

AGENDA
IRVINE RANCH WATER DISTRICT
WATER BANKING COMMITTEE
THURSDAY, OCTOBER 15, 2015

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

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

<u>ALSO PRESENT</u>	Paul Cook	_____	Kellie Welch	_____
	Rob Jacobson	_____	Patrick Sheilds	_____
	Ray Bennett	_____	Paul Weghorst	_____
	Jo Ann Corey	_____	Dane Johnson	_____
	Fiona Sanchez	_____	Christine Compton	_____
	_____	_____	_____	_____

COMMUNICATIONS

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

INFORMATION

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

Recommendation: Receive and file. | |
| 6. | <u>WATER BANKING PROGRAM UPDATE – SANCHEZ/WEGHORST</u>

Recommendation: Receive and file. | |
| 7. | <u>EVALUATION OF POTENTIAL THIRD WATER BANKING SITE –
WELCH/SANCHEZ/WEGHORST</u>

Recommendation: Receive and file. | |

ACTION

8. REVISED WATER BANKING, TRANSFERS AND WHEELING POLICY
POSITION PAPER - WEGHORST

Recommendation: That the Committee provide input on the updated Policy Position Paper entitled *Water Banking, Transfers and Wheeling* and the Board approve the Policy Position Paper as amended based on input from the Committee.

OTHER BUSINESS

9. A. Directors' Comments

B. CLOSED SESSION CONFERENCE WITH REAL PROPERTY NEGOTIATOR
(Government Code Section 54956.8).

Property: Sections 25, 26, 34, and 35 of T23S R19E MDB&M – lease and pipeline easement and license.

Negotiating Parties: Sandridge Partners

Agency Negotiator: Paul Cook, General Manager

Purpose of Negotiations: Price and Terms of Payment

C. Adjourn

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

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

October 15, 2015

Prepared by: D. Johnson/K. Welch

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

Approved by: Paul Cook *Paul Cook*

WATER BANKING COMMITTEE

WATER BANKING PROJECT FACILITIES AND CAPACITIES OVERVIEW

SUMMARY:

Staff has prepared a summary table of the storage, recharge and recovery capacities of existing and planned IRWD water banking projects including capacities available to IRWD in the Kern Water Bank. A table that provides a quarterly update on Strand Ranch recovery and recharge operations and the balance of the stored water in the Kern Water Bank has also been prepared. These tables are provided as Exhibits "A" and "B", respectively. Staff has revised the column descriptions in Exhibit "A" to reflect *recovery capacity as planned* versus *recovery capacity as designed*. In addition, staff has prepared a map depicting project wells and pipelines and a map showing Cross Valley Canal turn-out locations. These maps are provided as Exhibits "C" and "D", respectively. The locations of the Drought Relief Project wells shown on Exhibit "C" have been revised to reflect that the location of one of the six wells has yet to be identified. The four exhibits are provided for the Committee's reference.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

- Exhibit "A" – Recharge, Storage and Recovery Capacities of Existing and Proposed Water Banking Projects
- Exhibit "B" – Strand Ranch Storage, Recharge and Recovery Operations Update
- Exhibit "C" – Map of Water Banking Project Wells and Pipelines
- Exhibit "D" – Map of Cross Valley Canal Turnouts

Exhibit "A"

TABLE 1
Current and Anticipated Water Banking Projects
Recharge, Storage and Recovery Capacities
 October 15, 2015

WATER BANKING PROJECT	OWNERSHIP AND WELL INFO			ALLOCATED CAPACITY (AF)					1 st PRIORITY RECOVERY CONDITIONS (CFS)		2 nd PRIORITY RECOVERY CONDITIONS (CFS)	
	IRWD OWNED	WELLS EXISTING	WELLS PROPOSED	TOTAL STORAGE CAPACITY	ANNUAL RECHARGE 1 ST PRIORITY	ANNUAL RECHARGE 2 ND PRIORITY	ANNUAL RECOVERY 1 ST PRIORITY	ANNUAL RECOVERY 2 ND PRIORITY	RECOVERY CAPACITY AS PLANNED ¹	RECOVERY CAPACITY CURRENT CONDITIONS ²	RECOVERY CAPACITY AS PLANNED	RECOVERY CAPACITY CURRENT CONDITIONS
Strand Ranch	Yes	7	-	50,000	17,500	-	17,500	-	40.0	23.0	-	-
Stockdale West	Yes	-	3	26,000	27,100	-	11,250	-	16.5	-	-	-
Stockdale East	No	-	2	-	-	19,000	-	7,500	-	-	10.0	-
IRWD Acquired Storage Account ³	No	-	-	50,000	-	-	-	-	-	-	-	-
Drought Relief Project Wells	No	-	3	-	-	-	-	-	16.5	-	-	-
Kern Water Bank Storage Account ⁵	No	-	-	9,495	3,200	-	6,330	-	-	-	-	-
TOTALS		7	8	135,495	47,800	19,000	35,080	7,500	73.0	23.0	10.0	0.0
Partner Capacities ⁴				38,000	-	-	12,667	-	35.5	35.5	-	-
IRWD Capacities				97,495	-	-	22,413	-	37.5	0.0	-	-
IRWD's recovery <i>during</i> 6 month partner recovery period (AF)									13,500	0.0	-	-
IRWD's recovery <i>after</i> 6 month partner recovery period (AF)									8,913	22,413	-	-
TOTALS (AF)									22,413	22,413	-	-
Number of months needed to recover IRWD's total AF after partners' recovery (Assumes IRWD has use of total recovery capacity after partners' recovery)									10.1	16.2	-	-

¹ Based on designed Strand recovery capacity assuming 370' bgs. Assumes 5.5 cfs for each of the Stockdale West and Drought Relief well. Assumes partners' water is recovered over 6 months.

² Current Conditions for Strand at 430' bgs.

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.

Exhibit "B"

IRWD's Water Banking Storage, Recharge and Recovery Update

10/6/2015

Water Banking Recovery and Recharge Operations

Water Bank	Water Banking Entity					
	IRWD		Buena Vista (BVWSD)	Carpinteria Valley Water (CVWD)	Antelope Valley-East Kern (AVEK)	Dudley Ridge Water District ⁽³⁾
	SWP ⁽¹⁾	Non-SWP ⁽²⁾	Non-SWP	SWP	SWP	SWP
Beginning Water in Storage 2014 (AF)						
Strand Ranch	3,082	13,761	2,326	621	2,229	-
Strand - Stockdale Pilot	-	1,401	1,475	-	-	-
Stored Water at 1/1/14	3,082	15,162	3,801	621	2,229	-
(Recovery) and Recharge in 2014 (AF)						
CVWD	-	-	-	(208)	-	-
AVEK	-	-	-	-	(2,229)	-
IRWD/Diamond Farming	-	(1,000)	-	-	-	-
IRWD/MWD Wheeling ⁽⁴⁾	-	(1,000)	-	-	-	-
IRWD/MWD Exchange ⁽⁵⁾	-	(4,000)	-	-	-	-
MWD Borrowing SWP ⁽⁶⁾	(2,853)	-	-	-	-	-
SWP Allocation (2013) ⁽⁷⁾	423	-	-	-	-	423
Available Reserve Water end 2014 ⁽⁸⁾	20	513	540	-	-	-
Total 2014 transactions	(2,410)	(5,487)	540	(208)	(2,229)	423
Total Held in MWD System ^(4,5)	5,423	-	-	-	-	423
Total Held in Kern County	3,102	9,675	4,341	413	-	-
Stored Water at 1/1/15	8,525	9,675	4,341	413	-	423
Estimated (Recovery) and Recharge in 2015 (AF)						
CVWD	-	-	-	(413)	-	-
BVWSD	-	-	(4,341)	-	-	-
SWP Allocation (2014) ⁽⁷⁾	51	-	-	-	-	51
SWP Allocation (2015) ⁽⁷⁾	175	-	-	-	-	175
Total Estimated 2015 transactions	226	-	(4,341)	(413)	-	226
Estimated End of Year Stored Water (Kern County and MWD System) 2015 (AF)						
Total Held in Kern Water Bank	-	4,188.00	-	-	-	-
Total Held in MWD System	5,649.00	-	-	-	-	649
Total Held in Kern County	3,102.00	9,674.50	-	-	-	-
Total Estimated Stored Water	8,751.00	13,862.50	-	-	-	649

