AGENDA
IRVINE RANCH WATER DISTRICT
FINANCE AND PERSONNEL COMMITTEE MEETING
TUESDAY, SEPTEMBER 19, 2017

CALL TO ORDER **10:30 a.m.,** Committee Room, Second Floor, District Office
15600 Sand Canyon Avenue, Irvine, California

ATTENDANCE Committee Chair: Peer Swan ____ Member: Doug Reinhart ____

ALSO PRESENT

Paul Cook	____	Cheryl Clary	____
Rob Jacobson	____	Christopher Smithson	____
Tanja Fournier	____	Eileen Lin	____
Kevin Burton	____	Tina Bertsch	____
Jenny Roney	____	Tony Mossbarger	____
Paul Weghorst	____	_____	____
Allen Shinbashi	____	_____	____

COMMUNICATIONS

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

INFORMATION

5. UPDATE ON ENTERPRISE MODEL – SMITHSON/CLARY

   Recommendation: Receive and file.

6. EMPLOYEE POPULATION AND TURNOVER STATUS REPORT - RAMOS/RONEY

   Recommendation: Receive and file.

ACTION

7. BUSINESS INTELLIGENCE CLOUD DISASTER RECOVERY IMPLEMENTATION AND REPORTING CONTRACT AWARD – MOSSBARGER/CLARY

   Recommendation: That the Board authorize the addition of Projects 10345 for $155,000 and 10347 for $155,000 to the FY 2017-18 Capital Budget and authorize the General Manager to execute a Professional Services Agreement with DiLytics, Inc. in the amount of $241,000.

TREASURY SECTION

8. MONTHLY INVESTMENT AND DEBT REVIEW – DAVIS/FOURNIER/ JACOBSON/CLARY

   Recommendation: Receive and file.

9. QUARTERLY DEFERRED COMPENSATION PLAN AND FUND REVIEW – DAVIS/FOURNIER/JACOBSON/CLARY

   Recommendation: Receive and file.

10. DISCUSSION ITEMS – ALL

    a. Updated investment activities/rates
    b. Serrano Summit sale proceeds update

11. Items for Discussion at Next Meeting

OTHER BUSINESS

12. Directors' Comments

13. 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 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.

September 19, 2017
Prepared by: Christopher Smithson
Submitted by: Cheryl Clary
Approved by: Paul A. Cook

FINANCE AND PERSONNEL COMMITTEE

UPDATE ON ENTERPRISE MODEL

SUMMARY:

The Finance and Personnel Committee requested an overview of the Enterprise Model to ensure that past and future costs of new capital facilities are shared equally between connection fees paid by developers and property taxes paid by property owners. Staff has prepared a summary analysis by Improvement District and will review the results with the Committee.

Staff will also review the status of a project to update the Replacement Planning Model (RPM) that will assist in determining reserve requirements needed to fund future infrastructure replacements. Future anticipated replacement costs from the RPM are included in the Enterprise Model and used to set the replacement component of annual user rates. The District will utilize the results in the Enterprise Model to assess the appropriateness of its current replacement reserves and District reserve policy.

BACKGROUND:

The IRWD Long-Term Capital Funding Plan (LTFP), completed in November 2013, established connection fees and formed new IDs for funding capital requirements and setting tax rates. A fundamental concept in the District's LTFP is that the cost of new capital facilities are shared equally between connection fees paid by the developer and property taxes paid by property owners. Staff utilizes the Enterprise Model, a comprehensive financial model to incorporate regional capital costs, future development, growth rates, inflation, and other variables to determine connection fees. Connection fees and property tax rates are reviewed annually with the Board and were last approved in July 2017. The Finance and Personnel Committee has requested an overview of the Enterprise Model to ensure that the past and future anticipated costs of new capital facilities are shared equally; this overview is attached as Exhibit "A".

The District's capital program anticipates the need to update, expand and provide redundancy as well as refurbish and replace existing facilities as they reach the end of their useful live. The Enterprise Model uses information from the RPM Model, which was last updated in 2010, to assess the adequacy of funding long-term replacement capital projects. Engineering is currently leading a project and has hired Kayuga Solution to assist in updating the RPM model. The model will identify fifty and one hundred year replacement funding needs for the District. The project is being completed in two phases. Phase 1 will update the model for new capital added since 2010 and is anticipated to be completed in time for the FY 2018/2019 Operating and Capital Budget processes. Phase 2 will include updating the unit replacement costs in the model and is expected to be completed in late summer 2018. Staff will provide an update on the status of the project which when completed, will be used to assess the appropriateness of the District's current replacement reserves and reserve policy.

FISCAL IMPACTS:

To be determined.

ENVIRONMENTAL COMPLIANCE:

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

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit "A" – Fund Balances, Connection Fees, and Property Taxes

IRVINE RANCH WATER DISTRICT
Identifying Changes within IDs
(in millions)

Exhibit "A"

Improvement District	112/212	113/213	153/253	185/285	188/288	125/225 240 [1]	111/222 [2]
Area	Great Park	Tustin Base	Undev-eloped	OSA	Baldwin	Developed - Tax Auth.	Developed - No Tax Auth.
To Date:							
Expenditures [3]	$ (47.4)	$ (60.8)	$ (21.5)	$ (4.8)	$ (17.9)	$ (1,014.1)	$ (29.5)
Connection Fees	12.9	19.5	13.7	9.4	0.0	251.7	16.9
GO Property Taxes	5.3	4.9	3.9	0.5	0.2	89.8	-
Previous Bond Sales	27.1	48.9	19.5	3.3	5.0	732.9	-
Other [4]	0.2	1.2	8.2	0.3	12.1	178.1	-
Fund Balance (6/30/2017)	$ (1.9)	$ 13.7	$ 23.7	$ 8.7	$ (0.5)	$ 238.5	$ (12.5)
Future:							
Revenue:							
Interest Income on Fund Balance	$ 22.4	$ 15.1	$ 16.4	$ 10.5	$ 2.9	$ 88.8	$ (48.8)
Other Revenues [5]	20.6	1.4	82.0	-	0.3	29.7	6.6
1% and Enhancement						476.8	258.8
Bond Sales	58.6	18.3	73.1	18.6	4.5	227.1	94.5
Connection Fees	54.2	24.5	48.8	12.6	4.4	13.0	14.4
GO Property Taxes	60.6	39.4	34.1	18.0	4.2	312.8	-
Total Revenue	$ 216.4	$ 98.6	$ 254.5	$ 59.6	$ 16.3	$ 1,148.3	$ 325.5
Expenditures:							
Capital	$ (60.9)	$ (18.4)	$ (114.4)	$ (18.8)	$ (2.9)	$ (220.9)	$ (146.6)
Debt	(145.1)	(87.6)	(151.3)	(35.1)	(10.4)	(1,044.7)	(146.3)
Total Expenditures	$ (206.1)	$ (106.0)	$ (265.7)	$ (53.9)	$ (13.3)	$ (1,265.7)	$ (292.9)
Projected Ending Fund Balance (FY 2056-57)	$ 8.5	$ 6.3	$ 12.4	$ 14.4	$ 2.4	$ 121.1	$ 20.1
Connection Fees:							
Previous	$12.9	$19.5	$13.7	$9.4	$0.0	$251.7	
Future	$54.2	$24.5	$48.8	$12.6	$4.4	$13.0	
Total Connection Fees	$67.1 50%	$44.0 50%	$62.5 50%	$22.0 50%	$4.4 50%	$264.7 40%	
GO Property Taxes:							
Previous	$5.3	$4.9	$3.9	$0.5	$0.2	$89.8	
Underlay (ID 125/225)			$24.1	$3.8			
Future	$60.6	$39.4	$34.1	$18.0	$4.2	$312.8	
Total GO Property Taxes	$65.9 50%	$44.3 50%	$62.1 50%	$22.2 50%	$4.4 50%	$402.6 60%	

(1) Includes an estimate (12,000 units at $4,000 per connection and $24 million in property taxes) for the Los Alisos rate area which constitues 30% of the Developed ID. Connection fee and tax information prior to the consolidation is not available.
(2) ID 111/222 includes OPA and it has no taxing authority. Funding for capital will come primarily from 1% revenue and enhancement revenue (user rates). Total capital expenditures are subsequent to the completion of the Long Term Capital Funding Program (November 2013).
(3) Expenditures includes both capital infrastructure and general plant expenditures.
(4) Other includes Grants, AMP, LRP, LPP, Native water and golf course revenue (TIC), and any other revenue sources that were used to offset capital.
(5) Other Revenues include Native water and golf course revenue for 153/253, buy-in costs, and estimated grant revenue.

September 5, 2017
Prepared by: Marta Ramos
Submitted by: Jenny Roney
Approved by: Paul Cook

FINANCE AND PERSONNEL COMMITTEE

EMPLOYEE POPULATION AND TURNOVER STATUS REPORT

SUMMARY:

Staff has prepared various population and turnover reports for Committee review.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

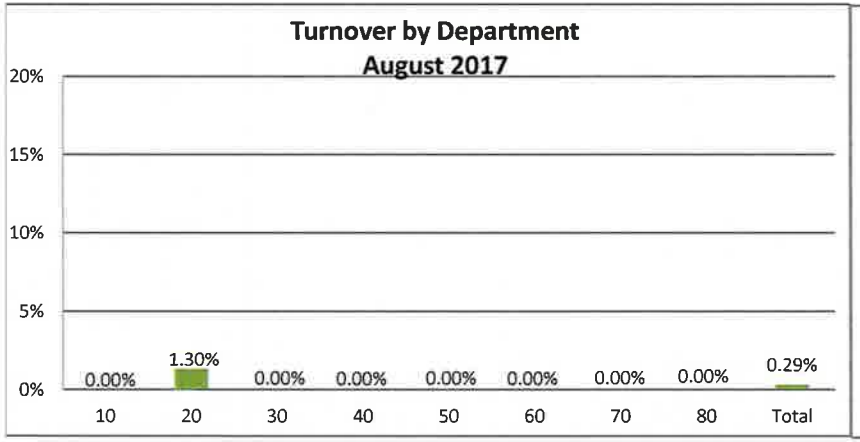
LIST OF EXHIBITS:

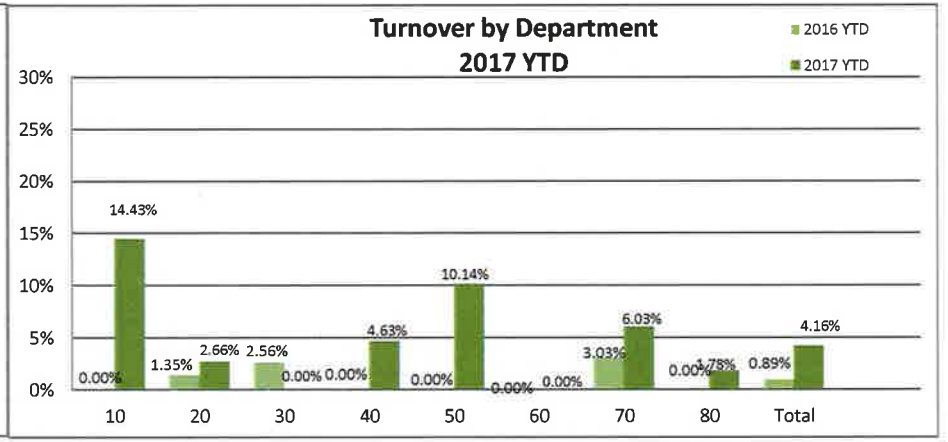
Exhibit "A" - Employee Population/Turnover Status Report

EXHIBIT A

IRVINE RANCH WATER DISTRICT
EMPLOYEE POPULATION STATUS REPORT
August 2017

	@08/01/17	Current Month Activity							@08/31/17		FY 17/18	Avg FYTD	Avg FYTD	Avg FYTD	Internal Turnover		External Turnover	
	Positions	New	Terms		Promo Trnsfr		Lateral Trnsfr		Positions	Positions	Budgeted	Filled Budget	Temp Emp	Total Filled	Current	2017	Current	2017
Dept No	Filled	Hires	Vol	Invol	In	Out	In	Out	Filled	Unfilled	Positions*	Positions	FTE	Positions	Period	YTD	Period	YTD
10P	13.0								13.0	2	15.0	13.7	0.0	13.7	0.00%	0.00%	0.00%	14.55%
20P	77.0		1						76.0	5	81.0	74.3	10.0	84.3	0.00%	0.00%	1.30%	3.97%
30P	41.0								41.0	3	44.0	39.9	4.6	44.5	0.00%	0.00%	0.00%	0.00%
40P	64.0	1				1			64.0	5	69.0	63.0	4.4	67.4	1.56%	0.00%	0.00%	4.63%
50P	42.0	2					7		51.0	5	55.0	41.0	2.5	43.5	0.00%	2.52%	0.00%	10.06%
60P	20.0								20.0	0	20.0	19.5	2.5	22.0	0.00%	0.00%	0.00%	0.00%
70P	34.0	1			1				36.0	1	37.0	32.0	4.1	36.1	0.00%	0.00%	0.00%	6.02%
80P	55.0							7	48.0	6	56.0	55.0	0.0	55.0	0.00%	1.79%	0.00%	1.79%
Totals	346	4	1	0	1	1	7	7	349.0	27	377.0	338.4	28.2	366.6	0.29%	0.30%	0.29%	4.46%
7/16	337	2	1	0	0	0	2	2	338	29	367.00	318.09	34.29	352.39	0.00%	0.62%	0.30%	3.75%



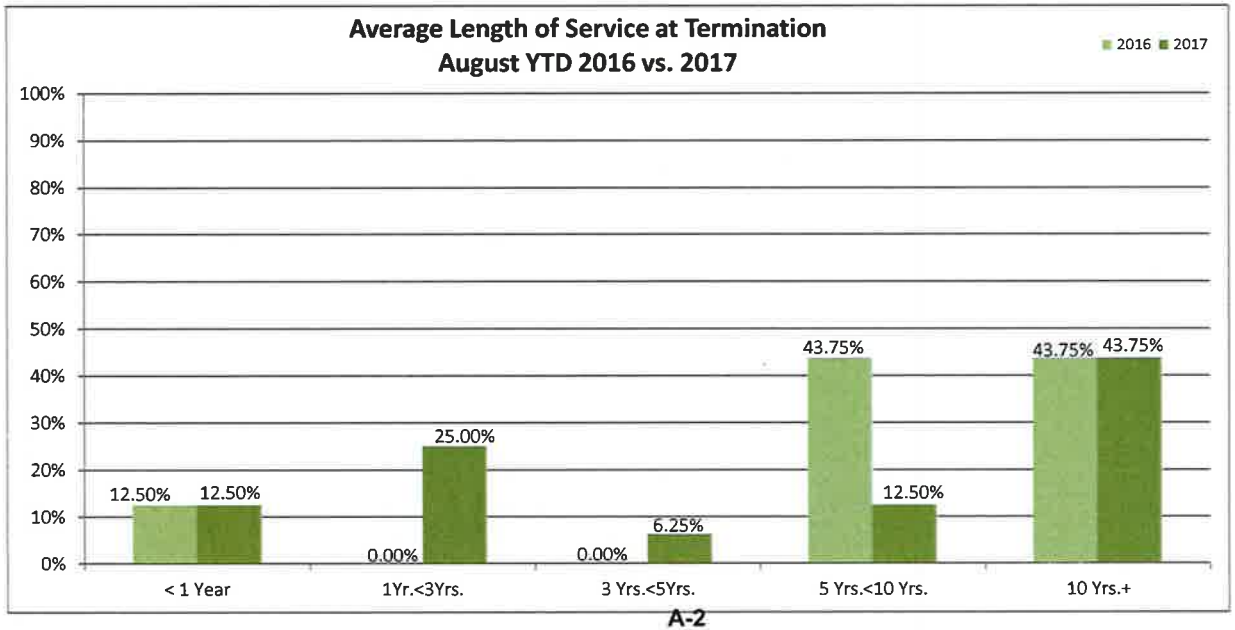


10P-GM, HR, Safety; 20P-Fin., Cust: Serv., IS, Purch.; 30P-Eng.: 40P-Water Ops; 50P-Recycling; 60P-Water Qualty; 70P-Water Res., Pol., Conserv. and Public Affairs; 80P-Maintenance Ops

IRVINE RANCH WATER DISTRICT
TURNOVER LONGEVITY RATIO
August 2017

Dept.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	YTD Turnover Longevity Ratio				
														< 1 Year	1Yr.<3Yrs.	3 Yrs.<5Yrs.	5 Yrs.<10 Yrs.	10 Yrs.+
10P						2												2
20P		1		1				1						1		1		1
30P							1											1
40P		1			1		1							1			1	1
50P				1	2										2		1	
60P																		
70P						1	1								1			1
80P	1						1								1			1
2017 Total	1	2	0	2	3	3	4	1					16	2	4	1	2	7
2016 Data	1	3	1	3	1	3	1	3	2	2	3	3	26					
Percentage of Total Turnover														12.50%	25.00%	6.25%	12.50%	43.75%

2017 Average YTD Length of Service at Termination	12.05 Years
2016 Average YTD Length of Service at Termination	12.43 Years
2015 Average YTD Length of Service at Termination	12.27 Years
2014 Average YTD Length of Service at Termination	19.07 Years
2013 Average YTD Length of Service at Termination	17.24 Years



IRVINE RANCH WATER DISTRICT
EMPLOYEE POPULATION STATUS REPORT
August 2017

NEW HIRES

Hire	Dept	Employee Name	Position	Comments
07/31/17	50P	Robert Tomasello	Automation Programmer	
08/12/17	70P	Natalie Palacio	Water Resources Specialist	
08/15/17	50P	Kevin Rezaee	Automation Specialist	
08/22/17	40P	Nicholas Cook	Water Maintenance Technician I	

TERMINATIONS

Termination Date	Dept	Employee Name	Position	Reason	Comments

RETIREMENTS

Effective Date	Departing Dept	Employee Name	Position	Reason	Comments
08/11/17	20P	Rosemary Riddle	Customer Service Supervisor	Voluntary	Retired

PROMOTIONS

Effective Date	Departing Dept	Employee Name	Departing Position	New Dept	New Position
08/12/17	20P	Maria Sanchez	Customer Service II	20P	Customer Service Specialist III
08/12/17	30P	Brad Jackson	Construction Inspector	30P	Construction Inspection Supervisor
08/12/17	30P	Jeff Schreck	Construction Inspector	30P	Senior Construction Inspector
08/12/17	40P	Kevin Reideler	Operator II	40P	Operations Supervisor
08/12/17	40P	Todd Sinclair	Cross Connection Specialist	70P	Senior Recycled Water Specialist

TRANSFERS

Effective Date	Departing Dept	Employee Name	Departing Position	New Dept	New Position
07/01/17	80P	Joe Lam	Automation Manager	50P	Automation Manager
07/01/17	80P	Ethan Fike	Automation Supervisor	50P	Automation Supervisor
07/01/17	80P	Sudhir Pisal	Automation Programmer	50P	Automation Programmer
07/01/17	80P	Rey Tobias	Automation Specialist	50P	Automation Specialist
07/01/17	80P	Evan Seraypheap	Automation Technician	50P	Automation Technician

