

AGENDA
IRVINE RANCH WATER DISTRICT
SUPPLY RELIABILITY PROGRAMS COMMITTEE
THURSDAY, NOVEMBER 21, 2019

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

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

ALSO PRESENT

Paul Cook	_____	Paul Weghorst	_____
Kellie Welch	_____	Fiona Sanchez	_____
Rob Jacobson	_____	Christine Compton	_____
Ray Bennett	_____	Jo Ann Corey	_____
Dane Johnson	_____	Natalie Palacio	_____
_____	_____	_____	_____

NOTICE

If you wish to address the Committee on any item, please file your name with the Committee. Forms are provided at the Committee meeting. Remarks are limited to three minutes per speaker on each subject.

COMMUNICATIONS

1. Notes: Weghorst
2. Public Comments
3. Determine the need to discuss and/or take action on item(s) introduced that came to the attention of the District subsequent to the agenda being posted.
4. Determine which items may be approved without discussion.

INFORMATION

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

Recommendation: Receive and file.

6. OVERVIEW OF SUBSIDENCE ISSUES IN THE CALIFORNIA AQUEDUCT – BENNETT / WELCH / SANCHEZ / WEGHORST

Recommendation: Receive and file.

ACTION

7. AMENDMENTS TO LANDOWNER AND PLANNING AGREEMENTS FOR COMPLIANCE WITH SUSTAINABLE GROUNDWATER MANAGEMENT ACT – BENNETT / WELCH / SANCHEZ / WEGHORST

Recommendation: That the Board authorize the General Manager to execute Amendment No. 1 to the Sustainable Groundwater Management Act Management Agreement with Rosedale-Rio Bravo Water Storage District and the First Amended Groundwater Sustainability Planning Agreement Between Rosedale Rio Bravo Water Storage District and Irvine Ranch Water District, subject to substantive changes approved by IRWD’s legal counsel and the Supply Reliability Programs Committee or subject to non-substantive changes.

8. REVISED TERMS FOR A 4-FOR-1 PILOT EXCHANGE PROGRAM WITH MOJAVE WATER AGENCY – WELCH / SANCHEZ / WEGHORST

Recommendation: That the Board authorize the General Manager to execute a 4-for-1 pilot exchange letter agreement and a side agreement to compensate Mojave Water Agency for the water delivered into storage that incorporates the proposed exchange and compensation terms, both agreements subject to substantive changes approved by the Supply Reliability Programs Committee or subject to non-substantive changes.

9. KERN FAN GROUNDWATER STORAGE PROJECT VARIANCE FOR PROFESSIONAL SERVICES WITH THE HALLMARK GROUP – SANCHEZ / WEGHORST

Recommendation: That the Board authorize the General Manager to execute Variance No. 3 in the amount of \$77,060 to the Professional Services Agreement with Hallmark Group for the development of terms for an agreement with the California Department of Water Resources for the construction of a turnout from the California Aqueduct and the operation of the Kern Fan Groundwater Storage Project.

OTHER BUSINESS

10. Directors’ Comments

11. Adjourn

Supply Reliability Programs Committee

November 21, 2019

Page 3

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.

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November 21, 2019
Prepared by: D. Johnson / K. Welch
Submitted by: F. Sanchez / P. Weghorst
Approved by: Paul A. Cook



SUPPLY RELIABILITY PROGRAMS COMMITTEE

WATER BANKING PROJECT FACILITIES, CAPACITIES, OPERATIONS AND PROGRAMS

SUMMARY:

Staff has prepared information related to IRWD's water banking facilities, capacities, operations and exchange programs. The information is regularly updated to reflect changes in the status of IRWD's projects, programs and operations. At the Committee meeting, staff will review this information. Staff will also provide an update on efforts to secure additional water for recharge at IRWD's water banking projects.

BACKGROUND:

To facilitate the discussion with the Committee, staff has prepared reference materials in tabular, map and schematic formats to describe IRWD's water banking facilities, capacities, operations, storage and exchange programs. The reference materials are updated regularly to reflect changes in the status of the projects, programs and operations. The following is an overview of the reference materials.

Capacity and Operations Tables:

A table presenting storage, recharge and recovery capacities of existing and planned IRWD water banking projects, including capacities available to IRWD in the Kern Water Bank, is attached as Exhibit "A". Exhibits "B" and "C" provide an update on water banking recovery and recharge operations, as well as the balance of the water stored in the Kern Water Bank. Exhibit "B" provides before-loss estimates of water recharged at the water banking projects, and Exhibit "C" provides after-loss estimates of water recharged at the projects. Both Exhibits "B" and "C" include a column that provides totals for each water type and storage location. Changes shown in red on Exhibits "B" and "C" reflect the final Kern River water recharged in 2019.

Exhibit "D" graphically depicts how storage of State Water Project (SWP) and non-SWP water has changed in the Strand and Stockdale Integrated Banking Projects through time. The table provided as Exhibit "E" shows how capacities in the water banking projects have been dedicated to IRWD's existing and proposed exchange programs.

Project Maps:

To support the tables provided as Exhibits "A", "B", "C" and "E", as well as the figure provided as Exhibit "D", staff has prepared maps that depict project wells and pipelines, recharge basins and Cross Valley Canal turnout locations, along with the most current recharge rates. These maps are provided as Exhibits "F", "G" and "H", respectively. Exhibit "F" has been updated to

reflect the completion of the Drought Relief Project Wells. The facilities shown on the maps are associated with the Strand Ranch, Stockdale West, Stockdale East and Drought Relief Projects.

Program Agreement Diagrams:

Schematic diagrams have been prepared that depict the IRWD water banking and exchange programs with Rosedale-Rio Bravo Water Storage District, Buena Vista Water Storage District, Dudley Ridge Water District and Metropolitan Water District of Southern California. These diagrams are provided as Exhibits “I”, “J”, “K”, “L” and “M”, as described in the List of Exhibits.

Delivery of Water to the Water Banks:

Buena Vista delivered Kern River water to the Strand Ranch and Stockdale West projects from April 11 through June 30, 2019. A total of 11,949 acre-feet (AF) was delivered, of which IRWD retains one-half, which is consistent with the terms of the existing long-term exchange program agreement with Buena Vista.

IRWD took delivery of its 1,311 AF of 2019 SWP supplies associated with the Jackson Ranch in Dudley Ridge Water District during July and August 2019.

Other Recharge Opportunities:

IRWD has been pursuing additional opportunities to secure water for recharge. At the Committee meeting, staff will provide an update on efforts to secure water from:

- Antelope Valley-East Kern Water Agency;
- Central Coast Water Authority;
- Dudley Ridge Water District; and
- Other sources.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

- Exhibit “A” – Recharge, Storage and Recovery Capacities of Current and Anticipated Water Banking Projects
- Exhibit “B” – Water Banking Storage, Recharge and Recovery Operations before Losses
- Exhibit “C” – Water Banking Storage, Recharge and Recovery Operations after Losses
- Exhibit “D” – Historic Water Storage in Strand and Stockdale Projects
- Exhibit “E” – Dedicated Capacities of Current Water Banking Projects
- Exhibit “F” – Map of Water Banking Project Wells and Pipelines
- Exhibit “G” – Map of Water Banking Recharge Basins and Cross Valley Canal Turnout Facilities
- Exhibit “H” – Map of Water Banking Recharge Rates
- Exhibit “I” – Diagram of IRWD-Rosedale Water Banking and Exchange Program Agreements
- Exhibit “J” – Diagram of Long-Term Water Exchange Program with BVWSD and Diagram of One-Year Program to Augment Recharge Using Stockdale West Recharge Facilities with BVWSD
- Exhibit “K” – Diagram of Unbalanced Exchange Program Diagram with DRWD
- Exhibit “L” – Diagram of Coordinated Operating, Water Storage, Exchange and Delivery Agreement with Metropolitan Water District
- Exhibit “M” – Diagram of Template Wheeling Agreement with Metropolitan Water District

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Exhibit "A"

TABLE 1
Current and Anticipated Water Banking Project
Recharge, Storage and Recovery Capacities
 November 21, 2019

WATER BANKING PROJECT	OWNERSHIP AND WELL INFO			ALLOCATED CAPACITY (AF)					1 ST PRIORITY RECOVERY CONDITIONS (CFS)		2 ND PRIORITY RECOVERY CONDITIONS (CFS)	
	IRWD OWNED	WELLS EXISTING	WELLS PROPOSED OR UNDER CONST.	TOTAL STORAGE CAPACITY	ANNUAL RECHARGE 1 ST PRIORITY	ANNUAL RECHARGE 2 ND PRIORITY	ANNUAL RECOVERY 1 ST PRIORITY	ANNUAL RECOVERY 2 ND PRIORITY	RECOVERY CAPACITY AS PLANNED ¹	ESTIMATED RECOVERY CAPACITY (APR. 2019 CONDITIONS) ²	RECOVERY CAPACITY AS PLANNED	RECOVERY CAPACITY CURRENT CONDITIONS
Strand Ranch	Yes	7	-	50,000	17,500	-	17,500	-	40.0	40.0	-	-
Stockdale West	Yes	3	-	26,000	27,100	-	11,250	-	15.0	15.0	-	-
Stockdale East	No	-	2	-	-	19,000	-	7,500	-	-	10.0	-
IRWD Acquired Storage Account ³	No	-	-	50,000	-	-	-	-	-	-	-	-
Drought Relief Project Wells ³	No	3	-	-	-	-	-	-	15.0	15.0	-	-
Kern Water Bank Storage Account ⁵	No	-	-	9,495	3,200	-	6,330	-	-	-	-	-
TOTALS		13	2	126,000	44,600	19,000	28,750	7,500	70.0	70.0	10.0	0.0
Partner Capacities ⁴				38,000	22,300	9,500	10,850	0	35.5	25.0	-	-
IRWD Capacities				88,000	22,300	9,500	17,900	7,500	34.5	25.0	-	-
IRWD's recovery <i>during</i> 6 month partner recovery period (AF)									12,420	9,000	-	-
IRWD's recovery <i>after</i> 6 month partner recovery period (AF)									5,480	6,733	-	-
TOTALS (AF)									17,900	15,733	-	-
Number of months needed to recover IRWD's total AF after partners' recovery (Assumes IRWD has use of total recovery capacity after partners' recovery)									8.6	10.2	-	-
Strand Ranch monthly recharge amount assuming 0.3 ft/day average recharge rate (AF)											4,518	
Stockdale West monthly recharge amount assuming 0.3 ft/day average recharge rate (AF)											2,331	

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

² Strand Ranch and Stockdale West wells currently idle.

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

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

⁵ Kern Water Bank capacities based on 6.58% of Dudley Ridge Water District's 9.62% share of the Kern Water Bank. Annual recharge amount is based on an average of recharge rates for high and low groundwater level conditions. Not included in storage capacity, recharge, and recovery totals to match IRWD's Water Banking Policy Position Paper.

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Exhibit "B"

TABLE 2
IRWD's Water Banking Storage, Recharge and Recovery Operations - BEFORE LOSSES
 November 21, 2019

TRANSACTIONS	WATER BANKING ENTITY					TOTAL BY WATER TYPE AND STORAGE LOCATION
	IRWD		BUENA VISTA (BVWSD)	CENTRAL COAST (CCWA)	DUDLEY RIDGE WATER DISTRICT (DRWD) ³	
	SWP ¹	NON-SWP ²	NON-SWP	SWP	SWP	
BEGINNING WATER IN STORAGE 2018 (AF)						
Total Kern Water Bank	-	4,656	-	-	-	4,656
Total MWD System ⁴	8,349	-	-	-	1,174	10,047
Total Kern County	3,257	17,704	6,869	289	2,388	30,507
TOTAL STORED WATER (1/1/2018)	11,606	22,360	6,869	289	3,562	44,686
MWD Water to Jackson Ranch ⁵	-	-	-	-	(295)	(295)
(RECOVERY) AND RECHARGE IN 2018 (AF)						
Kern Water Bank Deliveries	-	-	-	-	-	-
2018 SWP Allocation (35%) ³	310	-	-	-	310	620
High Flow Kern River	-	-	(1,667)	-	-	(1,667)
TOTAL 2018 TRANSACTIONS	310	-	(1,667)	-	310	(1,047)
Total Kern Water Bank	-	4,656	-	-	-	4,656
Total MWD System	8,349	-	-	-	879	9,228
Total Kern County	3,567	17,704	5,202	289	2,698	29,460
TOTAL STORED WATER (1/1/2019)	11,916	22,360	5,202	289	3,577	43,344
(RECOVERY) AND RECHARGE IN 2019 (AF)						
MWD Water to Jackson Ranch (estimated)	-	-	-	-	(295)	(295)
Kern Water Bank Deliveries ⁶	-	97	-	-	-	97
2019 SWP Allocation (75%) ³	656	-	-	-	656	1,311
Kern River water	-	5,975	5,975	-	-	11,949
TOTAL ESTIMATED 2019 TRANSACTIONS	656	6,072	5,975	-	361	13,062
ESTIMATED WATER IN STORAGE 2019 (AF)						
Total Kern Water Bank	-	4,753	-	-	-	4,753
Total MWD System	8,349	-	-	-	879	9,228
Total Kern County	4,223	23,776	11,177	289	3,059	42,522
TOTAL ESTIMATED STORED WATER TO DATE	12,572	28,529	11,177	289	3,938	56,503

NOTES:

-MWD = Metropolitan Water District of Southern California.

¹ IRWD's SWP includes 437 AF from CVWD that stays in Kern County.

² IRWD's Non-SWP total includes 3,158 AF of Kern County Water Agency Article 21 Water.

³ DRWD water supply will be returned by MWD or IRWD's Strand Ranch to IRWD's Jackson Ranch. IRWD's 2013-2016 SWP allocation amounts are stored in the MWD system. IRWD's 2017 through 2019 SWP allocation water is stored in Kern County.

⁴ Beginning balance of water stored in MWD system includes: 4,494 AF from 2014 Exchange, 3,206 AF of 2014 borrowed SWP, 649 AF of IRWD's 2013-2016 SWP allocations through DRWD.

⁵ Water returned to DRWD by MWD for use on IRWD's Jackson Ranch.

⁶ A portion of IRWD's 2019 SWP deliveries from DRWD include 97 AF of Article 21 water, which was delivered to the Kern Water Bank.

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Exhibit "C"

TABLE 3
IRWD's Water Banking Storage, Recharge and Recovery Operations - AFTER LOSSES
 November 21, 2019

TRANSACTIONS	WATER BANKING ENTITY					TOTAL BY WATER TYPE AND STORAGE LOCATION
	IRWD		BUENA VISTA (BVWSD)	CENTRAL COAST (CCWA)	DUDLEY RIDGE WATER DISTRICT (DRWD) ³	
	SWP ¹	NON-SWP ²	NON-SWP	SWP	SWP	
BEGINNING WATER IN STORAGE 2018 (AF)						
Total Kern Water Bank	-	4,233	-	-	-	4,233
Total MWD System ⁴	7,393	-	-	-	1,174	9,091
Total Kern County	2,782	15,564	6,199	246	2,131	26,921
TOTAL STORED WATER (1/1/2018)	10,175	19,797	6,199	246	3,305	39,721
MWD Water to Jackson Ranch ⁵	-	-	-	-	(295)	(295)
(RECOVERY) AND RECHARGE IN 2018 (AF)						
Kern Water Bank Deliveries	-	-	-	-	-	-
2018 SWP Allocation (35%) ³	264	-	-	-	264	528
High Flow Kern River	-	-	(1,667)	-	-	(1,667)
TOTAL 2018 TRANSACTIONS	264	-	(1,667)	-	264	(1,139)
Total Kern Water Bank	-	4,233	-	-	-	4,233
Total MWD System	7,393	-	-	-	879	8,272
Total Kern County	3,046	15,564	(1,667)	246	2,395	19,584
TOTAL STORED WATER (1/1/2019)	10,439	19,797	4,532	246	3,274	38,288
(RECOVERY) AND RECHARGE IN 2019 (AF)						
MWD Water to Jackson Ranch (estimated)	-	-	-	-	(295)	(295)
Kern Water Bank Deliveries ⁷	-	87	-	-	-	87
2019 SWP Allocation (75%) ³	557	-	-	-	557	1,114
Kern River Water	-	5,078	5,377	-	-	10,455
TOTAL ESTIMATED 2019 TRANSACTIONS⁶	557	5,166	5,377	-	262	11,362
ESTIMATED WATER IN STORAGE 2019 (AF)						
Total Kern Water Bank	-	4,320	-	-	-	4,320
Total MWD System	7,393	-	-	-	879	8,272
Total Kern County	3,603	20,642	9,909	246	2,657	37,057
TOTAL ESTIMATED STORED WATER TO DATE	10,996	24,963	9,909	246	3,536	49,649

NOTES:

-Water in storage has been adjusted to account for losses. IRWD's water stored in Kern County is adjusted 15% for losses (5% for out of county loss, 6% surface loss, and 4% reserve loss); Water stored for DRWD and BVWSD in Kern County is adjusted 10% (6% for surface loss and 4% for reserve loss); KWB losses are 10%; no losses for water directly delivered to MWD system.

-MWD = Metropolitan Water District of Southern California.

¹ IRWD's SWP includes 389 AF from CVWD that stays in Kern County.

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

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

IRWD's 2017 through 2019 SWP allocation water is stored in Kern County.

⁴ Beginning balance of water stored in MWD system includes (net of CVC losses): 3,920 AF of 2014 Exchange, 2,824 AF of 2014 borrowed SWP, 649 AF of IRWD's 2013-2016 SWP allocations through DRWD.

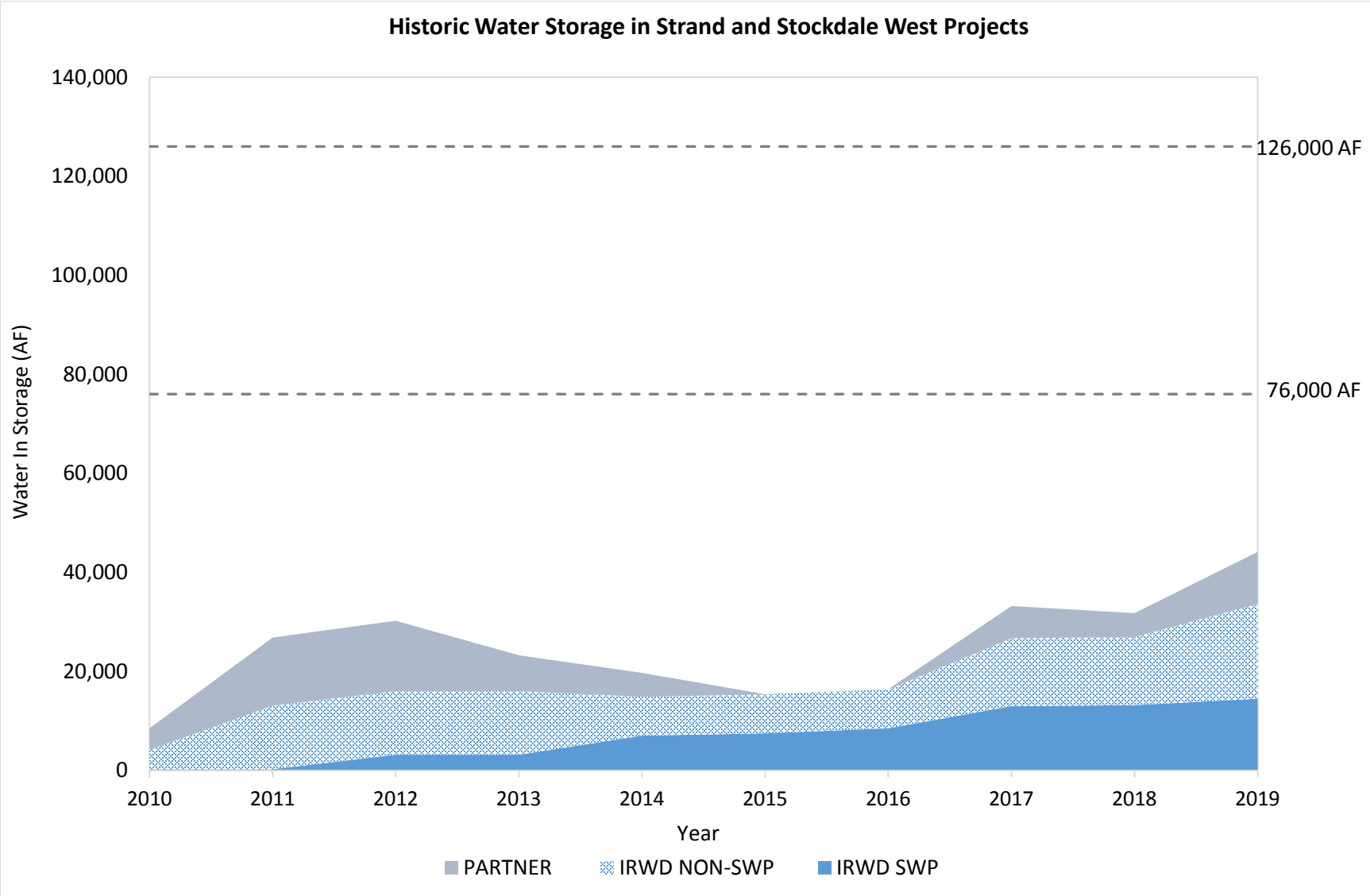
⁵Water returned to DRWD by MWD for use on IRWD's Jackson Ranch.

