

AGENDA
IRVINE RANCH WATER DISTRICT
SUPPLY RELIABILITY PROGRAMS COMMITTEE
THURSDAY, SEPTEMBER 17, 2020

Due to COVID-19, this meeting will be conducted as a teleconference pursuant to the provisions of the Governor's Executive Orders N-25-20 and N-29-20, which suspend certain requirements of the Ralph M. Brown Act. Members of the public may not attend this meeting in person.

Participation by members of the Committee will be from remote locations. Public access and participation will only be available telephonically/electronically.

To virtually attend the meeting and to be able to view any presentations or additional materials provided at the meeting, please join online via Webex using the link and information below:

Via Web:

<https://irwd.my.webex.com/irwd.my/j.php?MTID=m692f9d6ab44603cf836989b428a49371>

Meeting Number (Access Code): 126 818 5234

Meeting Password: XiMyVrAi323

After joining the meeting, in order to ensure all persons can participate and observe the meeting, please select the "Call in" option and use a telephone to access the audio for the meeting by using the call-in information and attendee identification number provided.

As courtesy to the other participants, please mute your phone when you are not speaking.

PLEASE NOTE: Participants joining the meeting will be placed into the Webex lobby when the Committee enters closed session. Participants who remain in the "lobby" will automatically be returned to the open session of the Committee once the closed session has concluded. Participants who join the meeting while the Committee is in closed session will receive a notice that the meeting has been locked. They will be able to join the meeting once the closed session has concluded.

CALL TO ORDER 3:00 p.m.

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

<u>ALSO PRESENT</u>	Paul Cook	_____	Paul Weghorst	_____
	Rob Jacobson	_____	Fiona Sanchez	_____
	Kellie Welch	_____	Christine Compton	_____
	Ray Bennett	_____	Jo Ann Corey	_____
	Natalie Palacio	_____	_____	_____
	_____	_____	_____	_____

PUBLIC COMMENT NOTICE

If you wish to address the Committee on any item, please submit a request to speak via the “chat” feature available when joining the meeting virtually. Remarks are limited to three minutes per speaker on each subject. You may also submit a public comment in advance of the meeting by emailing comments@irwd.com before 12:00 p.m. on Thursday, September 17, 2020.

ALL VOTES SHALL BE TAKEN BY A ROLL CALL VOTE.

COMMUNICATIONS

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

INFORMATION

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

Recommendation: Receive and file. |
| 6. | <u>KERN FAN GROUNDWATER STORAGE PROJECT UPDATE – SANCHEZ / WEGHORST</u>

Recommendation: Receive and file. |

ACTION

- | | |
|----|---|
| 7. | <u>PARTICIPATION IN DELTA CONVEYANCE PROJECT – WEGHORST</u>

Recommendation: That the Committee provide input on draft terms presented at the meeting to be included in updated non-binding letters to Dudley Ridge Water District and Rosedale-Rio Bravo Water Storage District for IRWD to receive an assignment of benefits from the Delta Conveyance Project. |
|----|---|

ACTION - Continued

8. SITES RESERVOIR PROJECT PARTICIPATION – WELCH / SANCHEZ /
WEGHORST

Recommendation: That the Committee concur with sending a non-binding letter to the Sites Project Authority describing IRWD's intent to participate in the Sites Reservoir Project in an amount of up to 1,000 acre-feet in annual yield.


OTHER BUSINESS

9. Directors' Comments

10. Adjourn

Availability of agenda materials: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the above-named Committee in connection with a matter subject to discussion or consideration at an open meeting of the Committee are available for public inspection in the District's office, 15600 Sand Canyon Avenue, Irvine, California ("District Office"). If such writings are distributed to members of the Committee less than 72 hours prior to the meeting, they will be available from the District Secretary of the District Office at the same time as they are distributed to Committee Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available electronically via the Webex meeting noted. Upon request, the District will provide for written agenda materials in appropriate alternative formats, and reasonable disability-related modification or accommodation to enable individuals with disabilities to participate in and provide comments at public meetings. Please submit a request, including your name, phone number and/or email address, and a description of the modification, accommodation, or alternative format requested at least two days before the meeting. Requests should be emailed to comments@irwd.com. Requests made by mail must be received at least two days before the meeting. Requests will be granted whenever possible and resolved in favor of accessibility.

Note: This page is intentionally left blank.

September 17, 2020
Prepared by: N. Palacio / 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 and provide an update on efforts to secure additional water for recharge at IRWD's water banking projects.

BACKGROUND:

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 provided 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. There are no changes to Exhibits "B" and "C" this month.

Exhibit "D" graphically depicts how storage of State Water Project 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. 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 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. These diagrams are provided as Exhibits “I”, “J”, “K”, “L”, “M” and “N”, as described in the List of Exhibits.

Other Recharge Opportunities:

At the Committee meeting, staff will provide an update on opportunities to secure water for recharge from Antelope Valley-East Kern Water Agency.

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

Exhibit “N” – Diagram of Dudley Ridge Water District One-For-One Exchange

Exhibit "A"

TABLE 1
Current and Anticipated Water Banking Project
Recharge, Storage and Recovery Capacities
September 17, 2020

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	

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

²SUP-1, SWEX-2, and SREX-6 are currently down.

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

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

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

Note: This page is intentionally left blank.

Exhibit "B"

TABLE 2
IRWD's Water Banking Storage, Recharge and Recovery Operations - BEFORE LOSSES
September 17, 2020

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 2019 (AF)						
Total Kern Water Bank	-	4,656	-	-	-	4,656
Total MWD System ⁴	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 ⁵	-	-	-	-	(440)	(440)
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
SWP Table A (CCWA 2019 Exch.)	347			347	-	694
TOTAL 2019 TRANSACTIONS	1,003	6,072	5,975	347	216	13,611
Total Kern Water Bank	-	4,753	-	-	-	4,753
Total MWD System	8,349	-	-	-	439	8,788
Total Kern County	4,570	23,679	11,177	636	3,354	43,414
TOTAL STORED WATER (1/1/2020)	12,919	28,432	11,177	636	3,793	56,955
(RECOVERY) AND RECHARGE IN 2020 (AF)						
MWD Water to Jackson Ranch (estimated)	-	-	-	-	-	-
Kern Water Bank Deliveries	-	-	-	-	-	-
2020 SWP Allocation (20 %) ³	175	-	-	-	175	350
Kern River Water	-	-	(7,500)	-	-	(7,500)
TOTAL ESTIMATED 2020 TRANSACTIONS	175	-	(7,500)	-	175	(7,150)
ESTIMATED WATER IN STORAGE 2020 (AF)						
Total Kern Water Bank	-	4,753	-	-	-	4,753
Total MWD System	8,349	-	-	-	439	8,788
Total Kern County	4,745	23,679	3,677	636	3,529	36,264
TOTAL ESTIMATED STORED WATER TO DATE	13,094	28,432	3,677	636	3,968	49,805

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. It is assumed that IRWD's 2020 SWP allocation will be 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.

Note: This page is intentionally left blank.

Exhibit "C"

TABLE 3
IRWD's Water Banking Storage, Recharge and Recovery Operations - AFTER LOSSES
September 17, 2020

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 2019 (AF)						
Total Kern Water Bank	-	4,233	-	-	-	4,233
Total MWD System ⁴	7,393	-	-	-	879	8,272
Total Kern County	3,046	15,564	4,532	246	2,395	25,783
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 ⁵	-	-	-	-	(440)	(440)
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
SWP Table A (CCWA 2019 Exch.)	298	-	-	298	-	595
TOTAL 2019 TRANSACTIONS	855	5,166	5,377	298	117	11,812
Total Kern Water Bank	-	4,320	-	-	-	4,320
Total MWD System	7,393	-	-	-	439	7,832
Total Kern County	3,901	20,642	9,909	543	2,952	37,947
TOTAL STORED WATER (1/1/2020)	11,294	24,963	9,909	543	3,391	50,100
(RECOVERY) AND RECHARGE IN 2020 (AF)						
MWD Water to Jackson Ranch (estimated)	-	-	-	-	-	-
Kern Water Bank Deliveries	-	-	-	-	-	-
2020 SWP Allocation (20%) ³	150	-	-	-	150	300
Kern River Water	-	-	(7,500)	-	-	(7,500)
TOTAL ESTIMATED 2020 TRANSACTIONS ⁶	150	-	(7,500)	-	150	(7,200)
ESTIMATED WATER IN STORAGE 2020 (AF)						
Total Kern Water Bank	-	4,320	-	-	-	4,320
Total MWD System	7,393	-	-	-	439	7,832
Total Kern County	4,051	20,642	2,409	543	3,102	30,747
TOTAL ESTIMATED STORED WATER TO DATE	11,444	24,963	2,409	543	3,541	42,900

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. It is assumed that IRWD's 2020 SWP allocation will be 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.

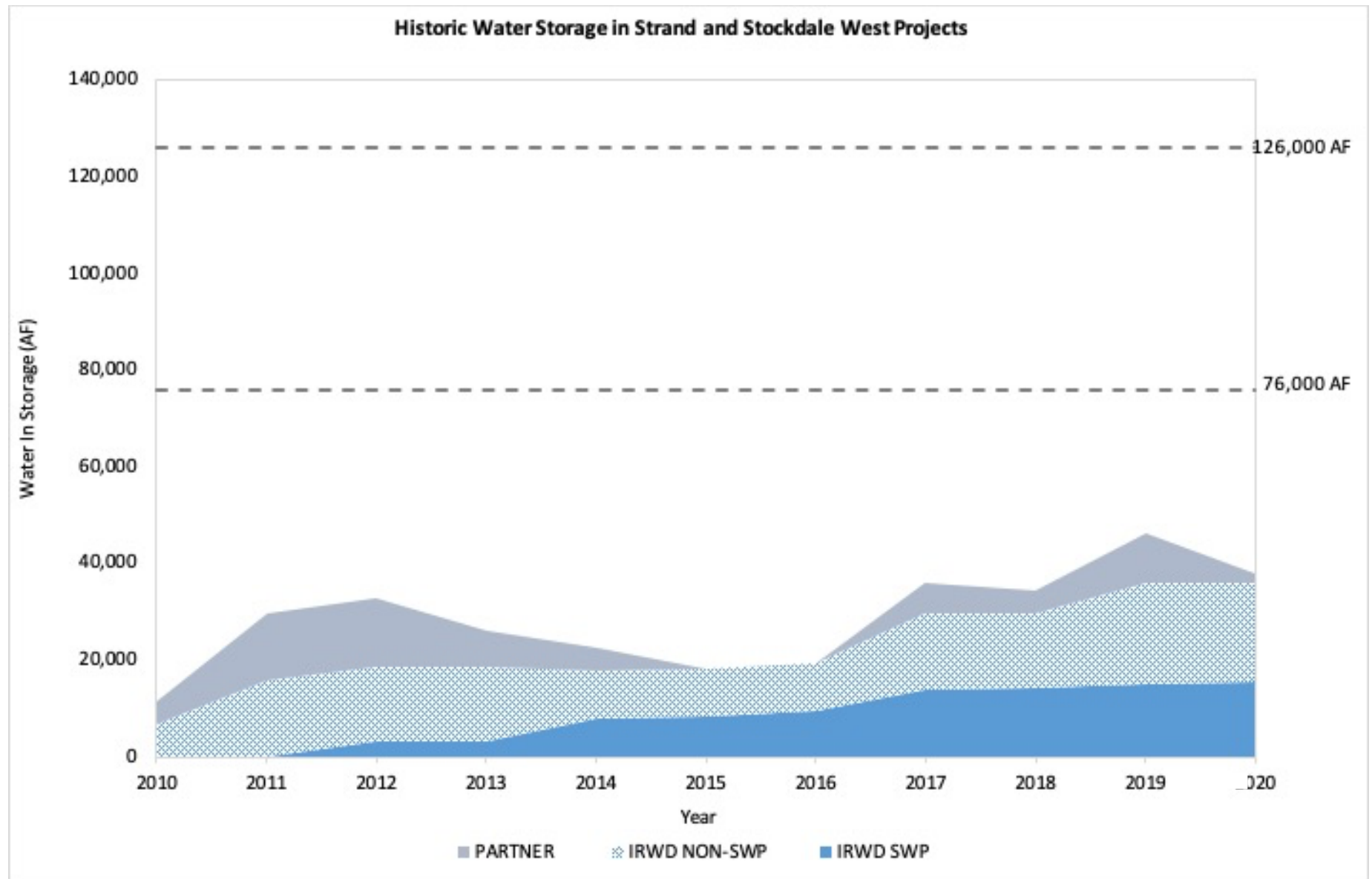
⁵ Water returned to DRWD by MWD for use on IRWD's Jackson Ranch.

