AGENDA

### IRVINE RANCH WATER DISTRICT BOARD OF DIRECTORS ADJOURNED REGULAR MEETING

Strategic Planning Workshop

Friday, July 7, 2017 at 9:30 a.m.

IRWD, 15500 Sand Canyon Avenue, Irvine Community Room

*Roll Call*: Doug Reinhart, Peer Swan, Steve LaMar, Mary Aileen Matheis, and John Withers

**Discussion Topics:** 

9:30 – 9:35 a.m.	1.	Communications to the Board: A. Written B. Oral	Reinhart
9:35 – 9:45 a.m.	2.	<ul> <li>Review of Foundational Documents</li> <li>IRWD Mission, Vision, and Values Statement</li> <li>IRWD Strategic Objectives</li> <li>Update of 2017 Target Activities List</li> </ul>	All
9:45 – 11:00 a.m.	3.	Syphon Reservoir Expansion Analysis	Akiyoshi
11:00 – 11:15 a.m.	4.	Break	All
11:15 – 12:30 p.m.	5.	Expanding IRWD's Water Banking Program	Weghorst
12:30 p.m.	6.	Adjournment	

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 Irvine Ranch Water District Board of Directors in connection with a matter subject to discussion or consideration at an open meeting of the Board of Directors 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 Board 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 Board Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available at the entrance to the Board of Directors Room of the District Office. The Irvine Ranch Water District Multi-Purpose 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) 453-5312 during business hours at least seventy-two (72) hours prior to the scheduled meeting. This agenda can be obtained in alternative format upon written request to the District Secretary at least seventy-two (72) hours prior to the scheduled meeting.

# IRVINE RANCH WATER DISTRICT

### **Review of IRWD 2017 Goals and Target Activities**

### Summary:

In January 2017, the Board provided input on and adopted the IRWD 2017 Goals and Target Activities. The approved Target Activities are associated with 16 goals for IRWD to accomplish within the next five years. Staff has conducted a mid-year review of the Goals and Target Activities and has made minor revisions to update target completion dates and updated activities where appropriate. The following is an overview of the District's general strategic planning process and the mid-year revisions to the 2017 Goals and Target Activities. Staff recommends that the Board review and provide input on the mid-year revisions, as needed.

### IRWD's General Strategic Planning Process:

In 2014, the District enhanced its approach to general strategic planning, incorporating the effective elements of IRWD's past strategic planning process along with added steps in the process and broader involvement among the IRWD Management Team. A graphical overview of IRWD's Strategic Planning Process is attached as Exhibit "A". The "baseline" documents used for strategic planning – the District Mission, Vision, and Values Statement and the IRWD Strategic Objectives, both dated February 6, 2014 – are attached as Exhibits "B" and "C", respectively.

One of the added steps in the enhanced process was to conduct an in-depth discussion of how conditions that impact the District and the water industry are changing, and what goals the District should adopt and prioritize in consideration of these changing conditions. At mid-year, staff has not identified any new changing conditions for the Board's consideration that would require discussion to revise the IRWD Goals and Target Activities for 2017. Staff has conducted a mid-year review of the 2017 Goals and Target Activies and only minor revisions have been made.

### Mid-Year Revisions to Goals and Target Activities:

The IRWD Management Team has been using the 2017 Goals and Target Activities to prioritize and deploy District resources as wells as to keep the Board apprised as to the progress made on each Target Activity. A mid-year review of the document has resulted in the need to update target completion dates, split off one activity into a goal and to update activities where appropriate. At the Strategic Planning Workshop, staff will present an overview of the revisions.

### **Recommendation:**

Staff recommends that the Board review and provide input on the mid-year revisions to the IRWD 2017 Goals and Target Activities.

# **IRWD Strategic Planning Process**

IRWD Mission, Vision, and Values





EXHIBIT "A"

Irvine Ranch Water District

2-1

Updated: July 14, 2016

### EXHIBIT "B"

### Irvine Ranch Water District Mission, Vision, and Values

### Mission

The mission of Irvine Ranch Water District, a public agency, is to provide high quality water and sewer service in an efficient, cost effective, and environmentally sensitive manner that provides a high level of customer satisfaction.

### Vision

The Irvine Ranch Water District's vision is to achieve greater customer and employee satisfaction, increased reliability and resource conservation, and excellent external relationships with suppliers and others.

### Values

Customer Service	We are dedicated to delivering superior service to our customers.
Employee Development	We are committed to recruiting and retaining top quality employees and to providing a workplace environment, training, and a recognition and reward system that enhances employee performance and satisfaction.
Resource Management	We are dedicated to providing, conserving, and maximizing the efficient use and reuse of water and renewable resources to the benefit of our customers and to enhance the environment.
Community Leadership	We will share our resources with the community through education, policy leadership and employee involvement.

### EXHIBIT "C"

### Irvine Ranch Water District Strategic Objectives

### **Customer Satisfaction**

Provide reliable, responsive, satisfying service to our customers in all aspects of our operations.

### Water Reliability

Provide a continuous, reliable supply of water to our current and future customers that meets their needs and expectations.

### Water Quality

Deliver potable and non-potable water that meets all regulatory standards and customer requirements, and improve the water quality of local urban runoff.