⁶2019 transactions may be adjusted for conveyance losses in CVC.

⁷A portion of IRWD's 2019 SWP deliveries from DRWD include 97 AF of Article 21 water, which was delivered to the Kern Water Bank.

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Exhibit "D"



*After losses

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Exhibit "E"

Program	Dedicated Storage Capacity Strand Ranch (AF)	Dedicated Storage Capacity Stockdale West (AF)	Dedicated Storage Capacity Leased Storage Account (AF)	Kern Water Bank Storage Capacity (AF)
Total Capacity	50,000	26,000	50,000	9,495
BVWSD	40,000	-	-	-
DRWD	10,000	-	-	-
AVEK	-	20,000	-	-
CVWD	-	5,000	-	-
Total Dedicated	50,000	25,000	-	-
Total Remaining	-	1,000	50,000	9,495

RECHARGE CAPACITY

Program	Dedicated Recharge Capacity Strand Ranch (AF)	Dedicated Recharge Capacity Stockdale West (AF)	Dedicated Recharge Capacity Leased Storage Account (AF)	Kern Water Bank Recharge Capacity (AF)
Total Capacity	17,500	27,100	-	3,200
BVWSD	17,500	-	-	-
DRWD	-	-	-	-
AVEK	-	20,000	-	-
CVWD	-	5,000	-	-
Total Dedicated	17,500	25,000	-	-
Total Remaining	-	2,100	-	3,200

RECOVERY CAPACITY

Program Partner	Dedicated Recovery Capacity Strand Ranch (AF)	Dedicated Recovery Capacity Stockdale West (AF)	Dedicated Recovery Capacity Leased Storage Account (AF)	Kern Water Bank Recovery Capacity (AF)
Total Capacity	17,500	11,250	-	6,330
BVWSD	6,667	-	-	-
DRWD	-	-	-	-
AVEK	-	3,333	-	-
CVWD	-	833	-	-
IRWD	10,833	7,084	-	6,330
Total Dedicated	17,500	11,250	-	6,330
Total Remaining	-	-	-	-

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Exhibit "F"

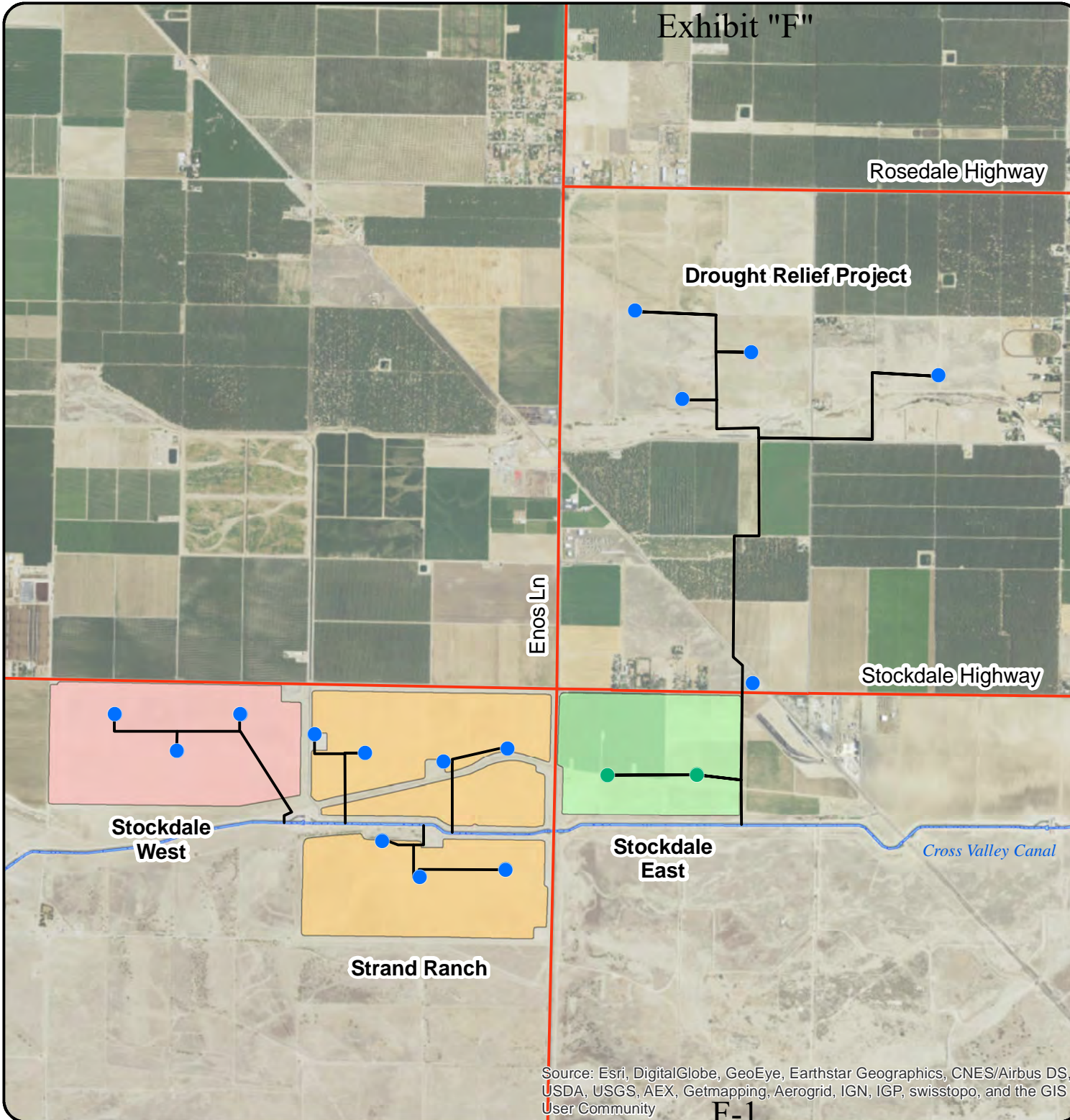


Location Map: IRWD Water Banking Projects Wells and Turnin Pipelines

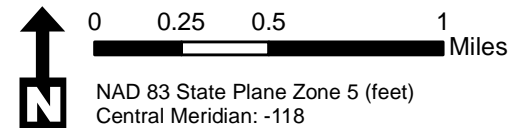
MAP FEATURES

- 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.



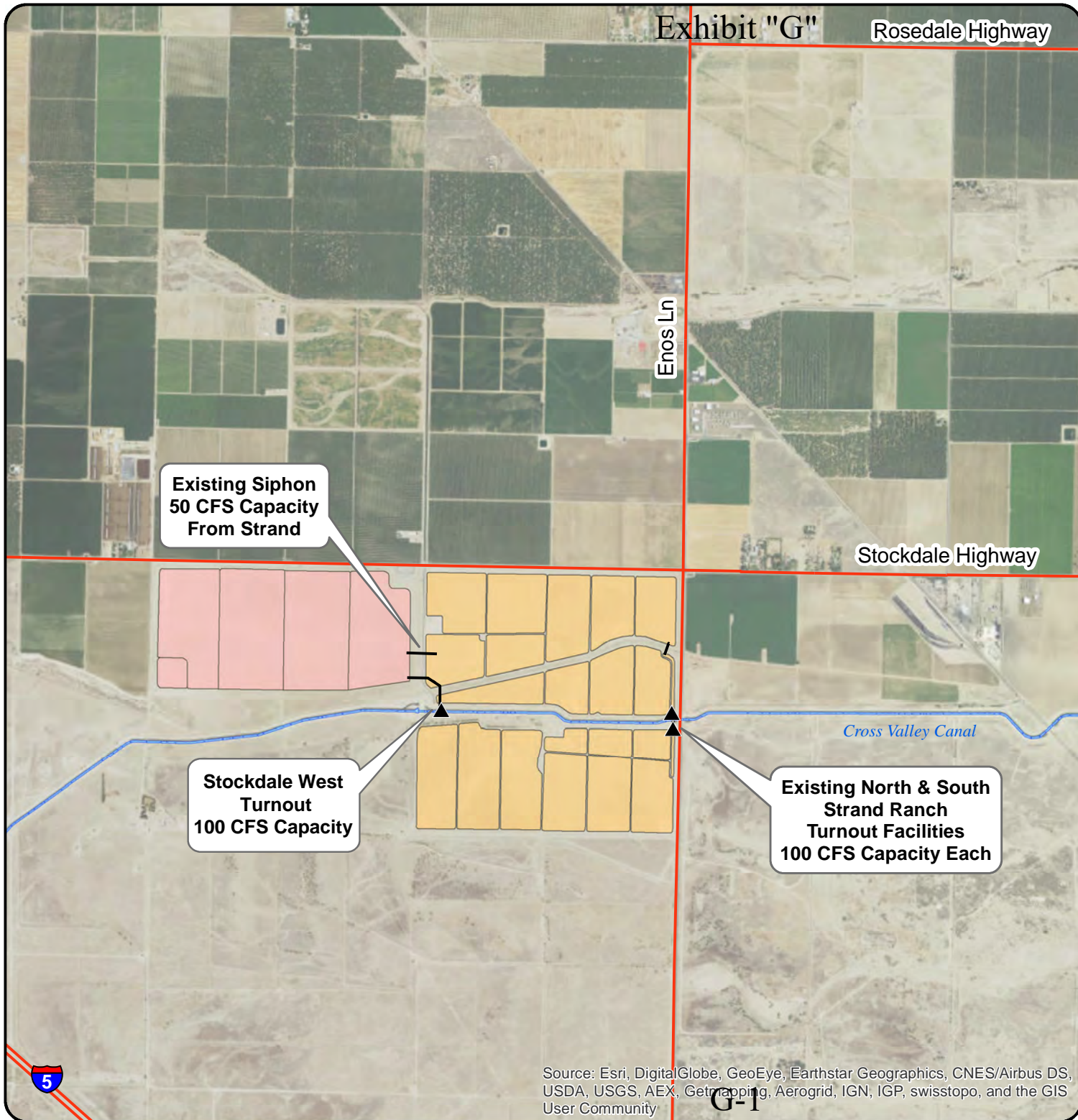
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



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



**Existing Siphon
50 CFS Capacity
From Strand**

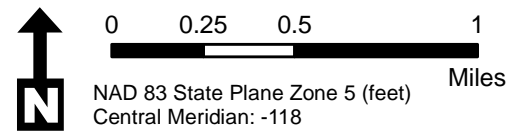
**Stockdale West
Turnout
100 CFS Capacity**

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

MAP FEATURES

- ▲ Turnouts
- Stockdale West
- Strand Ranch

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



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

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Location Map: IRWD Water Banking Projects Recharge Rates

Stockdale West
0.11 feet/day
15 CFS

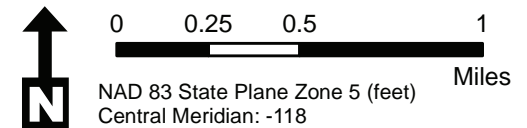
Strand Ranch North
0.29 feet/day
40 CFS

Strand Ranch South
0.13 feet/day
15 CFS

MAP FEATURES

- ▲ Turnouts
- Stockdale West
- Strand Ranch

This figure shows the location of recharge basins and their associated recharge rates as of June 18, 2019.

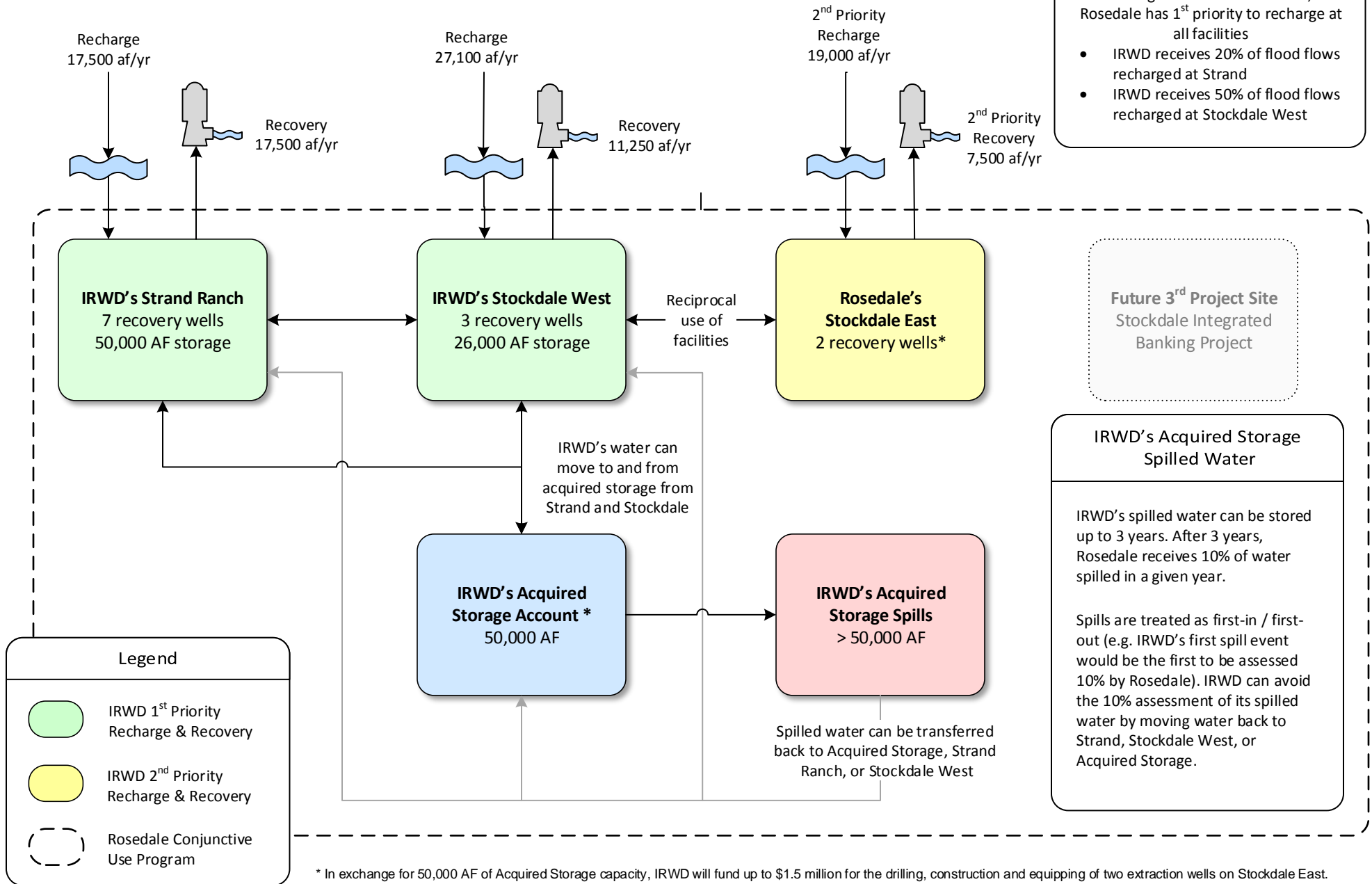


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Exhibit "I"

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)

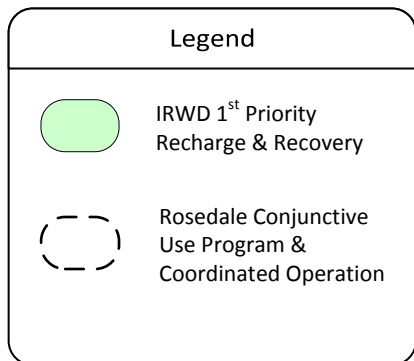
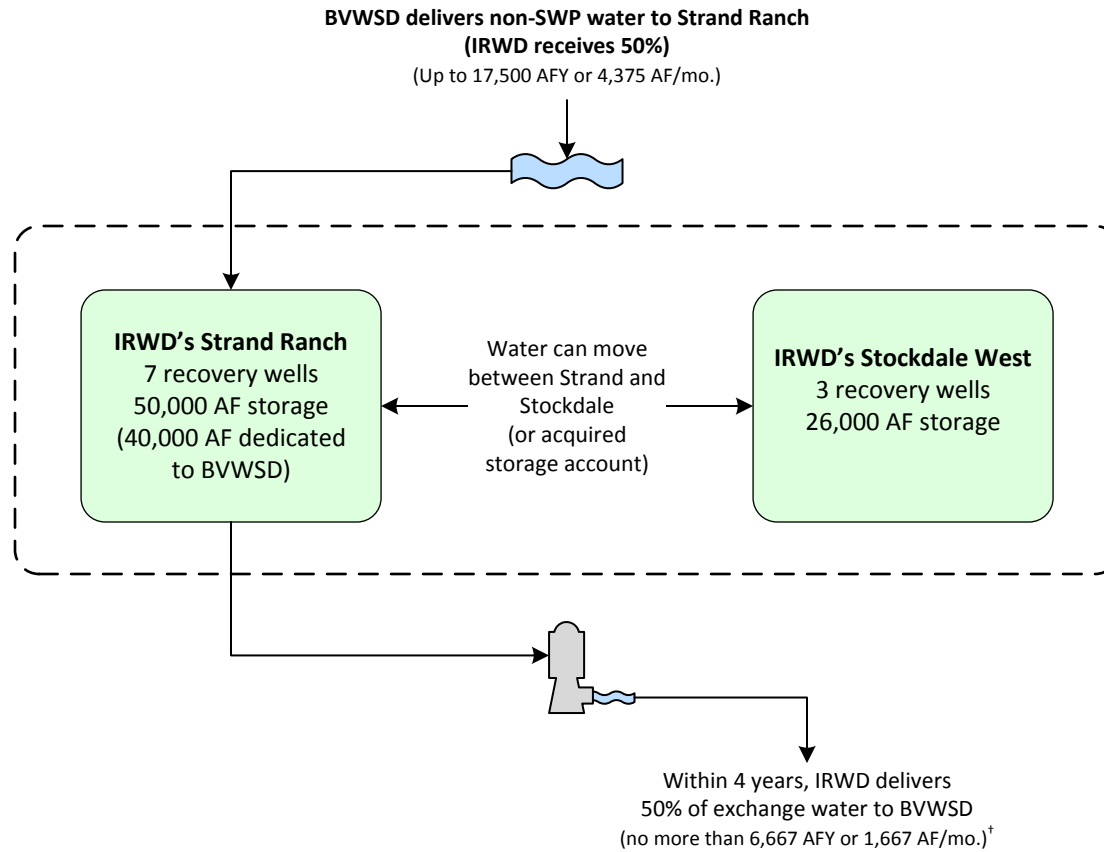


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Exhibit "J"