⁶ 2020 transactions may be adjusted for conveyance losses in CVC.

⁷ 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.

Note: This page is intentionally left blank.

Exhibit “D”



*After losses

Note: This page is intentionally left blank.

Exhibit "E"

TABLE 1
IRWD Dedicated Water Banking Capacities for
Existing and Proposed Exchange Programs
September 17, 2020

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	-	-	-	-

Note: This page is intentionally left blank.

Exhibit "F"



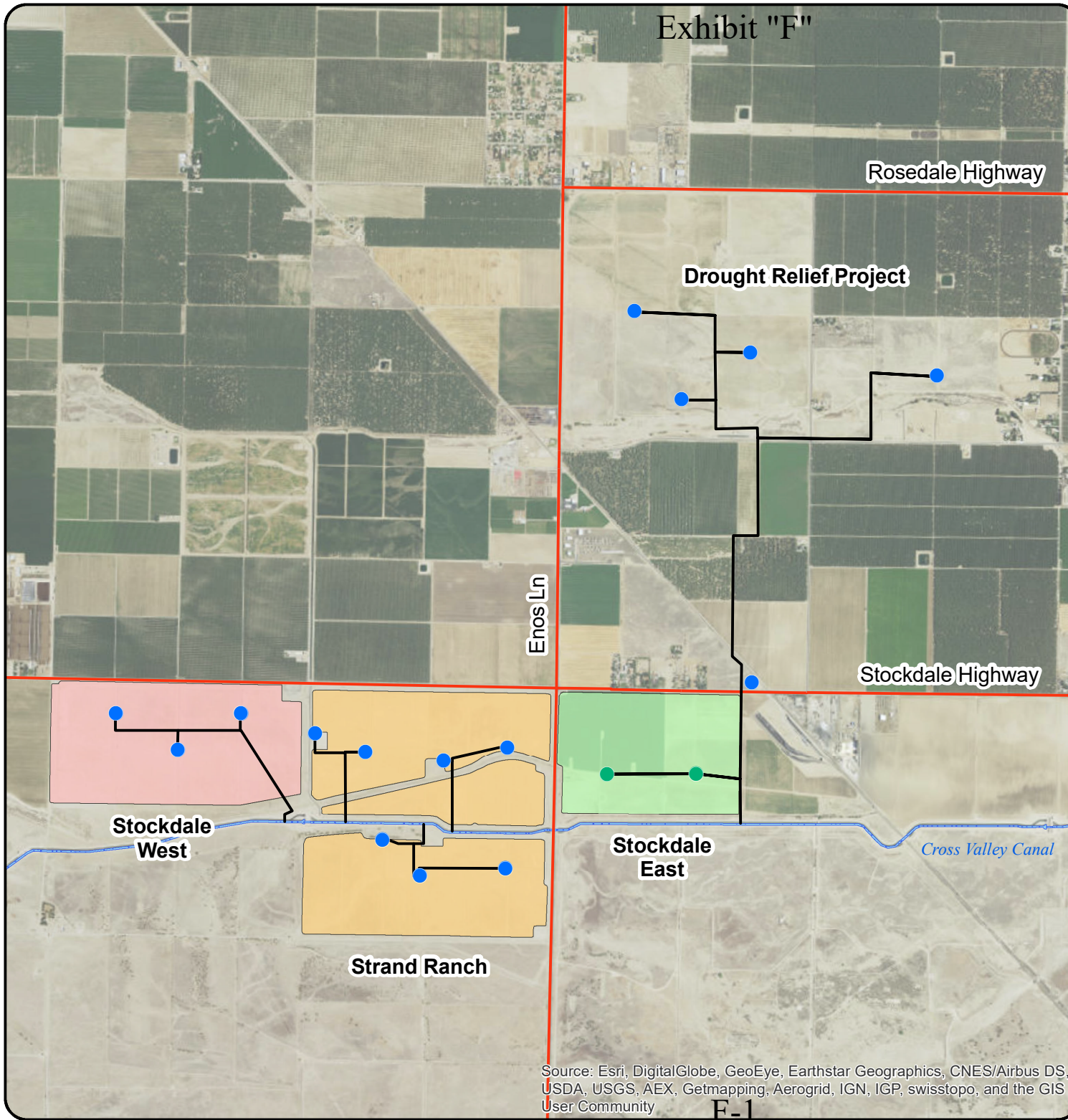
Irvine Ranch
WATER DISTRICT

Location Map: IRWD Water Banking Projects Wells and Turnin Pipelines

MAP FEATURES

- Extraction Well
- Extraction Well
- Well Discharge Pipelines
- Stockdale East
- Stockdale West
- Strand Ranch

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



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

F-1



0 0.25 0.5 1 Miles

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

Note: This page is intentionally left blank.

Exhibit "G"

Rosedale Highway



Irvine Ranch
WATER DISTRICT

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

MAP FEATURES

- ▲ Turnouts
- Stockdale West
- Strand Ranch

This figure shows the location of
recharge basins, pipelines and
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

Cross Valley Canal

Enos Ln

Stockdale Highway

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

G-1



0 0.25 0.5 1
Miles

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

Note: This page is intentionally left blank.

Exhibit "H"

Rosedale Highway



Location Map: IRWD Water Banking Projects Recharge Rates

MAP FEATURES

- ▲ Turnouts
- Stockdale West
- Strand Ranch

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

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

Stockdale Highway

Cross Valley Canal

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



0 0.25 0.5 1
Miles

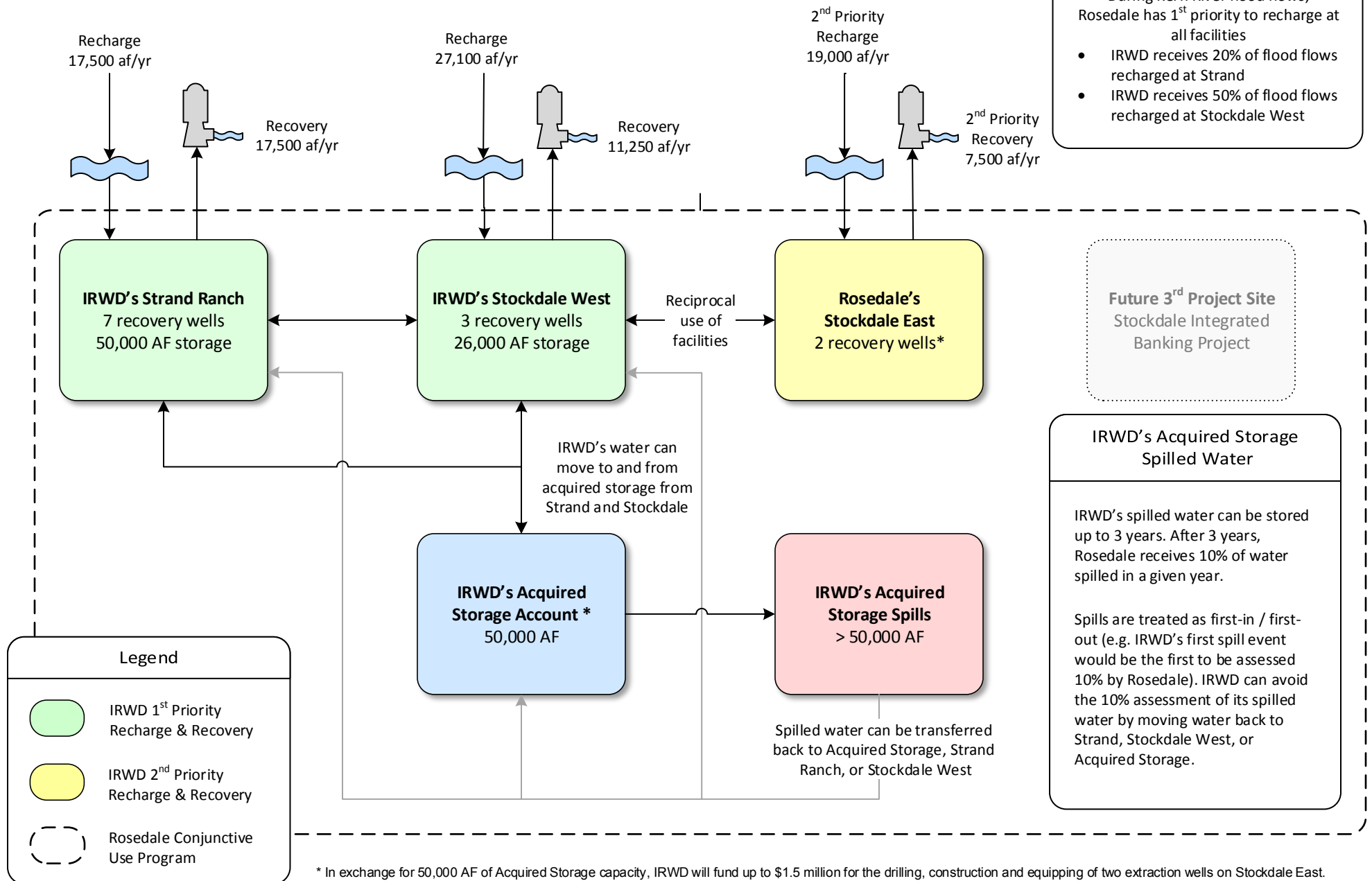
NAD 83 State Plane Zone 5 (feet)
Central Meridian: -118

Note: This page is intentionally left blank.

