

AGENDA
IRVINE RANCH WATER DISTRICT
FINANCE AND PERSONNEL COMMITTEE MEETING
FEBRUARY 2, 2021

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

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

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

Via Web: <https://irwd.webex.com/irwd/j.php?MTID=m358cec9350ecbfe9d6489470352453fa>

Meeting Number: 146 792 8003

Password: mkXdmJFZ333

After joining the meeting, in order to ensure all persons can participate and observe the meeting, please select the "Call in" option and use a telephone to access the audio for the meeting shown.

Please enter the attendee identification number, which will be provided when you connect to Webex, followed by #.

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

CALL TO ORDER 11:30 a.m., Committee Room, Second Floor, District Office
15600 Sand Canyon Avenue, Irvine, California

ATTENDANCE Chair: Peer Swan _____ Member: Steve LaMar _____

<u>ALSO PRESENT</u>	Paul Cook	_____	Cheryl Clary	_____
	Wendy Chambers	_____	Kevin Burton	_____
	Paul Weghorst	_____	Rob Jacobson	_____
	Tom Malone	_____	Allen Shinbashi	_____
	Christopher Smithson	_____	Eileen Lin	_____
	Jennifer Davis	_____	_____	_____
	_____	_____	_____	_____

PUBLIC COMMENT NOTICE

If you wish to address the Committee on any item, please submit a request to speak via the "chat" feature available when joining the meeting virtually. Remarks are limited to three minutes per speaker on each subject. You may also submit a public comment in advance of the meeting by emailing comments@irwd.com before 8:00 a.m. on Tuesday, February 2, 2021.

ALL VOTES SHALL BE TAKEN BY A ROLL CALL VOTE.

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. EMPLOYEE POPULATION AND TURNOVER STATUS REPORT – SRADER

Recommendation: Receive and file.

6. MONTHLY INVESTMENT AND DEBT REVIEW – DAVIS / JACOBSON / CLARY

Recommendation: Receive and file.

7. EXPENSES AND FEE OF BOARD MEMBERS AND GENERAL MANAGER PAID THROUGH THE SECOND QUARTER OF FY 2020-21 – PULLES / CLARY

Recommendation: Receive and file.

8. LEGAL FEES QUARTERLY UPDATE – TOBAR / CLARY

Recommendation: Receive and file.

9. FISCAL YEAR 2020-21 OPERATING AND NON-OPERATING FINANCIAL HIGHLIGHTS QUARTERLY UPDATE – PARDEE / SMITHSON / CLARY

Recommendation: Receive and file.

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

Recommendation: Receive and file.

ACTION

11. ORACLE CUSTOMER CARE & BILLING UPGRADE – MALONE / CLARY

Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement with Origin Consulting in the amount not to exceed \$1,200,000 for the Oracle CC&B Upgrade, Projects 10546 and 10547.

OTHER BUSINESS

12. CLOSED SESSION CONFERENCE WITH REAL PROPERTY NEGOTIATORS -
Pursuant to Government Code Section 54956.8:

Property: 18741 E. Center Street, Orange, CA, 92869, APN: 383-08-263

Agency Negotiator: Paul A. Cook

Negotiating Party: Phillip de los Reyes

Under Negotiation: Price and terms of payment

13. Open Session

14. Directors' Comments

15. 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 electronically via the Webex meeting noted. Upon request, the District will provide for written agenda materials in appropriate alternative formats, and reasonable disability-related modification or accommodation to enable individuals with disabilities to participate in and provide comments at public meetings. Please submit a request, including your name, phone number and/or email address, and a description of the modification, accommodation, or alternative format requested at least two days before the meeting. Requests should be emailed to comments@irwd.com. Requests made by mail must be received at least two days before the meeting. Requests will be granted whenever possible and resolved in favor of accessibility.

Note: This page is intentionally left blank.

February 2, 2021
Prepared by: L. Srader
Submitted by: L. Srader
Approved by: Paul A. 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.