### Sewer Reliability

Plan, design, operate and maintain the sewer system in a consistent, reliable, and cost effective manner.

### **Cost Effectiveness**

Optimize all of the District's activities to provide service at the lowest possible cost with high standards of quality and reliability.

### **Employee Satisfaction / Development**

Provide employees with a working environment and the tools needed to optimize performance, productivity, and satisfaction and encourage individual career development and enjoyment.

### **Environmental Commitment**

Conduct our business so that we either enhance our environment or minimize negative impacts.

### Innovation

Optimize the use of technology and innovation in order to constantly improve processes to provide the most reliable and cost effective services to our customers.

### **Resource Recovery**

Maximize the efficient recovery of resources including the recycling of water, recovery of energy, and use of organic materials for the benefit of our customers and the community.

### Communication

Provide clear, accurate, transparent, and timely communication of information regarding our services, projects, finances, and activities utilizing multiple disciplinary tools that include educational programs, publications, electronic media and personal contact.

### Water Policy

Develop and advocate for policies at the local, state, and federal levels that promote a reliable, high quality, and cost effective water supply for our customers, as well as the efficient use of resources.

### EXHIBIT "D"

### **Strategic Planning** 2017 IRWD Goals and Target Activities Report Updated: July 7, 2017

GM = General Managers Office
ENG = Engineering and Water Quality
OPS = Operations

POL = Water Policy A&F = Administration and Finance HR = Human Resources

	<b>Goals and Target Activities</b>	Target Completion Date	Lead
1.	Optimize and protect local water supply utilization		
	a. Update and implement near-term recommendations from 2014 Groundwater Work Plan	Sept. 2018	ENG
	b. Prepare sensitivity analysis update to water supply reliability study	Sept. 2017	POL
	2. Select preferred alternative and begin feasibility study to repair or replace the Irvine Lake Outlet Tower	<u>Dec</u> . 2017	ENG
	d. Coordinate / collaborate with OCWD on South Basin Clean-up Project	Dec. 2017	POL
	e. Investigate opportunities for brine recovery for potable uses	<u>Dec</u> . 2017	ENG
	f. Work with OCWD on Green Acres Project water supply opportunities	Dec. 2017	POL
	g. Explore local IPR opportunities for aquifer and surface water storage within IRWD	July 2018	ENG
2.	Evaluate and invest in projects and programs that will enhance future long-term water supply reliability		
	a. Identify and procure property with high priority water rights	<u>July</u> 2017	POL A&F
	b. Implement agreements with MWD and MWDOC that will provide water supply reliability from high priority water rights during periods of drought and supply interruptions	Dec. 2019	POL
	c. Advocate methods for filling the Orange County Groundwater Basin	<u>Sept</u> . 2017	POL

3. E e	Bank 90,000 AF of water for IRWD, develop 70 cfs of xtraction and additional recharge and storage capacity is needed for IRWD and water banking partners		
a	. Execute long-term unbalanced exchange agreements for Stockdale	<u>Dec.</u> 2017	POL
b	. Execute long-term exchange agreements to maximize benefits of non-SWP water	Dec. 2017	POL
с	. Construct Drought Relief Project recovery and conveyance facilities	<u>Feb. 2018</u>	POL
d	. Develop Framework for water banking participation by Orange County Agencies	Oct. 2017	POL
e	. Identify and secure additional land as needed for recharge and recovery facilities	Dec. 2018	POL
f	. Construct Stockdale recovery facilities	<u>Oct.</u> 2017	ENG
<b>4</b> . <i>I</i>	Minimize discharge of recyclable water to the ocean		
a	. Complete construction of Irvine Lake Pipeline North Conversion	<u>Oct.</u> 2018	ENG
ł	<ul> <li>Convert UCI Cooling Towers and other projects to recycled water for minimum potable water savings of 250 AF per year</li> </ul>	<u>May 2018</u>	POL
C	. Include IRWD's recycled water demands in OCWD's total water demand calculations	June 2018	POL
C	I. Update Sewage Treatment Master Plan, including consideration of IBC flows	<u>Dec.</u> 2018	ENG
¢	<ul> <li>Update the Salt Management Plan – Impacts of Seawater</li> <li>Desalination and other issues</li> </ul>	<u>Dec.</u> 2017	POL
f	Perform CEQA, alternatives analysis and preliminary design for the Syphon Reservoir Expansion	Dec. 201 <u>9</u>	POL ENG
Ę	g. Prepare preliminary design for diverting SGU discharge into the sewer system	<u>Nov</u> . 2017	ENG
5. 1	Maximize resource recovery from fully functional biosolids and other resource recovery facilities		
8	a. Biosolids Facilities operational	July 2018	ENG
ł	<ul> <li>Complete marketing plan for beneficial use(s) of pellets</li> </ul>	<u>Sept.</u> 2017	OPS
(	<ul> <li>Develop partnerships with other agencies to utilize surplus capacity</li> </ul>	<u>Dec.</u> 2017	OPS
(	<ol> <li>Evaluate process and schedule to introduce FOG to Biosolids Facilities</li> </ol>	Dec. 2017	OPS