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)

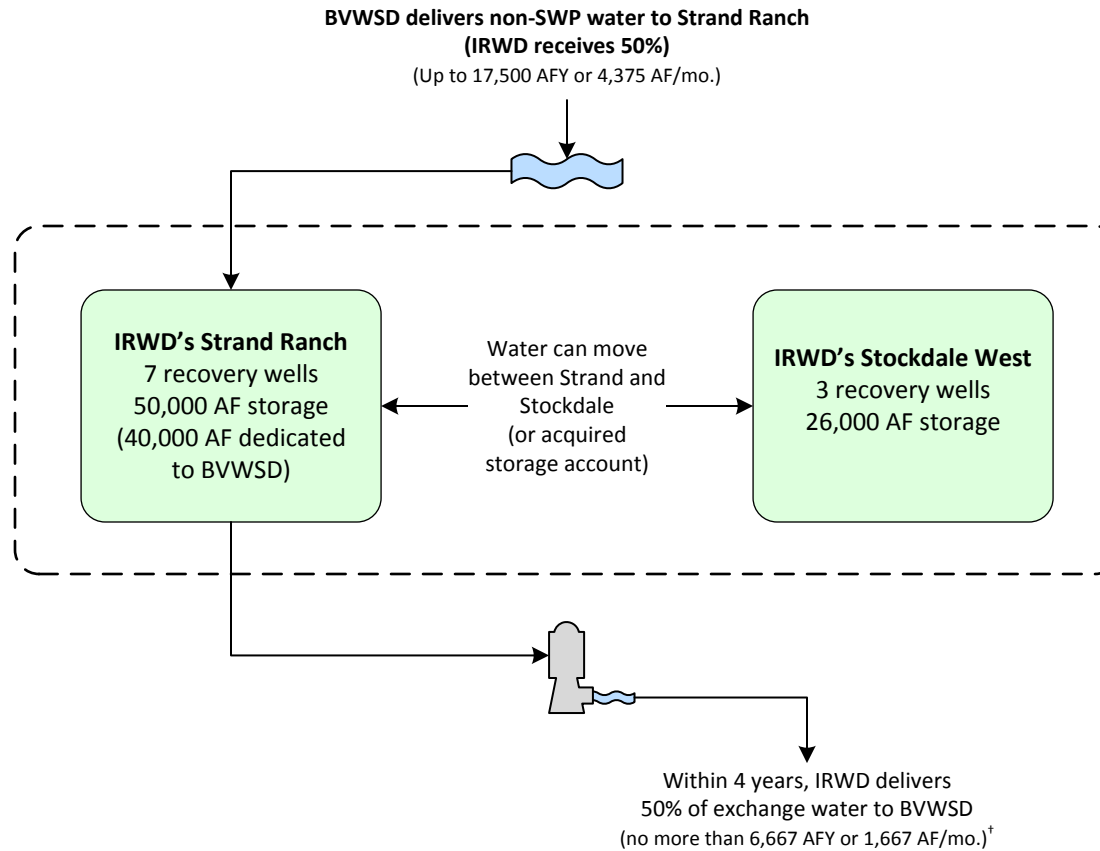




Note: This page is intentionally left blank.

Exhibit "J"

Buena Vista Water Storage District Long Term Water Exchange Program

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



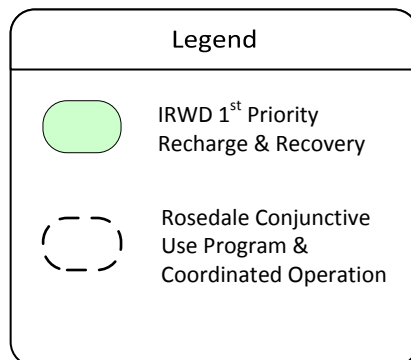
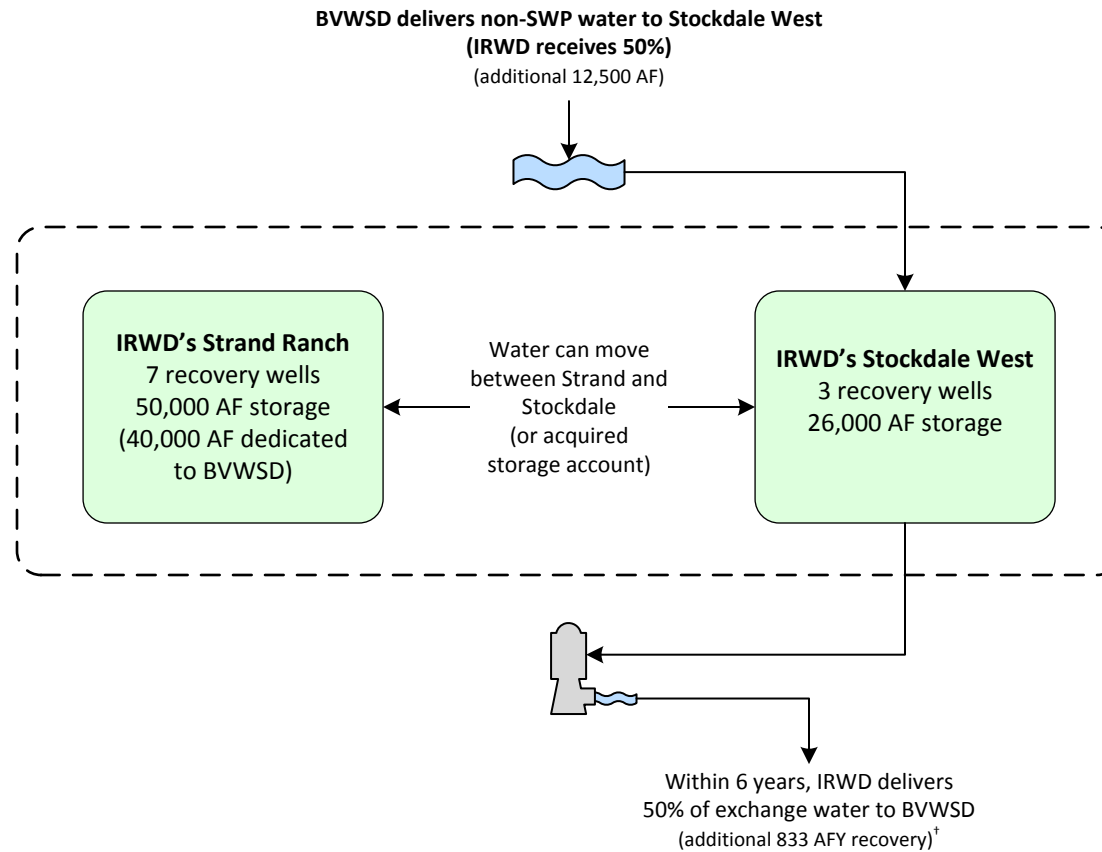
Legend	
	IRWD 1 st Priority Recharge & Recovery
	Rosedale Conjunctive Use Program & Coordinated Operation

[†]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



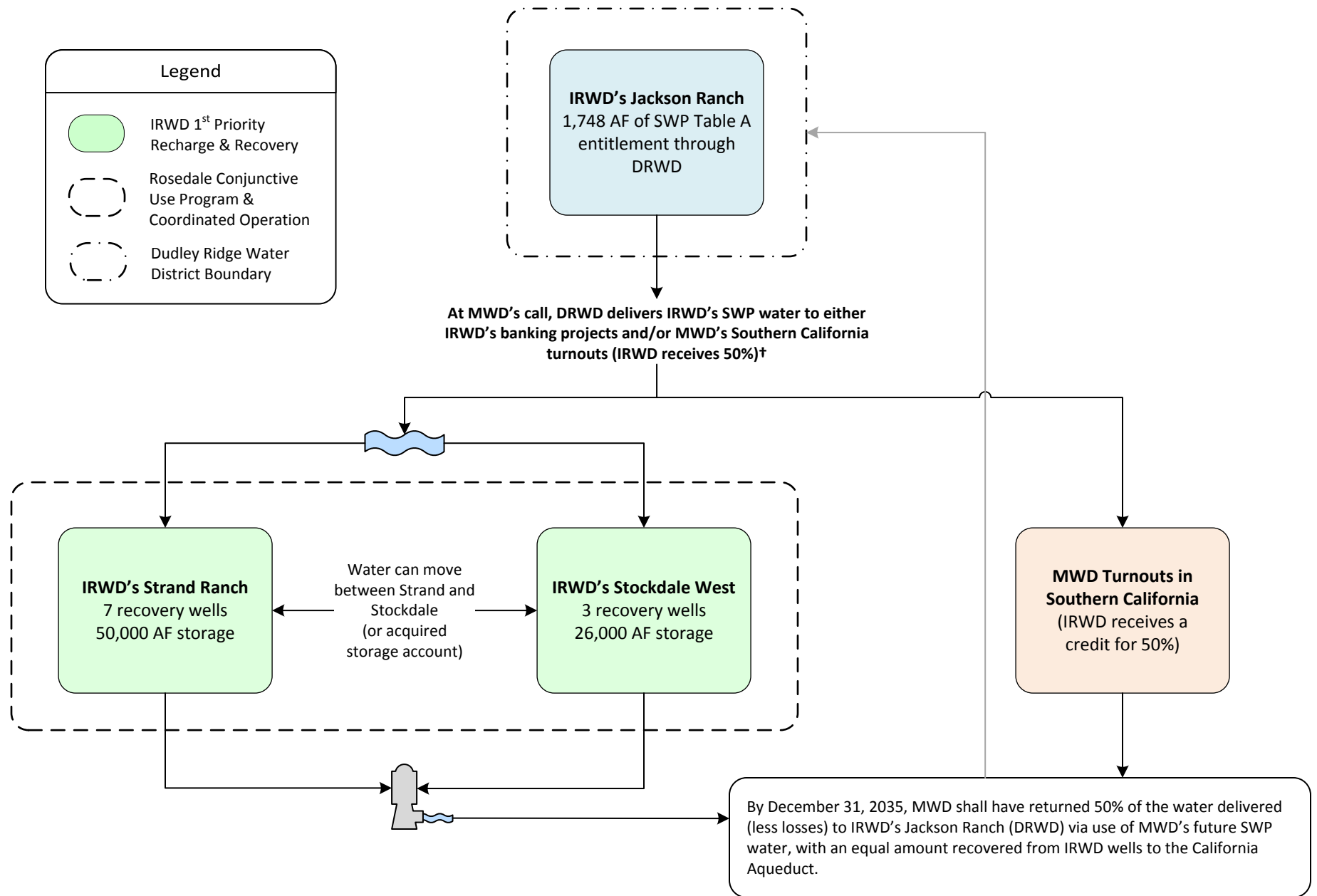
[†]IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31st of the 6th year following the associated recharge event. IRWD pays for recovery of water returned to BV. Water to be remitted back to BV may remain in storage at Strand Ranch 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.

Note: This page is intentionally left blank.

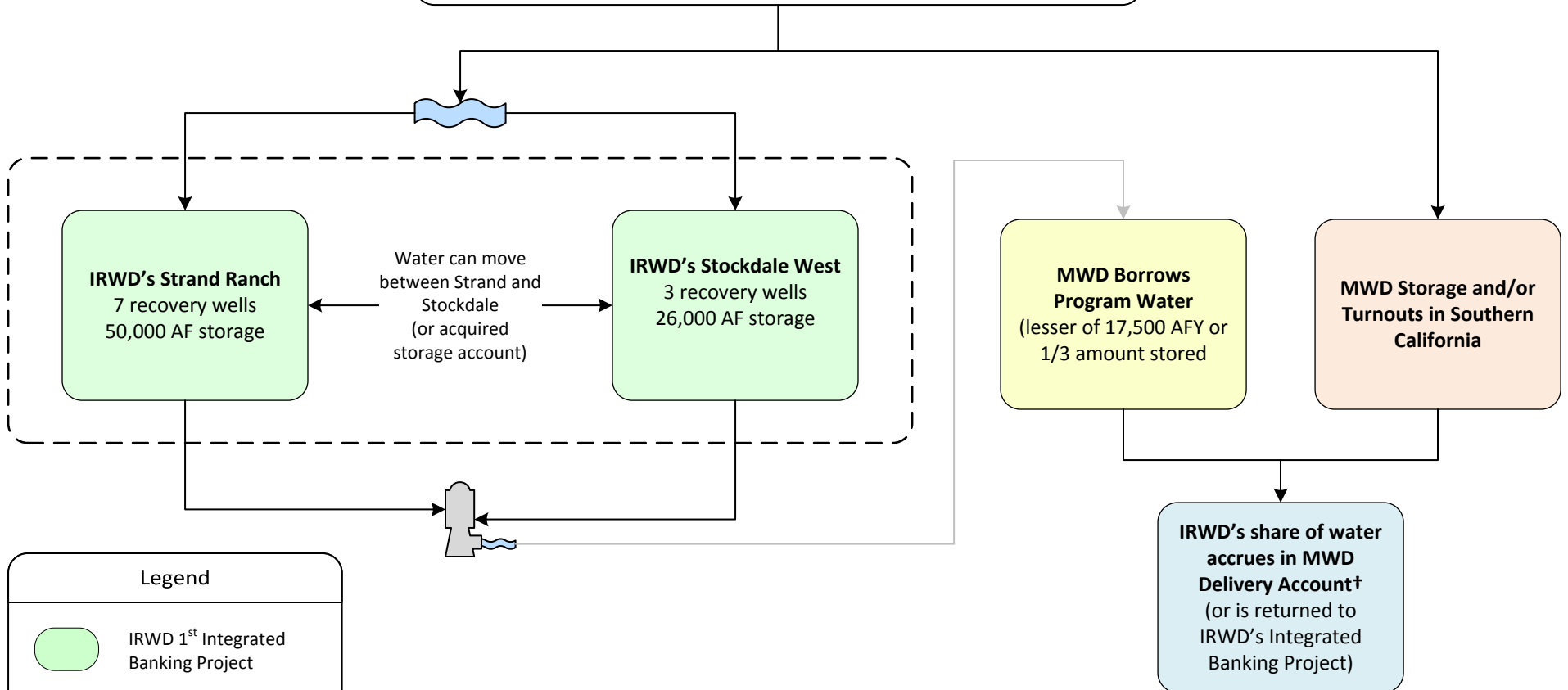
Exhibit "L"