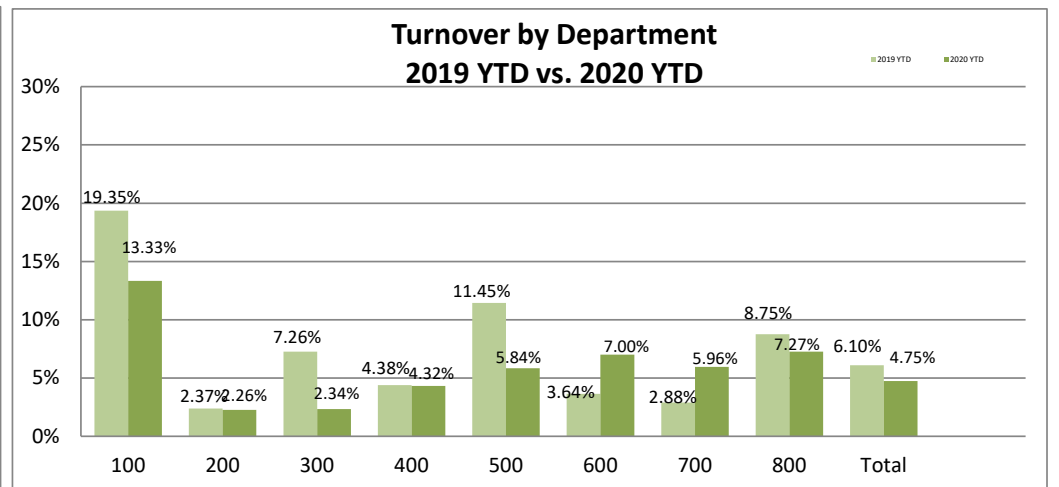
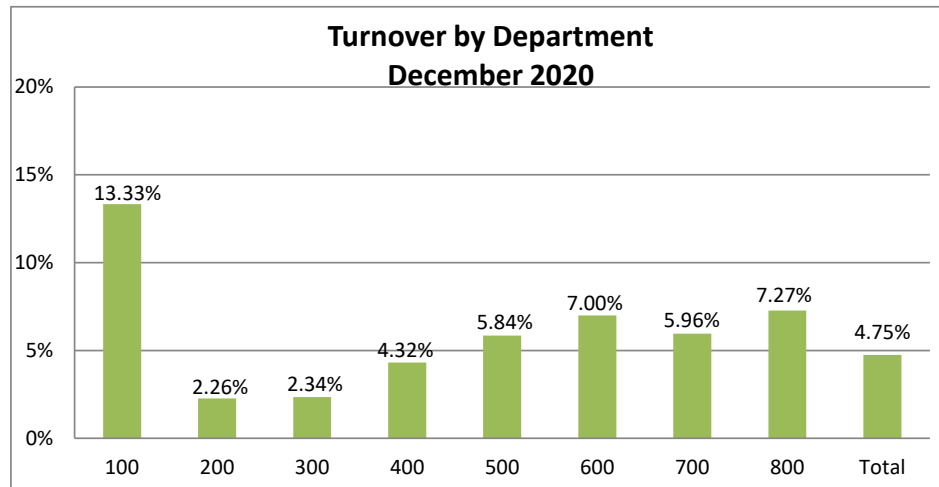
LIST OF EXHIBITS:

Exhibit "A" – Employee Population/Turnover Status Report

Note: This page is intentionally left blank.

EXHIBIT A
IRVINE RANCH WATER DISTRICT
EMPLOYEE POPULATION STATUS REPORT
December 2020

	@12/01/20	Current Month Activity							@12/31/20		FY 20/21	Avg FYTD	Avg FYTD	Avg FYTD	Internal Turnover		External Turnover	
Dept	Positions Filled	New Hires	Terms		Promo Trnsfr		Lateral Trnsfr		Positions Filled	Positions Unfilled	Budgeted Positions	Filled Budget Positions	Temp Emp FTE	Total Filled Positions	Current Period	2020 YTD	Current Period	2020 YTD
			Vol	Invol	In	Out	In	Out							Period	YTD	Period	YTD
100	16.0		1						15.0	1	16.0	15.5	1.1	16.6	0.00%	0.00%	6.25%	13.33%
200	91.0		1						90.0	2	92.0	90.2	2.4	92.6	0.00%	0.00%	1.10%	2.26%
300	44.0								44.0	0	44.0	43.3	0.0	43.3	0.00%	0.00%	0.00%	2.34%
400	69.0	1							70.0	3	73.0	69.5	3.3	72.8	0.00%	1.44%	0.00%	4.32%
500	51.0								51.0	9	60.0	51.7	1.3	52.9	0.00%	1.95%	0.00%	5.84%
600	31.0								31.0	0	31.0	29.3	6.2	35.5	0.00%	0.00%	0.00%	7.00%
700	34.0		1						33.0	2	35.0	33.7	4.2	37.9	0.00%	2.98%	2.94%	5.96%
800	57.0		1						56.0	5	61.0	55.2	0.9	56.0	0.00%	0.00%	1.75%	7.27%
Totals	393	1	4	0	0	0	0	0	390.0	22	412.0	388.3	19.3	407.7	0.00%	0.53%	1.02%	4.75%
12/19	382	1	3	0	0	0	0	0	380	25	404.0	372.3	24.2	396.5	0.00%	0.00%	0.79%	5.84%