6. In an	nprove electric service reliability, manage demands, nd control costs		
a.	Develop program to maximize generation of renewable energy through food waste addition	Mar. 2018	OPS
b.	Secure funding from SCE for water conservation programs in high energy intensive areas identified through Embedded Energy Program	<u>June</u> 201 <u>8</u>	POL
с.	Pursue applications for IRWD to participate in SCE's Direct Access Program	July 2017	POL
d.	Implement Energy Storage Projects	Dec 2018	ENC
e.	Prepare SCE/IRWD Phase 1 Status Report for Preferred Resource Pilot Program and prioritize next steps to further reduce peak demands	Complete	POL
f.	Collaborate on the development of micro-grid technologies through a partnership with UCI	Dec. 2017	OPS
g.	Evaluate site constraints and requirements for photovoltaic installation and energy storage at the Baker WTP	<u>Nov.</u> 2017	POI
h.	Implement steps to outsource operation and maintenance of biogas treatment and micro-turbine systems	<u>Oct.</u> 2017	OPS
7. M	aximize watershed protection		
a.	Explore potential conversion of some NTS sites to infiltrate dry weather flows	<u>Complete</u>	OPS
b.	Facilitate discussions with the County of Orange to identify facilities for potential cost effective recycled water recharge and storm water infiltration	<u>Dec.</u> 2017	POI
c,	Work with the County and others on Selenium TMDL offset trading program	Dec. 2017	POI
d.	Identify projects and partners to qualify for Measure M Funding	Dec. 2017	POI
e.	Evaluate customer FOG and Pre-treatment programs including assessment of implementation, billing and program requirements	<u>Oct</u> . 2017	POI
f.	Complete Local Limits Study and obtain regulatory approvals	Dec. 2017	POI
g.	Continue to work with OC Flood to ensure appropriate capacity in San Diego Creek	<u>Dec.</u> 2017	GM
h.	Evaluate silt removal from San Joaquin Marsh Ponds	Complete	OPS

8.	Ensure financial and rate stability		
l	a. Complete environmental and final map approval process for IRWD's Serrano Summit property	<u>July</u> 2017	A&F
	Develop plan to invest revenue generated by the Lake Forest property; establish rate parity for IRWD Lake Forest customers	<u>Complete</u>	A&F
	c. Evaluate development opportunities at other IRWD properties	Dec. 2017	A&F
(	d. Complete plans, permitting, development and leasing on remaining Sand Canyon campus and other facilities	June 2018	A&F
	e. Update Facility List for the Replacement Planning Model	Dec. 2017	ENG
	<ol> <li>Update Cost of Service Study for the IRWD sewer system that includes the Biosolids Project operating</li> </ol>	Dec. 2018	A&F
	g. Develop IRWD debt policy	Complete	A&F
9.	Identify, assess and implement new technologies and		
	systems to improve operating efficiency		
;	a. Complete the Implementation of Part 1 of Phase 2 of the Enterprise Asset Management System	Dec. 2017	OPS
1	<ul> <li>Document outstanding deed, access and other contractual restrictions related to real property</li> </ul>	Dec. 2017	A&F
	- Implement the Operations Database Management System	Complete	OPS
â	<ol> <li>Simplify and optimize financial module to incorporate new ID structure and project management</li> </ol>	Complete	A&F
(	e. Implement findings of IT-related existing/new technology opportunity assessment while maintaining District security	<u>Dec.</u> 2017	A&F
-	E. Implement Process Development Steering Committee to identify operational process improvements and explore new technologies	<u>Dec.</u> 2017	OPS
10.	Enhance customer communications		
	a. Enhance customer communication through an improved customer web access portal	Dec. 2017	A&F
1	<ul> <li>Develop and implement new water efficiency outreach program</li> </ul>	Dec. 2017	POL
(	. Implement redesigned customer bill to improve customers' understanding of IRWD rate structure	<u>Oct.</u> 2017	A&F
(	I. Enhance water supply reliability outreach program	Dec. 2017	POL
(	e. Investigate development of an IRWD customer app	Dec. 2017	POL

1 Ma			
1.1VI U	ximize water use efficiency in the community		
a. 1	Update Water Shortage Contingency Plan based on new State regulations	Sept. 2017	POL
b. ]	Evaluate and update water use efficiency programs and Water Use Efficiency Plan	<u>Dec.</u> 2017	POL
e.—	Broadcast guide for implementing budget-based rate structures	Complete	POL
d	Review current approach to water loss management, best practices, and compliance with new regulations	Complete	POL
e. ]	Evaluate remote meter monitoring program opportunities	Dec. 2017	POL
f. I	Implement automated methodology for quantifying irrigated areas and meter locations by linking aerial image data to meter	June 201 <mark>8</mark>	POL
2.Rec	and parcel data cruit. develop and retain a highly skilled. motivated.		
2.Rec and	and parcel data cruit, develop and retain a highly skilled, motivated, d educated work force		
2.Rec ana a.	and parcel data cruit, develop and retain a highly skilled, motivated, d educated work force Implement NeoGov performance evaluation on-line system	Complete	HR
<b>2. Rec</b> and a. b.	and parcel data cruit, develop and retain a highly skilled, motivated, d educated work force Implement NeoGov performance evaluation on-line system Work with Employee Development Task Force to develop and implement a staff mentoring program	Complete Dec. 2017	HR HR
<b>2. Rec</b> and a. b.	and parcel data cruit, develop and retain a highly skilled, motivated, d educated work force Implement NeoGov performance evaluation on line system Work with Employee Development Task Force to develop and implement a staff mentoring program Develop employee cross training and job rotation guidelines	<u>Complete</u> Dec. 2017 Dec. 2017	HIR HR HR
2.Rec and a. b. c. 1 d.	and parcel data cruit, develop and retain a highly skilled, motivated, d educated work force Implement NeoGov performance evaluation on line system Work with Employee Development Task Force to develop and implement a staff mentoring program Develop employee cross training and job rotation guidelines Develop a safety training database and two-year staff training plan based on the needs of the District	Complete Dec. 2017 Dec. 2017 Complete	HR HR HR HR HR
2. Rec and a. b. c. d. d.	and parcel data cruit, develop and retain a highly skilled, motivated, d educated work force Implement NeoGov performance evaluation on line system Work with Employee Development Task Force to develop and implement a staff mentoring program Develop employee cross training and job rotation guidelines Develop a safety training database and two-year staff training plan based on the needs of the District Evaluate improvements to IRWD standby / first responder systems	Complete Dec. 2017 Dec. 2017 <u>Complete</u> <u>Complete</u>	HR HR HR HR HR HR