Water in Storage has been adjusted to account for losses
MWD (Metropolitan Water District of Southern California)

- (1) IRWD's SWP includes 229 AF from CVWD that stays in Kern County
- (2) IRWD's Non-SWP total includes 2,842 AF of Kern County Water Agency Article 21 water
- (3) DRWD water supply will be returned by MWD to IRWD's Jackson Ranch
- (4) IRWD will reserve a portion of the wheeled water as extraordinary supply and consumptively use the remainder in 2015
- (5) MWD will return the exchanged water as SWP to IRWD within 10 years
- (6) MWD borrowed IRWD's SWP supplies and will replace it with an equivalent amount of MWD's stored water in Kern County.
- (7) MWD storing 2013 SWP allocation and assumes MWD will store 2014 and 2015 SWP allocation amounts in MWD's system and not Strand Ranch
- (8) 4% of banked water is placed into a reserve to account for actual or potential losses. This reserve water may be purchased within 3 years following the end of the calendar year in which the water was banked. If the water is not purchased at the end of 3 years, it is made available for recovery.

Exhibit "C"

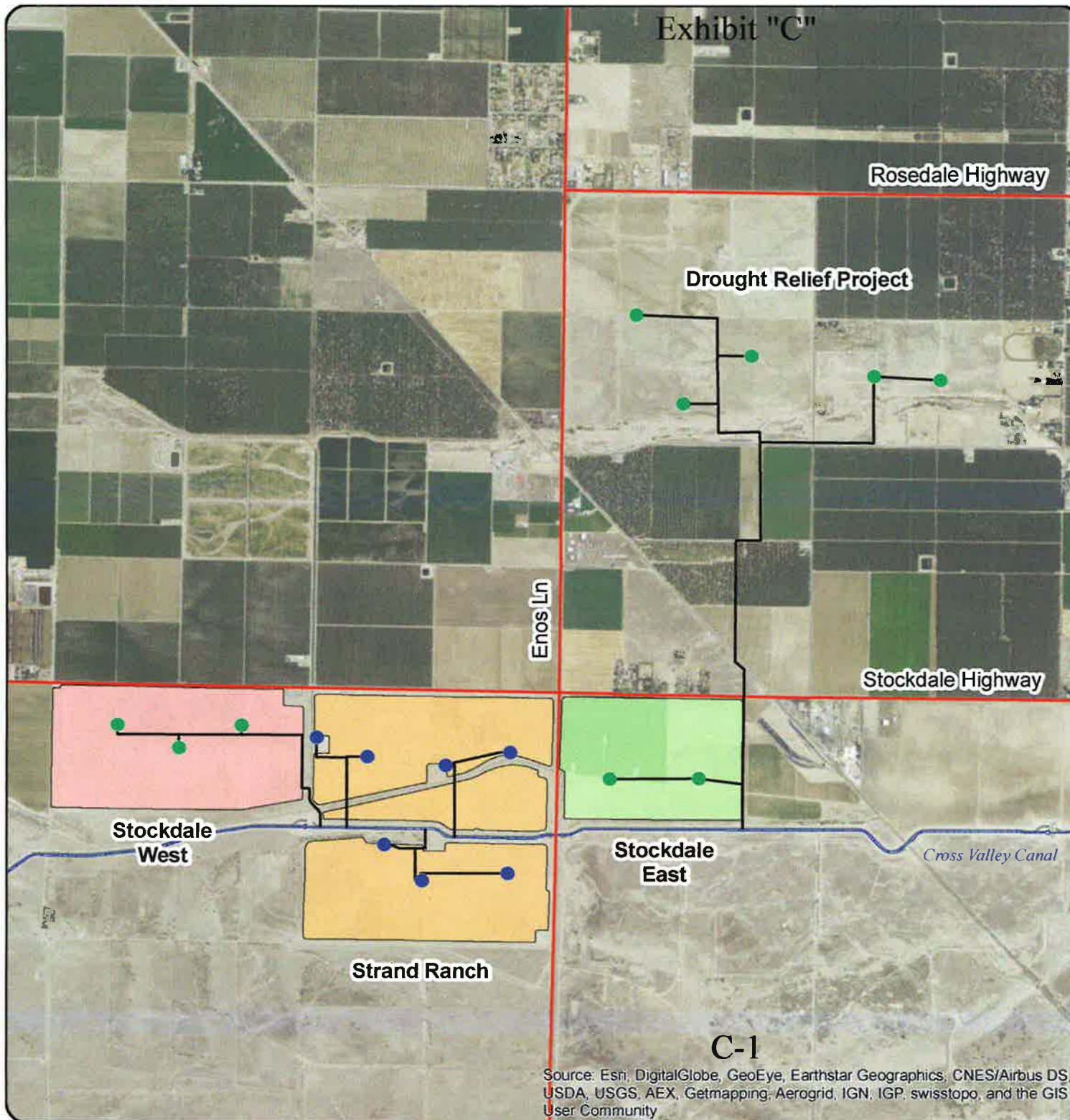


Location Map: IRWD Water Banking Projects Wells and Turnin Pipelines

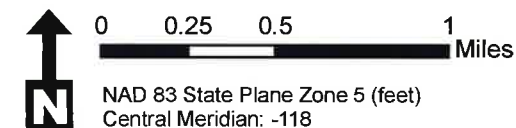
MAP FEATURES

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

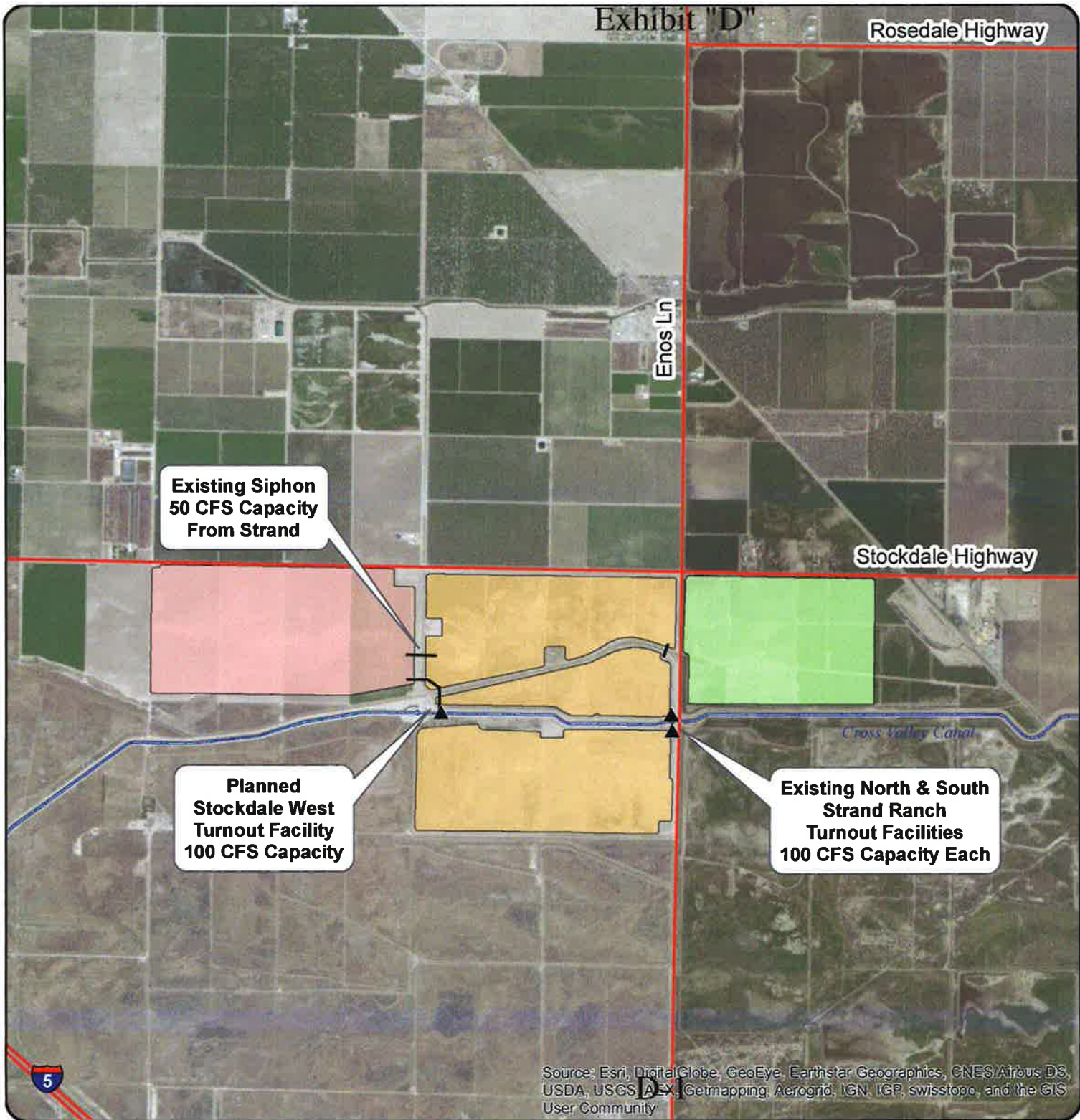
This figure shows the location of IRWD's water banking project sites as well as existing and proposed extraction wells.



