

AGENDA
IRVINE RANCH WATER DISTRICT
SUPPLY RELIABILITY PROGRAMS COMMITTEE
TUESDAY, SEPTEMBER 27, 2016

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

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

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

- | | |
|---|--|
| <p>5. <u>WATER BANKING PROJECT FACILITIES, CAPACITIES AND PROGRAMS OVERVIEW – JOHNSON/WELCH/SANCHEZ/WEGHORST</u></p> | |
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Recommendation: Receive and file.

ACTION

- | | |
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| <p>6. <u>UPDATE ON POTENTIAL LONG-TERM EXCHANGE PROGRAM WITH CASTAIC LAKE WATER AGENCY – WELCH/SANCHEZ/WEGHORST</u></p> | |
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Recommendation: That the Committee provide input on the concepts presented at the meeting for revising the draft terms for a Long-Term Exchange Program with Castaic Lake Water Agency.

ACTION - Continued

7. VARIANCE REQUEST FOR BASELINE PROPERTY ASSESSMENT WORK
BY DEE JASPAR & ASSOCIATES – WELCH/SANCHEZ/WEGHORST

Recommendation: That the Board approve Variance No. 3 to the District's Professional Services Agreement with Dee Jaspar and Associates, Inc. in the amount of \$145,000 for baseline property assessment work on properties of interest in Palo Verde Irrigation District.

8. OPTIONS FOR PROVIDING WATER SUPPLY RELIABILITY
ASSISTANCE – WEGHORST

Recommendation: That the Committee provide input on the concepts presented at the Committee meeting on how IRWD could provide water supply reliability assistance to South County retail agencies.

OTHER BUSINESS

9. A. Directors' Comments

B. CLOSED SESSION with real property negotiator (Government Code Section 54956.8).

Property: Parcels 875-240-008, 878-102-006, 878-102-011, 878-102-012, 866-021-004, 866-022-001, 866-022-03, 866-080-004, 866-090-012, 869-020-002, and 869-050-010, County of Riverside

Negotiating Parties: Hayday Farms, Inc.

Agency Negotiator: Paul Cook, General Manager

Purpose of Negotiations: Price and Term of Payment,

Property: Parcels 824-030-001 and 824-030-002, County of Riverside

Negotiating Parties: Calabrese

Agency Negotiator: Paul Cook, General Manager

Purpose of Negotiations: Price and Term of Payment,

Property: Parcels 827-030-004, 827-030-005, 827-110-005, 827-110-006, 827-110-010, 827-110-011, 827-110-014, and 827-110-016, County of Riverside

Negotiating Parties: Lourenco Farm

Agency Negotiator: Paul Cook, General Manager

Purpose of Negotiations: Price and Term of Payment,

OTHER BUSINESS - Continued

9. B. CLOSED SESSION with real property negotiator (Government Code Section 54956.8).

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

Negotiating Parties: Stroschein

Agency Negotiator: Paul Cook, General Manager

Purpose of Negotiations: Price and Term of Payment, and

Property: Parcels 878-151-003, 878-210-001, 878-270-001, 878-270-002, 878-260-001, 878-260-002, County of Riverside

Negotiating Parties: Barnes and Berger

Agency Negotiator: Paul Cook, General Manager

Purpose of Negotiations: Price and Term of Payment.

- C. Adjourn

Availability of agenda materials: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the above-named Committee in connection with a matter subject to discussion or consideration at an open meeting of the Committee are available for public inspection in the District's office, 15600 Sand Canyon Avenue, Irvine, California ("District Office"). If such writings are distributed to members of the Committee less than 72 hours prior to the meeting, they will be available from the District Secretary of the District Office at the same time as they are distributed to Committee Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available at the entrance of the meeting room at the District Office.

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

September 27, 2016

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. Since the last Committee meeting, minor changes to the map depicting well locations have been made to reflect the current status of wells that are planned or under construction.

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. These maps are provided as Exhibits "C" and "D", respectively. The facilities shown on these maps are associated with the Strand Ranch, Stockdale West, Stockdale East and Rosedale Drought Relief Projects. Minor changes to Exhibit "C" have been made to reflect the current status of wells that are planned or under construction.

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 "C", "D", "E", "F", "G", "H" and "I" as described in the List of Exhibits shown 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” – Diagram of IRWD-Rosedale Water Banking and Exchange Program Agreements
- Exhibit “F” – Diagram of Long-Term Water Exchange Program with Buena Vista Water Storage District
- Exhibit “G” – Diagram of Unbalanced Exchange Program Diagram with Dudley Ridge Water District
- Exhibit “H” – Diagram of Coordinated Operating, Water Storage, Exchange and Delivery Agreement with Metropolitan Water District of Southern California
- Exhibit “I” – 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
September 27, 2016

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 CURRENT CONDITIONS ²	RECOVERY CAPACITY AS PLANNED	RECOVERY CAPACITY CURRENT CONDITIONS
Strand Ranch	Yes	7	-	50,000	17,500	-	17,500	-	40.0	18.6	-	-
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	18.6	10.0	0.0
Partner Capacities ⁴				36,000	22,300	9,500	12,000	0	35.5	35.5	-	-
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
September 27, 2016

TRANSACTIONS	WATER BANKING ENTITY				
	IRWD		BUENA VISTA (BVWSD)	CARPINTERIA VALLEY (CVWD)	DUDLEY RIDGE WATER DISTRICT (DRWD) ³
	SWP ¹	NON-SWP ²	NON-SWP	SWP	SWP
BEGINNING WATER IN STORAGE 2015 (AF)					
Total Kern Water Bank	-	4,016	-	-	-
Total MWD System ⁵	7,327	-	-	-	-
Total Kern County	249	9,675	4,341	413	474
TOTAL STORED WATER (1/1/2015)	7,576	13,691	4,341	413	474
(RECOVERY) AND RECHARGE IN 2015 (AF)					
CVWD	-	-	-	(413)	-
BVWSD	-	-	(4,341)	-	-
Kern Water Bank	-	251	-	-	-
2015 SWP Allocation ⁵	175	-	-	-	175
Reserve Water Available in 2015 ⁶	140	-	-	-	-
TOTAL 2015 TRANSACTIONS	315	251	(4,341)	(413)	175
Total Kern Water Bank	-	4,267	-	-	-
Total MWD System	7,502	-	-	-	-
Total Kern County	389	9,675	-	-	649
TOTAL STORED WATER (1/1/2016)	7,891	13,942	-	-	649
(RECOVERY) AND RECHARGE IN 2016 (AF)					
Recharge	TBD	TBD	-	-	-
Kern Water Bank	-	-	-	-	-
2016 SWP Allocation (current 60%) ⁵	524	-	-	-	525
TOTAL ESTIMATED 2016 TRANSACTIONS	524	-	-	-	525
Total Kern Water Bank	-	4,267	-	-	-
Total MWD System	8,026	-	-	-	-
Total Kern County	389	9,675	-	-	1,174
TOTAL ESTIMATED STORED WATER (1/1/2017)	8,415	13,942	-	-	1,174

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.