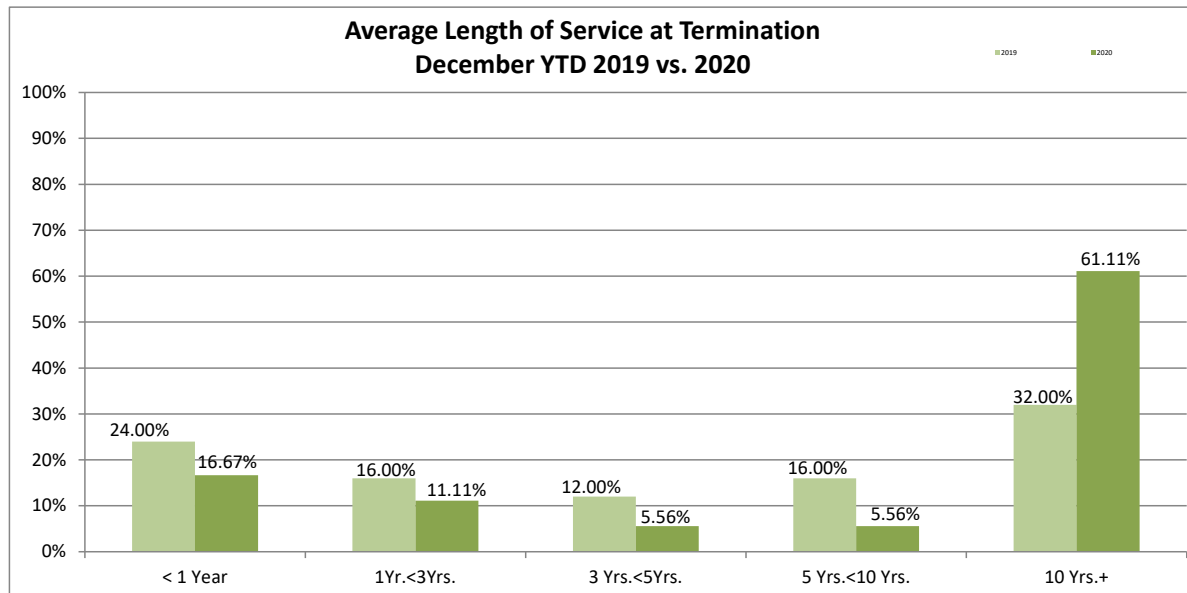


100-GM, HR, Safety; 200-Fin., Cust. Serv., IS, Purch.; 300-Eng.; 400-Water Ops; 500-Recycling; 600-WQ&RC; 700-Water Res., Recyc. Water and Public Affairs; 800-Adm. & Maintenance Ops

**IRVINE RANCH WATER DISTRICT
TURNOVER LONGEVITY RATIO
December 2020**

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.+
100			1									1	2	1			1	
200										1		1	2		1			1
300					1								1					1
400						1			1				2	2				
500	1			1	1								3		1			2
600	1				1								2					2
700			1									1	2			1		1
800				1			2					1	4					4
2020 Total	2	0	2	2	3	1	2	0	1	1	0	4	18	3	2	1	1	11
2019 Data	2	4	1	1	2	1	3	1	0	4	2	4	25					
Percentage of Total Turnover														16.67%	11.11%	5.56%	5.56%	61.11%

2020 Average YTD Length of Service at Termination	16.33 Years
2019 Average YTD Length of Service at Termination	9.21 Years
2018 Average YTD Length of Service at Termination	13.85 Years
2017 Average YTD Length of Service at Termination	14.35 Years
2016 Average YTD Length of Service at Termination	12.43 Years



**IRVINE RANCH WATER DISTRICT
EMPLOYEE POPULATION STATUS REPORT
December 2020**

NEW HIRES				
Date	Dept	Employee Name	Position	Comments
12/26/20	400	Max Contreras	Utility Worker	

TERMINATIONS					
Date	Dept	Employee Name	Position	Reason	Comments

RETIREMENTS					
Date	Dept	Employee Name	Position	Reason	Comments
12/04/20	800	Brian Bystrom	Senior Instrumentation Technician	Ret	
12/30/21	700	Beth Beeman	Director of Public Affairs	Ret	
12/30/20	100	Jenny Roney	Director of Human Resources	Ret	
12/31/20	200	Frederick Bertsch	Network & Cybersecurity Manager	Ret	

PROMOTIONS					
Date	Departing Dept	Employee Name	Departing Position	New Dept	New Position

TRANSFERS					
Effective Date	Departing Dept	Employee Name	Departing Position	New Dept	New Position
12/12/20	700	Jorge Flores	Cross Connection Specialist	700	Recycled Water Specialist
12/26/20	200	Alfrazuddin Haquani	Network Administrator	200	Network Administrator