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



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

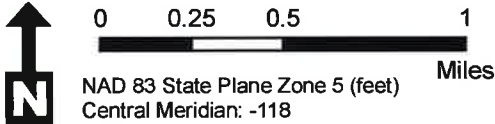


**Location Map:
IRWD Water Banking Projects
Turnout Facilities**

MAP FEATURES

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

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



October 15, 2015

Prepared by: F. Sanchez

Submitted by: P. Weghorst

Approved by: Paul Cook

WATER BANKING COMMITTEE

WATER BANKING PROGRAM UPDATE

SUMMARY:

Staff will provide an update to the Water Banking Committee on discussions that have been held with Rosedale-Rio Bravo Water Storage District (Rosedale) related to finding a location for the sixth Drought Relief Project well. Staff will also provide an update on potential water supply opportunities which may benefit the District's water banking programs.

BACKGROUND:

Drought Relief Project:

Staff continues to work with Rosedale in evaluating potential locations for the sixth well to be constructed for the shared use of IRWD and Castaic Lake Water Agency as part of the Drought Relief Project. At the Committee meeting, staff will provide a verbal update on discussions that have been held with Rosedale related to securing a site for the construction of the sixth well.

Other Water Supply Opportunities:

Staff continues to investigate water supply opportunities suitable to further enhance the District's water banking programs and long-term water supply reliability. Staff will provide the Committee with a verbal update on potential water supply opportunities for IRWD.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

None.

October 15, 2015
Prepared By: K. Welch
Submitted By: F. Sanchez / P. Weghorst
Approved By: Paul Cook 

WATER BANKING COMMITTEE

EVALUATION OF POTENTIAL THIRD WATER BANKING SITE

SUMMARY:

Rosedale-Rio Bravo Water Storage District (Rosedale) and staff are working with environmental consultants at ESA to finalize the Environmental Impact Report (EIR) for the Stockdale Integrated Banking Project. The project will integrate IRWD's Stockdale West property and Rosedale's Stockdale East property into Rosedale's Conjunctive Use Program. The EIR evaluates the potential environmental impacts of the construction and operation of water banking facilities on these properties. It also provides an environmental analysis of a potential third water banking site to be incorporated into the project that has not yet been identified. This report provides an overview of the advantages and disadvantages of potentially securing a third site for the project.

BACKGROUND:

The proposed Stockdale Integrated Banking Project would consist of the construction and operation of water banking facilities at three sites: IRWD's Stockdale West property, Rosedale's Stockdale East property and a third project site that could be located anywhere in the *additional site radius area* shown on Exhibit "A". The construction and operation of recharge and recovery facilities at these sites is evaluated in the project EIR that is currently being finalized by environmental consultants at ESA. Within the EIR, the third site is described as being made up of non-contiguous parcels that have yet to be identified. It is contemplated in the EIR, that the third site would be shared by Rosedale and IRWD. The Water Banking, Recovery and Exchange Agreement that is being finalized for the Stockdale Integrated Banking Project includes provisions for IRWD and Rosedale to cooperate in the identification of a third project site.

In anticipation that lands may come onto the market that might be suitable as a third project site, staff has developed lists of advantages and disadvantages associated with securing lands for incorporation into the project. These lists are described below:

Advantages of Third Site:

It is expected that the third project site could comprise up to 640 acres and could result in a storage capacity of approximately 51,200 AF, a recharge capacity of about 52,200 AFY and a recovery capacity of approximately 22,500 AFY. If IRWD and Rosedale participated equally in the purchase of the land, the storage capacity would be divided equally to IRWD and Rosedale and each agency would get access to 50 percent of the resulting recharge and recovery capacities on a first priority basis. Each agency would also get access to each other's share of the recharge and recovery capacity on a second priority basis. The potential advantages of having access to a third water banking project site are as follows:

- Increased ability to capture flood flows that would otherwise leave Kern County;

- Increased instantaneous recharge and recovery capacity that could assist in the expansion and operation of IRWD exchange programs;
- Accelerated ability to reach 88,000 AF of stored water banking supplies for IRWD's use during severe droughts and periods of supply interruptions;
- The ability to offer water banking opportunities to other water agencies that could be used to recover capital costs associated with IRWD's water banking projects;
- Securing high quality recharge land now could reduce costs compared to competing for land in the future when land prices could be substantially higher; and
- The value of the land would likely appreciate in value and could offer potential development opportunities in the future.

Disadvantages of a Third Site:

The potential disadvantages of securing access to a third water banking project site are as follows:

- Mis-timing the market for high-quality recharge land could result in paying a higher price for the land, especially if the property was not held for a long period of time; and
- Potential water banking and exchange partners might pursue different opportunities to improve water supply reliability in the future.

Staff and Rosedale are working together to identify available land for a potential third water banking site for the Stockdale Integrated Banking Project. Staff will return to the Committee with a full discussion of the advantages and disadvantages described above, along with recommendations related to securing a potential third site for banking water.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

A Stockdale Integrated Banking Project EIR is being finalized by Rosedale as the Lead Agency and IRWD as a Responsible Agency. This environmental document has been developed 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. The EIR includes a program-level analysis of impacts of a third project site because the location of the site has not been identified. If and when the third Stockdale project site is identified, subsequent project-level environmental review would need to be conducted prior to implementation of project facilities.