13.GI	liae and lead local, stale and jederal policies and		
leg	gislation		
a.	Engage productively in legislative discussions regarding the development of a long-term conservation framework for California and related legislation	Aug. 2017	GM POL
b.	Advocate for legislation that protects local investments in water recycling and extraordinary supplies, and protects IRWD's ability to access those supplies, without penalty, during times of drought or shortage	Aug. 2017	GM POL
c.	Participate in the coalition(s) opposing legislative mandates to eliminate ocean discharges and seeking legislation to further indirect and direct potable reuse in California	<u>Dec</u> . 2017	GM
d.	Engage in discussions surrounding water and wastewater infrastructure financing including discussion related to Proposition 218 reforms consistent with Board direction	Dec. 2017	GM
e,	Provide input to the legislature and administration on developing water markets in California	Dec. 201 <u>8</u>	GM POL
f.	Promote policies that encourage energy reliability and efficiency in the water industry	Dec. 201 <u>8</u>	GM POL

lo	cal, state and federal agencies		
a.	Provide input to the State Water Resources Control Board on extensions of the statewide drought regulations	Complete	PC
b.	Provide input to the State Water Resources Control Board on revisions to the Mercury Policy	<u>Sept.</u> 2017	Gl PC
c.	Seek regulatory changes promoting recycled water use in decorative lakes	Dec. 2017	GI PC
d.	Promote a "fit for purpose" approach to regulation of recycled water for both potable and non-potable uses	<u>Mar. 2018</u>	Gl
e.	Promote policies and regulations that will improve air quality and allow efficient operation of District facilities and equipment	Dec. 2017	GI PC
5. In th	crease collaboration with other agencies and entities rough leadership and innovation		
a.	Update South Orange County water supply reliability policy	Complete	PC
b.	Advocate for IRWD's Desalination Policy Principles	Dec. 2017	PC
c.	Evaluate and promote opportunities for shared services such as third party billing for UC Irvine	Dec. 2017	Að
d.	Participate as leaders in industry associations	Dec. 2017	G
e.	Advocate for regional IPR and DPR projects including Metropolitan's Carson Regional IPR Project	Dec. 2017	G
f.	Evaluate opportunities for reliability sharing including Irvine Lake and updating the Irvine Lake agreement	<u>Dec.</u> 2017	PC
g.	Evaluate opportunities to update South County Emergency Interconnect Agreement	Dec. 2017	PC
h.	Work with other agencies to maximize Orange County benefits from IRWM processes, including capture of urban runoff by OCSD for use in GWRS	Dec. 2017	GI PC
i.	Participate in the water efficiency data collaborative program	Dec. 2017	PC
j.	Work with OCSD to identify mutually beneficial opportunities for use of IRWD sewer flows	Dec. 2017	OF
5. <i>E</i> 1	valuate opportunities that enhance safety and		
en	nergency preparedness throughout the District		
a.	Implement facility security assessment starting with MWRP	Dec. 2017	H
b.	Design improvements to eliminate the use of chlorine gas at Preliminary Disinfection Facility	July 2018	EN
c.	Update District Emergency Operations Plan, including training for certain high-risk scenarios	<u>Oct.</u> 2017	H

# IRVINE RANCH WATER DISTRICT

July 7, 2017

### Syphon Reservoir Expansion Analysis

### Summary:

Staff has prepared an analysis of the proposed expansion of IRWD's Syphon Reservoir, quantifying the cost effects of the project relative to reduced purchases of untreated imported water from Metropolitan Water District and reduced sewage diversions to Orange County Sanitation District particularly during wet weather events. Staff recommends that the Board approve an Expenditure Authorization in the amount of \$2,500,000 for the environmental documentation and supporting engineering analyses.

### Background:

IRWD purchased Syphon Reservoir in January 2010. Subsequently, the "Syphon Reservoir Expansion Feasibility Study" and associated constructability analysis was completed in August 2012. The reservoir was integrated into the recycled water system in October 2014.

IRWD's sewage projections were calibrated in 2016 and presented to the Board. While the current capacity at Michelson Water Recycling Plant (MWRP) is 28 MGD, the projected baseline sewage flows to MWRP at buildout are 32.5 MGD.