CROSS TRAINING					
Effective Date	Departing Dept	Employee Name	Departing Position	New Dept	New Position

**IRVINE RANCH WATER DISTRICT
EMPLOYEE POPULATION STATUS REPORT
December 2020**

UNFILED POSITIONS			
Dept	Position	Salary Grade	Comments
100	Director of Human Resources	U27.E	Recruiting
200	User Support Administrator	U32.N	Recruiting
200	Network & Cybersecurity Manager	U22.E	Offer Accepted
400	Field Services Manager	U18.E	
400	Metering Systems Technician I	16.N	1/1/2021
400	Metering Systems Technician II	22.N	Recruiting
500	Process Specialist	32.N	
500	Collection Systems Technician I	15.N	
500	Wetlands Specialist	24.N	Recruiting
500	Collection Systems CCTV Technician	21.N	
500	Operations Supervisor	S35.N	
500	Collection Systems Supervisor	S32.N	
500	Operator II	27.N	Recruiting
500	Operator III	29.N	Recruiting
500	Operator II	27.N	Recruiting
700	Cross Connection Specialist	26.N	
700	Director of Public Affairs	U27.E	
800	Reliability Engineer	U20.E	Recruiting
800	Senior Electrical Technician	30.N	
800	Senior Instrumentation Technician	30.N	
800	Electrical Technician	28.N	
805	Director of Field Operations	U27.E	

**IRVINE RANCH WATER DISTRICT
EMPLOYEE POPULATION STATUS REPORT
December 2020**

LEAVE OF ABSENCE					
Type of Leave	Pay Status	Date Leave Began	Anticipated Return Date	Current Length	Comments
WC/FMLA/CFRA	SDI	10/23/2020		2 months	
FMLA/CFRA	SDI	11/19/2020	1/17/2021	2 months	
FMLA/CFRA	SDI	11/2/2020		2 months	
FMLA/CFRA/FFCRA	SDI	12/28/2020		2 days	
FMLA/CFRA	SDI	12/14/2020	1/12/2021	2 weeks	

Leave	Original Status	Date Leave Began	Return Date	Length	Return Date	Comments
FMLA/CFRA	SDI	10/7/2019	2/10/2020	4 months	02/03/20	Returned
FMLA/CFRA	SDI	9/2/2019	2/17/2020	5 months	02/03/20	Returned
FMLA/CFRA	SDI	12/10/2019	2/6/2020	2 months	02/10/20	Returned
FMLA/CFRA	SDI	12/2/2019	2/3/2020	2 months	02/03/20	Returned
FMLA/CFRA	SDI	1/27/2020	3/9/2020	1 month	03/09/20	Returned
FMLA/CFRA	SDI	9/23/2019	3/2/2020	5 months	03/09/20	Returned
FMLA/CFRA	SDI	1/23/2020	3/9/2020	2 months	03/09/20	Returned
WC/FMLA/CFRA	SDI	2/3/2020	4/13/2020	1 month	04/13/20	Returned
FFCRA/FMLA	SDI	6/26/2020	8/5/2020	1 month	8/5/2020	Returned
FFCRA/FMLA	SDI	6/21/2020	7/6/2020	3 weeks	7/6/2020	Returned
FFCRA/FMLA	SDI	6/22/2020	7/6/2020	3 weeks	7/6/2020	Returned
FMLA/CFRA	SDI	6/20/2020	7/6/2020	3 weeks	7/6/2020	Returned
FMLA/CFRA	SDI	6/2/2020	7/6/2020	1 month	7/6/2020	Returned
FMLA/CFRA	SDI	6/1/2020	7/13/2020	1.5 months	7/13/2020	Returned
FMLA/CFRA	SDI	5/7/2020	7/27/2020	3 months	7/27/2020	Returned
FMLA/CFRA	SDI	7/2/2020	7/28/2020	1 month	7/28/2020	Returned
FMLA/CFRA	SDI	7/29/2020	8/31/2020	1 month	8/31/2020	Returned
FMLA/CFRA	SDI	7/21/2020	9/2/2020	2 weeks	09/02/20	Returned
FMLA/CFRA	SDI	8/4/2020	9/8/2020	1 month	09/08/20	Returned
FMLA/CFRA	SDI	9/22/2020	10/15/2020	1 month	10/15/20	Returned
FFCRA/FMLA	SDI	9/8/2020	10/12/2020	2 months	10/12/20	Returned
FFCRA/FMLA	LVBK	9/8/2020	10/8/2020	1 month	10/08/20	Returned

