AGENDA
IRVINE RANCH WATER DISTRICT
SUPPLY RELIABILITY PROGRAMS COMMITTEE

THURSDAY, SEPTEMBER 21, 2017

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 _____

ALSO PRESENT

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. WATER BANKING PROJECT FACILITIES, CAPACITIES, OPERATIONS AND PROGRAMS OVERVIEW – JOHNSON/WELCH/SANCHEZ/ WEGHORST

   Recommendation: Receive and file.

ACTION

6. REVISED WATER BANKING, TRANSFERS AND WHEELING POLICY POSITION PAPER – WEGHORST

   Recommendation: That the Board approve the District's Water Banking, Transfers and Wheeling Policy Position Paper as revised with input from the Supply Reliability Programs Committee.

OTHER BUSINESS

7. A. Directors' Comments

B. Adjourn

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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.

September 21, 2017
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, exchange programs and operations that can be used for reference purposes 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. Staff will also review a draft Fact Sheet that highlights the proposed Kern Fan Groundwater Storage Project that has been submitted for grant funding through the Water Storage Investment Program.

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. A discussion of current recharge activities, ongoing efforts to secure additional water for recharge at the projects and a draft Fact Sheet that highlights the proposed Kern Fan Groundwater Storage Project are also provided.

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. The amount of water delivered in 2017 to the IRWD projects is 19,325 acre-feet (AF). This amount includes 13,654 AF of high flow Kern River Water, 1,486 of Table A water and 3,610 AF of Article 21 water delivered to the Strand and Stockdale West Ranch projects. It also includes 575 AF of Article 21 water and other supplies that are not part of the State Water Project

(SWP) that were delivered to the Kern Water Bank. All of IRWD's 2017 Table A water available through Dudley Ridge Water District (DRWD) has been recharged at the IRWD projects.

Recharge at IRWD Projects:

Rosedale-Rio Bravo Water Storage District's recent use of the Strand and Stockdale West facilities for recharging water have been limited by available supply and CVC capacity limitations and not by recharge rates. Based on discussions with Rosedale's operations manager, the CVC is being operated to convey SWP supplies to Kern County Water Agency member agencies and no third-party supplies are being delivered. Rosedale estimates the current recharge rates at the Strand Ranch at approximately 0.27 feet per day in the basins on the south side of the CVC and at approximately 0.36 feet per day on the north side of the CVC. Exhibit "G" provides an overview of the current recharge rates at both the Strand and Stockdale West Ranch Projects.

Other Recharge Opportunities:

Staff has been pursuing additional opportunities to recharge water at the Strand and Stockdale West Ranch Projects prior to the end of the current fiscal year. At the Committee meeting, staff will provide an update on efforts to secure water from:

- Carpinteria Valley Water District;
- Dudley Ridge Water District;
- Metropolitan Water District of Southern California;
- Mojave Water District; and
- Other Opportunities.

Kern Water Bank 2017 Recharge:

Staff has investigated recent recharge activity in the Kern Water Bank (KWB) to help better understand storage of water by KWB participants. As of the end of July 2017, approximately 370,000 AF of water has been recharged into the KWB. Of that amount, approximately 280,000 AF (75% of total water) belongs to Wheeler Ridge-Maricopa Water Storage District and Westside Mutual Water Storage District. Both of these districts are subsidiaries of The Wonderful Company, formerly known as Paramount Farms. DRWD recharged approximately 32,000 AF to the KWB in 2017. A total of 575 AF was delivered by DRWD on behalf of IRWD into storage in the KWB.

Project Maps:

To support the tables provided as Exhibits "A", "B" and "C", staff has prepared maps that depict project wells, pipelines and CVC turnout locations, recharge basin locations and current recharge rates. These maps are provided as Exhibits "D", "E", "F" and "G", 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. These diagrams are provided as Exhibits "H", "I", "J", "K" and "L" as described in the List of Exhibits.

Fact Sheet for Kern Fan Groundwater Storage Project:

In August 2017, IRWD and Rosedale submitted a grant application for the proposed Kern Fan Groundwater Storage Project to the California Water Commission for Proposition 1 funding through the Water Storage Investment Program. Based on feedback from the Committee in August 2017, staff has prepared a draft Fact Sheet summarizing the proposed project and related benefits. This Fact Sheet is provided as Exhibit "M".

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 Cross Valley Canal Turnout Facilities
Exhibit "F" – Map of Water Banking Recharge Basins
Exhibit "G" – Map of Water Banking Recharge Rates
Exhibit "H" – Diagram of IRWD-Rosedale Water Banking and Exchange Program Agreements
Exhibit "I" – 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 "J" – Diagram of Unbalanced Exchange Program Diagram with Dudley Ridge Water District
Exhibit "K" – Diagram of Coordinated Operating, Water Storage, Exchange and Delivery Agreement with Metropolitan Water District of Southern California
Exhibit "L" – Diagram of Template Wheeling Agreement with Metropolitan Water District of Southern California
Exhibit "M" – Draft Kern Fan Groundwater Storage Project Fact Sheet

Exhibit "A"

TABLE 1
Current and Anticipated Water Banking Projects
Recharge, Storage and Recovery Capacities
September 21, 2017

WATER BANKING PROJECT	OWNERSHIP AND WELL INFO			ALLOCATED CAPACITY (AF)					1st PRIORITY RECOVERY CONDITIONS (CFS)		2nd PRIORITY RECOVERY CONDITIONS (CFS)	
	IRWD OWNED	WELLS EXISTING	WELLS PROPOSED OR UNDER CONST.	TOTAL STORAGE CAPACITY	ANNUAL RECHARGE 1ST PRIORITY	ANNUAL RECHARGE 2ND PRIORITY	ANNUAL RECOVERY 1ST PRIORITY	ANNUAL RECOVERY 2ND 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 ***during*** 6 month partner recovery period (AF)									12,420	0.0	-	-
IRWD's recovery ***after*** 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
September 21, 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]	743	-	-	-	743	1,486
2017 SWP Article 21[6]	1,805	-	-	-	1,805	3,610
High Flow Kern River	-	6,827	6,827	-	-	13,654
TOTAL ESTIMATED 2017 TRANSACTIONS[7]	3,077	6,873	6,827	-	2,548	19,325
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	2,985	17,662	6,827	-	2,548	30,022
TOTAL ESTIMATED STORED WATER TO DATE	12,387	22,473	6,827	-	3,722	45,409

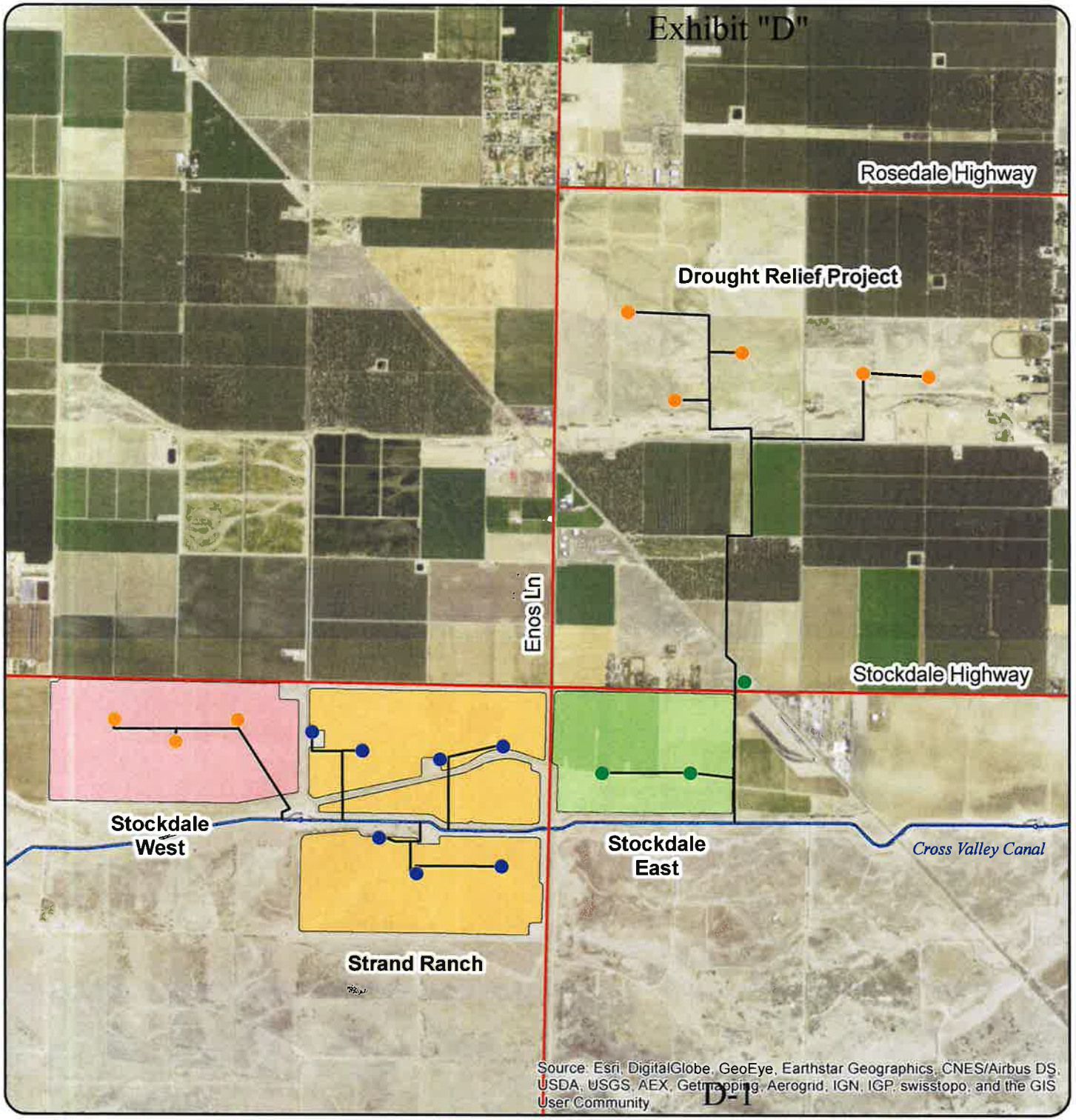
NOTES:
-MWD = Metropolitan Water District of Southern California.
[1] IRWD's SWP includes 437 AF from CVWD that stays in Kern County.
[2] IRWD's Non-SWP total includes 3,158 AF of Kern County Water Agency Article 21 Water.
[3] DRWD water supply will be returned by MWD or IRWD's Strand Ranch to IRWD's Jackson Ranch. IRWD's 2013-2016 SWP allocation amounts are stored in the MWD system. IRWD's 2017 SWP allocation water will be stored at Strand Ranch.
[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 2013-2015 SWP allocations through DRWD.
[5] Article 21 deliveries to Kern Water Bank commenced on 2/15/17. In February, IRWD's share of DRWD's capacity (6.58%) initially yielded about 11 AF/day, and then dropped to about 6 AF/day from 2/25/17 to 5/10/17.
[6] Article 21 deliveries to Strand Ranch/Stockdale West began 3/8/17. Deliveries made pursuant to the DRWD/MWD Unbalanced Exchange Program at a rate of 130 cfs.