CROSS TRAINING

Effective Date	Departing Dept	Employee Name	Departing Position	New Dept	New Position
06/03/17	50P	Ricky Ruiz	Operator II	50P	Operator II

IRVINE RANCH WATER DISTRICT
EMPLOYEE POPULATION STATUS REPORT
August 2017

UNFILLED POSITIONS			
Dept	**Position**	**Salary Grade**	**Comments**
10P	Human Resources Technician	U25.N	
10P	Human Resources Manager	U18.E	Holding 2nd interviews, underfilling as Sr. HR Analyst
20P	Mailroom Coordinator	6.N	
20P	Customer Service Field Technician	14.N	Recruiting
20P	Customer Service Specialist II	17.N	Recruiting
20P	Sr. Application Analyst	U18.E	Coordinating interview date
30P	Construction Inspector	28.N	Recruiting
30P	Construction Inspector	28.N	Recruiting
30P	Construction Inspector	28.N	Recruiting
40P	Cross Connection Specialist	24.N	
40P	Operator II	27.N	Coordinating interview date
40P	Operator III	29.N	Interviews held waiting on dept. decision
40P	Operator III	29.N	Interviews held waiting on dept. decision
40P	Operator III	29.N	Interviews held waiting on dept. decision
50P	Wetland Specialist	24.N	
50P	Prcoess Specialist	32.N	
50P	Operator I (MWRP)	27.N	
50P	Operator II (MWRP)	29.N	Re-posted
50P	Operator II (MWRP)	29.N	Re-posted
50P	Operator I (LAWRP)	27.N	
70P	Public Affairs Specialist	29.N	Coordinated 2nd interviews, waiting for dept. decision
80P	Maintenance Mechanic	20.N	
80P	Executive Assistant	U26.N	
80P	Electrical Technician	28.N	Re-posted
80P	Asset Maintenance Coordinator	32.N	
80P	Asset Maintenance Coordinator	32.N	
80P	Asset Systems Analyst	10.E	

IRVINE RANCH WATER DISTRICT
EMPLOYEE POPULATION STATUS REPORT
August 2017

LEAVE OF ABSENCE									
Type of Leave	**Original Status**	**Final Status**	**Dept. No.**	**Claim #**	**Date Leave Began**	**Anticipated Return Date**	**Current Length**	**Comments**	
WC	WC		40P	001401	10/14/2016	4/25/2017	10 Months		
WC/FMLA/CFRA	WC		50P	000817	3/22/2017	8/15/2017	4.5 Months		
FMLA/CFRA	SDI		30P	001675	4/3/2017	8/31/2017	4 Months		
WC/FMLA/CFRA	WC		50P	001336	4/12/2017	8/1/2017	3.5 Months		
DL/FMLA/CFRA	SDI		60P	001889	5/12/2017	10/25/2017	3 Months		
FMLA/CFRA	SDI		80P	001173	6/8/2017	7/31/2017	2 Months		
FMLA/CFRA	SDI		20P	002158	6/12/2017	10/31/2017	6 Weeks		
PDL	SDI		40P	002246	7/28/2017	9/28/2017	1 Month		
FMLA/CFRA	SDI		80P	001896	8/14/2017	9/14/2017	3 Weeks		
Leave	**Original Status**	**Final Status**	**Dept. No.**	**Claim #**	**Date Leave Began**	**Anticipated Return Date**	**Expected Length**	**Actual Return Date**	**Comments**
FMLA/CFRA	SDI		60P	001007	6/19/2017	7/1/2017	2 Weeks	07/10/17	Returned
FMLA/CFRA	SDI		30P	001148	6/26/2017	7/17/2017	3 Weeks	07/10/17	Returned
WC FMLA/CFRA	WC	Vac	40P	001601	3/8/2017	7/19/2017	4 Months	07/19/17	Returned
FMLA/CFRA	Sick/Vac	Sick/Vac	80P	001572	7/10/2017	7/17/2017	1 Week	07/17/17	Returned
WC/FMLA/CFRA	WC	WC	40P	001484	7/12/2017	7/20/2017	1 Week	07/20/17	Returned
WC/FMLA/CFRA	WC		40P	001672	6/12/2017	8/15/2017	6 Weeks	07/28/17	Returned
FMLA/CFRA	SDI		60P	001007	6/20/2017	8/1/2017	5 Weeks	08/01/17	Returned
FMLA/CFRA	SDI		80P	002087	7/11/2017	7/31/2017	3 Weeks	08/01/17	Returned
FMLA/CFRA	SDI		50P	000936	7/13/2017	7/29/2017	2 Weeks	08/08/17	Returned
FMLA/CFRA	PFL		50P	002070	7/17/2017	8/3/2017	2 Weeks	08/07/17	Returned
FMLA/CFRA	PFL		50P	001896	7/17/2017	8/3/2017	2 Weeks	08/07/17	Returned

IRVINE RANCH WATER DISTRICT
EMPLOYEE POPULATION STATUS REPORT
June 2017

Month	Dept	Length of Employment	Termination		Comments
			Vol	Invol	
January	50P	19 Years, 3 Months	X		Other employment
February	40P	1 Year, 11 Months	X		Other employment
	20P	3 Years, 4 Months	X		Other employment
March					
April	50P	7 Years, 9 Months	X		Other employment
	20P	4 Months	X		Other employment
May	40P	5 Years, 8 Months	X		Other employment
	50P	2 Years, 5 Months	X		Other employment
	50P	1 Year, 3 Months	X		Other employment
June	10P	28 Years, 1 Month	X		Retired
	10P	27 Years, 2 Months	X		Retired
	70P	2 Years, 1 Month	X		Resigned
July	40P	19 Years, 2 Months	X		Retired
	70P	18 Years, 5 Months	X		Retired
	80P	1 Year, 5 Months	X		Other employment
	30P	33 Years, 6 Months	X		Retired
August	20P	23 Years, 1 Month	X		Retired

IRVINE RANCH WATER DISTRICT
SUMMARY
AGENCY & DISTRICT TEMPORARY EMPLOYEES
July 2017
ACTIVE

Current Month FTE	Avg FYTD Temp Emp FTE	Active PERS Y/N *	Agency	Dept	Hire Date	Term Date	Classification	Hourly Rate	Est Hours per Month	Est Cost Per Month	Expected Duration (Months)	Actual Worked (Months)	Projected Cost FY' YTD	Actual Cost FY 'YTD
0.00	**0.00**			**10P**										
0.90	0.90	Yes		210	6/5/2017		Full Time	30.00	168	5,040.00	3	1	5,040.00	4,575.00
0.93	0.93	Yes		220	3/3/2014		Full Time	20.84	168	3,501.12	7	1	3,501.12	3,334.40
1.00	1.00	Yes		220	5/11/2015		Full Time	28.95	168	4,863.60	7	1	4,863.60	5,782.76
0.86	0.86	No	X	220	3/13/2017		Full Time	25.97	168	4,362.96	12	1	4,362.96	3,791.62
0.48	0.48	No	X	220	7/17/2017		Full Time	31.00	168	5,208.00	7	0.5	2,604.00	2,480.00
0.48	0.48	No	X	220	7/17/2017		Full Time	35.22	168	5,916.96	7	0.5	2,958.48	2,817.60
0.91	0.91	No	X	220	5/30/2017		Full Time	19.99	168	3,358.32	6	1	3,358.32	3,068.47
0.90	0.90	No	X	240	5/31/2017		Full Time	26.01	168	4,369.68	12	1	4,369.68	3,953.52
0.90	0.90	No	X	240	6/5/2017		Full Time	26.01	168	4,369.68	12	1	4,369.68	3,953.52
0.90	0.90	No	X	240	6/5/2017	7/28/2017	Full Time	26.01	168	4,369.68	6	1	4,369.68	3,953.52
0.79	0.79	EXC		250	2/13/2017		Part Time	14.00	84	1,176.00	12	1	1,176.00	1,862.00
0.88	0.88	EXC		250	2/17/2017		Part Time	14.00	84	1,176.00	12	1	1,176.00	2,072.00
9.95	**9.95**			**20P**										
0.85	0.85	Yes		300	6/20/2015		Full Time	24.23	168	4,070.64	12	1	4,070.64	3,440.66
0.64	0.64	EXC		300	5/23/2016		Part Time	15.00	84	1,260.00	12	1	1,260.00	1,605.00
0.00	0.00	EXC		300	6/20/2016		Part Time	15.00	84	1,260.00	12	1	1,260.00	0.00
0.90	0.90	No	X	300	5/4/2017		Full Time	26.70	168	4,485.60	3	1	4,485.60	4,058.40
0.68	0.68	EXC		300	5/30/2017		Part Time	15.00	84	1,260.00	12	1	1,260.00	1,725.00
0.64	0.64	EXC		300	6/26/2017		Part Time	15.00	84	1,260.00	12	1	1,260.00	1,605.00
0.64	0.64	EXC		300	6/26/2017		Part Time	15.00	84	1,260.00	12	1	1,260.00	1,605.00
0.29	0.29	Yes		300	7/19/2017		Full Time	23.60	168	3,964.80	12	1	3,964.80	
4.63	**4.63**			**30P**										
0.89	0.89	No	X	425	5/2/2017		Full Time	26.65	168	4,477.20	6	1	4,477.20	3,997.50
0.24	0.24	No	X	425	6/6/2017	7/7/2017	Full Time	30.65	168	5,149.20	1	1	5,149.20	1,226.00
0.89	0.89	No	X	425	6/6/2017		Full Time	30.65	168	5,149.20	6	1	5,149.20	4,597.50
0.88	0.88	Yes		430	10/26/2015	8/24/2017	Full Time	19.14	168	3,215.52	1	1	3,215.52	2,880.57
0.65	0.65	No	X	430	4/5/2017	7/20/2017	Full Time	20.00	168	3,360.00	1	1	3,360.00	2,190.00
0.61	0.61	Yes		430	8/22/2016		Full Time	29.45	168	4,947.60	12	1	4,947.60	4,417.50
4.16	**4.16**			**40P**										
0.00	0.00	EXC		515	6/20/2016		Part Time	19.00	84	1,596.00	6	1	1,596.00	2,284.75
0.72	0.72	Yes		515	6/27/2016		Full Time	26.49	84	2,225.16	7	1	2,225.16	3,973.50
0.89	0.89	No	X	515	1/19/2017		Full Time	34.65	168	5,821.20	4	1	5,821.20	5,197.50
1.61	**1.61**			**50P**										
0.00	0.00	No	X	600	5/1/2017		Full Time	35.00	168	5,880.00	3	1	5,880.00	0.00
0.95	0.95	No	X	600	6/27/2017	8/8/2017	Full Time	31.50	168	5,292.00	1	1	5,292.00	5,040.00
0.83	0.83	EXC		600	6/19/2017		Part Time	17.00	84	1,428.00	12	1	1,428.00	2,363.00
0.67	0.67	EXC		600	6/26/2017		Part Time	15.00	84	1,260.00	12	1	1,260.00	1,685.63
0.06	0.06	EXC		600	7/8/2017		Part Time	17.00	84	1,428.00	12	1	1,428.00	170.00
2.51	**2.51**			**60P**										
0.61	0.61	Yes		710	12/14/2015		Full Time	33.62	168	5,648.16	12	1	5,648.16	3,429.24
0.89	0.89	Yes		720	7/5/2016	8/12/2017	Full Time	20.00	168	3,360.00	12	1	3,360.00	2,980.00
0.92	0.92	Yes		730	8/13/2015		Part Time	19.80	84	1,663.20	12	1	1,663.20	3,049.20
0.95	0.95	Yes		730	8/13/2015		Part Time	19.00	84	1,596.00	12	1	1,596.00	3,030.50
0.35	0.35	No	X	730	7/17/2017		Part Time	19.99	84	1,679.16	12	1	1,679.16	1,179.41
0.43	0.43	Yes		750	7/18/2017		Full Time	27.02	168	4,539.36	12	1	4,539.36	1,945.44
4.14	**4.14**			**70P**										
0.00	0.00													
0.00	**0.00**			**80P**										
27.00	**27.00**													

IRVINE RANCH WATER DISTRICT
SUMMARY
AGENCY & DISTRICT TEMPORARY EMPLOYEES
July 2017
TERMINATED

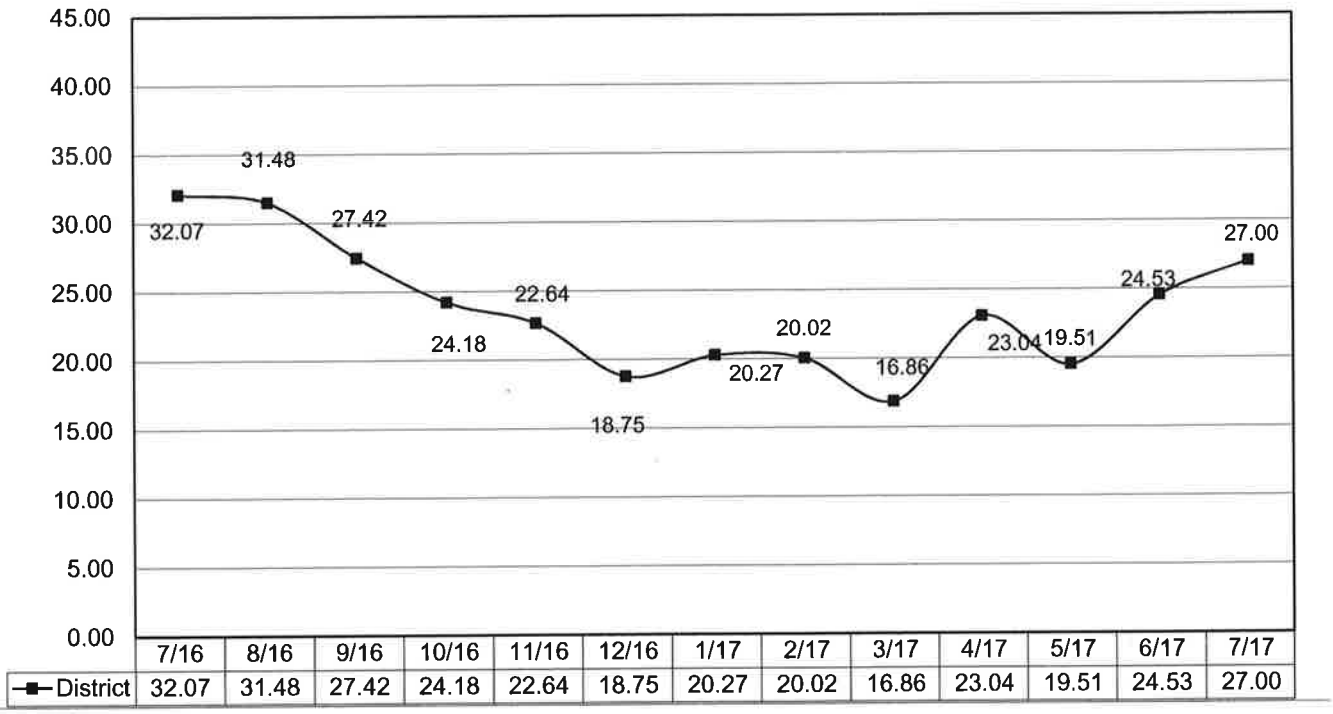
Current Month FTE	Avg FYTD Temp Emp FTE	Active PERS Y/N *	Agency	Dept	Hire Date	Term Date	Classification	Hourly Rate	Est Hours per Month	Est Cost Per Month	Expected Duration (Months)	Actual Worked (Months)	Projected Cost FYTD	Actual Cost FYTD
0.00	0.00			10P										
0.00	0.00			20P										
0.00	0.00			30P										
0.00	0.00			40P										
0.00	0.00			50P										
0.00	0.00			60P										
0.00	0.00			70P										
0.00	0.00			80P										
	0.00												130,685.52	111,320.70

RET = Retired Annuitant working less than 960 hrs/yr/No=Temporary Employee not enrolled in PERS Membership
EXC = Exclude by PERS Contract / Yes= Temporary employee enrolled in PERS Membership

* Temporaries are reported 30 days in arrears

Temporary Employees

Full Time Equivalency thru 07/31/17
District Totals



	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17	4/17	5/17	6/17	7/17
District	32.07	31.48	27.42	24.18	22.64	18.75	20.27	20.02	16.86	23.04	19.51	24.53	27.00

September 19, 2017
Prepared by: Tony Mossbarger
Submitted by: Cheryl Clary
Approved by: Paul Cook

FINANCE AND PERSONNEL COMMITTEE

BUSINESS INTELLIGENCE CLOUD DISASTER RECOVERY IMPLEMENTATION AND REPORTING CONTRACT AWARD

SUMMARY:

The District's Oracle Financial Software Upgrade and Project Management implementation (Financial Upgrade Project), completed in March 2017, included a backup Cloud Disaster Recovery (DR) environment for continuing operations in the event of a system failure. A separate backup Business Intelligence (BI) Cloud DR environment is also needed to support ongoing financial reporting in the event of a system failure.

In addition, the Financial Upgrade Project included minimal new reports. Post implementation, staff has identified the need for additional BI reports and training on those reports. Staff recommends that the Board:

- Authorize the addition of Project 10345 for $155,000 and Project 10347 for $155,000 to the FY 2017-18 Capital Budget; and
- Authorize the General Manager to execute a Professional Services Agreement with DiLytics in the amount of $241,000 for the Business Intelligence Cloud Disaster Recovery Implementation and Additional BI Reports.

BACKGROUND:

In March 2017, the District completed the Financial Upgrade Project, which included the creation of a Cloud DR environment for continuing operations in the event of a system failure. The District uses Oracle BI applications software to provide timely financial reporting to support ongoing operations. Staff has determined that in addition to the Oracle Financial and Project Management Cloud DR environment, a separate BI Cloud DR environment is needed. A cloud solution is more secure in the event of a system failure or natural disaster as the previous DR environment was located at the Operations Center. As discussed above, staff is proposing to move the upgraded environment to the cloud.

In order to maximize the benefits from the Financial Upgrade Project, staff has identified additional opportunities for reporting that are not part of standard Oracle reports. DiLytics met with staff from Finance, Engineering, Human Resources, Information Services, Operations, and Purchasing to gain a better understanding of the additional reporting requirements. The requested reports are identified in the DiLytics proposal and is attached as "Exhibit A".

Consultant Selection:

The District upgraded its Oracle BI software in August 2015, as Oracle support for that version had expired and required an upgrade to a newer version. A Request for Proposal was issued to five consultants with experience performing Oracle BI software upgrades. At that time, DiLytics

was selected and awarded a professional services contract to perform the 2015 Oracle BI software upgrade. DiLytics successfully completed the upgrade project on time and within budget. DiLytics worked with all levels of staff in a professional manner and developed good working relationships. DiLytics exhibited their excellent knowledge and experience with the Oracle BI software and is very familiar with the District's BI reporting environment.

