

AGENDA  
IRVINE RANCH WATER DISTRICT  
SUPPLY RELIABILITY PROGRAMS COMMITTEE  
THURSDAY, JULY 21, 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 | _____ |
|                     | _____         | _____ | _____             | _____ |

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**COMMUNICATIONS**

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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.

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**INFORMATION**

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

|  |                                   |  |
|--|-----------------------------------|--|
|  | Recommendation: Receive and file. |  |
|--|-----------------------------------|--|

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**ACTION**

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- |    |                                                                                                              |  |
|----|--------------------------------------------------------------------------------------------------------------|--|
| 6. | <u>PROPOSED TERMS FOR LONG-TERM EXCHANGE PROGRAM WITH CASTAIC LAKE WATER AGENCY - WELCH/SANCHEZ/WEGHORST</u> |  |
|----|--------------------------------------------------------------------------------------------------------------|--|

|  |                                                                                                                                                                                                                                                                                                                                                                                                      |  |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | Recommendation: That the Committee provide input on the conceptual draft terms for a Long-Term Exchange Program with CLWA, and authorize staff and legal counsel to work with CLWA to prepare a Long-Term Exchange Program Agreement consistent with the terms as may be revised based upon input from the Committee, and to present the agreement for consideration by the full Board of Directors. |  |
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## OTHER BUSINESS

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7. 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, and

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, and

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.

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.

July 21, 2016

Prepared by: D. Johnson/K. Welch

Submitted by: F. Sanchez/P. Weghorst *PW*

Approved by: Paul Cook *P. Cook*

## SUPPLY RELIABILITY PROGRAMS COMMITTEE

### WATER BANKING PROJECT FACILITIES, CAPACITIES AND PROGRAMS OVERVIEW

#### SUMMARY:

Staff has prepared a summary table of the storage, recharge and recovery capacities of existing and planned IRWD water banking projects including capacities available to IRWD in the Kern Water Bank. A table that provides an update on Strand Ranch recovery and recharge operations and the balance of the stored water in the Kern Water Bank has also been prepared. In addition, maps have been created that show the location of project wells and pipelines and the Cross Valley Canal turn-out locations. At the May and June 2016 Committee meetings, staff presented three diagrams describing IRWD's banking and exchange agreements with Rosedale-Rio Bravo Water Storage District (Rosedale), Buena Vista Water Storage District (BVWSD) and Dudley Ridge Water District (DRWD). Staff has prepared an additional diagram depicting the Coordinated Operating, Water Storage, Exchange and Delivery Agreement between Metropolitan Water District of Southern California (Metropolitan), Municipal Water District of Orange County (MWDOC) and IRWD. At the Committee meeting, staff will provide an overview of this new diagram.

#### BACKGROUND:

##### 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 wells and pipelines and Cross Valley Canal turn-out locations. The facilities shown on these maps are associated with the Strand Ranch, Stockdale West, Stockdale East and Rosedale Drought Relief Projects. The maps are provided as Exhibits "C" and "D".

##### Program Agreement Diagrams:

In May and June 2016, staff reviewed with the Committee the diagrams in Exhibits "E", "F" and "G" that describe IRWD's water banking and exchange programs with Rosedale, BVWSD and DRWD. A new diagram has been created to describe the Coordinated Operating, Water Storage, Exchange and Delivery Agreement between Metropolitan, MWDOC and IRWD. This agreement facilitates the storage and conveyance of State Water Project water acquired by IRWD, with the consent of Metropolitan, to IRWD's service area. The new diagram is presented as Exhibit "H."

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

- Exhibit "A" – Recharge, Storage and Recovery Capacities of Existing and Planned 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" – Rosedale Water Banking and Exchange Program Agreements Diagram
- Exhibit "F" – Buena Vista Long Term Water Exchange Program Diagram
- Exhibit "G" – Dudley Ridge Water District Unbalanced Exchange Program Diagram
- Exhibit "H" – Metropolitan Water District Coordinated Operating, Water Storage, Exchange and Delivery Agreement Diagram