Buena Vista Water Storage District Long Term Water Exchange Program

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

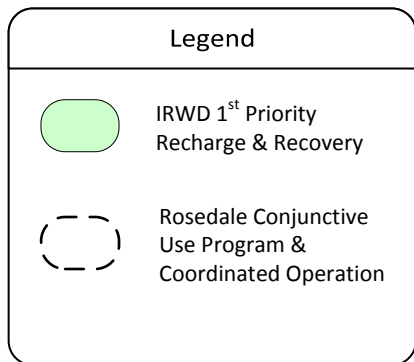
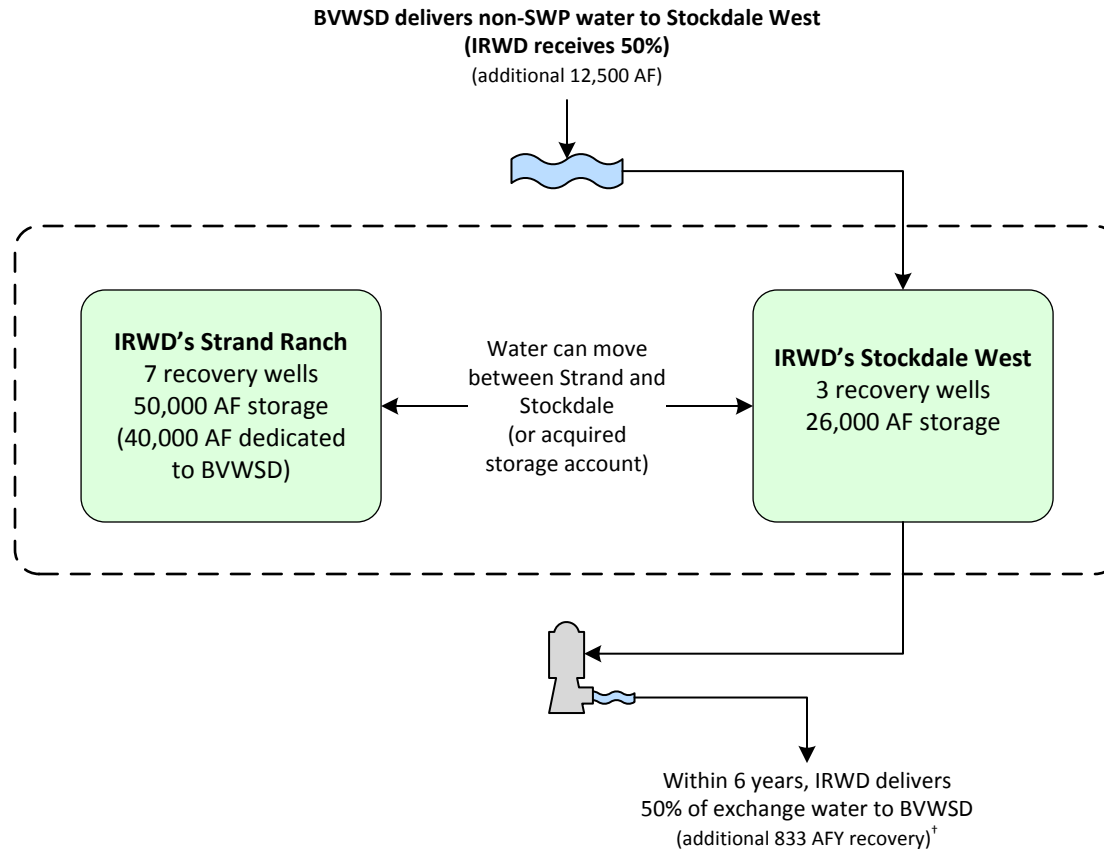


[†]IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31st of the 4th year following the associated recharge event. IRWD pays for recovery of water returned to BV. Water to be remitted back to BV may remain in storage at Strand Ranch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

Buena Vista Water Storage District One-Year Program to Augment Recharge Using Stockdale West Recharge Facilities

Effective 4/1/2017 through 3/30/2018



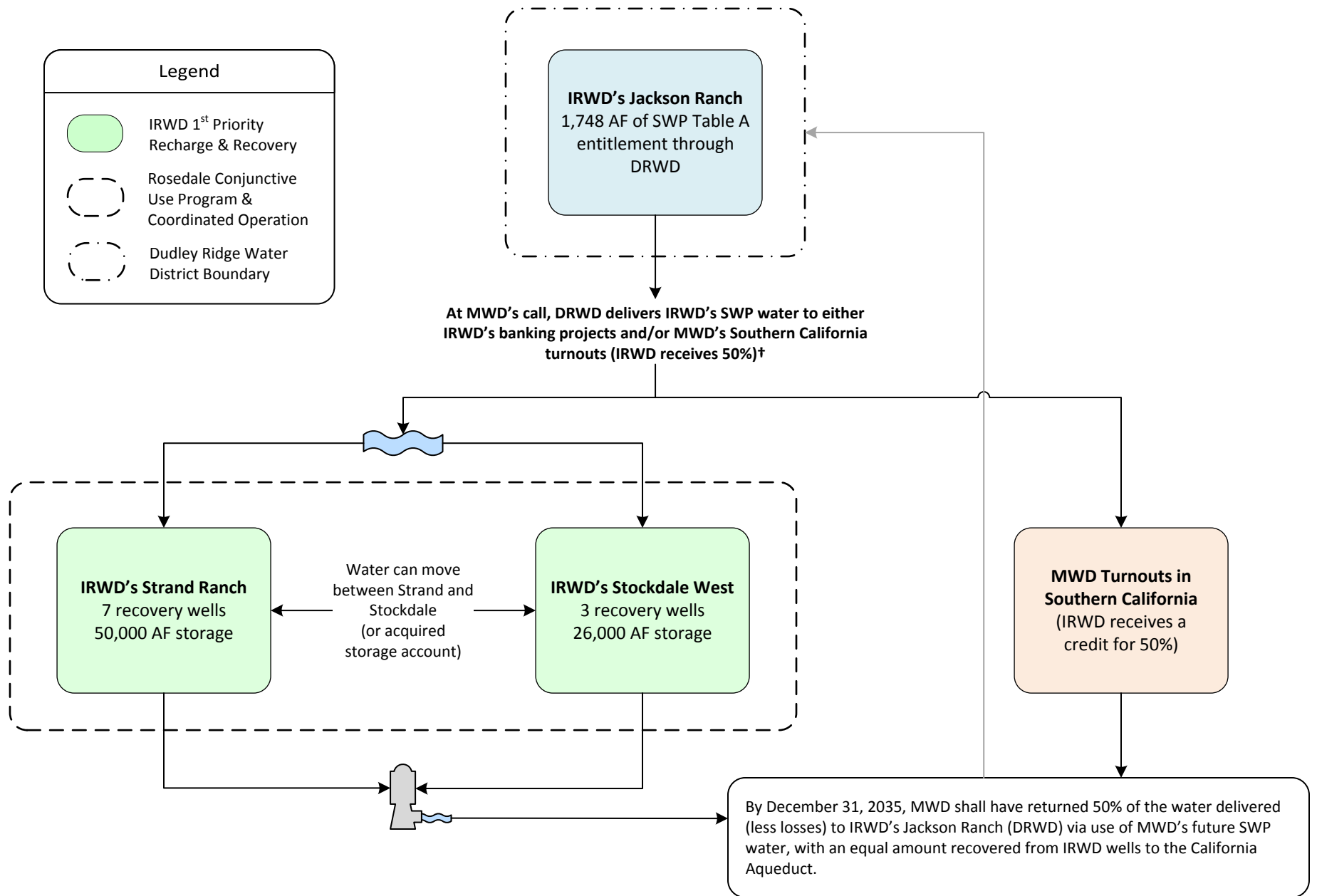
[†]IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31st of the 6th year following the associated recharge event. IRWD pays for recovery of water returned to BV. Water to be remitted back to BV may remain in storage at Strand Ranch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

Year Following Recharge Event	Percent Transferred to IRWD	Percent Returned to BV During or Before Indicated Year
1	50%	50%
2	50%	50%
3	50%	50%
4	50%	50%
5	50%	50%
6	50%	50%
7	75%	25%
8	100%	0%
9	100%	0%

Exhibit "K"

Dudley Ridge Water District (DRWD) Unbalanced Exchange Program

Up to 12,240 AF delivered from 6/7/2018 through 12/31/2027



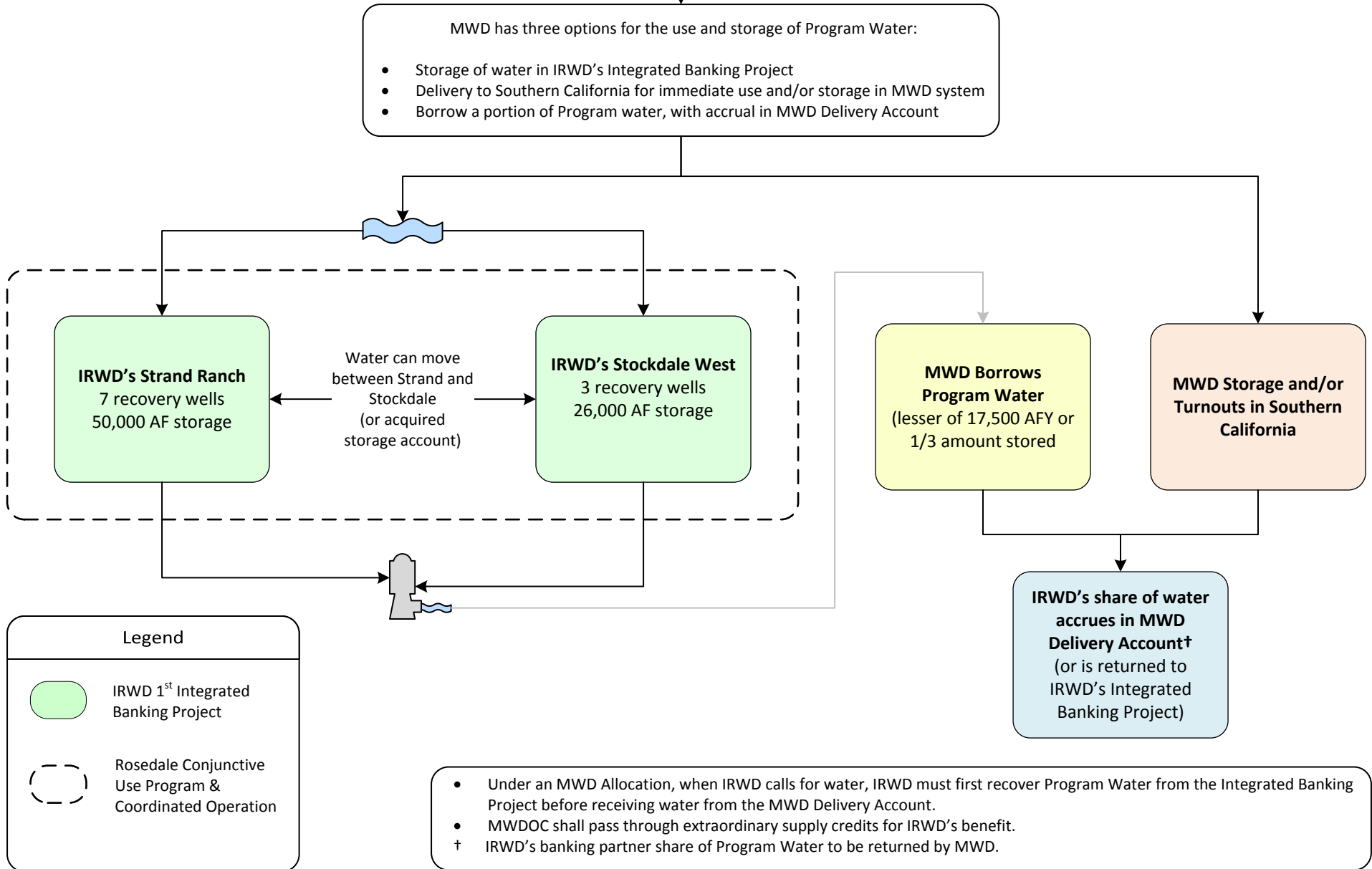
†Consistent with IRWD-MWD coordinated operating agreement.

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Exhibit "L"

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

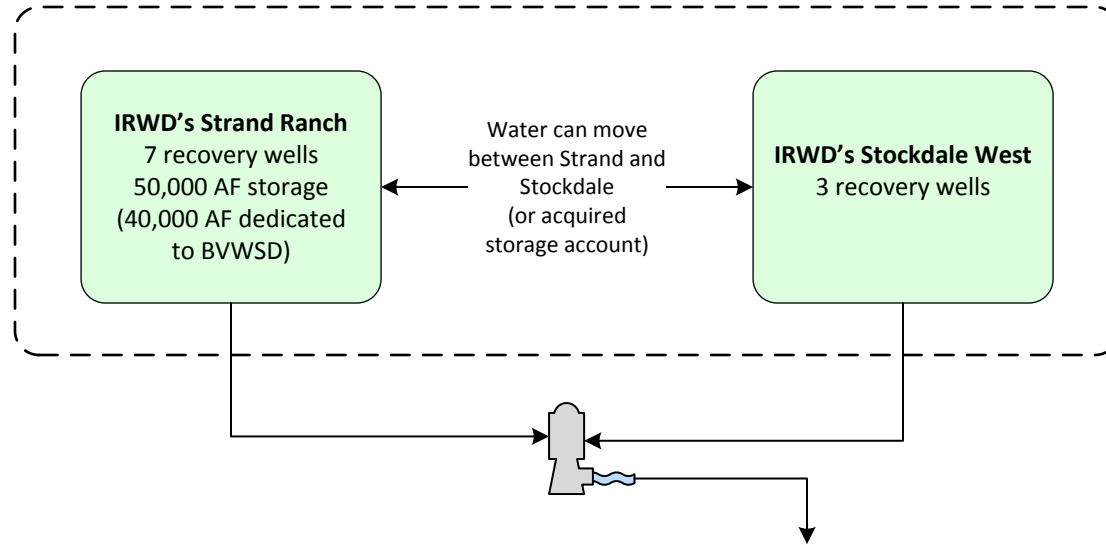


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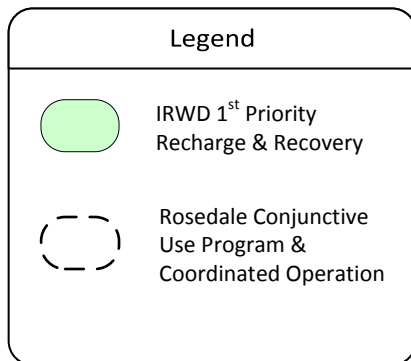
Exhibit "M"

Agreement for Conveyance of Water Between MWD, MWDOC, and IRWD (Wheeling Agreement)

Template for future agreements



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



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

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November 21, 2019
Prepared by: R. Bennett / K. Welch
Submitted by: F. Sanchez / P. Weghorst
Approved by: Paul A. Cook



SUPPLY RELIABILITY PROGRAMS COMMITTEE

OVERVIEW OF SUBSIDENCE ISSUES IN THE CALIFORNIA AQUEDUCT

SUMMARY:

IRWD, through partnerships with multiple agencies, operates water banking facilities in Kern County. The primary purpose of these facilities is to provide emergency supply reliability to IRWD customers during water shortage conditions. IRWD's water banking facilities – both existing and future – require the ability to convey water from the State Water Project (the "California Aqueduct") to IRWD turnouts in the Cross Valley Canal. Subsidence of the California Aqueduct at multiple locations along its alignment is compromising the capacity of the Aqueduct. At the Committee meeting, staff will provide an overview of the subsidence issues facing the California Aqueduct and the impacts these issues may have on IRWD's water banking facilities.

BACKGROUND:

Subsidence in the San Joaquin Valley has been recorded, analyzed and studied since the 1920s. U.S. Geological Survey studies from the mid-1950s to present have identified aquifer compaction caused by groundwater overdraft as the primary driver for the majority of land subsidence in the Central Valley. Between 1926 and 1970, some areas in the Central Valley experienced subsidence exceeding 28 feet. Exhibit "A" shows the location of subsidence caused by groundwater withdrawals during this period.

California Aqueduct Subsidence and Impacts:

The original plan and design of the Aqueduct considered potential subsidence issues by aligning the Aqueduct to avoid areas with known or likely potential subsidence. When avoidance was not possible, the Aqueduct was built with higher-than-normal embankments, concrete-lined freeboard, and consolidation ponds. Subsidence was expected to continue during construction of the Aqueduct and then reduce significantly once the canal was completed and water could be delivered to the region.

Once water deliveries from the Aqueduct began, subsidence rates decreased during normal to wet hydrologic years. During dry to critical hydrologic years, subsidence increased at rates averaging 1.1 inches per year in Aqueduct Pools 17 through 20. The ongoing subsidence has reduced the Aqueduct's freeboard limit in some reaches to a point that required canal embankment and liner raises in the San Luis Field Division (in 1982) and in the San Joaquin Field Division (in 1989 and in 1996).

In June 2017, the California Department of Water Resources (DWR) prepared a report titled *California Aqueduct Subsidence Study* that summarizes how subsidence is impacting capacity in the Aqueduct. To quantify the impact of subsidence on the Aqueduct flow capacity and lined

freeboard, a hydraulic model was developed by DWR from the outlet of the Dos Amigos Pumping Plant at Pool 14 to the forebay of the Buena Vista Pumping Plant at Pool 30. The model includes 164.2 miles of the Aqueduct and all associated check structures, siphons, canal transitions, turnout locations, and pumping plants located within the study reach. Exhibit “B” shows the location and magnitude of historic Aqueduct subsidence that was evaluated in DWR’s study.

To estimate the impact of subsidence on the Aqueduct’s flow capacity, the model was run twice: once using the design flow rate and again using a reduced flow rate with a water surface elevation lower than a pre-specified freeboard. Exhibit “C” presents the results of the hydraulic analysis by depicting the original and reduced flow rate required to maintain a freeboard of 0.5 feet. Exhibit “D” shows the reduction in flow capacity range from approximately 400 cubic feet per second (cfs) in Pools 17 and 18 to 1,700 cfs in Pools 21 and 22. The reduction in Pool 28, where the Kern Fan Project may be expected to divert and the Cross Valley Canal currently diverts, was estimated to be approximately 450 cfs.

Conclusions and Next Steps:

Flow reductions in the Aqueduct would be significantly greater if the minimum freeboard were increased from the 0.5 feet that was analyzed to the original depth of 3.0 feet. As an example, Exhibit “E” shows that with an increase in the freeboard from 0.5 feet to 3.0 feet, reductions in flow capacity in Pool 20 are nearly linear with a total loss of capacity of 1,400 cfs.

DWR is finalizing an update to the 2017 California Aqueduct subsidence study. At the Committee meeting, staff will discuss the status of the revised study and provide an update on discussions with DWR regarding the proposed new Aqueduct turnout for the Kern Fan Project.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

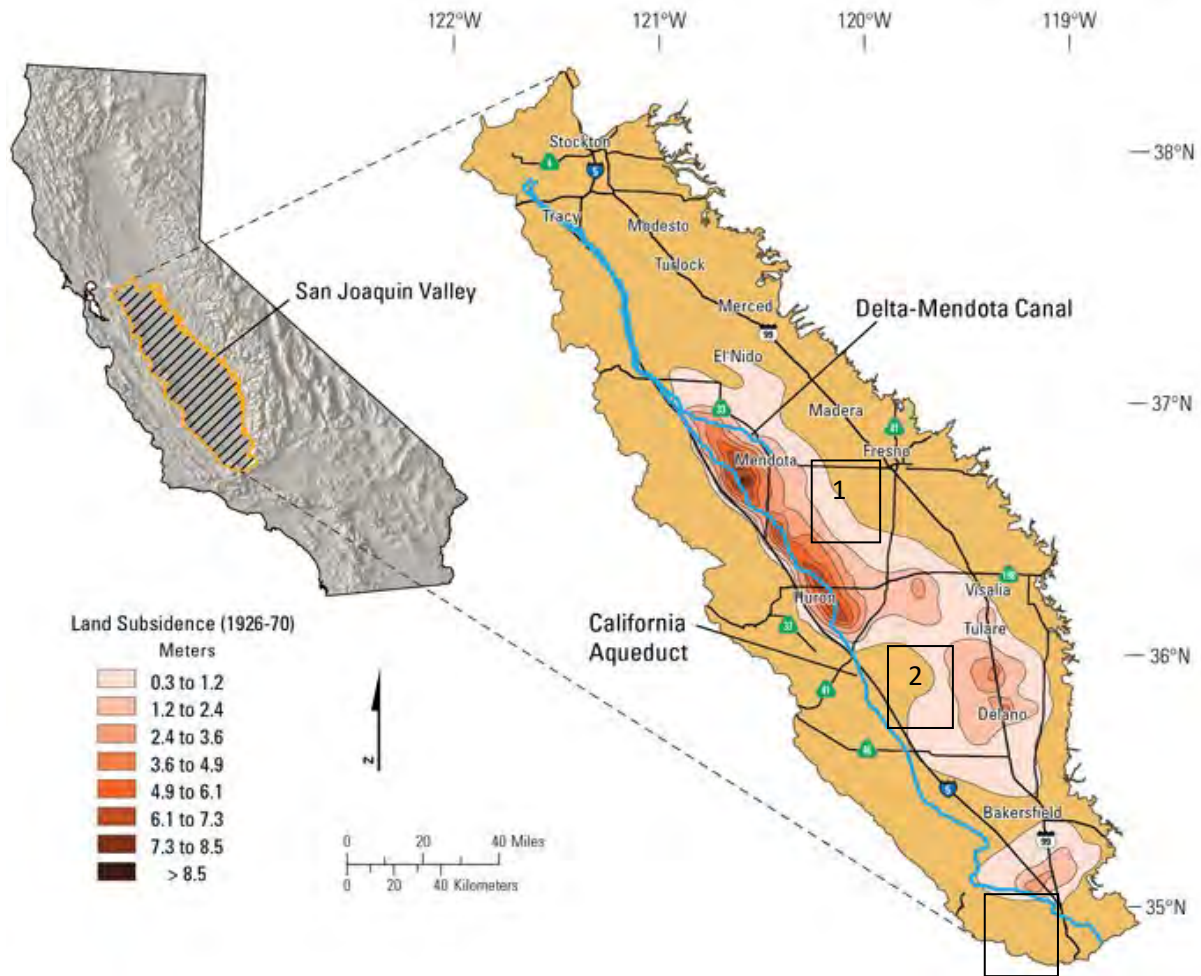
Receive and file.