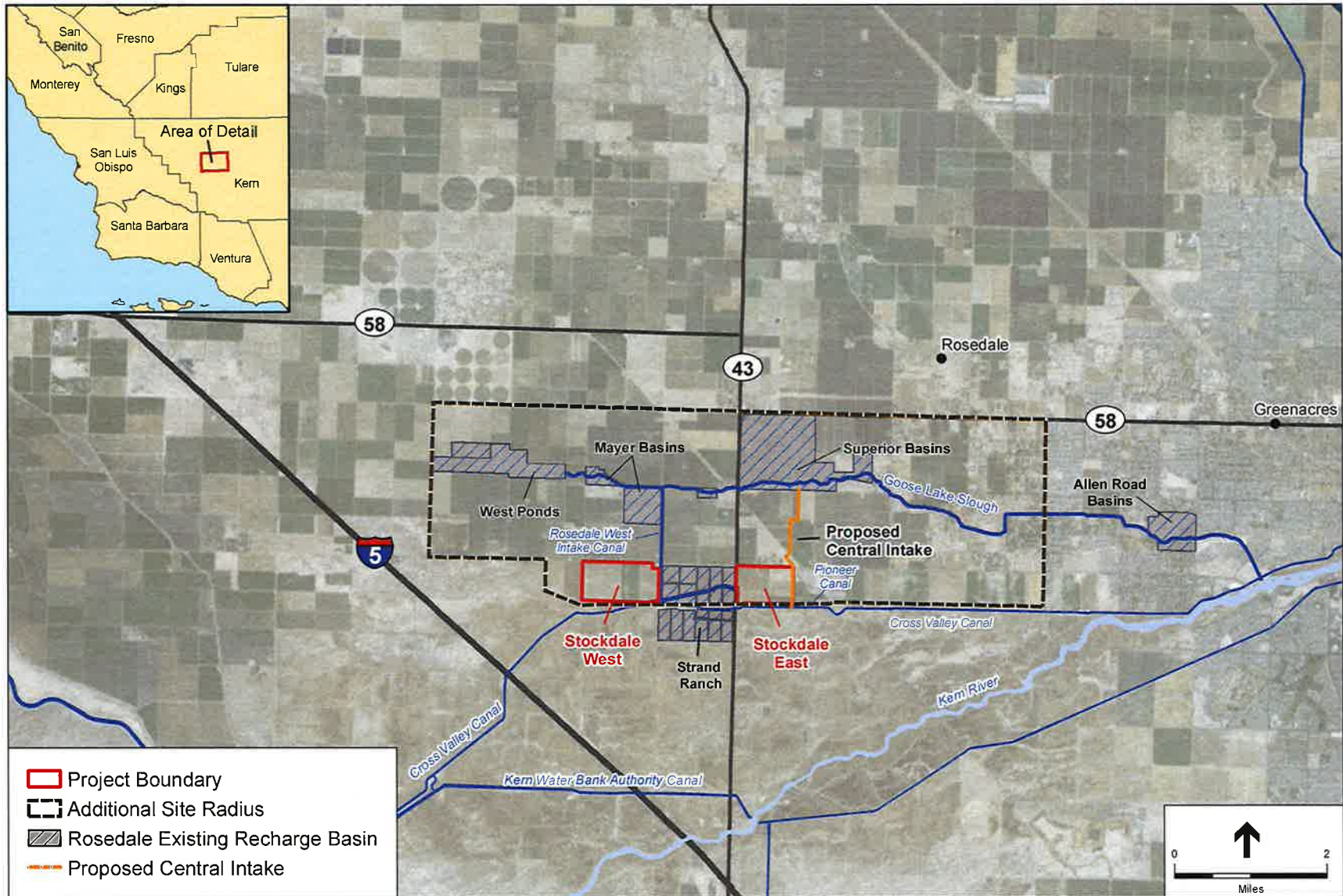
RECOMMENDATION:

Receive and file.

EXHIBITS:

Exhibit “A” – Location Map: Stockdale Integrated Banking Project

EXHIBIT "A"



SOURCE: ESRI 2013

Stockdale Integrated Banking Project . 211181

Figure 2-1
Project Location

October 15, 2015

Submitted by: P. Weghorst 

Approved by: Paul Cook 

WATER BANKING COMMITTEE

REVISED WATER BANKING, TRANSFERS AND WHEELING POLICY POSITION PAPER

SUMMARY:

Irvine Ranch Water District policy position papers are reviewed periodically to determine if the positions are still valid, need revisions or if additional papers need to be written on different issues of importance to the District. Staff has modified the existing Water Banking, Transfers and Wheeling policy position paper that was last revised and approved on August 2, 2013. These revisions take into consideration progress that has occurred in establishing IRWD's water banking programs and the potential for the development of a water market within the State. Staff recommends that the Committee provide input on the updated paper and that the Board approve the Policy Position Paper as amended based on input from the Committee.

BACKGROUND:

In 2004, IRWD began producing policy position papers on topics of particular interest and importance to the District. Because of the IRWD Board of Directors' standing in the water industry, the opinions of individual Board members are regularly solicited on issues of vital interest to the industry and the community. To keep these position papers current, staff occasionally recommends that the Board review the papers and when appropriate, incorporate revisions.

IRWD's Water Banking, Transfers and Wheeling position paper was last revised and adopted by the Board on August 2, 2013. At that time, the approved policy reflected the construction of the Strand Ranch Integrated Banking Project, acquisition of the Jackson Ranch property, development of the Stockdale Integrated Banking Project, development of an agreement with Metropolitan Water District of Southern California for coordinated delivery of State Water Project supplies, and the execution of approved pilot and long-term water supply programs involving unbalanced exchanges. Since that time, IRWD has entered into an agreement with Rosedale-Rio Bravo Water Storage District (Rosedale) for the construction and operation of wells in Rosedale's service area that will assist both agencies achieve groundwater recovery objectives. In addition, the two agencies are now contemplating incorporating a third project site into the Stockdale project. These significant changes in addition to the Administration's interest in establishing a water market for the State of California that would streamline water transfers and exchanges, has resulted in the need to update the policy position paper.

Staff has updated the Water Banking, Transfers and Wheeling Policy Position Paper. Staff recommends that the Committee provide input to the updated document as provided in Exhibit "A". A copy of the paper with changes identified from the August 2, 2013 version of the document is provided as Exhibit "B".

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

None.

RECOMMENDATION:

That the Committee provide input on the updated Policy Position Paper entitled *Water Banking, Transfers and Wheeling* and that the Board approve the Policy Position Paper as amended based on input from the Committee.

LIST OF EXHIBITS:

Exhibit "A" – Updated Policy Paper: Water Banking, Transfers and Wheeling

Exhibit "B" – Updated Policy Paper: Water Banking, Transfers and Wheeling with Changes
Identified from August 2, 2013

Exhibit “A”
DRAFT
IRVINE RANCH WATER DISTRICT POLICY POSITION
WATER BANKING, TRANSFERS AND WHEELING

Revised: October 15, 2015

Issue Summary:

The Irvine Ranch Water District is further diversifying its water supply portfolio by developing water banking facilities in Kern County in the southern San Joaquin Valley. As water supplies become fully subscribed and as shortage limitations being experienced at the Sacramento-San Joaquin Delta continue to stress water deliveries, water banking storage and recovery programs will continue to provide a highly reliable and cost efficient alternative to improving water supply reliability. These programs and participation by retail agencies should be encouraged throughout the State.

Background:

The continued rapid growth in statewide population, coupled with challenges of drought, limitations in the Delta and expanding regulatory and environmental pressures will continue to stress the State’s water supplies. Strategies for addressing these challenges include securing supplemental supplies to store for future use and for the development of groundwater storage capabilities with corresponding recharge and recovery facilities (water banking). The conveyance or “wheeling” of water through federal, state, regional, and local facilities to points of use is a critical issue related to water banking, transfer programs, and the end users. The following are descriptions of the District’s requirements for diversifying its water supplies through water banking, actions that IRWD has taken to date relative to the development of its water banking program, a summary of current and planned water banking capacities, objectives for acquiring supplemental supplies and objectives for expanding its water banking program capacities. This paper concludes with Policy Principals for the District’s water banking program.

IRWD Supply Diversity Requirements:

IRWD’s primary mission is to provide a safe and reliable water supply to its customers. Supply reliability is directly related to supply diversity. Along with the implementation of numerous water use efficiency programs, IRWD has developed and continues to develop a diverse mix of local and non-local supplies including the use of high quality groundwater, impaired groundwater, and recycled water. After taking these efforts into consideration, current projections indicate that IRWD has long-term requirements for the storage of at least 88,000 acre-feet of supplemental water that could be called upon during drought conditions and / or supply interruptions. In the event of a major supply interruption, this amount of water would fulfill IRWD’s estimated needs for import water for three years in a row based on projected water demands. IRWD’s water banking program will provide IRWD the ability to store and recover this supplemental water to meet long-term supply reliability requirements.

A significant risk of a major supply interruption exists at the Delta, where an earthquake or other natural disaster could damage the series of levees in the Sacramento Bay Delta. Various water and regulatory agencies have indicated water exports from the Delta could be interrupted for one or two years due to actual levee failures and subsequent repairs. Some estimates indicate that it

could take up to three years to repair the levees. In addition, the risk of shortages of water from the Colorado River must be considered. The Colorado River basin is in a 15-year drought and the U.S. Department of Interior projects that supply shortages on the Colorado River will occur in the future. Based on these projections, it is possible that shortages could result in impacts to supplies available to IRWD.