**IRVINE RANCH WATER DISTRICT
EMPLOYEE POPULATION STATUS REPORT**

Month	Length of Employment	Termination		Comments
		Vol	Invol	
January	14 years, 6 months	X		Other employment - Metropolitan WD
	1 year, 4 months	X		Other employment
February				
March	10 months	X		No reason given
	3 years, 2 months	X		Other employment - Mesa Water
April	32 years, 2 months	X		Retired
	24 years, 1 month	X		Retired
May	28 years	X		Retired
	26 years, 9 months	X		Other employment - Metropolitan WD
	26 years, 1 month	X		Other employment - Las Vegas WD
June	1 month	X		Other employment - returned to old job
July	25 years, 11 months	X		Retired
	29 years, 10 months	X		Retired
August				
September	4 months	X		Other employment - started own business
October	2 years, 7 months	X		Other employment
November				
December	19 years, 9 months	X		Retired
	18 years, 3 months	X		Retired
	7 years, 3 months	X		Retired
	27 years, 1 month	X		Retired

**IRVINE RANCH WATER DISTRICT
SUMMARY
AGENCY & DISTRICT TEMPORARY EMPLOYEES**

ACTIVE											
Current Month	FYTD Ave Hours Worked	PERS Enroll- ment	Agency		Hourly Rate	Est Hours per Month	Est Cost Per Month	Expected Duration (Months)	Actual Worked (Months)	Projected Cost FY' YTD	Actual Cost FY 'YTD
0.47	0.44	Yes	X	130	47.75	84	4,011.00	9	6	24,066.00	21,917.25
1.00	0.32	No		140	40.43	168	6,792.24	2	2	13,584.48	13,584.48
1.47	0.76			100							
0.02	0.01	Yes	X	200	56.55	84	4,750.20	12	6	28,501.20	311.03
1.00	0.29	No		200	37.73	168	6,338.64	6	2	12,677.28	11,319.00
0.98	0.92	Yes		200	22.37	168	3,758.16	12	6	22,548.96	21,352.17
2.00	1.21			200							
0.93	0.95	Yes		300	37.70	168	6,333.60	6	6	38,001.60	37,436.10
0.06	0.30	Yes		300	72.97	84	6,129.48	6	6	36,776.88	22,949.07
0.06	0.06	Yes		300	85.30	84	7,165.20	6	6	42,991.20	5,160.65
0.35	0.49	EXC		300	18.00	84	1,512.00	12	6	9,072.00	9,162.00
0.31	0.25	EXC		300	17.00	84	1,428.00	9	4	5,712.00	4,343.50
0.98	0.98	EXC		300	37.70	84	3,166.80	6	6	19,000.80	38,265.50
2.68	3.03			300							
1.00	1.00	No	X	400	33.67	168	5,656.56	6	6	33,939.36	35,185.15
1.00	0.88	No	X	400	33.91	168	5,696.88	6	6	34,181.28	31,366.75
1.00	0.93	No	X	400	30.53	168	5,129.04	6	6	30,774.24	29,614.10
3.00	2.82			400							
0.98	0.72	Yes		500	29.23	168	4,910.64	12	5	24,553.20	21,922.50
0.80	0.54	Yes		500	29.23	168	4,910.64	4	4	19,642.56	16,281.11
1.79	1.26			500							
0.92	0.99	No	X	600	52.00	168	8,736.00	11	6	52,416.00	53,612.00
0.92	0.99	No	X	600	52.00	168	8,736.00	6	6	52,416.00	53,612.00
1.00	1.00	No	X	600	43.84	168	7,365.12	12	6	44,190.72	46,660.67
1.00	0.97	No	X	600	43.84	168	7,365.12	6	6	44,190.72	44,190.72
1.00	0.63	No	X	600	52.00	168	8,736.00	5	5	43,680.00	34,190.00
0.28	0.68	EXC		600	15.00	84	1,260.00	12	6	7,560.00	10,680.00
0.47	0.49	EXC		600	16.00	84	1,344.00	6	6	8,064.00	8,196.80
5.60	5.76			600							
0.98	0.98	No	X	700	30.92	168	5,194.56	6	6	31,167.36	31,662.08
0.87	0.96	No	X	700	43.53	168	7,313.04	6	6	43,878.24	43,464.71
0.98	0.98	Yes	X	700	30.92	168	5,194.56	6	6	31,167.36	31,383.80
0.78	0.33	EXC		700	14.00	84	1,176.00	9	3	3,528.00	4,746.00
0.98	0.98	Yes		700	30.92	168	5,194.56	6	6	31,167.36	31,352.88
4.59	4.22			700							
0.88	0.87	No	X	800	56.70	168	9,525.60	6	6	57,153.60	51,086.70
0.88	0.87			800							
22.00	19.93										