Exhibit "C"

TABLE 3
IRWD's Water Banking Storage, Recharge and Recovery Operations - AFTER LOSSES
September 21, 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]	7,502	-	-	-	649	8,151
Total Kern County	389	9,675	-	-	-	10,064
TOTAL STORED WATER (1/1/2016)	7,891	13,942	-	-	649	22,482
(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	8,026	-	-	-	1,174	9,200
Total Kern County	389	9,675	-	-	-	10,064
TOTAL STORED WATER (1/1/2017)	8,415	13,964	-	-	1,174	23,553
(RECOVERY) AND RECHARGE IN 2017 (AF)						
Kern Water Bank Deliveries[5]	476	41	-	-	-	518
2017 SWP Allocation (85%)[3]	632	-	-	-	669	1,301
2017 SWP Article 21[6]	1,534	-	-	-	1,625	3,159
High Flow Kern River	-	5,803	6,144	-	-	11,947
TOTAL ESTIMATED 2017 TRANSACTIONS[7]	2,642	5,844	6,144	-	2,293	16,924
ESTIMATED WATER IN STORAGE 2017 (AF)						
Total Kern Water Bank	476	4,330	-	-	-	4,806
Total MWD System	8,026	-	-	-	1,174	9,200
Total Kern County	2,555	15,478	6,144	-	2,293	26,470
TOTAL ESTIMATED STORED WATER TO DATE	11,057	19,808	6,144	-	3,467	40,476

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 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 will be stored at Strand Ranch.
[4] Beginning balance of water stored in MWD system includes 4,000 AF 2014 Exchange, 2,853 AF 2014 borrowed SWP, 649 AF IRWD's 2013-2015 SWP allocations through DRWD.
[5] Article 21 deliveries to Kern Water Bank commenced on 2/15/17. In February, IRWD's share of DRWD's capacity (6.58%) initially yielded about 11 AF/day, and then dropped to about 6 AF/day from 2/25/17 to 5/10/17.
[6] Article 21 deliveries to Strand Ranch/Stockdale West began 3/8/17. Deliveries made pursuant to the DRWD/MWD Unbalanced Exchange Program at a rate of 130 cfs.
[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

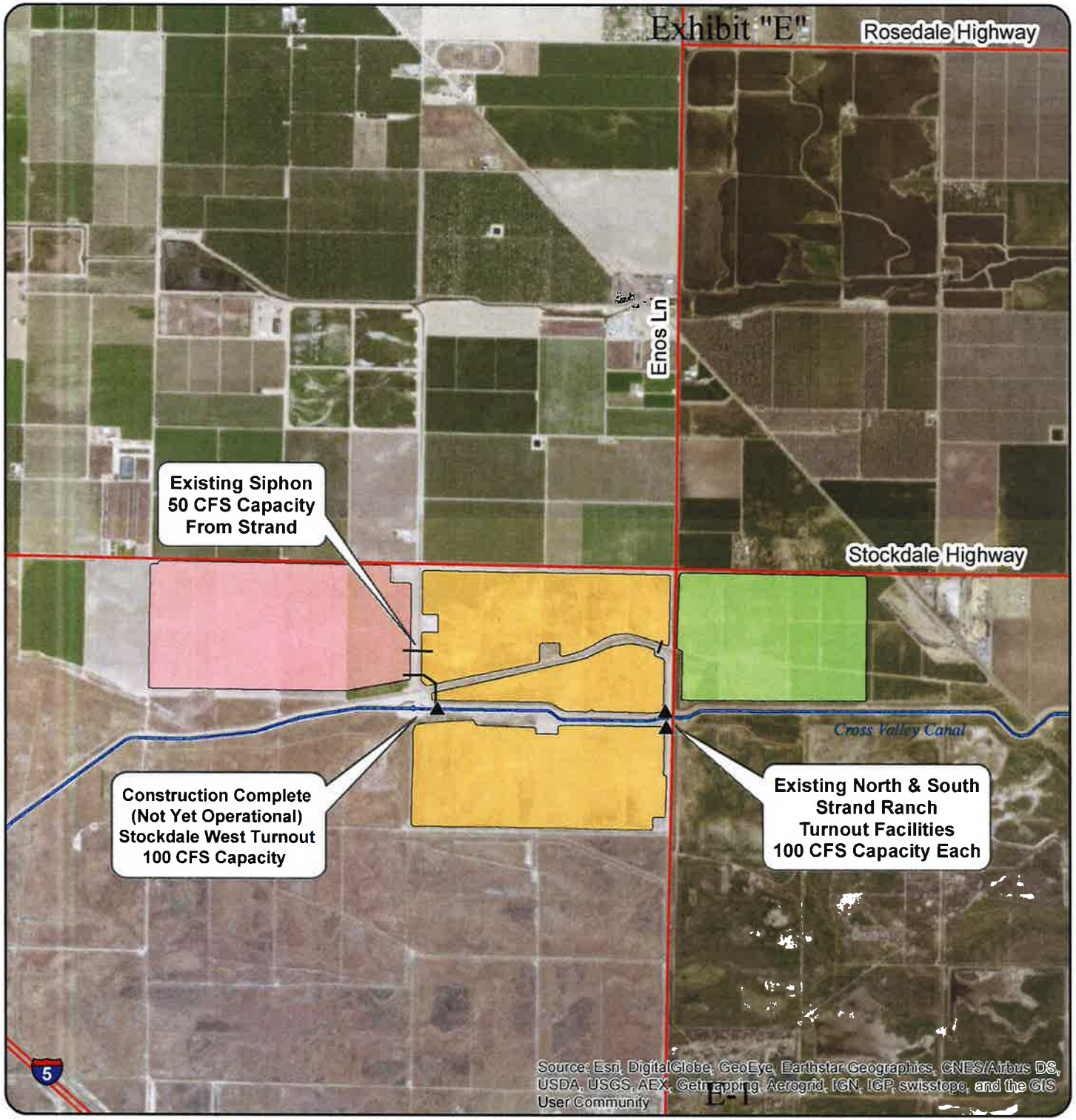
- Existing Extraction Well
- Planned Extraction Well
- Well Under Construction
- Well Discharge Pipelines
- Stockdale East
- Stockdale West
- Strand Ranch

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

N

0 0.25 0.5 1 Miles

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



Irvine Ranch
WATER DISTRICT

Location Map:
IRWD Water Banking Projects
Turnout Facilities

MAP FEATURES

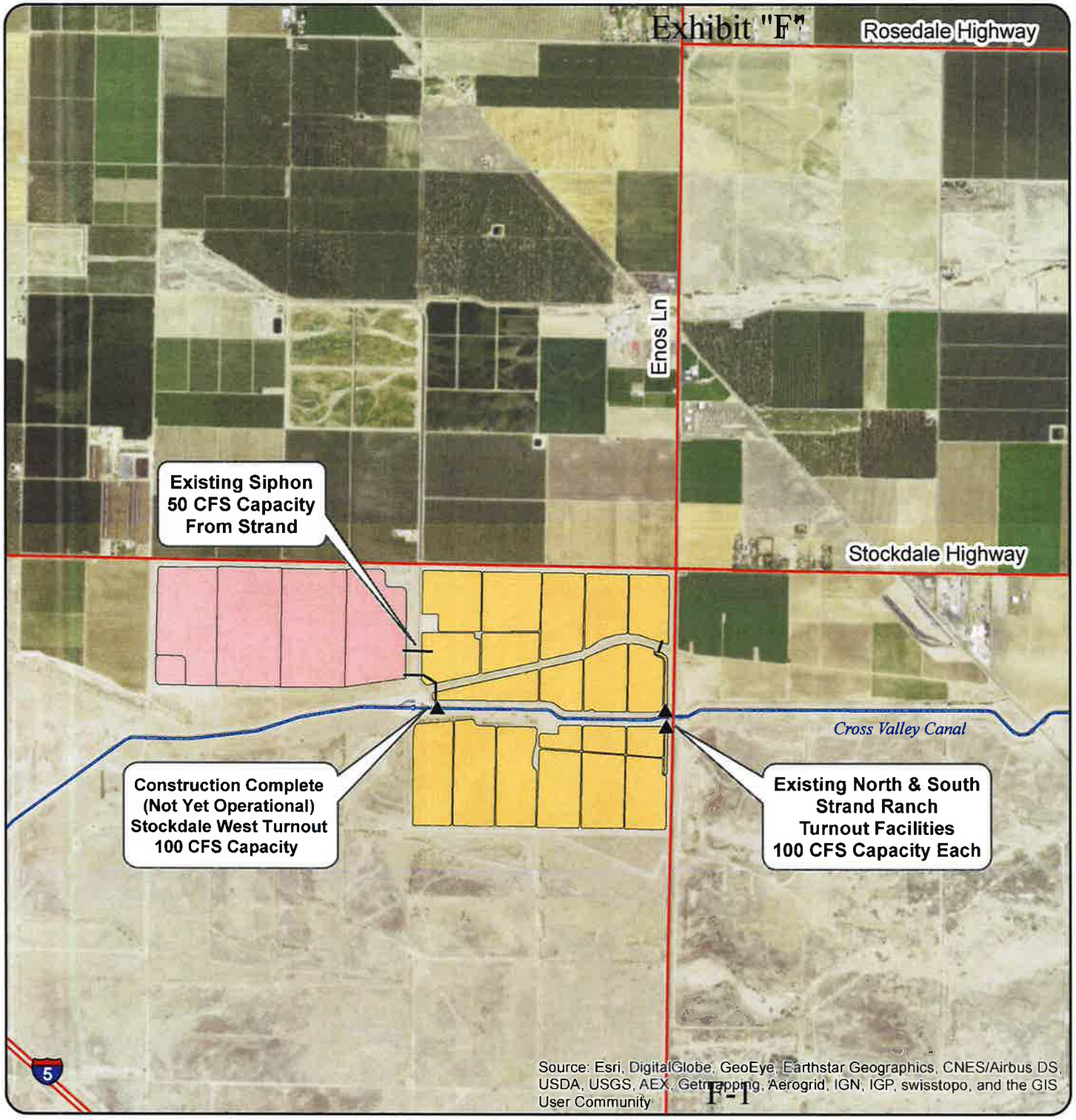
- ▲ Turnouts
- Stockdale East
- Stockdale West
- Strand Ranch

This figure shows the location of existing and anticipated pipelines and turnout facilities.

N

0 0.25 0.5 1
Miles

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



Irvine Ranch
WATER DISTRICT

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

MAP FEATURES

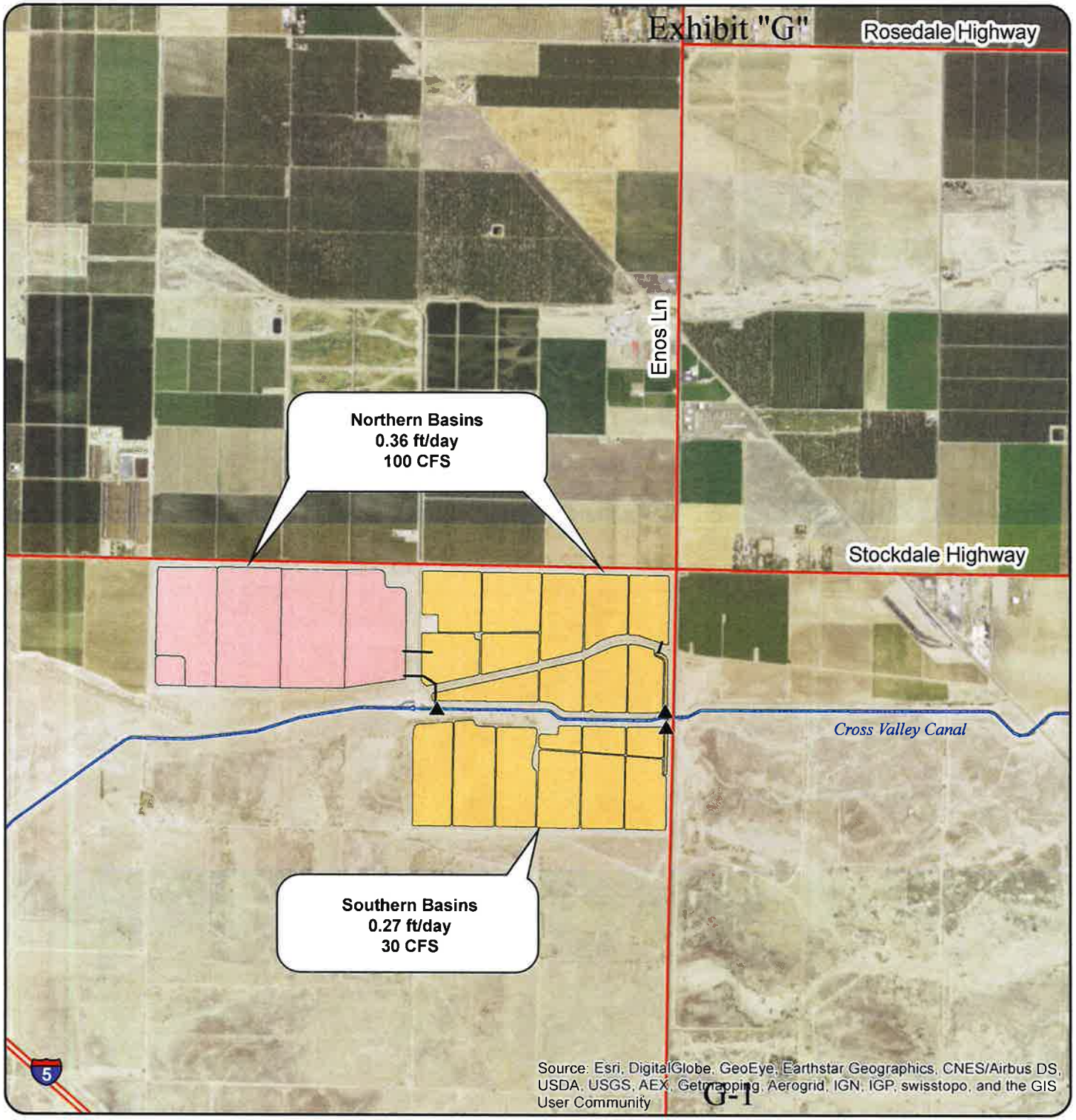
- Turnouts
- Stockdale West
- Strand Ranch

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

N

0 0.25 0.5 1 Miles

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



Irvine Ranch WATER DISTRICT

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 2017.

