

AGENDA

IRVINE RANCH WATER DISTRICT SUPPLY RELIABILITY PROGRAMS COMMITTEE

THURSDAY, FEBRUARY 16, 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 _____

<u>ALSO PRESENT</u>	Paul Cook	_____	Paul Weghorst	_____
	Rob Jacobson	_____	Patrick Sheilds	_____
	Ray Bennett	_____	Kellie Welch	_____
	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 AND PROGRAM OVERVIEW – JOHNSON/WELCH/SANCHEZ/WE GHORST</u> | |
| | Recommendation: Receive and file. | |
| 6. | <u>UPDATE ON RECHARGE OPERATIONS – WELCH/SANCHEZ/ WEGHORST</u> | |
| | Recommendation: Receive and file. | |

ACTION

- | | | |
|----|--|--|
| 7. | <u>UPDATE ON WATER EXCHANGES IN DUDLEY RIDGE WATER DISTRICT - WEGHORST</u> | |
| | Recommendation: That the Committee authorize the General Manager to indicate IRWD's concurrence with Dudley Ridge Water District's (DRWD) letter to Department of Water Resources (DWR) requesting the extension of the multi-year unbalanced exchange program; provide input on the suggested revised terms to the revised draft 2017 Agreement Between DRWD and IRWD for a Long-Term Exchange Program; and authorize staff to work with DRWD to finalize the agreement to be presented to IRWD's Board of Directors. | |

OTHER BUSINESS

8. A. Closed Session

CLOSED SESSION Conference with Real Property Negotiator (Government Code Section 54956.8).

Property Parcels: 048-210-040-000, County of Kings

Negotiating Parties: Sandridge Partners

Agency Negotiator: Paul Cook, General Manager

Purpose of Negotiations: Price and Term of Payment.

B. Directors' Comments

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.

February 16, 2017

Prepared by: D. Johnson/K. Welch

Submitted by: F. Sanchez/P. Weghorst

Approved by: Paul Cook

SUPPLY RELIABILITY PROGRAMS COMMITTEE

WATER BANKING PROJECT FACILITIES, CAPACITIES 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 provided in tabular, map and schematic formats that can be updated as necessary to reflect changes in IRWD's projects, programs and operations. At the Committee meeting, staff will provide an overview of the information.

BACKGROUND:

To assist in 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, exchange programs and operations. 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.

Capacity and Operations Tables:

A table has been prepared that presents storage, recharge and recovery capacities of existing and planned IRWD water banking projects including capacities available to IRWD in the Kern Water Bank. Another table has been prepared that provides an update on Strand Ranch recovery and recharge operations and the balance of the stored water in the Kern Water Bank. These tables are provided as Exhibits "A" and "B", respectively.

Project Maps:

To support the tables provided as Exhibits "A" and "B", staff has prepared maps that depict project wells, pipelines and Cross Valley Canal turn-out locations, and recharge basin locations. These maps are provided as Exhibits "C", "D", and "E", 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 IRWD's water banking and exchange programs with Rosedale-Rio Bravo Storage District, Buena Vista Water Storage District, Dudley Ridge Water

District and Metropolitan Water District of Southern California. These diagrams are provided as Exhibits “F”, “G”, “H”, “I” and “J” as described in the List of Exhibits below.

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” – Strand Ranch Storage, Recharge and Recovery Operations
- Exhibit “C” – Map of Water Banking Project Wells and Pipelines
- Exhibit “D” – Map of Cross Valley Canal Turnout Facilities
- Exhibit “E” – Map of Water Banking Recharge Basins
- Exhibit “F” – Diagram of IRWD-Rosedale Water Banking and Exchange Program Agreements
- Exhibit “G” – Diagram of Long-Term Water Exchange Program with Buena Vista Water Storage District
- Exhibit “H” – Diagram of Unbalanced Exchange Program Diagram with Dudley Ridge Water District
- Exhibit “I” – Diagram of Coordinated Operating, Water Storage, Exchange and Delivery Agreement with Metropolitan Water District of Southern California
- Exhibit “J” – Diagram of Template Wheeling Agreement with Metropolitan Water District of Southern California

Exhibit "A"

TABLE 1
Current and Anticipated Water Banking Projects
Recharge, Storage and Recovery Capacities
 February 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	TOTAL STORAGE CAPACITY	ANNUAL RECHARGE 1 ST PRIORITY	ANNUAL RECHARGE 2 ND PRIORITY	ANNUAL RECOVERY 1 ST PRIORITY	ANNUAL RECOVERY 2 ND PRIORITY	RECOVERY CAPACITY AS PLANNED ¹	RECOVERY CAPACITY (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	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	-	-

¹Based 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.

²Strand Ranch wells currently idle.

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

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

⁵Kern 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
Strand Ranch Storage, Recharge and Recovery Operations
February 16, 2017

TRANSACTIONS	WATER BANKING ENTITY				
	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	-	-	-
Total MWD System ⁴	7,502	-	-	-	-
Total Strand Ranch	389	9,675	-	-	649
TOTAL STORED WATER (1/1/2016)	7,891	13,942	-	-	649
(RECOVERY) AND RECHARGE IN 2016 (AF)					
CVWD	-	-	-	-	-
BVWSD	-	-	-	-	-
Kern Water Bank	-	22	-	-	-
2016 SWP Allocation ⁴	524	-	-	-	525
TOTAL 2016 TRANSACTIONS	524	22	-	-	525
Total Kern Water Bank	-	4,289	-	-	-
Total MWD System	8,026	-	-	-	-
Total Kern County	389	9,675	-	-	1,174
TOTAL STORED WATER (1/1/2017)	8,415	13,964	-	-	1,174
(RECOVERY) AND RECHARGE IN 2017 (AF)					
Recharge	TBD	TBD	TBD	TBD	-
Kern Water Bank	TBD	TBD	-	-	-
2017 SWP Allocation (60%) ⁴	525	-	-	-	524
TOTAL ESTIMATED 2017 TRANSACTIONS	525	-	-	-	524
Total Kern Water Bank	-	4,289	-	-	-
Total MWD System	8,551	-	-	-	-
Total Kern County	389	9,675	-	-	1,698
TOTAL ESTIMATED STORED WATER (1/1/2018)	8,940	13,964	-	-	1,698

NOTES:

- Water in storage has been adjusted to account for losses.

- MWD = Metropolitan Water District of Southern California.

¹ IRWD's SWP includes 229 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 to IRWD's Jackson Ranch.

⁴ Assumes MWD will store IRWD's share of 2017 SWP allocation. MWD has previously stored IRWD's share of 2013-2016 SWP allocation.

Exhibit "C"

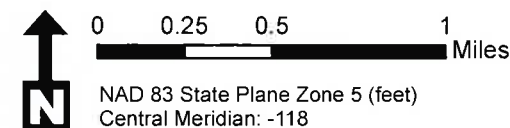


Location Map: IRWD Water Banking Projects Wells and Turnin Pipelines

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.