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

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

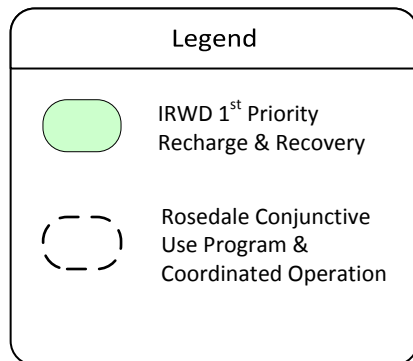
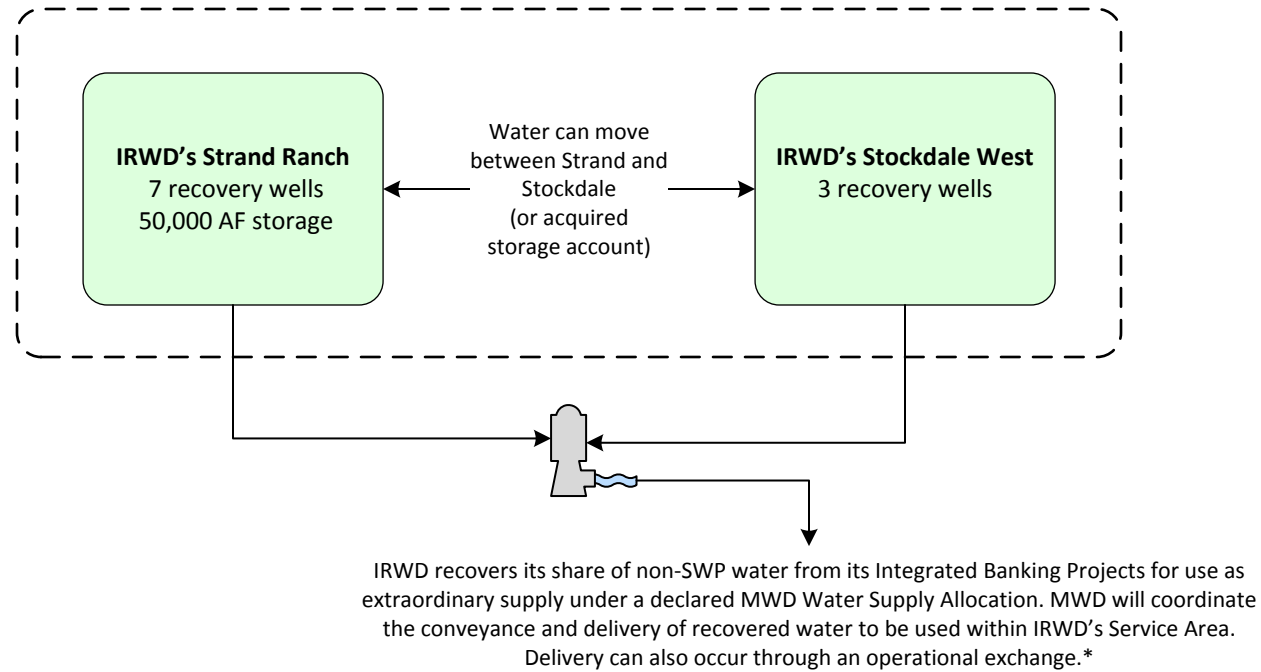
- Storage of water in IRWD's Integrated Banking Project
- Delivery to Southern California for immediate use and/or storage in MWD system
- Borrow a portion of Program water, with accrual in MWD Delivery Account



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

Note: This page is intentionally left blank.

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



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

Note: This page is intentionally left blank.

Exhibit "N"

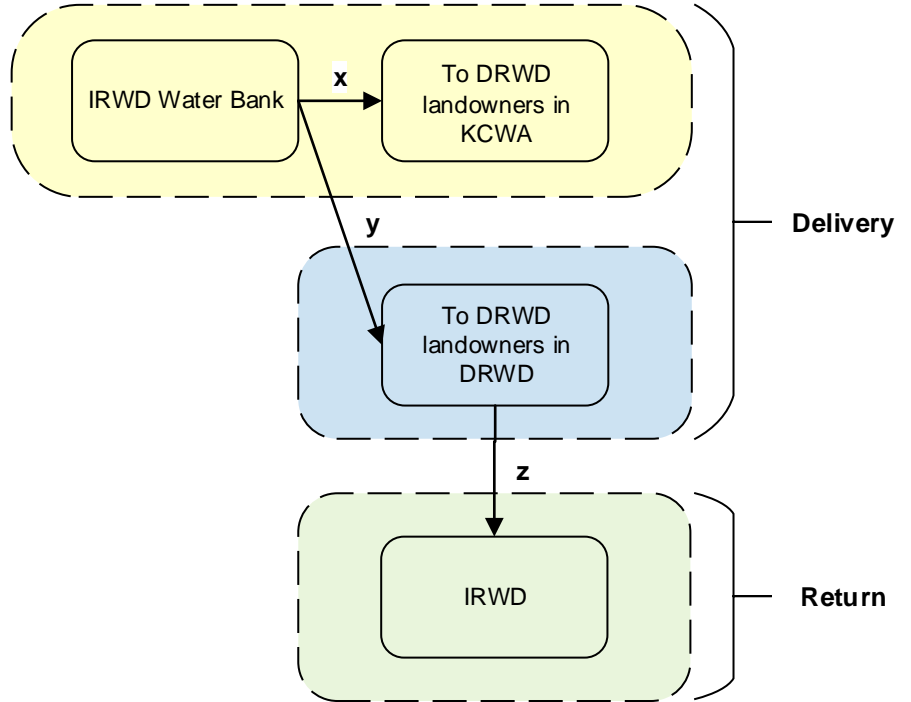
Dudley Ridge Water District Long Term 1-for-1 Water Exchange Program Effective 5/31/2017 through 11/4/2035

Scenario A

(Per Sections 2, 3, 4.1.1, and 4.1.3)

x= Non-Project Water required to stay in Kern County
y= Non-Project Water allowed to leave Kern County
z= DRWD Table A Water equal to x+y less applicable losses, if any

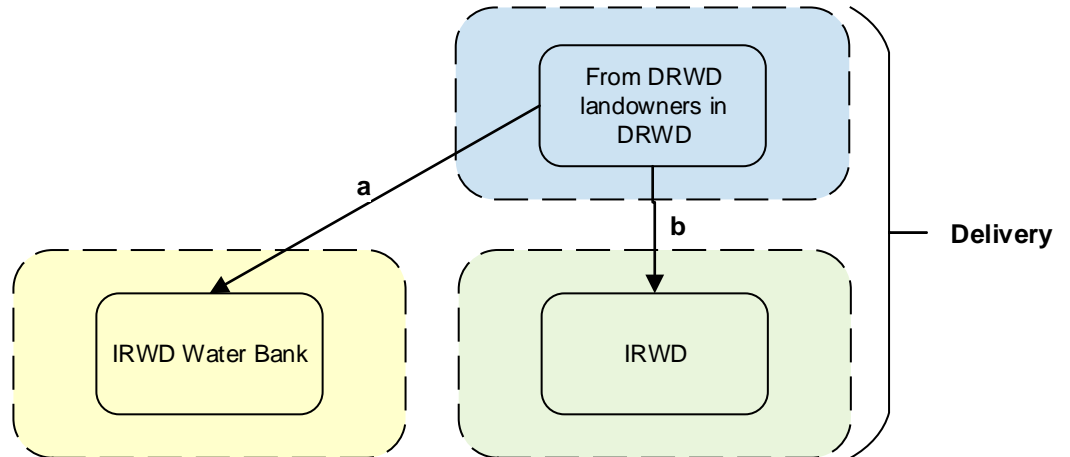
Per Section 4.1.3, z can be delivered to IRWD via in-ground transfer to IRWD, SWP delivery to IRWD banking facilities, or SWP delivery to MWDSC



Scenario B

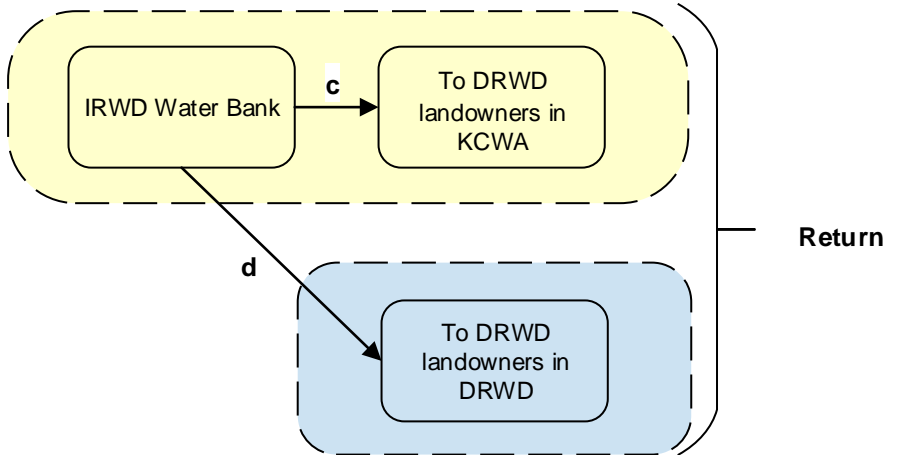
(Per Sections 2, 3, and 4.1.2)

$a + b = c + d$
(less applicable losses, if any)




Legend

	KCWA Service Area
	DRWD Service Area
	IRWD Service Area



Note: This page is intentionally left blank.

September 17, 2020
Prepared by: F. Sanchez
Submitted by: F. Sanchez / P. Weghorst
Approved by: Paul A. Cook 

SUPPLY RELIABILITY PROGRAMS COMMITTEE

KERN FAN GROUNDWATER STORAGE PROJECT UPDATE

SUMMARY:

IRWD and Rosedale-Rio Bravo Water Storage District have formed the Groundwater Banking Joint Powers Authority to plan, design, construct, and operate the Kern Fan Groundwater Storage Project (Kern Fan Project). Below is an overview of the project as well as an update on efforts to secure Federal funding, to develop necessary agreements with the State of California and to conduct an environmental review of the project.

BACKGROUND:

The Water Quality, Supply and Infrastructure Improvement Act of 2014, also known as Proposition 1, provides \$2.7 billion for public benefits associated with water storage projects that will provide specific public and ecosystem benefits. The California Water Commission (CWC) is administering Prop 1 grant funding for the planning, design, and construction of water storage projects through the Water Storage Investment Program (WSIP). IRWD and Rosedale jointly submitted a WSIP grant application for the Kern Fan Project on August 14, 2017. In July 2018, the CWC awarded \$67.5 million in conditional funding for the project.