DiLytics has an excellent understanding of the BI Cloud DR Implementation and Reporting project; a well-seasoned and experienced project team; submitted an optimal project schedule; and is the most capable of assisting the District with the project. Staff recommends awarding a Professional Service Agreement to DiLytics in the amount of $241,000.

FISCAL IMPACTS:

Projects 10345 and 10347 are not included in the FY 2017-18 Capital Budget. Staff requests the addition of Projects 10345 and 10347 to the FY 2017-18 Capital Budget as shown in the table below. Funding for projects will be provided by the Replacement Fund (Improvement Districts 1100 and 2100) respectively:

Project No.	Current Budget	Addition <Reduction>	Total Budget
10345	$-0-	$155,000	$155,000
10347	$-0-	$155,000	$155,000
Total	$-0-	$310,000	$310,000

ENVIRONMENTAL COMPLIANCE:

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

RECOMMENDATION:

That the Board authorize the addition of Projects 10345 for $155,000 and 10347 for $155,000 to the FY 2017-18 Capital Budget and authorize the General Manager to execute a Professional Services Agreement with DiLytics, Inc. in the amount of $241,000.

LIST OF EXHIBITS:

Exhibit "A" – DiLytics Statement of Work and Fee Proposal

Statement of Work
Oracle Business Intelligence
At IRWD

September 2017

DiLytics, Inc.

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Revision History

Change Record

Date	Author	Version	Change Reference
19-May-2017	DiLytics, Inc.	1.0	Initial Creation by DiLytics
24-May-2017	DiLytics, Inc.	2.0	DiLytics internal review and feedback
21-June-2017	DiLytics, Inc.	3.0	Reduced scope based on IRWD inputs
28-August-2017	DiLytics, Inc.	4.0	Revised scope to include additional departments and their requirements

Reviewers

Approvers

Confidentiality Agreement

This document contains information that is proprietary and confidential to DiLytics, Inc. ("**DiLytics**") and Irvine Ranch Water District ("**IRWD**") which shall not be disclosed outside DiLytics and IRWD and shall not be transmitted or duplicated, used in whole or in part for any purpose other than its intended purpose. Any use or disclosure in whole or in part of this information without express written permission of DiLytics and IRWD is prohibited.

Any other company and product names mentioned in the document are used for identification purpose only and may be trademarks of respective owners.

1. General

This Statement of Work ("**SOW**") is entered into by Irvine Ranch Water District ("**IRWD**") and DiLytics, Inc. ("**Contractor**" or "**DiLytics**") (Each herein referred to as "**Party**" and collectively as "**Parties**"), pursuant to the terms of the Master Services Agreement ("**Agreement**") dated <<Month XX, Year>>. Except to the extent expressly provided otherwise in this SOW, all the terms of the Agreement are incorporated by reference into this SOW. In the event of any inconsistent or contradictory terms between the Agreement and the SOW, the terms of Agreement will control and supersede such inconsistent or contradictory terms included in the SOW. Any terms used specifically in the SOW and not otherwise defined in the agreement will be defined in the SOW.

2. Background

- IRWD leverages Oracle EBS as its ERP for Financials, Costing, Procurement, Projects, Inventory and Human Resources
- District uses Oracle Customer Care & Billing (CC&B) for Water Utility operations
- District leverages Oracle BI Apps for analytics on Oracle EBS Financials, Procurement, Projects and Human Resource modules
- District uses Oracle Utilities Analytics for insight on CC&B data
- Currently District's primary and Disaster Recovery (DR) data centers are located very close to each other
- District recently subscribed to Oracle Infrastructure cloud for installing the Disaster Recovery (DR) instances of applications and servers
- In this Statement of Work (SOW), DiLytics is specifying the scope, timeline and estimate for
    - Installation of Oracle BI Apps DR instance in Oracle Cloud Infrastructure
    - Provide Training on Oracle BI Apps to business users
    - Create new Reports and Dashboards for Engineering, Purchasing, Inventory, General Ledger, Payables, Payroll, HR, Budgeting
    - Resolve data issues
    - Make performance improvements

3. SOW Scope & Approach

This SOW to implement BI Phase2 in IRWD includes the following scope:

3.1 Install Oracle BI Apps DR instance

- Install OBIEE
- Install Data Warehouse
- Install ODI
- Install Oracle BI Apps (OBIA)
- Migrate OBIA code from Production to DR Instance
    - Migrate DW
    - Migrate RPD
    - Migrate Web Catalog
    - Migrate ETL
    - Migrate Domain Configurations
- Load data into OBIA DR Instance
- Verify OBIA DR instance
    - Verify Data Load
    - Verify Reports and Dashboards

- Verify OBIA Production instance accessing and updating OBIA DR RPD and web catalog
- Verify seamless transition to DR instance when Production OBIA goes down

3.2 Training on Oracle BI Apps

- Conduct separate training sessions for each department on functionality specific to their department (For example, Finance team training on General Ledger, Payables, Payroll)
- Follow up one on one discussions to answer additional questions and provide online help
- Provide Training Documentation

3.3 Reports and Dashboards

3.3.1 Engineering

- Develop Capital Budgeting Reports
- Develop Project Budget Expenditure (Including field called Budget Type Code)
- Create Snapshot of Project Budget Expenditure based on user input date (Write-back table) for snapshot
- Create Pivot Classifications for Project Budget Expenditure report
- Redesign Labor/Payroll Charges based on PO Spend and Non-PO Spend
- Redesign Project Summary Report
  - New Fields Required
  - Project start date incorrect
- Tune performance for drill-down reports from Project Summary Report
  - Project Manager/Engineer summary
  - POs, Invoices, Labor/Payroll
- Provide documentation (Semi-technical) on EBS to BI mapping

3.3.2 Purchasing

- Develop Invoice by Supplier Report
  - Provide visibility into AP (Accounts Payable)
  - Ability to view PO balance at the end of fiscal year

3.3.3 Inventory

- Develop Report to view Usage for items in past six months
  - Current method is View Material transactions --> Import all transactions and then pivot tables to organize. Do not include return to Stock or receipt. Sort by week or month.
- Develop Monthly Report: Misc Inventory transactions - Issues to GL
  - Current report: IRWD Miscellaneous Txn Report from EBS. Manually match correct ID with Process.

3.3.4 General Ledger

- Address the issue of data not showing up in BI after incremental data load is completed
- Fix the issue of junk (decode statements) values in Account and account segment
  - Not able to do range search for any segment in GL
- Resolve Performance issue with 'Financials - GL detail transactions' Subject area
- Clean up duplicate in subject area

  - there is one folder called GL Account and another folder called GL segment4 - ACCOUNT
- Address columns showing up code values rather than the exact name
  - Journal category
- Fix the issue of columns getting merged when exporting into excel 2007
- Account document source is 'AP' then provide Vendor invoice number, PO amount, check number just like in project module
  - Combine 'Financials- GL detail transactions' and Financial - AP Transactions. Check number cannot be brought over with Account number
- Account document source is 'Payroll' then need Employee Name, Employee Number, Hours, rate
- Account document source is 'Inventory' then need item, item desc
- Account document source is 'Receivables' Customer Name, Receipts (if there is one)

3.3.5 Payables

- Address the issue of Wrong Results from AP Invoices table - Membership GL Account- 586002
- Fix the issue of Some of the results from BI is incorrect
  - Amount against Account
- Resolve data issue in Financial - Asset Balance Table
  - Under Asset, under Asset Key Detail and under Asset Key Group

3.3.6 Payroll

- Provide visibility into Hours by process - Employee Name, Number, Hours and Process
  - Getting information from Project Inquiry screen - Need that in BI
- Create OTL - Request for who charge to which process
  - Operations request-- By Manager
- Create Vacation and Sick Hours by Employee by each pay period
  - Current Report might be wrong
- Develop new Report for Vacation accrual balance report
  - Runs Quarterly in BI
- Provide ability to select Earning Elements (Uniform, Performance Recognition)
  - Payroll and Advanced benefits Subject Area: element report is not user friendly - Element by pay period, GI fiscal period, GI fiscal number. Deductions are there - CS Earnings by Pay Period Report (in catalog under shared folder). Regular salary does not have sum amount

3.3.7 Human Resource (HR)

- Provide visibility into Employee census data with DOH DOB Adjusted service date
  - Rate of pay missing
  - New Hires do not show
  - August run shows only July data
- Develop Report to show current life events that are open or pending
  - Need to run before open enrollment
- Resolve data issues
  - New Hires missing from all reports
  - Workforce Salary Facts - Some missing Salaries

3.3.8 Budgeting

- Fix data issue on Report does not bring correct results for performance ratings
  - Subject Area - Human Resources - Compensation
- Provide the ability to filter by Payment Type
  - HR Payroll & Benefits CS- Employee Compensation for Workers Comp
- Fix Performance Issue in Operating Expense Budget (Adopted)
  - Under Financial Managers - Operating Expnse Budget(Adopted) - Around 200 records but takes longer than usual to retrieve data
- Resolve Out of box - Element Register report (It does not work)

3.3.9 Common in General

- Fix data issues
- Address Performance bottlenecks
- All OOTB reports should run without any error
- Validate data in the Reports
- Assist users to perform UAT and get sign off
- Migrate to Production
- Training and Documentation

Note: Most of the above scope has been taken from the Requirements table below.

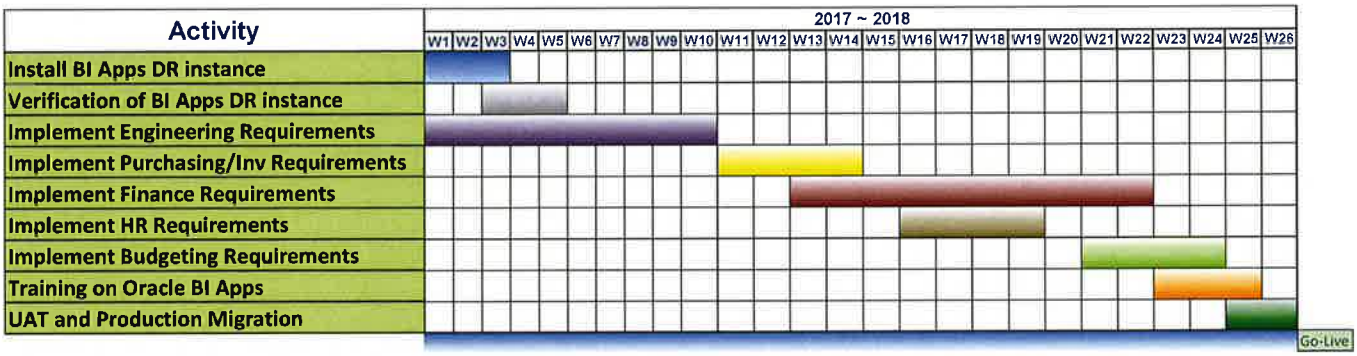
	Purchasing:	Comments
1	Invoice by Supplier	New Reporting need to have certain kind of access for AP. How much fiscal year balance left for a PO
	Inventory:	**Comments**
1	Usage for items in past six months.	Current method is View Material transactions --> Import all transactions and then pivot tables to organize. Do not include return to Stock or receipt . Sort by week or month
2	Monthly Report: Misc Inventory transactions - Issues to GL	Current report: IRWD Miscellaneous Txn Report from EBS. Manually match correct ID with Process
	General Ledger:	**Comments**
1	Concern where lines don't come over even if load is successful	Incorrect data
2	Table Issue - Please enter Account and account segment has junk(decode statements) in it	Not able to do range search for any segment in GL
3	Performance issue with Subject area called 'Finacials - GL detail transactions'	
4	Duplicate items like there is one folder called GL Account and another folder called GL segment4 - ACCOUNT	
5	Certain Columns like Journal category shows up code rather than the exact name	Not able to export into Excel.Cast('Account' as INT)

6	Export into excel 2007. for certain exports, columns get merged	
	Link to other modules from GL:	**Comments**
8.1	Account document source is 'AP' then provide Vendor invoice number, PO amount, check number just like in project module	For example: Subject Area - Combine 'Finacials- GL detail transactions' and Financial - AP Transactions.Check number can not be brought over with Account number
8.2	Account document source is 'Payroll' then need Employee Name,Employee Number, Hours, rate	
8.3	Account document source is 'Inventory' then need item, item desc	
8.4	Account document source is 'Receivables' Customer Name, Receipts(if there is one)	
	Payables:	**Comments**
1	Wrong Results from Ap Invoices table - Membership GL Account- 586002	
2	Some of the results from BI is incorrect - Amount against Account	
3	Financial - Asset Balance Table Under Asset, under Asset Key Detail and under Asset Key Group	
	Payroll:	**Comments**
1	Hours by process - Employee Name, Number, Hours and Process	Getting information from Project Inquiry screen - Need that in BI
2	OTL - Request for who charge to which process	OPErations request-- By Manager
3	Vacation and Sick Hours by Employee by each pay period.	Current Report might be wrong
4	Need new Report:Vacation accrual balance report	Runs Quarterly in BI
5	Earning Elements(Uniform, Performance Recognition) not there to select	Payroll and Advanced benefits Subject Area: lement report is not user friendly - Element by pay period, GI fiscal period, GI fiscal number.Deductions are there - CS Earnings by Pay Period Report(in catalog under shared folder).Regular salary does not have sum amount
	HR:	**Comments**
1	Employee census data with DOH DOB Adjusted service date	Rate of pay missing. New Hires does not show. Today's run shows only July data
2	Verify current life events that are open or	Need to run before open enrollment

	pending	
3	New Hires missing from all reports	
4	Workforce Salary Facts - Some missing Salaries	
	Budgeting	**Comments**
1	Subject Area - Human Resources - Compensation	Report does not bring correct results for perofrmance ratings
2	HR Payroll & Benefits CS- Employee Compensation for Workers Comp	Cannot filter by Payment Type
3	Under Financial Managers - Operating Expnse Budget(Adopted) - Around 200 records but takes longer than usual to retrieve data	Performance Issue
4	Human Capital Management	Out of box - Element Register report does not work
	Training:	**Comments**
1	Help in training - Not fully utilizing Dashboard reports -	
2	Does not know how to create simple reports	
3	Training by Department - Finance, HR, Engineering, Purchasing, Operations	
4	Guide where everything is	
	Example from Purchasing - Lack of training. These reports can be built/modified very easily	
1	New Report - PO by status	Status Parameter not available E.g. Pos that are on hold.Current EBS Report: Purchase Summary Report by category - Pos on Hold are found.There is Issue with sequence of fields.
2	Pos by category	Manually sorted by dollar.
	Other:	**Comments**
1	Overall BI Performance is slow.	
2	Export to excel shows 2003 or 2007+ only. Why??	

4. High Level Project Timeline*

This SOW is estimated to be twenty six weeks work for implementation of the above included scope.



* The above timeline represents business weeks, excluding holidays and shutdowns

5. Deliverables

As part of this SOW, DiLytics will complete the following Deliverables:

Activity	Deliverable	Ownership
A. Install Oracle BI Apps DR instance in Oracle Infrastructure cloud	1. OBIA DR instance working as expected with verified Reports, Dashboards and Data	DiLytics team IRWD Business users for UAT IRWD IT team
B. Implement Engineering Requirements	2. Delivery of Scope and Requirements documented in this SOW under Engineering	DiLytics team IRWD Business users
C. Implement Purchasing and Inventory Requirements	3. Delivery of Scope and Requirements documented in this SOW under Purchasing and Inventory	DiLytics team IRWD Business users
D. Implement Finance Requirements	4. Delivery of Scope and Requirements documented in this SOW under Finance	DiLytics team IRWD Business users

Activity	Deliverable	Ownership
E. Implement HR Requirements	5. Delivery of Scope and Requirements documented in this SOW under Human Resource	DiLytics team IRWD Business users
F. Implement Budgeting Requirements	6. Delivery of Scope and Requirements documented in this SOW under Budgeting	DiLytics team IRWD Business users
G. Provide Training on Oracle BI Apps to business users H. Conduct UAT and obtain sign off I. Migrate to Production	7. Trained business users 8. Data warehouse extensions 9. RPD metadata extension 10. New Reports and Dashboards 11. Signed off new Reports in Production	DiLytics team IRWD Business users

Deliverables shall be deemed accepted by IRWD according to the following process:

IRWD will provide feedback on Deliverables by giving DiLytics written notice of the feedback within fifteen (15) business days of receipt of the Deliverables (the "Notice"). Upon receipt of the Notice, DiLytics shall make commercially reasonable efforts to make the Deliverables to address IRWD feedback. In the event, IRWD does not issue a Notice to DiLytics on the submitted Deliverables within fifteen (15) business days, the Deliverables will be deemed Accepted by IRWD.

6. Resource Requirements

As part of this SOW, DiLytics estimates the following resource commitments as requirements from both DiLytics and IRWD staff:

Activity	DiLytics Resource	IRWD Staff
A. Install Oracle BI Apps DR instance in Oracle Infrastructure cloud	• Oracle BI Architect/PM • Senior OBIEE Administrator • Senior ODI Administrator	• Business Users • IT Team
B. Implement Engineering Requirements	• Oracle BI Architect/PM • Lead ETL Developers • Senior BI Developers	• Engineering team
C. Implement Purchasing and Inventory Requirements	• Oracle BI Architect/PM • Lead ETL Developers • Senior BI Developers	• Purchasing team

Activity	DiLytics Resource	IRWD Staff
D. Implement Finance Requirements	• Oracle BI Architect/PM • Lead ETL Developers • Senior BI Developers	• Finance team
E. Implement HR Requirements	• Oracle BI Architect/PM • Lead ETL Developers • Senior BI Developers	• HR team
F. Implement Budgeting Requirements	• Oracle BI Architect/PM • Lead ETL Developers • Senior BI Developers	• Business Users
G. Provide Training on Oracle BI Apps to business users H. Conduct UAT and obtain sign off I. Migrate to Production	• Oracle BI Architect/PM • Lead ETL Developers • Senior BI Developers	• Business Users • IT Team

7. SOW Terms and Conditions

- Both Parties agree not to directly or indirectly employ or engage as an independent contractor any staff resource of the other Party who has performed Services during the term of this SOW and for a period of one (1) year thereafter without the prior written consent of the other Party.

8. Assumptions

- IRWD team will provide all available documentation on the current BI implementation.
- IRWD business users will provide inputs on their requirements for new Reports and Dashboards in this BI implementation.
- IRWD IT team will provide clarifications on our questions regarding this implementation.
- IRWD Staff will be available to provide their inputs, feedback and signoff in a timely manner.
- IRWD will provide all required hardware, software, space and remote access to systems to perform this SOW.
- IRWD will provide DiLytics with any IT Standards, Guidelines, Policies and Compliance requirements to be followed.