N

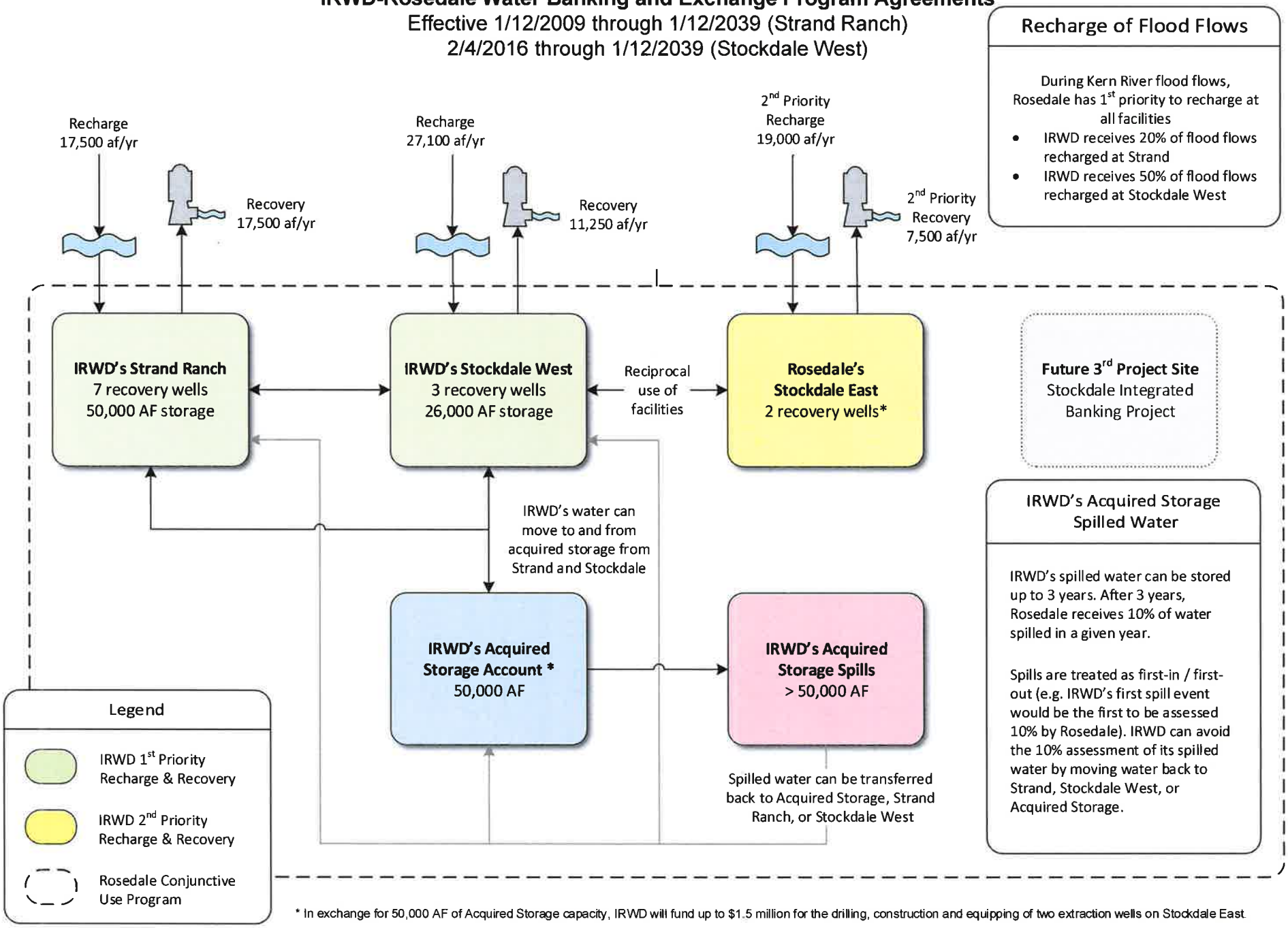
0 0.25 0.5 1 Miles

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

Exhibit "H"

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)



Recharge of Flood Flows

During Kern River flood flows, Rosedale has 1st priority to recharge at all facilities

- IRWD receives 20% of flood flows recharged at Strand
- IRWD receives 50% of flood flows recharged at Stockdale West

IRWD's Acquired Storage Spilled Water

IRWD's spilled water can be stored up to 3 years. After 3 years, Rosedale receives 10% of water spilled in a given year.

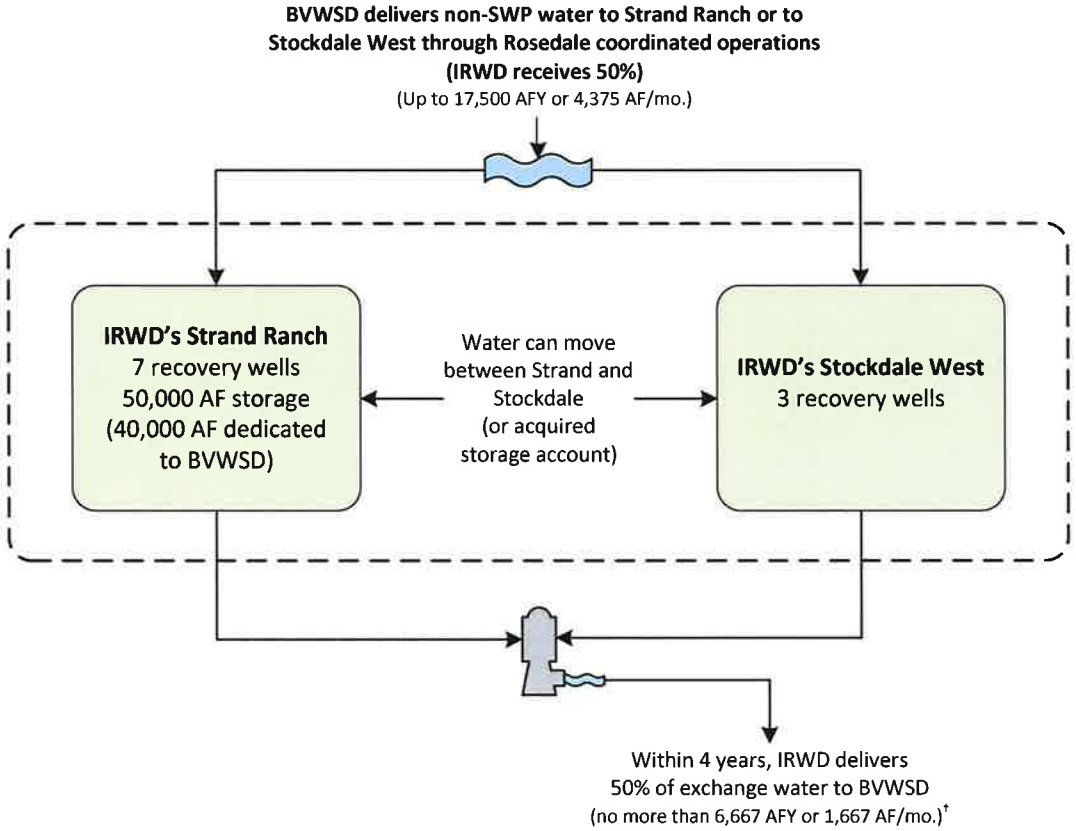
Spills are treated as first-in / first-out (e.g. IRWD's first spill event would be the first to be assessed 10% by Rosedale). IRWD can avoid the 10% assessment of its spilled water by moving water back to Strand, Stockdale West, or Acquired Storage.

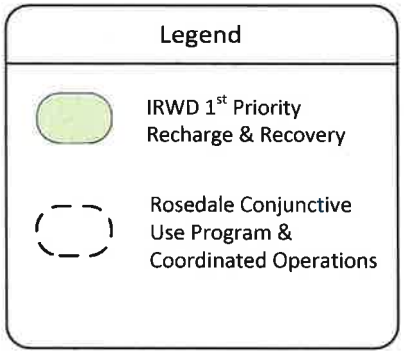
* In exchange for 50,000 AF of Acquired Storage capacity, IRWD will fund up to $1.5 million for the drilling, construction and equipping of two extraction wells on Stockdale East.

Exhibit "I"

Buena Vista Water Storage District Long Term Water Exchange Program

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





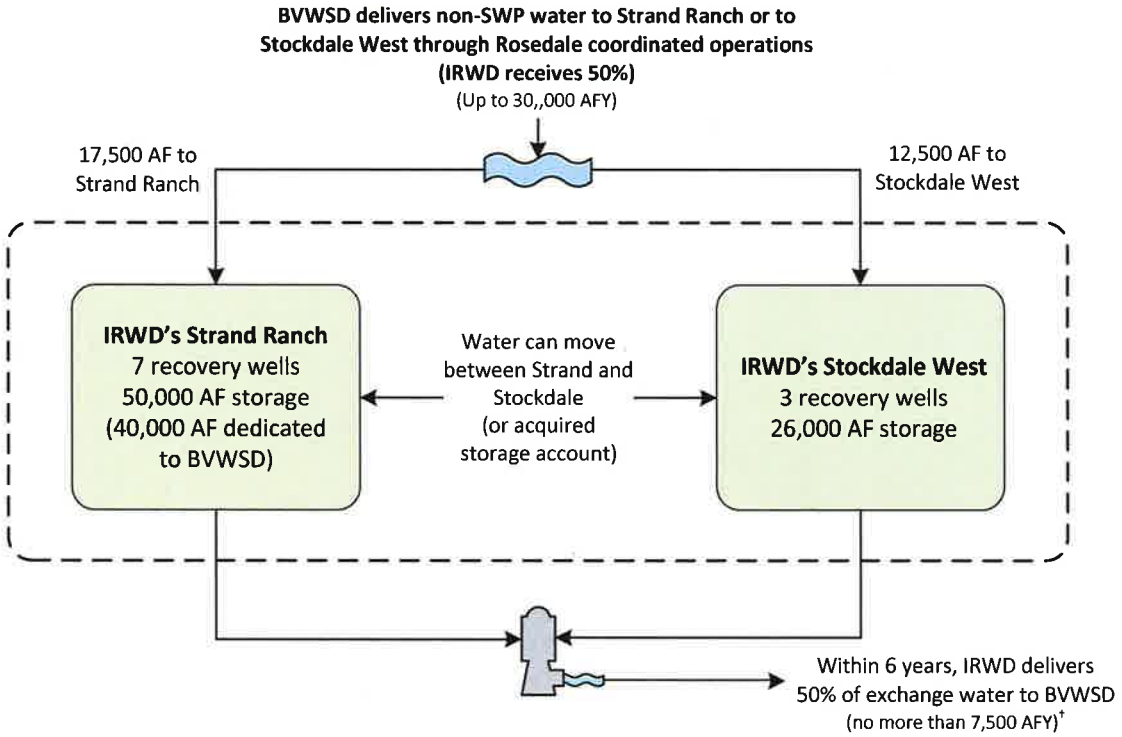
†IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31st of the 4th year following the associated recharge event. IRWD pays for recovery of water returned to BV. Water to be remitted back to BV may remain in storage at Strand Ranch beyond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