IRVINE RANCH WATER DISTRICT
SUMMARY
AGENCY & DISTRICT TEMPORARY EMPLOYEES

TERMINATED

Current Month FTE	Avg FYTD Temp Emp FTE	Active PERS Y/N *	Agency	Dept	Hourly Rate	Est Hours per Month	Est Cost Per Month	Expected Duration (Months)	Actual Worked (Months)	Projected Cost FYTD	Actual Cost FYTD
0.25	0.32	No	X	140	37.15	168	6,241.20	6	3	18,723.60	12,468.65
0.25	0.32			100							
0.25	0.38	Yes		200	22.37	168	3,758.16	12	3	11,274.48	8,746.67
0.56	0.85	Yes		200	23.92	168	4,018.56	2	4	16,074.24	14,017.12
0.81	1.22			200							
0.00	0.00			300							
0.17	0.46	No	X	400	30.53	168	5,129.04	5	3	15,387.12	9,769.60
0.17	0.46			400							
0.00	0.00			500							
0.64	0.43	Yes		600	32.76	168	5,503.68	2	3	16,511.04	14,840.28
0.64	0.43			600							
0.00	0.00			700							
0.00	0.00			800							
1.87	2.44									924,572.88	824,851.02

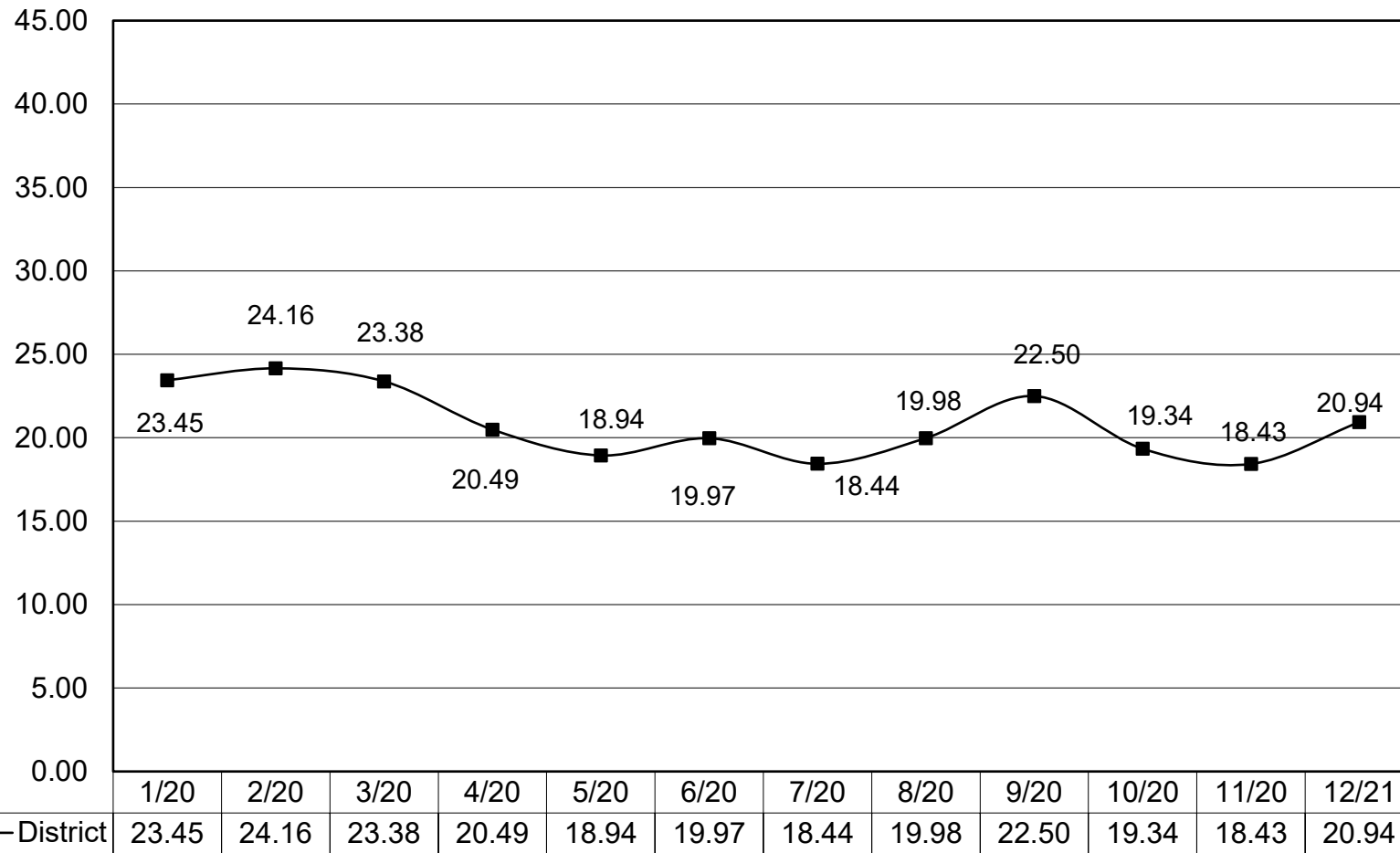
EXC = Exclude from PERS enrollment

Yes= Temporary employee enrolled in PERS Membership


No=Temporary Agency employee

*Data reported 30 days in arrears

Temporary Employees **Full Time Equivalency** **District Totals as of December 31, 2020**



Note: This page is intentionally left blank.