9. Service Delivery Location

- DiLytics team will complete the Deliverables related to this SOW in a combination of onsite and remote activities.
- To the extent this SOW permits services to be performed outside the United States, DiLytics will leverage its local affiliates in respective regions to perform such work.

10. Implementation Fee

This SOW will be executed on a fixed fee basis over duration of 26 weeks. The fixed fee for this SOW shall not exceed USD $240,680 without IRWD's prior written consent (the "Fees"). DiLytics will invoice IRWD based on the invoicing schedule provided below:

Scope	Fixed fee*
A. Install Oracle BI Apps DR instance in Oracle Infrastructure cloud	$38,600
B. Implement Engineering Requirements	$46,300
C. Implement Purchasing and Inventory Requirements	$19,100
D. Implement Finance Requirements	$47,800
E. Implement HR Requirements	$18,200
F. Implement Budgeting Requirements	$19,800
G. Provide Training on Oracle BI Apps to business users H. Conduct UAT and obtain sign off I. Migrate to Production	$16,400
Contingency (Including T&E)	$21,880
Total	$240,680

*The fixed fee is based on the scope defined in this SOW and a total of 26 weeks effort estimate, contingent upon timely participation and feedback from IRWD's IT and Business teams. Any extension of the actual timeline resulting from delays in timely response from IRWD's IT and Business teams would warrant change order in addition to the fixed fee.

- All Invoices will be submitted in USD currency
- IRWD will make payments towards DiLytics' invoices on a payment term basis of Net 30
- All other terms and conditions regarding payments, rates and fees will be subject to the provisions of the Agreement;
- Any material changes to the scope of this SOW, such as additional deliverables or resources will increase the implementation fee;
- Any additional scope will require additional fee based on the size of scope.

11. Post Go-Live Support

Post go-live support is available as an option, as follows:

Production Support Options	Contract Duration	Fixed Fee Per Month#	Total Fee*
6 month Post Go-Live Support	6 month	$5,000 (Fixed)	$30,000 (Fixed)
1 Year Post Go-Live Support	12 months	$4,000 (Fixed)	$48,000 (Fixed)

Represents the minimum fixed fee per month
* Effort over 20 hours per month will be billed additionally at $125 per hour of additional effort over 20 hours.

12. Approvals

Accepted by:	Accepted by:
Irvine Ranch Water District	**DiLytics, Inc.**
By: _____	By: _____
Name:	Name:
Title:	Title:
Date: _____	Date: _____

September 19, 2017
Prepared by: J. Davis/T. Fournier
Submitted by: R. Jacobson/C. Clary
Approved by: Paul Cook

FINANCE AND PERSONNEL COMMITTEE

MONTHLY INVESTMENT AND DEBT REVIEW

SUMMARY:

The following items are submitted for the Committee's review and consideration:

- The Investment Portfolio Summary Report as of August 31, 2017, as outlined in Exhibit "A"
- The U.S. Treasury Yield Curve as of August 31, 2017, as outlined in Exhibit "B"
- The Summary of Fixed and Variable Debt as of August 31, 2017, as outlined in Exhibit "C"
- The Summary of Variable Rate Debt Rates as of August 31, 2017, as outlined in Exhibit "D"
- The Monthly Interest Rate Swap Summary as of August 31, 2017, as outlined in Exhibit "E"

BACKGROUND:

Investment Portfolio:

For August 2017, the rate of return for the fixed income investment portfolio was 1.07%, which was a 0.01% increase from July's rate of 1.06%. Including real estate investments, the weighted average rate of return for the District's investment portfolio for August 2017 was 3.54%, which was a 0.16% increase from July's rate of 3.38%. The increase was primarily due to the change in the fixed income portfolio average monthly balance from $350.1 million to $325.7 million.

Debt Portfolio:

As of August 31, 2017, the District's weighted average all-in variable rate was 1.01%, which was a 0.05% decrease from July's rate of 1.06%. Including the District's weighted average fixed rate bond issues of 3.70% and the previous month's negative cash accruals from fixed payer interest rate swaps, which hedge a portion of the District's variable rate debt, the total average debt rate was 3.49%, which was a 0.02% increase from July's rate of 3.47%.

Interest Rate Swaps:

For August 2017, the total notional amount of the interest rate swap portfolio was $130 million of fixed payer swaps. Cash accrual in August from all swaps was negative $507,000. As of August 31, 2017, the District had posted $816,978 of collateral with Citigroup, which was an increase of $212,723 from July's posted amount. No collateral was posted with Merrill Lynch. The collateral earns the Fed Funds Effective Rate, which is currently 1.16%.

FISCAL IMPACTS:

Fiscal impacts are included in the above narrative and in the attached exhibits.

ENVIRONMENTAL COMPLIANCE:

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

RECOMMENDATION:

Receive and file.

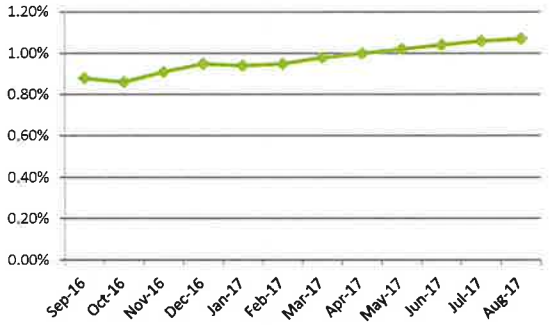
LIST OF EXHIBITS:

Exhibit "A" – Investment Portfolio Summary as of August 31, 2017
Exhibit "B" – Yield Curve as of August 31, 2017
Exhibit "C" – Summary of Fixed and Variable Debt as of August 31, 2017
Exhibit "D" – Summary of Variable Rate Debt Rates as of August 31, 2017
Exhibit "E" – Monthly Interest Rate Swap Summary as of August 31, 2017

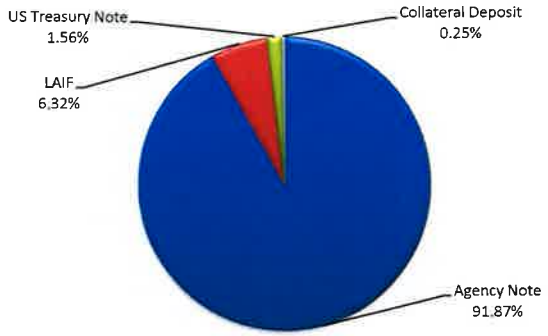
Exhibit "A"

Irvine Ranch Water District
Investment Portfolio Summary
August 2017

Monthly Fixed Income Yield



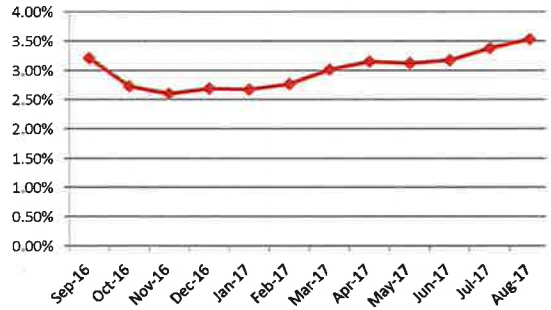
Portfolio Distribution



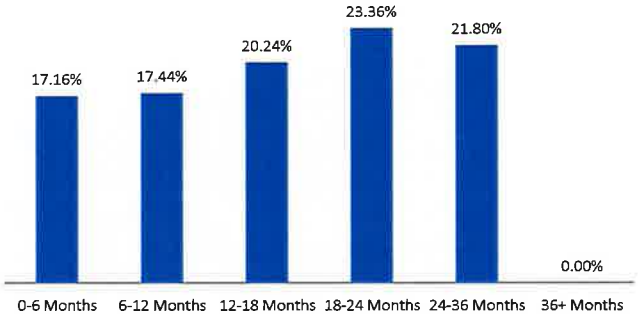
Investment Summary

Type	PAR	Book Value	Market Value
Agency Note	295,000,000	295,215,886	294,150,180
LAIF	20,300,000	20,300,000	20,283,272
US Treasury Note	5,000,000	5,009,231	5,006,600
Collateral Deposit	816,978	816,978	816,978
Grand Total	321,116,978	321,342,095	320,257,030

Weighted Average Return Including Real Estate Portfolio



Maturity Distribution



Top Issuers

Issuer	PAR	% Portfolio
Fed Home Loan Bank	106,000,000	33.01%
Fed Home Loan Mortgage Corp	84,000,000	26.16%
Fed Farm Credit Bank	55,000,000	17.13%
Fed Natl Mortgage Assoc	50,000,000	15.57%
State of California Treasury - LAIF	20,300,000	6.32%
US Treasury Note	5,000,000	1.56%
Citi-Group Collateral	816,978	0.25%
Merrill Lynch Collateral	0	0.00%
Grand Total	321,116,978	100.00%

IRVINE RANCH WATER DISTRICT
INVESTMENT SUMMARY REPORT

08/31/17

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE[1] 8/31/2017	UNREALIZED[2] GAIN/(LOSS)
08/23/17			09/01/17		LAIF	State of California Tsy.	$20,300,000		1.080%	$20,300,000.00	$20,300,000.00	20,283,271.81	(16,728.19)
09/16/15	N/A	N/A	09/15/17	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.900%	0.915%	4,998,500.00	4,999,971.23	5,000,050.00	78.77
01/30/17	N/A	N/A	10/31/17	NR	US Treasury - Note	US Treasury	5,000,000	1.875%	0.743%	5,042,154.40	5,009,230.89	5,006,600.00	(2,630.89)
12/08/16	N/A	N/A	11/21/17	AAA/NR/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	0.750%	0.866%	9,989,000.00	9,997,439.66	9,992,800.00	(4,639.66)
12/18/15	Continuous after	12/13/13	12/12/17	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	0.820%	1.132%	4,969,500.00	4,995,708.97	4,998,000.00	2,291.03
04/22/16	N/A	N/A	01/29/18	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	4,000,000	0.850%	0.856%	3,999,600.00	3,999,907.26	3,996,600.00	(3,307.26)
03/01/16	Quarterly	05/26/16	02/26/18	NR/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.050%	1.050%	5,000,000.00	5,000,000.00	4,996,650.00	(3,350.00)
03/23/16	N/A	N/A	03/23/18	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.100%	0.908%	5,019,000.00	5,005,283.56	4,994,200.00	(11,083.56)
04/07/16	N/A	N/A	04/09/18	NA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.750%	0.790%	4,996,000.00	4,998,797.81	4,987,600.00	(11,197.81)
05/16/16	N/A	N/A	05/16/18	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	0.750%	0.801%	4,995,000.00	4,998,239.73	4,988,350.00	(9,889.73)
05/13/16	N/A	N/A	05/21/18	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	0.875%	0.768%	5,010,700.00	5,003,798.64	4,987,700.00	(16,098.64)
05/24/16	N/A	N/A	06/08/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	11,000,000	1.250%	0.995%	11,056,540.00	11,021,249.93	11,001,430.00	(19,819.93)
06/29/16	N/A	N/A	06/29/18	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	10,000,000	1.000%	0.679%	10,016,000.00	10,006,597.26	9,978,100.00	(28,497.26)
09/01/16	N/A	N/A	07/27/18	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	0.750%	0.928%	4,983,250.00	4,992,059.44	4,976,800.00	(15,259.44)
12/21/16	N/A	N/A	08/15/18	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.000%	1.245%	4,980,000.00	4,988,438.54	4,988,000.00	(438.54)
09/01/16	One Time	02/28/17	08/28/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.000%	1.000%	5,000,000.00	5,000,000.00	4,986,150.00	(13,850.00)
09/01/16	NA	NA	09/14/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.125%	0.916%	5,021,000.00	5,010,683.71	4,991,800.00	(18,883.71)
12/28/16	NA	NA	09/14/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.125%	1.225%	4,991,500.00	4,994,859.20	4,991,800.00	(3,059.20)
10/12/16	N/A	N/A	09/27/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	0.900%	0.952%	9,990,000.00	9,994,251.75	9,968,000.00	(26,251.75)
10/12/16	N/A	N/A	09/28/18	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	0.880%	0.942%	4,994,000.00	4,996,547.49	4,982,300.00	(14,247.49)
09/01/16	NA	NA	10/01/18	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.030%	0.925%	5,010,750.00	5,005,587.17	4,989,250.00	(16,337.17)
10/12/16	N/A	N/A	10/12/18	Aaa/NR/NR	FFCB - Note	Fed Farm Credit Bank	10,000,000	1.000%	1.041%	9,992,000.00	9,995,331.51	9,953,800.00	(41,531.51)
10/12/16	N/A	N/A	11/27/18	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	10,000,000	1.625%	0.956%	10,140,360.00	10,085,373.61	10,041,400.00	(43,973.61)
12/21/16	N/A	N/A	12/05/18	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.100%	1.319%	4,978,900.00	5,051,342.57	4,986,600.00	(64,742.57)
09/01/16	NA	NA	12/14/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.750%	0.941%	5,091,300.00	5,027,169.43	5,026,350.00	(819.43)
12/27/16	NA	NA	12/14/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.750%	1.320%	5,041,536.20	4,986,406.16	5,026,350.00	39,943.84
09/01/16	One Time	07/30/18	01/30/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.950%	1.009%	4,993,000.00	4,995,900.11	4,970,200.00	(25,700.11)
10/26/16	One Time	07/30/18	01/30/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.950%	1.035%	4,990,500.00	4,993,996.37	4,970,200.00	(23,796.37)
10/26/16	One Time	07/30/18	01/30/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.950%	1.040%	4,990,000.00	4,993,680.39	4,970,200.00	(23,480.39)
10/12/16	Continuous after	02/12/18	02/12/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	1.050%	1.093%	9,990,000.00	9,993,563.89	9,950,200.00	(43,363.89)
09/01/16	NA	NA	03/08/19	Aaa/AA+/AAA	FHLB - Note	Fed Home Loan Bank	5,000,000	1.500%	0.964%	5,066,500.00	5,040,059.37	5,010,800.00	(29,259.37)
10/12/16	N/A	N/A	03/29/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.050%	1.050%	4,999,950.00	4,999,966.93	4,970,850.00	(29,116.93)
10/12/16	N/A	N/A	04/15/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	10,000,000	1.125%	0.992%	10,032,800.00	10,021,902.51	9,967,300.00	(54,602.51)
10/31/16	N/A	N/A	04/26/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.050%	1.060%	4,998,750.00	4,999,168.96	4,971,900.00	(27,268.96)
09/01/16	One Time	08/28/17	05/28/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.030%	1.048%	4,997,550.00	4,998,445.15	4,962,250.00	(36,195.15)

IRVINE RANCH WATER DISTRICT
INVESTMENT SUMMARY REPORT

08/31/17

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE[1] 8/31/2017	UNREALIZED[2] GAIN/(LOSS)
09/01/16	NA	NA	06/14/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.625%	0.987%	5,087,400.00	5,056,001.38	5,019,950.00	(36,051.38)
10/12/16	NA	NA	06/14/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.625%	1.103%	5,068,515.88	5,047,152.98	5,019,950.00	(27,202.98)
10/12/16	NA	NA	07/19/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.875%	1.098%	4,969,652.90	4,978,787.08	4,953,250.00	(25,537.08)
09/01/16	NA	NA	07/26/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.150%	1.180%	4,995,700.00	4,997,183.46	4,972,850.00	(24,333.46)
09/01/16	One Time	08/28/17	08/28/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.150%	1.160%	4,998,500.00	4,999,001.83	4,937,450.00	(61,551.83)
09/01/16	NA	NA	08/28/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.125%	1.132%	4,999,000.00	4,999,334.56	4,968,750.00	(30,584.56)
09/28/16	Quarterly	03/09/17	09/09/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.125%	1.142%	4,997,500.00	4,998,283.13	4,962,750.00	(35,533.13)
09/28/16	Continuous after	12/27/16	09/27/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.250%	1.189%	5,001,500.00	5,001,036.56	4,959,450.00	(41,586.56)
10/12/16	Continuous after	10/03/17	10/03/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	1.125%	1.160%	9,989,780.00	9,992,640.85	9,915,500.00	(77,140.85)
10/12/16	Continuous after	10/11/17	10/11/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	10,000,000	1.120%	1.205%	9,975,000.00	9,981,946.98	9,916,100.00	(65,846.98)
11/08/16	Quarterly	05/08/17	11/08/19	Aaa/AA+/NR	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.250%	1.245%	5,000,750.00	5,000,546.58	4,966,550.00	(33,996.58)
11/28/16	NA	NA	11/15/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.375%	1.440%	4,990,550.00	4,992,969.27	4,994,750.00	1,780.73
11/28/16	Quarterly	05/25/17	11/25/19	Aaa/AA+/NR	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.400%	1.503%	4,985,000.00	4,988,804.95	4,985,800.00	(3,004.95)
12/12/16	NA	NA	12/12/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.450%	1.440%	5,001,450.00	5,001,101.42	4,998,200.00	(2,901.42)
12/21/16	NA	NA	12/19/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.500%	1.621%	4,982,350.00	4,986,451.65	5,001,900.00	15,448.35
05/12/17	One Time	10/27/17	04/27/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.750%	1.729%	5,003,000.00	5,002,914.76	5,003,000.00	85.24
SUB-TOTAL							$320,300,000			$320,711,289.38	$320,525,116.61	$319,440,051.81	($1,085,064.81)
RESTRICTED CASH (Swap Collateral Deposits)[4]													
04/01/17					Collateral Deposit	Citi-Group	$816,978		1.160%	$816,977.89	$816,977.89	816,977.89	
					Collateral Deposit	Merrill Lynch	-						
SUB-TOTAL							$816,978			$816,977.89	$816,977.89	$816,977.89	
TOTAL INVESTMENTS							$321,116,978			$321,528,267.27	$321,342,094.50	$320,257,029.70	
					Petty Cash					3,400.00			
					Ck Balance	Bank of America				941,091.65			
										$322,472,758.92			

[1] LAIF market value is as of the most recent quarter-end as reported by LAIF.
Security market values are determined using Bank of New York ("Trading Prices"), Bloomberg and/or broker dealer pricing.
[2] Gain (loss) calculated against carry value using the trading value provided by Bank of New York/or Brokers
[3] Real estate rate of return is based on most recent quarter end return
[4] Swap Collateral Deposits assumes 6 month maturity, dependent on interest rate changes

This Investment Summary Report is in conformity with the 2017 Investment Policy and provides sufficient liquidity to meet the next six months estimated expenditures.
*S - Step up

Outstanding Variable Rate Debt	$291,900,000
Net Outstanding Variable Rate Debt (Less $130 million fixed-payer swaps)	$161,900,000
Investment Balance:	$322,472,759
Investment to Variable Rate Debt Ratio:	199%
Portfolio - Average Number of Days To Maturity[4]	456

	Investment Portfolio	Real Estate[3] Portfolio	Weighted Avg. Return
August	1.07%	14.59%	3.54%
July	1.06%	14.59%	3.38%
Change	0.01%		0.16%