The current Syphon Reservoir expansion analysis was conducted with several baseline assumptions. This focuses the decision-making process on Syphon Reservoir while keeping options open for future projects, interagency agreements, and additional analyses. The assumptions used include:

- Artificially Constrain MWRP flows to 28 MGD: Although the March 2016 calibrated flow projections indicate 32.5 MGD at build-out, capping the MWRP flows to 28 MGD (for planning purposes only) allowed for a conservative approach to the analysis;
- Perform a sensitivity analysis for future recycled water demands: A sensitivity analysis was conducted for baseline, increased (+10%), and decreased (-10%) future demands; and
- Assume no grant funding: While IRWD continues to pursue grant funding for this project, this analysis excludes any capital offsets through grant funding that may be obtained for this project.

Staff will present the details of the analysis at the Strategic Planning Workshop. A copy of the presentation is attached as Exhibit "A". Using the described approach, the analysis demonstrates that proceeding now with the expansion of the Syphon Reservoir aligns with the Strategic Objectives of the District and is economically beneficial to IRWD and its customers. Staff recommends that IRWD proceed with the environmental documentation and supporting engineering analyses.

Syphon Reservoir Expansion Analysis July 14, 2016 Page 2

### Fiscal Impacts:

The Syphon Reservoir Expansion, Project 03808, is in the FY 2017-18 Capital Budget as a flagged project and has sufficient budget for this work. An Expenditure Authorization is required for this work and staff will bring the environmental and engineering consultant contract awards to the Board for approval in the near future.

Project No.	Current Budget	Addition <reduction &gt;</reduction 	Total Budget	Existing EA	This EA Request	Total EA Request
03808	\$60,169,200	\$0	\$60,169,200	\$150,000	\$2,500,000	\$2,650,000

### Environmental Compliance:

This project is subject to the California Environmental Act (CEQA). In conformance with the California Code of Regulations Title 14, Chapter 3, Section 15004, the appropriate environmental document will be prepared when meaningful information becomes available.

### Committee Status:

This item was reviewed by the Engineering and Operations Committee on June 7, 2017.

### **Recommendation:**

THAT THE BOARD APPROVE AN EXPENDITURE AUTHORIZATION IN THE AMOUNT OF \$2,500,000 FOR THE SYPHON RESERVOIR EXPANSION, PROJECT 03808, FOR THE ENVIRONMENTAL DOCUMENTATION AND SUPPORTING ENGINEERING SERVICES.

List of Exhibits:

Exhibit "A" – Draft PowerPoint Presentation

### EXHIBIT "A"



### Workshop Overview

- 1. Project Background
- 2. Syphon Reservoir Expansion Analysis
  - Quantify effects on purchasing MWD untreated water
  - Quantify effects of sewage diversions to OCSD
  - Quantify effects on operations and maintenance costs
  - Compare to GAP Disposal alternative
- 3. Path Forward and Recommendations











### **Review Seasonal Storage Concepts**

- Balances IRWD sewage flows with annual variations in RW demands
- Minimizes purchasing MWD untreated water during peak summer season
- Optimizes excess sewage disposal at OCSD and SOCWA outfall







### Balancing Recycled Water Demands and Seasonal Storage





**A-4** 



### Seasonal Storage Availability

Recycled Water Seasonal Storage Reservoir	Usable Capacity (acre-feet)
Rattlesnake Reservoir	900
Sand Canyon Reservoir	750
San Joaquin Reservoir	2,500
Existing Syphon Reservoir	400
Total Existing	4,550



A-5

## Seasonal Storage Availability

Recycled Water Seasonal Storage Reservoir	Usable Capacity (acre-feet)
Rattlesnake Reservoir	900
Sand Canyon Reservoir	750
San Joaquin Reservoir	2,500
Existing Syphon Reservoir	400
Proposed Syphon Expansion	+4,100
Total Required	8,650

irvine Ranch Water District

### Syphon Reservoir Expansion Analysis:

- Quantify effects on purchasing MWD untreated water
- Quantify effects of sewage diversions to OCSD
- Quantify effects on operations and maintenance costs







### Increased Independence from MWD Untreated Water











### **Excess Sewage Diversions**

- Main Street Diversion to OCSD is primarily used when sewage influent exceeds MWRP treatment capacity.
- Wintertime excess diversion occurs when seasonal storage is full and MWRP tertiary flows exceed demands.
- IBC and Newport Coast diversions are year-round occurrences and are excluded from this analysis.
- SOCWA Outfall is used when LAWRP Tertiary is not needed.

irvine Ranch Water District.