If during a major water supply interruption, Metropolitan Water District of Southern California (MWD) is unable to deliver IRWD's imported water demands of 28,000 acre-feet (AF) in 2035, then IRWD would need to supplement imported supplies with 28,000 AF per year (AFY) from storage in its water banking program to offset this shortfall. IRWD has determined that it needs to develop at least 28,000 AFY capacity to recover water from its water banking program to provide a reliable supply of water to its customers during major import water supply interruptions. In preparation for a major three-year interruption in imported water supplies and assuming the need to recover and deliver 28,000 AFY from storage for each of the three years, while taking into consideration in-ground losses, IRWD would need at least 88,000 AF of water in storage in its water banking programs.

To ensure that water can be delivered into storage when available in wet years, IRWD has also determined that it needs the capacity to recharge at least 28,000 AFY.

IRWD Actions to Date:

Following is a summary of actions to date to develop IRWD's water banking program:

Strand Ranch Facilities:

Since 2005, IRWD has made significant progress in the development of its water banking program and in securing supplemental supplies to store in the program in Kern County. The process began with the acquisition of the Strand Ranch in Kern County. Subsequent to the purchase, IRWD successfully negotiated a 30-year water banking partnership agreement with Rosedale-Rio Bravo Water Storage District which certified an Environmental Impact Report for the Strand Ranch Integrated Water Banking Project. IRWD has constructed 502 acres of recharge basins, seven production wells, Cross Valley Canal turnouts and turn-ins, recovery pipelines, and three monitoring wells. A small capacity in the CVC was also purchased by IRWD. The storage capacity associated with the Strand Ranch Water Bank is 50,000 AF. Recharge and recovery facilities have been developed for capacities of 17,500 AF per year. The Strand Ranch Water Bank is integrated into Rosedale's Conjunctive Use Program. IRWD also has access to three well sites within Rosedale's service area and the three wells are currently under construction as part of Rosedale's Drought Relief Project. These three new wells will be used to increase the instantaneous recovery capacity associated with the Strand Ranch Integrated Banking Project.

State Water Project Supplies:

In 2010, IRWD completed the acquisition of the Jackson Ranch property in Kings County with the right to use 1,747 AFY of State Water Project (SWP) Table A water through the Dudley Ridge Water District (DRWD). In addition, IRWD purchased the property's assigned portion of DRWD's participation rights in the Kern Water Bank (KWB) for an additional 9,495 AF of dedicated storage capacity and associated first priority recharge and recovery rights. Through this participation in the KWB, IRWD obtained access to unused storage, recharge and recovery capacity in the KWB. In December 2013, the California Department of Water Resources, DRWD, MWD and the Kern County Water Agency executed the Multi-Year Exchange and Change in Point of Delivery Agreement that allows the delivery of Table A water associated with the Jackson Ranch for storage in the Strand Ranch banking program on an unbalanced exchange basis.

In 2011, IRWD, MWD and Municipal Water District of Orange County (MWDOC) executed a Coordinated Exchange and Delivery Agreement for delivery of SWP supplies from the Strand Ranch Water Bank to IRWD's service area. The agreement allows IRWD to secure SWP supplies with the concurrence of MWD with MWD maintaining control of the introduction of these supplies into its service area.

IRWD has also completed two pilot projects with the Central Coast Water Agency (CCWA) for unbalanced exchanges of Carpinteria Valley Water District's (CVWD) SWP Table A amounts. A pilot unbalanced exchange program was also executed with Antelope Valley East Kern Water Agency (AVEK). A total of 7,000 AF of water has been delivered to the Strand Ranch from both the CCWA and AVEK programs and IRWD retains 50% (less a proportional share of losses) of the water for recovery and use in its service area. In 2014 and 2015, IRWD returned to both CCWA and AVEK their respective shares of the water. The development of these supplemental supplies is consistent with the District's objectives for acquiring supplemental water supplies. Currently, IRWD is pursuing long-term exchange program agreements with both CCWA and AVEK.

Non-State Water Project Supplies:

In 2010, IRWD completed a pilot project agreement with Buena Vista Water Storage District (BVWSD), whereby BVWSD could store up to 5,000 AF of its pre-1914, high flow Kern River water at the Strand Ranch on an unbalanced exchange basis where IRWD retains 50% of the stored supplies. In December 2010, IRWD and BVWSD executed an agreement for a long-term program whereby BVWSD can store up to 40,000 AF of its pre-1914 high flow Kern River with IRWD retaining the rights to the use of half of this water. By the end of 2012, BVWSD had stored 25,473 AF of water at the Strand Ranch. In 2013 and 2015, IRWD returned to BVWSD the 50% share of the water that was stored for the benefit of BVWSD.

In 2014, IRWD, MWD and MWDOC executed a template Wheeling Agreement that facilitated the delivery of 1,000 AF of SWP water into IRWD's service area that was received from MWD in exchange for high flow Kern River water that was recovered from the Strand Ranch project and delivered to Arvin Edison Water Storage District on behalf of MWD. This Wheeling

Agreement was implemented consistent with MWD's Administrative Code. IRWD completed taking delivery of the 1,000 AF water into its service area in 2015 as extraordinary supply consistent with MWD's Water Supply Allocation Plan.

Stockdale West Facilities:

In 2010, IRWD completed the purchase of the Stockdale West Ranch property located just west of the Strand Ranch. In 2011, IRWD constructed four recharge basins over 259 acres as part of a one-year Pilot Recharge Project. In August 2011, IRWD and BVWSD entered into a one-year pilot program whereby BVWSD stored 3,268 AF of high flow Kern River water. This pilot was used to determine the recharge capabilities of the property and to provide important information necessary for the design of a long-term water banking project on the project.

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

The EIR for the Stockdale Integrated Banking Project contemplates that a third water banking project site would be secured and developed by IRWD and Rosedale to help meet both IRWD and Rosedale storage, recharge and recovery requirements. It is expected that the third project site could comprise up to 640 acres and could result in a storage capacity of approximately 51,200 AF, a recharge capacity of about 52,200 AFY and a recovery capacity of approximately 22,500 AFY. If IRWD and Rosedale participated equally in the purchase of the land, the storage capacity would be divided equally to IRWD and Rosedale and each agency would get access to 50 percent of the resulting recharge and recovery capacities on a first priority basis. Each agency would also get access to each other's share of the recharge and recovery capacity on a second priority basis.

Water Banking Capacities:

The following table presents an overview of the storage, recharge and recovery capacities that have been developed to date and that are expected to be developed at IRWD's water banking projects on both the Strand Ranch and the Stockdale West Ranch. The table also provides an overview of how these capacities are shared and expected to be shared with IRWD's unbalanced exchange partners. At the bottom of the table is a summary of IRWD requirements and additional capacities that are needed to meet these requirements. The table indicates that IRWD will have a shortfall of annual recovery capacity in the amount of 4,417 AF that would likely be achieved by securing and developing two recovery wells on the third water banking project site that is contemplated in the EIR for the Stockdale Integrated Banking Project. Any excess

storage, recharge and recovery capacities that would be available to IRWD from the third project site could be used to share reliability benefits with other retail water supply agencies.

Existing and Currently Planned Storage, Recharge, and Recovery
Capacity in IRWD's Water Banking Program

Water Banking Property	Storage Capacity (AF)	Recharge Capacity		Recovery Capacity	
		First Priority Recharge Capacity (AFY)	Second Priority Recharge Capacity (AFY)	First Priority Recovery Capacity (AFY)	Second Priority Recovery Capacity (AFY)
Strand Ranch	50,000	17,500	0	17,500	0
Stockdale West	26,000	27,100	0	11,250	0
Stockdale East	0		19,000		7,500
Storage Lease in Rosedale's Conjunctive Use Program	50,000	0	0	0	0
Total to Date	126,000	44,600	19,000	28,750	7,500
Exchange Partner Share	38,000	22,300	9,500	12,667	0
IRWD Share	88,000	22,300 <i>First + Second:</i>	9,500 31,800	16,083 <i>First + Second:</i>	7,500 23,583
IRWD Stated Capacity Needs:	88,000		28,000		28,000
IRWD's Needs: Excess (Shortfall)	0		3,800		(4,417)

Objectives for Acquiring Supplemental Water Supplies:

IRWD's objectives for acquiring supplemental water supplies for recharge, storage and recovery within IRWD's water banking program excluding supplies needed to fulfill local operations (including irrigation) are as follows:

1. IRWD seeks to acquire low-cost and diverse supplemental sources of water such as high flow Kern River water, State Water Project supplies, water associated with pre-1914 rights, CVP supplies and water from other available sources depending on annual availability and conveyance capacity availability.
2. Generally, IRWD seeks to acquire up to 67% of its supplemental supplies during wet hydrologic periods subject to the conditions established by the water supplier and availability. IRWD does not intend to compete for supplemental supplies during dry years when supply availability may be less.