LIST OF EXHIBITS:

- Exhibit “A” – Location of Subsidence Caused by Groundwater Withdrawals from 1926 to 1970
- Exhibit “B” – California Aqueduct Subsidence
- Exhibit “C” – Original and Reduced Aqueduct Capacity
- Exhibit “D” – Aqueduct Capacity Reduction
- Exhibit “E” – Reductions in Pool 20 Flow Capacity with Increases in Freeboard

Exhibit "A"

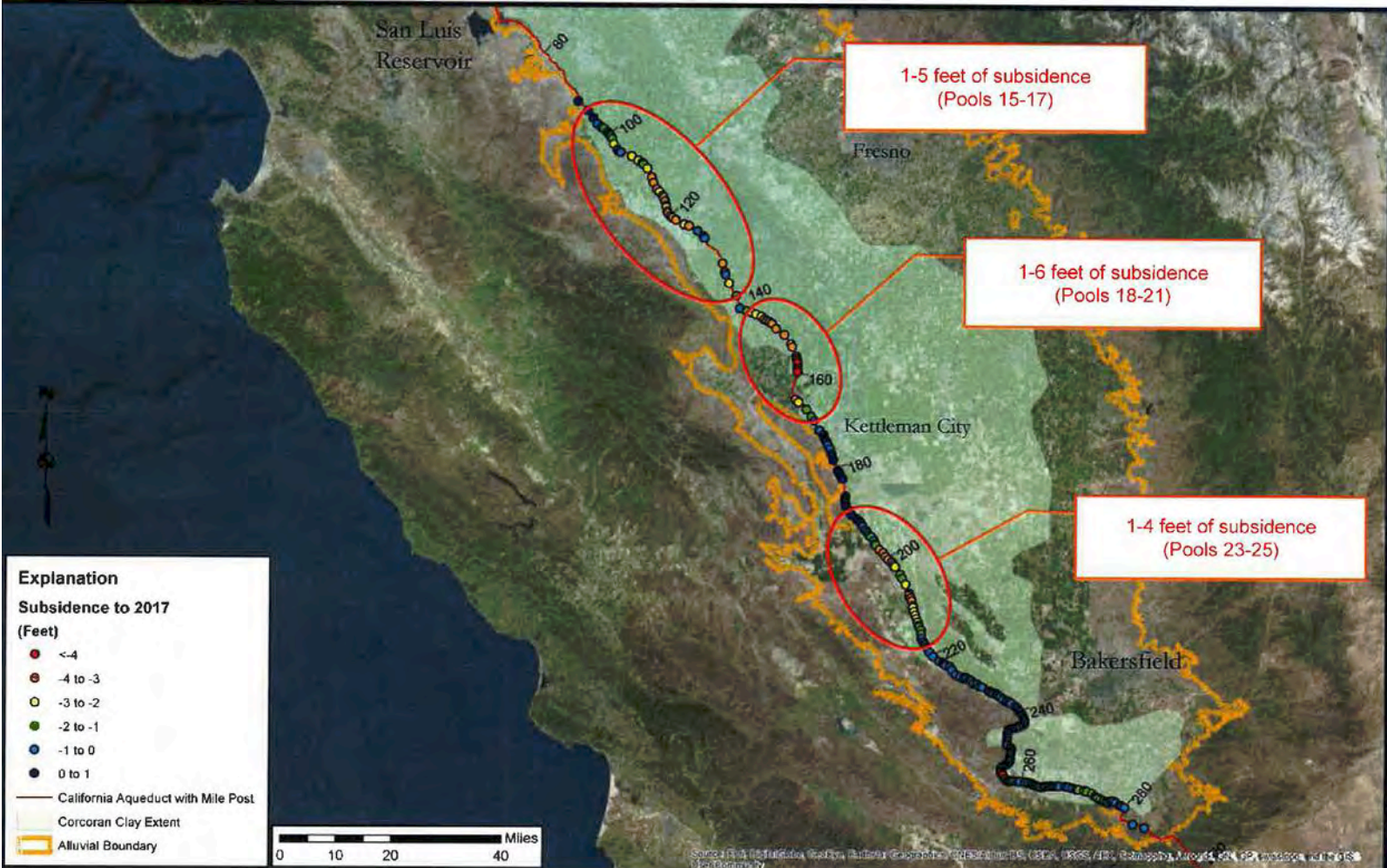
Location of Subsidence Caused by Groundwater Withdrawals from 1926 to 1970



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Exhibit "B"

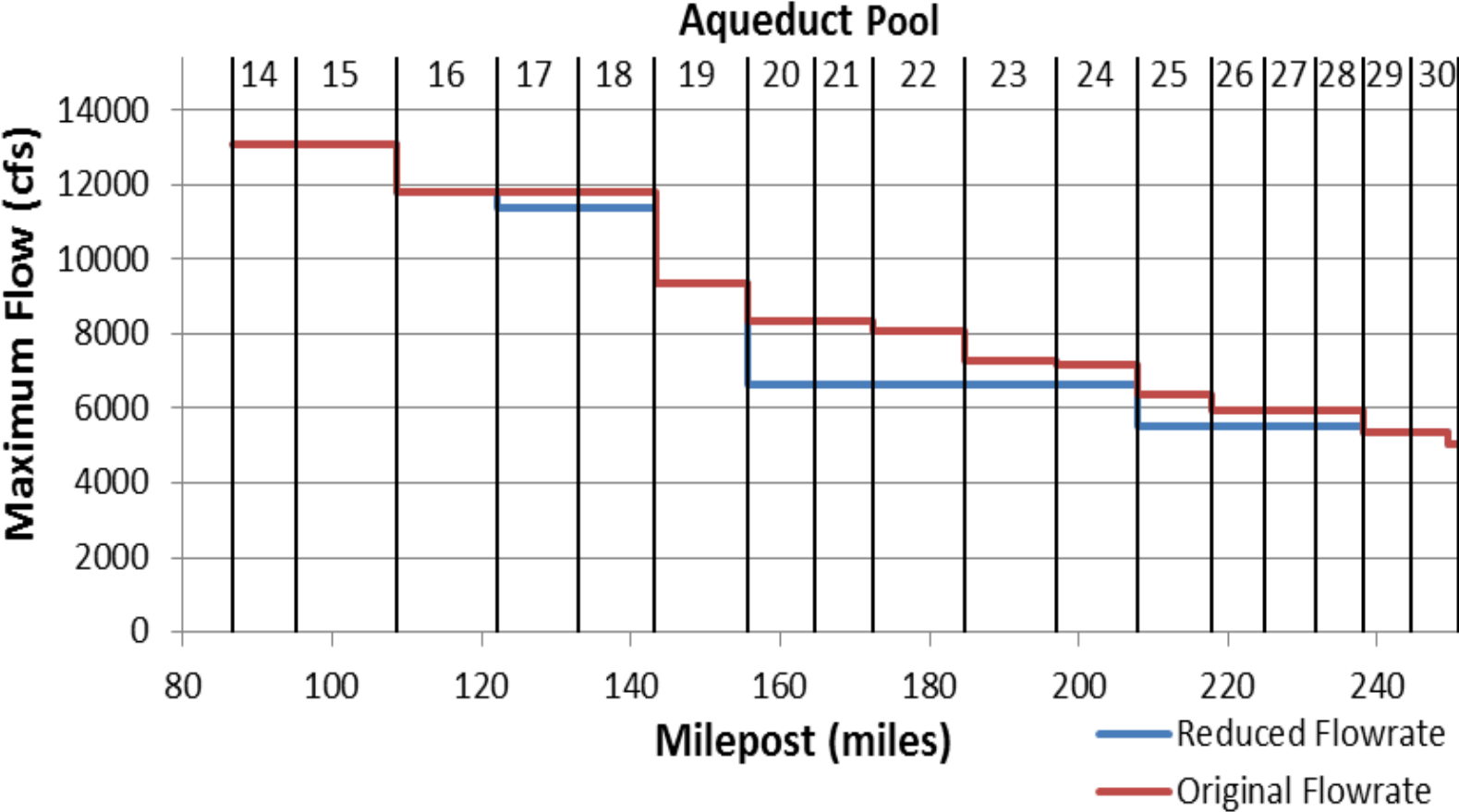
California Aqueduct Subsidence



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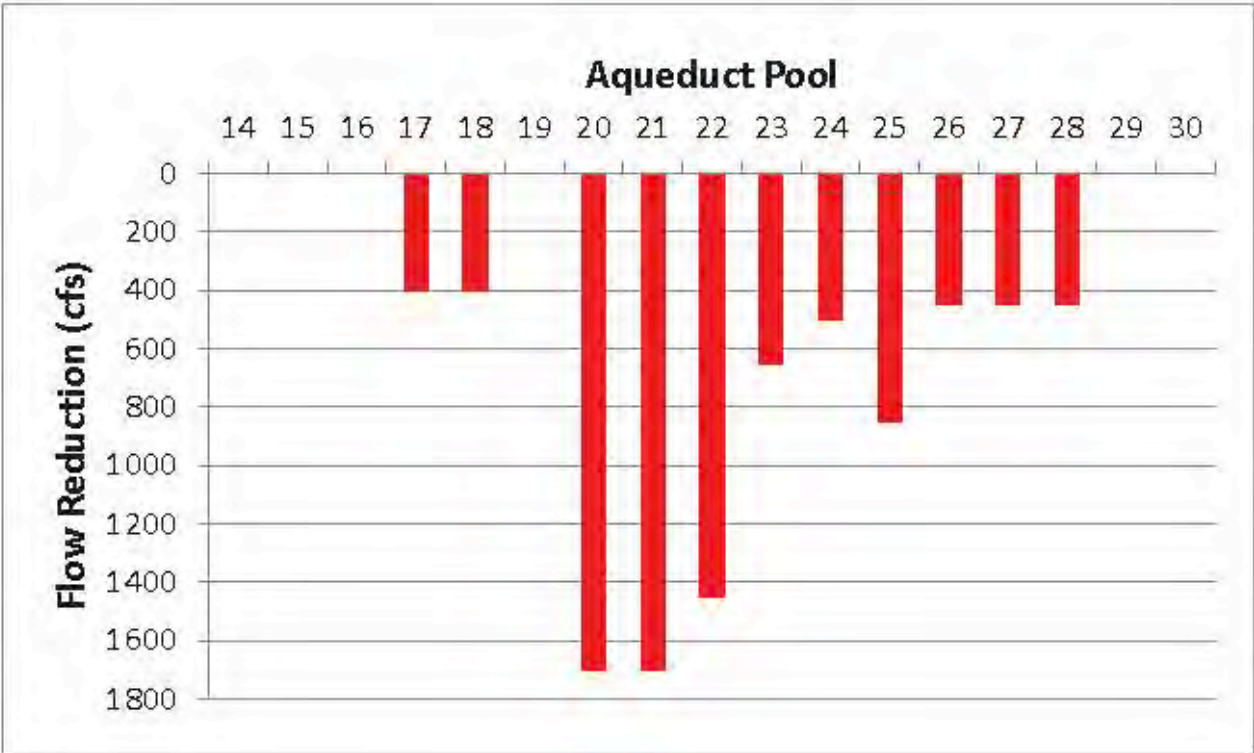
Exhibit "C"

**Original and Reduced Aqueduct Capacity
(Manning's n=0.020 and Minimum Freeboard of 0.5 feet)**



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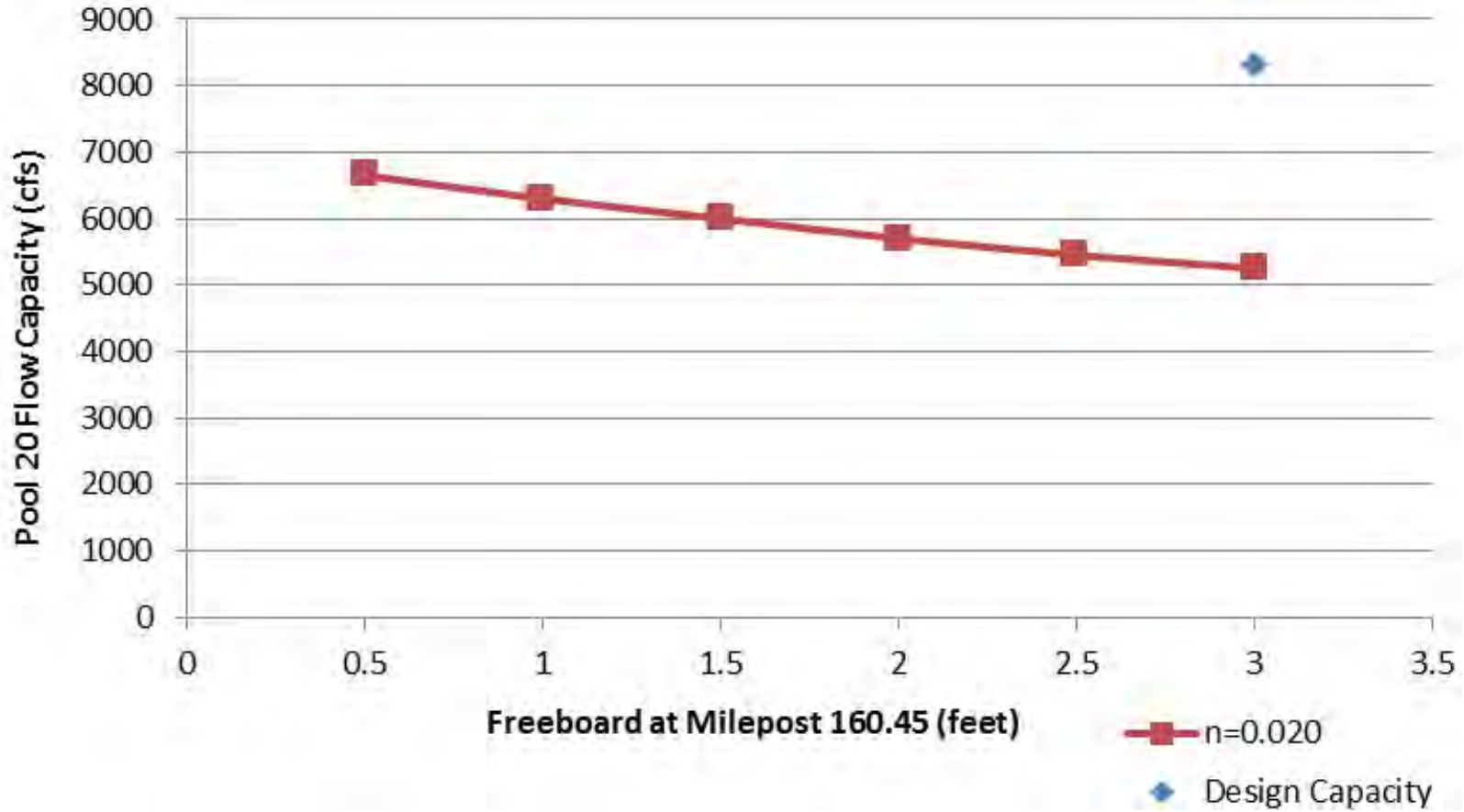
Exhibit "D"
Aqueduct Capacity Reduction
(Manning's $n=0.020$ and Minimum Lined Freeboard of 0.5 feet)



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Exhibit "E"

Reductions in Pool 20 Flow Capacity with Increase in Freeboard (Manning's $n=0.020$)



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November 21, 2019
Prepared by: R. Bennett / K. Welch
Submitted by: F. Sanchez / P. Weghorst
Approved by: Paul A. Cook



SUPPLY RELIABILITY PROGRAMS COMMITTEE

AMENDMENTS TO LANDOWNER AND PLANNING AGREEMENTS FOR COMPLIANCE WITH SUSTAINABLE GROUNDWATER MANAGEMENT ACT

SUMMARY:

In 2017, the Kern Groundwater Authority (KGA) was formed in pursuit of compliance with the requirements of the Sustainable Groundwater Management Act (SGMA). Rosedale-Rio Bravo Water Storage District is a member of KGA and has prepared a draft chapter of KGA's Groundwater Sustainability Plan (GSP) that will cover Rosedale's service area. In March 2019, the IRWD Board approved two agreements with Rosedale: 1) a Landowner Agreement that would provide SGMA coverage for IRWD's Kern County water banking properties by incorporation into Rosedale's chapter of the GSP, and 2) a Planning Agreement that would limit IRWD from selected parts of the Landowner Agreement.

Due to recent jurisdictional changes in Kern County, KGA is requesting that all undistricted landowners execute Amendment No. 1 to the Landowner Agreement that will increase the landowners' indemnity obligations and limit their ability to contest the actions of agencies with jurisdiction. IRWD's special legal counsel, Kronick, Moskovitz, Tiedemann & Girard (KMTG), has been working with other undistricted landowners and Rosedale's legal counsel to prepare Amendment No. 1 to the Landowner Agreement. In addition, KMTG has drafted the First Amended Planning Agreement to be consistent with Amendment No. 1 to the Landowner agreement. Staff recommends that the Board authorize the General Manager to execute Amendment No. 1 to the Landowner Agreement and the First Amended Planning Agreement, subject to substantive changes approved by IRWD's legal counsel and the Supply Reliability Programs Committee or subject to non-substantive changes.

BACKGROUND:

In September 2014, Governor Brown signed three bills that comprised SGMA: SB 1168, AB 1739, and SB 1319. SGMA requires local and regional agencies to develop and implement sustainable groundwater management plans through the formation of Groundwater Sustainability Agencies (GSAs). KGA, which includes Rosedale and 12 other agencies, was formed as a local GSA to comply with SGMA. KGA agencies must provide SGMA coverage within their respective agency boundaries. By default, the County of Kern has SGMA jurisdiction over undistricted (also known as "white space") areas.

SGMA Coverage for IRWD Lands:

IRWD's Strand and Stockdale West properties are located outside of Rosedale's boundary and are considered undistricted within the Kern County Sub-basin. Unless undistricted lands are extended SGMA coverage through a GSP, the lands would by default fall within the County of Kern's jurisdiction for SGMA purposes. Rosedale offered to provide SGMA coverage for

undistricted landowners, including IRWD's Strand and Stockdale West properties, by including these areas within its chapter of the Kern Groundwater Authority's GSP.

On March 11, 2019, the IRWD Board authorized the General Manager to execute two agreements with Rosedale. The Landowner Agreement, which is included as Exhibit "A", allows IRWD's Strand and Stockdale West properties to be included within Rosedale's chapter of the GSP. The Planning Agreement limits selected parts of the Landowner Agreement that are not appropriate for IRWD's water banking properties.

Amendment No. 1 to the Landowner Agreement:

In April 2019, the County of Kern withdrew from its responsibility over the undistricted areas. In response to this withdrawal, the Kern County Water Agency (KCWA) agreed to be the jurisdictional authority for undistricted lands within Kern County. In accepting this authority, KCWA is requiring that all members of KGA, including owners of undistricted lands that have signed the Landowner Agreement, provide additional indemnifications and a covenant not to sue or contest.

In September 2019, staff reviewed with the Committee and the Board a proposed replacement to the original Landowner Agreement that would accommodate KCWA's requirement. Since that time, KGA has decided to amend rather than replace the Landowner Agreement. At the request of various undistricted landowners including IRWD, KGA, and Rosedale, the proposed Amendment No. 1 to the Landowner Agreement, which is provided as Exhibit "B", includes the following provisions:

- A limit to the indemnifications and covenant not to sue;
- A revision that specifies when a landowner can withdraw from the GSP; and
- The ability to terminate the agreement in the event of adjudication.

Rosedale's Board has approved Amendment No. 1 to the Landowner Agreement.

First Amended Planning Agreement:

To provide consistency with Amendment No. 1 to the Landowner Agreement, KMTG drafted the First Amended Planning Agreement to replace the original Planning Agreement and reference both the original and amended Landowner Agreements. The First Amended Planning Agreement is provided as Exhibit "C". At the Committee meeting, IRWD's special legal counsel will provide an overview of Amendment No. 1 to the Landowner Agreement and the First Amended Planning Agreement.