⁵ MWD is storing IRWD's share of 2013-2015 SWP allocation (649 AF) and assumes MWD will store 2016 SWP allocation amounts in MWD's system and not at Strand Ranch.

⁶ 4% of banked water is placed into a reserve to account for actual or potential losses. The reserve water may be purchased within 3 years following the end of the calendar year in which the water was banked. If the water is not purchased at the end of 3 years, it is made available for recovery.

Exhibit "C"

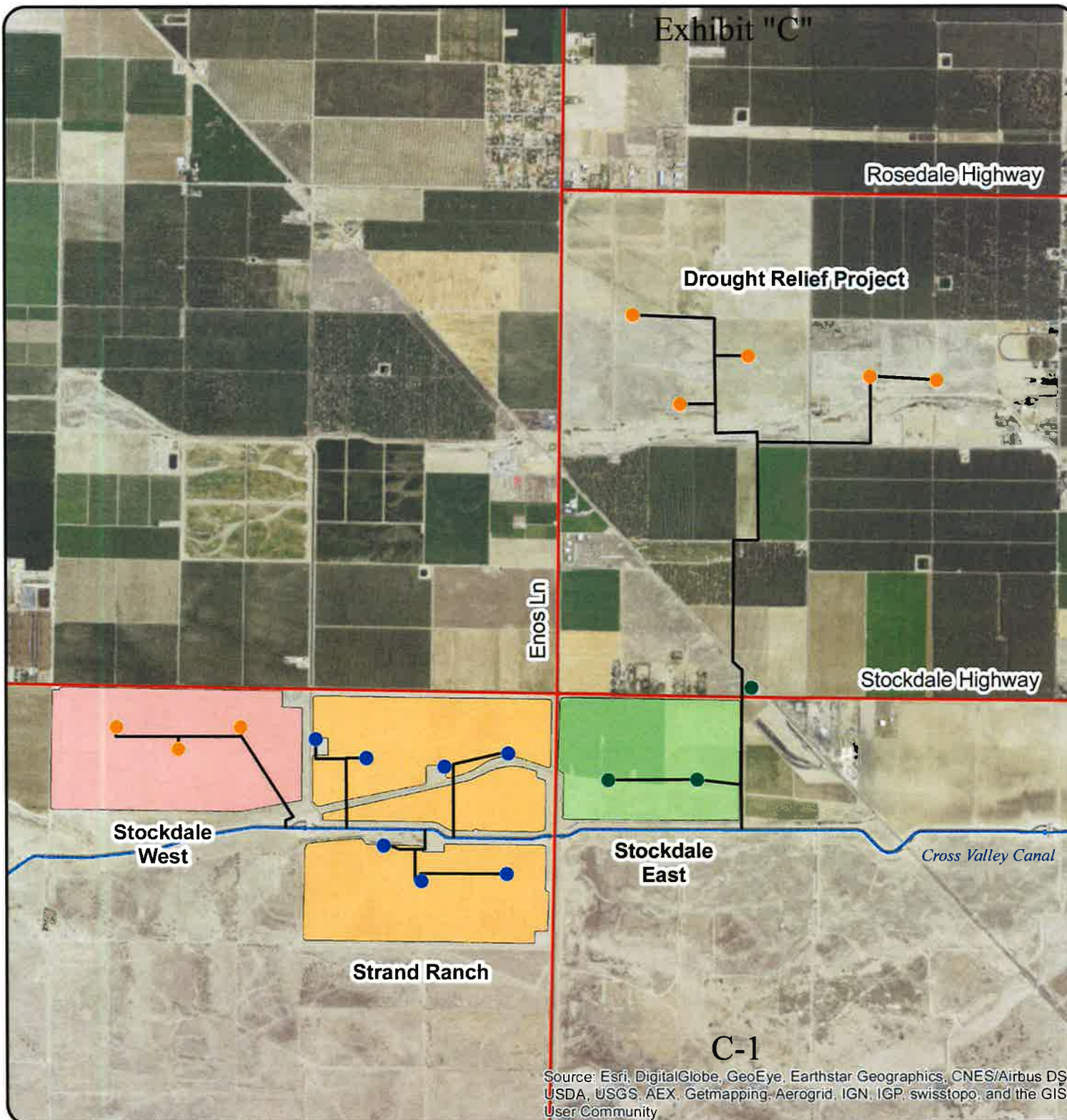


Location Map: IRWD Water Banking Projects Wells and Turnin Pipelines

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.



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



0 0.25 0.5 1 Miles

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

Exhibit "D"

Rosedale Highway



**Location Map:
IRWD Water Banking Projects
Turnout Facilities**

MAP FEATURES

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

Existing Siphon
50 CFS Capacity
From Strand

Planned
Stockdale West
Turnout Facility
100 CFS Capacity

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

Stockdale Highway

Cross Valley Canal

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

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

Exhibit "E"

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)