# Exhibit "A"

**TABLE 1**  
**Current and Planned Water Banking Projects**  
**Recharge, Storage and Recovery Capacities**  
**July 21, 2016**

| WATER BANKING PROJECT                                                                                                                                     | OWNERSHIP AND WELL INFO |                |                | ALLOCATED CAPACITY (AF) |                                          |                                          |                                          |                                          | 1 <sup>ST</sup> PRIORITY RECOVERY CONDITIONS (CFS) |                                                   | 2 <sup>ND</sup> PRIORITY RECOVERY CONDITIONS (CFS) |                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------|----------------|-------------------------|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|----------------------------------------------------|---------------------------------------------------|----------------------------------------------------|--------------------------------------|
|                                                                                                                                                           | IRWD OWNED              | WELLS EXISTING | WELLS PROPOSED | TOTAL STORAGE CAPACITY  | ANNUAL RECHARGE 1 <sup>ST</sup> PRIORITY | ANNUAL RECHARGE 2 <sup>ND</sup> PRIORITY | ANNUAL RECOVERY 1 <sup>ST</sup> PRIORITY | ANNUAL RECOVERY 2 <sup>ND</sup> PRIORITY | RECOVERY CAPACITY AS PLANNED <sup>1</sup>          | RECOVERY CAPACITY CURRENT CONDITIONS <sup>2</sup> | 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 <sup>3</sup>                                                                                                                | No                      | -              | -              | 50,000                  | -                                        | -                                        | -                                        | -                                        | -                                                  | -                                                 | -                                                  | -                                    |
| Drought Relief Project Wells                                                                                                                              | No                      | -              | 3              | -                       | -                                        | -                                        | -                                        | -                                        | 15.0                                               | -                                                 | -                                                  | -                                    |
| Kern Water Bank Storage Account <sup>5</sup>                                                                                                              | No                      | -              | -              | 9,495                   | 3,200                                    | -                                        | 6,330                                    | -                                        | -                                                  | -                                                 | -                                                  | -                                    |
| <b>TOTALS</b>                                                                                                                                             |                         | <b>7</b>       | <b>8</b>       | <b>135,495</b>          | <b>47,800</b>                            | <b>19,000</b>                            | <b>35,080</b>                            | <b>7,500</b>                             | <b>70.0</b>                                        | <b>18.6</b>                                       | <b>10.0</b>                                        | <b>0.0</b>                           |
| Partner Capacities <sup>4</sup>                                                                                                                           |                         |                |                | 38,000                  | -                                        | -                                        | 9,583                                    | -                                        | 35.5                                               | 35.5                                              | -                                                  | -                                    |
| IRWD Capacities                                                                                                                                           |                         |                |                | 97,495                  | -                                        | -                                        | 25,497                                   | -                                        | 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)                                                                                         |                         |                |                |                         |                                          |                                          |                                          |                                          | 13,077                                             | 6,733                                             | -                                                  | -                                    |
| <b>TOTALS (AF)</b>                                                                                                                                        |                         |                |                |                         |                                          |                                          |                                          |                                          | <b>25,497</b>                                      | <b>6,733</b>                                      | <b>-</b>                                           | <b>-</b>                             |
| Number of months needed to recover IRWD's total AF after partners' recovery<br>(Assumes IRWD has use of total recovery capacity after partners' recovery) |                         |                |                |                         |                                          |                                          |                                          |                                          | 12.2                                               | 18.1                                              | -                                                  | -                                    |

<sup>1</sup> Based on designed Strand recovery capacity assuming 370' bgs. Assumes 5 cfs for each of the Stockdale West and Drought Relief wells in order to meet IRWD's Water Banking, Transfers, and Wheeling policy position. Assumes partners' water is recovered over 6 months.

<sup>2</sup> Strand Ranch wells currently idle.

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

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

<sup>5</sup> Kern Water Bank capacities based on 6.58% of Dudley Ridge Water District's 9.62% share of the Kern Water Bank. Annual recharge amount is based on an average of recharge rates for high and low groundwater level conditions.

# Exhibit "B"

**TABLE 2**  
**Strand Ranch Storage, Recharge and Recovery Operations**  
 July 21, 2016

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

**NOTES:**

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

-MWD = Metropolitan Water District of Southern California.

<sup>1</sup> IRWD's SWP includes 229 AF from CVWD that stays in Kern County.