Rosedale has stated that the finalization and execution of the Amendment No. 1 to the Landowner Agreement is time sensitive. Staff recommends that the Board authorize the General Manager to execute Amendment No. 1 to the Landowner Agreement and the First Amended Planning Agreement, subject to substantive changes approved by IRWD's legal counsel and the Supply Reliability Programs Committee or subject to non-substantive changes.

Supply Reliability Programs Committee: Amendments to Landowner and Planning Agreements
for Compliance with Sustainable Groundwater Management Act

November 21, 2019

Page 3

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

That the Board authorize the General Manager to execute Amendment No. 1 to the Sustainable Groundwater Management Act Management Agreement with Rosedale-Rio Bravo Water Storage District and the First Amended Groundwater Sustainability Planning Agreement Between Rosedale Rio Bravo Water Storage District and Irvine Ranch Water District, subject to substantive changes approved by IRWD's legal counsel and the Supply Reliability Programs Committee or subject to non-substantive changes.

LIST OF EXHIBITS:

Exhibit "A" – Sustainable Groundwater Management Act Management Agreement with
Rosedale-Rio Bravo Water Storage District

Exhibit "B" –Amendment No. 1 to Sustainable Groundwater Management Act Management
Agreement with Rosedale-Rio Bravo Water Storage District

Exhibit "C" –First Amended Groundwater Sustainability Planning Agreement between
Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District

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Recorded at the request of
Public

RECORDING REQUESTED BY AND
WHEN RECORDED, MAIL TO:

ROSEDALE-RIO BRAVO WATER
STORAGE DISTRICT
P.O. Box 20820
Bakersfield, CA 93390-0820

DOC#: 219035748



Stat Types: 1	Pages: 5
Fees	0.00
Taxes	0.00
Others	0.00
PAID	\$0.00

SPACE ABOVE THIS LINE FOR RECORDER'S USE

RECORDING FOR THE BENEFIT OF A GOVERNMENT AGENCY
NO FEE PURSUANT TO CA. GOV'T CODE SECTION 6103

Kern County APN's: 160-010-02; 160-010-07; 160-010-21; 160-010-22; 160-010-60;
160-020-12; 160-020-23

MEMORANDUM OF AGREEMENT

**Sustainable Groundwater Management Act Management
Agreement with
Rosedale-Rio Bravo Water Storage District**

This Memorandum of Agreement - Sustainable Groundwater Management Act Management Agreement with Rosedale-Rio Bravo Water Storage District ("Agreement") is made and entered into this March 28, 2019, by and among the Rosedale-Rio Bravo Water Storage District, ("District") and the landowner identified by its name and signature below ("Landowner"). District and Landowner are sometimes each individually referred to herein as a "Party" and collectively as the "Parties."

RECITALS

WHEREAS, Landowner is an owner of certain real property in Kern County, California ("Landowner Land"), which property is generally identified by its Kern Assessor's Parcel Number(s) listed above and along with the Landowner's signature on this document, and which property is located outside of the District's boundaries.

WHEREAS, Landowner desires the District's assistance with respect to compliance with the Sustainable Groundwater Management Act ("SGMA");

WHEREAS, District has entered into a *Sustainable Groundwater Management Act Management Agreement* (dated May 31, 2018 and recorded on September 13, 2018 in the official records of Kern County as Document No. 000218120706) with several other landowners whose land is also located outside of the District's boundaries and who also desire the District's assistance with respect to SGMA compliance;

WHEREAS, District and Landowner desire to execute this Memorandum of Agreement, which is to be recorded in the official records of Kern County, in order that third parties may have notice of the respective rights and obligations of the District and Landowner with respect to SGMA compliance and the Landowner Land.

NOW, THEREFORE, in consideration of the foregoing Recitals and all of the terms and conditions of the above-referenced *Sustainable Groundwater Management Act Management Agreement*, it is agreed by and between the Parties as follows:

I. PURPOSE OF AGREEMENT

As set forth more fully in the *Sustainable Groundwater Management Act Management Agreement*, the Parties enter into this Memorandum of Agreement solely for the purpose of providing the Landowner a process to attempt to comply with SGMA through the inclusion of the Landowner Lands within the District's GSP Chapter. Neither the District nor any landowners within the District's current boundaries are committing anything to the Landowner Land except for the inclusion of the Landowner Land within the District's GSP Chapter, provided that all Landowners comply with the terms of the *Sustainable Groundwater Management Act Management Agreement*. Said agreement is intended to form the basis of the Parties' understanding regarding the terms and conditions of including the Landowner Land within the District's GSP Chapter, and their individual rights and responsibilities subsequent to such inclusion. Concurrently with entering into this Memorandum of Agreement, the Parties also have entered into a related *Groundwater Sustainability Planning Agreement* dated March 28, 2019 ("Planning Agreement") that confirms the Parties' intent for the GSP Chapter to be consistent with certain water banking project agreements and SGMA.

II. INCORPORATION OF AGREEMENT BY REFERENCE

All of the terms, conditions, provisions and covenants in the *Sustainable Groundwater Management Act Management Agreement* identified above are incorporated into this Memorandum of Agreement by reference as though written out at length herein. In the event of any inconsistency between the provisions of this Memorandum of Agreement and those of the *Sustainable Groundwater Management Act Management Agreement*, the provisions of the *Sustainable Groundwater Management Act Management Agreement* shall control. Copies of the *Sustainable Groundwater Management Act Management Agreement* are held by both Landowner and the District at their respective addresses. The Parties hereby acknowledge, agree to, and accept all of the terms, conditions, provisions and covenants in the *Sustainable Groundwater Management Act Management Agreement* identified above.


[SIGNATURES AND PROPERTY IDENTIFICATION ON THE FOLLOWING PAGE]

IRVINE RANCH WATER DISTRICT

APNs: 160-010-02; 160-010-07;
160-010-21; 160-010-22; 160-010-60;
160-020-12; 160-020-23



Signature

 By: Paul A. Cook, General Manager
Name and Title

15 March 2019

Date

ROSEDALE-RIO BRAVO
WATER STORAGE DISTRICT:



Signature

By: Eric Averett, General Manager
Name and Title

3/28/19

Date

ACKNOWLEDGEMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Orange)

On March 15, 2019, before me, Leslie Bonkowski, a Notary Public, personally appeared **Paul A. Cook**, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Leslie Bonkowski



CALIFORNIA ALL-PURPOSE ACKNOWLEDGEMENT

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }
County of Kern }

On March 28, 2019, before me, Megan Misuraca Notary Public,
personally appeared Eric Averett

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~
subscribed to the within instrument and acknowledged to me that he/~~she~~/~~they~~ executed the same
in his/~~her~~/~~their~~ authorized capacity(ies), and that by his/~~her~~/~~their~~ signature(s) on the instrument
the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of State of California that the foregoing
paragraph is true and correct.



WITNESS my hand and official seal.

SIGNATURE Megan Misuraca

PLACE NOTARY SEAL ABOVE

Though the information below is not required by law, it may prove valuable to persons relying on the document
and could prevent fraudulent removal and reattachment of this form to another document.

Description of attached document

Title or type of document: Memorandum of Agreement -
SGMA - Irvine Ranch.

Document Date: March 28, 2019 Number of Pages: 3 ^{MM}

Signer(s) Other than Named Above: Paul Cook

GROUNDWATER SUSTAINABILITY PLANNING AGREEMENT
BETWEEN ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT
AND
IRVINE RANCH WATER DISTRICT

THIS GROUNDWATER SUSTAINABILITY PLANNING AGREEMENT ("Agreement") is made and entered into as of the Effective Date by and between the ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT ("Rosedale") and the IRVINE RANCH WATER DISTRICT ("IRWD"). Rosedale and IRWD are sometimes referred to individually as a "Party" and collectively as the "Parties."

RECITALS

A. Rosedale is a public agency organized in accordance with the California Water Storage District Law (Division 14, commencing with § 39000 of the California Water Code) for the purpose of acquiring, storing, distributing, and replenishing water supplies within its boundaries in Kern County, California.

B. IRWD is a public agency organized in accordance with the California Water District Law (Division 13, commencing with section 34000 of the California Water Code) to provide water services and certain other services. IRWD's powers and purposes include the acquisition within or without the district in the State of all necessary property, water and water rights for the production, storage, transmission and distribution of water for irrigation, domestic, industrial and municipal purposes and to provide and sell such water at wholesale and retail to customers within its boundaries in Orange County, California.

C. IRWD has agreed to the terms of that certain agreement titled *Sustainable Groundwater Management Act Management Agreement* with Rosedale-Rio Bravo Water Storage District ("Landowners Agreement") providing for Rosedale to include in its chapter of the Kern Groundwater Authority's ("Authority") Groundwater Sustainability Plan ("GSP") IRWD's Strand Ranch property and the Stockdale West property (collectively "IRWD Property"), which are located outside of and adjacent to Rosedale's territorial boundary, a copy of which Landowners Agreement is attached as Exhibit A to this Agreement.

D. On January 13, 2009, Rosedale and IRWD entered into an "Agreement For A Water Banking and Exchange Program," as amended by Amendment No. 1, entered into on or about February 27, 2015 (collectively, the "Strand Ranch Integrated Banking Project Agreement"). On February 4, 2016, Rosedale and IRWD entered into an "Agreement for A Water Banking, Recovery and Exchange Program," as amended by Amendment No. 1, entered into on or about January 16, 2018 (collectively, the "Stockdale Integrated Banking Project Agreement"). The Strand Ranch Integrated Banking Project Agreement and the Stockdale Integrated Banking Project Agreement are collectively referred to as the "Banking Project Agreements."

E. Rosedale and IRWD desire for Rosedale to develop and implement the chapter of the Authority GSP encompassing Rosedale and including the Strand Ranch Integrated Banking Project and the Stockdale Integrated Banking Project (collectively "IRWD Projects") – all to ensure that Rosedale will continue operating the IRWD Projects in an efficient and coordinated manner that complies with the requirements of SGMA and that preserves and meets the Parties' mutual rights and obligations under the respective Banking Project Agreements.

NOW, THEREFORE, the Parties agree as follows:

AGREEMENT

1. Effective Date and Term.

This Agreement shall be effective upon the date when both Parties have signed this Agreement (the "Effective Date"). This Agreement shall remain in effect so long as the IRWD Property is subject to Rosedale's chapter of the Authority's GSP.

2. Rosedale's Incorporation of the Strand Ranch Integrated Banking Project and the Stockdale Integrated Banking Project. Rosedale shall include the IRWD Property within Rosedale's chapter of the Authority's GSP. A map showing the locations of the Strand Ranch property and the Stockdale West property adjacent to Rosedale's southern boundary is attached and incorporated herein as Exhibit B to this Agreement.

3. Preserving Rights and Obligations under the Banking Project Agreements. Rosedale's chapter of the Authority's GSP shall be consistent with and shall preserve all the Parties' respective rights and obligations under the Banking Project Agreements; provided, however, that such rights and obligations must be exercised in a manner that is consistent with the requirements of SGMA, including the avoidance of undesirable results.

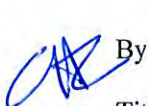
4. Fees and Charges for Mitigation. Rosedale shall not initiate or impose on IRWD's Strand Ranch property or Stockdale West property or on the IRWD Projects on these properties any fee, charge or assessment that pays for mitigation of groundwater production and use effects to which the IRWD Projects do not contribute.

5. Termination. Consistent with section 1, this Agreement shall remain in effect so long as the IRWD Projects and IRWD Property are subject to Rosedale's chapter of the Authority's GSP.

Each Party has executed this Agreement on the date set forth below its signature.

Irvine Ranch Water District

Rosedale-Rio Bravo Water Storage District

By:  Paul Cook
Title: General Manager
Date: 15 MARCH 2019


By: 
Title: General Manager
Date: 3/28/19

Exhibit A

**Sustainable Groundwater Management Act Management Agreement
with
Rosedale-Rio Bravo Water Storage District**

This Sustainable Groundwater Management Act Management Agreement with Rosedale-Rio Bravo Water Storage District (“Agreement”) is made and entered into this 31st day of May, 2018, by and among the Rosedale-Rio Bravo Water Storage District, (“District”) and the landowners identified in Exhibit A (collectively, “Landowners”). District and Landowners are sometimes each individually referred to herein as a “Party” and collectively as the “Parties.”

RECITALS

WHEREAS, Landowners are individuals, or authorized agents of entities, owning real property in Kern County, California (“Landowner Land”), which is generally identified by its respective Kern Assessor's Parcel Number on Exhibit A hereto, and which is located outside of the District's boundaries, which are generally shown on Exhibit B, attached hereto and incorporated by reference.

WHEREAS, District is a Water Storage District comprised of approximately 44,500 acres situated in Kern County.

WHEREAS, the Sustainable Groundwater Management Act (“SGMA”) provides that all basins designated as critically overdrafted high-priority basins shall be managed under a Groundwater Sustainability Plan (“GSP”) or a coordinated GSP by January 31, 2020.

WHEREAS, the Landowner Land is overlying the Kern County Sub-basin (Basin Number 5-022.14, DWR Bulletin 118) within the San Joaquin Valley Groundwater Basin (“Basin”), a DWR designated high-priority and critically overdrafted basin and, therefore, the Basin, and all portions thereof, must be managed by a local agency under a GSP by January 31, 2020.

WHEREAS, SGMA allows local agencies to become a groundwater sustainability agency (“GSA”) to engage in the sustainable management of groundwater pursuant to the provisions of SGMA. Private landowners, either individually or collectively, are not local agencies under SGMA, and therefore cannot be members of a GSA.

WHEREAS, District is a member of the Kern Groundwater Authority Groundwater Sustainability Agency (“Kern GSA”), under which the District will work collaboratively with with other interested local agencies to develop and implement a Groundwater Sustainability Plan (“GSP”) to manage a portion of the Basin for which the Kern GSA has elected to be the GSA pursuant to SGMA.

WHEREAS, with respect to SGMA jurisdictional considerations, the Landowner Land is within the jurisdictional boundaries of the County of Kern, which is also a member of the Kern GSA.

WHEREAS, the Kern GSA is planning to organize its GSP in chapters that prescribe the management actions to be taken to comport with the requirements of SGMA. Each chapter will be developed by one or more local agencies that are members of the Kern GSA. Kern GSA has encouraged its members developing chapters of the GSP to provide GSP coverage for lands located in close proximity to their jurisdictional boundaries, but which are, for SGMA jurisdictional considerations, located in the areas covered by the County of Kern.

WHEREAS, Landowners desire to be included in the chapter to be developed by the District (the "District's GSP Chapter") to afford GSP coverage to the Landowner Land. In this respect, Landowners are willing to provide local information and assistance to the development of the GSP that is ultimately adopted by the Kern GSA that will regulate the Landowner Land under SGMA. Thus, the Landowners enter into this Agreement for the purpose of Landowners attempting to attain GSP coverage for their land through the District's GSP Chapter.

WHEREAS, the Landowners contemplate an arrangement whereby Landowners independently form a group from among owners of the Landowner Land to serve as an advisory panel to the District with respect to matters covered by this Agreement. The Landowners will provide information for their respective real property and funding for the process for the District to include the Landowner Land within the the District's GSP Chapter. The approval of any GSP covering the Landowner Land will ultimately lie with the Kern GSA and the State of California, which will consider the completeness and effectiveness the GSP to be developed under SGMA. Due to the mandated deadlines of SGMA and its associated regulations, the District will initiate proceedings to amend the area to be covered by District's GSP Chapter to include Landowner Land, but must also concurrently begin preparation of the the District's GSP Chapter, and thus, the Landowners consent to and authorize the District to hire the necessary consultants on behalf of the Landowners, and any such associated fees or costs of such consultants (i.e. engineers, attorneys, accountants, etc.) shall be borne solely by the Landowners and paid promptly upon being invoiced by either the District or by such consultants directly. The GSP, after being approved and agreed to by the Kern GSA and ultimately the State of California, shall be managed by the Kern GSA, with input and coordination with the District as a member of the Kern GSA.

WHEREAS, the Landowners desire that the Landowner Land be included within the District's GSP Chapter, so as to provide a process for the Landowners to be subject to a GSP and allow the Landowners to be represented by consultants and other necessary individuals to assist in the completion of the Kern GSA's GSP. The Landowners shall be independently responsible to provide information and funding at the request of the District to maintain and support the efforts to include the Landowner Land within the District's

GSP Chapter so as to comport with SGMA and any future statutory laws and regulations that may be adopted to amend SGMA, supplement SGMA, replace SGMA or other laws or regulations adopted to engage in the sustainable management of groundwater in relation to the Landowner Land.

WHEREAS, the Parties do not intend that the inclusion of the Landowner Land within the District's GSP Chapter, or that this Agreement in any way provides Landowners with a right to any portion of the water supplies of the District to which the owners of the land located within the District have a right.

NOW, THEREFORE, in consideration of the foregoing Recitals and the following terms and conditions, it is agreed by and between the Parties as follows:

I. PURPOSE OF AGREEMENT

The Parties enter into this Agreement solely for the purpose of providing the Landowners a process to attempt to comply with SGMA through the inclusion of the Landowner Lands within the District's GSP Chapter. Neither the District nor any landowners within the District's current boundaries are committing anything to the Landowner Land except for the inclusion of the Landowner Land within the District's GSP Chapter, provided that all Landowners comply with the terms of this Agreement. This Agreement is intended to form the basis of the Parties' understanding regarding the terms and conditions of including the Landowner Land within the District's GSP Chapter, and their individual rights and responsibilities subsequent to such inclusion.

II. TERMS AND CONDITIONS OF INCLUDING LANDOWNER LAND WITHIN THE DISTRICT'S GSP CHAPTER

1. Commitment to Include Landowner Land in District's GSP Chapter. The District hereby agrees to make reasonable efforts to include the Landowner Land within the District's GSP Chapter, and the Landowners hereby agree for the Landowner Land to be included within the District's GSP Chapter, provided that such inclusion is approved by all necessary governmental bodies and the Parties have complied with all provisions of this Agreement.

2. Regulation Contingent on Funding. The District and Landowners acknowledge that funding for the District's efforts hereunder shall be provided on a long-term basis, if possible, through the development and subsequent payment by the Landowners of a land-based assessment or water charge as authorized by SGMA or other legally authorized fee or funding mechanism. Prior to the establishment of said land-based assessment or water charge for the Landowner Land, the Landowners acknowledge and agree that the District's inclusion of the Landowner Land within the District's GSP Chapter, and District's efforts to include the Landowner Lands with the District's GSP Chapter pursuant to this Agreement, are contingent upon Landowners' regular and timely payment of (1) the general administrative expenses of the District that are attributable to the District's efforts hereunder, (2) the Landowners' pro-rata share of costs for consultants retained by the District for the purposes of developing or implementing the District's GSP

Chapter, and (3) any administrative or other costs the District incurs in implementing SGMA and coordinating with KGA for SGMA purposes concerning the Landowner Land.

Upon final execution of this Agreement, District shall bill and Landowners shall pay the District \$10.00 per acre of Landowner Land as an initial payment to fund the District's (and necessary consultants') efforts made pursuant to this Agreement, any proposition 218 or other land-based fee/funding proceedings, and any other activities related to the GSP processes.

3. Determination of Funding Obligation; Landowner Advisory Committee. The amount of any additional payments required for services rendered by the District or others for the purposes of fulfilling the obligations set forth herein, or the formula for the calculation of such payments, and the method of such payments, shall be determined by the District, in consultation with Landowners, as soon as reasonably practicable. District shall create a Landowner Advisory Committee, comprised of not less than three (3) and not more than five (5) Landowners to provide the District input and guidance on Landowner issues relating to the development and implementation of the District's GSP Chapter.

4. Failure to Satisfy Funding Obligation & GSP Requirements. Landowners acknowledge and agree that if, for any reason, any Landowner refuses or otherwise fails to remit any payment required hereunder, in the amount and using the method determined and requested by the District, or fails to comply with the requirements of the GSP and its management and regulation, ("Defaulted Landowner") the District:

(a) shall be relieved of any and all obligation to proceed with including the Defaulted Landowner's Land within the District's GSP Chapter;

(b) shall be relieved of any and all obligation to provide the services and obligations enumerated in this Agreement to a Defaulted Landowner; and

(c) may, in its sole and absolute discretion, seek to remove the Defaulted Landowner's Land from the District's GSP Chapter, at Defaulted Landowner's expense, and in such event the Defaulted Landowner agrees to obtain regulation under SGMA by some other method separate and apart from the District pursuant to the terms for a withdrawing Landowner set forth in Paragraph 8 of this Agreement.