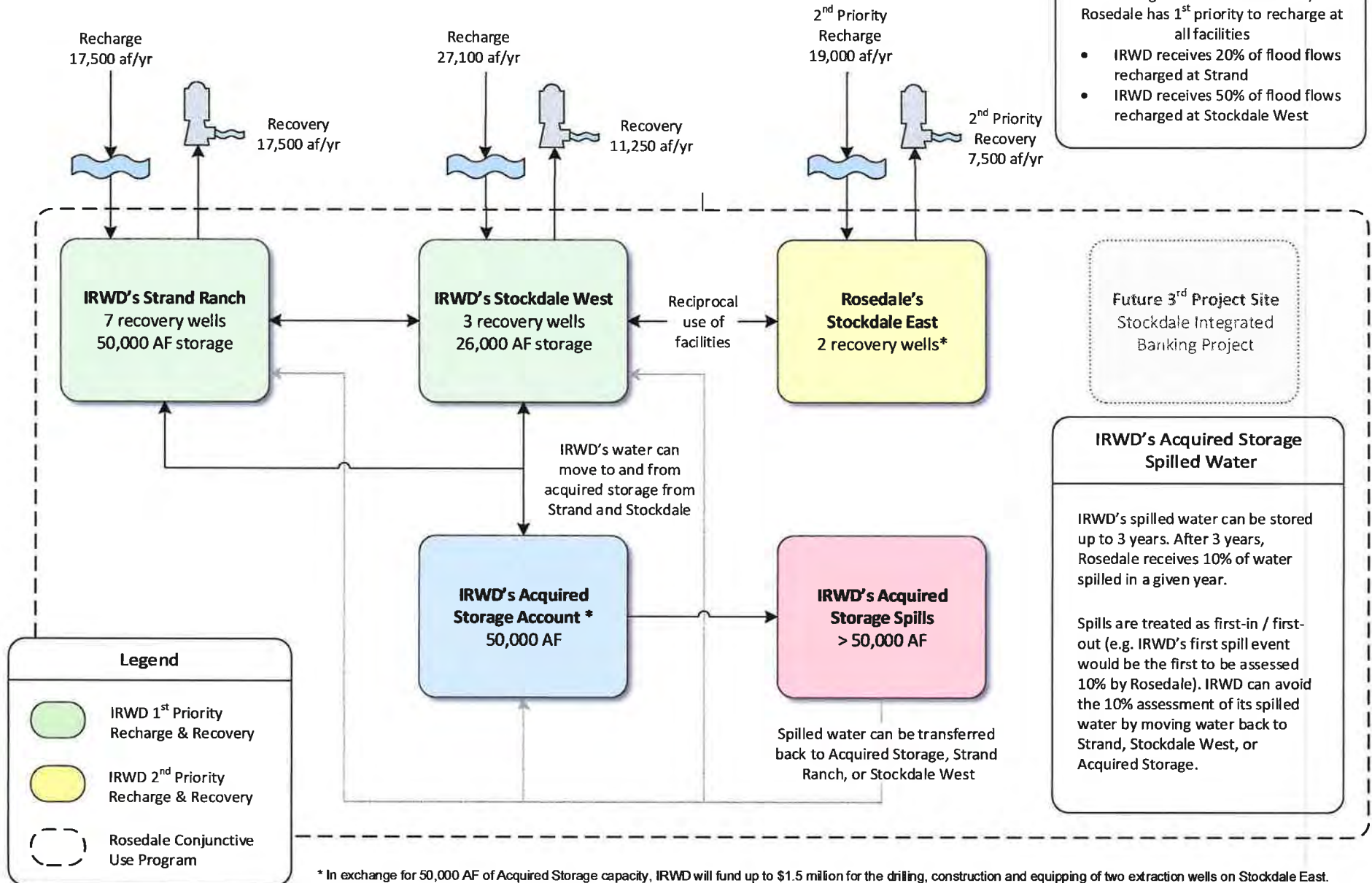
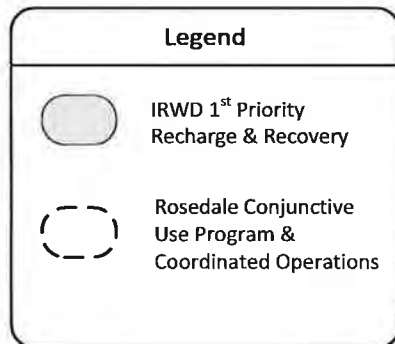
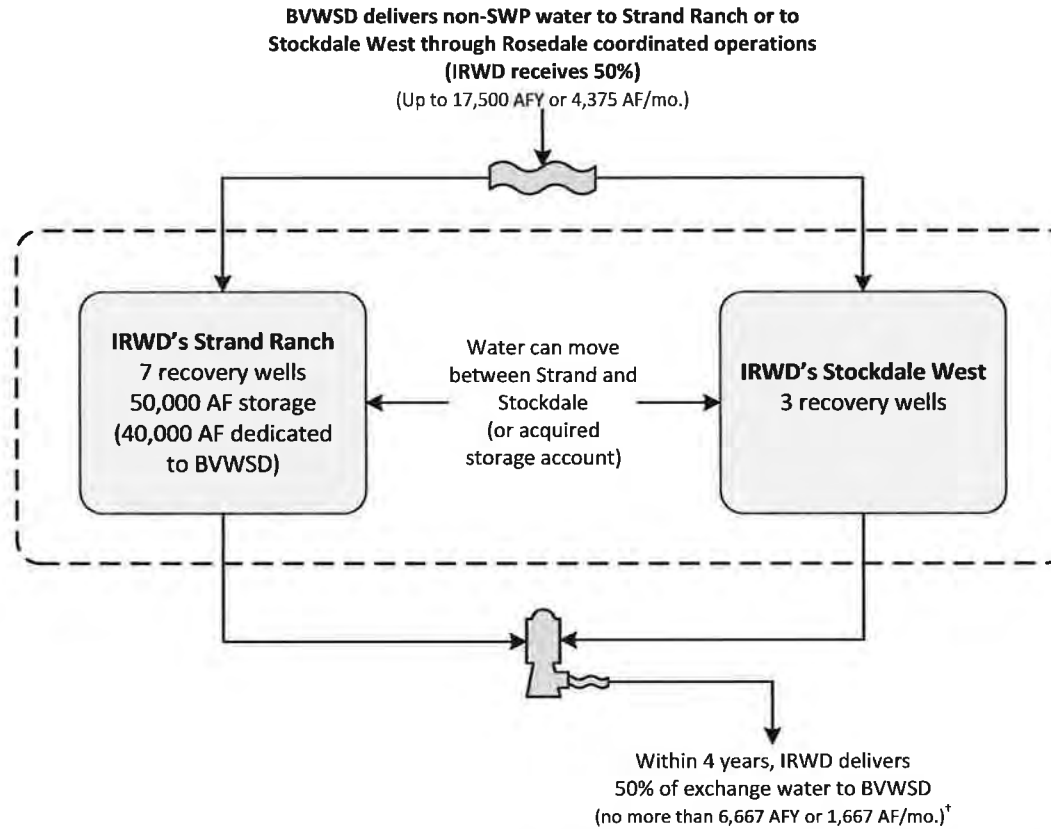


Exhibit "F"