Imported MWD Untreated

Main St. Diversion to OCSD

flyphon /

MWRP ributa Area

MWRP

AWF

Î

LAWRP

Recycle Water Demand





### OCSD Capital and O&M Cost Assumptions

- OCSD Capital
  - Based on OCSD capital information
  - Escalated at 3% per year
- OCSD and MWRP Secondary O&M
  - Analyzed three years of IRWD and OCSD operations financial data to develop estimated unit costs
  - Escalated at 3% per year





### **O&M Cost Savings Information**





Annual O&M Cost Components		
	Existing Syphon	Expanded Syphon
Syphon O&M	\$43,000	\$333,000
OCSD O&M	O&M <sub>OCSD</sub> x 5,000 AF	O&M <sub>OCSD</sub> x 1,000 AF
MWRP Secondary O&M	N/A	O&M <sub>MWRP</sub> x 4,000 AF













Cumulative Project Costs: Existing Syphon vs. Expanded Syphon





# Green Acres Project (GAP) Disposal Alternative: - Overview of GAP system - 50-Year Project Life Costs and Curves

### GAP Disposal Alternative Overview

- Current GAP system handles up to 8 mgd
- Disposal system would send 5,000 afy to GAP
- Consists of 11.5-miles of large diameter (>36-inch) pipeline and a new pump station
- Analysis excludes 50year replacement costs and OCSD outfall disposal costs

irvine Ranch Water District





Expanded Syphon and GAP Disposal (\$ million)		
	Expanded Syphon	
Capital Construction in 2023-24	\$75	
O&M Cost (MWRP and OCSD)	\$185	
OCSD Capital	\$213	
MWD Imported	\$4	

### 50-Year Project Life Costs

Expanded Syphon and GAP Disposal (\$ million)			
	Expanded Syphon	GAP Disposal	
Capital Construction in 2023-24	\$75	\$73	
O&M Cost (MWRP and OCSD)	\$185	\$176	
OCSD Capital	\$213	\$213	
MWD Imported	\$4	\$86	
50-Year Project Cost	\$477	\$548	









### Conclusions for the Syphon Reservoir Expansion

- 1. Syphon Expansion provides largest cumulative savings
- 2. Furthers IRWD's established goals:
  - Increase IRWD's independence from imported water purchases
  - Optimize the use of recycled water
  - Minimize sewage to OCSD and other disposal methods
- 3. Sustains MWRP Biosolids Operations
- 4. Preserves future options for:
  - IRWD Potable Reuse Program
  - MWRP Expansion Phase 3
  - Green Acres Project concepts

Invine Ranch Water District

### Next Steps

- Proceed with CEQA and permitting process
- Proceed with Preliminary Design to support CEQA
- Continue pursuing grant funding for Syphon Reservoir
- Return to Board for CEQA and Engineering Consultant Awards
- Develop Multi-Year Community Outreach Program
  - Support entire project life-cycle (Pre-EIR through Operations)
  - Develop key outreach components for Syphon Reservoir expansion
     Promotes safe and reliable IRWD facilities
    - Optimizes water resources
    - Provides cost effective water supply

Irvine Ranch Water District





36

### Recommendation

Authorize Expenditure Authorization in the amount of \$2,500,000 for Project 03808 "Syphon Reservoir Expansion Project"

Irvine Ranch Water District



# IRVINE RANCH WATER DISTRICT

### Strategic Planning Workshop

July 7, 2017

### Issue-Specific Strategic Planning Topic: Sharing Water Supply Reliability from the IRWD Water Banking Projects

As the Board has discussed over the past several years, strategic planning is important to IRWD as it focuses the District's time, energy and resources in an organized and prioritized manner. To date, the District has used strategic planning to annually set the direction of the District's activities for the next year by focusing on the District's Strategic Objectives, short-term (three- to five-year) goals, and annual targeted activities. This Strategic Planning Workshop has been scheduled for the Board to engage in a more focused style of strategic planning: issue-specific strategic planning.

Issue-specific strategic planning, unlike IRWD's annual planning process for developing the Goals and Target Activities for the coming year, is designed to guide the District's decisions, evaluation processes, and adaptive responses on specific issues or decisions before the organization. *The issue proposed for discussion is <u>whether</u>, and, if so, then <u>how</u> should IRWD implement a program to share emergency water supply reliability from its Water Banking Projects in Kern County.* 

This memo includes information on the issue-specific strategic planning process that will be undertaken, along with a description of each step of the process as it relates to IRWD's discussion on sharing water supply reliability. The descriptions include questions and prompts, which the Board is encouraged to consider prior to the meeting while making notes in the spaces provided. This preparation will facilitate making the strategic planning workshop as constructive and valuable as possible.

### **Overview of the Issue-Specific Strategic Planning Process:**

Issue-specific strategic planning focuses on a single issue or decision before an organization. It consists of a four-step process, which includes discussions on assumptions, organizational direction and actions. The four steps in the planning process are:

- Step 1: Review the hypothetical scenario and environmental assumptions.
- Step 2: Establish the strategic policy principle that would lead to a desirable outcome for IRWD, if the scenario becomes reality.
- Step 3: Agree on issue-specific objectives.
- Step 4: Discuss and decide on implementation strategies for achieving the agreed-on objectives.

Each of the four steps is discuss in more detail below.



Sharing Water Supply Reliability from the IRWD Water Banking Projects July 7, 2017 Page 2

### Step 1: Review the hypothetical scenario and environmental assumptions:

#### Purpose of the Step:

Step 1 of the issue-specific strategic planning process reviews the outside decisions and environmental factors that will shape the outcome of the issue for IRWD. Identification of the outside decisions and environmental factors are used to create a hypothetical scenario and to establish assumptions that will be used in the remainder of the issue-specific strategic planning process.