3. IRWD plans to acquire up to 33% of its supplemental supplies through smaller sustained, controllable and schedulable supply sources. Such supplies are expected to be acquired through the purchases of farm land that have water supply entitled to it. IRWD will preserve existing agricultural uses wherever possible and will schedule excess water for direct or exchange delivery to its water banking programs through rotational fallowing or onsite conservation using methods that minimize third-party impacts to local economies.

The acquisition of supplemental supplies is likely to require the use of unbalanced exchange concepts whereby IRWD stores water on behalf of another party in return for 50 percent of the water being transferred to IRWD. The sharing of the District's water banking facilities will result in the need to expand water banking capacity to ensure that the District can meet its water supply diversification requirements while meeting the requirements of IRWD's exchange partners.

Objectives for Developing Additional Capacity:

IRWD seeks to develop additional recovery capacity to meet IRWD's recovery needs and to ensure that IRWD and its exchange partner's rights to the use of the recovery facilities during peak periods can be maximized. It is anticipated that a total recovery capacity of up to 70 cfs will need to be developed to meet these needs. Access to second priority use of wells by IRWD would also be effective for periods when IRWD can recover water for its use off-peak to other uses in Kern County.

Rosedale is currently constructing three wells in its service area as part of the Rosedale Drought Relief Project that will be available for IRWD's use in conjunction with the wells on the Strand Ranch project. These additional wells will help IRWD achieve its goal of 70 cfs of instantaneous recovery capacity. At least two more wells will need to be developed by IRWD on the third Stockdale project site that is described above to fulfill the identified 4,417 AF per year shortfall in recovery capacity.

Land Acquisition Opportunities:

IRWD will consider land acquisition opportunities which have an associated water supply benefit where water can be conserved or made available through temporary fallowing. Such water would be scheduled for delivery to storage in the water banking facilities with minimal third-party impacts and without significant environmental resource impacts. Such water supplies would be useful in performing in-lieu recharge or recovery operations associated with IRWD's water banking program.

IRWD will also consider land acquisition opportunities with the most favorable conditions for groundwater recharge, storage and recovery capacity as needed to meet IRWD capacity requirements as described above and as they may change in the future.

Policy Principles:

Based on the information provided above, the following IRWD policy principals have been developed:

1. The State's water supply situation is being impacted by persistent drought, problems in the Delta, a growing population, increasing regulatory pressure, potential climate change impacts, and an imbalance between available water supplies and available storage. As a result, IRWD has the need for supplemental supplies and storage facilities to store the supplemental water supplies for use during dry periods.
2. Based on economic and environmental criteria, water banking programs involving storage in groundwater aquifers have demonstrated that they are less expensive and preferable to surface storage.
3. A primary mission of IRWD is to provide a highly reliable supply of water. Reliability is enhanced by having multiple redundant sources of supply. To address this need, IRWD will develop diverse supplemental water supply sources and water banking capacity.
4. IRWD seeks to secure low-cost and diverse supplemental sources of water including high flow Kern River, State Water Project supplies, water with pre-1914 rights, CVP supplies and water from other available sources depending on annual availability and conveyance and/or exchange capacity that will allow IRWD to achieve its goal of storing 88,000 AF of water in its water banking program.
5. Because of the District's obligation to its customers, long-term equity ownership of water banking capacity as well as in lands that have water supplies entitled to them is strongly preferred over contract or lease arrangements. Equity partnerships that provide benefits to both the District and to local entities are preferred.
6. The District's water banking partnerships benefit from the sharing of recharge, storage and recovery capacity through unbalanced exchanges. In addition, due to potential climate change, the future intervals between wet years are expected to become longer with increases in the rate of runoff. These issues may make it necessary for IRWD in the future to consider increasing recharge, storage and recovery capacities in its water banking program.
7. Expansion of water banking capacities may be considered through equity purchases of capacities available in existing water banking programs or development of partnerships for capacity expansion.
8. IRWD will support wheeling policies and rates adopted by MWD and other agencies to the extent they reflect cost of service approach. Any wheeling or exchange of water through MWD's conveyance facilities should be consistent with MWD's Administrative Code, must not financially impact MWD or its Member Agencies and should protect MWD's rights including its SWP contract.
9. IRWD will put all available supplemental water supplies to beneficial use using methods that minimize third-party impacts while preserving the agricultural benefits of the

contributing lands through temporary fallowing arrangements and / or water conservation efforts.

10. IRWD will seek partnerships that result in mutually beneficial exchange opportunities as well as the ability to enhance direct and in-lieu recharge or recovery operations associated with IRWD's water banking program.
11. IRWD will support and actively work with the State and the Federal governments and available legislative processes to streamline procedures for the implementation of short and long-term water transfers as well as water marketing systems.
12. IRWD will support the development of water marketing systems in the State of California that provide local control of markets, encourage state-wide cooperation, protect existing water and capacity rights, protect communities from unreasonable third party impacts, avoid significant environmental impacts, do not interfere with contract rights and that result in streamlined abilities to effectuate water transfers, exchanges and wheeling of supplies among voluntary market participants.
13. IRWD will support sharing reliability from its water banking program after IRWD's reliability requirements are fulfilled. Such sharing would occur in a way that ensures IRWD is kept financially whole on the transactions.

Exhibit “B”

DRAFT

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

Revised: ~~October 15~~ August 2, 201~~5~~3

Issue Summary:

The Irvine Ranch Water District is further diversifying its water supply portfolio by developing water banking facilities in Kern County in the southern San Joaquin Valley. As water supplies become fully subscribed and ~~as shortages~~ the limitations being experienced at the Sacramento-San Joaquin Delta continue to stress water deliveries, water banking storage and recovery programs will continue to provide a highly reliable and cost efficient alternative to improving water supply reliability. These programs and participation by retail agencies should be encouraged throughout the State.

Background:

The continued rapid growth in statewide population, coupled with challenges ~~of drought, and~~ limitations in the Delta ~~and~~ ~~and~~ expanding regulatory and environmental pressures, will continue to stress the State’s water supplies. Strategies for addressing these challenges include securing supplemental supplies to store for future use and for the development of groundwater storage capabilities with corresponding recharge and recovery facilities (water banking). The conveyance or “wheeling” of water through federal, state, regional, and local facilities to points of use is a critical issue related to water banking, transfer programs, and the end users. The following are descriptions of the District’s requirements for diversifying its water supplies through water banking, actions that IRWD has taken to date relative to the development of its water banking program, a summary of current and planned water banking capacities, objectives for acquiring supplemental supplies and objectives for expanding its water banking program capacities. This paper concludes with Policy Principals for the District’s water banking program.

IRWD Supply Diversity Requirements:

IRWD’s primary mission is to provide a safe and reliable water supply to its customers. Supply reliability is directly related to supply diversity. Along with the implementation of numerous water use efficiency programs, IRWD has developed and continues to develop a diverse mix of local and non-local supplies including the use of high quality groundwater, impaired groundwater, and recycled water. After taking these efforts into consideration, current projections indicate that IRWD has long-term requirements for the storage of at least 88,000 acre-feet of supplemental water that could be called upon during drought conditions and / or supply interruptions. In the event of a major supply interruption, this amount of water would fulfill IRWD’s estimated needs for import water for three years in a row based on projected water demands. IRWD’s water banking program will provide IRWD the ability to store and recover this supplemental water to meet long-term supply reliability requirements.