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

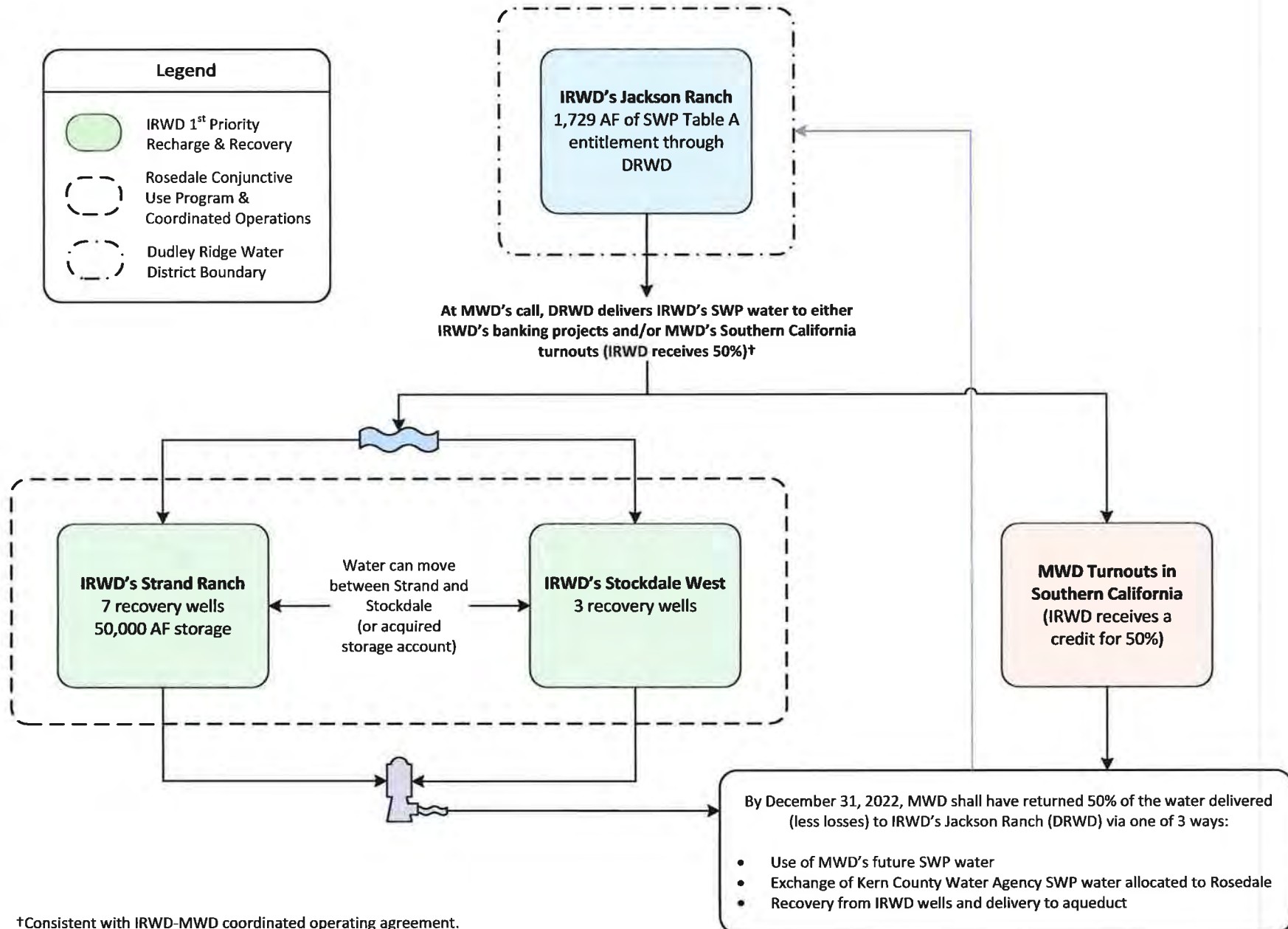


Exhibit "H"