Enos Ln

Rosedale Highway

Drought Relief Project

Stockdale Highway

Stockdale
West

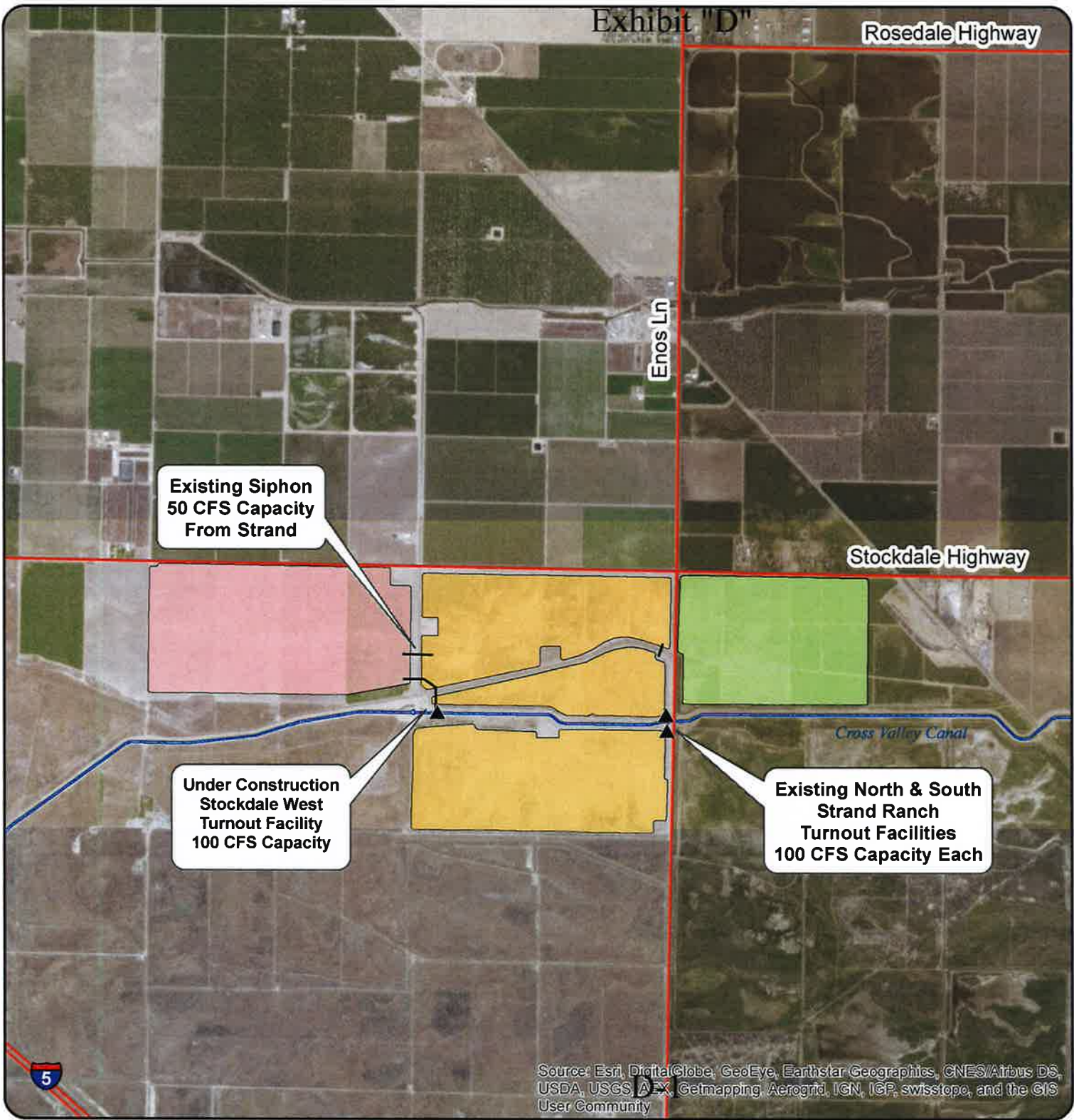
Stockdale
East

Cross Valley Canal

Strand Ranch

C-1

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
Turnout Facilities**

MAP FEATURES

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

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

0 0.25 0.5 1
Miles

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

Exhibit "E"

Rosedale Highway



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

MAP FEATURES

- ▲ Turnouts
- Stockdale West
- Strand Ranch

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

Existing Siphon
50 CFS Capacity
From Strand

Under Construction
Stockdale West
Turnout Facility 100
CFS Capacity

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

Stockdale Highway

Cross Valley Canal

Enos Ln

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



0 0.25 0.5 1

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

Miles

EXHIBIT "F"

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)

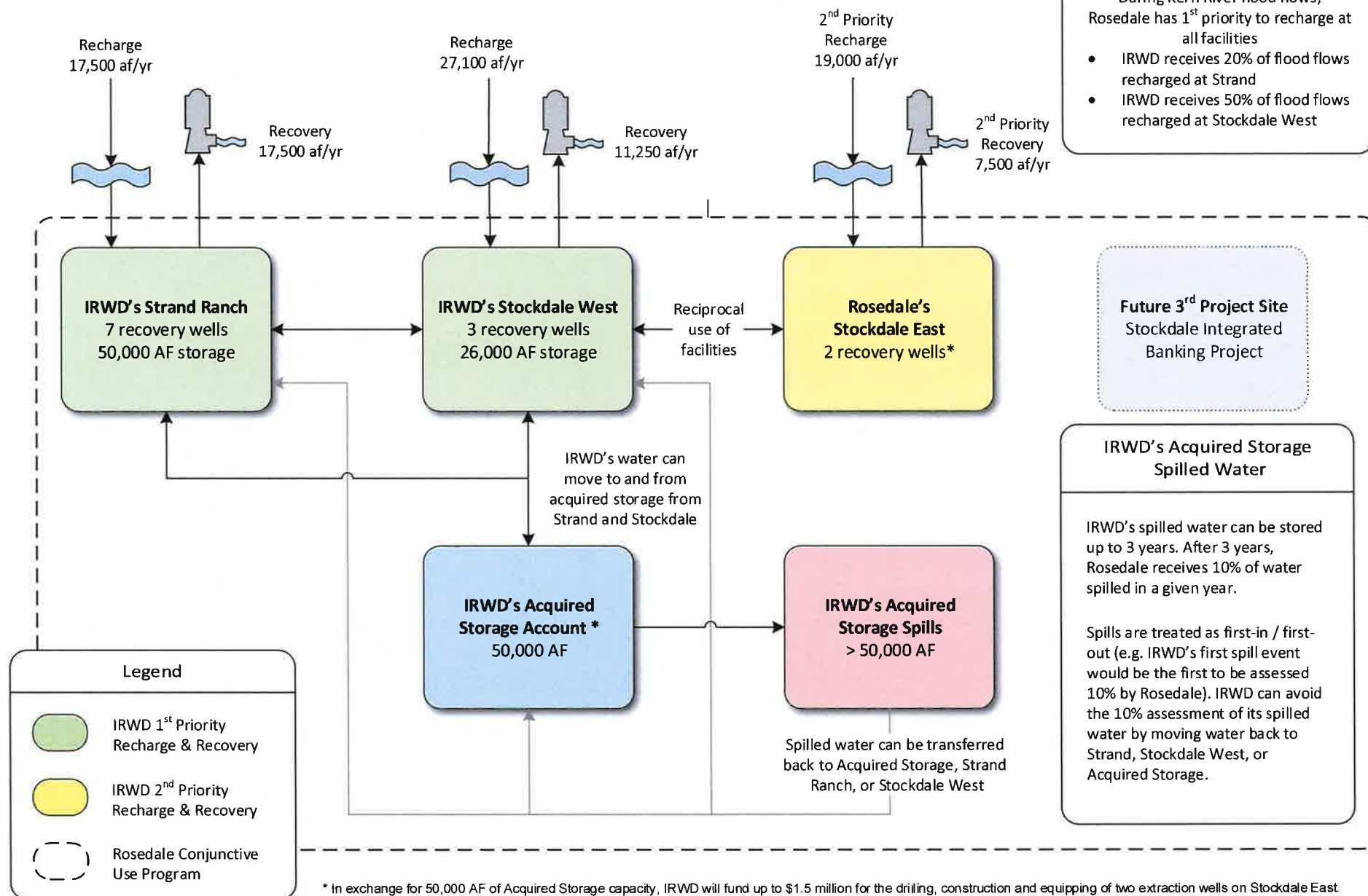
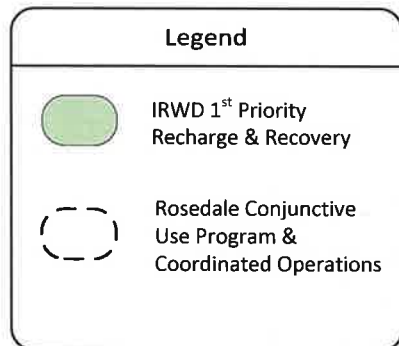
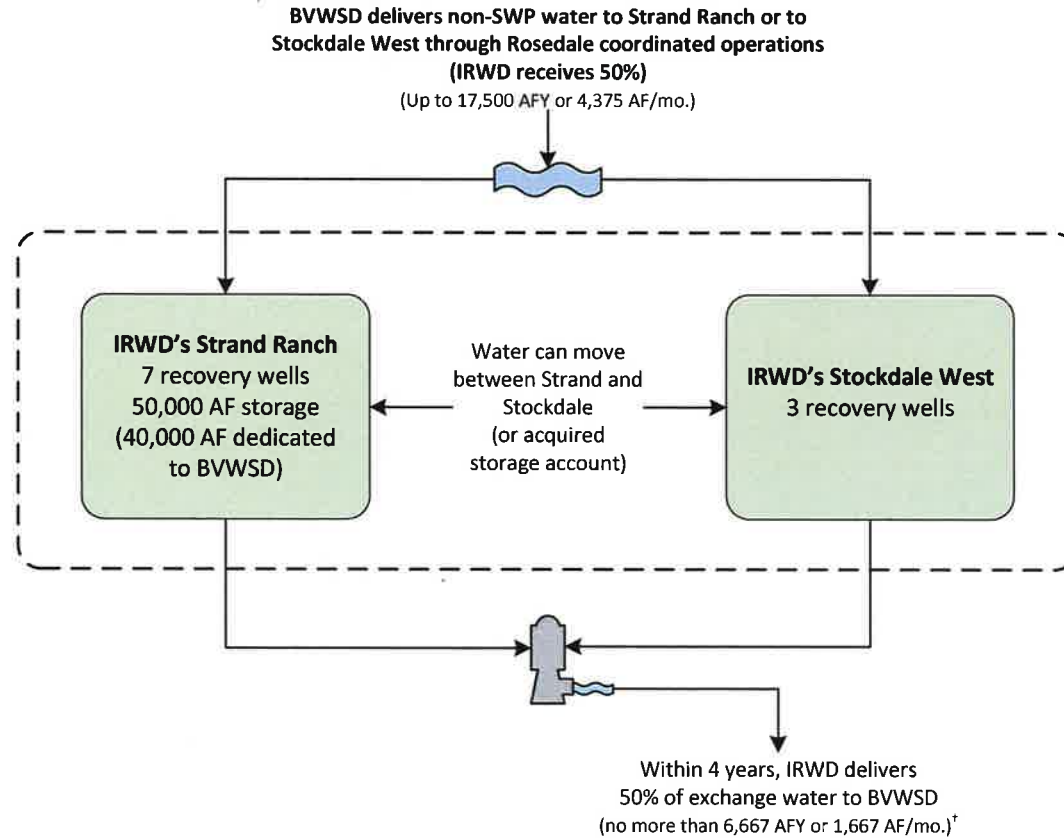