A significant risk of a major supply interruption exists at the Delta, where an earthquake or other natural disaster could damage the series of levees in the Sacramento Bay Delta. Various water and regulatory agencies have indicated water exports from the Delta could be interrupted for one or two years due to actual levee failures and subsequent repairs. Some estimates indicate that it

could take up to three years to repair the levees. In addition, the risk of shortages of water from the Colorado River must be considered. The Colorado River basin is in a ~~153~~-year drought and the U.S. Department of Interior projects that supply shortages on the Colorado River will ~~become more severe~~occur in the future. Based on these projections, it is possible that shortages could result in impacts to supplies available to IRWD.

If during a major water supply interruption, Metropolitan Water District of Southern California (MWD) is unable to deliver IRWD's imported water demands of 28,000 acre-feet (AF) in 2035, then IRWD would need to supplement imported supplies with 28,000 AF per year (AFY) from storage in its water banking program to offset this shortfall. IRWD has determined that it needs to develop at least 28,000 AFY capacity to recover water from its water banking program to provide a reliable supply of water to its customers during major import water supply interruptions. In preparation for a major three-year interruption in imported water supplies and assuming the need to recover and deliver 28,000 AFY from storage for each of the three years, while taking into consideration in-ground losses, IRWD would need at least ~~88~~8,000 AF of water in storage in its water banking programs.

To ensure that water can be delivered into storage when available in wet years, IRWD has also determined that it needs the capacity to recharge at least 28,000 AFY.

IRWD Actions to Date:

Following is a summary of actions to date to develop IRWD's water banking program:

Strand Ranch Facilities:

Since 2005, IRWD has made significant progress in the development of its water banking program and in securing supplemental supplies to store in the program in Kern County. The process began with the acquisition of the Strand Ranch in Kern County. Subsequent to the purchase, IRWD successfully negotiated a 30-year water banking partnership agreement with Rosedale-Rio Bravo Water Storage District ~~which~~and jointly certified an Environmental Impact Report for the Strand Ranch Integrated Water Banking Project. IRWD has constructed 502 acres of recharge basins, seven production wells, Cross Valley Canal turnouts and turn-ins, recovery pipelines, and three monitoring wells. A small capacity in the CVC was also purchased by IRWD. The storage capacity associated with the Strand Ranch Water Bank is 50,000 AF. Recharge and recovery facilities have been developed for capacities of 17,500 AF per year. The Strand Ranch Water Bank is integrated into Rosedale's Conjunctive Use Program. IRWD also has access to threetwo well sites ~~reserved~~ within Rosedale's service area and the three wells are currently under construction as part of Rosedale's Drought Relief Project. ~~With additional appropriate environmental review, t~~These three new wells will be used to ~~could be constructed to increase the instantaneous recovery capacity associated with the Strand Ranch Integrated Banking Project.~~

State Water Project Supplies:

In 2010, IRWD completed the acquisition of the Jackson Ranch property in Kings County with the right to use 1,747 AFY of State Water Project (SWP) Table A water through the Dudley Ridge Water District (DRWD). In addition, IRWD purchased the property's assigned portion of DRWD's participation rights in the Kern Water Bank (KWB) for an additional 9,495 AF of dedicated storage capacity and associated first priority recharge and recovery rights. Through this participation in the KWB, IRWD obtained access to unused storage, recharge and recovery capacity in the KWB. In December 2013, the California Department of Water Resources, DRWD, MWD and the Kern County Water Agency executed -is currently preparing the necessary- Multi-Year Exchange and Change in Point of Delivery Agreement agreements to that allows the delivery of Table A water associated with the Jackson Ranch for storage in the Strand Ranch banking program on an unbalanced exchange basis.

In 2011, IRWD, MWD and Municipal Water District of Orange County (MWDOC) executed a Coordinated Exchange and Delivery Agreement for delivery of SWP supplies from the Strand Ranch Water Bank to IRWD's service area. The agreement allows IRWD to secure SWP supplies with the concurrence of MWD with MWD maintaining control of the introduction of these supplies into its service area.

IRWD has also completed two pilot projects with the Central Coast Water Agency (CCWA) for unbalanced exchanges of -CCWA's member agency- Carpinteria Valley Water District's (CVWD) SWP Table A amounts. A pilot unbalanced exchange program was also executed with Antelope Valley East Kern Water Agency (AVEK). A total of 7,000 AF of water has been delivered to the Strand Ranch from both the CCWA and AVEK programs and IRWD retains 50% (less a proportional share of losses) of the water for recovery and use in its service area. In 2014 and 2015, IRWD returned to both CCWA and AVEK their respective shares of the water. The development of these supplemental supplies is consistent with the District's objectives for acquiring supplemental water supplies. Currently, IRWD is pursuing long-term exchange program agreements with both CCWA and AVEK.

Non-State Water Project Supplies:

In 2010, IRWD completed a pilot project agreement with Buena Vista Water Storage District (BVWSD), whereby BVWSD could an store up to 5,000 AF of its pre-1914, high flow Kern River water at the Strand Ranch on an unbalanced exchange basis where IRWD retains 50% of the stored supplies. In December 2010, IRWD and BVWSD executed an agreement for a long-term program whereby BVWSD can store up to 40,000 AF of its pre-1914 high flow Kern River with IRWD retaining the rights to the use of half of this water in its service area. By the end of 2012, BVWSD had stored 25,473 AF of water at the Strand Ranch. In 2013 and 2015, IRWD returned to BVWSD the 50% share of the water that was stored for the benefit of BVWSD.

In 2014, IRWD, MWD and MWDOC executed -has prepared- a template Wheeling Agreement that will facilitated the delivery of recovery and delivery of 1,000 AF of SWP water into IRWD's service area that was received from MWD in exchange for high flow Kern River water that was recovered from the Strand Ranch project and delivered to Arvin Edison Water Storage District

on behalf of MWD. This Wheeling Agreement was implemented consistent into IRWD's service area consistent with MWD's Administrative Code. IRWD completed taking delivery of the 1,000 AF water into its service area in 2015 as extraordinary supply consistent with MWD's Water Supply Allocation Plan. This agreement is expected to be tested in 2013 with the recovery and delivery of 1,000 AF of water to IRWD's service area.

Stockdale West Facilities:

In 2010, IRWD completed the purchase of the Stockdale West Ranch property located just west of the Strand Ranch. In 2011, IRWD constructed four recharge basins over 259 acres as part of a one-year Pilot Recharge Project. In August 2011, IRWD and BVWSD entered into a one-year pilot program whereby BVWSD stored 3,268 AF of high flow Kern River water. This pilot was used to determine the recharge capabilities of the property and to provide important information necessary for the design of a long-term water banking project on the project.

IRWD and Rosedale have entered into a development agreement for the joint development of banking facilities on the Stockdale West Ranch and Rosedale's Stockdale East property located to the east of the Strand Ranch. This combined project is called the Stockdale Integrated Banking Project and currently IRWD and Rosedale are ~~preparing~~ finalizing an Environmental Impact Report (EIR) and long-term partnership agreement for the project. Included in the Stockdale Integrated Banking Project ~~description is~~ will be the lease by Rosedale to IRWD of a total of 50,000 AF of storage in Rosedale's Conjunctive Use Program. Under the proposed project, IRWD and Rosedale would each have second priority use of each other's facilities on both the Stockdale West and Stockdale East properties.

The EIR for the Stockdale Integrated Banking Project contemplates that a third water banking project site would be secured and developed by IRWD and Rosedale to help meet both IRWD and Rosedale storage, recharge and recovery requirements. It is expected that the third project site could comprise up to 640 acres and could result in a storage capacity of approximately 51,200 AF, a recharge capacity of about 52,200 AFY and a recovery capacity of approximately 22,500 AFY. If IRWD and Rosedale participated equally in the purchase of the land, the storage capacity would be divided equally to IRWD and Rosedale and each agency would get access to 50 percent of the resulting recharge and recovery capacities on a first priority basis. Each agency would also get access to each other's share of the recharge and recovery capacity on a second priority basis.