IRWD and Rosedale are currently pursuing Federal funding for the Kern Fan Project through the Water Infrastructure Improvements for the Nation Act (WIIN Act). The Bureau of Reclamation is overseeing IRWD's and Rosedale's efforts to secure WIIN Act funding. Following is an overview of the project as well as an update on efforts to secure Federal funding, to develop necessary agreements with the State of California and to conduct an environmental review of the project.

Kern Fan Project Overview:

In July 2020, IRWD and Rosedale formed the Groundwater Banking Joint Powers Authority (Authority) that will plan, design, construct and operate the Kern Fan Project. The proposed project will develop a regional water bank in the Kern Fan area to capture, recharge and store Article 21 water from the State Water Project (SWP) during wet hydrologic periods. The stored water would be extracted when needed to provide ecosystem, emergency supply, and water supply benefits to the State of California, IRWD and Rosedale. Project operations would be coordinated with the SWP through an exchange agreement with the California Department of Water Resources (DWR).

The diversion and storage of Section 215 water from the Central Valley Project (CVP) Friant Division could also provide a significant wet year water supply for the Kern Fan Project. A portion of this water would be used to provide benefits to Reclamation in exchange for WIIN Act funding.

Phased Construction:

The Kern Fan Project would be constructed in two phases. In Phase 1 of the project, the Authority will acquire up to 640 acres in the Kern Fan area and construct recharge and recovery facilities as necessary to develop a fully functioning water banking project. In addition, the Authority 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. In Phase 2 of the Kern Fan Project, the Authority will acquire an additional 640 acres of land to construct additional water banking facilities. The overall project would consist of approximately 500 cubic feet per second (cfs) of canal capacity from the California Aqueduct, 100,000 acre-feet (AF) of storage capacity, up to 100,000 acre-feet per year (AFY) in recharge capacity and up to 70 cfs, or 50,000 AFY, of groundwater recovery capacity. The recharge and recovery capacities would be shared equally by IRWD and Rosedale. The preliminary Kern Fan Project location map is provided as Exhibit “A”.

Project Schedule:

The two phases of Kern Fan Project will require approximately six years to complete. Work on Phase 1 is expected to be complete in 2023. Phase 2 would be complete and operational in 2025. An overview of the project schedule showing the major project components is provided as Exhibit “B”.

Securing WIIN Act Funding:

In December 2019, staff submitted a feasibility study to Reclamation that is required for Reclamation to recommend the Kern Fan Project for Federal funding through the WIIN Act. In April 2020, staff prepared and submitted an updated feasibility study that included a 30% design report and corresponding project costs prepared by Dee Jaspar and Associates.

Reclamation completed a Design, Estimating and Construction (DEC) review, which confirmed that the project is technically feasible. Based on the findings of the DEC review team, the feasibility study was revised with a federal funding request of \$70.3 million. Reclamation’s Lower Colorado Region and the Denver offices prepared a Joint Resolution Memorandum with a recommendation regarding federal funding for the Kern Fan Project. Reclamation also conducted an initial policy review and notified IRWD that all the policy requirements were satisfied. This policy review is currently being updated to reflect an evaluation of new Reclamation benefits from the Kern Fan Project.

Coordination with Reclamation:

In August 2020, staff gave a presentation on the Kern Fan Project to Reclamation Commissioner Brenda Burman and other Reclamation staff. The presentation provided an overview of the project as well as an understanding of the Federal nexus to project benefits that will assist her with recommending the project for Federal funding through the WIIN Act. The Commissioner recognized the significant support already provided by Reclamation’s Lower Colorado Basin Region while emphasizing the importance of securing the support of the California-Great Basin Region.

Commissioner Burman also provided insights into additional information that will be needed to substantiate the benefits of the Kern Fan Project to the Office of Management and Budget (OMB), which will review the Project for consistency with the policy and budget objectives of the President. Commissioner Burman indicated that the successful quantification of project benefits to Reclamation will be necessary to secure her recommendation to the Secretary of Interior that the Kern Fan Project be included on a list to receive WIIN Act funding.

Subsequent to meeting with Commissioner Burman, staff from IRWD and Rosedale briefed Ernest Conant, the Director of Reclamation's California-Great Basin Region, on the project. As a result of the meeting, the Great Basin Region of Reclamation has initiated its own review of documentation needed to establish the Region's concurrence with the DEC Review Final Report and associated Joint Resolution Memorandum for the project. The Great Basin Region is also reviewing hydrologic and economic modeling work that IRWD and Rosedale are performing in the quantification of Kern Fan Project benefits to Reclamation.

Quantifying Benefits to Reclamation:

Staff from IRWD and Rosedale are working to quantify additional benefits that the Kern Fan Project will provide to Reclamation. Modelers at MBK Engineers are evaluating whether the Kern Fan Project can provide benefits to IRWD, Rosedale and Reclamation through exchanges of Friant 215 water. Preliminary hydrologic modeling results indicate that substantial amounts of Friant 215 water could be available in the future for diversion into the Kern Fan Project once subsidence-related repairs are made to the Friant-Kern Canal. A portion of these supplies could then be recovered and made available to Reclamation for delivery to the Kern National Wildlife Refuge, which would provide significant benefits to Reclamation. The remainder of the supplies would be available to Rosedale and IRWD. IRWD's share would be exchanged with Rosedale for water useable in IRWD's service area.

Once the hydrologic modeling results are finalized, staff will work with economists at M.Cubed to quantify the economic benefits to Reclamation. Staff will then submit an updated feasibility study to Reclamation. Reclamation's Denver office will conduct a final policy review to confirm that the new quantified benefits meet all Reclamation requirements. The updated feasibility study and final policy review will also provide the basis for the Great Basin Region to prepare a letter of concurrence with the project benefits, final policy review, DEC review, and Joint Resolution Memorandum recommending the project for federal funding.

Development of Agreements with State Agencies:

To implement the Kern Fan Project, the Authority will need to execute the following agreements with DWR and the California Department of Fish and Wildlife (CDFW):

- California Aqueduct Turnout Agreement (DWR);
- Exchange Agreement (DWR);
- Water Supply Public Benefits Agreement (DWR); and
- Ecosystem Public Benefits Agreement (CDFW).

The purpose of these agreements will be to coordinate construction and operation of the Kern Fan Project, and to provide the public benefits necessary for the Authority to receive \$67.5 million in WSIP funding. Execution of the Aqueduct Turnout and Exchange Agreements are a critical path items for the successful implementation of the Project. Principles for these critical agreements were finalized in May 2020. Staff continues to work with DWR and its consultants on additional modeling work associated with the Aqueduct turnout and exchanges that will be used as to further inform the development of the final terms for the agreements.

Environmental Review of Project:

In September 2019, IRWD executed an agreement with Environmental Science Associates to conduct an environmental review of the Kern Fan Project and to assist with securing necessary permits for the project by January 2022. A Notice of Preparation for the development of the Environmental Impact Report (EIR) for the Project was released on April 7, 2020, and a Public Scoping Meeting was held April 29. The draft of the EIR is expected to be released for public review by early October 2020.

FISCAL IMPACTS:

The CWC has conditionally awarded \$67.5 million in WSIP grant funding for the Kern Fan Project. Staff has submitted a project feasibility report to Reclamation seeking \$70.3 million in Federal funding. IRWD and Rosedale will fund the remaining cost of the Kern Fan Project.

ENVIRONMENTAL COMPLIANCE:

An 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, which could include portions of Phase 1 of the Kern Fan Project. A new EIR is being prepared for the construction and operation of Kern Fan Project Phase 1 and Phase 2 facilities. A Notice of Preparation of an EIR for the Kern Fan Project was released on April 7, 2020 and public comments were received. A draft of the EIR is expected to be released for public review by early October 2020.

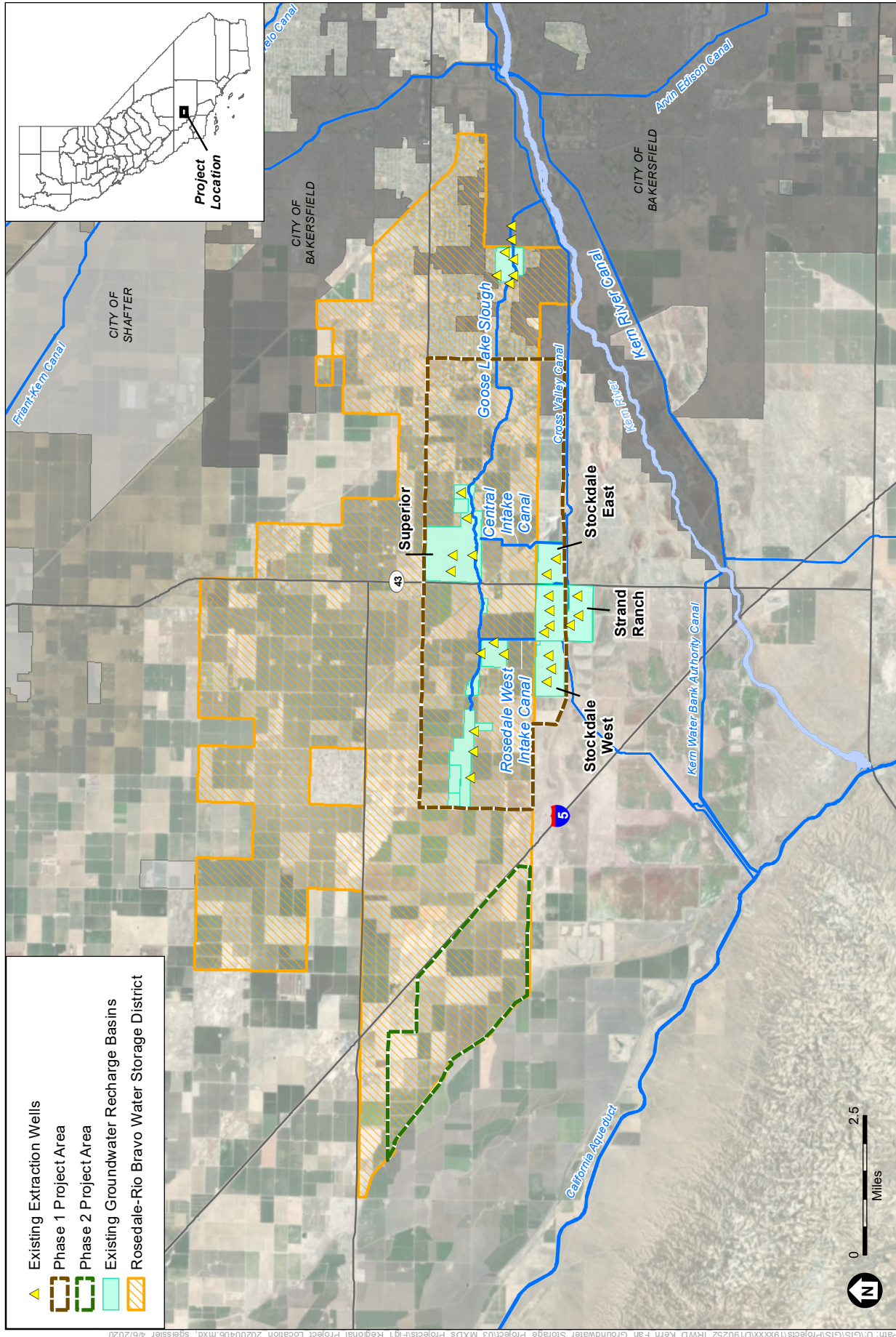
RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit “A” – Kern Fan Project Location Map
Exhibit “B” – Kern Fan Project Schedule

EXHIBIT "A"