### Information for the Discussion:

IRWD has successfully developed its Water Banking Program in Kern County to provide an emergency supply of water to its customers during a period of declared water shortage or system interruption. One of the keys to the success of this program has been the mutually-beneficial partnerships with other entities, including water districts in Kern County (e.g., Rosedale-Rio Bravo Water Storage District, Buena Vista Water Storage District, Kern County Water Agency), State Water Project Contractors such as Dudley Ridge Water District and Castaic Lake Water Agency, and the Southern California agencies of Metropolitan Water District (MWD) and the Municipal Water District of Orange County (MWDOC). With these partnerships firmly in place and a wet winter that continues to provide California with water for use and storage, IRWD is in a position to possibly extend the benefits of its Water Banking Program to other agencies.

In reviewing IRWD's stated need for emergency supplies from its Water Banking Program, a policy was adopted by the Board of Directors in which the water bank should be able to provide to IRWD enough water to offset three years of imported water supply that could be lost due to an event such as a major earthquake in the Sacramento-San Joaquin River Delta. The quantity of water calculated for this purpose (and stated in the District's Goals and Target Activities) is 90,000 acre-feet (AF). Since this number was calculated, three critical environmental assumptions have changed:

- 1) IRWD's water usage, on a per capita basis, significantly reduced during the recent drought. Staff is monitoring usage data to determine the extent of any "rebound effect" now that the drought is over, but efforts to maintain high water use efficiency continue.
- 2) The number of dwelling units proposed for the IRWD service area continues to increase, resulting in modifications of the District's estimates of total water demands at "build-out".
- 3) IRWD continues to identify more opportunities for converting certain existing and future uses of potable water (e.g., cooling towers, dual-plumbed office buildings and hotels) to the use of recycled water. Recycled water conversion projects have the direct result of IRWD purchasing less imported water from MWD.

During the Workshop, staff will provide a brief discussion of how these factors and certain decisions could affect IRWD's target for water from its Water Banking Program to meet its customers' needs and determine how changes are incorporated.

Sharing Water Supply Reliability from the IRWD Water Banking Projects July 7, 2017 Page 3

### Hypothetical Scenario:

For the purposes of the issue-specific strategic planning discussion planned for today's Workshop, staff is presenting a hypothetical scenario in which:

IRWD, in partnership with MWDOC, establishes a choice program for regional emergency water supply reliability utilizing capacity in IRWD's Water Banking Program in Kern County.

# Step 2: Establish the strategic policy principle that would lead to a desirable outcome for IRWD, if the scenario becomes reality:

### Purpose of the Step:

Step 2 of the issue-specific strategic planning process has the District ask where it wants to be positioned should the hypothetical scenario become a reality. This step seeks to have the IRWD look into the future and identify what a positive position would be if certain environmental conditions exist. By identifying a positive position, we can then develop the policy principle that is important to the issue under discussion.

#### Information for the Discussion:

Under Step 2, the IRWD Board is being asked to consider where the District should be positioned should MWDOC and MWD, along with other key stakeholders, agree to work with IRWD to implement a program through which water supply reliability benefits from IRWD's Water Banking Program can be shared in Orange County.

If IRWD established an Emergency Water Supply Reliability Sharing Program, how should IRWD be positioned?

IRWD should be positioned to....

Ensure that the water bank's primary purpose is to meet the needs of IRWD's customers.

Control the procurement, import, and export of water supplies at its facilities.

Protect the financial investment made by the IRWD customers in these facilities and only allocate appropriate costs to other beneficiaries.

Retain ownership of its facilities while recovering a proportionate share of the cost of capital facilities and operating costs.

Ensure that no beneficiary of the Program is allowed to profit from the Program.

### Proposed Policy Position:

The proposed strategic policy principle is for IRWD to leverage its existing facilities to cost-effectively confer enhanced water supply reliability to other water agencies while IRWD fairly allocates the costs of the program over a larger base of beneficiaries.

Sharing Water Supply Reliability from the IRWD Water Banking Projects July 7, 2017 Page 4

### Step 3: Agree on issue-specific objectives.

### Purpose of the Step:

Step 3 of the issue-specific strategic planning process has the District identify issuespecific objectives to guide efforts in developing the policy principle identified in Step 2. The objectives should address the issue under discussion and provide greater specificity on key aspects of the issue or decision before the organization, which are important to achieving the policy principle.

### Information for the Discussion:

Based on preliminary discussions with the IRWD Supply Reliability Programs Committee, some initial objectives are provided below. In addition to these objectives, there are likely other objectives that should be identified if the hypothetical scenario is realized. What alternative or other objectives should be developed to optimally position IRWD?

# If the project moves forward, what should IRWD's objectives be in working towards a positive outcome?

**Objective 1:** 

The project should be substantial enough to generate tangible water supply reliability benefits for interested retail water agencies in a cost-effective manner.

Objective 2:

IRWD and the program participants need to structure the Program so the recipients of the benefit understand the benefit being conferred, and that IRWD understands its cumulative obligations to its own customers and other agencies.

### Objective 3:

IRWD's existing partners in its Water Banking Program, particularly MWD and Rosedale, must be included in the development and implementation of an expanded program to ensure the continued productive cooperation between these entities.

### Objective 4:

No negative impacts to IRWD customers.