Exhibit "G"

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

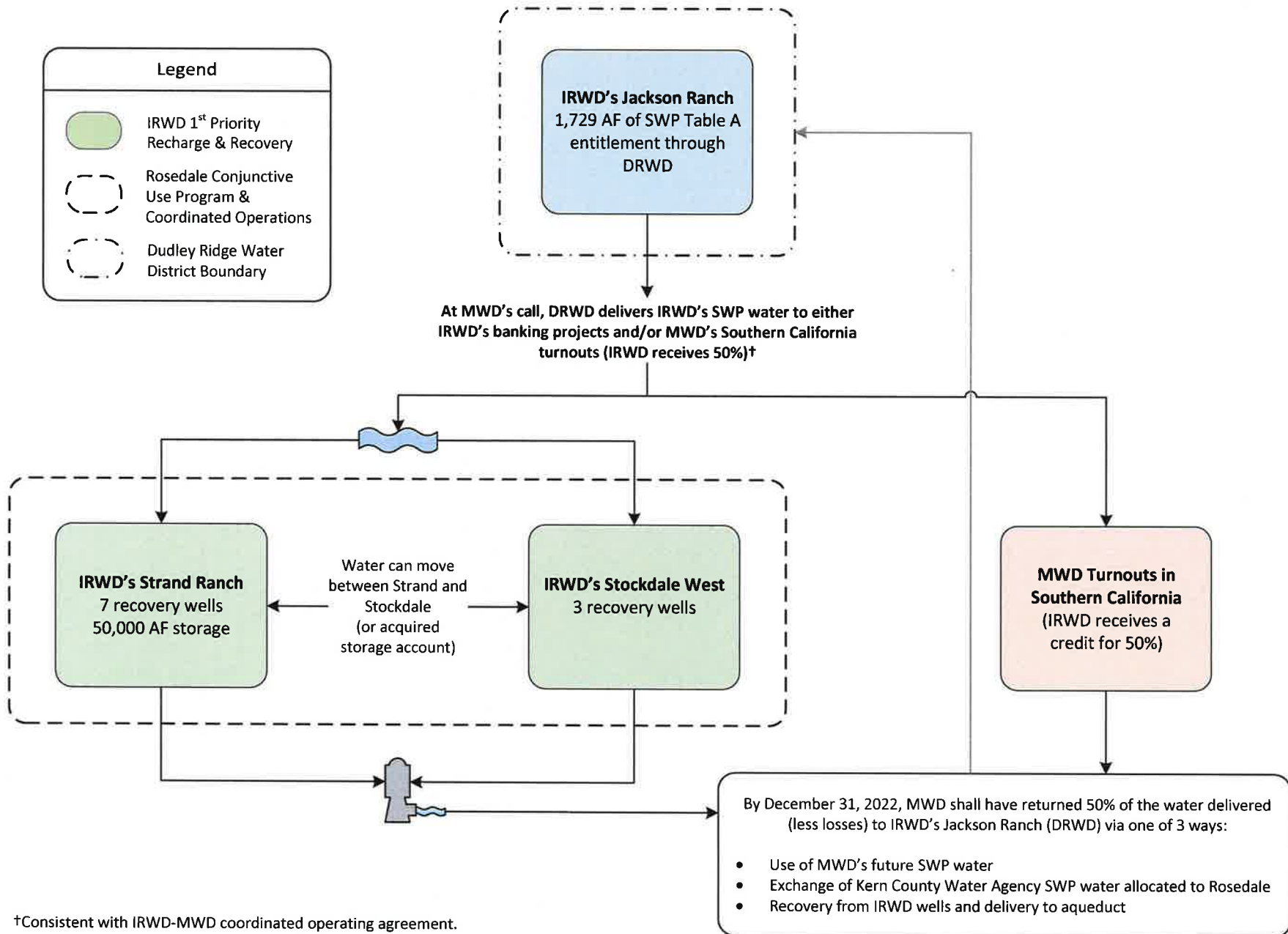


Exhibit "I"