Kern Fan Groundwater Storage Project
Figure 1
 Regional Project Location

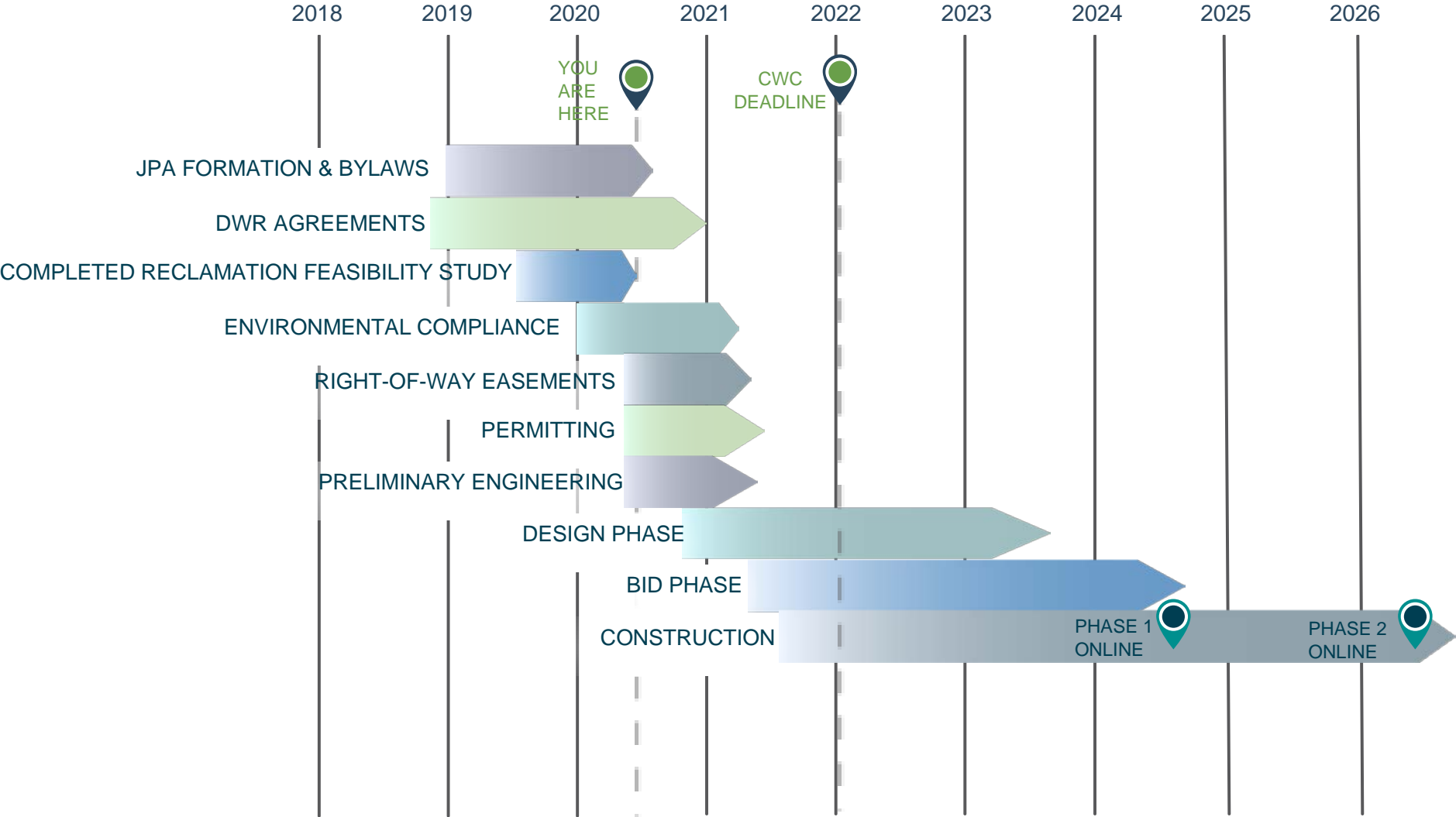
SOURCE: ESRI; Kern County



Note: This page is intentionally left blank.

Exhibit "B"

KERN FAN GROUNDWATER STORAGE PROJECT SCHEDULE



Note: This page is intentionally left blank.

September 17, 2020

Prepared and Submitted by: P. Weghorst

Approved by: Paul A. Cook



SUPPLY RELIABILITY PROGRAMS COMMITTEE

PARTICIPATION IN DELTA CONVEYANCE PROJECT

SUMMARY:

In the spring 2018, staff submitted non-binding letters to Dudley Ridge Water District and Rosedale-Rio Bravo Water Storage District to receive an assignment of benefits from the California Water Fix. The draft terms in the letters were prepared with input from the Supply Reliability Programs Committee. Since that time, the State of California has withdrawn approvals of the WaterFix and initiated the permitting of a smaller project called the Delta Conveyance Project (DCP). New information about the DCP, including preliminary costs and benefits of the project, have become available. At the Committee meeting, staff will present an overview of this new information and draft terms to be included in updated non-binding letters to DRWD and Rosedale for IRWD to receive an assignment of benefits from the DCP. Staff recommends the Committee provide input on the draft terms presented at the meeting.

BACKGROUND:

IRWD receives water from the State Water Project (SWP) through annual imported water purchases from the Metropolitan Water District. The SWP is dependent on using the Sacramento-San Joaquin Delta (Delta) for conveyance of water. To augment IRWD's water supplies during major water supply interruptions, including levee failures in the Delta, IRWD implemented its Strand and Stockdale Integrated Banking Projects (IRWD Water Bank) in the Kern Fan area of Kern County. The IRWD Water Bank is operated in a partnership with Rosedale. IRWD has an agreement with Metropolitan that allows IRWD to store SWP in the IRWD Water Bank for future recovery and delivery to IRWD's service area.

In 2010, IRWD purchased the 883-acre Jackson Ranch that is located within Dudley Ridge for the purpose of providing a water supply to the IRWD Water Bank. IRWD has the right to use SWP Table A water through its ownership of the Jackson Ranch. IRWD would have the opportunity to benefit from water conveyance improvements in the Delta through its land ownership in Dudley Ridge and partnership with Rosedale.

Challenges Facing the State Water Project:

The current Delta water system is outdated and unreliable, and has been subject to environmental restrictions that have significantly reduced the ability to divert water to the SWP Contractors south of the Delta. Furthermore, the system relies on levees in the Delta that are vulnerable to earthquakes, floods and rising sea levels. A major earthquake in the Bay Area could cause levees in the Delta to fail, severely impacting the state's ability to deliver fresh water. IRWD's access to water supplies from the SWP would be significantly impacted under a Delta levee failure scenario, and IRWD would rely on supplies stored in the IRWD Water Bank until the levees were repaired, which could take multiple years.

As sea levels rise, the Delta will be faced with increasing saltwater intrusion, which will permanently affect fresh water supplies flowing through the Delta. Climate change is expected to affect the type and timing of precipitation and pumping restrictions in the south Delta, which would affect the ability of the SWP to capture water when it is available, particularly during storm events. The IRWD Water Bank would not be able to provide continuous relief from a permanent loss of fresh water supplies in the Delta.

Planning the Delta Conveyance Project:

The California WaterFix was the state's plan to upgrade outdated infrastructure in the Delta. The purpose of the project would have been to secure California's water supplies and to improve the ecosystem in the Delta. In May 2019, the California Department of Water Resources withdrew permits for the WaterFix and initiated the environmental review and planning of the smaller DCP that would be integrated into the State Water Project (SWP). New information about the DCP, including preliminary costs and benefits of the project, have become available. At the Committee meeting, staff will present an overview of this new information.

Overview of Facilities:

The DCP would add new diversions in the north Delta to promote a more resilient and flexible SWP in the face of the unstable future conditions described above. The proposed DCP facilities are shown on the map provided as Exhibit "A". These facilities include:

- Two intakes with each having a 3,000 cubic feet per second (cfs) capacity;
- One underground tunnel through two possible corridors;
- Intermediate and southern forebays;
- One pumping plant;
- South Delta conveyance facilities; and
- Other ancillary facilities.

Since the DCP would only replace 6,000 cubic feet per second (cfs) of the current 10,300 cfs pumping capacity from the south Delta, IRWD's water supplies would still be at risk due to Delta Levee Failures, rising sea levels, climate change and regulatory restrictions. The IRWD Water Bank would be able to provide water supply reliability during such conditions that affect the remaining south Delta pumping facilities.

Central Valley Project Participation:

Currently, the DCP is to be designed, constructed and operated for the benefit of the SWP Contractors. Accordingly, the California Department of Water Resources will only request a change in point of diversion for the SWP. Without a change in point of diversion for the Central Valley Project (CVP), it is unlikely that the CVP Contractors would be able to use the DCP facilities.

Project Repayment:

The cost of the DCP would be split among the SWP Contractors in accordance with the long-term State Water Contract that each contractor has with DWR. Costs are assumed to be recovered in proportion to each SWP contractor's baseline Table A contract amount. The SWP Contractors and DWR are negotiating an amendment to the State Water Contracts that would extend the term of the State Water Contract from December 31, 2035 to December 31, 2085.

IRWD Participation in Delta Conveyance Project:

IRWD as a landowner in Dudley Ridge would have the opportunity to fully participate in the DCP in proportion to its Table A amount in Dudley Ridge. IRWD would receive:

- Incremental amounts of Table A water;
- Additional Article 21 water;
- Access to additional transfer capacity from north of the Delta;
- Partial emergency protection from a Delta outage; and
- Additional flexibility in executing water transfers and sales of water.

Benefits to IRWD Water Banking Projects:

The increased availability of Table A to DRWD and the corresponding access to transfer capacity and additional flexibility would benefit the operations of the IRWD Water Bank. Dudley Ridge's participation in the DCP would result in increased Article 21 water being available to IRWD for delivery to the IRWD Water Banks under certain circumstances.

The Kern Fan Groundwater Storage Project will be a major expansion of both IRWD's and Rosedale's water banking capabilities in Kern County. The project would include the construction of a new 500 cfs canal that would significantly increase the ability of both IRWD and Rosedale to divert additional Article 21 water into storage. The availability of Article 21 water is expected to be greater with the implementation of the DCP.

Receiving Assignment of Benefits:

Should other landowners in Dudley Ridge decide not to participate in the DCP, it is expected that IRWD will have the opportunity to receive an assignment of a portion of other landowners' benefits from the DCP by paying for their respective share of DCP costs. Member units of the Kern County Water Agency may also choose not to participate in the DCP. Should this happen, IRWD may have the opportunity to receive an assignment of a portion of these member unit benefits by paying a respective share of DCP costs through an agreement with Rosedale.

In May 2018, IRWD submitted non-binding letters to DRWD and Rosedale to receive an assignment of benefits from the California Water Fix. Exhibit "B" provides the terms for receiving the benefits that were included in the letter to DRWD. The terms sent to Rosedale were substantially the same. At the Committee meeting, staff will present draft terms to be included in updated non-binding letters to DRWD and Rosedale for IRWD to receive an

assignment of benefits from the DCP. Staff recommends the Committee provide input on the draft terms presented at the meeting.

FISCAL IMPACTS:

At the Committee meeting, staff will present an overview of the preliminary costs of the DCP.

ENVIRONMENTAL COMPLIANCE:

This item is not a project as defined in the California Environmental Quality Act (CEQA), Code of Regulations, Title 14, Chapter 3, Section 15378.

RECOMMENDATION:

That the Committee provide input on draft terms presented at the meeting to be included in updated non-binding letters to Dudley Ridge Water District and Rosedale-Rio Water Storage District for IRWD to receive an assignment of benefits from the Delta Conveyance Project.

LIST OF EXHIBITS:

Exhibit “A” – Map of Delta Conveyance Project Facilities.