5. No Protest in Case of Removal of Defaulted Landowner Land; Duty to Cooperate. Landowners hereby agree that, if any Landowner breaches the terms of this Agreement, including but not limited to the refusal or failure to remit any payment required herein, following reasonable notice of alleged breach and opportunity to cure, the District, may in its sole and absolute discretion, seek to remove the Defaulted Landowner's Land from the District's GSP Chapter, and if the District does so, the Landowners shall not lodge any protest, participate in any protest hearing, or act in any way to influence the outcome of the District's decision. Landowners further agree to work in good faith with the District to provide the District any non-privileged materials or information in Landowners' possession or control that may, in the District's sole determination, be necessary or

appropriate to effectuate the District's decision to remove the Defaulted Landowner Land from the District's GSP Chapter, including, but not limited to, providing timely responses to requests for non-privileged information and meeting with District representatives to establish terms of removal.

6. Disclaim Water Rights. Landowners expressly disclaim any right to any District water supplies other than through any negotiated purchase, transfer, or exchange any Landowner has obtained or may obtain wholly outside of this Agreement and not related to this Agreement. Landowners understand and agree that as a result of the foregoing disclaimer, among other things, inclusion of the Landowner Lands within the District's GSP Chapter will not entitle them to receive any portion of the District's water supply. Landowners further understand and agree the sole purpose of this Agreement is to provide the Landowners a process for them obtain coverage by the Kern GSA's GSP, and thus, SGMA compliance for the Landowners' by affording Landowners the benefit of inclusion within the District's GSP Chapter. Any GSP must ultimately be approved and agreed to by the District and thereafter by the Kern GSA's GSP and such GSP shall be solely managed and regulated by the Kern GSA in coordination with the District, supported in part by information and funds provided by Landowners. Landowners further understand and agree that any other benefits accruing to the Landowner Land and/or to Landowners as a result of this Agreement are purely incidental and shall not give rise to any expectation, entitlement, or right to District water supplies of any kind, including, but not limited to, Kern River water, Stater Water Project water, Central Valley Project water, carryover supplies, supplies from any lake, river, stream, manmade conveyance, or aquifer that the District purchases, acquires, transfers, exchanges, takes receipt of or otherwise controls, including groundwater supplies or any return flows that may enter the underground aquifer as a result of delivery within District of any of the foregoing water supplies, or any other designation or classification of District water whatsoever, whether in existence at the time of this Agreement is executed or created at some future time. Other than the reservations noted above, nothing in this Agreement is intended to limit current or future groundwater rights of the Landowners beyond that imposed by operation of law.

7. No Voluntary Consent. Once the Landowner Land is included within the District's GSP Chapter and the GSP is adopted by the Kern GSA and approved by DWR, Landowners hereby agree not to consent to the inclusion of the Landowner Lands within another chapter of the Kern GSA's GSP developed by any entity other than the District without the District's express prior written consent.

8. Withdrawal of Landowner. Until the GSP is adopted by the Kern GSA and approved by DWR, any Landowner may elect to withdraw from this Agreement and be excluded from the District's GSP Chapter, and instead be included within another chapter of the Kern GSA's GSP developed by another member of the Kern GSA or otherwise seek alternative lawful SGMA compliance, by providing written notice to the District and all other Landowners. Any Landowner which elects to withdraw shall be responsible for all costs and obligations associated with the withdrawal, including but not limited to any amendments or revisions of the District's GSP Chapter or the Kern GSA's GSP required to maintain compliance with SGMA in the event of their withdrawal. The District may

impose additional requirements upon any withdrawing Landowner, to ensure compliance with SGMA, the GSP Chapter or the Kern GSA's GSP, and any financial obligations resulting from the withdrawal of such Landowner. Upon any withdrawal, the withdrawing Landowner shall arrange for the withdrawn lands to be covered by another chapter of the Kern GSA's GSP developed by another member of the Kern GSA or otherwise seek alternative lawful SGMA compliance, so that such lands of the withdrawing Landowner would continue to be compliant with SGMA. Any withdrawal from the District's GSP Chapter shall not be effective unless and until the withdrawing landowner has made such arrangements and the alternative means of SGMA compliance is effective for the such lands of the withdrawing Landowner.

9. Notice of Agreement. Landowners agree to provide a copy of this Agreement to each and every person who receives any interest in any portion of the Landowner Lands.

10. Runs with the Land. The benefits and burdens of this Agreement are intended to attach to and run with the land generally identified in Exhibit A to this Agreement, are related to the direct benefit, use, maintenance and improvement of the Landowner Land, and shall be binding on and inure to the benefit of the Parties and their respective legal representatives, successors, heirs and assigns. It is the intent of the Landowners from the date of this Agreement, that the equitable servitudes, covenants, conditions, restrictions, assessments and other duties and obligations herein or in the District's GSP Chapter (so long as such lands have not been withdrawn pursuant to Section 8 hereof) run with the land and shall be binding on any successors or assigns. All persons or entities claiming under the Parties, or who accept deeds, leases, easements or other grants of conveyances to any portion of the Landowner Land agree that they shall be personally bound by all of the provisions of this Agreement, and shall conform to and observe the provisions of this Agreement and the District's GSP Chapter and the Kern GSA's GSP. The Parties agree that a covenant evidencing this Agreement and its nature as attaching to and running with the land shall be executed by each Landowner and recorded with the Clerk/Recorder of the County of Kern as a condition to the the inclusion of the Landowner Lands within the District's GSP Chapter and the Kern GSA's GSP.

11. Entire Agreement; Amendments or Modifications. The Parties agree that this Agreement contains the entire Agreement and understanding concerning the subject matter among the Parties and supersedes and replaces all prior negotiations of proposed agreements, written or oral, if any. This Agreement shall not be amended or modified except in writing, executed and agreed to by all of the Parties to this Agreement.

12. Effective Illegality. If any paragraph, sentence, clause, or phrase becomes illegal, null, or void for any reason or is held by any court of competent jurisdiction to be illegal, null, void, or against public policy, the remaining paragraphs, sentences, clauses, or phrases are not affected, and the Parties must negotiate an equitable adjustment of the affected provision with a view toward effecting the purpose of this Agreement.

13. Construction. Headings are used for convenience only and have no force or effect in the construction or interpretation of this Agreement. As used in this Agreement, the singular includes the plural and the masculine includes the feminine and neuter. This Agreement is a joint product of all Parties and is to be interpreted as such. This Agreement: (1) shall not be construed against the Party preparing it; (2) shall be construed as if the Parties had jointly prepared this Agreement; and (3) shall be deemed their joint work product. Each and every provision of this Agreement shall be construed as through the Parties participated equally in the drafting hereof, and, therefore, any uncertainty or ambiguity shall not be interpreted against any one Party. As a result of the foregoing, any rule of construction that a document is to be construed against the drafter shall not be applicable.

14. No Third-Party Rights. Nothing in this Agreement, whether expressed or implied, either is intended, or is to be construed, or otherwise interpreted as, conferring any rights or remedies on any third parties. Also, nothing in this Agreement gives any third parties any rights of subrogation against any Party.

15. Governing Law and Venue. This Agreement is entered into and performed in the State of California and is to be interpreted pursuant to the internal substantive law, and not the law of conflicts, of the State of California. Venue in any action brought under this Agreement shall be in the Superior Court of the County of Kern, State of California.

16. Indemnification. Landowners ("Indemnifying Party") shall protect, defend, indemnify and hold harmless the District and its directors, officials, officers, managers, employees, contractors and agents ("Indemnified Party") from and against all liabilities, obligations, claims, damages, penalties, causes of action, costs and expenses (including, without limitation, attorneys' fees and expenses) imposed upon, incurred by, or asserted against an Indemnified Party arising out of, resulting from, or in connection with any action taken or omitted to be taken by the Indemnifying Party under this Agreement, including but not limited to the following: (i) the actions or omissions by Landowners or Landowners' affiliates, members, managers, employees, contractors and agents related to this Agreement and the GSP; (ii) Landowners or Landowners' affiliates, members, managers, employees, contractors and agents' violation of any applicable laws or regulations; or (iii) the failure on the part of Landowners or Landowners' affiliates to perform or comply with any of the terms of this Agreement, provided, however, that such indemnity shall not extend to any such suit, claim, or damage to the extent caused solely by the negligent or wrongful acts or omissions of any Indemnified Party. The indemnification provisions in this section shall survive expiration or termination of this Agreement, and shall not be restricted to insurance proceeds, if any, received by the District or its directors, officials, officers, managers, employees, contractors and agents.

17. Effective Date And Term Of Agreement. The effective date of this Agreement shall be the date last signed below. This Agreement shall remain in effect with respect to each particular Landowner unless and until such Landowner fails to perform according to the terms of this Agreement or such Landowner withdrawals from the Agreement pursuant to Section 8 hereof. This Agreement shall have no force or effect upon

a determination that the performance of any provision of this Agreement will result or has resulted in the violation of state or federal law.

“District”

ROSEDALE-RIO BRAVO
WATER STORAGE DISTRICT

By:  Eric L. Avenett

Title: General Manager

Date: Sept. 13, 2018

[landowner signatures and property APN's on following pages]

Landowner

AFFENTRANGER & SONS DAIRY

Franz Affentranger
Signature

Franz Affentranger / Partner owner
Printed Name/Title

463-030-15-00-8
APN(s)

463-030-12-00-9, 463-030-13-00-2

5-31-2018
Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

HEIN, MARTIN & KATHRYN FAMILY TRUST

Signature

Printed Name/Title

104-012-12-5 & 408-210-14-4
APN(s)

Date

Landowner

HEIN, MARTIN H

Signature

Printed Name/Title

104-011-15-0 & 104-012-24-0
APN(s)

Date

Landowner

AFFENTRANGER & SONS DAIRY

Signature

Printed Name/Title

463-030-15-00-8

APN(s)

463-030-12-00-9, 463-030-13-00-2

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

HEIN, MARTIN & KATHRYN FAMILY TRUST

Signature

Martin Hein
Printed Name/Title

104-012-12-5 & 408-210-14-4
APN(s)

Date

5-31-2018

Landowner

HEIN, MARTIN H

Signature

John Zimmerer
Printed Name/Title

104-012-24-0
APN(s)

Date

5-31-2018

Landowner

HOPKINS FAMILY L P

Michael D. Hopkins
Signature

MICHAEL D. HOPKINS CEO
Printed Name/Title

104-030-01-01-8
APN(s)

5-22-18
Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

LEE, ROBERT & STEPHANIE 2006 FAMILY TRUST

Signature

Printed Name/Title

159-010-07-00-1
APN(s)

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

HOPKINS FAMILY L P

Signature

Printed Name/Title

104-030-01-01-8
APN(s)

Date

Landowner

LEE, ROBERT & STEPHANIE 2006
FAMILY TRUST

Signature

Printed Name/Title

159-010-07-00-1
APN(s)

Date

Landowner

LAYSHOT FAMILY TRUST

Alan D Layshot
Signature

Alan D Layshot, Trustee
Printed Name/Title

159-010-06-00-8
APN(s)

5-31-2018
Date

Landowner

LAYSHOT FAMILY TRUST

Erma H. Layshot - Trustee
Signature

Erma H. Layshot / Trustee
Printed Name/Title

159-010-06-00-8
APN(s)

5-31-2018
Date

Landowner

HOPKINS FAMILY L P

Signature

Printed Name/Title

104-030-01-01-8

APN(s)

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

LEE, ROBERT & STEPHANIE 2006 FAMILY TRUST

Signature

Robert Lee / Trustee

159-010-07-00-1

APN(s)

Date

5/15/18

Landowner

Signature

Stephanie Lee / Trustee

159-010-07-00-1

APN(s)

Date

5/15/18

Landowner

MC CARTHY, MICHAEL & LINDA FAMILY TRUST OF 2006

Michael McCarthy

Signature

MICHAEL MCCARTHY / TRUSTEE
Printed Name/Title

159-020-04-005
APN(s)

5/31/2018
Date

Landowner

LOUISE F. MC CARTHY FAMILY TRUST DATED DECEMBER 6, 2000

Louise F. McCarthy

Signature

LOUISE F. MCCARTHY / TRUSTEE
Printed Name/Title

159-020-04-005
APN(s)

5/31/2018
Date

Landowner

OCAFRAIN, MARCEL & JOSEPHINE REV TRUST

Josephine Ocafrain

Signature

Josephine OCAFRAIN
Printed Name/Title TRUSTEE

104-040-01-00-2
APN(s)

5-31-2018
Date

Landowner

Marcel Ocafrain

Signature

MARCEL OCAFRAIN
Printed Name/Title TRUSTEE

APN(s)

5-31-2018
Date

Landowner

MARVIN WEIDENBACH FARMS

Ruth A. Weidenbach, Partner

Signature

Ruth A. Weidenbach, Partner
Printed Name/Title

463-020-24-8, 463-020-08-1, 463-020-10-7,
APN(s)

463-030-15-1, & 463-020-17-2,

463-020-12-3, 463-020-13-1

May 30, 2018

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

WONDERFUL NUT ORCHARDS LLC

Signature

Printed Name/Title

160-130-36
APN(s)

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

WEIDENBACH FAMILY FARMS LLC

Signature

Printed Name/Title

463-020-24-8

APN(s)

Date

Landowner

MARVIN WEIDENBACH FARMS

Signature

Printed Name/Title

463-020-08-1, 463-020-10-7,

APN(s)

463-020-12-3, 463-020-13-1,

463-030-15-1, & 463-020-17-2

Date

Landowner

WONDERFUL NUT ORCHARDS LLC

Signature

Cheyl Postarich / CFO
Printed Name/Title

160-130-36

APN(s)

Date

5/21/18

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

DIAMOND FARMING CO

Jeff Huchaby

Signature

Jeff Huchaby, President

Printed Name/Title

524-020-15, 524-020-16 &
APN(s)

524-020-20

Date

Landowner

BOLTHOUSE LAND CO LLC

Signature

Printed Name/Title

104-012-03, 104-012-06,
APN(s)

104-012-20, & 104-012-19

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

DIAMOND FARMING CO

Signature

Printed Name/Title

524-020-15, 524-020-16 &
APN(s)

524-020-20

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

BOLTHOUSE LAND CO LLC

Signature

Anthony L. Leggio, Manager
Printed Name/Title

104-012-03, 104-012-06,
APN(s)

104-012-20, & 104-012-19

Date

05/22/2018

Landowner

Signature

Printed Name/Title

APN(s)

Date

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EXHIBIT "B"

RECORDING REQUESTED BY AND
WHEN RECORDED, MAIL TO:

ROSEDALE-RIO BRAVO WATER
STORAGE DISTRICT
P.O. Box 20820
Bakersfield, CA 93390-0820

SPACE ABOVE THIS LINE FOR RECORDER'S USE

**RECORDING FOR THE BENEFIT OF A GOVERNMENT AGENCY
NO FEE PURSUANT TO CA. GOV'T CODE SECTION 6103**

**Kern County APN's: 160-010-02, 160-010-07, 160-010-22, 160-010-60, 160-010-21,
160-020-12 and 160-020-23**

AMENDMENT NO. 1

to

Sustainable Groundwater Management Act Management Agreement with Rosedale-Rio Bravo Water Storage District

This Amendment No. 1 to Memorandum of Agreement - Sustainable Groundwater Management Act Management Agreement with Rosedale-Rio Bravo Water Storage District is made and entered into, by and among the Rosedale-Rio Bravo Water Storage District, ("District") and the landowner identified by its name and signature below ("Landowner"). District and Landowner are sometimes each individually referred to herein as a "Party" and collectively as the "Parties."

RECITALS

WHEREAS, Landowner is an owner of certain real property in Kern County, California ("Landowner Land"), which property is generally identified by its Kern Assessor's Parcel Number(s) listed above and along with the Landowner's signature on this document, and which property is located outside of the District's boundaries.

WHEREAS, Landowner desires the District's assistance with respect to compliance with the Sustainable Groundwater Management Act ("SGMA");

WHEREAS, District and Landowner have agreed to the terms of a *Sustainable Groundwater Management Act Management Agreement* (dated May 31, 2018 and recorded on September 13, 2018 in the official records of Kern County as Document No. 000218120706) in order that the District may provide Landowner with assistance with respect to SGMA compliance;

WHEREAS, District and Landowner desire to amend the *Sustainable Groundwater Management Act Management Agreement* by this Amendment No. 1.

WHEREAS, this Amendment No. 1 shall be recorded in the official records of Kern County, in order that third parties may have notice of the respective rights and obligations of

the District and Landowner with respect to SGMA compliance and the Landowner Land.

NOW, THEREFORE, in consideration of the foregoing Recitals and all of the terms and conditions of the above-referenced *Sustainable Groundwater Management Act Management Agreement*, it is agreed by and between the Parties that said *Sustainable Groundwater Management Act Management Agreement* shall be amended as follows and all other terms of said agreement not amended hereby shall remain in full force and effect:

Section 8 of the Agreement is hereby amended in its entirety to read as follows:

8. Withdrawal of Landowner. At any time, whether before or after the GSP is adopted by the Kern GSA and approved by DWR, the Landowner shall have the right to withdraw from this Agreement and be excluded from the District's GSP Chapter by providing 10-days prior written notice to the District. If Landowner elects to withdraw, then the Landowner shall be responsible for advance payment of all costs and obligations associated with the withdrawal, including but not limited to, any amendments or revisions of the District's GSP Chapter or the Kern GSA's GSP required to maintain compliance with SGMA in the event of their withdrawal. The District may impose additional requirements upon the withdrawing Landowner to satisfy any financial obligations resulting from the withdrawal of such Landowner. Upon withdrawal, the Landowner shall arrange for the withdrawn lands to be covered by another chapter of the Kern GSA's GSP or otherwise seek alternative lawful SGMA compliance.

Section 16 of the Agreement is amended in its entirety to read as follows:

16. Indemnification. The Landowner shall protect, defend, indemnify and hold harmless the District, the Kern Groundwater Authority ("KGA"), the Kern GSA, and their respective members, directors, officials, officers, managers, employees, contractors and agents ("Indemnified Party") from and against all liabilities, obligations, claims, damages, penalties, causes of action, costs and expenses (including, without limitation, attorneys' fees and expenses) imposed upon, incurred by, or asserted against an Indemnified Party arising out of, resulting from, or in connection with (a) the indemnification obligation undertaken by the District with respect to the Landowner or the Landowner Land under the Provision of Jurisdiction Agreement Regarding the Sustainable Groundwater Management Act Between the Kern Groundwater Authority and Rosedale-Rio Bravo Water Storage District (in the form approved by the Kern Groundwater Authority in September, 2019, which is attached to this Amendment No. 1 as Exhibit A), or (b) any action taken or omitted to be taken by the Landowner under this Agreement, including but not limited to the following: (i) the actions or omissions by Landowner or Landowner's affiliates, members, managers, employees, contractors and agents related to this Agreement, the Kern GSA GSP, or SGMA; (ii) the Landowner or Landowner's affiliates, members, managers, employees, contractors and agents' violation of any applicable laws or regulations; (iii) the failure on the part of the Landowner or Landowner's affiliates to comply with the terms of this Agreement; or (iv)

the inclusion of the Landowner Land in the District's GSP Chapter. The foregoing provision does not include and in no way obligates the Landowner with respect to any liabilities, obligations, claims, damages, penalties, causes of action, costs and expenses, including litigation costs and attorney's fees, to the extent caused by the negligent or wrongful acts or omissions of any Indemnified Party. For purposes of clarity, the Landowner's obligations provided under this Section 16 shall be limited to its Landowner Land included under this Agreement. The indemnification provisions in this Section shall not be restricted to insurance proceeds, if any, received by any Indemnified Party and shall survive expiration or termination of this Agreement except that the Landowner's obligations under this Section shall cease five years following such expiration or termination.

Section 18 is hereby added to the Agreement as follows:

18. Covenant Not to Sue or Contest. In consideration of the District's inclusion of Landowner's Land into the District's GSP Chapter and Landowner's right to withdraw as provided in Section 8, the Landowner shall not sue or take any judicial or administrative action against the District, the KGA or the Kern GSA for any claims related to this Agreement. The Landowner acknowledges and agrees that initiation of a lawsuit, judicial, or administrative action or other legal challenge against the District, the KGA or the Kern GSA for claims related to the inclusion of the Landowner's Land in the District's GSP Chapter will render the Landowner initiating the action a Defaulted Landowner (as defined by Section 4 of this Agreement). Landowner's covenant under this Section is limited solely to claims arising from the Landowner's Land covered by this Agreement and does not in any way apply to any other land that Landowner owns now, or in the future. Moreover, nothing in this Section shall prevent or preclude Landowner from actively participating in the development and implementation of the District's GSP Chapter, any other Kern GSA member's GSP Chapter or the KGA's GSP, or any subsequent review by the State of California of the Kern GSA GSP or any GSP Chapter. Subject to and without limiting the foregoing covenant, Landowner otherwise retains all rights to prosecute or participate in any action or proceeding which might affect Landowner's rights to extract, use and store groundwater in the Basin, including without limitation an action to quiet title, for declaratory relief, and/or Basin groundwater adjudication. The obligations and agreements in this Section shall survive any expiration or termination of this Agreement.