IRVINE RANCH WATER DISTRICT
SUMMARY OF MATURITIES

08/31/17

DATE	TOTAL	%	LAIF	Agency Notes	Agency Discount Notes	Collateral Deposit	US Treasury
09/17	$25,300,000	7.88%	$20,300,000	5,000,000			
10/17	5,000,000	1.56%					5,000,000
11/17	10,000,000	3.11%		10,000,000			
12/17	5,000,000	1.56%		5,000,000			
01/18	4,816,978	1.50%		4,000,000		816,978	
02/18	5,000,000	1.56%		5,000,000			
03/18	5,000,000	1.56%		5,000,000			
04/18	5,000,000	1.56%		5,000,000			
05/18	10,000,000	3.11%		10,000,000			
06/18	21,000,000	6.54%		21,000,000			
07/18	5,000,000	1.56%		5,000,000			
08/18	10,000,000	3.11%		10,000,000			
SUB-TOTAL	$111,116,978	34.60%	$20,300,000	$85,000,000		$816,978	$5,000,000
13 Months - 3 YEARS							
9/01/18 - 10/31/2018	40,000,000	12.46%		40,000,000			
11/01/18 - 1/31/2019	25,000,000	7.79%		25,000,000			
2/01/19 - 4/30/2019	50,000,000	15.57%		50,000,000			
4/01/2019 - 7/31/19	25,000,000	7.79%		25,000,000			
8/01/19 - 10/31/2019	40,000,000	12.46%		40,000,000			
11/01/2019 - 1/31/2020	25,000,000	7.79%		25,000,000			
02/01/2020 - 04/30/2020	5,000,000	1.56%		5,000,000			
	-						
	-						
TOTALS	$321,116,978	100.00%	$20,300,000	$295,000,000		$816,978	$5,000,000
% OF PORTFOLIO			6.32%	91.87%		0.25%	1.56%

Irvine Ranch Water District
Summary of Real Estate Investments - Income Properties
6/30/2017

	ACQUISITION DATE	PROPERTY TYPE	OWNERSHIP INTEREST	ORIGINAL COST	ESTIMATED MARKET VALUE 6/30/2017	RATE OF RETURN QUARTER ENDED 6/30/2017
Sycamore Canyon	Dec-92	Apartments	Fee Simple	$ 43,550,810	$ 147,507,750	19.05%
Wood Canyon Villas	Jun-91	Apartments	Limited Partner	$ 6,000,000	$ 28,934,076	8.57%
ITC (230 Commerce)	Jul-03	Office Building	Fee Simple	$ 5,739,845	$ 9,571,680	9.09%
Waterworks Business Pk.	Nov-08	Research & Dev.	Fee Simple	$ 8,630,577	$ 7,803,000	5.94%
Sand Canyon Professional Center	Jul-12	Medical Office	Fee Simple	$ 8,648,594	$ 10,820,160	8.59%
				$ 72,569,826	$ 204,636,666	14.59%

IRVINE RANCH WATER DISTRICT INVESTMENT SUMMARY REPORT
INVESTMENT ACTIVITY
Aug-17

MATURITIES/SALES/CALLS | **PURCHASES**

DATE	SECURITY TYPE	PAR	YIELD	Settlement Date	Maturity Date	SECURITY TYPE	PAR	YIELD TO MATURITY
8/28/2017	FHLB - Note	$5,000,000	0.80%					

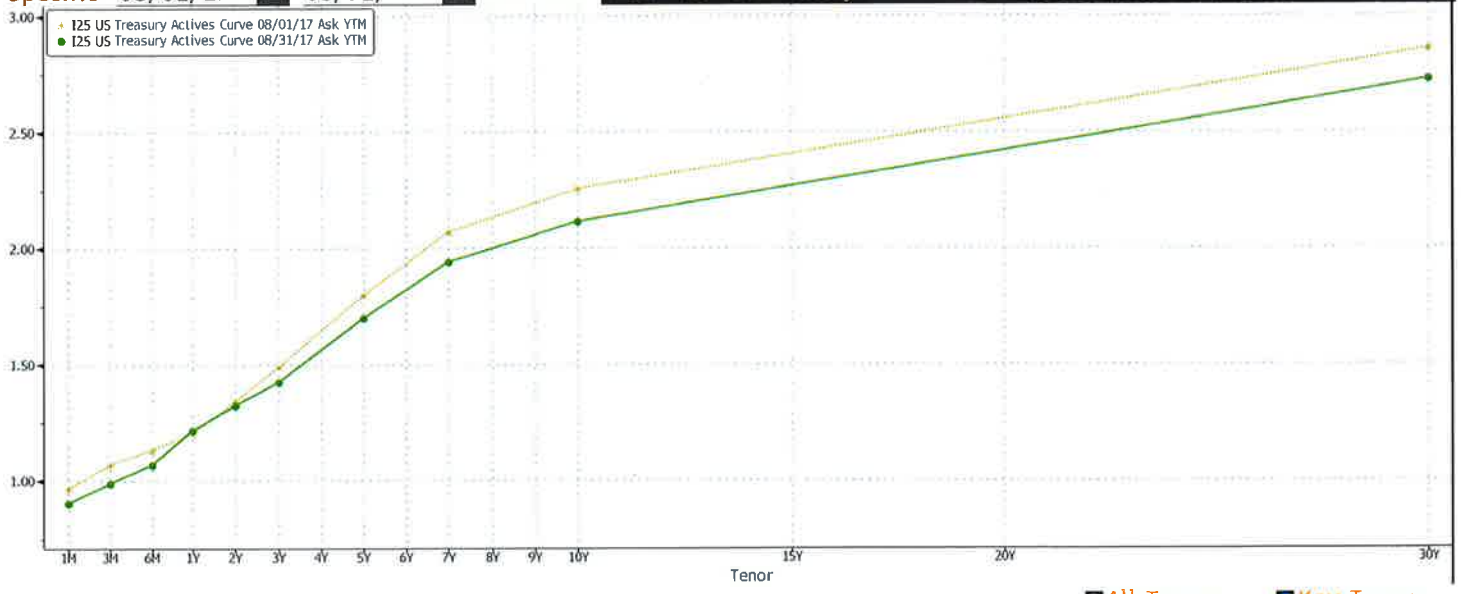
Exhibit "B"

Running as C15. Run GC for more features.

US Treasury Actives Curve | Actions | 98) Table | Settings | Graph Curves

X-Axis Tenor | Y-Axis Ask YTM | Currency None | PCS | Lower Chart History Table

Specific 08/01/17 | 08/31/17 | Relative | Last 1D 1W Modify « Curves & Relative Value



All Tenors | Key Tenors

Curve Id	3M	1Y	2Y	3Y	5Y	10Y	30Y
11) I25 08/31/17	0.991	1.217	1.326	1.427	1.702	2.117	2.726
12) I25 08/01/17	1.067	1.207	1.341	1.489	1.799	2.253	2.857
13) I25 (08/31/17-08	-7.6	1.0	-1.6	-6.2	-9.7	-13.6	-13.0

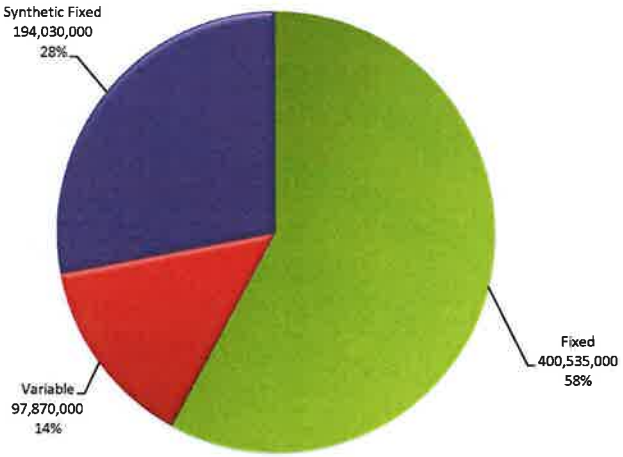
SN 736334 PDT GMT-7:00 H145-4783-0 07-Sep-2017 12:45:55

Australia 61 2 9777 8600 Brazil 5511 2395 9000 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2017 Bloomberg Finance L.P.

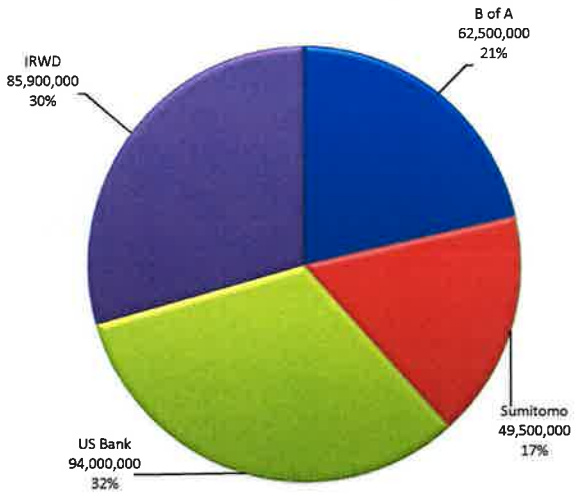
Exhibit "C"

Irvine Ranch Water District
Summary of Fixed and Variable Rate Debt
August 2017

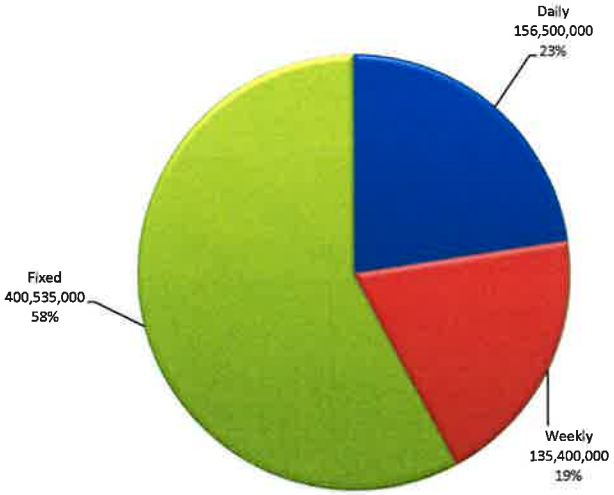
Current Debt Mix By Type



Letters of Credit / Support



Current Debt Rate Reset



Outstanding Par by Series

Series	Issue Date	Maturity Date	Remaining Principal	Percent	Letter of Credit	Rmkt Agent	Mode	Reset
Series 1993	05/19/93	04/01/33	$31,500,000	4.55%	US Bank	BAML	Variable	Daily
Series 2008-A Refunding	04/24/08	07/01/35	$49,500,000	7.15%	Sumitomo	BAML	Variable	Weekly
Series 2011-A-1 Refunding	04/15/11	10/01/37	$51,540,000	7.44%	IRWD	Goldman	Variable	Weekly
Series 2011-A-2 Refunding	04/15/11	10/01/37	$34,360,000	4.96%	IRWD	Morgan	Variable	Weekly
Series 2009 - A	06/04/09	10/01/41	$62,500,000	9.03%	US Bank	US Bank	Variable	Daily
Series 2009 - B	06/04/09	10/01/41	$62,500,000	9.03%	B of A	Goldman	Variable	Daily
2010 Refunding Cops	02/23/10	03/01/20	$5,390,000	0.78%	N/A	N/A	Fixed	Fixed
2016 COPS	09/01/16	03/01/46	$116,745,000	16.86%	N/A	N/A	Fixed	Fixed
2010 Build America Taxable Bond	12/16/10	05/01/40	$175,000,000	25.27%	N/A	N/A	Fixed	Fixed
Series 2016	10/12/16	02/01/46	$103,400,000	14.93%	N/A	N/A	Fixed	Fixed
Total			$692,435,000	100.00%				

IRVINE RANCH WATER DISTRICT

SUMMARY OF FIXED & VARIABLE RATE DEBT

August-17

ITN

Daily

Weekly

VARIABLE RATE ISSUES	Issue Date	Maturity Date	Principal Payment Date	Payment Date	Original Par Amount	Remaining Principal	Letter of Credit	Reimbursment Agreement Date	L/C Exp. Date	MOODYS	S&P	FITCH	LOC Stated Amount	LOC Fee	Annual LOC Cost	Rmkt Agent	Reset	Rmkt Fees	Annual Cost	Trustee
	GENERAL BOND INFORMATION						LETTER OF CREDIT INFORMATION									TRUSTEE INFORMATION				
SERIES 1993	05/19/93	04/01/33	APR 1 (2014)	5th Bus. Day	$38,300,000	$31,500,000	US BANK	05/07/15	11/07/18	Aa3/VMIG1	AA-/A-1+	N/R	$31,924,603	0.3300%	$105,351	BAML	DAILY	0.10%	$31,500	BANK OF NY
SERIES 2008-A Refunding	04/24/08	07/01/35	JUL 1	5th Bus. Day	$60,215,000	$49,500,000	SUMITOMO	04/01/11	07/21/21	A1/P-1	A/A-1	A/F1	$50,232,329	0.3150%	$158,232	BAML	WED	0.07%	$34,650	BANK OF NY
SERIES 2011-A-1 Refunding	04/15/11	10/01/37	Oct 1	1st Bus. Day	$60,545,000	$51,540,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	$64,425	BANK OF NY
SERIES 2011-A-2 Refunding	04/15/11	10/01/37	Oct 1	1st Bus. Day	$40,370,000	$34,360,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Morgan S.	WED	0.13%	$42,950	BANK OF NY
SERIES 2009 - A	06/04/09	10/01/41	Oct 1	1st Bus. Day	$75,000,000	$62,500,000	US BANK	04/01/11	12/22/20	Aa2/VMIG 1	AA-/A-1+	AA/F1+	$63,198,630	0.4100%	$259,114	US Bank	DAILY	0.07%	$43,750	US BANK
SERIES 2009 - B	06/04/09	10/01/41	Oct 1	1st Bus. Day	$75,000,000	$62,500,000	B of A	04/01/11	07/15/19	A1/VMIG 1	A/A-1	A1/F1+	$63,198,630	0.4000%	$252,795	Goldman	DAILY	0.10%	$62,500	US BANK
					$349,430,000	$291,900,000	SUB-TOTAL VARIABLE RATE DEBT						$208,554,192 (Wt. Avg)	0.3719%	$775,492			0.10% (Wt. Avg)	$279,775	
FIXED RATE ISSUES																				
2010 REFUNDING COPS	02/23/10	03/01/20	Mar -1	MAR/SEPT	$85,145,000	$5,390,000	N/A	N/A	N/A	Aa1	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BANK OF NY
2010 GO Build America Taxable Bonds	12/16/10	05/01/40	MAY (2025)	MAY/NOV	$175,000,000	$175,000,000	N/A	N/A	N/A	Aa1	AAA	NR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	US BANK
2016 COPS	09/01/16	03/01/46	Mar - 1	MAR/SEPT	$116,745,000	$116,745,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	US BANK
SERIES 2016	10/12/16	02/01/46	Feb - 1	FEB/AUG	$103,400,000	$103,400,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BANK OF NY
					$480,290,000	$400,535,000	SUB-TOTAL FIXED RATE DEBT													
					$829,720,000	$692,435,000	TOTAL- FIXED & VARIABLE RATE DEBT													

Remarketing Agents		
Goldman	114,040,000	39%
Morgan Stanley	34,360,000	12%
BAML	81,000,000	28%
US Bank	62,500,000	21%
	291,900,000	

GO VS COP's		
GO:	570,300,000	82%
COPS:	122,135,000	18%
Total	692,435,000	

LOC Banks	
SUMITOMO	49,500,000
BANK OF AMERICA	62,500,000
US BANK	94,000,000
	206,000,000

Breakdown Between Variable & Fixed Rate Mode		
Daily Issues	156,500,000	23%
Weekly Issues	49,500,000	7%
ITN Issues	85,900,000	12%
Sub-Total	291,900,000	
Fixed Rate Issues	$400,535,000	58%
Sub-Total - Fixed	400,535,000	
TOTAL DEBT FIXED & VAR.	692,435,000	100%

Exhibit "D"

IRVINE RANCH WATER DISTRICT
SUMMARY OF DEBT RATES
Aug-17

Rmkt Agent	GOLDMAN	GOLDMAN	MORGAN STANLEY	MERRILL LYNCH		US BANK
	DAILY	WEEKLY	WEEKLY	DAILY	WEEKLY	DAILY
Bond Issue	2009 - B	2011 A-1	2011 A-2	1993	2008-A	2009-A
Par Amount	62,500,000	51,540,000	34,360,000	31,500,000	49,500,000	62,500,000
Bank	BOFA	(SIFMA+7)	(SIFMA+7)	US BANK	Sumitomo	US BANK
Reset		Wednesday	Wednesday		Wednesday	
8/1/2017	0.50%	0.89%	0.89%	0.47%	0.77%	0.57%
8/2/2017	0.46%	0.89%	0.89%	0.43%	0.77%	0.48%
8/3/2017	0.42%	0.86%	0.86%	0.41%	0.74%	0.47%
8/4/2017	0.42%	0.86%	0.86%	0.44%	0.74%	0.46%
8/5/2017	0.42%	0.86%	0.86%	0.44%	0.74%	0.46%
8/6/2017	0.42%	0.86%	0.86%	0.44%	0.74%	0.46%
8/7/2017	0.45%	0.86%	0.86%	0.44%	0.74%	0.46%
8/8/2017	0.45%	0.86%	0.86%	0.43%	0.74%	0.46%
8/9/2017	0.43%	0.86%	0.86%	0.43%	0.74%	0.45%
8/10/2017	0.43%	0.85%	0.85%	0.43%	0.73%	0.45%
8/11/2017	0.44%	0.85%	0.85%	0.46%	0.73%	0.44%
8/12/2017	0.44%	0.85%	0.85%	0.46%	0.73%	0.44%
8/13/2017	0.44%	0.85%	0.85%	0.46%	0.73%	0.44%
8/14/2017	0.45%	0.85%	0.85%	0.46%	0.73%	0.44%
8/15/2017	0.45%	0.85%	0.85%	0.44%	0.73%	0.46%
8/16/2017	0.45%	0.85%	0.85%	0.44%	0.73%	0.47%
8/17/2017	0.47%	0.84%	0.84%	0.50%	0.70%	0.48%
8/18/2017	0.50%	0.84%	0.84%	0.52%	0.70%	0.52%
8/19/2017	0.50%	0.84%	0.84%	0.52%	0.70%	0.52%
8/20/2017	0.50%	0.84%	0.84%	0.52%	0.70%	0.52%
8/21/2017	0.53%	0.84%	0.84%	0.54%	0.70%	0.54%
8/22/2017	0.53%	0.84%	0.84%	0.55%	0.70%	0.54%
8/23/2017	0.57%	0.84%	0.84%	0.55%	0.70%	0.55%
8/24/2017	0.57%	0.85%	0.85%	0.58%	0.78%	0.60%
8/25/2017	0.62%	0.85%	0.85%	0.61%	0.78%	0.62%
8/26/2017	0.62%	0.85%	0.85%	0.61%	0.78%	0.62%
8/27/2017	0.62%	0.85%	0.85%	0.61%	0.78%	0.62%
8/28/2017	0.70%	0.85%	0.85%	0.63%	0.78%	0.64%
8/29/2017	0.68%	0.85%	0.85%	0.63%	0.78%	0.69%
8/30/2017	0.70%	0.85%	0.85%	0.66%	0.78%	0.69%
8/31/2017	0.72%	0.86%	0.86%	0.66%	0.75%	0.69%
Avg Interest Rates	0.51%	0.85%	0.85%	0.51%	0.74%	0.52%
Rmkt Fee	0.10%	0.13%	0.13%	0.10%	0.07%	0.07%
LOC Fee	0.40%			0.33%	0.32%	0.41%
All-In Rate	**1.01%**	**0.98%**	**0.98%**	**0.94%**	**1.13%**	**1.01%**
Par Amount		114,040,000	34,360,000		81,000,000	62,500,000