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

<sup>3</sup> DRWD water supply will be returned by MWD to IRWD's Jackson Ranch.

<sup>5</sup> 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.

<sup>6</sup> 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"

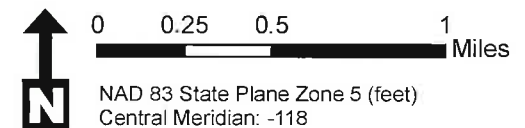


## Location Map: IRWD Water Banking Projects Wells and Turn-in Pipelines

### MAP FEATURES

- Existing Extraction Well
- Planned Extraction Well
- 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



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

Enos Ln

5

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, 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

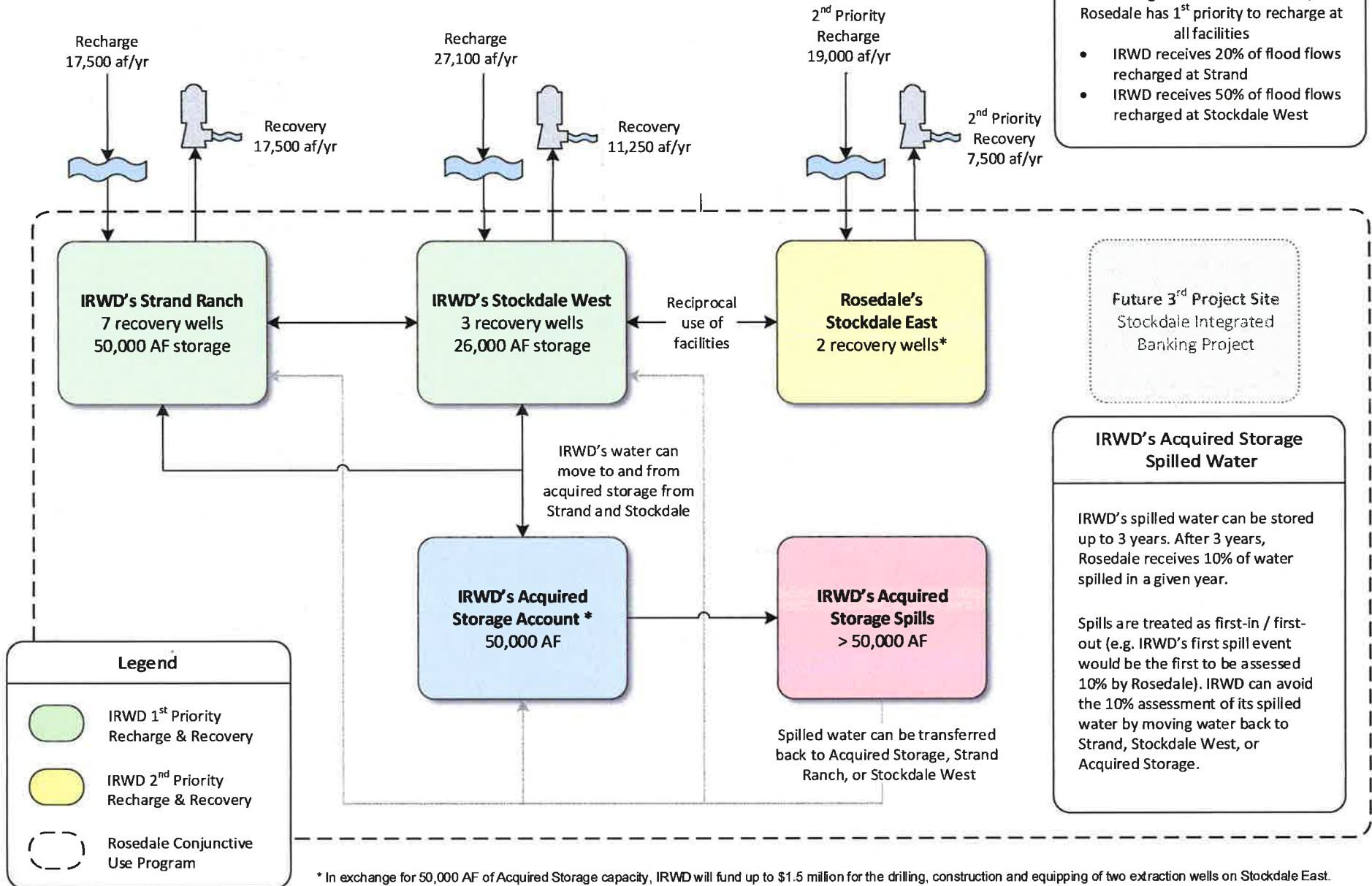


# Exhibit "E"

## 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)

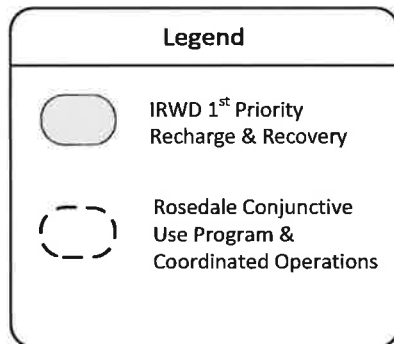
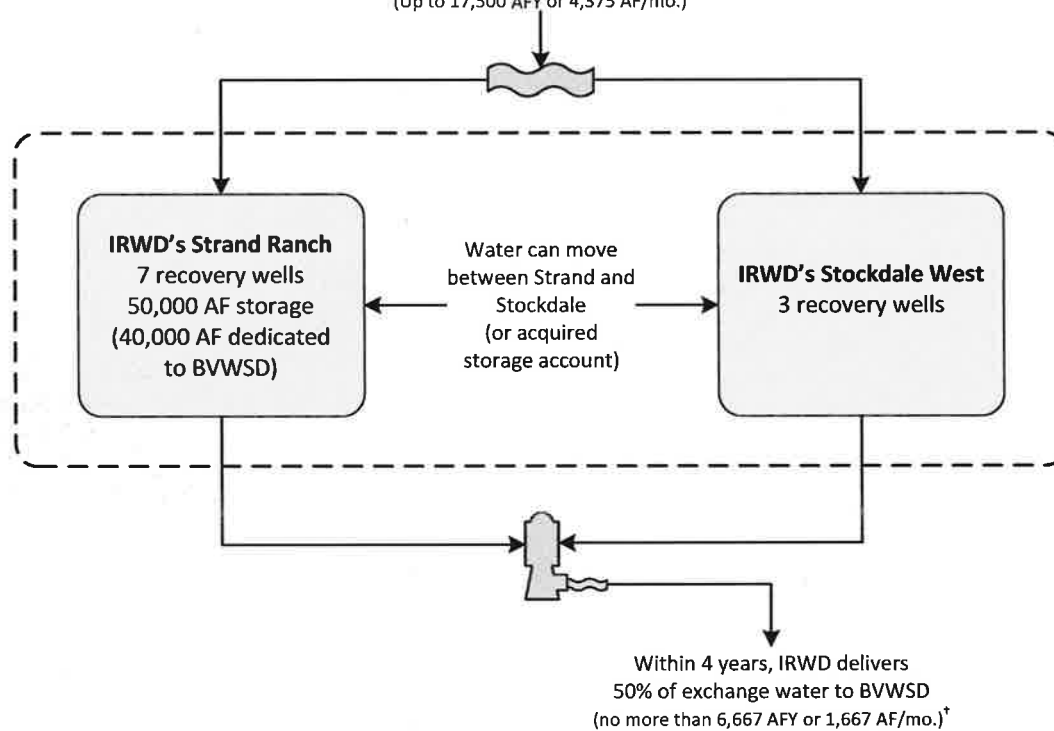