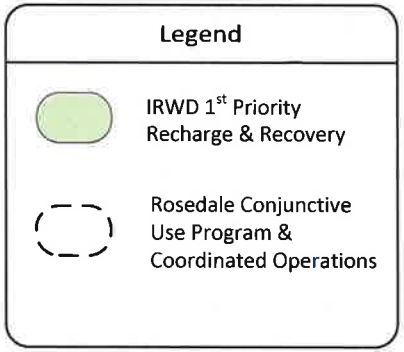
Year Following Recharge Event	Percent Transferred to IRWD	Percent Returned to BV During or Before Indicated Year
1	50%	50%
2	50%	50%
3	50%	50%
4	50%	50%
5	60%	40%
6	70%	30%
7	80%	20%
8	90%	10%
9	100%	0%

Exhibit "I"

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:

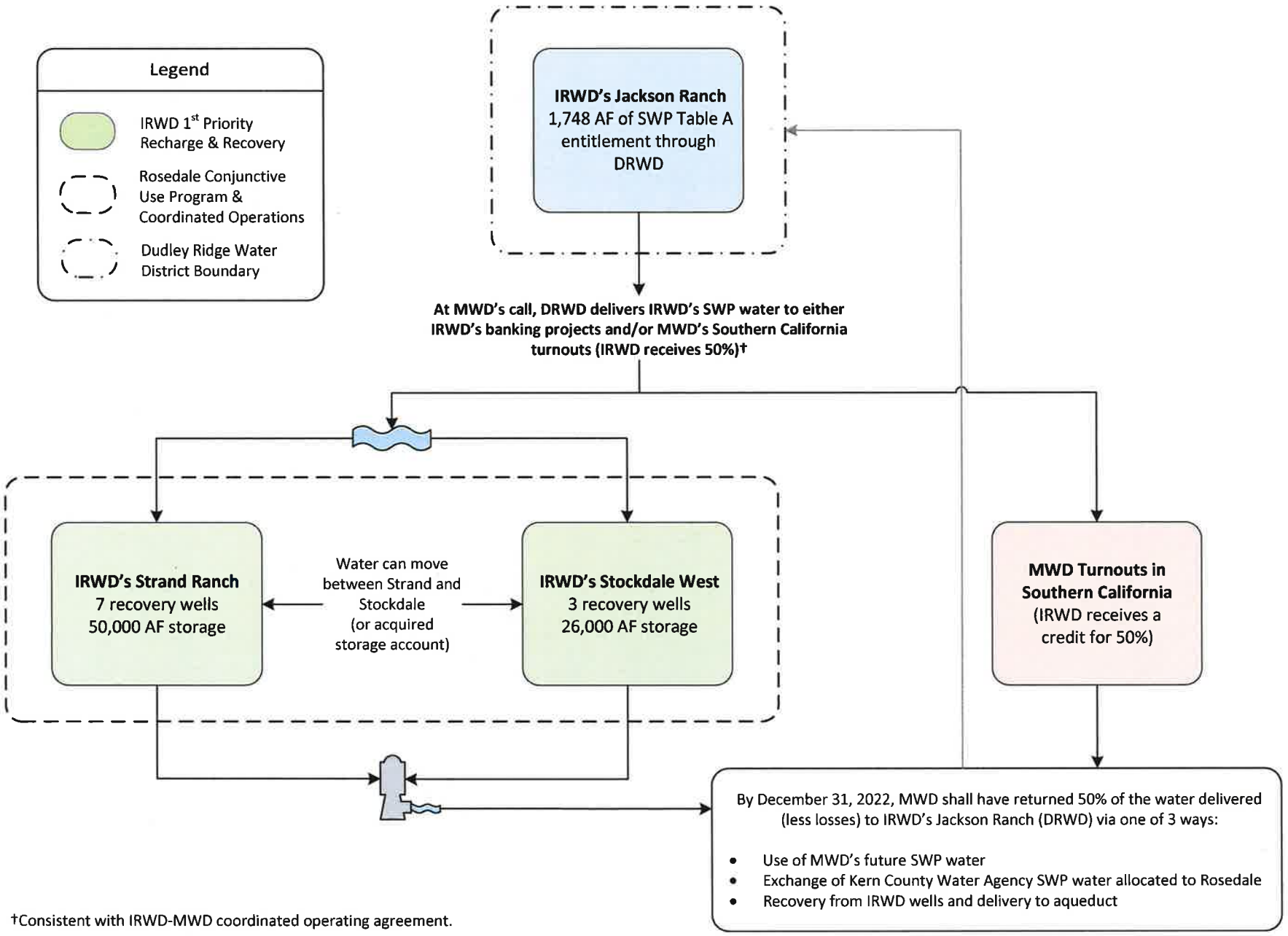
Modified for 1-Year Recharge Program Only

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 "J"

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 "K"

Coordinated Operating, Water Storage, Exchange and Delivery Agreement Between MWD, MWDOC and IRWD

Effective 5/1/2011 through 11/4/2035

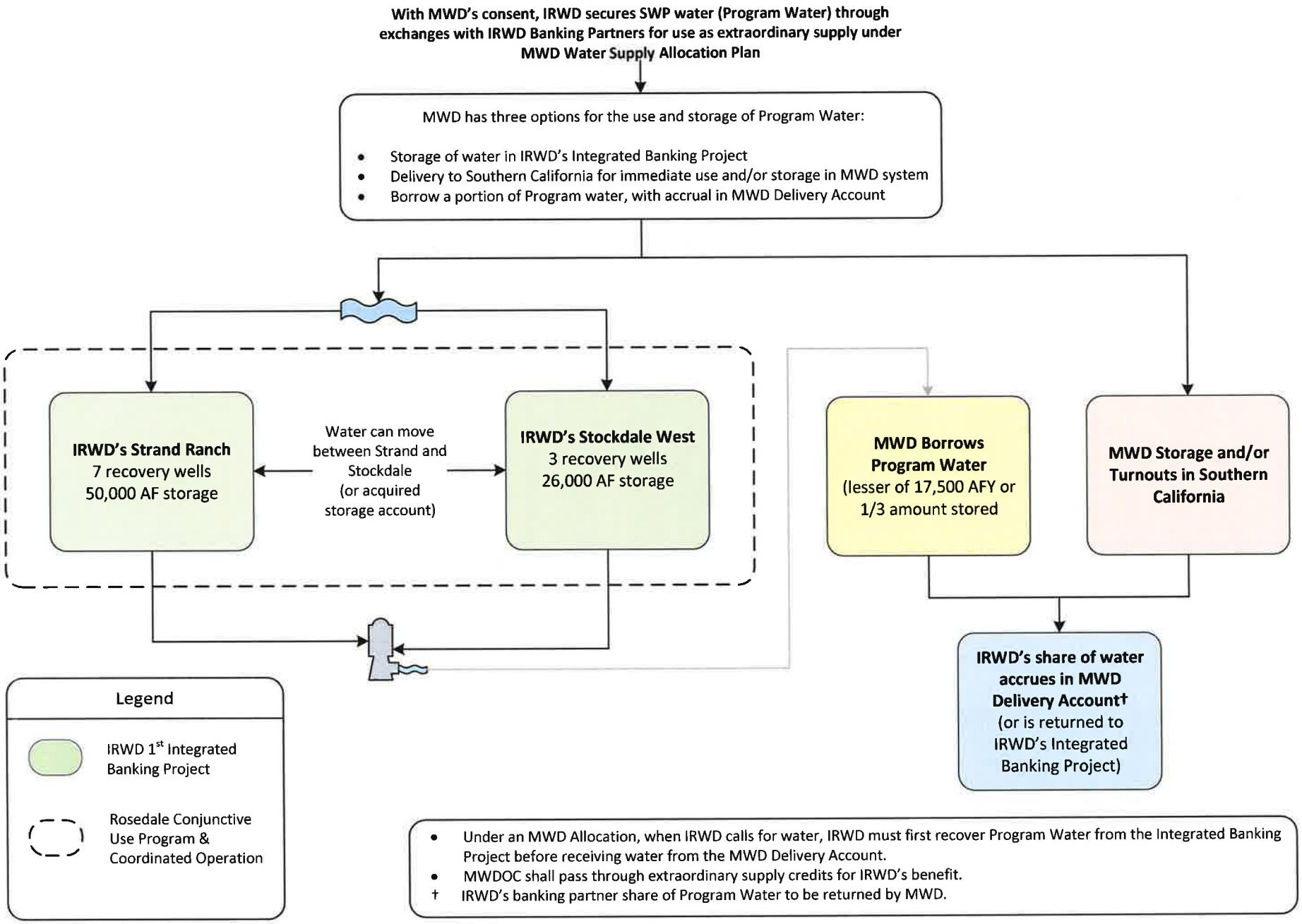
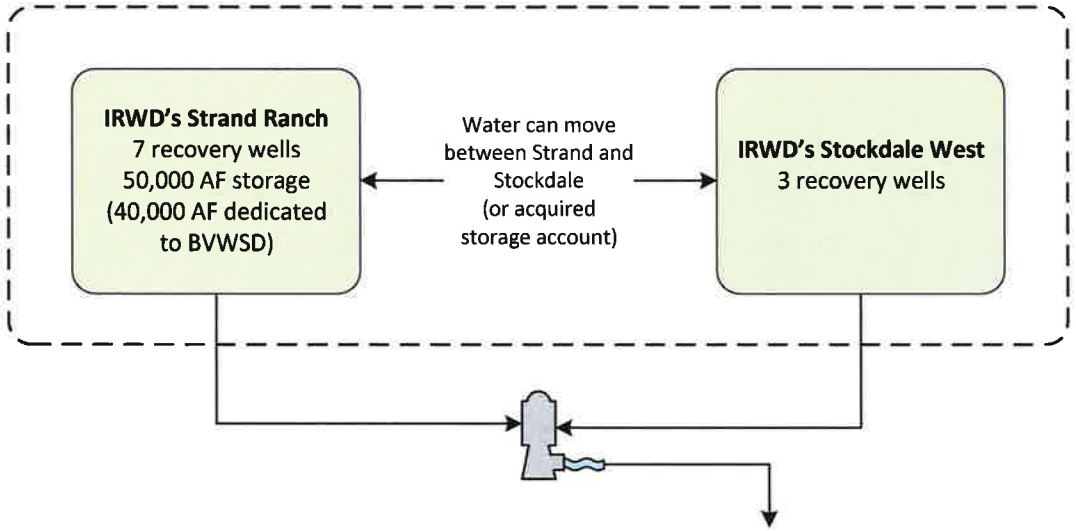


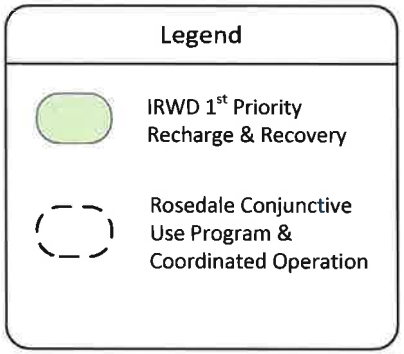
Exhibit "L"

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.