Section 19 is hereby added to the Agreement as follows:

19. Termination in the Event of Adjudication. In the event that any person or entity commences a comprehensive groundwater adjudication concerning the Basin pursuant to California Code of Civil Procedure, sections 830 et seq., or any other action or proceeding that seeks to determine or declare Landowner's rights to extract, use or store water in the Basin, either Party may elect to terminate this Agreement by 10-days

prior written notice to the other Party. Termination pursuant to this paragraph operates as a complete and full termination of all obligations under this Agreement and neither Party will have any remaining obligation or liability to the other Party, except for those provisions which expressly survive termination of this Agreement and any payment obligations of the Landowner as described in Section 8 of this Agreement.

Section 20 is hereby added to the Agreement as follows:

20. Clear Title. In the event this Agreement is terminated the District shall promptly record in the Official Records of the County of Kern a document in a form acceptable to Landowner terminating the Agreement and removing the Agreement as a cloud or encumbrance on Landowner's title.

IRVINE RANCH WATER DISTRICT

APN(s): **160-010-02, 160-010-07, 160-010-22, 160-010-60, 160-010-21, 160-020-12 and 160-020-23**

Signature
By: _____
Printed Name
Title: _____
Dated: _____

Signature
By: _____
Printed Name
Title: _____
Date: _____

**ROSEDALE-RIO BRAVO
WATER STORAGE DISTRICT:**

Signature
By: Eric Averett, General Manager
Dated: _____

Exhibit A - Amendment No. 1 - SGMA Management Agreement

PROVISION OF JURISDICTION AGREEMENT REGARDING THE SUSTAINABLE
GROUNDWATER MANAGEMENT ACT BETWEEN THE KERN GROUNDWATER
AUTHORITY AND ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

This Sustainable Groundwater Management Act Jurisdiction Agreement
("Agreement") between the Kern Groundwater Authority ("KGA") and Rosedale-Rio Bravo
Water Storage District ("District") is made and entered into this ____ day of
_____, 2019. KGA and District are sometimes each individually referred to
herein as a "Party" and collectively the "Parties."

RECITALS

WHEREAS, on August 29, 2014, the California Legislature passed comprehensive groundwater
legislation contained in SB 1168, SB 1319 and AB 1739. Collectively, those bills, as
subsequently amended, enacted the "Sustainable Groundwater Management Act" ("SGMA").
Governor Brown signed the legislation on September 16, 2014 and it became effective on
January 1, 2015; and

WHEREAS, the KGA and the District overly portions of the Kern County subbasin (Basin
Number 5-022.14, DWR Bulletin 118) within the San Joaquin Valley Groundwater Basin, a
DWR designated high-priority and critically overdrafted basin; and

WHEREAS, SGMA provides that all basins designated as critically overdrafted high-priority
basins must be managed under a Groundwater Sustainability Plan ("GSP") or a coordinated GSP
by January 31, 2020; and

WHEREAS, SGMA requires GSPs to be developed and implemented by Groundwater
Sustainability Agencies ("GSAs"); and

WHEREAS, on March 22, 2017, Kern County (the "County"), the District, and other local
agencies formed the KGA, a joint powers authority ("JPA"), by executing an "AMENDED AND
RESTATED JOINT POWERS AGREEMENT" pursuant to the Joint Exercise of Powers Act
(Government Code Sections 6500, et seq.); and

WHEREAS, on April 27, 2017, the KGA elected to be a GSA under SGMA in order to pursue
groundwater management activities within the boundaries of participating members; and

WHEREAS, the District is a member of the Kern Groundwater Authority Groundwater
Sustainability Agency ("KGA GSA"); and

WHEREAS, the KGA is working collaboratively with its members to organize the KGA GSP in
chapters, each of which will be developed by KGA members; and

WHEREAS, within the KGA boundaries, certain areas are known as "undistricted lands."
Undistricted lands are areas of the basin not within the service area of a general KGA member;
and

WHEREAS, under SGMA, groundwater management of undistricted lands is the County's
responsibility and, accordingly, was to be included in the County's chapter of the KGA GSP; and

WHEREAS, on December 11, 2018, the County's Board of Supervisors voted to withdraw the County from the KGA and leave the undistricted lands without SGMA management; and

WHEREAS, in order to maximize the SGMA management of undistricted lands, the District has identified specific undistricted lands, identified in Exhibit A, it may manage in its GSP chapter; and

WHEREAS, in order to facilitate the District's management of undistricted lands, the KGA may have to provide SGMA jurisdiction over the undistricted lands; and

WHEREAS, the Parties have entered into this Agreement to set forth the terms governing the KGA's lending of SGMA jurisdiction to the District.

THEREFORE, in consideration of the mutual promises set forth below and to implement the goals described above, the Parties agree as follows:

1. Provision of SGMA Jurisdiction to the District. The KGA hereby agrees to provide SGMA jurisdiction to the District for the express purpose of enabling the District to incorporate the undistricted lands identified in Exhibit A into its chapter of the KGA GSP.
2. District's Agreement with Undistricted Landowners. For any undistricted landowner whose lands are incorporated into the District's GSP, the District agrees that it will enter into a separate agreement with the undistricted landowner whereby the landowner agrees to, at a minimum: (1) comply with the KGA GSP provisions; (2) not to sue or otherwise challenge the District, the KGA related to the jurisdiction provided herein; and (3) indemnify the District from and against all liabilities, obligations, claims, damages, penalties, causes of action, costs and expenses (including, without limitation, attorneys' fees and expenses) imposed upon, incurred by, or asserted against the District arising out of, resulting from, or in connection with any action taken or omitted to be taken by the landowner under the agreement with the District.
3. District Indemnification of the KGA. The District hereby agrees to protect, defend, indemnify and hold harmless the KGA and its directors, officials, officers, managers, employees, contractors and agents from and against all liabilities, obligations, claims, damages, penalties, causes of action, costs and expenses (including, without limitation, attorneys' fees and expenses) imposed upon, incurred by, or asserted against the KGA arising out of, resulting from, or in connection with the District's management of undistricted lands by virtue of the SGMA jurisdiction provided to the District under this Agreement. The Parties agree that the foregoing indemnification provision does not include and in no way obligates the District to defend the KGA from any claims, damages, losses, judgements, liabilities, expenses, or other costs, including litigation costs and attorney's fees directly caused by the KGA, or its officers, directors, employees or agents negligence or wrongful acts.

4. No Guarantee of Continued Jurisdiction. KGA SGMA jurisdiction is based on the jurisdictional service area of its existing general, associate, and cooperative members. To the extent the membership of the KGA is altered, the KGA jurisdiction may change. KGA does not guarantee and cannot guarantee the jurisdiction it provides pursuant to this Agreement will remain constant or unchanged. To the extent the jurisdiction contemplated in this Agreement is altered and such jurisdiction, authority, or legal capacity to provide jurisdiction pursuant to this Agreement is limited or no longer exists, the Agreement shall terminate. Neither KGA, nor its members, shall not be liable for any liabilities, obligations, claims, damages, penalties, causes of action, costs and expenses that occur or are related to termination pursuant to this section.
5. Construction. Headings are used for convenience only and have no force or effect in the construction or interpretation of this Agreement. As used in this Agreement, the singular includes the plural and the masculine includes the feminine and neuter. This Agreement is a joint product of all Parties and is to be interpreted as such. This Agreement: (1) shall not be construed against the Party preparing it; (2) shall be construed as if the Parties had jointly prepared this Agreement; and (3) shall be deemed their joint work product. Each and every provision of this Agreement shall be construed as through the Parties participated equally in the drafting hereof, and, therefore, any uncertainty or ambiguity shall not be interpreted against any one Party. As a result of the foregoing, any rule of construction that a document is to be construed against the drafter shall not be applicable.
6. Effective Date and Term of Agreement. The effective date of this Agreement shall be the date last signed below. This Agreement shall remain in effect unless terminated by the unanimous consent of the Parties.
7. Complete Agreement. The Parties agree that this Agreement contains the entire Agreement and understanding concerning the subject matter among the Parties and supersedes and replaces all prior negotiations of proposed agreements, written or oral, if any. This Agreement shall not be amended or modified except in writing, executed and agreed to by both Parties to this Agreement.
8. No Third-Party Rights. Nothing in this Agreement, whether expressed or implied, either is intended, or is to be construed, or otherwise interpreted as, conferring any rights or remedies on any third parties. Also, nothing in this Agreement gives any third parties any rights of subrogation against any Party.
9. Governing Law and Venue. This Agreement is entered into and performed in the State of California and is to be interpreted pursuant to the internal substantive law, and not the law of conflicts, of the State of California. Venue in any action brought under this Agreement shall be in the Superior Court of the County of Kern, State of California.

IN WITNESS WHEREOF, the Parties hereto have caused their names to be affixed by their proper and respective representatives as of the day and year first above-written.

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Exhibit "C"

FIRST AMENDED GROUNDWATER SUSTAINABILITY PLANNING AGREEMENT

BETWEEN ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT AND IRVINE RANCH WATER DISTRICT

THIS FIRST AMENDED GROUNDWATER SUSTAINABILITY PLANNING AGREEMENT ("First Amended Agreement") is made and entered into as of the Effective Date by and between the ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT ("Rosedale") and the IRVINE RANCH WATER DISTRICT ("IRWD"). Rosedale and IRWD are sometimes referred to individually as a "Party" and collectively as the "Parties."

RECITALS

A. Rosedale is a public agency organized in accordance with the California Water Storage District Law (Division 14, commencing with § 39000 of the California Water Code) for the purpose of acquiring, storing, distributing, and replenishing water supplies within its boundaries in Kern County, California.

B. IRWD is a public agency organized in accordance with the California Water District Law (Division 13, commencing with section 34000 of the California Water Code) to provide water services and certain other services. IRWD's powers and purposes include the acquisition within or without the district in the State of all necessary property, water and water rights for the production, storage, transmission and distribution of water for irrigation, domestic, industrial and municipal purposes and to provide and sell such water at wholesale and retail to customers within its boundaries in Orange County, California.

C. On January 13, 2009, Rosedale and IRWD entered into an "Agreement For A Water Banking and Exchange Program," as amended by Amendment No. 1, entered into on or about February 27, 2015 (collectively, the "Strand Ranch Integrated Banking Project Agreement"). On February 4, 2016, Rosedale and IRWD entered into an "Agreement for A Water Banking, Recovery and Exchange Program," as amended by Amendment No. 1, entered into on or about January 16, 2018 (collectively, the "Stockdale Integrated Banking Project Agreement"). The Strand Ranch Integrated Banking Project Agreement and the Stockdale Integrated Banking Project Agreement are collectively referred to as the "Banking Project Agreements."

D. IRWD agreed to the terms of that certain agreement titled *Sustainable Groundwater Management Act Management Agreement* with Rosedale-Rio Bravo Water Storage District ("Landowners Agreement") providing for Rosedale to include in its chapter of the Kern Groundwater Authority's ("Authority") Groundwater Sustainability Plan ("GSP") IRWD's Strand Ranch property and the Stockdale West property (collectively "IRWD Property"), which are located outside of and adjacent to Rosedale's territorial boundary, a copy of which Landowners Agreement is attached as Exhibit A to this First Amended Agreement.

E. In connection with entering into the Landowners Agreement, the Parties entered into that certain Groundwater Sustainability Planning Agreement Between Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District, dated March 28, 2019, concerning Rosedale's application of SGMA through its GSP chapter to IRWD's Banking Project Agreements with Rosedale.

F. Subsequently, Rosedale proposed to amend the original Landowners Agreement, and IRWD has agreed to the terms of that certain Amendment No. 1 to Sustainable Groundwater Management

Act Management Agreement with Rosedale-Rio Bravo Water Storage District ("Amended Landowners Agreement"), a copy of which is attached as Exhibit B to this First Amended Agreement.

G. Rosedale and IRWD desire for Rosedale to develop and implement the chapter of the Authority GSP encompassing Rosedale and including the Strand Ranch Integrated Banking Project and the Stockdale Integrated Banking Project (collectively "IRWD Projects") – all to ensure that Rosedale will continue operating the IRWD Projects in an efficient and coordinated manner that complies with the requirements of SGMA and that preserves and meets the Parties' mutual rights and obligations under the respective Banking Project Agreements.

NOW, THEREFORE, the Parties agree as follows:

AGREEMENT

1. Effective Date and Term. This First Amended Agreement shall be effective upon the date when both Parties have signed this First Amended Agreement (the "Effective Date"). This First Amended Agreement shall replace and supersede the original Agreement and shall remain in effect so long as the IRWD Property is subject to Rosedale's chapter of the Authority's GSP.

2. Rosedale's Incorporation of the Strand Ranch Integrated Banking Project and the Stockdale Integrated Banking Project. Rosedale shall include the IRWD Property within Rosedale's chapter of the Authority's GSP. A map showing the locations of the Strand Ranch property and the Stockdale West property adjacent to Rosedale's southern boundary is attached and incorporated herein as Exhibit C to this Agreement.

3. Preserving Rights and Obligations under the Banking Project Agreements. Rosedale's chapter of the Authority's GSP shall be consistent with and shall preserve all the Parties' respective rights and obligations under the Banking Project Agreements; provided, however, that such rights and obligations must be exercised in a manner that is consistent with the requirements of SGMA, including the avoidance of undesirable results.

4. Fees and Charges for Mitigation. Rosedale shall not consent to, initiate or impose on IRWD's Strand Ranch property or Stockdale West property or on the IRWD Projects on these properties any fee, charge or assessment that pays for mitigation of groundwater production and use effects to which the IRWD Projects do not contribute.

5. Termination. Consistent with section 1, this First Amended Agreement shall remain in effect so long as the IRWD Projects and IRWD Property are subject to Rosedale's chapter of the Authority's GSP.

Each Party has executed this Agreement on the date set forth below its signature.

Irvine Ranch Water District

Rosedale-Rio Bravo Water Storage District

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____

November 21, 2019
Prepared by: K. Welch
Submitted by: F. Sanchez / P. Weghorst
Approved by: Paul A. Cook



SUPPLY RELIABILITY PROGRAMS COMMITTEE

REVISED TERMS FOR A 4-FOR-1 PILOT EXCHANGE PROGRAM WITH MOJAVE WATER AGENCY

SUMMARY:

Staff has worked with Mojave Water Agency to update the terms for the pilot exchange program to allow Mojave to bank its State Water Project (SWP) water before the end of 2021. If IRWD and Mojave approve an exchange agreement when the initial SWP allocation is below 25% at the beginning of the year, then it is likely that Department of Water Resources (DWR) will approve the 4-for-1 exchange program. Staff recommends that the Board authorize the General Manager to execute a 4-for-1 pilot exchange letter agreement and a side agreement to compensate Mojave for the water delivered into storage that incorporates the proposed updated terms, both subject to substantive changes approved by the Supply Reliability Programs Committee or subject to non-substantive changes.

BACKGROUND:

Mojave is an SWP Contractor that currently has Table A water supplies in excess of its demands. These supplies also exceed the storage capacity of Mojave's water banking capacities that were developed through its Mojave Basin Conjunctive Use Program. On March 11, 2019, the IRWD Board authorized the General Manager to execute a letter agreement with Mojave to implement a 4-for-1 pilot exchange and a side agreement to compensate Mojave for SWP exchange water delivered into storage. The pilot exchange was executed but not implemented because IRWD and Mojave had approved the exchange *after* DWR had increased the SWP allocation to 70%. DWR requires that the SWP allocation that is in place at the time when a 4-for-1 exchange program agreement is executed be less than 25%.

Staff has worked with Mojave to update the terms for the exchange so that Mojave could bank its SWP supplies in IRWD's water bank prior to the end of 2021. If IRWD and Mojave approve an exchange agreement based on the updated terms at the beginning of 2020 (when the initial SWP allocation could be below 25%), then it is likely that DWR will approve the 4-for-1 exchange program.

Proposed Exchange Program Terms:

The proposed updated terms provided as Exhibit "A" are substantially the same as those previously approved with Mojave. The revisions from the previously approved terms are shown as tracked changes in red. Revisions include some clarifications requested by DWR as it relates to Metropolitan Water District of Southern California's role in the exchange of SWP water on behalf of IRWD. The terms also reflect a delivery schedule of water through the end of 2021.

Through this proposed pilot program, IRWD would receive three acre-feet (AF) for every four AF of SWP water that Mojave delivers into storage at IRWD's water bank, with Mojave receiving compensation for the water through a separate agreement. The terms would allow Mojave, at its discretion, to deliver up to 20,000 AF of SWP Table A water to IRWD's water bank through the end of 2021.

Mojave would be able to deliver water into IRWD's water bank only if recharge capacity is available after IRWD completes the recharge of water available from its other exchange programs. In this way, IRWD retains its discretion as to whether Mojave can deliver water to IRWD's water bank. Within 10 years, IRWD would return 25% of the water to Mojave through the use of the IRWD's water bank wells (or alternatively through exchanges). The water would be returned when requested by Mojave on a second priority basis, with IRWD retaining first priority. The revised terms reflect that IRWD would return water to Mojave at an annual rate of no more than one-third of the amount delivered into storage that is allocated to Mojave. Mojave could request to recover more water should IRWD determine that capacity is available.

FISCAL IMPACTS:

IRWD proposes to compensate Mojave in the amount of \$177 per AF for the SWP water it delivers into storage at IRWD's water bank. In addition, IRWD proposes to pay the costs associated with recharging the water and the costs of recovering Mojave's share of the water through the use of IRWD's water bank wells. Mojave would pay for all costs associated with the use of its capacities in the SWP to deliver water for recharge and to convey recovered return water to Mojave's service area. The effective cost of the water to IRWD would be consistent with the cost of water from IRWD's programs in Dudley Ridge. The source of funds for providing the \$177 per AF compensation would be IRWD's over-allocation revenue.

ENVIRONMENTAL COMPLIANCE:

Final Environmental Impact Reports for the Strand Ranch and Stockdale Integrated Banking Project 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-Rio Bravo Water Storage District, as lead agency, filed Notice of Determinations for both the Strand Ranch and Stockdale Integrated Banking Projects with the County of Kern. IRWD, as a responsible agency, filed Notice of Determinations with the County of Orange and with the County of Kern.

RECOMMENDATION:

That the Board authorize the General Manager to execute a 4-for-1 pilot exchange letter agreement and a side agreement to compensate Mojave Water Agency for the water delivered into storage that incorporates the proposed exchange and compensation terms, both agreements subject to substantive changes approved by the Supply Reliability Programs Committee or subject to non-substantive changes.