# Exhibit "F"

## Buena Vista Water Storage District Long Term Water Exchange Program

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

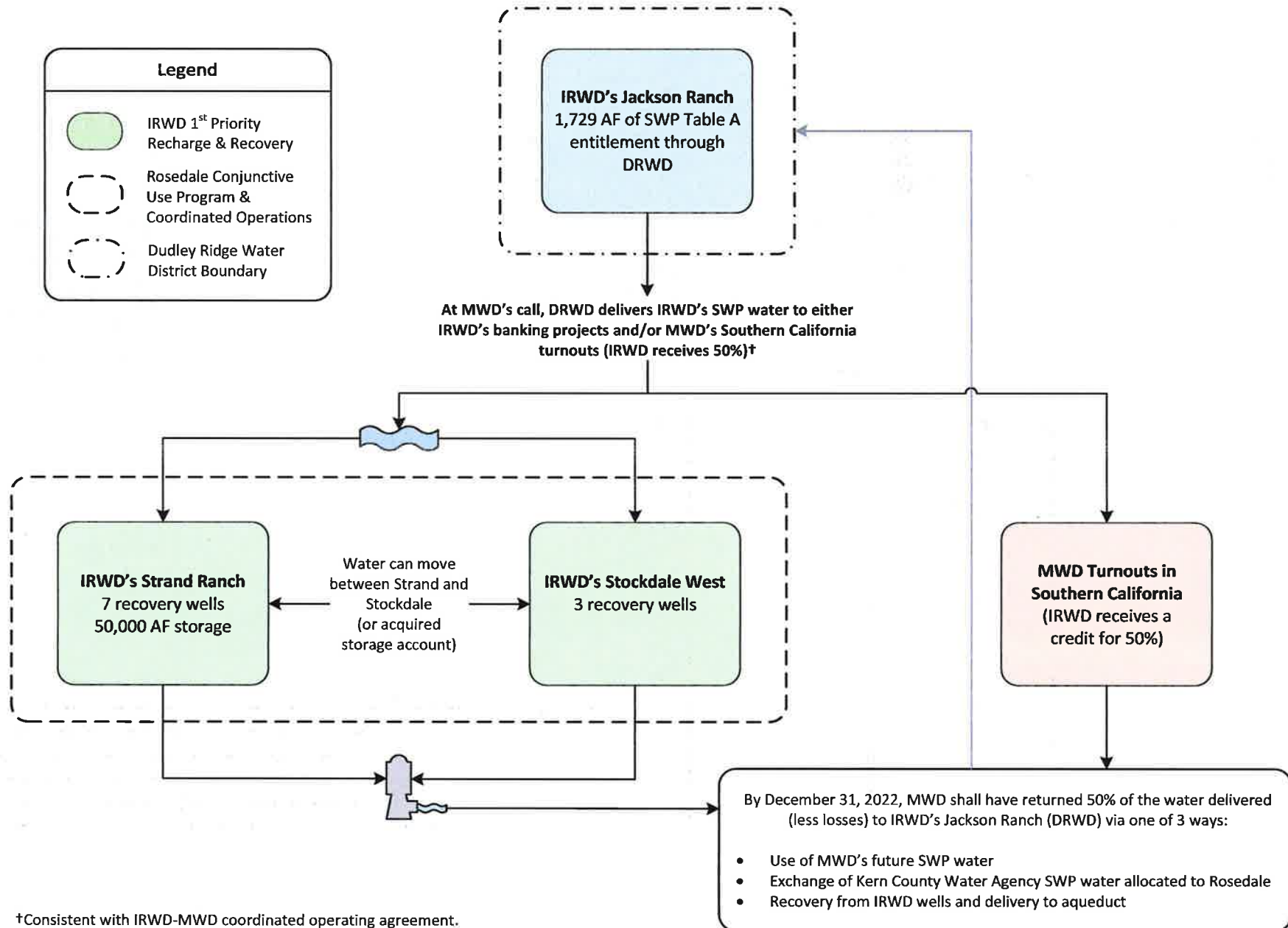
BVWSD delivers non-SWP water to Strand Ranch or to  
Stockdale West through Rosedale coordinated operations  
(IRWD receives 50%)  
(Up to 17,500 AFY or 4,375 AF/mo.)



†IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31<sup>st</sup> of the 4<sup>th</sup> 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 4<sup>th</sup> 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