EXHIBIT "M"

DRAFT

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

Kern Fan Groundwater Storage Project

Summary

Irvine Ranch Water District (IRWD) and Rosedale-Rio Bravo Water Storage District (Rosedale) jointly submitted a grant application to the California Water Commission (CWC) for Proposition 1 funding through the Water Storage Investment Program (WSIP). The innovative Kern Fan Groundwater Storage Project would provide approximately $178 million in benefits. The project would provide significantly enhanced water supply reliability benefits to IRWD and Rosedale, and environmental benefits to endangered species in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Delta). IRWD and Rosedale requested $86 million in grant funding from the CWC, which is 50% of the estimated total capital cost of $172 million.

Project Overview

The Kern Fan Project would provide IRWD and Rosedale water supply reliability benefits and ecosystem benefits for the Delta and its tributaries by recharging and storing up to 100,000 AF of unallocated State Water Project (SWP) Article 21 water in the Kern County groundwater basin. Recovered stored groundwater will supply local demands in lieu of exporting water from the Delta.

IRWD and Rosedale would jointly construct recharge and recovery facilities in the Kern Fan area to develop a fully functioning water banking project. It will be constructed in two phases, each about 640 acres, for a total of 1280 acres.

The overall project would consist of approximately:

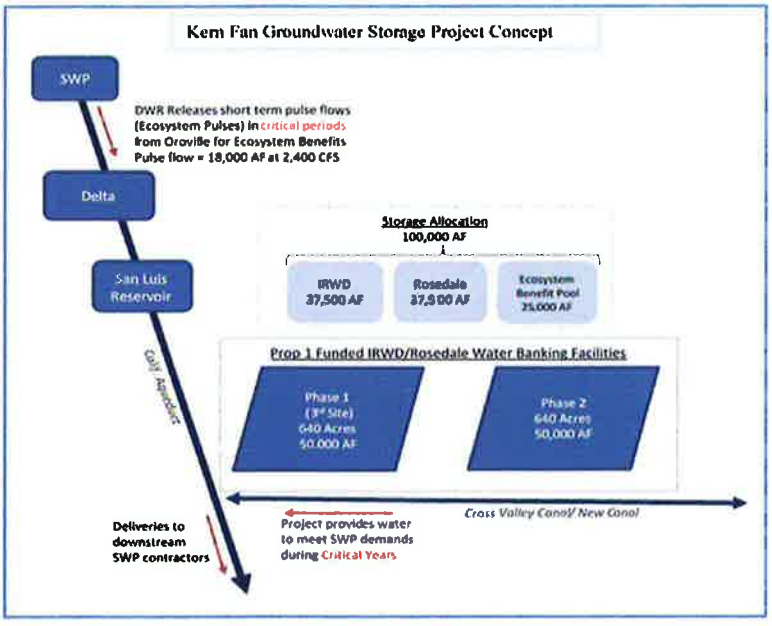
- 100,000 acre-feet of storage capacity;
- Up to 100,000 acre-feet per year (AFY) in recharge capacity;
- Up to 70 cubic feet per second (cfs) or 50,000 AFY of recovery capacity; and
- 500 cfs of new canal capacity from the California Aqueduct.

How will it Work?

Unallocated Article 21 water would be stored in the Kern Fan Project and extracted when needed to provide ecosystem, emergency supply and water supply benefits.

The total expected 100,000 AF storage capacity of the Project would be split between project beneficiaries as follows:

- 25% reserved for public ecosystem benefits (25,000 AF)
- 75% shared equally by IRWD and Rosedale for their respective water supply reliability programs (75,000 AF)



Approximately 25,000 AF of the stored water would be held as SWP system water that would be used for ecosystem benefit purposes to restore endangered winter and spring-run Chinook salmon.

Operations of the Project would be coordinated with the State Water Project (SWP) through the California Department of Water Resources (DWR) and could be integrated with the operations of other projects funded through the WSIP such as Sites Reservoir.

Multiple Statewide and Local Benefits:

The Kern Fan Project is unique because it not only provides benefits to IRWD and Rosedale, but also provides significant statewide public benefits. Specific benefits include:

- Provides new groundwater storage that recharges the Kern Fan sub-basin and enhances water supply reliability;
- Reduced imported water demands on the Delta at critical times to benefit endangered spring and winter-run Chinook salmon;
- Provides water supply during drought conditions and for emergency response purposes, such as after a Delta levee failure;
- Manages water in a resilient and sustainable manner;
- Establishes temporary wetlands through intermittent recharge events that will attract migratory and other water birds in Kern County; and
- Integrates into other water storage projects to provide greater statewide benefits.

WISP Grant Funding

The funding source for the WSIP is Proposition 1, also known as the Water Quality, Supply and Infrastructure Improvement Act of 2014, which provides $2.7 billion for public benefits associated with water storage projects. The funding is administered by the California Water Commission (CWC).

IRWD and Rosedale have requested $86 million in grant funding, which is 50% of the estimated total capital cost of $172 million for the project.

IRWD and Rosedale would each provide $43 million in funding for the project.

The CWC is expected to announce its grant funding awards in May or June 2018.

For more detailed information please visit: (website

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Eric Averett
General Manager
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September 21, 2017
Submitted by: P. Weghorst
Approved by: Paul A. Cook

SUPPLY RELIABILITY PROGRAMS COMMITTEE

REVISED WATER BANKING, TRANSFERS AND WHEELING POLICY POSITION PAPER

SUMMARY:

Irvine Ranch Water District policy position papers are reviewed periodically to determine if the positions are still valid, need revisions or if additional papers need to be written on different issues of importance to the District. Staff has modified the existing Water Banking, Transfers and Wheeling Policy Position Paper that was last revised and approved on October 26, 2015. These revisions take into consideration progress that has occurred in establishing and expanding IRWD's water banking programs, a reduced and uncertain need for imported water in the future and the potential for providing water supply reliability assistance to other retail water supply agencies in Orange County. Staff recommends that the Board approve the Water Banking, Transfers and Wheeling Policy Position Paper as revised with input from the Supply Reliability Programs Committee.

BACKGROUND:

In 2004, IRWD began producing policy position papers on topics of particular interest and importance to the District. Because of the IRWD Board of Directors' standing in the water industry, the opinions of individual Board members are regularly solicited on issues of vital interest to the industry and the community. To keep these position papers current, staff occasionally recommends that the Board review the papers and when appropriate, incorporate revisions.

IRWD's Water Banking, Transfers and Wheeling position paper was last revised and adopted by the Board on October 26, 2015. At that time, the approved policy reflected the construction of the Strand Ranch Integrated Banking Project, acquisition of the Jackson Ranch property, development of the Stockdale Integrated Banking Project, development of an agreement with Metropolitan Water District of Southern California for coordinated delivery of State Water Project supplies, the execution of approved pilot and long-term water supply programs involving unbalanced exchanges, and the execution of an agreement with Rosedale-Rio Bravo Water Storage District for the construction and operation of wells in Rosedale's service area that will assist both agencies to achieve groundwater recovery objectives. The paper also contemplated incorporating a third project site into the Stockdale Project and changes associated with the Administration's interest in establishing a water market for the State of California that would streamline water transfers and exchanges.

Updates to Policy Position Paper:

Since October 2015, numerous changes have occurred that require updating of IRWD's Water Banking, Transfers and Wheeling Policy Position Paper. One major change is that Rosedale and IRWD have certified and approved an Environmental Impact Report for the Stockdale Project that has facilitated the construction and equipping of additional recovery wells and related

conveyance facilities. IRWD has also entered into a long-term one-for-one exchange agreement with Dudley Ridge Water District that will make water available for delivery into IRWD's service area.

Recently, IRWD and Rosedale submitted a grant application to the California Water Commission for the planning, design and construction of water conveyance and banking facilities at the third project site contemplated for the Stockdale Project as well as at other suitable sites. In addition, IRWD has completed an update to its Water Supply Master Plan that indicates a reduced and uncertain demand for imported water in the year 2035. This change in demand for imported water has allowed IRWD to enter into discussions with the Municipal Water District of Orange County to initiate a program to share reliability from IRWD's water banking projects with other water supply retail agencies. IRWD has also completed a Water Supply Reliability Evaluation that affirms the importance of IRWD's water banking programs to meet district demands during future dry periods. These changes have all resulted in the need to update the policy position paper.

The updated Water Banking, Transfers and Wheeling Policy Position Paper is attached as Exhibit "A". The position paper with changes identified from the October 15, 2015 version of the document is attached as Exhibit "B".

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

None.

RECOMMENDATION:

That the Board approve the District's Water Banking, Transfers and Wheeling Policy Position Paper as revised with input from the Supply Reliability Programs Committee.

LIST OF EXHIBITS:

Exhibit "A" – Updated Policy Paper: Water Banking, Transfers and Wheeling
Exhibit "B" – Updated Policy Paper: Water Banking, Transfers and Wheeling with Changes Identified from October 15, 2015

EXHIBIT "A"

DRAFT

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

Revised: September 21, 2017

Issue Summary:

The Irvine Ranch Water District is further diversifying its water supply portfolio by developing water banking facilities in Kern County in the southern San Joaquin Valley. As water supplies become fully subscribed, potential shortages from the Colorado River, as well as supply limitations from the Sacramento-San Joaquin Delta may continue to stress water deliveries. Under such conditions, water banking recharge, storage and recovery programs will continue to provide a cost effective and reliable supplemental source of water that could be relied upon during majors droughts and periods of supply interruptions. These programs and participation by retail water agencies should be encouraged throughout the State.

Background:

The continued rapid growth in statewide population, coupled with challenges of drought, risks of shortages from the Colorado River, supply limitations in the Delta and expanding regulatory and environmental pressures may continue to stress the State's water supplies. Strategies for addressing these challenges include securing supplemental supplies to store for future use and to develop groundwater storage capabilities with corresponding recharge and recovery facilities (water banking). The conveyance or "wheeling" of water through federal, state, regional, and local facilities to points of use is a critical issue related to water banking, transfer programs, and the end users. The following are descriptions of the District's requirements for diversifying its water supplies through water banking, actions that IRWD has taken to date relative to the development of its water banking program, a summary of current and planned water banking capacities, objectives for acquiring supplemental supplies and objectives for expanding its water banking program capacities. This paper concludes with Policy Principles for the District's water banking program.

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 the use of high quality groundwater, impaired groundwater, and supplies of recycled water that reduce IRWD's dependence on imported water. After taking these efforts into consideration, current projections indicate that IRWD has long-term requirements for the storage of at least 70,000 acre-feet (AF) of supplemental water that could be called upon during drought conditions or major supply interruptions. This storage target is subject to revision as conditions change in the future and may be adjusted by the IRWD Board of Directors based on recommendations from the Supply Reliability Programs Committee. In the event of a major supply interruption, this amount of water would fulfill IRWD's estimated needs for imported water for three consecutive years based on projected water demands in the year 2035. IRWD's water banking program will

provide IRWD the ability to store and recover this supplemental water to meet its long-term supply reliability requirements. In 2016, IRWD completed a Water Supply Reliability Evaluation that affirms the importance of IRWD's water banking programs to meet district demands during future droughts and major supply interruptions.

A significant risk of a major supply interruption exists at the Delta, where an earthquake or other natural disaster could damage the series of levees in the Sacramento Bay Delta. Various water and regulatory agencies have indicated water exports from the Delta could be interrupted for one or two years due to levee failures and subsequent repairs. Some estimates indicate that it could take up to three years to repair the levees. In addition, the risk of shortages of water from the Colorado River must be considered. The Colorado River basin has experienced a long-term drought and the U.S. Department of Interior projects that supply shortages on the Colorado River could occur in the future. Based on these projections, it is possible that shortages could result in impacts to supplies available to IRWD.