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

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

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

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

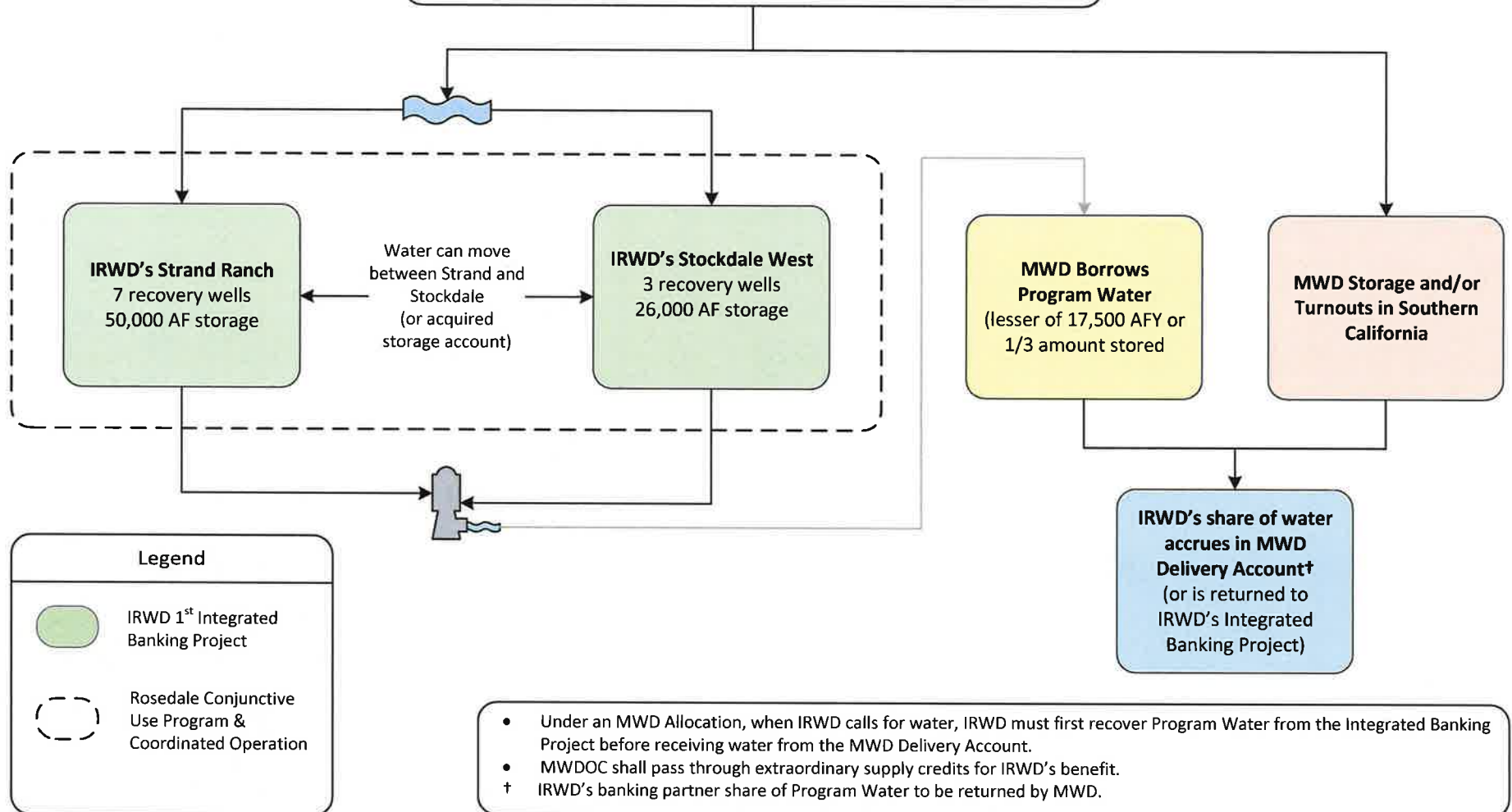
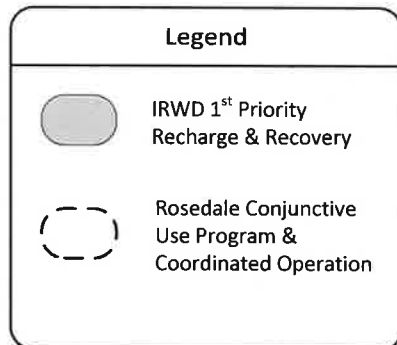
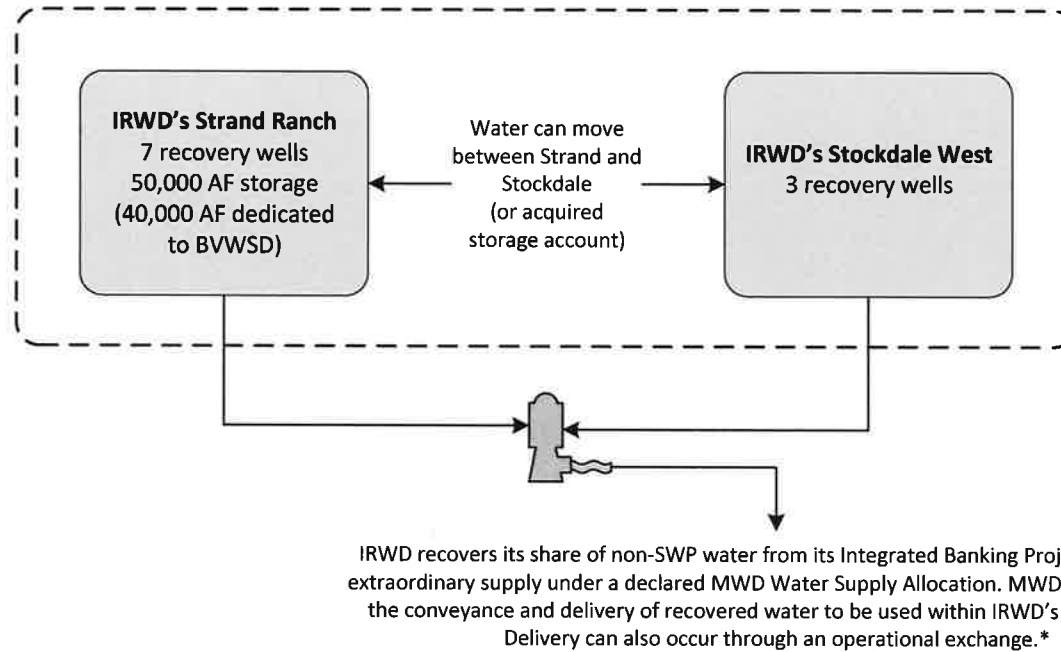


Exhibit "J"
Agreement for Conveyance of Water Between MWD, MWDOC, and IRWD (Wheeling Agreement)
Template for future agreements



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

February 16, 2017

Prepared by: K. Welch

Submitted by: F. Sanchez/P. Weghorst

Approved by: Paul Cook

SUPPLY RELIABILITY PROGRAMS COMMITTEE

UPDATE ON RECHARGE OPERATIONS

SUMMARY:

Wet year conditions are resulting in water supplies being made available for recharge at the Strand and Stockdale Integrated Banking Projects. This report provides an overview of ongoing recharge activities by Rosedale-Rio Bravo Water Storage District (Rosedale) and pending deliveries of high-flow Kern River Water to the Strand Ranch from Buena Vista Water Storage District (BVWSD). Also provided is an overview of terms for a one-year program that would allow BVWSD to recharge water on the Stockdale Integrated Banking Project.

BACKGROUND:

Based on the favorable wet-year water supply conditions, staff has been coordinating with Rosedale and BVWSD to facilitate the delivery of Kern River water to IRWD's Strand and Stockdale Integrated Banking Projects in 2017. Rosedale has already been delivering its own water to the projects for recharge on a second priority basis. The following is an update on Rosedale's current recharge operations and pending first priority Kern River water deliveries by BVWSD.

Current Recharge Operations by Rosedale:

In January 2017, Rosedale began utilizing the south recharge basins on the Strand Ranch to recharge water for its own banking programs on a second priority basis. Rosedale's use of the north recharge basins was initially performed on a limited basis to avoid ongoing construction associated with the new Cross Valley Canal (CVC) turnout to the Stockdale West recharge basins. This construction work is nearing completion and Rosedale began using all of the north recharge basins starting in the second week of February. Rosedale reported that it recharged over 5,000 AF in January using the recharge basins on the Strand Ranch. Rosedale also expects to continue recharging more than 350 AF per day until IRWD begins its first priority use of the facilities. Recharge water can also be conveyed to the Stockdale West basins through the existing 50 cfs syphon between Strand Ranch and Stockdale West. The new CVC turnout to the Stockdale West is expected to be available for use some time in May 2017.

BVWSD Kern River Deliveries to Strand Ranch:

Staff has been coordinating with BVWSD on initiating the delivery of high-flow Kern River water to the Strand Ranch on a first priority basis. These deliveries would be made consistent with the long-term unbalanced exchange agreement between IRWD and BVWSD. Last week, BVWSD made a request to staff to schedule delivery of up to 17,500 AF of high-flow Kern River water to the Strand Ranch beginning the week of February 15. To fulfill the request, staff submitted a Transaction Request Form through Rosedale to the Kern County Water Agency (KCWA) calling for the deliveries to begin when BVWSD announces that the water is available. The deliveries will be scheduled based on available capacity in the CVC and expected Article 21 deliveries of State Water

Project water. The delivery of Article 21 water will have priority use of CVC capacity consistent with existing agreements that control the use of the facility. At the Committee meeting, staff will provide an update on the status of BVWSD making high-flow Kern River water available for recharge on the Strand Ranch.