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

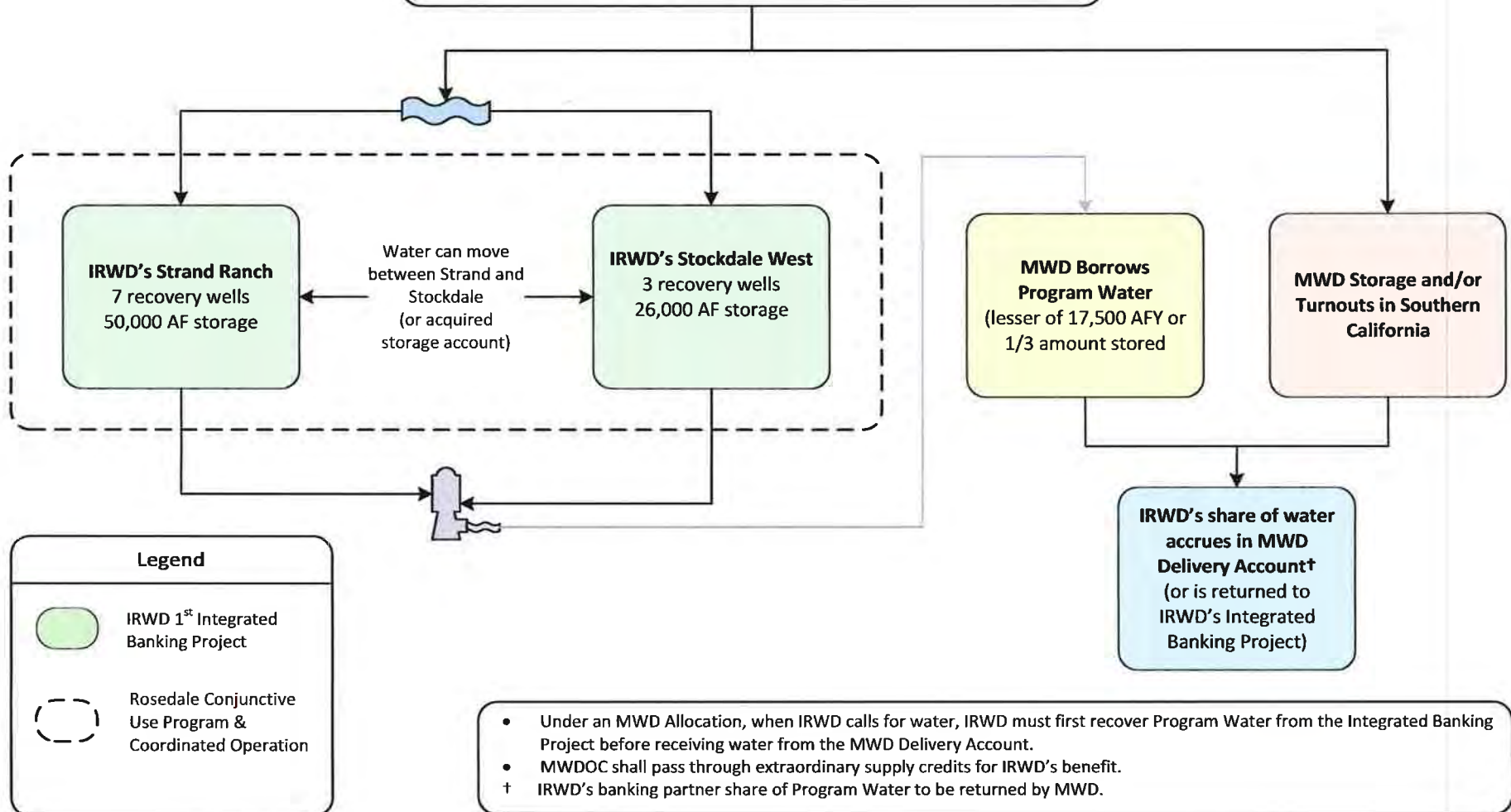
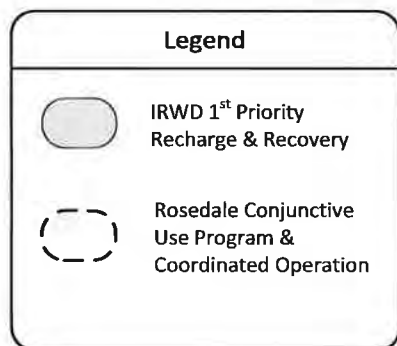
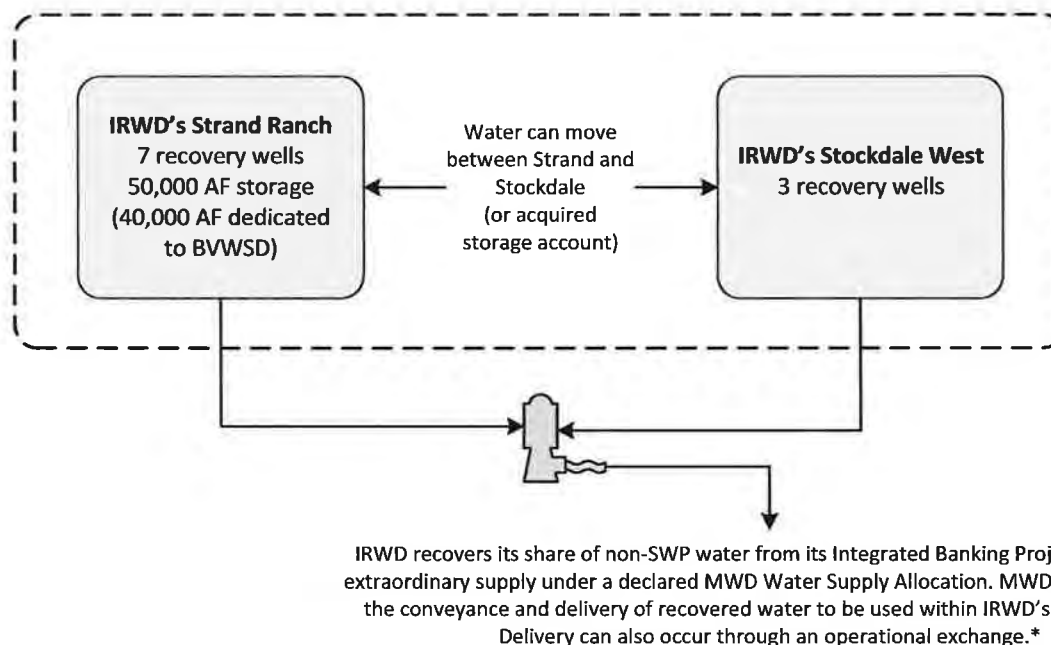


Exhibit "I"
Agreement for Conveyance of Water Between MWD, MWDOC, and IRWD (Wheeling Agreement)
Template for future agreements



*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.

September 27, 2016
Prepared by: K. Welch
Submitted by: F. Sanchez/P. Weghorst
Approved by: Paul Cook 

SUPPLY RELIABILITY PROGRAMS COMMITTEE

UPDATE ON POTENTIAL LONG-TERM EXCHANGE PROGRAM WITH CASTAIC LAKE WATER AGENCY

SUMMARY:

IRWD continues to hold discussions with Castaic Lake Water Agency (CLWA) related to implementing a Long-Term Exchange Program (Exchange Program) for the benefit of both agencies. Staff has shared with CLWA the proposed terms for such a program that were reviewed with the Committee in July 2016. CLWA has expressed interest in the proposed program while communicating concerns related to one of the draft terms. At the Committee meeting, staff will provide an overview of CLWA's concerns and will present concepts that may be more acceptable to CLWA. Staff recommends that the Committee provide input on the concepts presented for revising the draft terms.

BACKGROUND:

In July 2016, staff reviewed with the Committee proposed terms for an Exchange Program which, based on input from the Committee, were revised and submitted to CLWA as shown in Exhibit "A". The proposed terms call for dedicating 28,000 acre-feet (AF) of storage to the proposed Exchange Program in IRWD's Strand and Stockdale West Integrated Banking Projects (Water Banks). The program would allow CLWA to store its excess State Water Project (SWP) supply in the Water Banks on a two-for-one basis with IRWD receiving half of the water. The Exchange Program would reserve 4,667 AF per year of recovery capacity for CLWA's use in recovering its half of the stored supply.

CLWA's Review of Program Terms:

In August, CLWA staff informally reviewed IRWD's proposed terms for the Exchange Program with a committee of its Board of Directors. CLWA staff indicated that the committee expressed interest in IRWD's proposal and requested that CLWA staff continue to research alternative banking opportunities for comparison purposes. CLWA staff also commented that they had concern with the proposed requirement for CLWA to deliver a minimum of 5,000 AF of water to storage whenever the SWP allocation is equal to or greater than 40 percent. They further stated that this requirement would restrict CLWA's ability to maximize the carry-over storage benefits of San Luis Reservoir.

In response to CLWA's concern with the minimum delivery requirement, staff is preparing additional concepts that could encourage CLWA to deliver water to IRWD's Water Banks while allowing CLWA the ability to effectively use San Luis Reservoir. At the Committee meeting, staff will provide an overview of these concepts and requests that the Committee provide input.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

That the Committee provide input on the concepts presented for revising the draft terms for a Long-Term Exchange Program with Castaic Lake Water Agency.