If during a major water supply interruption, Metropolitan Water District of Southern California (MWD) is unable to deliver water to fulfill IRWD's projected imported water demands of 23,000 AF in 2035, then IRWD would need to supplement imported supplies with 23,000 AF per year (AFY) from storage in its water banking program to offset this shortfall. IRWD needs at least 23,000 AFY capacity to recover water from its water banking program to provide a reliable supply of water to its customers during major imported water supply interruptions. In preparation for a major three-year interruption in imported water supplies and assuming the need to recover and deliver 23,000 AFY from storage for each of the three years, while taking into consideration in-ground losses, IRWD would need at least 70,000 AF of water in storage in its water banking programs. To ensure that water can be delivered into storage when available in wet years, IRWD has also determined that it needs the capacity to recharge at least 23,000 AFY after consideration of losses.

IRWD Actions to Date:

Following is a summary of actions to date to develop IRWD's water banking program:

Strand Ranch Facilities:

Since 2005, IRWD has made significant progress in the development of its water banking program and in securing supplemental supplies to store in its program in Kern County. The process began with the acquisition of the Strand Ranch in Kern County. Subsequent to the purchase, IRWD successfully negotiated a 30-year water banking partnership agreement with Rosedale-Rio Bravo Water Storage District (Rosedale) which certified an Environmental Impact Report for the Strand Ranch Integrated Water Banking Project. IRWD constructed 502 acres of recharge basins, seven production wells, Cross Valley Canal turnouts and turn-ins, recovery pipelines, and three monitoring wells at the Strand Ranch. A small capacity in the CVC was also purchased by IRWD. The storage capacity associated with the Strand Ranch Water Bank is 50,000 AF. Recharge and recovery facilities have been developed for capacities of approximately 18,000 AFY. The Strand Ranch Water Bank is integrated into Rosedale's Conjunctive Use Program. IRWD also has access to three wells within Rosedale's service area

that have been drilled and constructed and that are currently being equipped as part of Rosedale's Drought Relief Project. These three new wells will be used to increase the instantaneous recovery capacity associated with the Strand Ranch Integrated Banking Project.

State Water Project Supplies:

In 2010, IRWD acquired the Jackson Ranch property in Kings County with the right to use 1,750 AFY of State Water Project (SWP) Table A water through the Dudley Ridge Water District (DRWD). In addition, IRWD purchased the property's assigned portion of DRWD's participation rights in the Kern Water Bank (KWB) for an additional 9,500 AF of dedicated storage capacity and associated first priority recharge and recovery rights. Through this participation in the KWB, IRWD has access to unused storage, recharge and recovery capacity in the KWB. In December 2013, the California Department of Water Resources (DWR), DRWD, MWD and the Kern County Water Agency executed a Multi-Year Exchange and Change in Point of Delivery Agreement that allows the delivery of Table A water associated with the Jackson Ranch for storage in the Strand Ranch banking program on an unbalanced exchange basis. This agreement is currently being extended by DWR for another 10 years.

In 2011, IRWD, MWD and Municipal Water District of Orange County (MWDOC) executed a Coordinated Exchange and Delivery Agreement for delivery of SWP supplies from the Strand Ranch Water Bank to IRWD's service area. The agreement allows IRWD to secure SWP supplies with the concurrence of MWD and with MWD maintaining control of the introduction of these supplies into its service area.

IRWD has also completed two pilot projects with the Central Coast Water Agency (CCWA) for unbalanced exchanges of Carpinteria Valley Water District's (CVWD) SWP Table A amounts. A pilot unbalanced exchange program was also executed with Antelope Valley East Kern Water Agency (AVEK). A total of 7,000 AF of water has been delivered to the Strand Ranch from both the CCWA and AVEK programs and IRWD retains 50% (less a proportional share of losses) of the water for recovery and use in its service area. In 2014 and 2015, IRWD returned to both CCWA and AVEK their respective shares of the water. The development of these supplemental supplies is consistent with the District's objectives for acquiring supplemental water supplies. In 2017, IRWD expects to deliver up to another 1,000 AF of Table A water from CCWA under a subsequent short term unbalanced exchange program. Currently, IRWD is pursuing a long-term exchange program agreement with CCWA.

Non-State Water Project Supplies:

In 2010, IRWD completed a pilot project agreement with Buena Vista Water Storage District (BVWSD), whereby BVWSD could store up to 5,000 AF of its pre-1914, high flow Kern River water at the Strand Ranch on an unbalanced exchange basis where IRWD retained 50% of the stored supplies. In December 2010, IRWD and BVWSD executed an agreement for a long-term program whereby BVWSD can store its pre-1914 high flow Kern River water with IRWD retaining the rights to the use of half of this water. Since 2011, BVWSD has stored 39,127 AF of water at the Strand Ranch. IRWD has returned to BVWSD a substantial portion of the 50% share of the water that was stored for the benefit of BVWSD.

In 2017, IRWD executed a long-term one-for-one exchange agreement with DRWD that will allow DRWD landowners, at IRWD's discretion, to make use of IRWD's 50% share of the high flow Kern River water that has been stored by BVWSD. This water will be used substantially in Kern County by DRWD landowners. In exchange, the one-for-one exchange agreement calls for DRWD to provide an equal amount of DRWD Table A supplies to IRWD. MWD has consented to this exchange and DWR is currently developing the necessary DWR exchange and change in point of delivery agreement that will facilitate the exchange program.

Wheeling Water:

In 2014, IRWD, MWD and MWDOC executed a template Wheeling Agreement that facilitated the delivery of 1,000 AF of SWP water into IRWD's service area that was received from MWD in exchange for high flow Kern River water that was recovered from the Strand Ranch project and delivered to Arvin Edison Water Storage District on behalf of MWD. This Wheeling Agreement was implemented consistent with MWD's Administrative Code. IRWD completed taking delivery of the 1,000 AF water into its service area in 2015 as extraordinary supply consistent with MWD's Water Supply Allocation Plan. The template Wheeling Agreement can be used by IRWD in the future to facilitate the delivery of non-SWP water that is recovered from IRWD's water banking projects to IRWD's service area.

Stockdale West Facilities:

In 2010, IRWD purchased the Stockdale West Ranch property located just west of the Strand Ranch. In 2011, IRWD constructed four recharge basins on 259 acres of the property as part of a one-year Pilot Recharge Project. In August 2011, IRWD and BVWSD entered into a one-year pilot program whereby BVWSD stored 3,268 AF of high flow Kern River water at the Stockdale West with IRWD retaining the rights to the use of half of the stored supplies.

In December 2015 Rosedale certified an environmental impact report (EIR) and IRWD approved a project for the joint development of banking facilities on the Stockdale West Ranch and Rosedale's Stockdale East property located to the east of the Strand Ranch. This combined project is called the Stockdale Integrated Banking Project. In February 2016 IRWD and Rosedale executed a long-term partnership agreement for the operation of a water banking, recovery and exchange program using the project facilities. This agreement also allows IRWD to lease from Rosedale 50,000 AF of storage in Rosedale's Conjunctive Use Program. Under the terms of the agreement, IRWD and Rosedale each have second priority use of each other's facilities on both the Stockdale West and Stockdale East properties. IRWD has drilled, constructed and equipped three wells on the Stockdale West Ranch which will provide the ability to recover approximately 11,000 AF of water per year for IRWD and its partners.

Kern Fan Groundwater Storage Project:

The EIR for the Stockdale Integrated Banking Project contemplated that a third water banking project site would be secured and developed by IRWD and Rosedale to help meet both IRWD and Rosedale storage, recharge and recovery requirements. In August 2017, IRWD and

Rosedale jointly applied for a Water Storage Investment Program grant, from the California Water Commission (CWC), to plan, design and construct water banking facilities at a third project site as well as at other locations that together are called the Kern Fan Groundwater Storage Project. This project would include a 500 cfs canal, 1,200 acres of recharge basins and 12 recovery wells.

The Kern Fan Project Groundwater Storage Project would provide IRWD access to approximately 38,000 AF of storage capacity, 38,000 AF per year of recharge capacity and up to 26 cfs of recovery capacity that would allow the recovery of up to 19,000 AF per year of water that was previously recharged at the project. It is not expected that IRWD would receive second priority access to Rosedale's share of the recharge capacity and recovery capacity from the Kern Fan Project.

Need to Expand Program:

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 of the water being transferred to IRWD. Recently, other agencies have expressed an interest in securing shared reliability from IRWD's water banking programs. It is IRWD's intent, that as IRWD's water banking capacity requirements are met, that IRWD will be able to enter into shared reliability program agreements that will allow other retail water agencies to receive reliability benefits in exchange for paying IRWD a portion of its capital investment in the water banking programs. The sharing of reliability benefits, with other retail water supply agencies, from IRWD's water banking projects and programs may result in the need to expand IRWD's water banking capacities. Such expansions will ensure that IRWD can meet its water supply reliability requirements while meeting the requirements of IRWD's unbalanced exchange partners and of the agencies to which IRWD seeks to provide reliability benefits. The agencies that receive shared reliability benefits from IRWD's water banking programs will be charged proportionally for these services to allow IRWD to recoup its capital investment in the programs such that IRWD's customers are not impacted.

Water Banking Capacities:

The following table presents an overview of the storage, recharge and recovery capacities that have been developed to date and that are expected to be developed at IRWD's Strand Ranch and Stockdale Integrated Banking Projects and the proposed Kern Fan Groundwater Storage Project. The table also provides an overview of how these capacities are expected to be shared with IRWD's unbalanced exchange partners. At the bottom of the table is a summary of minimum IRWD capacity requirements and the maximum excess capacities that IRWD is targeting to be available to share reliability from the projects with other water supply retail agencies. IRWD's minimum stated capacity needs are subject to change in the future, by the IRWD Board of Directors, based on changes to IRWD's supplies and environmental conditions.

Existing and Currently Planned Storage, Recharge, and Recovery Capacity in IRWD's Water Banking Program

Water Banking Project	Storage Capacity (AF)	Recharge Capacity		Recovery Capacity	
		First Priority Recharge Capacity (AFY)	Second Priority Recharge Capacity (AFY)	First Priority Recovery Capacity (AFY)	Second Priority Recovery Capacity (AFY)
Strand Ranch	50,000	18,000	0	18,000	0
Stockdale West	26,000	27,000	0	11,000	0
Stockdale East	0		19,000		7,500
Storage Lease in Rosedale's Conjunctive Use Program	50,000	0	0	0	0
Proposed Kern Fan Groundwater Storage Project	38,000	38,000	0	19,000	0
Total to Date	**164,000**	**83,000**	**19,000**	**48,000**	**7,500**
Exchange Partner Share	57,000	41,500	9,500	24,000	0
IRWD Share	107,000	41,500	9,500	24,000	7,500
		First + Second:	51,000	*First + Second:*	31,500
Minimum IRWD Stated Capacity Needs:	70,000		23,000		23,000
Maximum Capacity Available for Shared Reliability Program	37,000		28,000		8,500

Objectives for Acquiring Supplemental Water Supplies:

IRWD's objectives for acquiring supplemental water supplies for recharge, storage and recovery within IRWD's water banking 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 when supply availability may be less.

3. 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. IRWD will attempt to preserve existing agricultural uses wherever 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 acceptable to the local community and where necessary attempt to minimize third-party impacts to local economies.

Objectives for Additional Recovery Capacity:

IRWD seeks to develop additional first priority recovery capacity to meet IRWD's recovery needs and to ensure that IRWD and its exchange and shared reliability partners can maximize the use of the recovery facilities during peak summer demand periods. It is anticipated that an instantaneous recovery capacity of at least 70 cfs will need to be developed to meet these needs on a first priority basis. Access to second priority use of wells by IRWD would also be effective for periods when IRWD can recover water for its use off-peak to other uses in Kern County.

Rosedale has drilled and constructed three wells in its service area as part of the Rosedale Drought Relief Project that will be available for IRWD's use in conjunction with the wells on the Strand Ranch project. The three wells are currently being equipped. Once operational, these additional wells will help IRWD achieve its goal of at least 70 cfs of instantaneous recovery capacity.