Supply Reliability Programs Committee: Revised Terms for a 4-for-1 Pilot Exchange Program
with Mojave Water Agency

November 21, 2019

Page 3

LIST OF EXHIBITS:

Exhibit "A" – Proposed Revised Terms for a 4-for-1 Pilot Exchange Program between Irvine
Ranch Water District and Mojave Water Agency

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Exhibit “A”

Terms for a 4-For-1 Pilot Exchange Program
Between Irvine Ranch Water District and Mojave Water Agency
November March XX5, 2019

Parties	The Irvine Ranch Water District (IRWD) and the Mojave Water Agency (Mojave)
<u>State Contractors</u>	<p><u>Mojave Water Agency (Mojave) has a long-term water supply contract with the Department of Water Resources (DWR) that permits MWA to receive water supply, storage and conveyance services from the State Water Project (SWP).</u></p> <p><u>Metropolitan Water District of Southern California (Metropolitan) has a long-term water supply contract with the DWR. IRWD receives SWP supplies from Municipal Water District of Orange County, a member unit of Metropolitan.</u></p>
Description	<p>IRWD and Mojave would implement a Pilot Exchange Program (Exchange Program) that would allow Mojave to schedule and deliver unused excess State Water Project (SWP) water to Metropolitan on IRWD’s behalf on a 4-to-1 exchange ratio basis. As part of the exchange, the water may be temporarily managed in into storage at IRWD’s Strand and Stockdale Integrated Banking Projects (IRWD Water Bank)-on a 4 to 1 exchange ratio basis. <u>The Exchange Program would manage unused SWP supplies for water is available to Mojave and would provide increased water supply for both Mojave and Metropolitan including IRWD as a sub-agency of Metropolitan. through its existing SWP Contract with the Department of Water Resources (DWR).</u></p> <p>Recharge and recovery facilities at both the Strand Ranch and Stockdale Integrated Banking Projects could be used to deliver water in and out of storage at the IRWD Water Bank.</p>
Term	<p>Ten years from the <u>effective date of the Exchange Program Agreement. that Mojave’s water is delivered into storage in the IRWD Water Bank under the Exchange Program.</u> Delivery of the water into storage would be accomplished prior to the end of calendar year 202<u>10</u>. Upon mutual agreement, the term may be extended as described under Return Water below.</p>
IRWD’s Water Bank	<p><u>The</u> IRWD Water Bank, located in Kern County, is owned by IRWD and operated by Rosedale-Rio Bravo Water Storage District (Rosedale). IRWD holds first priority rights to the use of the recharge and recovery facilities except for when the Kern River Watermaster offers water to all takers willing to sign a notice/order or the Kern River Watermaster offers Kern River water to the California Aqueduct/Kern River Intertie. Under such conditions, Rosedale has first priority right to the use of the recharge facilities.</p>
Quantity	<p>Up to 20,000 acre-feet (AF) of Mojave’s SWP water supplies may be delivered to <u>Metropolitan at</u> the IRWD Water Bank for storage. The storage account balance to be allocated to Mojave would be equal to twenty-five percent (25%) of the amount of water delivered into storage (i.e., if 20,000 AF is delivered, 5,000 AF will be owed to Mojave Water Agency in return). Seventy-five percent (75%) of the water delivered into storage would be <u>available deemed transferred to Metropolitan and</u> IRWD at the time the water has been recharged at the IRWD Water Bank.</p>

<p>Exchange Water</p>	<p><u>Mojave expects to supply the specified Quantity of its SWP water supplies to the IRWD Water Bank by the end of 2021. When the SWP allocation is equal to or greater than 65% (or less at Mojave's discretion), Mojave will notify IRWD of its intent to schedule and deliver up to 20,000 AF of SWP water (Exchange Water) to the IRWD Water Bank. The Parties would cooperate in scheduling the Exchange Water deliveries with deliveries associated with other IRWD exchange programs. The recharge of Exchange Water would be subject to available recharge capacity, as well as provisions of IRWD's Coordinated Operating, Water Storage, Exchange and Delivery Agreement with Metropolitan and the Municipal Water District of Orange County (Coordinated Agreement). Mojave shall schedule delivery of Exchange Water for recharge at the IRWD Water Bank during times when IRWD determines that recharge capacity is available.</u> Within 30 days of DWR's approval of Mojave's delivery schedule, Mojave shall prepare an invoice for compensation by IRWD in an amount per AF as defined under separate agreement between the Parties.</p>
<p>Return Water</p>	<p><u>Water shall be returned, when requested by Mojave by the end of the tenth calendar year after the delivery of Exchange Water. When the first year occurs with a final SWP allocation equal to or less than 25%, Mojave will notify IRWD of its request to take delivery of all or a portion of its share of the Exchange Water (Return Water). Returns from the IRWD Water Bank would be at an annual rate of no more than one-third of the amount delivered into storage allocated to Mojave, after losses and not to exceed 1,650 AF per year. IRWD may allow Mojave to recover more water in a year, should IRWD determine that the use of additional recovery capacity by Mojave would not infringe on IRWD's ability to recover water for itself and/or IRWD's other partners.</u></p> <p><u>The Return Water delivered to Mojave shall be by</u> Water will occur by <u>recovery and exchange</u> of water from the IRWD Water Bank with subsequent delivery through the Cross Valley Canal (CVC) and California Aqueduct <u>or shall be from Metropolitan's future approved SWP Table A water.</u> IRWD shall use its first priority recovery well capacity in the IRWD Water Bank to recover Return Water for Mojave after meeting IRWD's own water supply needs. Mojave's Return Water may not remain in storage beyond the end of the tenth calendar year after the delivery of water into storage in the IRWD Water Bank. Upon mutual agreement, the Term of this Exchange Program may be extended for an additional 10 years or up to the current term of Mojave's contract with DWR, whichever is shorter, should the return water not be returned for reasons such as hydrologic conditions, allocation percentages, capacity/conveyance limitations, economic hardships, health and safety issues, etc.</p>
<p>Quality</p>	<p>The quality of Exchange Water and Return Water will be limited as follows: If and to the extent that either party delivers water to and into the California Aqueduct, the quality of water shall meet the water quality standards established by DWR for pump-in to the California Aqueduct.</p>
<p>Delivery Points</p>	<p>Mojave will deliver Exchange Water to the IRWD point of delivery (IRWD POD) which will be the Strand Ranch and/or Stockdale West Turnouts on the CVC, other Rosedale diversion locations as specified by Rosedale, or as directed by Metropolitan Water District of Southern California (Metropolitan). IRWD will use IRWD Water Bank wells to extract Return Water for delivery to the pump-in location at Reach 12E of the California Aqueduct. Mojave shall coordinate with DWR for delivery to the</p>

	Mojave point of delivery (Mojave POD) which will be Check 22B of the California Aqueduct or to another delivery point as determined by Mojave.
Losses	IRWD will assume all water banking losses.
Recharge Costs	IRWD will pay all costs assessed to IRWD by Rosedale for recharging water at the IRWD 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. Costs are assessed by Rosedale consistent with that certain Water Banking and Exchange Program Agreement between Rosedale and IRWD dated January 13, 2009. These estimated costs may include Rosedale's administrative charge of about \$3 per acre-foot (AF), charges assessed by the Kern County Water Agency (KCWA) of \$5 per AF, CVC Standby, applicable CVC pumping and O&M costs of about \$12 per AF, and applicable fixed and variable O&M Water Bank costs of about \$3 per AF.
Recovery Costs	IRWD will pay actual costs to recover Return Water from the IRWD Water Bank through pumping of IRWD Water Bank wells <u>or by exchange as assessed by Rosedale.</u> Recovery costs associated with extraction are estimated at \$79 per AF and are comprised of average groundwater pumping costs of \$68 per AF. These costs may include Rosedale's administrative charge <u>of about \$3 per AF,</u> pumping costs, charges assessed by the KCWA, CVC Standby, O&M, and applicable CVC pumping costs <u>of about \$4 per AF,</u> and applicable fixed and variable O&M Water Bank costs <u>of about \$4 per AF.</u> IRWD will also pay any costs assessed by Rosedale under its Long Term Operations Plan for implementing provisions of the MOUs to prevent impacts from operations. <u>It is expected that banking projects, such as the IRWD Water Bank, may be required to contribute \$2.00 per AF for recovered water to a fund, which may be used to meet mitigation obligations.</u>
SWP Costs	Metropolitan will pay all DWR Variable <u>Operation, Maintenance, Power, and Replacement (OMP&R)</u> charges <u>estimated at \$30 per AF</u> associated with the delivery of Exchange Water to IRWD POD consistent with the Coordinated Operating, Water Storage, Exchange and Delivery Agreement dated April 21, 2011. For delivery of Return Water to Mojave POD, Mojave will pay all DWR Variable OMP&R charges from the pump-in location at Reach 12E to Mojave Water Agency's turnout at Reach 22B.
Agency Coordination	IRWD and Mojave would cooperate with DWR, KCWA and Metropolitan in preparing all necessary agreements to facilitate the Exchange Program. IRWD and Mojave shall each be responsible for their own costs associated with such coordination.

<p>Environmental Compliance</p>	<p>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 DWR for the proposed Exchange Program. IRWD has already conducted environmental review under CEQA for the Strand and Stockdale Integrated Banking Projects that takes into consideration the delivery, storage and recovery of SWP water. Rosedale certified and IRWD and approved the CEQA documents for the Strand and Stockdale Integrated Banking Projects. Corresponding Notices of Determinations were filed by both Rosedale and IRWD. IRWD and Mojave will share equally any additional costs associated with environmental review or permitting deemed necessary for delivering Mojave water into storage (however, none are expected). Both IRWD and Mojave shall each be responsible for any other environmental review or permitting necessary to implement the Exchange Program within their own respective service areas.</p>
<p>Water Rights</p>	<p>It is expressly agreed, understood, and acknowledged by IRWD and Mojave that any existing or future delivery of Exchange Water to the IRWD Water Bank by Mojave will not result in or be considered a sale or transfer of Mojave’s contractual rights to SWP water or a sale or transfer of IRWD’s ownership in the IRWD Water Bank.</p>
<p>General Expenses</p>	<p>Each Party would be responsible for its own fees and expenses arising out of the negotiation and execution of the Exchange Program Agreement, obtaining necessary approvals, and the like.</p>

November 21, 2019
Prepared by: F. Sanchez
Submitted by: P. Weghorst
Approved by: Paul A. Cook



SUPPLY RELIABILITY PROGRAMS COMMITTEE

KERN FAN GROUNDWATER STORAGE PROJECT VARIANCE FOR PROFESSIONAL SERVICES WITH THE HALLMARK GROUP

SUMMARY:

On November 5, 2018, staff executed a Professional Services Agreement with Hallmark Group to assist with the development of a Memorandum of Understanding (MOU) that will ultimately lead to an agreement with the California Department of Water Resources (DWR) for the construction of a turnout from the California Aqueduct and the operation of Kern Fan Groundwater Storage Project (Kern Fan Project). In early 2019, staff executed two variances with Hallmark to facilitate meetings and to provide additional support and assistance to secure approval of a new turnout on the California Aqueduct and the development of the MOU. Additional work and coordination with IRWD, Rosedale-Rio Bravo Water Storage District, Kern County Water Agency (KCWA), and other consultants is needed to refine and model the information necessary to obtain DWR approval for the new turnout as well as to prepare terms for the agreement with DWR. To facilitate this additional work, staff has negotiated Variance No. 3 to the Professional Services Agreement with Hallmark. Staff recommends that the Board authorize the General Manager to execute Variance No. 3 in the amount of \$77,060 with Hallmark.

BACKGROUND:

Proposition 1, also known as the Water Quality, Supply and Infrastructure Improvement Act of 2014, dedicated \$2.7 billion for investments in new water storage projects through the Water Storage Investment Program (WSIP). In August 2017, IRWD and Rosedale jointly submitted an application to the California Water Commission (CWC) for the proposed Kern Fan Project with a request for \$86 million in WSIP grant funding. In July 2018, CWC conditionally awarded \$67.5 million in grant funding to the project.

The proposed Kern Fan Project would develop a regional water bank in the Kern Fan area to capture, recharge and store unallocated Article 21 water from the State Water Project (SWP) during wet hydrologic periods. IRWD and Rosedale would construct a new dedicated conveyance canal from the California Aqueduct to ensure the ability to convey flows from the SWP to the new recharge facilities. A new turnout on the California Aqueduct would be used to divert SWP water into the Kern Fan Project canal. The stored water would be extracted when needed to provide ecosystem, emergency supply, and water supply benefits. The construction of the turnout and subsequent Kern Fan Project operations would be coordinated with the SWP through an agreement with DWR.

The preparation of terms for the agreement with DWR is a critical path item necessary for the successful implementation of the Kern Fan Project. In November 2018, IRWD executed a Professional Services Agreement with Hallmark to assist IRWD and Rosedale with the

development of an MOU with DWR that will establish the terms for an agreement that will facilitate the operation of the Kern Fan Project. Since that time, Hallmark has provided support to IRWD and Rosedale in discussions with DWR and in coordinating efforts with KCWA.

Variance No. 3 with Hallmark:

Hallmark submitted Variance No. 3, provided as Exhibit "A", for work that will continue efforts to secure DWR approval of the proposed new turnout. The level of effort required for agency coordination and meetings among IRWD, Rosedale, KCWA and DWR have been significantly greater than previously envisioned. The additional efforts are required as a result of the complexity of the Aqueduct subsidence and capacity issues. The scope of work to be completed under this variance will largely be associated with coordinating and working with DWR and KCWA to obtain DWR approval of the proposed turnout. Hallmark will also develop a term sheet for an agreement with DWR for the construction of the turnout from the California Aqueduct and the operation of the Kern Fan Project. Hallmark anticipates resolving the turnout issues with DWR and finalizing a term sheet by April 2020. Work on the development of the MOU will follow development of the term sheet.

Staff has negotiated the costs associated with Hallmark's request for Variance No. 3 and finds the variance to be fair and reasonable. Staff recommends that the Board authorize the General Manager to execute Variance No. 3 to the Professional Services Agreement with Hallmark in the amount of \$77,060.

FISCAL IMPACTS:

Project 10854, the Kern Fan Groundwater Storage Project, is included in the FY 2019-20 Capital Budget. The cost for Hallmark to perform the additional work under Variance No. 3 is \$77,060. This variance requires Board approval because the cumulative total of the three variances (\$5,412 + \$22,183 + \$77,060) exceeds \$100,000. The existing budget and Expenditure Authorizations are sufficient to fund the work performed by Hallmark through Variance No. 3. The costs associated with this work will be ultimately shared with Rosedale pursuant to a cost-share agreement executed between IRWD and Rosedale on November 14, 2018.

ENVIRONMENTAL COMPLIANCE:

A Final Environmental Impact Report (EIR) for the Stockdale Integrated Banking Project was prepared, certified and approved in compliance with California Environmental Quality Act (CEQA) of 1970 (as amended), codified at California Public Resources Code Sections 21000 et. seq., and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3. Rosedale, as lead agency, filed a Notice of Determination for the Stockdale Integrated Banking Project with the County of Kern. IRWD, as a responsible agency, filed Notices of Determination with the County of Orange and with the County of Kern. The EIR includes a program-level analysis of impacts of a third project site. Environmental consultants at ESA will prepare a new supplemental EIR that will provide a project-level environmental review of the construction and operation of both the phase one and phase two facilities contemplated for the proposed Kern Fan Project.

Supply Reliability Programs Committee: Kern Fan Groundwater Storage Project Variance for Professional Services with the Hallmark Group

November 21, 2019

Page 3

RECOMMENDATION:

That the Board authorize the General Manager to execute Variance No. 3 in the amount of \$77,060 to the Professional Services Agreement with Hallmark Group for the development of terms for an agreement with the California Department of Water Resources for the construction of a turnout from the California Aqueduct and the operation of the Kern Fan Groundwater Storage Project.

LIST OF EXHIBITS:

Exhibit "A" – Variance No. 3 with Hallmark Scope of Work and Budget

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Exhibit "A"
IRVINE RANCH WATER DISTRICT
PROFESSIONAL SERVICES VARIANCE

Project Title: Kern Fan Groundwater Storage Project

Project No.: 10854 Date: 11/8/19

Purchase Order No.: _____ Variance No.: 3

Originator: IRWD ENGINEER/CONSULTANT Other (Explain) _____

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

Cost variance and modification of scope to provide continued support for critical path items and go/no go decision on the project. Completion expected April 2020. See Attachment 1.

Engineering & Management Cost Impact:

Classification	Manhours	Billing Rate	Labor \$	Direct Costs	Subcon. \$	Total \$
See Attachment 1 for scope of work for support to develop critical path agreement terms for Kern Fan Project.	306	Varies. See scope.				\$77,060
Total \$ =						\$77,060

Schedule Impact:

Task No.	Task Description	Original Schedule	Schedule Variance	New Schedule

Required Approval Determination:

Total Original Contract	\$ <u>54,481</u>	<input type="checkbox"/> Director: Cumulative total of Variances less than or equal to \$50,000. <input type="checkbox"/> Executive Director: Cumulative total of Variances less than or equal to \$75,000. <input type="checkbox"/> General Manager: Cumulative total of Variances less than or equal to \$100,000. <input checked="" type="checkbox"/> Board: Cumulative total of Variances greater than \$100,000.
Previous Variances \$	<u>27,593</u>	
This Variance \$	<u>77,060</u>	
Total Sum of Variances	\$ <u>104,653</u>	
New Contract Amount	\$ <u>159,134</u>	
Percentage of Total Variances to Original Contract	<u>192</u> %	

ENGINEER/CONSULTANT: Hallmark Group

 Company Name

IRVINE RANCH WATER DISTRICT

Project Engineer/Manager Chad R. Bader Date 11-08-2019

 Engineer's/Consultant's Management Date

Department Director _____ Date _____
 General Manager/Board _____ Date _____

TASK 1: TURNOUT RESOLUTION VARIANCE 3

Background – Hallmark was engaged to assist the Kern Fan Groundwater Storage Project team (Project Team) with development of terms for a turnout agreement with DWR which is required for the Kern Fan Groundwater Storage Project to be viable. It was anticipated resolution of this issue would be completed by July 2019. The effort was compounded by several factors including DWR’s determination not to allow any new turnouts on the California Aqueduct due to operational constraints caused by subsidence. Hallmark and the Project Team spent considerable time understanding the location and impact subsidence may have on water deliveries in Kern County. We have identified information to be modeled to demonstrate that the turnout required for the project will not negatively impact current water deliveries.

Due to a shortage of DWR staff time, a meaningful dialogue to review data developed by the Project Team has yet to occur. Going forward, Hallmark will continue to work with the Project Team to refine and develop the information necessary to gain approval for the turnout. Among the information being developed is modeling the effects proposed WSIP projects may have on aqueduct operations. Also, in development is the modeling of pulse flows which is a central component of the Project.

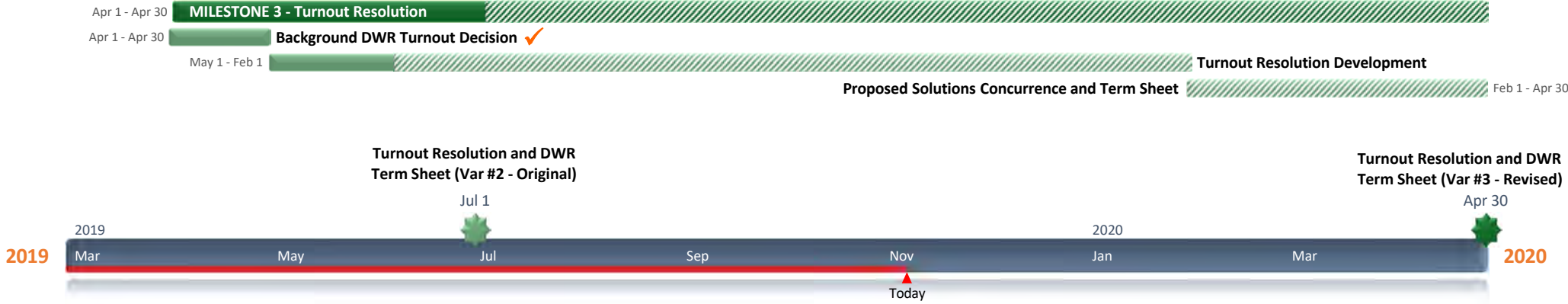
Hallmark will participate in tabletop discussions with DWR, develop strategies, propose solutions and support the Project Team and the Kern County Water Agency in negotiations to develop a term sheet acceptable to the principals involved in the Project.

Hallmark has \$14,526 left in the MOU task order. At this time, it is unknown if the available funds will be enough for development of a MOU with DWR for operations of the facility, or if DWR would consider entering into such a MOU. This task will be revisited as more information becomes available.

Kern Fan Groundwater Storage Project

Revised Turnout Resolution Schedule – November 8, 2019

Original Date
Revised Date



Hallmark Group Scope of Work - Kern Fan Groundwater Storage Project - Variance #3

Classification		Strategic Advisor Gardner	Program Manager Beck	Sr. Project Manager Starkey	Project Controls Harris	Project Coordinator Blakslee	Project Admin Ballard	Total Hours
Rate / HR		326	250	202	140	125	100	
Total Labor		48	96	96	18	24	24	306
Task 1	Go/No-Go Critical Tasks	48	96	96	18	24	24	306
	Turnout Decision, layering WSIP Project integration and verification of pulse flows	48	96	96	18	24	24	306
Total Estimated Hours		48	96	96	18	24	24	306

Classification		Strategic Advisor Gardner	Program Manager Beck	Sr. Project Manager Starkey	Project Controls Harris	Project Coordinator Blakslee	Project Admin Ballard	Total Cost
Rate / HR		326	250	202	140	125	100	
Total Labor		\$ 15,648	\$ 24,000	\$ 19,392	\$ 2,520	\$ 3,000	\$ 2,400	\$ 66,960
Task 1	Go/No-Go Critical Tasks	\$ 15,648	\$ 24,000	\$ 19,392	\$ 2,520	\$ 3,000	\$ 2,400	\$ 66,960
	Turnout Decision, layering WSIP Project integration and verification of pulse flows	\$ 15,648	\$ 24,000	\$ 19,392	\$ 2,520	\$ 3,000	\$ 2,400	\$ 66,960
Total Other Direct Costs								\$ 10,100
Travel								\$ 8,700
Printing / Reprographics								\$ 700
Conference Line [Approx. \$100/ mo based on usage]								\$ 700
Total Fee Proposal								\$ 77,060