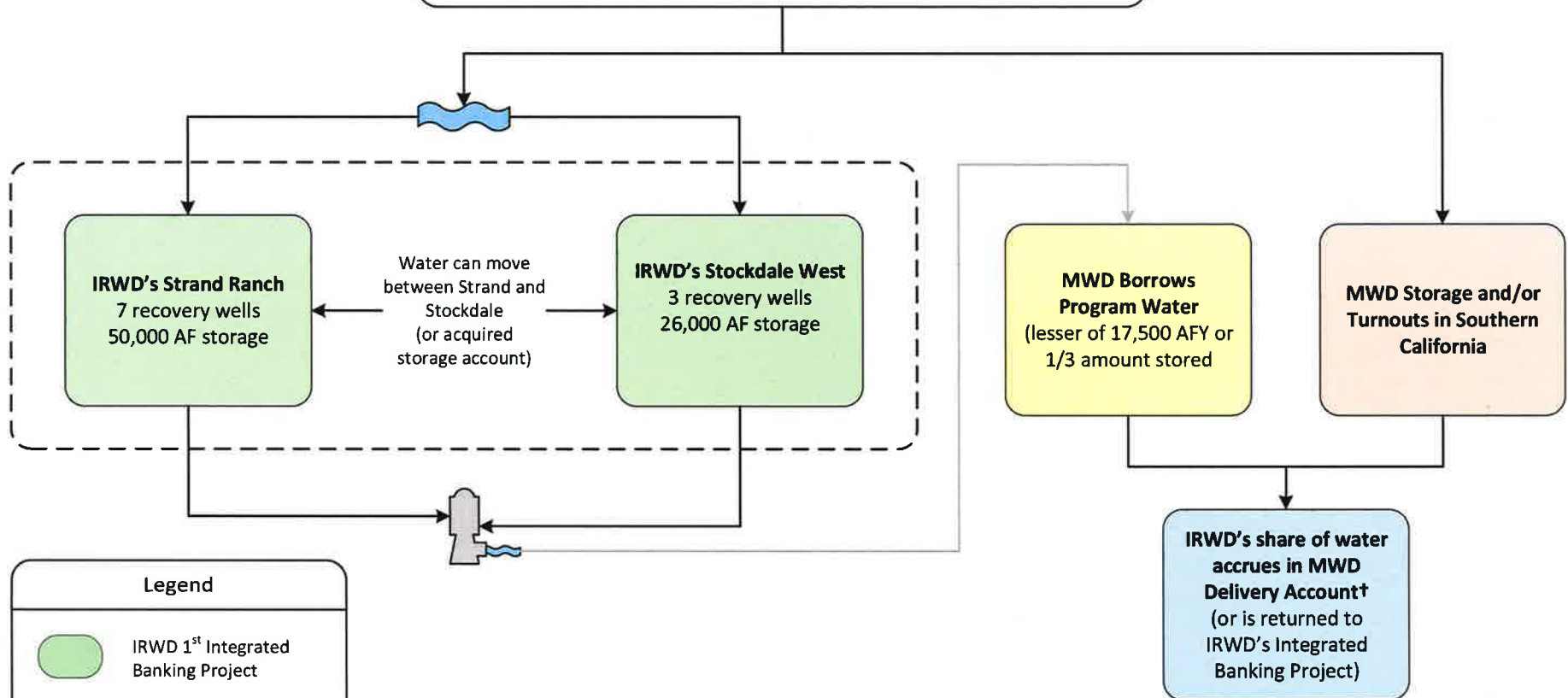
# Exhibit "H"

## 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



- Under an MWD Allocation, when IRWD calls for water, IRWD must first recover Program Water from the Integrated Banking Project before receiving water from the MWD Delivery Account.
- MWDOC shall pass through extraordinary supply credits for IRWD's benefit.
- † IRWD's banking partner share of Program Water to be returned by MWD.



July 21, 2016

Prepared by: K. Welch

Submitted by: F. Sanchez/P. Weghorst *pmw*

Approved by: Paul Cook *P. Cook*

## SUPPLY RELIABILITY PROGRAMS COMMITTEE

### PROPOSED TERMS FOR LONG-TERM EXCHANGE PROGRAM WITH CASTAIC LAKE WATER AGENCY

#### SUMMARY:

Castaic Lake Water Agency (CLWA) has expressed interest in entering into a Long-Term Exchange. In response staff has prepared conceptual draft terms for a Long-Term Exchange Program with CLWA. Staff recommends that the Committee provide input on the draft terms and authorize staff and legal counsel to work with CLWA to prepare a Long-Term Exchange Program Agreement consistent with the terms as may be revised based upon input from the Committee and to present the agreement for consideration by the full Board of Directors.