BVWSD Kern River Deliveries to Stockdale West:

In February 2016, the Committee approved terms for a one-year recharge program that would have allowed BVWSD to recharge up to 20,000 AF of high-flow Kern River water using the recharge basins at the Stockdale West project. These deliveries would augment BVWSD's use of 17,500 AF of recharge capacity that is allowed on the Strand Ranch. The Kern River did not reach high-flow conditions in 2016, and the BVWSD Board decided not to enter into the one-year recharge program.

As a result of the current wet year conditions, the Kern River Water Master is scheduling an increase in outflows from Lake Isabella that will create high-flow conditions on the Kern River. To maximize recharge of Kern River water supplies, BVWSD has requested to utilize the Stockdale West basins in addition to the Strand Ranch recharge basins. To facilitate BVWSD's request, staff has updated the term sheet (to include new dates) for the use of the Stockdale West Ranch that was approved by the Committee in February 2016. The updated term sheet is attached as Exhibit "A". BVWSD staff is expected to present the updated terms to its Board on February 15, 2017. At the Committee meeting, staff will provide an overview of the terms and the status of BVWSD's review and approval of the terms.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

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

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit "A" – Updated Term Sheet for a One-Year Recharge Program Using Stockdale West Recharge Facilities

EXHIBIT "A"

Summary of Terms | 1
February __, 2017~~6~~

DRAFT

Terms for a One-Year Recharge Program to
Augment Recharge Under the Agreement Between
Irvine Ranch Water District and
Buena Vista Water Storage District
Using Stockdale West Recharge Facilities

GENERAL TERMS

Entities: Irvine Ranch Water District (the "IRWD"); Buena Vista Water Storage District (the "BV")

Description: IRWD and BV seek to carry out a one-year recharge program ("Recharge Program") to augment the recharge capacities under the IRWD Water Exchange Program established in the long-term Agreement for Water Acquisition by IRWD from BV Water Management Program that was executed on December 22, 2010 ("IRWD/BV Exchange Agreement"). Recharge would be augmented through the delivery of high flow Kern River water to IRWD's Stockdale West property on a 2-for-1 basis consistent with the IRWD/BV Exchange Agreement as described in this term sheet ("Term Sheet"). Capitalized terms used herein and not otherwise defined shall have the same meanings as are given to such terms in the IRWD/BV Exchange Agreement.

Effective Date: _____, 2017~~6~~ (the "Effective Date").

Term: One year from the Effective Date, terminating on _____, 2018~~7~~.

Stockdale West: IRWD has constructed recharge facilities at its Stockdale West property in Kern County, California. These facilities consist of approximately 259 acres of recharge basins and appurtenant facilities to convey water to the Stockdale West property from the Strand Ranch Integrated Banking Project and the Rosedale Intake Canal. By augmenting recharge abilities under the IRWD/BV Exchange Agreement, the Recharge Program will provide improved water management and reliability. The Recharge Program will not include recovery wells on Stockdale West.

Exchange Program: The IRWD/BV Exchange Agreement provides for storage of high flow Kern River water on a 2-for-1 basis consistent with the BV Water Management Program that includes a Water Exchange Program that allows BV to more effectively and beneficially manage BV's water resources. The IRWD/BV Exchange Agreement allows BV to supply up to 17,500 AF of water in any given year for recharge at the Strand Ranch

Integrated Banking Project and provides for IRWD to return fifty percent (50%) of the water less losses at a rate of no more than 6,667 AF in any given year. As consideration, the remainder of the water is deemed transferred to IRWD with provisions for additional transfers that are dependent on time length of storage. The IRWD/BV Exchange Agreement has a term through January 13, 2039, extendable by the parties.

Non-Binding Effect: This Term Sheet is intended to be a statement of the terms of the proposed transaction. It is subject to the execution of a letter agreement ("Letter Agreement") by IRWD and BV inclusive of the terms and conditions set forth herein.

General Expenses: Each party shall be responsible for its own fees and expenses arising out of the negotiation and execution of agreements related to this transaction, obtaining necessary approvals, and the like.

CEQA Compliance: Both parties shall comply with CEQA and cooperate with one another with respect to CEQA compliance for the proposed Recharge Program. BV was the lead agency with respect to CEQA compliance for its BV Water Management Program, which included the Water Exchange Program, and adopted a Final Environmental Impact Report (EIR) on January 12, 2010. IRWD was a responsible agency with respect to CEQA compliance for the Stockdale Integrated Banking Project, including the delivery of high flow Kern River water from BV to the Stockdale West, and adopted a Final EIR on December 14, 2015. IRWD was a responsible agency with respect to CEQA compliance for the Strand Ranch Integrated Banking Project, and adopted a Final EIR on May 27, 2008. BV and IRWD shall each be responsible for all fees and costs associated with future or additional CEQA compliance regarding its participation in the Recharge Program, whether incurred by IRWD or BV, including litigation expenses if any.

Permit Costs: As provided in the IRWD/BV Exchange Agreement (Section 1(F)). However, no permit costs are expected for the Recharge Program.

Water Rights: As provided in the IRWD/BV Exchange Agreement (Section 1(G); Section 3(B) (ii) (4)).

RECHARGE AUGMENTATION TERMS

Source of Water:	As provided in the IRWD/BV Exchange Agreement (Section 2(A)(i)).
Quantity:	Up to 20,000 additional acre-feet (AF) of water during the one year term hereof ("Augmentation Water"), to augment the 17,500 AF of supply that BV is allowed to supply to the Strand Ranch Integrated Banking Project as specified in the IRWD/BV Exchange Agreement. The Augmentation Water is to be stored at in an account within the Stockdale Integrated Banking Project within the estimated storage capacity of 26,000. The Recharge Program storage capacity dedicated in the Stockdale Integrated Banking Project is for the Recharge Program only and will not increase the dedicated storage capacity amount as specified in the IRWD/BV Exchange Agreement. The Recharge Program shall not augment or increase the existing annual recovery capacity of 6,667 AF as provided in the IRWD/BV Exchange Agreement.
Quality:	As provided in the IRWD/BV Exchange Agreement (Section 2(A)(iii)).
Availability:	As provided in the IRWD/BV Exchange Agreement (Section 2(A)(IV)).
Delivery Points:	As provided in the IRWD/BV Exchange Agreement (Section 2(A) (v)). Notwithstanding that recharge of the Augmentation Water will occur on the Stockdale West property, the location of storage, recovery, return and delivery points shall be the same as for water other than Augmentation Water.
Other Terms:	Except where otherwise specified above or the context requires otherwise, all terms and conditions of the IRWD/BV Exchange Agreement are incorporated and will apply to this Term Sheet, the Letter Agreement and disposition of the Augmentation Water including without limitation the return of water to BV, consideration to be provided to IRWD, construction of facilities, indemnifications and duties related to the operation, maintenance, power and repairs. For the purpose of this Term Sheet and the Letter Agreement, such terms and conditions of the IRWD/BV Exchange Agreement shall be read and construed as though references therein to the Agreement or the words "herein," "hereof," and the like were to this Term Sheet and the Letter Agreement, and references to water included the Augmentation Water.

February 16, 2017

Submitted by: P. Weghorst

Approved by: Paul Cook 

SUPPLY RELIABILITY PROGRAMS COMMITTEE

UPDATE ON WATER EXCHANGES IN DUDLEY RIDGE WATER DISTRICT

SUMMARY:

On January 30, 2017, staff updated the Committee on opportunities between IRWD and Dudley Ridge Water District (DRWD) to extend IRWD's multi-year unbalanced exchange program and to execute a proposed agreement for a long-term 1-for-1 exchange that would provide mutual benefits to both agencies. On February 8, 2017, the DRWD Board concurred with extending the multi-year unbalanced exchange program and approved the 1-for-1 exchange agreement subject to several requested modifications acceptable to DRWD's Board President and General Manager. At the Committee meeting, staff will provide an overview of DRWD's letter request to the California Department of Water Resources (DWR) to extend the multi-year unbalanced exchange program. Staff will also present several revisions to the draft long-term 1-for-1 exchange agreement that were prepared in response to DRWD's requested modifications. Staff recommends that the Committee:

- Authorize the General Manager to indicate IRWD's concurrence with DRWD's letter to DWR requesting the extension of the multi-year unbalanced exchange program;
- Provide input on the suggested revised terms to the proposed 2017 Agreement Between DRWD and IRWD for a Long-Term Exchange Program; and
- Authorize staff to work with DRWD to finalize the agreement, which will then be presented to IRWD's Board of Directors.