LIST OF EXHIBITS:

Exhibit “A” – Draft Conceptual Terms for a Long-Term Exchange Program with Castaic Lake Water Agency dated August 1, 2016

EXHIBIT "A"

Draft Conceptual Terms for a Long-Term Exchange Program with Castaic Lake Water Agency August 1, 2016

Parties	Irvine Ranch Water District (IRWD) and Castaic Lake Water Agency (CLWA).
Exchange Program Description	IRWD and CLWA seek to enter into an Exchange Program to improve water management and reliability which will provide for IRWD to store a portion of CLWA's unused State Water Project (SWP) water in IRWD's Strand and Stockdale Integrated Banking Projects.
Term	Through December 31, 2035, the end of the SWP Contract.
Exchange Water	CLWA will supply SWP Table A water to the Water Bank available to CLWA through its SWP Contract with Department of Water Resources (DWR).
IRWD's Water Bank	IRWD's Strand and Stockdale Integrated Banking Projects (Water Bank) located in Kern County are owned by IRWD and operated by Rosedale-Rio Bravo Water Storage District (Rosedale). Through the Water Bank, IRWD has first priority to 126,000 AF of storage capacity, 44,600 AF of annual recharge capacity and 28,800 AF of annual recovery capacity.
Water Bank Capacities Allocated to Exchange Program	The following capacities would be allocated to the Long-Term Exchange Program in the Water Bank: • 28,000 AF of Storage Capacity in Water Bank ◦ 14,000 AF CLWA; 14,000 AF IRWD; • 10,000 AF per year of Recharge Capacity; • 4,667 AF per year of Recovery Capacity Allocated to CLWA. Upon CLWA's request, IRWD may approve temporary use of any unused recharge or recovery Water Bank capacities above those allocated to the Long-Term Exchange Program. IRWD and CLWA may also mutually agree to increase the storage, recharge and recovery limits allocated to the Exchange Program within IRWD's Water Bank or expansions thereof.
Delivery of Exchange Water Into Storage	CLWA shall deliver a minimum of 5,000 AF of Exchange Water into storage in the Water Bank whenever the SWP allocation is equal to or greater than 40%, up to the available recharge capacity. CLWA may also deliver Exchange Water into storage in the Water Bank by an in-ground transfer of CLWA's SWP Table A water that may be available from CLWA's other accounts in programs with other entities such as Rosedale. One-half of Exchange Water delivered into storage would be deemed transferred to IRWD and stored in IRWD's share of the Long-Term Exchange Program allocated storage capacity.
Return Water	Water that IRWD delivers to CLWA (Return Water) will occur by either (i) an exchange of banked water for SWP in the Aqueduct, or (ii) recovery of water from the Water Bank. All Return Water shall be limited to an annual rate of no more than 4,667 AF, unless unused capacity is approved by IRWD for CLWA's use.

Losses	IRWD and CLWA would each be responsible for conveyance losses upon recharge, recovery and delivery of their own share of the water. Water stored in the Water Bank will be subject to the loss provisions of any applicable Memoranda of Understanding (MOUs) between Rosedale and adjoining entities. Losses for banking operations currently are 15% for evaporation, migration and out-of-county use. IRWD and CLWA shall equally share in any other unidentified losses. It is expected that no additional losses would accrue to any water transferred underground.
Recharge Costs	IRWD and CLWA would each be responsible for one-half of all costs assessed to IRWD by Rosedale for recharging Exchange Water at the Water Bank. These costs may include Rosedale's administrative charge, charges assessed by the Kern County Water Agency (KCWA), Cross Valley Canal (CVC) Standby, applicable CVC pumping and O&M costs, and applicable fixed and variable O&M Water Bank costs. No recharge costs are expected to be assessed upon the in-ground transferred Exchange Water to the Water Bank.
SWP Fixed and Variable Costs	IRWD and CLWA would each be responsible for one-half of all SWP related variable costs incurred by CLWA associated with making the Exchange Water available for recharge at the Water Bank. CLWA shall pay all SWP related fixed costs associated with making Exchange Water available for recharge, including water that will be allocated to IRWD.
Recovery Costs	IRWD and CLWA would each be responsible for actual costs of recovery for its share of the water either through well pumping or by exchange. These costs may include Rosedale's administrative charge, charges assessed by the KCWA, CVC Standby, O&M, and applicable CVC pumping costs, and applicable fixed and variable O&M Water Bank costs. CLWA will pay all conveyance costs in the Aqueduct associated with the delivery of recovered water to CLWA's Point of Delivery. IRWD and CLWA would each share any costs assessed by Rosedale under its Long Term Operations Plan for implementing provisions of the MOUs to prevent impacts from operations. It is expected that banking projects, such as the Water Bank, will be required to contribute \$2.00/AF for recovered water to a fund which may be used to meet mitigation obligations.
Metropolitan Water District Consent	IRWD, Metropolitan Water District of Southern California (MWD) and Municipal Water District of Orange County have entered into a Coordinated Operating, Water Storage, Exchange and Delivery Agreement (COA) which provides for IRWD to secure SWP water for the joint benefits of increased water supply reliability. Per the COA, MWD must consent to IRWD's acquisition of SWP supplies through the Exchange Program.
Agency Coordination	IRWD and CLWA will cooperate with Rosedale, the DWR, MWD and KCWA in coordinating necessary agreements and approvals to facilitate the Program.
Environmental Compliance	Both parties shall comply with California Environmental Quality Act (CEQA) and cooperate with one another with respect to CEQA compliance that may be required by the California Department of Water Resources for the proposed Exchange Program. IRWD has already conducted environmental review under CEQA for the Water Bank that takes into consideration the delivery of SWP water to the Water Bank. Rosedale certified and IRWD approved the CEQA for the Water Bank. IRWD and CLWA will share equally any additional costs associated with environmental review deemed necessary for delivering CLWA water into storage. Both IRWD and CLWA shall each be responsible for any other environmental review necessary to implement the Exchange Program within their own respective service areas.

September 27, 2016

Prepared by: K. Welch

Submitted by: F. Sanchez/P. Weghorst

Approved by: Paul Cook 

SUPPLY RELIABILITY PROGRAMS COMMITTEE

VARIANCE REQUEST FOR BASELINE PROPERTY ASSESSMENT WORK BY DEE JASPAR & ASSOCIATES

SUMMARY:

Baseline property assessments are essential due diligence investigations that take place prior to purchasing properties. The District has retained Dee Jaspar & Associates, Inc. (DJA) to perform baseline property assessments on parcels being considered for purchase within the Palo Verde Irrigation District (PVID). A variance to IRWD's Professional Services Agreement with DJA is necessary to continue performing property assessment work on new PVID properties being considered by the District. Staff recommends that the Board approve Variance No. 3 to the Professional Services Agreement with Dee Jaspar and Associates, Inc. in the amount of \$145,000 for baseline property assessment work on properties of interest in Palo Verde Irrigation District.

