeologic evaluations, and environmental compliance. Rosedale and IRWD would equally fund the cost of the identified Early Planning Activities.

Allocation of
Capacities:

For the Kern Fan Project, Rosedale and IRWD intend to develop up to 100,000 AF of storage and recharge capacity, up to 50,000 AF per year of recovery and up to 500 cubic feet per second (cfs) of additional conveyance capacity. Storage capacity developed under the Kern Fan Project will be allocated as follows:

25% to the WSIP Public or Ecosystem account
37.5% to the Rosedale account
37.5% to the IRWD account

Recharge, recovery and additional conveyance capacities developed under the Kern Fan Project will be allocated as follows:

50% to Rosedale
50% to IRWD

The Parties would jointly use their recharge, recovery and conveyance capacities to fulfill public ecosystem requirements as may be required in any grant funding or operations agreements that are entered into by the JPA with the CWC, DWR and other state resource agencies pursuant to the WSIP.

Project Water: For the purposes of participation in the WSIP, the Kern Fan Project will be operated by recharging and storing water supplied by the State Water Project (SWP) under the Article 21 Program (Project Water). These deliveries would be made on behalf of IRWD as a landowner in Dudley Ridge Water District (DRWD) and Rosedale as a sub-unit of the Kern County Water Agency (KCWA). Project Water delivered to the Kern Fan Project will be proportionately applied to each respective storage account as defined under "Allocation of Capacities".

Ownership: The JPA would acquire and own up to 1,280 acres of land within the Kern Fan Project designated project area. The JPA will own all property, facilities and capacities of the Kern Fan Project.

Hydrogeologic

Evaluations: Rosedale and IRWD would equally fund hydrogeologic studies needed to determine the recharge, storage and recovery capacities and limitations of the Kern Fan Project designated properties.

CEQA

Compliance: Rosedale and IRWD would comply with CEQA and would equally fund the preparation of an Environmental Impact Report (EIR) for the construction and operation of the Kern Fan Project facilities including all technical studies necessary to support the EIR. Rosedale would be the lead agency with respect to CEQA compliance. IRWD would be a responsible agency. Rosedale and IRWD would equally fund any litigation expenses associated with the CEQA compliance work for the Kern Fan Project.

General

Expenses: Each Party would be responsible for its own fees and expenses arising out of the negotiation and execution of the Interim and JPA Agreements, obtaining necessary approvals and the like.

Permit Costs: The JPA would fund all regulatory and permitting fees and costs associated with the construction of Kern Fan Project facilities.

Project Costs: The WSIP grant funds would be applied to the planning, design and construction costs of the Kern Fan Project and the JPA would fund all remaining associated costs.

Project

Operation: The JPA Agreement would specify Rosedale as the operator of the Kern Fan Project facilities.

Operation Costs: The JPA Agreement would specify Rosedale and IRWD payment of operations, maintenance, energy and replacement (OME&R) costs. Costs would be defined as either variable OME&R and paid pro rata based on actual use of facilities or fixed OME&R and divided equally. Rosedale and IRWD will equally split the OME&R costs associated with the public benefits or ecosystem account associated with participation in the WSIP that are not funded by the State.

Unused

Capacities: Rosedale and IRWD shall have equal priority and access to use of any unused available capacities in the Kern Fan Project. Rosedale and IRWD may use such unused capacity in coordination with other independent operating program and projects integrated in Rosedale's Conjunctive Use Program. Rosedale and IRWD will have the ability to transfer water stored in the Kern Fan Project to respective storage accounts in other programs or projects.

Kern River
Regulated

High Flows: At such times when Project Water and other water are available simultaneously, Project Water will be utilized until the public benefit and ecosystem account is at full capacity. Once this is met, Rosedale and IRWD may each use their respective capacities for all available water including Project Water.

Kern River

Flood Water: During times that the "Kern River Flood Water" is available (e.g. when the Kern River Watermaster offers water to all takers willing to sign a "Notice/Order", or the Kern River Watermaster offers water to the California Aqueduct/Kern River Intertie, such water is expected to flood farmed acreage in Buena Vista Lake, or is expected to be delivered into the Kern River Flood Channel for delivery out-of-county), this water would precede delivery of Project Water, if simultaneously available. Rosedale would have a first priority to use all Kern Fan Project facilities for recharge of Kern River Flood Water. All Kern River Flood Water banked using the Kern Fan Project facilities would be shared between Rosedale and IRWD on an equal basis.

Water Quality: The quality of water to be recharged and recovered at the Kern Fan Project would be consistent with the pump-in requirements of the California Aqueduct.