February 2, 2021
Prepared by: J. Davis
Submitted by: R. Jacobson / C. Clary
Approved by: Paul A. 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 January 25, 2021, as outlined in Exhibit "A";
- The U.S. Treasury Yield Curve as of January 25, 2021, as shown in Exhibit "B";
- The Summary of Fixed and Variable Debt as of January 25, 2021, as outlined in Exhibit "C"; and
- The Summary of Variable Rate Debt Rates as of January 25, 2021, as outlined in Exhibit "D".

BACKGROUND:

Investment Portfolio:

Due to the timing of the Committee meeting, the rate of return for January 2021 is not complete at this time. Preliminary calculations indicate a rate of return for the fixed income investment portfolio of 0.87%, which is a 0.09% decrease from December's rate of 0.96%. The decrease is due to a greater average balance in the fixed income portfolio at lower interest rates and a decrease in the Local Agency Investment Fund's (LAIF) rate from 0.54% to 0.48%. Including real estate investments, the weighted average rate of return for IRWD's investment portfolio for January 2021 was 2.77%, which was a 0.11% decrease from December's rate of 2.88%.

Debt Portfolio:

As of January 25, 2021, IRWD's weighted average all-in variable rate was 0.34%, which was a 0.02% decrease from December's rate of 0.36%. Including IRWD's weighted average fixed rate bond issues of 3.69% and the 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 2.92%, a 0.01% increase from December's rate of 2.91%.

FISCAL IMPACTS:

Fiscal impacts are outlined above and included in the exhibits provided.

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 January 25, 2021

Exhibit “B” – Yield Curve as of January 25, 2021

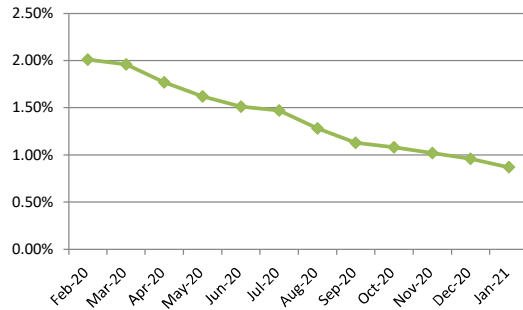
Exhibit “C” – Summary of Fixed and Variable Debt as of January 25, 2021

Exhibit “D” – Summary of Variable Rate Debt Rates as of January 25, 2021

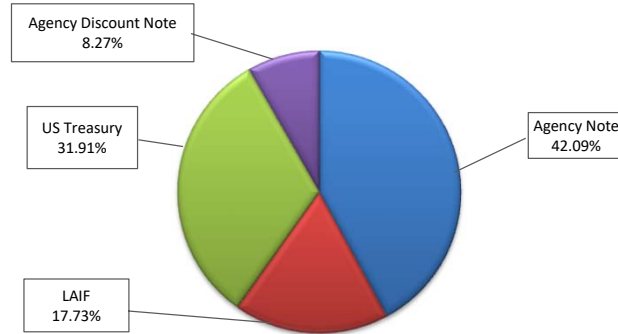
Exhibit "A"