#### BACKGROUND:

CLWA is a State Water Project (SWP) contractor with an annual Table A allotment of 95,200 acre-feet (AF). In many years, the amount of water allocated to CLWA by the California Department of Water Resources is in excess of CLWA's demands. CLWA regularly stores its surplus SWP allocation as carryover in the SWP system or within its existing groundwater banking and exchange programs that are described in Exhibit "A". CLWA has expressed interest in entering into a Long-Term Exchange Program with IRWD that would make use of CLWA's excess Table A to the benefit of both agencies on an unbalanced 2-for-1 basis. Following is an overview of CLWA's needs for additional water banking recovery capacity and proposed conceptual terms for a long-term program between IRWD and CLWA.

#### CLWA Water Banking Needs:

In its 2015 Urban Water Management Plan, CLWA identified the need to develop additional banking programs after 2045 to replace its Semitropic Banking Program. CLWA also stated its near-term intent to develop additional recovery capacity for its groundwater banking programs of at least 5,000 AFY for use in single and multiple-dry year periods.

#### Proposed Terms for a Long-Term Exchange Program:

Staff has had numerous conversations with CLWA about its need for additional recovery capacity and the possibility of securing the capacity through a Long-Term Exchange Program with IRWD that would allow CLWA to deliver Table A water to IRWD's water banking projects on an unbalanced basis. Such a mutually beneficial program would provide CLWA the recovery capacity that it needs and a water supply to IRWD. In response to these discussions, staff has prepared draft conceptual terms for a Long-Term Exchange Program with CLWA that would make use of recharge, storage and recovery facilities at both the Strand Ranch and Stockdale West Integrated Banking Projects (Water Banking Projects). The conceptual draft terms are provided as Exhibit "B" and incorporate all expected banking costs that are consistent with costs that have been incurred by IRWD in its ongoing Strand Ranch programs. At the Committee

meeting, staff will present an overview of the draft terms. Staff recommends that the Committee provide input on the draft terms.

*Metropolitan's Consent:*

The consent of Metropolitan Water District of Southern California (Metropolitan) is required for IRWD to secure SWP water as specified in the Coordinated Operating, Water Storage, Exchange and Delivery Agreement (COA) between IRWD, Metropolitan and the Municipal Water District of Orange County. As the Exchangee in IRWD's SWP water transactions, Metropolitan will have the right to decide whether the IRWD secured SWP water is delivered into storage at the Water Banking Projects or to Metropolitan's reservoirs in Southern California. IRWD will receive a credit for all water stored in Metropolitan's reservoirs. The Metropolitan Agreement calls for Metropolitan to pay the variable supply costs associated with SWP water secured by IRWD and for IRWD to pay Metropolitan its Full Service Tier-1 rate when IRWD calls on the water for delivery to IRWD's service area.

FISCAL IMPACTS:

The total cost of IRWD's share of the water under the proposed Long-Term Exchange Program with CLWA is currently estimated to range between the cost of Metropolitan's Full Service Treated Tier-1 Rate of \$942 per AF and \$1,042 per AF depending on whether the exchange water is delivered directly to Metropolitan's reservoirs in Southern California or delivered, stored and recovered from IRWD's Water Banking Projects.

ENVIRONMENTAL COMPLIANCE:

Final Environmental Impact Reports for the Strand Ranch and Stockdale Integrated Water Banking Projects were prepared, certified and approved in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended), codified at California Public Resources Code Sections 21000 et. seq. and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3. Rosedale, as lead agency, filed Notices of Determination for both the Strand Ranch and Stockdale Integrated Banking Projects with the County of Kern. IRWD, as a responsible agency, filed Notice of Determinations for both projects with the County of Orange and with the County of Kern.

RECOMMENDATION:

That the Committee provide input on the conceptual draft terms for a Long-Term Exchange Program with CLWA and authorize staff and legal counsel to work with CLWA to prepare a Long-Term Exchange Program Agreement consistent with the terms as may be revised based upon input from the Committee and to present the agreement for consideration by the full Board of Directors.

EXHIBITS:

Exhibit “A” – Existing Castaic Lake Water Agency Water Transfer, Banking and Exchange Programs.

Exhibit “B” – Draft Conceptual Terms for a Long-Term Exchange Program with Castaic Lake Water Agency.