Interest Rate Mode	Percent of Total Variable Rate Debt		Par Outstanding	Weighted All-In Average Rate		Base Rate Average
Daily	53.61%		156,500,000	1.00%		0.52%
Weekly	46.39%		135,400,000	1.03%		0.81%
	100.00%	$	**291,900,000**	1.01%		0.65%
Fixed						
COPS 2010	1.35%		5,390,000	3.82%		
COPS 2016	29.15%		116,745,000	2.90%		
BABS 2010	43.69%		175,000,000	4.46%	(1)	
SERIES 2016	25.82%		103,400,000	3.32%		
	100.00%	$	**400,535,000**	3.70%		
All-In Debt Rate Including $130 Million Notional Amount of Swaps						**3.49%**

(1) Rate adjusted up from 4.35% as a result of sequestration reducing BAB's subsidy by 6.8%

8/31/2017

Exhibit "E"

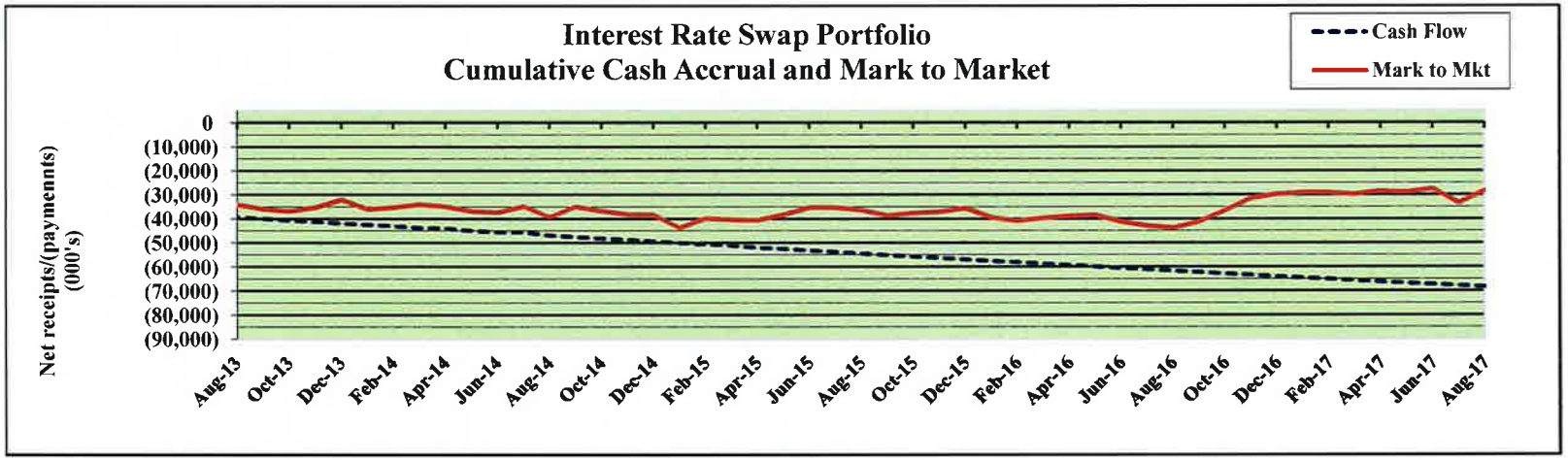
IRVINE RANCH WATER DISTRICT
INTEREST RATE SWAP MONTHLY SUMMARY REPORT - DETAIL
August 31, 2017

	Prior Mo.	Current Mo.	12-Mo Avg
LIBOR Avg %	1.23%	1.23%	0.84%

Current Fiscal Year Active Swaps								Cash Flow			(Since 6/06)	Mark to Market	
Effective Date	Maturity Date	Years to Maturity	Counter Party	Notional Amt	Type	Base Index	Fixed Rate	Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference
Fixed Payer Swaps - By Effective Date													
6/4/2006	6/4/2019	1.8	ML	$ 20,000,000	FXP	LIBOR	6.200%	(86,029)	(82,155)	$ (168,184)	$ (11,091,476)	$ 18,343,296	$ (1,656,704)
6/4/2006	6/4/2019	1.8	CG	20,000,000	FXP	LIBOR	6.200%	(86,029)	(82,155)	(168,184)	(11,091,476)	18,343,627	(1,656,373)
6/17/2006	6/17/2019	1.8	CG	30,000,000	FXP	LIBOR	6.140%	(127,185)	(121,807)	(248,992)	(16,451,649)	27,498,356	(2,501,644)
3/10/2007	3/10/2029	11.5	ML	30,000,000	FXP	LIBOR	5.687%	(116,187)	(110,442)	(226,629)	(14,832,436)	18,745,107	(11,254,893)
3/10/2007	3/10/2029	11.5	CG	30,000,000	FXP	LIBOR	5.687%	(116,187)	(110,442)	(226,629)	(14,832,436)	18,741,362	(11,258,638)
Totals/Weighted Avgs		6.3		$ 130,000,000			5.949%	$ (531,616)	$ (507,000)	$ (1,038,616)	$ (68,299,472)	$ 101,671,748	$ (28,328,252)
Total Current Year Active Swaps				$ 130,000,000				$ (531,616)	$ (507,000)	$ (1,038,616)	$ (68,299,472)	$ 101,671,748	$ (28,328,252)

Current Fiscal Year Terminated Swaps								Cash Flow				Mark to Market	
Effective Date	Maturity Date		Counter Party	Notional Amt	Type	Base Index	Fixed Rate	Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference
Total Current Year Terminated Swaps				$ -				$ -	$ -	$ -	$ -	$ -	$ -

Current Fiscal Year - Total Swaps			Cash Flow				Mark to Market	
			Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference
Total Current Year Active & Terminated Swaps		$ 130,000,000	$ (531,616)	$ (507,000)	$ (1,038,616)	$ (68,299,472)	$ 101,671,748	$ (28,328,252)



Cash Flow Comparison Synthetic Fixed vs. Fixed Rate Debt	
	Cash Flow to Date
Synthetic Fixed =	$95,053,368
Fixed Rate =	$116,027,048

Assumptions:
- Fixed rate debt issued at 5.10% in Jun-06, and 4.93% in Mar-07 (estimated TE rates - Bloomberg)
- 'Synthetic' includes swap cash flow + all-in cost of to date

9/5/2017
4:50 PM

September 19, 2017
Prepared by: J. Davis/T. Fournier
Submitted by: R. Jacobson/C. Clary
Approved by: Paul Cook

FINANCE AND PERSONNEL COMMITTEE

QUARTERLY DEFERRED COMPENSATION PLAN AND FUND REVIEW

SUMMARY:

The following is submitted for the Committee's review and consideration:

- A Summary of the Deferred Compensation Program and Distribution of Assets as of June 30, 2017, as outlined in Exhibit "A"; and
- Mutual Fund Performance Review as of June 30, 2017, as outlined in Exhibit "B".

BACKGROUND:

Overview of the Deferred Compensation Assets:

As of June 30, 2017, the District's Section 457(b) and 401(a) Plans (collectively, the "Plans") assets totaled $52,419,845, which represented a $2,069,544 increase from the quarter ending March 31, 2017 and an $8,380,768 increase for the one-year period ending June 30, 2017. The changes in Plan assets over these two periods are summarized as follows:

	For the One-Year Period Ending June 30, 2017	*For the Quarter Ending June 30, 2017*
Beginning Balance	$44,039,076	$50,350,301
Employee Contributions	2,261,306	507,074
District Contributions	874,440	211,153
Transfers to/from other plans	1,071,724	457,159
Distributions	(1,614,844)	(325,130)
Loan Distributions[(1)]	(396,674)	(90,898)
Loan Repayments	140,257	43,053
Net Investment Gain (Loss)	6,044,560	1,267,133
Ending Balance – June 30, 2017	$52,419,845	$52,419,845
Change in assets for the period	$8,380,768	$2,069,544

(1) Number of loans outstanding: 47

Review of Investment Options:

The District's deferred compensation policy states that any investment option performing "Below Benchmark" for four consecutive quarters or seven out of the trailing 12 quarters, has "Failed" the Long-Term Rolling Analysis (LTRA) and the investment option is to be replaced. The Hotchkis and Wiley Mid-Cap Value Fund has performed below the benchmark four of the trailing six quarters. If the fund fails any additional three quarters through December 2018

(totaling seven out of the trailing 12 quarters), the investment option is to be replaced. The Great-West Financial Fund Performance Review as of June 30, 2017 is attached as Exhibit "B".

FISCAL IMPACTS:

As of June 30, 2017, the District's Plan assets totaled $52,419,845, which represented a $2,069,544 increase from the quarter ending March 31, 2017 and an $8,380,768 increase for the one-year period ending June 30, 2017.

ENVIRONMENTAL COMPLIANCE:

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

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit "A" – Summary of the Deferred Compensation Plan and Distribution of Assets
Exhibit "B" – Mutual Fund Performance Review

EXHIBIT "A"

IRVINE RANCH WATER DISTRICT

SUMMARY OF DEFERRED COMPENSATION PROGRAM

June 30, 2017

Deferred Compensation IRS Section 457 (Employee Contributions)

Money Purchase Pension Plan & Executive Plan - IRS Section 401 (a) (District Contribution)

	457 Assets			401(a) Assets	
	Empower-Retirement Core Investments	Ameritrade Brokerage	**Total 457**	**Total 401(a)** **401 (a)**	**GRAND TOTAL** 457 & 401(a)
Assets	$37,864,732	$2,469,016	**$40,333,747**	**$12,086,098**	**$52,419,845**
Change From Prior Quarter	*$1,852,207*	*($241,299)*	*$1,610,908*	*$458,636*	*$2,069,544*
Change From Prior Year (6/2016)	*$6,472,653*	*($117,750)*	*$6,354,903*	*$2,025,865*	*$8,380,768*
Quarterly Contributions	**$507,074**	n/a	**$507,074**	**$211,153**	**$718,228**
Change From Prior Quarter**	($215,426)			($23,961)	

**Reduction in contributions is due to one addtional pay period in the quarter ended March 2017.

	For the One Year Period Ending June 30, 2017	For the Quarter Ending June 30, 2017
Beginning Balance	$44,039,076	$50,350,301
Employee Contributions	2,261,306	507,074
District Contributions	874,440	211,153
Transfers to/from other plans	1,071,724	457,159
Distributions	(1,614,844)	(325,130)
Loan Distributions[(1)]	(396,674)	(90,898)
Loan Repayment	140,257	43,053
Net Investment Gain (Loss)	6,044,560	1,267,133
Ending Balance - June 30, 2017	$52,419,845	$52,419,845
Change in assets for the period	$8,380,768	$2,069,544

(1) Number of loans outstanding as of 6/30/17 : 47

Employee Participation	
Full-time Permanent Employees	347
Temporary/Student Employees	27
Permanent Employees Participating	300
Percent Participation	86%

IRVINE RANCH WATER DISTRICT
SUMMARY OF DEFERRED COMPENSATION PROGRAM
DISTRIBUTION OF ASSETS

June 30, 2017

	Fund	Assets	Percent of Assets	Change from previous quarter
	PROFILE FUNDS			
AGG	Aggressive Profile Fund	5,697,780	10.9%	0.3%
MOD	Moderate Profile Fund	5,562,517	10.6%	0.8%
CON	Conservative Profile Fund	3,226,700	6.2%	0.5%
	Sub Total	**14,486,997**	**27.6%**	**1.6%**
	INTERNATIONAL FUND			
HAINX	Harbor International Instl	1,950,093	3.7%	0.0%
VTIAX	Vanguard Total Intl Stock Index Admiral	843,551	1.6%	0.2%
	Sub Total	**2,793,644**	**5.3%**	**0.2%**
	SMALL CAP FUNDS			
BSFIX	Baron Small-Cap Growth Fund	2,443,889	4.7%	0.3%
VSVIX	Victory Integrity Small Cap	1,491,277	2.8%	-0.2%
VSMAX	Vanguard Small Cap Index	1,194,357	2.3%	0.1%
	Sub Total	**5,129,522**	**9.9%**	**0.3%**
	MEDIUM CAP FUNDS			
MGOSX	Munder Mid-Cap Core Growth Fund	1,698,043	3.2%	0.0%
HWMIX	Hotchkis & Wiley Mid-Cap Value Fund	2,211,940	4.2%	-0.9%
VIMAX	Vanguard Mid-Cap Index Fund	1,317,514	2.5%	0.3%
	Sub Total	**5,227,497**	**10.0%**	**-0.6%**
	LARGE CAP FUNDS			
RGAFX	American Growth Fund R4	4,397,752	8.4%	0.5%
VINIX	Vanguard Institutional Index	5,390,359	10.3%	-0.2%
DHLYX	Diamond Hill Large-Cap Fund	2,225,754	4.2%	0.2%
	Sub Total	**12,013,864**	**22.9%**	**0.6%**
	BOND FUND			
MWTIX	Metropolitan West Total Return Bond	2,408,036	4.6%	-0.1%
	Sub Total	**2,408,036**	**4.6%**	**-0.1%**
	STABLE VALUE FUND			
	Putnam Stable Value	7,692,918	14.7%	-1.2%
	Sub Total	**7,692,918**	**14.7%**	**-1.2%**
	OTHER			
	Ameritrade Brokerage	2,667,367	5.0%	-0.8%
	Total Assets	**$52,419,845**	**100%**	

GREAT-WEST FINANCIAL™

FUND PERFORMANCE REVIEW

Irvine Ranch Water District - 98453-01/02/F1

Reporting Period Ending June 30, 2017

The analytical material contained herein merely describes the process that Great West Financial applies in evaluating funds. It may or may not be based on the plan's current investment policy and is not intended to be used by plan sponsors as a primary basis for deciding whether to make a particular fund available under the plan. Funds listed on the Fund Perfrmance Review are designed to meet stated investment objectives and risk profiles, but do not constitute investment advice from Great West Financial or its affiliate. Plan fiduciaries should review the educational material provided and consult with their investment advisers if necessary to make the investment decision. Neither Great West Financial, nor its representatives, agents or affiliates are permitted to give legal, ERISA, or tax advice. Any discussion of these matters included or related to this document or other educational information is provided for informational purposes only. Such discussion does not purport to be complete or to cover every situation. Current tax and ERISA law are subject to interpretation and legislative change. The appropriateness of any product for any specific taxpayer may vary depending on the particular set of facts and circumstances. You should consult with and rely on your own legal and tax advisers.

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FUND PERFORMANCE REVIEW

GREAT-WEST FINANCIAL™

IMPORTANT DISCLOSURES:

The Fund Performance Review is compiled at the request of the Plan Sponsor and/or broker. It is designed as a high level analytical tool to aide plan sponsors in carrying out their fiduciary responsibilities; it is not intended as investment advice. Plan Sponsors may wish to review the enclosed material with their investment adviser, consultant or broker, if necessary, prior to making final investment decisions.

Funds listed on the Fund Performance Review are designed to meet stated investment objectives and risk profiles. Risks associated with the investment options can vary significantly and the relative risks of investment categories may change under certain economic conditions. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be more or less than their original cost. Current performance may be lower or higher than performance data shown due to market activity. Past performance is not a guarantee of future results.

FUND PERFORMANCE REVIEW: OVERVIEW

GREAT-WEST FINANCIAL™

OBJECTIVE:
* To quantify historical fund performance relative to peer group benchmarks.
* To identify funds that have consistently underperformed over the long-term.
* To assist in identifying style drift and discern gaps within the plan portfolio.

FUNDAMENTALS:
* An objective analysis based on set criteria.
* Based on long-term and risk-adjusted performance.
* Comparison against peer group of similar funds as determined by *Morningstar, Inc.*

SOURCE:
* Statistics are derived from an independent third-party source: primarily Morningstar® Direct℠

SCOPE:
* The Fund Performance Review is designed as a high level analytical tool to aide plan sponsors in carrying out their fiduciary responsibilities; it is not intended as investment advice.

The purpose of this document is to provide investment-related information only for the plan sponsor in its role as a fiduciary to the Plan, not as investment advice for plans or plan participants. Although the data contained in this report is from reliable sources, Advised Assets Group, LLC cannot guarantee its completeness or accuracy. Risks associated with investment options can vary significantly with each particular Investment category and the relative risks of categories may change under certain economic conditions. The investment return and principal of an investment will fluctuate so that an investor's shares, when redeemed, may redeemed, may be more or less than their original cost.

Current performance may be lower or higher than performance data shown due to market volatility. Past performance is no guarantee of future returns.

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FUND PERFORMANCE REVIEW (FPR): CRITERIA

GREAT-WEST FINANCIAL

OVERALL RATING: Based on performance, risk-adjusted performance and the Overall Morningstar Rating.

Return Composite: Determined by taking the equal-weighted average of the 3-, 5- and 10-year category return percentiles.

Sharpe Composite: Calculated by averaging the 3- and 5-year category sharpe percentiles.

Overall Composite: The equally-weighted average of the Return Composite and Sharpe Composite.

Overall Morningstar Rating™: Represents a measure of an investment's risk-adjusted return, relative to similar investments.
The Overall Composite is the sole determinate for the Overall Rating for funds that do not have an Overall Morningstar Category Rating.

Overall Composite		Overall Morningstar Rating	Overall Rating
> 50.0%	AND	❸, ❹, or ❺	Above
≥ 50.0%	OR	❸, ❹, or ❺	Neutral
< 50.0%	AND	❶, or ❷	Below
< 25.0%			Below

LONG-TERM ROLLING ANALYSIS: Based on the accumulated trailing 12 quarter "Overall Ratings".