Exhibit “B” – May 2018 Non-Binding Conceptual Terms for the Assignment of Incremental Table A Water from DRWD Associated with Base Table A

EXHIBIT "A"

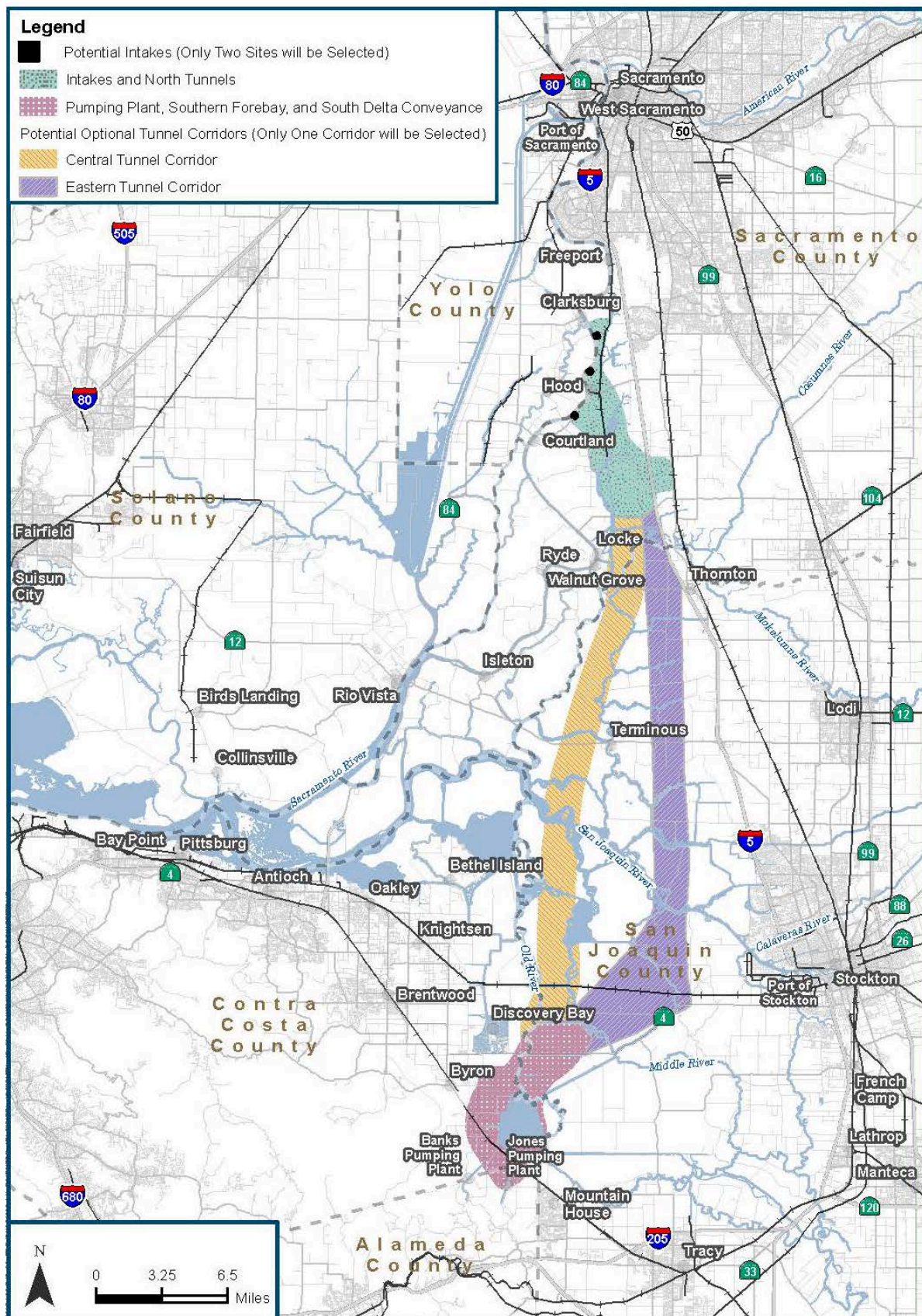


Figure 1. Proposed Project Facility Corridor Options

Note: This page is intentionally left blank.

Exhibit “B”

Non-Binding Conceptual Terms for the Assignment of Incremental Table A Water Associated with Base Table A Amounts to Irvine Ranch Water District

May 8, 2018

Parties: Irvine Ranch Water District (“IRWD”) and Dudley Ridge Water District (“DRWD”).

General: The Parties shall use these non-binding Conceptual Terms in the preparation of detailed terms for an agreement that would facilitate assignment to IRWD of incremental yield from the California WaterFix associated with other DRWD landowner Base Table A amounts. IRWD and DRWD would work together to clarify the terms and unknowns listed below.

Incremental Yield: IRWD and DRWD would work together using best available information and CalSim II modeling capabilities available to IRWD to forecast the future incremental Table A yield that would be available as a result of the WaterFix that is associated with Base Table A amounts in DRWD. The Incremental Yield could be expected to change from time-to-time based on other side-agreements entered into by DRWD.

Detailed Terms for Agreement: Detailed terms and conditions for an agreement would be negotiated and prepared by IRWD and DRWD that would inform the consideration of the assignment of the Incremental Yield to IRWD.

Base Table A Amounts: IRWD seeks to receive the Incremental Yield associated with 7,500 AF of Base Table A in DRWD. An option would be provided for IRWD to trigger an increase in the assignment to the Incremental Yield associated with 15,000 AF of Base Table A.

Term: The term of the agreement would be through the end of the current State Water Project (SWP) contract (2035) and the proposed contract extension which is expected to be 2085.

Costs: IRWD would pay DRWD the costs for the assigned Incremental Yield equivalent to a negotiated fixed percentage of WaterFix costs. Costs and a schedule of payments would be negotiated taking into consideration requirements for gap funding, capital payments and any clarification of the unknowns listed below.

Environmental Compliance: The Parties would negotiate the cost sharing of any required environmental compliance document(s) prepared with DRWD as the lead agency and IRWD as a Responsible Agency. Environmental compliance may be covered through other DRWD and/or DWR documents adopted in pursuant of the California Environmental Quality Act.

Financial: The Parties would work together to identify a preferred method to financially protect IRWD and DRWD from unforeseen circumstances such as defaults.

Approvals: DRWD would make a reasonable efforts to secure any necessary agreement(s) with DWR to effectuate the assignment of Incremental Yield to IRWD.

Unknowns: The Parties would work together to clarify unknowns associated with the following items from which detailed terms for agreement could be established:

1. The costs associated with the California WaterFix to be borne by DRWD that would affect the costs to be paid by IRWD in return for the assignment of Incremental Yield;
2. The quantity and schedule for gap funding that would be needed from IRWD for past and future planning, design and environmental compliance work;
3. The amounts and a schedule for IRWD's payment of capital costs associated with assignment of Incremental Yield;
4. Expected flexibility (and restrictions) to be incorporated into the existing SWP Contract and proposed contract extension related to the transfer, exchange and use of the incremental yield;
5. DRWD rules and regulations that are expected to be implemented with respect to the use of the incremental yield;
6. A schedule of exit ramps that would be afforded to IRWD should the assignment of the incremental yields become infeasible or financially unviable; and
7. Any other unknowns identified during the negotiation of detailed terms for the transaction.

September 17, 2020
Prepared by: Kellie Welch
Submitted by: F. Sanchez / P. Weghorst
Approved by: Paul A. Cook



SUPPLY RELIABILITY PROGRAMS COMMITTEE

SITES RESERVOIR PARTICIPATION

SUMMARY:

The Sites Reservoir Project will store stormflows from the Sacramento River for use during dry and critically dry years. Participation in the project could result in a water supply for the Kern Fan Groundwater Storage Project (Kern Fan Project). At the Committee meeting, staff will present preliminary estimated costs associated with participation in the project. Staff recommends the Committee support sending a non-binding letter to the Sites Project Authority describing IRWD's intent to participate in the Sites Reservoir Project in an amount of up to 1,000 acre-feet (AF) in annual yield.

BACKGROUND:

The Sites Reservoir Project will provide 1.5 million AF of off-stream storage on the west side of the Sacramento Valley, approximately 10 miles west of the town of Maxwell. A location map of the project is provided as Exhibit "A". The project would be designed and constructed by the Sites Project Authority. The project has been conditionally approved to receive Water Storage Investment Program funding from the California Water Commission and is currently being considered by the Bureau of Reclamation for funding from the Water Infrastructure Improvements for the Nation (WIIN) Act.

Sites reservoir would capture and store stormwater flows from the Sacramento River after all other water rights and regulatory requirements are met. The stored water would be used in dry and critically dry years by California communities, farms and businesses as well as for environmental purposes. Reservoir operations would be coordinated with the Central Valley Project (CVP) and the State Water Project (SWP). Water from the reservoir would be available for use in both the CVP and SWP places of use. A fact sheet describing the Sites Reservoir Project is provided as Exhibit "B".

Opportunities for IRWD Participation:

Recently, the Rosedale-Rio Bravo Water Storage District Board of Directors approved submitting a non-binding letter of intent to participate in the Sites Reservoir Project in the amount of 500 AF in annual yield. Subsequent to this approval, Rosedale proposed that IRWD also submit a non-binding letter of intent to participate in the project to develop a water supply for the Kern Fan Project. After conducting due diligence investigations of participation in the Sites Reservoir Project, the two agencies could assign any executed participation agreements to the Groundwater Banking Joint Powers Authority (GBA). The GBA's participation in the Sites Reservoir Project would provide the basis for integrating the corresponding yield from the reservoir as a water supply to the Kern Fan Project. At the Committee meeting, staff will present preliminary estimated costs and benefits associated with participation in the reservoir project.

Draft Letter of Intent:

Staff has prepared a draft letter of intent for IRWD to participate in the Sites Reservoir Project in an amount of up to 1,000 AF in annual yield. The draft letter is provided as Exhibit “C”. The letter makes it clear that IRWD’s decision to execute an agreement for participation in the project would be subject to IRWD’s due diligence investigation of the costs and benefits of the project. Staff recommends the Committee concur with sending the non-binding letter to the Sites Project Authority.

FISCAL IMPACTS:

At the Committee meeting, staff will present preliminary estimated costs and benefits associated with participation in the project.

ENVIRONMENTAL COMPLIANCE:

This item is not a project as defined in the California Environmental Quality Act (CEQA), Code of Regulations, Title 14, Chapter 3, Section 15378.

RECOMMENDATION:

That the Committee concur with sending a non-binding letter to the Sites Project Authority describing IRWD’s intent to participate in the Sites Reservoir Project in an amount of up to 1,000 acre-feet in annual yield.