Objective 5:

Sharing Water Supply Reliability from the IRWD Water Banking Projects July 7, 2017 Page 5

# Step 4: Discuss and decide on implementation strategies for achieving the agreed upon issue-specific objectives:

### Purpose of the Step:

Step 4 of the issue-specific strategic planning process begins with a discussion on how IRWD should move forward to achieve the objectives as established in Step 3. Once staff has provided adequate background, the process ideally begins with brainstorming, and moves on to discussing the various strategies that could be deployed by IRWD to achieve the objectives. After a thorough discussion, the District should decide on the implementation strategies it will use to obtain the positive outcome it seeks.

### Information for the Discussion:

Staff has developed three potential options for sharing reliability from its Water Banking Program to help start the discussion at the workshop. These options are as follows:

- 1. Long-term Lease of Emergency Supply;
- 2. Annual Option for Emergency Supply; and
- 3. Emergency Water Supply If It Is Available

A detailed description of each option, along with pro / con analyses from IRWD's perspective and MWDOC's perspective will be provided. As these options and perhaps others are evaluated by the Board, the following questions should be considered:

### **Questions to Consider:**

Question 1:

How should IRWD formally initiate discussions with MWDOC and the Member Agencies?

Question 2:

Are there other direct collaboration opportunities that IRWD should pursue (e.g., with OCWD and/or the Three Cities)?

Question 3:

Are there potential outcomes that meet our objectives, but are not acceptable for IRWD?

Question 4:

Where / when should the IRWD Board members engage in the development of an expanded Water Banking Program?

Question 5:

Sharing Water Supply Reliability from the IRWD Water Banking Projects July 7, 2017 Page 6

### **Conclusion:**

At the strategic planning workshop, staff will provide an overview of the four-step, issuespecific strategic planning process discussed above and will be prepared to answer questions related each step. The Board is encouraged to think about each of the steps and prompts outlined above. At the end of the discussion, the Board will be asked to provide direction as appropriate.

### List of Exhibits:

Exhibit "A" – Draft PowerPoint Presentation

EXHIBIT "A"

# DRAFT



### Presentation Agenda

- 1. Overview of issue-specific Strategic Planning Process
- 2. Review of assumptions
- Strategic-level discussion on partnering with MWDOC and others to share water supply reliability from water banks
- 4. Next Steps

Irvine Ranch Water District





### Issue-Specific Strategic Planning Process

Environmental Assumptions

- **1. Review** hypothetical scenario and environmental assumptions.
- 2. Establish the strategic principle which would lead to a desirable outcome for IRWD, if the scenario becomes reality.
- **3.** Agree on issue-specific strategic objectives.
- **4. Discuss** and decide on implementation strategies for achieving the agreed on objectives.

irvine Ranch Water District





### Articulating the Hypothetical Scenario

IRWD, in partnership with MWDOC, establishes a choice program for regional emergency water supply reliability utilizing capacity in IRWD's Water Banking Program in Kern County.









frvine Ranch Water District

Pros/Cons – IRWD	Pros/Cons – MWDOC
Pros: IRWD recovers partial capital investment: IRWD recovers cost of water; Proportional recovery of operations and admin expenses.	<ul> <li>Pros:</li> <li>Provides MWDOC long- term assurance of water supply with highest degree of certainty;</li> <li>Requires no additional staff expertise.</li> </ul>
Cons: Less flexibility; Additional administrative burden.	Cons: Most expensive option; Locked into long-term agreement.





Pros/Cons – IRWD	Pros/Cons – MWDOC
<ul> <li>Pros:</li> <li>IRWD recovers partial capital investment:</li> <li>IRWD recovers cost of water:</li> <li>Proportional recovery of operations and admin expenses:</li> <li>IRWD retains some flexibility;</li> <li>Less difficult to administer.</li> </ul>	<ul> <li>Pros;</li> <li>Provides MWDOC some assurance of water supply one year at a time;</li> <li>Requires no additional staff expentise;</li> <li>Provides some flexibility.</li> </ul>
Cons: No long-term commitments from buyers.	Cons: • Less certainty of emergency water supply.





Irvine Ranch Water District

Pros/Cons – IRWD	Pros/Cons – MWDOC
<ul> <li>Pros:</li> <li>IRWD recovers partial capital investment:</li> <li>IRWD recovers cost of water;</li> <li>Proportional recovery of operations and admin expenses;</li> <li>Provides IRWD most flexibility;</li> <li>Simplest to administer.</li> </ul>	<ul> <li><u>Pros:</u></li> <li>Requires no additional staff expertise;</li> <li>More costly supply option;</li> <li>Provides MWDOC the most flexibility, though least certainty.</li> </ul>
Cons: Harder to plan for procurement and distribution of emergency supplies.	Cons: • No certainty of access to emergency supply.



# <section-header> Strategic Planning – Sharing Supply Reliability <u>Positioning IRWD for Desired Outcome</u>: 1. Ensure that the water bank's primary purpose is to meet the needs of IRWD's customers. 2. Control the procurement, import, and export of water supplies at its facilities. 3. Protect the financial investment made by the IRWD customers in these facilities and only allocate appropriate costs to other beneficiaries. 4. Retain ownership of its facilities while recovering a proportionate share of the cost of capital facilities and operating costs. 5. Ensure that no beneficiary of the Program is allowed to profit from the Program.