Consecutive number of Quarters Receiving a Below Rating		Total number of Quarters Below out of trailing 12 quarters	Long-Term Rolling Analysis *
< 4 Quarters	AND	< 7 Quarters	Pass
≥ 4 Quarters	OR	≥ 7 Quarters	Fail
	OR		
Overall Rating: < 25.0%			Fail

*'Pass' and 'Fail' ratings in the long-term rolling analysis are not available for target date funds or Great-West SecureFoundation funds. Morningstar's category classification system has not evolved to address differences in target-date glidepaths. The current system separates funds only by target retirement date and does not consider the level of equity in the glidepath (i.e. how aggressive or conservative the glidepath is versus peers). Plans should consider how their demographics align with their chosen target date glidepath rather than attempt to "time the market" by changing glidepaths based on peer performance rankings. All target-date funds will receive an 'N/A' rating in the FPR. The Great-West SecureFoundation funds will also receive an 'N/A' rating in the FPR. These funds are unique in that they also require the purchase of a Guaranteed Lifetime Withdrawal Benefit (Guarantee) either as a fixed deferred annuity contract, a certificate to a group fixed deferred annuity contract, or a rider to a variable annuity contract. The Guarantee provides guaranteed retirement income for the life of a designated person(s), provided certain conditions are met. Plan Sponsors that seek this feature should take a long-term, holistic view with these funds as this benefit does not show up in peer group performance rankings as measured and scored through the FPR process.

For expanded definitions of the Composites, Sharpe Ratio and Ratings, please refer to the corresponding glossary. Information for this fund evaluation was received from what we believe to be reliable sources, but we cannot absolutely guarantee accuracy. The performance data quoted within represents past performance and is not a guarantee or indication of future investment results. For each fund with at least a three-year history, Morningstar calculates a Morningstar Rating based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a fund's monthly performance (including the effects of sales charges, loads, and redemption fees), placing more emphasis on downward variations and rewarding consistent performance. The top 10% of the funds in each category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars and the bottom 10% receive 1 star. (Each share class is counted as a fraction of one fund within this scale and rated separately, which may cause slight variations in the distribution percentages). The Overall Morningstar Rating for a fund is derived from a weighted average of the performance figures with its three -, five -, and then-year (if-applicable) Morningstar Rating metrics. Past Performance is no guarantee of future results.

Performance Summary: Irvine Ranch Water District

period ended 06/30/2017

	Morningstar Category	Ticker Symbol	Fund Name	Overall Rating[1] Composite %'s Overall	Return	Sharpe	Mstar Rating		Long-Term Rolling Analysis[2] Consecutive Quarters Below	# of Quarters Below out of trailing 12	
Intl	Foreign Large Blend	HAINX	Harbor International Institutional	28.0	39.0	17.0	3	Neutral	0	0 out of 12	Pass
Small-Cap	Small Growth	BSFIX	Baron Small Cap Instl	56.9	49.3	64.5	3	Above	0	0 out of 12	Pass
	Small Value	VSVIX	Victory Integrity Small-Cap Value Y	58.5	67.0	50.0	4	Above	0	0 out of 12	Pass
Mid-Cap	Mid-Cap Growth	MGOSX	Victory Munder Mid-Cap Core Growth R6	48.8	42.7	55.0	3	Neutral	0	0 out of 12	Pass
	Mid-Cap Value	HWMIX	Hotchkis & Wiley Mid-Cap Value I	19.7	33.3	6.0	2	Below	2	4 out of 12	Fail
Large-Cap	Large Growth	RGAFX	American Funds Growth Fund of Amer R5	76.1	65.7	86.5	4	Above	0	0 out of 12	Pass
	Large Value	DHLYX	Diamond Hill Large Cap Y	89.7	95.3	84.0	5	Above	0	0 out of 12	Pass
Bond	Intermediate-Term Bond	MWTIX	Metropolitan West Total Return Bd I	78.4	78.3	78.5	5	Above	0	0 out of 12	Pass
Index Funds	Foreign Large Blend	VTIAX	Vanguard Total Intl Stock Index Admiral (Idx)	50.9	53.3	48.5	3	N/A	N/A	0 out of 12	Pass
	Small Blend	VSMAX	Vanguard Small Cap Index Adm (Idx)	74.6	70.7	78.5	4	N/A	N/A	0 out of 12	Pass
	Mid-Cap Blend	VIMAX	Vanguard Mid Cap Index Admiral (Idx)	81.6	76.7	86.5	4	N/A	N/A	0 out of 12	Pass
	Large Blend	VINIX	Vanguard Institutional Index I (Idx)	87.8	84.0	91.5	4	N/A	N/A	0 out of 12	Pass

Data Source: Morningstar® Direct℠

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Return Analysis: Irvine Ranch Water District

period ended 06/30/2017

	Fund Name	2nd Qtr 2017 Return	2nd Qtr 2017 Percentile	Performance vs. Benchmark (Annualized Returns and Return Percentiles %) 1 Year Return	1 Year Percentile	3 Year Return	3 Year Percentile	5 Year Return	5 Year Percentile	10 Year Return	10 Year Percentile	Incept. Date
Intl	Foreign Large Blend Peer Group	6.24	50	19.33	50	1.11	50	7.93	50	0.86	50	
	Harbor International Institutional	6.77	76	17.71	28	-0.04	19	6.76	17	2.24	81	12/29/1987
Small-Cap	Small Growth Peer Group	4.28	50	22.66	50	7.02	50	13.00	50	7.31	50	
	Baron Small Cap Instl	6.75	91	25.11	72	6.66	45	13.11	53	7.31	50	5/29/2009
	Small Value Peer Group	0.34	50	21.34	50	5.79	50	13.23	50	6.22	50	
	Victory Integrity Small-Cap Value Y	-0.64	18	23.14	74	5.65	49	14.02	72	7.36	80	7/7/2005
Mid-Cap	Mid-Cap Growth Peer Group	4.77	50	18.39	50	6.85	50	12.58	50	7.06	50	
	Victory Munder Mid-Cap Core Growth R6	4.16	41	17.73	45	6.35	40	12.61	51	6.63	37	6/1/2012
	Mid-Cap Value Peer Group	1.00	50	16.42	50	6.08	50	13.94	50	6.28	50	
	Hotchkis & Wiley Mid-Cap Value I	-1.33	3	23.37	90	2.06	6	13.20	37	6.48	57	1/2/1997
Large-Cap	Large Growth Peer Group	5.01	50	20.12	50	9.31	50	14.23	50	7.71	50	
	American Funds Growth Fund of Amer R5	3.96	26	21.82	69	10.11	65	15.88	86	7.55	46	5/15/2002
	Large Value Peer Group	1.82	50	16.51	50	6.61	50	12.92	50	5.34	50	
	Diamond Hill Large Cap Y	3.04	90	22.92	92	9.28	95	15.52	96	7.44	95	12/30/2011
Bond	Intermediate-Term Bond Peer Group	1.48	50	0.72	50	2.28	50	2.44	50	4.50	50	
	Metropolitan West Total Return Bd I	1.29	24	0.25	37	2.28	50	3.49	88	6.00	97	3/31/2000
Index Funds	Vanguard Total Intl Stock Index Admiral (Idx)	5.82	24	20.05	64	1.35	57	7.68	43	1.17	60	11/29/2010
	Vanguard Small Cap Index Adm (Idx)	1.95	55	19.14	25	6.78	56	14.13	70	7.83	86	11/13/2000
	Vanguard Mid Cap Index Admiral (Idx)	2.77	81	17.25	47	8.07	79	14.78	87	7.48	64	11/12/2001
	Vanguard Institutional Index I (Idx)	3.08	64	17.86	58	9.59	91	14.60	80	7.18	81	7/31/1990

Investment options available in the plan may be through mutual funds, collective trusts, separately managed accounts and/or a group fixed and variable annuity contract. *Current performance may be lower or higher than performance data shown. Performance data quoted represents past performance and is not a guarantee or prediction of future results. The investment return and principal value of an investment will fluctuate so that, when redeemed shares/units may be worth more or less than their original cost.* For performance data current to the most recent month-end, please visit www.empower-retirement.com/participant. Total return performance shown above represents that of the underlying fund and does not include a deduction for any applicable annuity contract of administrative fees/expenses. Performance numbers shown above would be less after applicable fee/expenses are deducted.

Data Source: Morningstar® Direct℠

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Sharpe Ratio and Expense Analysis: Irvine Ranch Water District

period ended 06/30/2017

	Fund Name	Sharpe Ratios and Percentiles %				Standard Deviation		Expense	Expense	Manager	Fund Size
		3 Yr Ratio	3 Yr %	5 Yr Ratio	5 Yr %	3 Yr	5 Yr	Ratio	Percentile %	Tenure (yrs)	$MM
Intl	Foreign Large Blend Peer Group	0.13	50	0.73	50	11.75	11.27	1.02	50		
	Harbor International Institutional	0.04	21	0.60	13	12.95	11.88	0.79	75	8	33,492
Small-Cap	Small Growth Peer Group	0.52	50	0.94	50	14.99	13.89	1.17	50		
	Baron Small Cap Instl	0.54	55	1.06	74	13.16	12.23	1.06	65	20	3,475
	Small Value Peer Group	0.43	50	0.97	50	14.63	13.28	1.20	50		
	Victory Integrity Small-Cap Value Y	0.41	45	0.99	55	15.82	14.10	1.15	56	13	2,466
Mid-Cap	Mid-Cap Growth Peer Group	0.57	50	1.04	50	12.20	11.51	1.10	50		
	Victory Munder Mid-Cap Core Growth R6	0.55	45	1.13	65	11.92	10.91	0.87	78	16	3,952
	Mid-Cap Value Peer Group	0.52	50	1.20	50	11.72	10.98	1.08	50		
	Hotchkis & Wiley Mid-Cap Value I	0.19	6	0.89	6	17.04	15.08	1.02	56	21	1,988
Large-Cap	Large Growth Peer Group	0.81	50	1.26	50	11.61	10.92	0.99	50		
	American Funds Growth Fund of Amer R5	0.92	77	1.51	96	10.86	10.02	0.39	97	24	163,394
	Large Value Peer Group	0.62	50	1.23	50	10.74	10.06	0.94	50		
	Diamond Hill Large Cap Y	0.79	84	1.38	84	11.82	10.79	0.58	90	15	5,056
Bond	Intermediate-Term Bond Peer Group	0.72	50	0.78	50	2.86	2.94	0.69	50		
	Metropolitan West Total Return Bd I	0.81	66	1.16	91	2.51	2.82	0.44	85	20	79,104
Index Funds	Vanguard Total Intl Stock Index Admiral (Idx)	0.15	57	0.70	40	11.80	11.24	0.11	97	9	283,434
	Vanguard Small Cap Index Adm (Idx)	0.54	71	1.13	86	13.28	12.20	0.06	99	1	76,880
	Vanguard Mid Cap Index Admiral (Idx)	0.72	86	1.36	87	11.25	10.45	0.06	98	19	86,740
	Vanguard Institutional Index I (Idx)	0.91	91	1.46	92	10.35	9.56	0.04	98	17	228,906

A Percentile Ranking of 100% represents the highest performance whereas 0% represents the lowest.
Expense refers to the Prospectus Net Expense Ratio

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Annual Returns and Statistics: Irvine Ranch Water District

period ended 06/30/2017

		Calendar Year Returns					Modern Portfolio Theory Statistics (3 year)			Portfolio Construction		
	Fund Name	2016	2015	2014	2013	2012	Alpha	Beta	R2	Turnover Ratio	Number of Holdings	% in top 10 holdings
Intl	Foreign Large Blend Peer Group	0.98	-1.27	-5.41	20.34	17.93						
	Harbor International Institutional	0.25	-3.82	-6.81	16.84	20.87	-1.13	1.01	93	14	80	29%
Small-Cap	Small Growth Peer Group	10.65	-2.14	3.25	41.19	14.19						
	Baron Small Cap Instl	10.26	-5.01	1.95	38.10	18.30	0.57	0.83	92	10	80	33%
	Small Value Peer Group	26.21	-6.43	4.23	35.94	16.27						
	Victory Integrity Small-Cap Value Y	24.38	-6.65	7.33	41.02	13.97	-1.32	1.01	96	47	136	12%
Mid-Cap	Mid-Cap Growth Peer Group	5.40	-0.19	7.58	35.54	14.83						
	Victory Munder Mid-Cap Core Growth R6	7.58	-4.20	10.40	33.93	16.15	-1.77	1.03	94	40	80	21%
	Mid-Cap Value Peer Group	17.76	-4.96	9.87	35.13	16.44						
	Hotchkis & Wiley Mid-Cap Value I	21.00	-12.53	12.18	42.55	31.09	-8.97	1.41	83	42	61	35%
Large-Cap	Large Growth Peer Group	2.83	4.62	10.56	34.58	15.64						
	American Funds Growth Fund of Amer R5	8.75	5.65	9.61	34.20	20.92	-0.01	0.94	93	31	364	26%
	Large Value Peer Group	14.52	-3.59	10.90	31.85	15.27						
	Diamond Hill Large Cap Y	14.74	-0.74	10.89	36.87	12.79	-0.45	1.08	95	23	52	32%
Bond	Intermediate-Term Bond Peer Group	2.96	0.06	5.57	-1.69	6.61						
	Metropolitan West Total Return Bd I	2.46	0.29	5.99	0.50	11.54	0.11	0.86	99	313	1871	32%
Index Funds	Vanguard Total Intl Stock Index Admiral (Idx)	4.67	-4.26	-4.17	15.14	18.21	0.54	0.94	98	3	6108	8%
	Vanguard Small Cap Index Adm (Idx)	18.30	-3.64	7.50	37.81	18.24	0.42	0.93	99	14	1437	3%
	Vanguard Mid Cap Index Admiral (Idx)	11.22	-1.34	13.76	35.15	15.99	0.06	0.99	99	15	358	8%
	Vanguard Institutional Index I (Idx)	11.93	1.37	13.65	32.35	15.98	-0.02	1.00	100	5	512	19%

A Percentile Ranking of 100% represents the highest performance whereas 0% represents the lowest.

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Index Performance

period ending 06/30/2017

	Index	Total Return 1 Year	Total Return Annlzd 3 Year	Total Return Annlzd 5 Year	Total Return Annlzd 10 Year	Annual Return 2016	Annual Return 2015	Annual Return 2014	Annual Return 2013	Annual Return 2012
International	MSCI EMF ID	21.18	-1.28	1.52	-0.47	8.58	-16.96	-4.63	-4.98	15.15
	MSCI Eafe Ndtr_D	20.27	1.15	8.69	1.03	1.00	-0.81	-4.90	22.78	17.32
	MSCI World Ndtr_D	18.20	5.24	11.38	3.97	7.51	-0.87	4.94	26.68	15.83
Small-Cap	Russell 2000 Growth	24.40	7.64	13.98	7.82	11.32	-1.38	5.60	43.30	14.59
	Russell 2000	24.60	7.36	13.70	6.92	21.31	-4.41	4.89	38.82	16.35
	Russell 2000 Value	24.86	7.02	13.39	5.92	31.74	-7.47	4.22	34.52	18.05
Mid-Cap	Russell Midcap Growth	17.05	7.83	14.19	7.87	7.33	-0.20	11.90	35.74	15.81
	Standard & Poor's Midcap 400	18.57	8.53	14.92	8.56	20.74	-2.18	9.77	33.50	17.88
	Russell Midcap Value	15.93	7.46	15.14	7.23	20.00	-4.78	14.75	33.46	18.51
Large-Cap	Russell 1000 Growth	20.42	11.11	15.30	8.91	7.08	5.67	13.05	33.48	15.26
	Standard & Poor's 500 TR	17.90	9.61	14.63	7.18	11.96	1.38	13.69	32.39	16.00
	Russell 1000 Value	15.53	7.36	13.94	5.57	17.34	-3.83	13.45	32.53	17.51
Bond	BBgBarc US Aggregate Bond	-0.31	2.48	2.21	4.48	2.65	0.55	5.97	-2.02	4.21
	BBgBarc US Capital Credit	1.84	3.40	3.68	5.61	5.63	-0.77	7.53	-2.01	9.37
	BBgBarc US Mortgage-Backed	-0.06	2.17	2.00	4.31	1.67	1.51	6.08	-1.41	2.59
	BBgBarc US Government Bond	-2.18	1.99	1.30	3.93	1.05	0.86	4.92	-2.60	2.02
	BBgBarc US 1-3 Year Government	-0.07	0.71	0.65	2.01	0.87	0.57	0.64	0.37	0.51

MSCI EMF ID	A capitalization-weighted index of stocks from 26 emerging markets that only includes issues that may be traded by foreign investors. The reported returns reflect equities priced in US dollars and do not include the effects of reinvested dividends.
MSCI EAFE Ndtr_D	Widely accepted as a benchmark for international stock performance, the EAFE Index is an aggregate of 21 individual country indexes that collectively represent many of the major markets of the world.
MSCI World Ndtr_D	Includes all 23 MSCI developed market countries. Ndtr_D indexes are calculated daily and take into account actual dividends reinvested daily before withholding taxes, but exclude special tax credits declared by companies.
Russell 2000 Growth	Market-weighted total return index that measures the performance of companies within the Russell 2000 Index having higher price-to-book ratios and higher forecasted growth values.
Russell 2000	Consists of the smallest 2000 companies in the Russell 3000 Index, representing approximately 7% of the Russell 3000 total market capitalization.
Russell 2000 Value	Market-weighted total return index that measures the performance of companies within the Russell 2000 Index having lower price-to-book ratios and lower forecasted growth values.
Russell Mid Cap Growth	Market-weighted total return index that measures the performance of companies within the Russell Midcap Index having higher price-to-book ratios and higher forecasted growth values.
Standard & Poor's Midcap 400	Includes approximately 10% of the capitalization of U.S. equity securities. These are comprised of stocks in the middle capitalization range.
Russell Mid Cap Value	Market-weighted total return index that measures the performance of companies within the Russell Midcap Index having lower price-to-book ratios and lower forecasted growth values.
Russell 1000 Growth	Market-weighted total return index that measures the performance of companies within the Russell 1000 Index having higher price-to-book ratios and higher forecasted growth values.
Standard & Poor's 500	A market capitalization-weighted index of 500 widely held stocks often used as a proxy for the stock market. It measures the movement of the largest issues. Standard and Poor's chooses the member companies for the 500 based on market size, liquidity and industry group representation.
Russell 1000 Value	Market-weighted total return index that measures the performance of companies within the Russell 1000 Index having lower price-to-book ratios and lower forecasted growth values.
BBgBarc US Aggregate Bond	Composed of the Bloomberg Barclays Govt/Credit Index, the Mortgage-Backed Securities Index, and the Asset-Backed Securities Index.
BBgBarc US Capital Credit	Listed for corporate bond-general and high-quality funds. This index tracks the returns of all publicly issued, fixed-rate, nonconvertible, dollar-denominated, SEC-registered, investment-grade corporate debt.
BBgBarc US Mortgage-Backed	Includes 15- and 30-year fixed-rate securities backed by mortgage pools of the Government National Mortgage Association (GNMA).
BBgBarc US Government Bond	Listed for government-bond general and Treasury funds because it tracks the returns of U.S. Treasuries, agency bonds, and one- to three-year U.S. government obligations. This index is effective for tracking portfolios holding non-mortgage government securities.
BBgBarc US 1-3 Year Governme	Comprised of both the Treasury Bond index (all public obligations of the U.S. Treasury, excluding flower bonds and foreign-targeted issues) and the Agency Bond Index (all publicly issued debt of U.S. Government agencies and quasi-federal corporations and corporate-debt guaranteed by the U.S. Government).