Water Banking Capacities:

The following table presents an overview of the storage, recharge and recovery capacities that have been developed to date and that are expected to be developed at IRWD's water banking projects on both the Strand Ranch and the Stockdale West Ranch. The table also provides an overview of how these capacities are shared and expected to be shared with IRWD's unbalanced exchange partners. At the bottom of the table is a summary of IRWD requirements and additional capacities that are needed to meet these requirements. The table indicates that IRWD will have a shortfall of annual recovery capacity in the amount of 4,417 AF that would likely be achieved by securing and developing two recovery wells on the third water banking project site

that is contemplated in the EIR for the Stockdale Integrated Banking Project. Any excess storage, recharge and recovery capacities that would be available to IRWD from the third project site could be used to share reliability benefits with other retail water supply agencies.

Existing and Currently Planned Storage, Recharge, and Recovery
Capacity in IRWD's Water Banking Program

Water Banking Property	Storage Capacity (AF)	Recharge Capacity		Recovery Capacity	
		First Priority Recharge Capacity (AFY)	Second Priority Recharge Capacity (AFY)	First Priority Recovery Capacity (AFY)	Second Priority Recovery Capacity (AFY)
Strand Ranch	50,000	17,500	0	17,500	0
Stockdale West	26,000	27,100	0	11,250 9,000	0
Stockdale East	0		19,000		7,500 6,000
Storage Lease in Rosedale's Conjunctive Use Program	50,000	0	0	0	0
Total to Date	126,000	44,600	19,000	28,7506,500	7,5006,000
Exchange Partner Share	38,000	22,300	9,500	12,667 13,250	0
IRWD Share	88,000	22,300	9,500	16,083 3,250	7,500 6,000
		<i>First + Second:</i>	31,800	<i>First + Second:</i>	23,583 19,250
IRWD Stated Capacity Needs:	88,000		28,000		28,000
IRWD's Needs: Excess (Shortfall)	0		3,800		(4,417) 8,750

Objectives for Acquiring Supplemental Water Supplies:

IRWD's objectives for acquiring supplemental water supplies for recharge, storage and recovery within IRWD's~~for the~~ water banking program excluding supplies needed to fulfill local operations (including irrigation) are as follows:

1. IRWD seeks to acquire low-cost and diverse supplemental sources of water including such as high flow Kern River water, State Water Project supplies, ~~water~~ water associated with pre-1914 rights, ~~and/or~~ CVP supplies and water from other available sources depending on annual availability and conveyance capacity availability.
2. Generally, IRWD seeks to acquire up to 67% of its supplemental supplies during wet hydrologic periods subject to the conditions established by the water supplier and availability. IRWD does not intend to compete for supplemental supplies during dry years when supply availability may be less.

3. IRWD plans to acquire up to 33% of its supplemental supplies through smaller sustained, controllable and schedulable supply sources. Such supplies are expected to be acquired through the purchases of farm land that have water supply entitled to it. IRWD will preserve existing agricultural uses wherever possible and will schedule excess water for direct or exchange delivery to its water banking programs through rotational fallowing or onsite conservation using methods that minimize third-party impacts to local economies.

The acquisition of supplemental supplies is likely to require the use of unbalanced exchange concepts whereby IRWD stores water on behalf of another party in return for 50 percent of the water being transferred to IRWD. The sharing of the District's water banking facilities will result in the need to expand water banking capacity to ensure that the District can meet its water supply diversification requirements while meeting the requirements of IRWD's exchange partners.

Objectives for Developing Additional Capacity ~~as Needed~~:

IRWD seeks to develop additional recovery capacity to meet IRWD's recovery needs and to ensure that IRWD and its exchange partner's rights to the use of the recovery facilities during peak periods can be maximized. It is anticipated that a total recovery capacity of up to 70 cfs will need to be developed to meet these needs. Access to second priority use of wells by IRWD would also be effective for periods when IRWD can recover water for its use off-peak to other uses in Kern County.

Rosedale is currently constructing three wells in its service area as part of the Rosedale Drought Relief Project that will be available for IRWD's use in conjunction with the wells on the Strand Ranch project. These additional wells will help IRWD achieve its goal of 70 cfs of instantaneous recovery capacity. IRWD may construct additional exchange wells within Rosedale's service area to meet these objectives and already has the rights to two wells sites in the Rosedale service area. Additional environmental review may be needed to operate wells on these sites. At least two more wells will need to be developed by IRWD on the third Stockdale project site that is described above to fulfill the identified 4,417 AF per year shortfall in recovery capacity.

Land Acquisition Opportunities:

IRWD will consider land acquisition opportunities which have an associated water supply benefit where water can be conserved or made available through temporary fallowing. Such water would be scheduled for delivery to storage in the water banking facilities with minimal third-party impacts and without significant environmental resource impacts. Such water supplies would be useful in performing in-lieu recharge or recovery operations associated with ~~of water from IRWD's~~ the water banking program.

IRWD will also consider land acquisition opportunities with the most favorable conditions for groundwater recharge, storage and recovery capacity as needed to meet IRWD capacity requirements as described above and as they may change in the future.

Policy Principles:

Based on the information provided above, the following IRWD policy principals have been developed:

1. The State's water supply situation is being impacted by persistent drought, problems in the Delta, a growing population, increasing regulatory pressure, potential climate change impacts, and an imbalance between available water supplies and available storage. As a result, IRWD has the need for supplemental supplies and storage facilities to store the supplemental water supplies for use during dry periods.
2. Based on economic and environmental criteria, water banking programs involving storage in groundwater aquifers have demonstrated that they are less expensive and preferable to surface storage.
3. A primary mission of IRWD is to provide a highly reliable supply of water. Reliability is enhanced by having multiple redundant sources of supply. To address this need, IRWD will develop diverse~~has developed~~ supplemental water supply sources and water banking capacity.
4. IRWD seeks to secure low-cost and diverse supplemental sources of water including high flow Kern River, State Water Project supplies, water with pre-1914 rights, and/or CVP supplies and water from other available sources depending on annual availability and conveyance and/or exchange ~~capacity-availability that will allow IRWD to achieve its goal of storing 88,000 AF of water in its water banking program.~~
5. Because of the District's obligation to its customers, long-term equity ownership of water banking capacity as well as in lands that have water supplies entitled to them is strongly preferred over contract or lease arrangements. Equity partnerships that provide benefits to both the District and to local entities are preferred.
6. The District's water banking partnerships benefit from the sharing of recharge, storage and recovery capacity through unbalanced exchanges. In addition, due to potential climate change, the future intervals between wet years are expected to become longer with increases in the rate of runoff. These issues may make it necessary for IRWD in the future to consider increasing recharge, storage and recovery capacities in its water banking program.
7. Expansion of water banking capacities may be considered through equity purchases of capacities available in existing water banking programs or development of partnerships for capacity expansion.
8. IRWD will support wheeling policies and rates adopted by MWD and other agencies to the extent they reflect ~~a uniform~~ cost of service approach. Any wheeling or exchange of water through MWD's conveyance facilities should be consistent with MWD's

Administrative Code, must not financially impact MWD or its Member Agencies and should protect MWD's rights including under its SWP contract.

9. IRWD will put all available supplemental water supplies to beneficial use using methods that minimize third-party impacts while preserving the agricultural benefits of the contributing lands through temporary fallowing arrangements and / or water conservation efforts.

10. IRWD will seek partnerships that result in mutually beneficial exchange opportunities as well as the ability to enhance direct and in-lieu recharge or recovery operations associated with IRWD's water banking program.

11. IRWD will support and actively work with the State and the Federal governments and available legislative processes to streamline procedures for the implementation of short and long-term water transfers as well as water marketing systems.

~~10.~~12. IRWD will support the development of water marketing systems in the State of California that provide local control of markets, encourage state-wide cooperation, protect existing water and capacity rights, protect communities from unreasonable third party impacts, avoid significant environmental impacts, do not interfere with contract rights and that result in streamlined abilities to effectuate water transfers, exchanges and wheeling of supplies among voluntary market participants.

~~11.~~13. IRWD will support sharing reliability from its water banking program after IRWD's reliability requirements are fulfilled. Such sharing would occur in a way that ensures IRWD is kept financially whole on the transactions.