BACKGROUND:

Staff has been working with DRWD in extending IRWD's existing multi-year unbalanced exchange program and in refining terms for a proposed long-term 1-for-1 exchange that would provide mutual benefits to both agencies. On January 30, 2017, staff provided the Committee an update on both exchange opportunities and the Committee authorized staff to pursue the extension to the multi-year program and authorized staff to work with DRWD in finalizing the agreement for the long-term 1-for-1 exchange. On February 8, 2017, the DRWD Board took up consideration of the proposed agreement and was briefed on DRWD staff efforts to extend the existing multi-year program. An overview of both programs is provided below with an update on actions taken by the DRWD Board related to each program.

Multi-Year Unbalanced Exchange:

In December 2013, DWR, DRWD, Metropolitan Water District of Southern California (Metropolitan) and the Kern County Water Agency (KCWA) entered into a Multi-Year Exchange and Change in Point of Delivery Agreement that facilitates unbalanced exchanges of IRWD's State Water Project (SWP) water allotment associated with the Jackson Ranch. The agreement facilitates exchanges to the benefit of IRWD and Metropolitan, consistent with IRWD's Coordinated Agreement with Metropolitan and the Municipal Water District of Orange County, through the delivery of IRWD's portion of DRWD's SWP water either to the Strand Ranch or into Southern

California. These deliveries are allowed under the terms of the agreement through December 31, 2017. Fifty percent of the water will be returned to IRWD's Jackson Ranch by December 31, 2022. An amendment to the multi-year agreement is needed to extend IRWD's ability to delivery water to the Strand Ranch or into Southern California beyond December 31, 2017.

On January 30, 2017 the Committee authorized staff to pursue a 10-year extension or longer to the existing multi-year agreement. At the February 8, 2017 DRWD Board meeting, the proposal to extend the program was presented by DRWD staff. At that meeting, the DRWD Board concurred with the extension of the multi-year program. Accordingly, staff at DRWD has prepared a letter to DWR requesting the extension of the multi-year unbalanced exchange program (provided as Exhibit "A"). At the Committee meeting, staff will provide an overview of this letter to DWR as well as next steps to obtaining the other necessary approvals of the extension. Staff recommends that the Committee authorize the General Manager to concur with DRWD's letter to DWR requesting the extension of the multi-year unbalanced exchange program.

Long-Term 1-for-1 Exchange:

On February 8, 2017, DRWD staff presented to the DRWD Board of Directors the proposed draft agreement for a long-term 1-for-1 exchange that was approved by the Committee on January 30, 2017. The execution of the agreement would allow IRWD to exchange its Kern River Water for SWP Table A water on a 1-for-1 basis in a way that ensures that IRWD's Kern River Water is used to the benefit of DRWD landowners that own land in both Kern County and DRWD. The proposed revised agreement that was presented to the DRWD Board is provided as Exhibit "B". The DRWD Board approved the agreement subject to several requested modifications acceptable to DRWD's Board President and General Manager.

At the Committee meeting, staff will present several revisions to the draft 1-for-1 exchange agreement that were prepared in response to DRWD's requested modifications. Staff recommends that the Committee provide input on the suggested revised terms to the agreement and authorize staff to work with DRWD to finalize the agreement, which will be presented to IRWD's Board of Directors.

FISCAL IMPACTS:

The long-term 1-for-1 exchange agreement described above would provide for the equal distribution of costs associated with the recharge and recovery of water. Staff will present details related to the allocation of these costs at the time staff presents program agreement to the Board.

ENVIRONMENTAL COMPLIANCE:

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

Project Final EIR. IRWD, as a Responsible Agency, filed Notices of Determinations with the Counties of Orange and Kern and with the California State Clearinghouse for both the Strand Ranch and Stockdale Integrated Banking Projects Final EIRs.

RECOMMENDATION:

That the Committee authorize the General Manager to indicate IRWD's concurrence with DRWD's letter to DWR requesting the extension of the multi-year unbalanced exchange program; provide input on the suggested revised terms to the revised draft 2017 Agreement Between DRWD and IRWD for a Long-Term Exchange Program; and authorize staff to work with DRWD to finalize the agreement to be presented to IRWD's Board of Directors.

LIST OF EXHIBITS:

- Exhibit "A" – Letter Request to DWR to extend the Multi-Year Exchange and Change in Point of Delivery Agreement Between DWR, DRWD, Metropolitan and KCWA.
- Exhibit "B" – Draft 2017 Agreement Between DRWD and IRWD for a Long-Term Exchange Program.

Exhibit "A"

200.033(2017)
300.0347

DUDLEY RIDGE WATER DISTRICT

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February 9, 2017

Pedro Villalobos, Chief
State Water Project Analysis Office
Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236-0001

Dear Pedro:

On behalf of Dudley Ridge Water District ("DRWD"), Irvine Ranch Water District ("IRWD"), Kern County Water Agency ("KCWA"), and Metropolitan Water District of Southern California ("MWDSC"), I am providing the Department of Water Resources ("DWR") this letter and enclosure requesting to modify and extend an approved multi-year 2 for 1 exchange agreement. IRWD is a landowner in DRWD that has banking facilities in Kern County¹ within LCWA's service area, a Coordinated Operating, Water Storage, Exchange and Delivery Agreement with MWDSC (Coordinated Operating Agreement)² and demands within the IRWD service area located inside MWDSC. The purpose of this letter is to request DWR's approval of modifying and extending the water exchange program as presented. By their concurrence and consent below, both IRWD and MWDSC are in support of the proposed exchange.

The approved multi-year exchange dated December 16, 2013 (SWPAO #13012), provided for delivery of up to 8,700 acre-feet of IRWD's allocated DRWD SWP water to IRWD's Strand Ranch Integrated Banking Project (Water Bank) or, at MWDSC's option, to MWDSC storage facilities in Southern California in accordance with the Coordinate Operating Agreement. Through the Coordinated Operating Agreement, 50% of the DRWD water (less proportional losses) would be used inside of MWDSC within IRWD's service area and the remaining 50% (less proportional losses) will be returned for IRWD's use within DRWD.

The current proposed exchange request modifies the approved multi-year exchange (SWPAO #13012) by adding IRWD's Stockdale Integrated Banking Project facilities to IRWD's current banking facilities within KCWA and including up to 12,240 acre-feet that would be delivered from DRWD over the next ten year period from 2018-2027; the portion of the water to be returned to DRWD would be returned by 2032.

The proposed exchange is consistent with DRWD's policy for temporary transfers that allows

¹ IRWD has ownership interest in the Strand Integrated Banking Project and the Stockdale Integrated Banking Project and, through DRWD, a portion of the Kern Water Bank.

² IRWD has a Coordinated Operating, Water Storage, Exchange and Delivery Agreement with MWDSC that allows IRWD to secure State Water Project (SWP) water on behalf of MWDSC for the benefit of both agencies. MWDSC can choose to either store IRWD secured SWP water in IRWD's Strand Ranch or Stockdale Integrated Banking Projects or in MWDSC reservoirs in southern California.

"Non District-approved banking or exchange programs where at least 50% of the water (after reasonable losses) is returned to the District within a ten year period, or other period as allowed by the California Department of Water Resources." Furthermore, the exchange as described is consistent with the IRWD's CEQA documentation for the Strand Ranch Integrated Banking Project (SCH #2007041080; CEQA certified 5/27/2008), CEQA documentation for the Stockdale Integrated Banking Project (SCH #2010091076; CEQA certified 12/8/15), and CEQA for the IRWD Jackson Ranch Water Allocation Project (SCH #2009111097; NOD filed 1/14/2010 by IRWD and 1/20/2010 by DRWD); the later document specifically describes this 2 for 1, unbalanced exchange among the parties indicated (DRWD, KCWA, IRWD, and MWDSC). This exchange is also consistent with DRWD's Negative Declaration (SCH #201621110) for the 2015 Update to DRWD's 2012 Agricultural Water Management Plan.