A benchmark index is not actively managed, does not have a defined investment objective and does not incur fees or expenses. Therefore, performance of a fund will generally be less than its benchmark index. You cannot invest directly in a benchmark index.

Data Source: Morningstar® Direct℠

S&P 500® Index is a registered trademark of Standard & Poor's Financial Services LLC ("Standard & Poor's), and is an unmanaged index considered indicative of the domestic Large-Cap equity market.

S&P 400® Index is a registered trademark of Standard & Poor's Financial Services LLC ("Standard & Poor's), and is an unmanaged index considered indicative of the domestic Mid-Cap equity market.

Please refer to the Appendix page for additional disclosures

Prior to selecting investment options for your plan, plan sponsors should consider the investment objectives, risks, fees and expenses carefully. For this and other important information, you may obtain prospectuses for mutual funds, any applicable annuity contract and the annuity's underlying funds and/or additional disclosure documents for investment options exempt from SEC registration from your registered representative. Read these materials carefully before making a selection.

About investment risk:
Equity securities of small-sized and medium-sized companies may be more volatile than securities of larger, more established companies. Foreign investments involve special risks, including currency fluctuations and political developments. Equity securities of companies located in emerging markets involve greater risks than investing in more established markets, including currency fluctuations, political developments and share illiquidity. Real estate securities involve greater risks than other non-diversified investments, including, but not limited to: declining property values, varying economic conditions, changes in zoning laws, or losses from casualty. Real estate securities that invest in foreign real estate involve additional risk, including currency fluctuations and political developments. Specialty funds invest in a limited number of companies and are generally non-diversified. As a result, changes in market value of a single issuer could cause greater volatility than with a more diversified fund. Commodities may have greater volatility than traditional securities. The value of commodities may be affected by changes in overall market movements, changes in interest rates or sectors affecting a particular industry or commodity, and international economic, political and regulatory developments. Alternative investments generally invest in non-traditional asset categories or strategies. As a result, such investments are subject to unique risks and may be more speculative than traditional investments. These investments may also have direct or indirect exposure to derivatives, which may be more volatile and less liquid than traditional securities. As a result, the option could suffer losses on its derivative positions.

Asset allocation funds are subject to the risks of the underlying investments, which can be a mix of stocks/stock funds, bonds/bond funds and other types of investments. Depending on the types of investments in this fund, an investor may face the following risks. Stock values fluctuate in response to the activities of the general market, individual companies and economic conditions. Bond values fluctuate in response to the financial condition of individual issuers, general market and economic conditions, and changes in interest rates. In general, when interest rates rise, bond values fall and investors may lose principal value. Compared to higher-rated securities, high yield bond investment options are subject to greater risk, including the risk of default. U.S.

The date in a target date fund's name is the approximate date when investors plan to start withdrawing their money (generally assumed at age 65). The principal value of the fund(s) is not guaranteed at any time, including at the time of the target date and/or withdrawal.

It is possible to lose money by investing in a money market fund. Although the fund seeks to preserve the value of your investment at $1 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

About Overall Morningstar Rating™

For each fund with at least a three-year history, Morningstar calculates a Morningstar RatingTM based on a Morningstar Risk-Adjusted Return (including the effects of sales charges, loads and redemption fees), placing more emphasis on downward variations and rewarding consistent performance. The top 10% of funds receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars and the bottom 10% receive 1 star. (Each share class is counted as a fraction of one fund within this scale and rated separately, which may cause slight variations in the distribution percentages.) The overall Morningstar Rating for a fund is derived from a weighted average of the performance figures associated with its three-, five- and ten-year (if applicable) Morningstar Rating metrics. Past performance is no guarantee of future results.

About Morningstar Rankings

Peer groups are created using Morningstar's category classification system. Peer groups are the combination of all share classes of all mutual funds in Morningstar's Open End Fund database (in a given asset class), all collective investment trusts in Morningstar's Separate Accounts/CITs database (in the same asset class), and all funds in Morningstar's Insurance and Pension Funds database (in the same asset class). As an example, the Large Blend peer group is created as a combination of all share clases of all mutual funds in Morningstar's US Fund Large Blend category, all collective investment trusts in Morningstar's US SA Large Blend category, and all funds in Morningstar's US Insurance Large Blend category.

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Shares of the series of Great-West Funds, Inc. are not available to the general public but are offered only to insurance company separate accounts for certain variable annuity contracts and variable life policies, to individual retirement account (IRA) custodians or trustees, to plan sponsors of qualified retirement plans and to college savings programs.

Core securities, when offered, are offered through GWFS Equities, Inc. and/or other broker-dealers. GWFS Equities, Inc., Member FINRA/SIPC, is a wholly owned subsidiary of Great-West Life & Annuity Insurance Company (GWL&A).

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Certain Great-West funds are managed by sub-advisers who manage other mutual funds having similar names and investment objectives. While their investment management may be similar to, or modeled after, those other mutual funds, the Great-West funds are not directly related to any other mutual funds. Consequently, the investment performance and other features of other mutual funds and any similarly named Great-West Fund may differ substantially.

Putnam funds are managed by Putnam Investment Management. Putnam mutual funds are distributed by Putnam Retail Management. Putnam is affiliated with GWL&A and its subsidiaries.

APPENDIX - GLOSSARY

GREAT-WEST FINANCIAL

12b-1 Fee The maximum annual charge deducted from fund assets to pay for distribution and marketing costs. Although usually set on a percentage basis, this amount will occasionally be a flat figure.

Actively managed A fund attempts to add portfolio value through such active investment techniques as sector allocation (top-down) and/or security selection (bottom-up).

Aggressive Growth (Objective) Funds that seek high growth of capital. Investments may include smaller companies, companies in newly-emerging industries or in

Alpha is the coefficient that measures the portion of an investment's return arising from non-market or unsystematic risk. In actively managed portfolio. Alpha is considered to be the vaue added by the manager through sector or security selection. A negative alpha would indicate that active management had produced less-than-market returns.

Annual Returns Total returns calculated on a calendar -year basis. The annual return for a fund will be the same as its trailing 12-month total return only at year-end

Annualized Returns Returns for periods longer than one year are expressed as "annualized returns." This is equivalent to the compound rate of return which, over a certain period of time, would produce a fund's total return over that same period.

Asset Allocation (Objective) Funds that seek high total return by investing in a mix of equities, fixed-income securities and money market instruments.

Barclays Capital Aggregate Index Composed of the Barclays Capital Govt/Credit Index, the Mortgage-Backed Securities Index, and the Asset-Backed Securities Index. The returns published for the index are total returns, which include reinvestment of dividends.

Barclays Capital Government Bond Index Listed for government-bond general and Treasury funds. Because it tracks the returns of U.S. Treasuries, agency bonds, and one- to three-year U.S. government obligations, this index is effective for tracking portfolios holding non-mortgage government securities. The returns published for the index are total returns, which include reinvestment of dividends.

Basis Point One-hundredth of a percentage point. For example, 50 basis points equals .50%.

Beta also known as market or systematic risk, beta is the coefficient that measures an investment's volatility relative to "the market" (the S & P 500 Index has a beta of 1.00) as a whole. Portfolios with a beta greater than 1.00 will move higher or lower than the market as a whole, while those with betas of less than 1.00 will move less than the market.

Bond funds Contrary to individual bonds, which offer a guaranteed rate of return, bond funds are variable funds and their returns may rise or fall depending on market conditions. Funds with 70% or more of their assets invested in bonds are classified as Bond Funds. Bond funds are divided into two main groups: Taxable Bond and Municipal Bond. Taxable Bond Fund categories include the following: Long-Term Government, Intermediate-Term Government, Short-Term Government, Long-Term Bond, Intermediate-Term Bond, Short-Term Bond, Ultrashort-Bond, International- Bond, High-Yield Bond, Emerging-Markets Bond and Multisector Bond.

Capital Appreciation The market rise in share value of a company as it experiences growth in earnings and/or assets. By extension, funds will experience capital appreciation as the underlying securities in their portfolios appreciate in value.

Capitalization The total market value of all stock issued by a company. Funds are frequently categorized by the market capitalization of the stocks in their portfolios; i.e., "small cap" generally refers to companies valued by the market at less than $1 billion, "Mid-cap" to companies valued between $1 billion and $5 billion, and "Large-cap" to companies valued at more than $5 billion.

Corporate Bond--General (Objective) Funds that seek income by investing in fixed-income securities. Funds with this objective may hold a variety of issues, including but not limited to government bonds, high-quality corporates, mortgages, asset-backeds, bank loans and junk bonds.

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APPENDIX - GLOSSARY (CONT.)

GREAT-WEST FINANCIAL

Corporate Bond--High Yield (Objective) Funds that seek income by generally investing 65% or more of their assets in bonds rated below BBB. The price of these issues is generally affected more by the condition of the issuing company (similar to a stock) than by the interest-rate fluctuation that usually causes bond prices to move up and down.
Diversification The investment practice of spreading assets in a portfolio among a number of different companies, industries, sectors and/or instruments. Under Modern Portfolio Theory, the practice of diversification may assist an investor in reducing overall portfolio risk and evening out portfolio returns.
Domestic equity funds are placed in a category based on the style and size of the stocks they typically own. The style and size parameters are based on the divisions used in the investment style box: Value, Blend, or Growth style and Small, Medium, or Large median market capitalization.
Duration A measure of the sensitivity of the price of a fixed-income security to a change in interest rates. Duration is expressed as a number of years. Duration is a measure of interest rate risk. The larger the duration number, the greater the interest rate risk or reward for bond prices.
Equity-Income (Objective) Funds that are expected to pursue current income by investing at least 65% of their assets in dividend-paying equity securities.
Excess Returns The percentage of fund assets paid for operating and administrative expenses, as well as management fees. Fund expenses are reflected in a Fund's NAV.
Expense Ratio The percentage of fund assets paid for operating expenses and management fees, including 12b-1 fees, administrative fees, and all other asset-based costs incurred by the fund, except brokerage costs. Fund expenses are reflected in the fund's NAV. Sales charges are not included in the expense ratio.
Foreign Stock Category An international fund having no more than 10% of stocks invested in the United States.
Fund of Funds A fund that specializes in buying shares in other mutual funds rather than individual securities. Quite often this type of fund is not discernible from its name alone, but rather through prospectus wording (i.e.: the fund's charter).
Government Bond--General (Objective) Offerings that pursue income by investing in a combination of mortgage-backed securities, Treasuries, and agency securities.
Growth (Objective) Funds that pursue capital appreciation by investing primarily in equity securities. Current income, if considered at all, is a secondary concern.
Growth and Income (Objective) Growth of capital and current income are near-equal objectives for these funds. Investments are typically selected for both appreciation potential and dividend-paying ability.
Index Fund A fund that tracks a particular index and attempts to match returns. While an index typically has a much larger portfolio than a mutual fund, the fund's management may study the index's movements to develop a representative sampling, and match sectors proportionately.
Information Ratio Is an alternative to the Sharpe Ratio for measuring the risk-adjusted performance of a portfolio. It is calculated by subtracting the benchmark (usually an index) from the return of the portfolio as a whole, then dividing by the tracking error (standard deviation of the difference between portfolio returns and the returns of the index). The higher the Information Ratio, the better the more consistent a manager is.
International Equity Funds with 40% or more of their equity holdings in foreign stocks (on average over three years) are placed in the international equity class. These categories include Europe, Japan, International Hybrid, Latin America, Diversified Pacific, Pacific ex. Japan, Specialty Precious Metals, Diversified Emerging Markets, World Stock, and Foreign Stock. Foreign investments involve special risks, including currency fluctuations and political developments.

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APPENDIX - GLOSSARY (CONT.)

GREAT-WEST FINANCIAL

Life Cycle These funds are geared toward investors of a certain age or with a specific time horizon for investing. Typically they are grouped together in sets (i.e. conservative, moderate, and aggressive portfolios).

Management Fees The management fee is the percentage deducted from fund assets to pay an advisor or subadvisor. Often, as the fund's net assets grow, the percentage deducted for management fees decreases. For example, a particular fund may report a management fee of 0.40% on the first $500 million in assets, 0.35% on all assets between $500 million and $1 billion, and 0.30% on assets in excess of $1 billion. Thus, if the fund contains $1.5 billion in total net assets, the advisor scales back its management fees accordingly. Alternatively, the fund may compute the fee as a flat percentage of average net assets. The management fee might also come in the form of a group fee (G), a performance fee (P), or a gross income fee (I). Note: The management fee is just one (albeit a major) component of a fund's costs. The overall expense ratio is the most useful number for investors. Actual fees are also noted in this section.

Morningstar Category identifies funds based on their actual investment styles as measured by their underlying portfolio holdings (portfolio statistics and compositions over the past three years). If the fund is new and has no portfolio, we estimate where it will fall before assigning a more permanent category. When necessary, we may change a category assignment based on current information.

MSCI EAFE Ndtr_D Listed for foreign stock funds (EAFE refers to Europe, Australasia, and Far East). Widely accepted as a benchmark for international stock performance, the EAFE Index is an aggregate of 21 individual country indexes that collectively represent many of the major markets of the world. Ndtr_D indexes are calculated daily and take into account actual dividends reinvested daily before withholding taxes, but exclude special tax credits declared by companies. In addition, Ndtr_D indexes subtract withholding taxes retained at the source, for foreigners who do not benefit from a double taxation treaty. The returns published for the index are total returns, which include reinvestment of dividends.

MSCI World Ndtr_D Includes all 23 MSCI developed market countries. Ndtr_D indexes are calculated daily and take into account actual dividends reinvested daily before withholding taxes, but exclude special tax credits declared by companies. In addition, Ndtr_D indexes subtract withholding taxes retained at the source, for foreigners who do not benefit from a double taxation treaty.

Mutual fund An investment option that pools money from many shareholders and invests it in a group of stocks, bonds, or other securities. Also known as an open-end investment management company, mutual funds are securities required to be registered with the SEC.

NAV Stands for net asset value, which is the fund's share price. Funds compute this value by dividing the total net assets by the total number of shares.

Net Assets The month-end net assets of the mutual fund, recorded in millions of dollars. Net-asset figures are useful in gauging a fund's size, agility, and popularity. They help determine whether a small company fund, for example, can remain in its investment-objective category if its asset base reaches an ungainly size.

Prospectus A fund's formal written statement, generally issued on an annual basis. In this statement the fund sets forth its proposed purposes and goals, and other facts (e.g.: history and investment objective) that an investor should know in order to make an informed decision.

Prospectus Objective Indicates a particular fund's investment goals, based on the wording in a fund's prospectus.

R-squared (R2) measures the degree to which movement in one variable is related to the movement in another variable. Portfolios with a high R-squared will react similarly to various market conditions. By combining investments with low correlations, an investor can reduce the overall risk within a portfolio.

Risk Basically there are four types of risk: 1) inflation risk means your money may not earn enough in the long run because as prices go up the value of your money goes down; 2) market risk means you could lose money because the price of a stock may go down; 3) credit risk means a company or organization that borrowed your money may not be able to pay it back; and 4) interest rate risk means you could lose money because as interest rates go up the value of bond investments goes down.

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APPENDIX - GLOSSARY (CONT.)

Russell 1000 Consists of the 1000 largest companies within the Russell 3000 index. Also known as the Market-Oriented Index, because it represents the group of stocks from which most active money managers choose. The returns published for the index are total returns, which include reinvestment of dividends.

Russell 1000 Growth Market-capitalization weighted index of those firms in the Russell 1000 with higher price-to-book ratios and higher forecasted growth values. The Russell 1000 includes the largest 1000 firms in the Russell 3000, which represents approximately 98% of the investable US equity market.

Russell 1000 Value Market-capitalization weighted index of those firms in the Russell 1000 with lower price-to-book ratios and lower forecasted growth values. The Russell 1000 includes the largest 1000 firms in the Russell 3000, which represents approximately 98% of the investable US equity market.

Russell 2000 Consists of the smallest 2000 companies in the Russell 3000 Index, representing approximately 7% of the Russell 3000 total market capitalization. The returns published for the index are total returns, which include reinvestment of dividends.

Russell 2000 Growth Market-weighted total return index that measures the performance of companies within the Russell 2000 Index having higher price-to-book ratios and higher forecasted growth values. The Russell 2000 Index includes the 2000 firms from the Russell 3000 Index with the smallest market capitalizations. The Russell 3000 Index represents 98% of the of the investable US equity market.

Russell 2000 Value Market-weighted total return index that measures the performance of companies within the Russell 2000 Index having lower price-to-book ratios and lower forecasted growth values. The Russell 2000 Index includes the 2000 firms from the Russell 3000 Index with the smallest market capitalizations. The Russell 3000 Index represents 98% of the of the investable US equity market.

Share Classes Shares of the same fund that offer different shareholder rights and obligations, such as different fee and load charges. Common share classes are A (front-end load), B (deferred fees), C (no sales charge and a relatively high annual 12b-1 fee, such as 1.00%). Multi-class funds hold the same investment portfolio for all classes, and differ only in their surrounding fee structure.

Sharpe Ratio measures the risk-adjusted performance of a portfolio. It is calculated by subtracting the risk-free rate of return (i.e., the return on treasury bills) from the return of the portfolio as a whole, then dividing by the standard deviation of the returns. The higher the Sharpe Ratio, the better the risk-adjusted performance of the portfolio.

Sortino Ratio is similar to the Sharpe Ratio, except that it uses downside deviation for the denominator instead of standard deviation. This alternative to the Sharpe Ratio provides a risk-adjusted measure of a security or fund's performance without penalizing it for upward price movements.

Standard Deviation A statistical measurement of dispersion about an average, which, for a mutual fund, depicts how widely the returns varied over a certain period of time. Investors use the standard deviation of historical performance to try to predict the range of returns that are most likely for a given fund. When a fund has a high standard deviation, the predicted range of performance is wide, implying greater volatility.

Tax-deferred earnings You don't have to pay taxes on any earnings in your defined contribution plan until you withdraw your money. The money in a defined contribution plan can grow faster than with other types of savings plans, because the earnings you accumulate, if any, are also tax-deferred.

Turnover Ratio A measure of the percentage of holdings that have been "turned over" -- replaced with other holdings -- within a portfolio during the course of a year.

Variable funds Investments that fluctuate with market conditions. Unlike guaranteed investments, such as bonds or CDs, variable funds don't guarantee a specific rate of return. They do offer potential for higher earnings in return for higher degree of market risk.

World Stock Category An international fund having more than 10% of stocks invested in the US. Also known as global funds. Foreign Investments involve special risks, including currency fluctuations and political developments.

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