BACKGROUND:

In November 2016, the District entered into a Professional Services Agreement with DJA to complete a baseline property assessment of the Eaton property within PVID. The Professional Services Agreement was approved by the General Manager in the amount of \$65,000. The work included the following:

- Preparing a Preliminary Title Report;
- Performing an Environmental Phase 1 Site Assessment;
- Examining surface soils;
- Assessing flood and seismic hazards;
- Conducting a crop water use study;
- Reviewing mineral rights;
- Performing an American Land Title Associates (ALTA) survey; and
- Reviewing the general plan and zoning designations.

Variance Nos. 1 and 2:

As the District proceeded with baseline property assessments of additional PVID properties, two variances to DJA's agreement were approved within staff signatory authorities for a total of \$96,722, as follows:

- Variance No. 1 in the amount of \$48,295 was approved for baseline property assessment work on the Martin and Holt properties, and
- Variance No. 2 in the amount of \$48,427 was approved to complete a baseline property assessment of the proposed Strochein property, and to subcontract and oversee a local drilling company to abandon a well and associated piping from the Martin property.

Staff has been satisfied with the responsive, cost effective and professional services that DJA has provided in completing baseline property assessments. Staff recommends that DJA be retained to continue providing such services on additional properties of interest in PVID.

Additional Property Assessments:

IRWD has submitted non-binding Letters of Intent to purchase three additional properties in the PVID area. Depending on the number of parcels and potential for issues of concern, staff expects that the cost for the baseline property assessment work will be approximately \$48,000 per property. To be prepared to conduct baseline property assessments on these properties or others, staff recommends that Variance No. 3 to the District's Professional Services Agreement with DJA be approved in the amount of \$145,000. Variance No. 3 and the associated scope of work are attached as Exhibit "A". At staff's request, DJA will prepare a scope of work, budget and schedule for each property to be assessed, and work will be authorized as needed on an on-call basis.

FISCAL IMPACTS:

The cost for the baseline property assessment work on prospective property acquisitions is included in Project No. 11869 (6242) and sufficient budget exists in the FY 2016-17 Capital Budget to cover this work.

ENVIRONMENTAL COMPLIANCE:

Any new lands purchased for water supply purposes would be subject to compliance with the California Environmental Quality Act of 1970 (as amended), codified at California Public Resources Code Sections 21000 et. seq., and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3.

RECOMMENDATION:

That the Board approve Variance No. 3 to IRWD's Professional Services Agreement with Dee Jaspar and Associates, Inc. in the amount of \$145,000 for baseline property assessment work on properties of interest in Palo Verde Irrigation District.

LIST OF EXHIBITS:

Exhibit "A" – Variance No. 3 for Dee Jaspar & Associates, Inc. Professional Services Agreement

EXHIBIT "A"
IRVINE RANCH WATER DISTRICT
PROFESSIONAL SERVICES VARIANCE

Project Title: Blythe Properties - Baseline Property Assessment

Project No.: 11869/6245 Date: September 22, 2016

Purchase Order No.: 531747 Variance No.: 3

Originator: ☒ IRWD ☐ ENGINEER/CONSULTANT ☐ Other (Explain) _____

Description of Variance (attach any back-up material):

Continuance of baseline property assessment work for PVID properties under consideration as part of due diligence prior to finalizing a property purchase. There is an urgent necessity to complete the assessment work during the designated due diligence period. This Variance #3 is for assessment work on additional properties of interest and work will be authorized as needed on an on-call basis. DJA will prepare a scope of work, budget and schedule for each property to be assessed.

Engineering & Management Cost Impact:

Classification	Manhours	Billing Rate	Labor \$	Direct Costs	Subcon. \$	Total \$
To be determined						
Total \$ =						

Schedule Impact:

Task No.	Task Description	Original Schedule	Schedule Variance	New Schedule

Required Approval Determination:

Total Original Contract	\$ <u>65,000.00</u>	☐ Director: Cumulative total of Variances less than or equal to \$50,000.
Previous Variances \$	<u>96,722.00</u>	
This Variance \$	<u>145,000.00</u>	☐ Executive Director: Cumulative total of Variances less than or equal to \$75,000.
Total Sum of Variances	\$ <u>241,722.00</u>	
New Contract Amount	\$ <u>306,722.00</u>	☐ General Manager: Cumulative total of Variances less than or equal to \$100,000.
Percentage of Total Variances to Original Contract	<u>372</u> %	☒ Board: Cumulative total of Variances greater than \$100,000.

ENGINEER/CONSULTANT: _____ IRVINE RANCH WATER DISTRICT
Company Name

Project Engineer/Manager _____ Date _____ Department Director _____ Date _____

Engineer's/Consultant's Management _____ Date _____ General Manager/Board _____ Date _____

September 27, 2016

Submitted by: P. Weghorst

Approved by: Paul Cook



SUPPLY RELIABILITY PROGRAMS COMMITTEE

OPTIONS FOR PROVIDING WATER SUPPLY RELIABILITY ASSISTANCE

SUMMARY:

Staff has been considering ways that IRWD could provide water supply reliability assistance to south Orange County retail water agencies while adhering to IRWD's policy principles on this topic. At the Committee meeting, staff will present concepts that could be pursued to provide such assistance. Staff will also provide an overview of discussions held with Municipal Water District of Orange County (MWDOC) staff related to facilitating a program based on such concepts. Staff recommends that the Committee provide input on the concepts presented.

BACKGROUND:

In October 2015, the IRWD's Board of Directors approved a revised Policy Position Paper on Water Banking, Transfers and Wheeling which is attached as Exhibit "A". The paper includes a policy principle that states:

IRWD will support sharing reliability from its water banking program after IRWD's reliability requirements are fulfilled. Such sharing would occur in a way that ensures IRWD is kept financially whole on the transactions.

Subsequent to IRWD adopting this principle, MWDOC completed an Orange County Reliability Study that investigated the long-term future reliability of water supplies available to areas in north and central Orange County that overlie the Orange County Groundwater Basin and in south Orange County. This study was conducted as a cooperative effort with the participation of interested retail water agencies. MWDOC is currently preparing the results of the study for final release.