## EXHIBIT “A”

### Overview of Existing Castaic Lake Water Agency Water Purchase, Banking and Exchange Programs

Castaic Lake Water Agency (CLWA) currently has the following water purchase, water banking, exchange and storage programs in place:

- *Water Purchase Program:* CLWA has a long-term water purchase agreement with Buena Vista Water Storage District and Rosedale-Rio Bravo Water Storage District (Rosedale) for the purchase of 11,000 acre-feet per year (AFY) of banked high-flow Kern River. This program was implemented in 2007 and will end in year 2036;
- *Long-Term Water Banking and Exchange Program:* CLWA has a long-term water banking and exchange program with Rosedale that provides CLWA with 100,000 AF of storage capacity in which CLWA can store its water. Within this program, CLWA has an annual recovery capacity of 3,000 AF. This program was implemented in 2007 and will end in 2036. The Drought Relief Project that is currently being constructed in partnership with IRWD and Rosedale will provide additional recovery capacity to CLWA under this program;
- *Unbalanced Exchange Program:* CLWA participates in a 2-for-1 unbalanced exchange agreement with West Kern Water District that has a ten-year term that began in 2011.
- *Semitropic Storage Program:* Since 2002 CLWA has participated in a water banking program with Semitropic Water Storage District (Semitropic) that provides approximately 55,000 AF of storage capacity in which to store excess CLWA supplies. This program will allow CLWA to recover 90% of its stored water by the year 2020. In 2015, CLWA entered in a new agreement with Semitropic that provides an additional 15,000 AF of storage through 2035, with a 10-year renewal option. Under the new agreement, CLWA may recover 5,000 AF on an annual basis.

# EXHIBIT “B”

## Draft Conceptual Terms for a Long-Term Exchange Program with Castaic Lake Water Agency July 19, 2016

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <b>Parties</b>                                             | Irvine Ranch Water District (IRWD) and Castaic Lake Water Agency (CLWA)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Exchange Program Description</b>                        | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Term</b>                                                | Through December 31, 2035, the end of the SWP Contract.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Exchange Water</b>                                      | CLWA will supply SWP Table A water to the Water Bank available to CLWA through its SWP Contract with Department of Water Resources (DWR)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>IRWD’s Water Bank</b>                                   | 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 28,750 AF of annual recovery capacity.                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Water Bank Capacities Allocated to Exchange Program</b> | <p>The following capacities would be allocated to the Long-Term Exchange Program in the Water Bank:</p> <ul style="list-style-type: none"> <li>• 30,000 AF of Storage Capacity in Water Bank <ul style="list-style-type: none"> <li>◦ 15,000 AF CLWA; 15,000 AF IRWD;</li> </ul> </li> <li>• 10,000 AF per year of Recharge Capacity;</li> <li>• 5,000 AF per year of Recovery Capacity Allocated to CLWA.</li> </ul> <p>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.</p> |
| <b>Delivery of Exchange Water Into Storage</b>             | <p>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 percent, 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.</p> <p>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.</p>                                                                                                                                                   |
| <b>Return Water</b>                                        | 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 5,000 AF, unless unused capacity is approved by IRWD for CLWA’s use.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |



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| <b>Losses</b>                              | 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.                                                                                                                                                                                                                                                                                                          |
| <b>Recharge Costs</b>                      | 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.                                                                                                                                                                                                                                                                                                                                                                 |
| <b>SWP Fixed and Variable Costs</b>        | <p>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.</p> <p>CLWA shall pay all SWP related fixed costs associated with making Exchange Water available for recharge, including water that will be allocated to IRWD.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Recovery Costs</b>                      | <p>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&amp;M, and applicable CVC pumping costs, and applicable fixed and variable O&amp;M Water Bank costs.</p> <p>CLWA will pay all conveyance costs in the Aqueduct associated with the delivery of recovered water to CLWA's Point of Delivery.</p> <p>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.</p> |
| <b>Metropolitan Water District Consent</b> | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Agency Coordination</b>                 | IRWD and CLWA will cooperate with Rosedale, the DWR, MWD and KCWA in coordinating necessary agreements and approvals to facilitate the Program.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Environmental Compliance</b>            | 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 and 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.                                                                       |