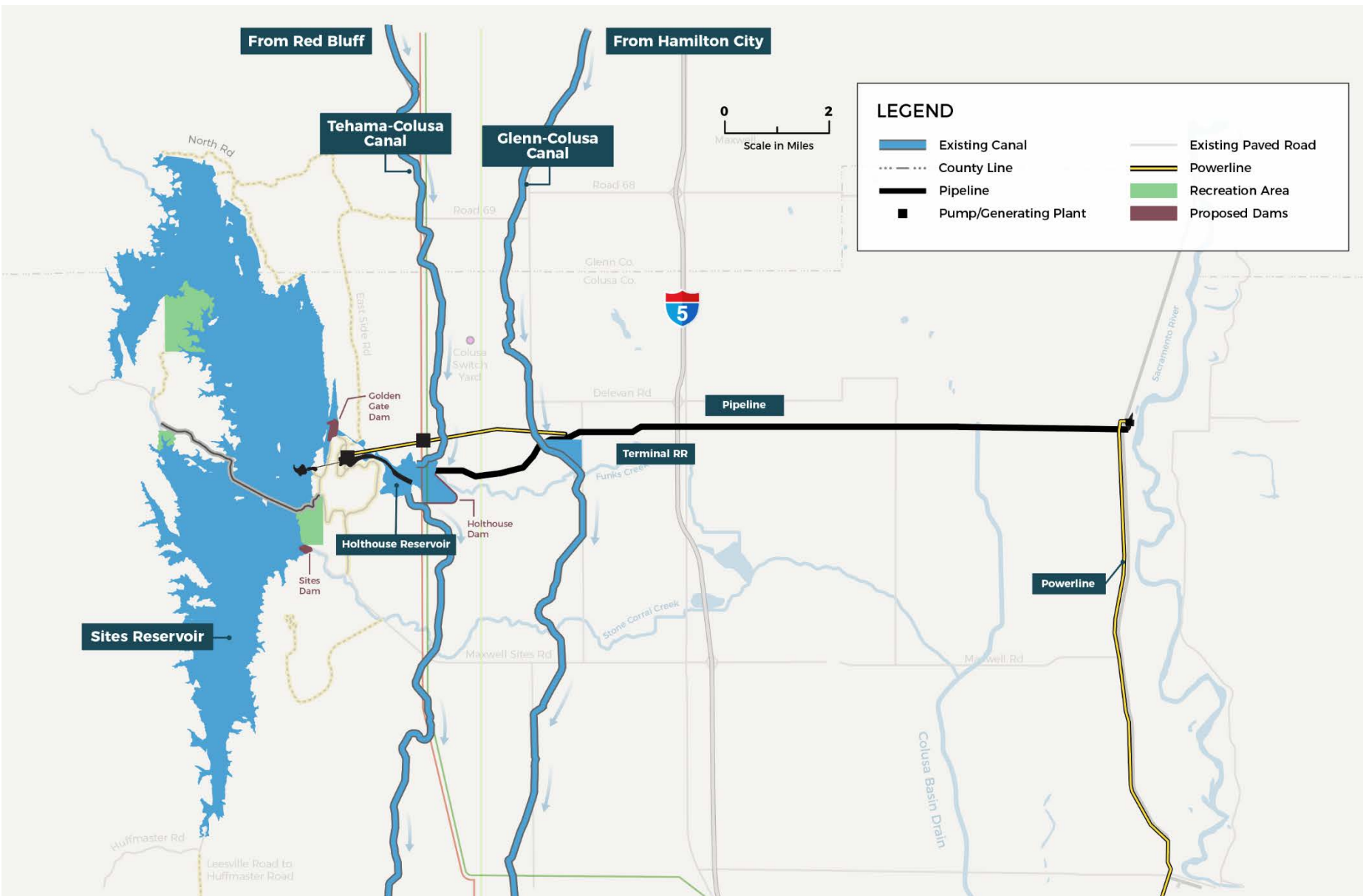
LIST OF EXHIBITS:

Exhibit “A” – Sites Reservoir Location Map

Exhibit “B” – Sites Reservoir Project Fact Sheet

Exhibit “C” – Draft Letter of Intent to Participate in the Sites Reservoir Project

EXHIBIT "A"
Sites Reservoir Location Map



Note: This page is intentionally left blank.

Sites Reservoir is generational opportunity to construct a multi-benefit water storage project that helps restore flexibility, reliability, and resiliency to our statewide water supply. Simply put, no other storage project currently under consideration in California can positively influence the operational efficiencies of our existing statewide water.

Perhaps what makes Sites Reservoir so unique is that it is not a “traditional” reservoir project. It is an off-stream facility that does not dam a major river system and would not block fish migration or spawning. Rather, Sites Reservoir offers a significant water storage opportunity that benefits both people and the environment.

Sites Reservoir captures and stores stormwater flows from the Sacramento River—after all other water rights and regulatory requirements are met—for release primarily in dry and critical years for environmental use and for California communities, farms, and businesses when it is so desperately needed. Sites Reservoir is designed to be adaptable to a changing climate. As snowpack declines due to climate change and more of our water comes in the form of atmospheric rivers – Sites Reservoir will become even more vital to the future resiliency of our statewide water supply.

How It Works

Located 10 miles west of the town of Maxwell in rural Glenn and Colusa counties, the Sites Reservoir would be an off-stream storage facility that captures and stores stormwater flows in the Sacramento River—after all other water rights and regulatory requirements are met—for release in dry and critical years for environmental use and for California communities, farms and businesses when it is so desperately needed.

When operated in coordination with other Northern California reservoirs such as Shasta, Oroville and Folsom, which function as the backbone to both the Central Valley Project and the State Water Project, Sites Reservoir will greatly increase flexibility, reliability and resiliency of statewide water supplies in drier periods.

With Sites Reservoir, California has a rare opportunity to enhance statewide water supplies and provide a dedicated allocation of water specifically for the environment.

It provides federal and state resource agencies with a dedicated and reliable supply of water they can manage to provide environmental benefits, especially during drier years.

A significant portion of the project's annual water supplies will be provided for environmental flows, which will help to improve conditions for Delta smelt; help preserve cold-water pools in Shasta later into the summer months to support salmon development, spawning and rearing; and improve Pacific Flyway habitat for migratory birds and other native species.

Sites Reservoir Fast Facts



Provide water for up to **1.5 million homes and businesses** for one year



Increases Sacramento Valley water storage capacity



Creates **reliable supplies** for environmental, agricultural, and municipal uses



29 participating agencies representing communities across California

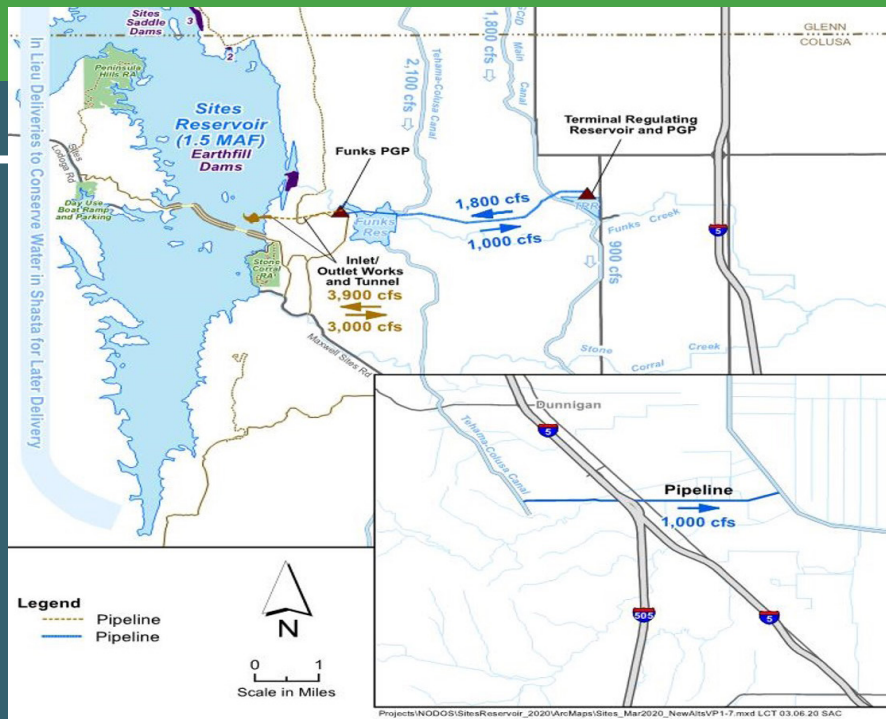
Sites Reservoir Benefits

- **Reliable dry-year water supply for California communities, farms and businesses**
- **Improved water quality**
- **Groundwater recharge**
- **Flood management**
- **Contribution to California's renewable energy goals**
- **Environmental water in drier periods for native fish and Pacific Flyway habitat for migratory birds and other native species**
- **Recreational opportunities**
- **Creation and protection of middle class jobs, including a large skilled work force during seven-year construction**



Support and Funding

Widely supported both regionally and statewide, the project has made significant progress. A bipartisan group of more than 175 organizations, agencies, businesses and elected officials support the Sites Reservoir Project. In 2018, the project was awarded \$816 million in funding from California's Proposition 1 water bond, and secured a \$449 million investment from the United States Department of Agriculture. The United States Bureau of Reclamation is also a significant project partner.



The Sites Reservoir would be an off-stream storage facility located 10 miles west of the town of Maxwell, California in rural Colusa County.

Sites Reservoir Participating Entities

Colusa County *
 Colusa County Water District *
 Glenn-Colusa Irrigation District *
 Glenn County *
 Placer County Water Agency &
 City of Roseville *
 Reclamation District 108 *
 Sacramento County Water Agency &
 City of Sacramento *
 Tehama-Colusa Canal Authority *
 Westside Water District *
 TC 4 **
 Western Canal Water District **
 American Canyon, City of
 Antelope Valley-East Kern Water Agency
 CA Department of Water Resources
 (Ex Officio)
 Carter Municipal Water Company
 Coachella Valley Water District
 Cortina Water District
 Davis Water District
 Desert Water Agency
 Dunnigan Water District
 LaGrande Water District
 Metropolitan Water District
 San Bernardino Valley
 Municipal Water District
 San Geronio Pass Water Agency
 Santa Clara Valley Water District
 Santa Clarita Valley Water Agency
 US Bureau of Reclamation (Cost-share)
 Wheeler Ridge-Maricopa Water
 Storage District
 Zone 7 Water Agency

* Authority Board Member
 ** Associate Board Member



What Makes Sites Reservoir Different?

Features	Benefits
Off-stream storage	Does not create barriers to native fish migration Improves local flood management Improved conservation of stored water to be available when it is needed most
Cooperative operations	Increases effectiveness and efficiency of existing water storage infrastructure
Sacramento Valley-led	Aligns with Sacramento Valley's values Authority will be an integral part of community Fosters regional and statewide collaboration
Beneficiary pays	Provides equity among participating partners Improves accountability and value creation
Federal and state agencies manage environmental water	Adaptable to current and future conditions and priorities Ensures federal and state environmental priorities are met—today and into the future
Adaptable to climate change	Operational flexibility to ensure the water will be applied to the highest beneficial uses despite an uncertain future

FOR MORE INFORMATION, PLEASE VISIT WWW.SITESPROJECT.ORG.



EXHIBIT “C”

DRAFT

September XX, 2020

Mr. Jerry Brown
Sites Project Authority
Email: jbrown@sitesproject.org

Re: Letter of Intent – For Irvine Ranch Water District Participation in Sites Reservoir Project

Dear Mr. Brown:

The Irvine Ranch Water District (IRWD) has an interest in participating in the Sites Reservoir Project (“Project”) for up to 1,000 acre-feet (AF) of annual yield. IRWD’s understanding of the initial costs for this participation would be as follows:

Payment 1: Phase 1: \$48.50/AF Phase 2 (2019): \$60/AF Phase 2 amendment 2 cash call 1: \$60/AF <u>Total due Nov 1, 2020: \$168.50/AF</u> <u>(\$168,500 for 1,000 AF)</u>	Payment 2: Phase 2 amendment 2 cash call: Up to \$40/AF (payment 2 is subject to review of actual expenditures and updated forecasts in Feb. 2021) <u>Total due Apr 1, 2021: Up to \$40/AF,</u> <u>(up to \$40,000 for 1,000 AF)</u>
---	---

Please let this letter serve as a letter of intent, which outlines the initial payment terms under which IRWD would be interested in participating in the Project. This letter of intent does not contain all of the material terms of IRWD’s participation and is not intended to, nor does it create, a binding agreement. A binding agreement will only occur upon the mutual execution and delivery of applicable Project agreements. Neither IRWD nor the Sites Project Authority will have any obligation with regard to IRWD’s participation until all necessary parties have executed a participation and/or funding agreement, as applicable. IRWD’s execution of such an agreement would be subject to the findings of its due diligence investigations.

Please provide the agreement that would be necessary for IRWD to participate in the Project for IRWD’s review and presentation to IRWD’s Board of Directors for final approval. IRWD looks forward to working with the Authority on the Project. Feel free to call me if you have any questions.

Sincerely,

Paul A. Cook
General Manager

Note: This page is intentionally left blank.