The implementation of the Kern Fan Groundwater Storage Project will result in IRWD having access to an additional 26 cfs of recovery capacity that will ensure that IRWD can meets its reliability needs without having to use second priority rights to groundwater wells. The objective of developing additional water banking capacities at the proposed Kern Fan Groundwater Storage Project would be to ensure IRWD's ability to meet its own reliability needs under any conditions in the future and to further IRWD's ability to share reliability benefits from its water banking projects with other retail water supply agencies.

Land Acquisition Opportunities:

IRWD will consider land acquisition opportunities which will have associated near and/or long-term water supply benefits where water can be conserved or made available through temporary fallowing or onsite conservation. Such water would be scheduled for delivery to storage in the water banking projects or other reliability programs through methods that are acceptable to the local community and where necessary attempt to minimize third-party impacts and environmental resource impacts. Such water supplies would be useful in performing in-lieu recharge or recovery operations associated with IRWD's water banking program.

IRWD will also consider land acquisition opportunities with the most favorable conditions for groundwater recharge, storage and recovery capacity as needed to meet the capacity requirements of IRWD and its partners as described above.

Policy Principles:

Based on the information provided above, the following IRWD policy principles have been developed:

1. The State's water supply situation is being impacted by reoccurring droughts, problems in the Delta, a growing population, increasing regulatory pressure, potential climate change impacts, and an imbalance between available water supplies and available storage. As a result, IRWD has the need for 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 have 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 water 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 goal of storing at least 70,000 AF of water in 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 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 benefit from the sharing of recharge, storage and recovery capacity through unbalanced exchanges and shared reliability programs. In addition, due to potential climate change, the future intervals between wet years are expected to 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 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. IRWD will put all available supplemental water supplies to beneficial use using methods that are acceptable to the communities that are local to the source waters and where necessary attempt to minimize third-party impacts while preserving the agricultural benefits of the contributing lands through temporary fallowing arrangements and / or water conservation efforts.

10. IRWD will seek partnerships that result in mutually beneficial exchange opportunities including the ability to enhance direct and in-lieu recharge or recovery operations associated with IRWD's water banking program.

11. 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.

12. 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 impacts and 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.

13. IRWD will support sharing reliability from its water banking program through agreements that provide regional retail water supply agencies increased water supply reliability while ensuring that IRWD's reliability requirements are fulfilled as a first priority. The agreements must also ensure that IRWD is kept financially whole and that IRWD recovers a proportional share of its capital investments in a way that avoids impacts to its customers.

EXHIBIT "B"

DRAFT

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

Revised: ~~October 26, 2015~~September 21, 2017

Issue Summary:

The Irvine Ranch Water District is further diversifying its water supply portfolio by developing water banking facilities in Kern County in the southern San Joaquin Valley. As water supplies become fully subscribed, ~~and~~ potential shortages from the Colorado River, as well as ~~as shortage~~ supply limitations ~~being experienced from~~at the Sacramento-San Joaquin Delta may continue to stress water deliveries.~~,~~ Under such conditions, water banking recharge, storage and recovery programs will continue to provide a cost effective and ~~highly~~ reliable supplemental source of water that could be relied upon during majors droughts and periods of supply interruptions. ~~and cost efficient alternative to improving water supply reliability.~~ These programs and participation by retail water agencies should be encouraged throughout the State.

Background:

The continued rapid growth in statewide population, coupled with challenges of drought, risks of shortages from the Colorado River, supply limitations in the Delta and expanding regulatory and environmental pressures may continue to stress the State's water supplies. Strategies for addressing these challenges include securing supplemental supplies to store for future use and ~~for the~~to develop~~ment of~~ groundwater storage capabilities with corresponding recharge and recovery facilities (water banking). The conveyance or "wheeling" of water through federal, state, regional, and local facilities to points of use is a critical issue related to water banking, transfer programs, and the end users. The following are descriptions of the District's requirements for diversifying its water supplies through water banking, actions that IRWD has taken to date relative to the development of its water banking program, a summary of current and planned water banking capacities, objectives for acquiring supplemental supplies and objectives for expanding its water banking program capacities. This paper concludes with Policy Principales for the District's water banking program.

IRWD Supply Diversity Requirements:

IRWD's primary mission is to provide a safe and reliable water supply to its customers. IRWD's water s~~S~~upply 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 the use of high quality groundwater, impaired groundwater, and supplies of recycled water that reduce IRWD's dependence on imported water. After taking these efforts into consideration, current projections indicate that IRWD has long-term requirements for the storage of at least 7~~9~~0,000 acre-feet (AF) of supplemental water that could be called upon during drought conditions ~~and /~~or major supply interruptions. This storage target is subject to revision as conditions change in the future and may be adjusted by the IRWD Board of Directors based on recommendations from the Supply Reliability Programs Committee. In the event of a major supply interruption, this amount of water would fulfill IRWD's estimated needs for imported water for three consecutive years ~~in a~~

~~row~~ based on projected water demands in the year 2035. IRWD's water banking program will provide IRWD the ability to store and recover this supplemental water to meet its long-term supply reliability requirements. In 2016, IRWD completed a Water Supply Reliability Evaluation that affirms the importance of IRWD's water banking programs to meet district demands during future droughts and major supply interruptions.

A significant risk of a major supply interruption exists at the Delta, where an earthquake or other natural disaster could damage the series of levees in the Sacramento Bay Delta. Various water and regulatory agencies have indicated water exports from the Delta could be interrupted for one or two years due to ~~actual~~ levee failures and subsequent repairs. Some estimates indicate that it could take up to three years to repair the levees. In addition, the risk of shortages of water from the Colorado River must be considered. The Colorado River basin ~~is in a 15-year~~has experienced a long-term drought and the U.S. Department of Interior projects that supply shortages on the Colorado River ~~will~~ could occur in the future. Based on these projections, it is possible that shortages could result in impacts to supplies available to IRWD.

If during a major water supply interruption, Metropolitan Water District of Southern California (MWD) is unable to deliver water to fulfill IRWD's projected imported water demands of ~~30~~23,000 ~~acre-feet (~~AF~~)~~ in 2035, then IRWD would need to supplement imported supplies with 23~~30~~,000 AF per year (AFY) from storage in its water banking program to offset this shortfall. IRWD ~~has determined that it~~ needs ~~to develop~~ at least 23~~30~~,000 AFY capacity to recover water from its water banking program to provide a reliable supply of water to its customers during major imported water supply interruptions. In preparation for a major three-year interruption in imported water supplies and assuming the need to recover and deliver 23~~30~~,000 AFY from storage for each of the three years, while taking into consideration in-ground losses, IRWD would need at least 7~~9~~0,000 AF of water in storage in its water banking programs.

To ensure that water can be delivered into storage when available in wet years, IRWD has also determined that it needs the capacity to recharge at least ~~90~~23,000 AFY after consideration of losses.

IRWD Actions to Date:

Following is a summary of actions to date to develop IRWD's water banking program:

Strand Ranch Facilities:

Since 2005, IRWD has made significant progress in the development of its water banking program and in securing supplemental supplies to store in its~~the~~ program in Kern County. The process began with the acquisition of the Strand Ranch in Kern County. Subsequent to the purchase, IRWD successfully negotiated a 30-year water banking partnership agreement with Rosedale-Rio Bravo Water Storage District (Rosedale) which certified an Environmental Impact Report for the Strand Ranch Integrated Water Banking Project. IRWD ~~has~~ constructed 502 acres of recharge basins, seven production wells, Cross Valley Canal turnouts and turn-ins, recovery pipelines, and three monitoring wells at the Strand Ranch. A small capacity in the CVC was also

purchased by IRWD. The storage capacity associated with the Strand Ranch Water Bank is 50,000 AF. Recharge and recovery facilities have been developed for capacities of ~~17,500~~approximately 18,000 AFY~~ per year~~. The Strand Ranch Water Bank is integrated into Rosedale's Conjunctive Use Program. ~~-~~IRWD also has access to three well~~s sites~~ within Rosedale's service area ~~and the three wells~~that have been drilled and constructed and that are currently ~~under construction~~being equipped as part of Rosedale's Drought Relief Project. These three new wells will be used to increase the instantaneous recovery capacity associated with the Strand Ranch Integrated Banking Project.

State Water Project Supplies:

In 2010, IRWD ~~completed the~~ acquisition~~red of~~ the Jackson Ranch property in Kings County with the right to use 1,750 AFY of State Water Project (SWP) Table A water through the Dudley Ridge Water District (DRWD). In addition, IRWD purchased the property's assigned portion of DRWD's participation rights in the Kern Water Bank (KWB) for an additional 9,500 AF of dedicated storage capacity and associated first priority recharge and recovery rights. Through this participation in the KWB, IRWD ~~obtained~~ has access to unused storage, recharge and recovery capacity in the KWB. In December 2013, the California Department of Water Resources (DWR), DRWD, MWD and the Kern County Water Agency executed ~~athe~~ Multi-Year Exchange and Change in Point of Delivery Agreement that allows the delivery of Table A water associated with the Jackson Ranch for storage in the Strand Ranch banking program on an unbalanced exchange basis. This agreement is currently being extended by DWR for another 10 years.

In 2011, IRWD, MWD and Municipal Water District of Orange County (MWDOC) executed a Coordinated Exchange and Delivery Agreement for delivery of SWP supplies from the Strand Ranch Water Bank to IRWD's service area. The agreement allows IRWD to secure SWP supplies with the concurrence of MWD and with MWD maintaining control of the introduction of these supplies into its service area.

IRWD has also completed two pilot projects with the Central Coast Water Agency (CCWA) for unbalanced exchanges of Carpinteria Valley Water District's (CVWD) SWP Table A amounts. A pilot unbalanced exchange program was also executed with Antelope Valley East Kern Water Agency (AVEK). A total of 7,000 AF of water has been delivered to the Strand Ranch from both the CCWA and AVEK programs and IRWD retains 50% (less a proportional share of losses) of the water for recovery and use in its service area. In 2014 and 2015, IRWD returned to both CCWA and AVEK their respective shares of the water. The development of these supplemental supplies is consistent with the District's objectives for acquiring supplemental water supplies. In 2017, IRWD expects to deliver up to another 1,000 AF of Table A water from CCWA under a subsequent short term unbalanced exchange program. Currently, IRWD is pursuing a long-term exchange program agreements with ~~both~~ CCWA ~~and AVEK~~.

Non-State Water Project Supplies:

In 2010, IRWD completed a pilot project agreement with Buena Vista Water Storage District (BVWSD), whereby BVWSD could store up to 5,000 AF of its pre-1914, high flow Kern River water at the Strand Ranch on an unbalanced exchange basis where IRWD retained~~s~~ 50% of the stored supplies. In December 2010, IRWD and BVWSD executed an agreement for a long-term program whereby BVWSD can store ~~up to 40,000 AF of~~ its pre-1914 high flow Kern River water with IRWD retaining the rights to the use of half of this water. Since 2011,~~By the end of 2012,~~ BVWSD has~~d~~ stored ~~25,473~~39,127 AF of water at the Strand Ranch. ~~In 2013 and 2015,~~ IRWD has returned to BVWSD a substantial portion of the 50% share of the water that was stored for the benefit of BVWSD.

In 2017, IRWD executed a long-term one-for-one exchange agreement with DRWD that will allow DRWD landowners, at IRWD's discretion, to make use of IRWD's 50% share of the high flow Kern River water that has been stored by BVWSD. This water will be used substantially in Kern County by DRWD landowners. In exchange, the one-for-one exchange agreement calls for DRWD to provide an equal amount of DRWD Table A supplies to IRWD. MWD has consented to this exchange and DWR is currently developing the necessary DWR exchange and change in point of delivery agreement that will facilitate the exchange program.