Improving South County Reliability:

The Orange County Reliability Study concludes that south Orange County retail water agencies could experience significant water supply shortages in the future as a result of factors that could affect imported water supplies provided by Metropolitan Water District of Southern California. One strategy that the study identified for improving south Orange County reliability during such shortage conditions would be for the affected retail water agencies to participate in Central Valley water banking projects. The study contemplates that the agencies could participate in water storage programs such as the one operated by Semitropic Water Storage District. IRWD's Strand and Stockdale West Ranch Integrated Banking Projects (Water Banks) are additional projects that south Orange County retail agencies could consider.

Concepts for Providing Assistance:

Staff has been considering ways that IRWD may be able to provide water supply reliability assistance to south County retail agencies while adhering to IRWD's policy principles. At the Committee meeting, staff will present concepts on how IRWD could provide such assistance using its Water Banks and other projects. Staff will also provide an overview of discussions that have recently been held with executive managers at MWDOC on how they may be able to help facilitate a program with IRWD providing assistance to the south County agencies. Staff recommends that the Committee provide input on the concepts presented at the Committee meeting.

FISCAL IMPACTS:

Any water supply reliability assistance provided by IRWD to other agencies would be implemented in a manner that ensures IRWD remains financially whole.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

That the Committee provide input on the concepts presented at the Committee meeting on how IRWD could provide water supply reliability assistance to South County retail agencies.

LIST OF EXHIBITS:

Exhibit "A" – IRWD Position Paper on Water Banking, Transfers and Wheeling

EXHIBIT "A"

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

Revised: October 26, 2015

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 as shortage limitations being experienced at the Sacramento-San Joaquin Delta may continue to stress water deliveries, water banking storage and recovery programs will continue to provide a highly reliable and cost efficient alternative to improving water supply reliability. These programs and participation by retail agencies should be encouraged throughout the State.

Background:

The continued rapid growth in statewide population, coupled with challenges of drought, 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 development 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 Principals 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. 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 recycled water. After taking these efforts into consideration, current projections indicate that IRWD has long-term requirements for the storage of at least 90,000 acre-feet of supplemental water that could be called upon during drought conditions and / or supply interruptions. In the event of a major supply interruption, this amount of water would fulfill IRWD's estimated needs for import water for three years in a row based on projected water demands. IRWD's water banking program will provide IRWD the ability to store and recover this supplemental water to meet long-term supply reliability requirements.

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 drought and the U.S. Department of Interior projects that supply shortages on the Colorado River will 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 IRWD's imported water demands of 30,000 acre-feet (AF) in 2035, then IRWD would need to supplement imported supplies with 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 30,000 AFY capacity to recover water from its water banking program to provide a reliable supply of water to its customers during major import water supply interruptions. In preparation for a major three-year interruption in imported water supplies and assuming the need to recover and deliver 30,000 AFY from storage for each of the three years, while taking into consideration in-ground losses, IRWD would need at least 90,000 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 90,000 AFY.

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 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 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. 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 AF per year. The Strand Ranch Water Bank is integrated into Rosedale's Conjunctive Use Program. IRWD also has access to three well sites within Rosedale's service area and the three wells are currently under construction 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 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 access to unused storage, recharge and recovery capacity in the KWB. In December 2013, the California Department of Water Resources, DRWD, MWD and the Kern County Water Agency executed the 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.

In 2011, IRWD, MWD and Municipal Water District of Orange County (MWD OC) 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 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. Currently, IRWD is pursuing 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 retains 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. By the end of 2012, BVWSD had stored 25,473 AF of water at the Strand Ranch. In 2013 and 2015, IRWD returned to BVWSD the 50% share of the water that was stored for the benefit of BVWSD.

In 2014, IRWD, MWD and MWD OC 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.

Stockdale West Facilities:

In 2010, IRWD completed the purchase of the Stockdale West Ranch property located just west of the Strand Ranch. In 2011, IRWD constructed four recharge basins over 259 acres 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. 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.

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 and currently IRWD and Rosedale are finalizing an Environmental Impact Report (EIR) and long-term partnership agreement for the project. Included in the Stockdale Integrated Banking Project will be the lease by Rosedale to IRWD of a total of 50,000 AF of storage in Rosedale's Conjunctive Use Program. Under the proposed project, IRWD and Rosedale would each have second priority use of each other's facilities on both the Stockdale West and Stockdale East properties.

The EIR for the Stockdale Integrated Banking Project contemplates 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. 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.

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 both the Strand Ranch and the Stockdale West Ranch. 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 IRWD requirements and additional capacities that are needed to meet these requirements. 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 Property	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	17,500	0	17,500	0
Stockdale West	26,000	27,100	0	11,300	0
Stockdale East	0		19,000		7,500
Storage Lease in Rosedale's Conjunctive Use Program	50,000	0	0	0	0
Total to Date	126,000	44,600	19,000	28,800	7,500
Exchange Partner Share	36,000	22,300	9,500	12,000	0
IRWD Share	90,000	22,300	9,500	16,800	7,500
		<i>First + Second:</i>	31,800	<i>First + Second:</i>	24,300
IRWD Stated Capacity Needs:	90,000		30,000		30,000
IRWD's Needs: Excess (Shortfall)	0		1,800		(5,700)

Objectives for Acquiring Supplemental Water Supplies:

IRWD's objectives for acquiring supplemental water supplies for recharge, storage and recovery within IRWD's water banking program 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 programs through rotational fallowing or onsite conservation using methods that where necessary attempt to minimize third-party impacts to local economies.

The acquisition of supplemental supplies 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. The sharing of the District's water banking facilities will result in the need to expand water banking capacity to ensure that the District can meet its water supply diversification requirements while meeting the requirements of IRWD's exchange partners.

Objectives for Developing Additional Capacity:

IRWD seeks to develop additional recovery capacity to meet IRWD's recovery needs and to ensure that IRWD and its exchange partner's rights to the use of the recovery facilities during peak summer demand periods can be maximized. It is anticipated that a total recovery capacity of up to 70 cfs will need to be developed to meet these needs. 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 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. These additional wells will help IRWD achieve its goal of 70 cfs of instantaneous recovery capacity. 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 facilities or other storage facilities through methods that 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 IRWD 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 principals have been developed:

1. The State's water supply situation is being impacted by persistent drought, 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 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 capacity.
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 90,000 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 partnerships benefit from the sharing of recharge, storage and recovery capacity through unbalanced exchanges. 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 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 after IRWD's reliability requirements are fulfilled. Such sharing would occur in a way that ensures IRWD is kept financially whole on the transactions.