By copy of this letter to the State Water Contractors ("SWC"), we are requesting the SWC initiate an internal review with the SWC Water Transfers Committee and/or SWC Board of Directors and follow-up with a recommendation to the Department to approve this water exchange program. The need for a recommendation from the SWC Board for this exchange is because the authority delegated to the SWC General Manager (SWC Resolution adopted 1/17/2008) addresses exchanges made in one year for return in multiple years, but does not address delegating authority to the General Manager to recommend exchanges made over multiple years, even though the return period is within a ten-year period from the initial transfer.

To assist DWR in preparing a long-term agreement approving this water exchange program, enclosed is a completed "Contract Information Form".

Your review and approval of the proposed water exchange program is appreciated in advance. Please contact me or Rick Besecker at our office, Holly Melton at KCWA (661-634-1467), and/or Kevin Donhoff at MWDSC (213-217-6359) if you have any questions or need additional information.

Respectfully,



Dale K. Melville, PE
Manager-Engineer

CONCURRENCE:

IRVINE RANCH WATER DISTRICT

By: _____
General Manager

CONSENT:

In accordance with Paragraph 3.2 of that agreement entitled "Coordinated Operating, Water Storage, Exchange and Delivery Agreement," (the

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

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

By: _____
General Manager

Encl – DWR Contract Information Form

Copy: Terry Erlewine, SWC (w/ encl.)
Geoff Shaw, DWR-SWPAO (w/ encl.)
DRWD Board of Directors (w/o encl.)
Joe Hughes (w/o encl.)
Paul Weghorst, IRWD (w/ encl.)
Holly Melton, KCWA (w/ encl.)
James Bodnar, MWDSC (w/ encl.)
Kevin Donhoff, MWDSC (w/ encl.)

EXHIBIT "B"

DRAFT 1/31/17

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

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

RECITALS:

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

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

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

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

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

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

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

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

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

AGREEMENT:

Section 1. Definitions of Certain Terms.

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

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

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

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

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

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

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

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

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

Section 3. Conveyance of Exchange Water.

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

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

Section 4. Return Water.

4.1 General. Within five (5) years of receiving a delivery of Exchange Water (the "Return Period"), and when the June 1 SWP allocation is 65% or greater, at a time of the year selected by DRWD, DRWD shall deliver an equivalent amount of Return Water, as provided herein, to IRWD. If the Return Period ends without a year with a June 1 SWP allocation of 65% or greater, then the Return Period will be extended one year at a time until a year occurs with the June 1 SWP allocation of 65% or greater which will trigger the delivery of the Return Water to IRWD. No more than five (5) one-year extensions would be provided. In the event five (5) extensions occur, DRWD's delivery of the Return Water shall be completed prior to the end of the fifth extension year. DRWD may also deliver Return Water to IRWD in any year when the June 1 SWP allocation is less than 65%. Delivery of Return Water shall be made by either (i) if preferred by DRWD, an in-ground transfer of DRWD Table A Water from DRWD's Kern Water Bank account to the Integrated Banking Project, or otherwise (ii) as directed by Metropolitan, (A) delivery of Return Water from the California Aqueduct to the IRWD POD or (B) delivery to Metropolitan for subsequent delivery to Southern California. DRWD shall provide thirty (30) days written notice to IRWD before it delivers Return Water and will confer with IRWD as to the date(s) and location(s) of delivery. With IRWD's approval, at the request of DRWD, DRWD may also pre-deliver Return Water prior to receiving a delivery of Exchange Water, up to an amount equal to, but not greater than, the amount of non-SWP water then stored by IRWD in the Integrated Banking Project. Within five (5) years of receiving a pre-delivery of Return Water, at a time selected by IRWD, and when DRWD is physically able to take delivery of Exchange Water and has demand therefor, IRWD shall, unless otherwise mutually agreed upon by IRWD and DRWD, deliver an equivalent amount of Exchange Water, as provided in Section 3.

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

IRWD.

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

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

Section 5. Delivery Schedule.

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

5.2 Exchange Water. In any calendar year when DRWD requests and IRWD approves an Exchange Water delivery, DRWD shall supply a preliminary delivery schedule with dates and amounts to IRWD by May 1. The Parties will meet and confer as necessary and shall finalize the delivery schedule by June 1 of such calendar year. Exchange Water delivery shall be scheduled in coordination with the KCWA.

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

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

15% losses associated with the Memorandum of Understanding would need to be provided for in the Return Water deliveries. Exhibit "A" provides the adjustment factors to be used in providing for losses for each method of delivering Return Water. Exhibit "A" also includes examples of adjusting for losses associated with each method of making Return Water deliveries to ensure a 1-for-1 exchange. IRWD may incur other losses up to 2 % through the CVC conveyance as assigned by KCWA or any other losses that may be incurred with delivery to the IRWD POD.

Section 7. Coordination of Approvals and Agreements.

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

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

Section 8. Costs.

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

8.1.1 Exchange Water Costs. Notwithstanding any other provision of this Agreement, IRWD shall be responsible for all per acre foot costs for acquisition and storage of Exchange Water prior to its delivery to the DRWD POD. IRWD shall be responsible for all costs of recovery of the Exchange Water, including recovery operation and maintenance,

Rosedale administrative charges for recovery and CVC conveyance to the DRWD POD. Each of the Parties shall be responsible for one-half of all KCWA fees, including transaction set-up fees, per acre foot transaction request fees and third-party out-of-county fees.

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

8.2 Out of Pocket Costs Other Than Coordination Costs Or Per Acre Foot Costs. Without limiting the generality of Section 10.1 of this Agreement in any way, each Party shall bear its own expenses and costs incurred in connection with activities undertaken by such Party relating to the Exchange Program, except for costs of coordination otherwise provided for in Section 7.1 or per acre foot costs described and otherwise provided for in Section 8.1. A Party's expenses to be borne by such Party under this Section include without limitation (i) actual out-of-pocket expenses incurred by such Party (including costs of its staff), (ii) the actual amount of legal fees, consulting fees and similar third-party charges incurred by such Party in connection with the Exchange Program, including without limitation the costs incurred by such Party in connection with preparing and reviewing any environmental documentation, (iii) all costs of litigation (including without limitation attorneys' fees) actually incurred by such Party in defending any action brought by a third party as the result of or challenging such Party's actions in connection with the Exchange Program, and (iv) damages actually payable by such Party relating to any activities such Party undertakes in connection with the Exchange Program, except to the extent such damages were the direct result of the willful misconduct of the other Party that would otherwise be indemnified under Section 10 unless otherwise mutually agreed by the Parties.

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

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

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

Section 10. Indemnification.

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

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

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

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

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

aquifer from any cause.

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

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

Section 11. Notices. All written notices required to be given pursuant to the terms of the Agreement shall be either (i) personally delivered, (ii) deposited in the United States express mail or first class mail, registered or certified, return receipt requested, postage prepaid, (iii) delivered by overnight courier service, or (iv) delivered by facsimile transmission or e-mail, provided that the original of such notice is sent by certified United States mail, postage prepaid, or by overnight courier, no later than one (1) business day following such facsimile transmission or email. All such notices shall be deemed delivered upon actual receipt (or upon first attempt at delivery pursuant to the methods specified in clauses (i), (ii) or (iii) above if the intended recipient refuses to accept delivery). All such notices shall be delivered to the addresses shown in the Agreement or to such other address as the receiving Party may from time to time specify by written notice to the other Party given in the manner provided herein.