Wheeling Water:

In 2014, IRWD, MWD and MWDOC executed a template Wheeling Agreement that facilitated the delivery of 1,000 AF of SWP water into IRWD's service area that was received from MWD in exchange for high flow Kern River water that was recovered from the Strand Ranch project and delivered to Arvin Edison Water Storage District on behalf of MWD. This Wheeling Agreement was implemented consistent with MWD's Administrative Code. IRWD completed taking delivery of the 1,000 AF water into its service area in 2015 as extraordinary supply consistent with MWD's Water Supply Allocation Plan. The template Wheeling Agreement can be used by IRWD in the future to facilitate the delivery of non-SWP water that is recovered from IRWD's water banking projects to IRWD's service area.

Stockdale West Facilities:

In 2010, IRWD ~~completed the~~ purchased ~~of~~ the Stockdale West Ranch property located just west of the Strand Ranch. In 2011, IRWD constructed four recharge basins ~~over~~on ~~-~~259 acres of the property as part of a one-year Pilot Recharge Project. In August 2011, IRWD and BVWSD entered into a one-year pilot program whereby BVWSD stored 3,268 AF of high flow Kern River water at the Stockdale West with IRWD retaining the rights to the use of half of the stored supplies. ~~This pilot was used to determine the recharge capabilities of the property and to provide important information necessary for the design of a long-term water banking project on the project.~~

In December 2015 Rosedale certified an environmental impact report (EIR) and IRWD approved a project ~~IRWD and Rosedale have entered into a development agreement~~ for the joint development of banking facilities on the Stockdale West Ranch and Rosedale's Stockdale East property located to the east of the Strand Ranch. This combined project is called the Stockdale Integrated Banking Project. In February 2016 ~~and currently~~ IRWD and Rosedale ~~are finalizing an Environmental Impact Report (EIR) and~~executed a long-term partnership agreement for the operation of a water banking, recovery and exchange program using the project facilities. This agreement also allows IRWD to ~~Included in the Stockdale Integrated Banking Project will be the lease by Rosedale to IRWD of~~lease ~~a total of~~ from Rosedale 50,000 AF of storage in Rosedale's Conjunctive Use Program. Under the ~~proposed project~~terms of the agreement, IRWD and Rosedale ~~would~~ each have second priority use of each other's facilities on both the Stockdale

West and Stockdale East properties. IRWD has drilled, constructed and equipped three wells on the Stockdale West Ranch which will provide the ability to recover approximately 11,000 AF of water per year for IRWD and its partners.

Kern Fan Groundwater Storage Project:

The EIR for the Stockdale Integrated Banking Project contemplated~~s~~ that a third water banking project site would be secured and developed by IRWD and Rosedale to help meet both IRWD and Rosedale storage, recharge and recovery requirements. ~~It is expected that the third project site could comprise up to 640 acres and could result in a storage capacity of approximately 51,200 AF, a recharge capacity of about 52,200 AFY and a recovery capacity of approximately 22,500 AFY.~~ In August 2017, IRWD and Rosedale jointly applied for a Water Storage Investment Program grant, from the California Water Commission (CWC), to plan, design and construct water banking facilities at a third project site as well as at other locations that together are called the Kern Fan Groundwater Storage Project. This project would include a 500 cfs canal, 1,200 acres of recharge basins and 12 recovery wells.

The Kern Fan Project Groundwater Storage Project would provide IRWD access to approximately 38,000 AF of storage capacity, 38,000 AF per year of recharge capacity and up to 26 cfs of recovery capacity that would allow the recovery of up to 19,000 AF per year of water that was previously recharged at the project. It is not expected that IRWD would receive second priority access to Rosedale's share of the recharge capacity and recovery capacity from the Kern Fan Project ~~If IRWD and Rosedale participated equally in the purchase of the land, the storage capacity would be divided equally to IRWD and Rosedale and each agency would get access to 50 percent of the resulting recharge and recovery capacities on a first priority basis. Each agency would also get access to each other's share of the recharge and recovery capacity on a second priority basis.~~.

Need to Expand Program:

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 of the water being transferred to IRWD. Recently, other agencies have expressed an interest in securing shared reliability from IRWD's water banking programs. It is IRWD's intent, that as IRWD's water banking capacity requirements are met, that IRWD will be able to enter into shared reliability program agreements that will allow other retail water agencies to receive reliability benefits in exchange for paying IRWD a portion of its capital investment in the water banking programs. The sharing of reliability benefits, with other retail water supply agencies, from IRWD's water banking ~~facilities~~ projects and programs may result in the need to expand IRWD's water banking capacities. Such expansions ~~to~~ will ensure that ~~the District~~IRWD can meet its water supply reliability requirements while meeting the requirements of IRWD's unbalanced exchange partners and of the agencies to which IRWD seeks to provide reliability benefits. The agencies that receive shared reliability benefits from IRWD's water banking programs will be charged proportionally for these services to allow IRWD to recoup its capital investment in the programs such that IRWD's customers are not impacted.

Water Banking Capacities:

The following table presents an overview of the storage, recharge and recovery capacities that have been developed to date and that are expected to be developed at IRWD's ~~water banking projects on the~~ Strand Ranch and ~~the~~ Stockdale Integrated Banking Projects~~West Ranch~~ and the proposed Kern Fan Groundwater Storage Project. The table also provides an overview of how these capacities are ~~shared and~~ expected to be shared with IRWD's unbalanced exchange partners. At the bottom of the table is a summary of minimum IRWD capacity requirements and the maximum excess ~~additional~~ capacities that IRWD is targeting to be available ~~are needed to meet these requirements~~to share reliability from the projects with other water supply retail agencies. IRWD's minimum stated capacity needs are subject to change in the future, by the IRWD Board of Directors, based on changes to IRWD's supplies and environmental conditions.

~~The table indicates that IRWD will have a shortfall of annual recovery capacity in the amount of 5,700 AF that would likely be achieved by securing and developing two recovery wells on the third water banking project site that is contemplated in the EIR for the Stockdale Integrated Banking Project. Any excess storage, recharge and recovery capacities that would be available to IRWD from the third project site could be used to share reliability benefits with other retail water supply agencies.~~

Existing and Currently Planned Storage, Recharge, and Recovery Capacity in IRWD's Water Banking Program

Water Banking Project~~perty~~	Storage Capacity (AF)	Recharge Capacity		Recovery Capacity	
		First Priority Recharge Capacity (AFY)	Second Priority Recharge Capacity (AFY)	First Priority Recovery Capacity (AFY)	Second Priority Recovery Capacity (AFY)
Strand Ranch	50,000	18,07~~,5~~00	0	18,07~~,5~~00	0
Stockdale West	26,000	27,01~~0~~0	0	11,03~~0~~0	0
Stockdale East	0		19,000		7,500
Storage Lease in Rosedale's Conjunctive Use Program	50,000	0	0	0	0
Proposed Kern Fan Groundwater Storage Project	38,000	38,000	0	19,000	0
Total to Date	**16~~24~~,06,~~0~~00**	**83,044,~~6~~00**	**19,000**	**48,~~0~~28,~~8~~00**	**7,500**
Exchange Partner Share	57,0~~36~~,000	41~~2~~2,53~~0~~0	9,500	24~~1~~2,000	0

IRWD Share	10~~97,00,0~~00	41,5~~22,3~~00	9,500	24,0~~16,8~~00	7,500
		First + Second:	51,000~~31,800~~	*First + Second:*	31,5~~24,3~~00
Minimum IRWD Stated Capacity Needs:	~~7~~90,000		23~~3~~0,000		~~3~~023,000
Maximum ~~IRWD's Needs: Excess (Shortfall)~~Capacity Available for Shared Reliability Program	37,000		~~1,8~~28,000		~~(5,700)~~8,500

Objectives for Acquiring Supplemental Water Supplies:

IRWD's objectives for acquiring supplemental water supplies for recharge, storage and recovery within IRWD's water banking 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 when supply availability may be less.

3. 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. IRWD will attempt to preserve existing agricultural uses wherever possible and will schedule excess water for direct or exchange delivery to its water~~water~~ banking and other water supply reliability programs through rotational fallowing or onsite conservation using methods that are acceptable to the local community and where necessary attempt to minimize third-party impacts to local economies.

Objectives for ~~Developing~~ Additional Recovery Capacity:

IRWD seeks to develop additional first priority recovery capacity to meet IRWD's recovery needs and to ensure that IRWD and its exchange and shared reliability partner's can maximize ~~rights to~~the ~~the~~ use of the recovery facilities during peak summer demand periods ~~can be maximized~~. It is anticipated that an instantaneous ~~total~~ recovery capacity of ~~up to~~at least 70 cfs will need to be developed to meet these needs on a first priority basis. Access to second priority

use of wells by IRWD would also be effective for periods when IRWD can recover water for its use off-peak to other uses in Kern County.

Rosedale has drilled and constructed~~is currently constructing~~ three wells in its service area as part of the Rosedale Drought Relief Project that will be available for IRWD's use in conjunction with the wells on the Strand Ranch project. The three wells are currently being equipped. Once operational, t~~T~~hese additional wells will help IRWD achieve its goal of at least 70 cfs of instantaneous recovery capacity.

The implementation of the Kern Fan Groundwater Storage Project will result in IRWD having access to an additional 26 cfs of recovery capacity that will ensure that IRWD can meets its reliability needs without having to use second priority rights to groundwater wells. The objective of developing additional water banking capacities at the proposed Kern Fan Groundwater Storage Project would be to ensure IRWD's ability to meet its own reliability needs under any conditions in the future and to further IRWD's ability to share reliability benefits from its water banking projects with other retail water supply agencies. ~~At least two more wells will need to be developed by IRWD on the third Stockdale project site that is described above to fulfill the identified 5,700 AF per year shortfall in recovery capacity.~~

Land Acquisition Opportunities:

IRWD will consider land acquisition opportunities which will have associated near and/or long-term water supply benefits where water can be conserved or made available through temporary fallowing or onsite conservation. Such water would be scheduled for delivery to storage in the water banking projects~~facilities~~ or other ~~storage facilities~~reliability programs through methods that are acceptable to the local community and where necessary attempt to minimize third-party impacts and environmental resource impacts. Such water supplies would be useful in performing in-lieu recharge or recovery operations associated with IRWD's water banking program.

IRWD will also consider land acquisition opportunities with the most favorable conditions for groundwater recharge, storage and recovery capacity as needed to meet the capacity requirements of IRWD and its partners ~~capacity requirements~~ as described above. ~~and as they may change in the future.~~

Policy Principles:

Based on the information provided above, the following IRWD policy principle~~al~~s have been developed:

1. The State's water supply situation is being impacted by ~~persistent~~ reoccurring droughts, problems in the Delta, a growing population, increasing regulatory pressure, potential climate change impacts, and an imbalance between available water supplies and available

storage. As a result, IRWD has the need for supplemental supplies and storage facilities to ~~store~~ 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 have 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 ~~y.~~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 water 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 goal of storing at least 7~~9~~0,000 AF of water in 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 ~~in~~ lands 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 partnership~~s~~ benefit from the sharing of recharge, storage and recovery capacity through unbalanced exchanges and shared reliability programs. In addition, due to potential climate change, the future intervals between wet years are expected to 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 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. IRWD will put all available supplemental water supplies to beneficial use using methods that are acceptable to the communities that are local to the source waters and where necessary attempt to minimize third-party impacts while preserving the agricultural benefits of the contributing lands through temporary fallowing arrangements and / or water conservation efforts.

10. IRWD will seek partnerships that result in mutually beneficial exchange opportunities including the ability to enhance direct and in-lieu recharge or recovery operations associated with IRWD's water banking program.

11. 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.

12. 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 impacts and 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.

13. IRWD will support sharing reliability from its water banking program through agreements that provide regional retail water supply agencies ~~after IRWD's reliably requirements are fulfilled. Such sharing would occur in a way~~ increased water supply reliability while~~that~~ ensure~~ings~~ that IRWD's reliability requirements are fulfilled as a first priority. The agreements must also ensure that IRWD is kept financially whole ~~on the transactions~~ and that IRWD recovers a proportional share of its capital investments in a way that avoids impacts to its customers.~~.~~