Section 12. Mediation. The Parties agree that any and all disputes, claims or controversies regarding the Exchange Program or this Agreement shall be submitted to mediation in a mutually agreeable venue and if the matter is not resolved through mediation, then it may be submitted to any court of competent jurisdiction. Any affected Party may commence mediation by providing the other Party a written request for mediation, setting forth the subject of the dispute and the relief requested. The Parties shall cooperate with one another in selecting a mediator and in scheduling the mediation proceedings. The Parties covenant that they shall participate in the mediation in good faith, and that they shall share equally in costs charged by the mediator. All offers, promises, conduct and statements, whether oral or written, made in the course of the mediation by any of the Parties, their agents, employees, experts and attorneys, and by the mediator or any of the mediator's employees, are confidential, privileged and inadmissible for any purpose, including impeachment, in any arbitration or other proceeding involving the

Parties, provided that evidence that is otherwise admissible or discoverable shall not be rendered inadmissible or non-discoverable as a result of its use in the mediation. The provisions of this Agreement with respect to mediation may be enforced by any Court of competent jurisdiction, and the Party seeking such enforcement shall be entitled to an award of all costs, fees and expenses, including attorneys' fees, to be paid by the Party against whom such enforcement is ordered.

Section 13. Attorneys' Fees. Should any litigation be commenced between the Parties concerning the Agreement, or the rights and duties of any of them in relation thereto, the Party prevailing in such litigation shall be entitled, in addition to such other relief as may be granted, to recover its attorneys' fees and other costs of litigation as determined by the court or in a separate action brought for that purpose.

Section 14. Entire Agreement. This Agreement constitutes the entire agreement between the IRWD and DRWD with respect to the subject matter hereof. This Agreement supersedes all prior negotiations, discussions, contracts, agreements or understandings between the parties hereto, and no evidence of any prior or contemporaneous parol agreement or understanding shall be admissible to vary its terms. This Agreement shall not be amended or modified in any way except by a written instrument executed by each party hereto. The foregoing notwithstanding, this Agreement shall not supersede the Agreement Between Dudley Ridge Water District and Irvine Ranch Water District, dated February 25, 2010.

Section 15. Termination For Breach. Either Party may terminate the Agreement if the other Party breaches any material obligation under the Agreement and such breach continues for a period of sixty (60) days, or such other period as may be reasonable under the circumstances, after the date on which written notice is issued by the non-breaching Party. The non-breaching Party shall be entitled to seek any and all legal or equitable damages and/or remedies as a result of the breaching Party's breach.

In the event that either IRWD or DRWD is in material default of the Agreement, the non-defaulting Party shall provide written notice to the defaulting Party, identifying with reasonable specificity the nature of the claimed default. If the defaulting Party has not cured the event(s) of material default which is (are) identified in the notice required by this section within twenty (20) business days after receipt of written notification, or such other period as is reasonable under the circumstances, the non-defaulting Party shall be entitled to any and all remedies which may be available to it at law or in equity. This provision is not intended to provide a separate termination right, which is set forth in the first paragraph of this Section.

Section 16. Choice of Laws; Venue. The Agreement shall be governed and construed in accordance with the laws of the State of California. Venue for any action brought for the purpose of enforcing any provision of the Agreement shall be in Kings County, California.

Section 17. Cumulative Rights; Waiver. No failure by either Party to exercise, and no delay in exercising any rights, shall be construed or deemed to be a waiver thereof, nor shall any single or partial exercise by either Party preclude any other or future exercise thereof or the exercise of any other right. Any waiver of any provision or of any breach of any provision of this Agreement must be in writing, and any waiver by either party of any breach of any provision of

this Agreement shall not operate as or be construed to be a waiver of any other breach of that provision or of any breach of any other provision of this Agreement.

Section 18. Further Action. The Parties agree to and shall take such further action and execute and deliver such additional documents as may be reasonably required to effectuate the Exchange Program, consistent with each and all of the terms and conditions of this Agreement.

Section 19. Assignment. Neither Party shall assign or otherwise transfer its rights or obligations in, under or to the Exchange Program or this Agreement, in whole or in part, without the prior written consent of the other Party, which may be withheld in such other Party's sole and absolute discretion.

Section 20. Force Majeure; Change In Law. The respective obligations of each Party hereto shall be suspended while it is prevented from complying by acts of God; war; riots; civil insurrection; acts of civil or military authority; fires; floods; earthquakes; labor accidents or incidents; rules and regulations of any federal, state, or other governmental agency (other than the Parties themselves); changes in law, rules, or regulations of any federal, state or other governmental agency (other than the Parties themselves); or other cause of the same or other character any of which are beyond the reasonable control of such Party (collectively, "Force Majeure"). In the event of a suspension due to the foregoing, the Party whose obligations are suspended shall promptly notify the other Party in writing of such suspension and the cause and estimated duration of such suspension.

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

Section 21. Interpretation. It is agreed and acknowledged by the parties that the Agreement has been arrived at through negotiation involving their respective counsel, and that each Party has had a full and fair opportunity to revise the terms of the Agreement. Consequently, the normal rule of construction that any ambiguities are to be resolved against the drafting party shall not apply in construing or interpreting the Agreement.

Section 22. Headings. Headings used in the Agreement are for reference only and shall not affect the construction of the Agreement.

Section 23. No Third Party Beneficiaries. No third party beneficiaries are intended by the Parties hereto, and no third party shall be entitled to claim or enforce any rights under this Agreement.

Section 24. Severability. In the event that any provision of the Agreement is determined by a court to be invalid, the court shall reform the provision in a manner that is both consistent with

the terms of the Agreement taken as a whole and legally valid. The remainder of the Agreement shall not be affected thereby.

Section 25. Successors and Permitted Assigns. All covenants and agreements contained in the Agreement by or on behalf of any of the Parties shall bind and inure to the benefit of their respective successors and permitted assigns under Section 19, whether so expressed or not.

Section 26. Counterparts. This Agreement may be executed in counterparts. Facsimile and other electronic signatures shall be binding for all purposes.

Section 27. Effective Date; Term. Subject to Section 7.2, this Agreement shall take effect on the date first written above. Unless the terms of contingent effectiveness are not satisfied pursuant to Section 7.2 or the Agreement is terminated under Section 10.1 or Section 15, the term of this Agreement shall extend to and including November 4, 2035.

IN WITNESS WHEREOF, the parties have executed this Agreement on the date first hereinabove written.

DUDLEY RIDGE WATER DISTRICT

By _____
President

By _____
Secretary

APPROVED AS TO FORM:

By _____

IRVINE RANCH WATER DISTRICT

By _____
President

By _____
Secretary

APPROVED AS TO FORM:

By _____

CONSENT:

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

THE METROPOLITAN WATER DISTRICT OF SOUTHERN
CALIFORNIA

By: _____
Title:

By: _____
Secretary

EXHIBIT “A”

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

Method of Delivery of Return Water	In-ground Transfer from Kern Water Bank to IRWD Integrated Banking Project	Metropolitan Takes Delivery to Southern California	Delivery to IRWD Integrated Banking Project via Cross Valley Canal²
Adjustment Factor for Losses	1.0	1.0	1.15

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

2/ Deliveries to the IRWD Integrated Banking Project are subject to losses defined in the “Memorandum of Understanding” between Rosedale and adjoining entities which amount to 15 percent.

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

Exchange Water delivered = 1,000 AF
Return Water delivered = 1,000 AF * 1.15 = 1,150 AF
Net Return Water = 1,000 AF

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

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

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

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

EXHIBIT "B"

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

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

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

	DRWD	IRWD	Metropolitan
Exchange Water Costs			
Stored Exchange Water		\$ 84.00	
KCWA Fees: transaction set up fee, per AF transaction request fees, third party out of county fee	\$ 2.50	\$ 2.50	
Recovery of Exchange Water		\$ 72.00	
Recovery operations, maintenance costs		\$ 2.00	
Rosedale admin. charge for recovery at Integrated Banking Project		\$ 3.00	
CVC conveyance of Exchange Water to DRWD		\$ 3.00	
Return Water Costs			
DRWD Table A (assumes 65% SWP allocation)	\$151.00		
Water Toll			\$ 28.00
CVC pumping to Integrated Banking Project	\$ 7.00		
CVC conveyance of Return Water to Integrated Banking Project	\$ 3.00		
Rosedale admin charge for recharge at Integrated Banking Project	\$ 3.00		
Estimated cost of providing for 15% losses associated with delivery of Return Water to Integrated Banking Project via the Cross Valley Canal. Calculated in this example as: $(\$151 + \$7 + \$3 + \$3) \times 0.15/2$	\$ 12.30	\$ 12.30	
Totals	\$ 178.80	\$ 178.80	\$ 28.00