Irvine Ranch Water District Investment Portfolio Summary January 2021

Monthly Fixed Income Yield



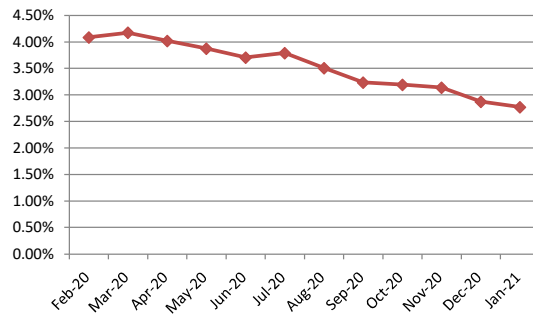
Portfolio Distribution



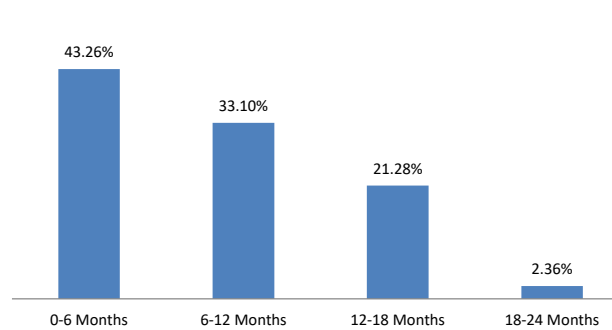
Investment Summary

Type	PAR	Book Value	Market Value
Agency Note	178,000,000	178,504,191	179,449,390
US Treasury	135,000,000	135,570,614	136,479,706
LAIF	75,000,000	75,000,000	75,170,349
Agency Discount Note	35,000,000	34,981,286	34,920,450
Grand Total	423,000,000	424,056,091	426,019,895

Weighted Average Return
Including Real Estate Portfolio



Maturity Distribution



Top Issuers

Issuer	PAR	% Portfolio
US Treasury	135,000,000	31.91%
Fed Home Loan Bank	90,000,000	21.28%
Fed Farm Credit Bank	80,000,000	18.91%
State of California Tsy.	75,000,000	17.73%
Fed Home Loan Mortgage Corp	25,000,000	5.91%
Fed Natl Mortgage Assoc	18,000,000	4.26%
Grand Total	423,000,000	100.00%

IRVINE RANCH WATER DISTRICT
INVESTMENT SUMMARY REPORT

01/25/21

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE ⁽¹⁾ 1/25/2021	UNREALIZED ⁽²⁾ GAIN/(LOSS)
07/24/20			01/26/21		LAIF	State of California Tsy.	\$75,000,000		0.480%	\$75,000,000.00	\$75,000,000.00	75,170,348.85	170,348.85
10/12/18	NA	NA	01/31/21	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	1.375%	2.890%	9,664,843.76	10,000,000.00	10,009,100.00	9,100.00
12/14/18	NA	NA	02/16/21	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	2.375%	2.806%	4,954,750.00	4,998,121.70	5,013,400.00	15,278.30
08/13/20	NA	NA	02/25/21	Aaa/NR/AAA	Treasury - Bill	US Treasury	10,000,000	0.110%	0.112%	9,994,011.11	9,999,266.67	9,999,000.00	(266.67)
12/14/18	NA	NA	02/28/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.000%	2.755%	4,919,515.95	4,995,512.04	5,014,050.00	18,537.96
02/12/19	NA	NA	03/12/21	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	2.500%	2.516%	9,996,500.00	9,999,820.16	10,044,200.00	44,379.84
02/25/19	NA	NA	03/12/21	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.375%	2.549%	4,982,700.00	4,999,095.58	5,021,550.00	22,454.42
06/17/19	NA	NA	03/17/21	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.950%	1.938%	5,001,050.00	5,000,072.30	5,018,900.00	18,827.70
02/28/20	NA	NA	04/13/21	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	3,000,000	2.500%	1.185%	3,043,950.00	3,017,687.20	3,019,890.00	2,202.80
11/24/20	NA	NA	04/27/21	NR	FHLB - Discount Note	Fed Home Loan Bank	5,000,000	0.075%	0.076%	4,998,395.83	4,999,114.58	4,998,400.00	(714.58)
11/25/20	NA	NA	04/27/21	NR	FHLB - Discount Note	Fed Home Loan Bank	5,000,000	0.075%	0.076%	4,998,406.25	4,999,114.58	4,998,400.00	(714.58)
06/14/19	NA	NA	04/30/21	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.750%	1.913%	4,985,000.00	4,998,075.80	5,026,850.00	28,774.20
12/05/19	NA	NA	04/30/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.250%	1.650%	5,041,406.25	5,007,116.70	5,034,550.00	27,433.30
09/13/19	NA	NA	05/15/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.625%	1.757%	5,071,093.75	5,012,004.35	5,045,700.00	33,695.65
11/18/20	NA	NA	05/27/21	NR	FHLB - Discount Note	Fed Home Loan Bank	5,000,000	0.080%	0.081%	4,997,888.89	4,998,722.22	4,998,000.00	(722.22)
03/02/20	NA	NA	05/31/21	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	2.125%	1.186%	10,115,711.10	10,053,405.12	10,081,300.00	27,894.88
06/11/20	NA	NA	06/09/21	NR	FHLB - Discount Note	Fed Home Loan Bank	5,000,000	0.190%	0.193%	4,990,420.85	4,996,622.23	4,997,850.00	1,227.77
09/18/19	NA	NA	06/11/21	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.250%	1.786%	5,039,300.00	5,008,083.86	5,045,650.00	37,566.14
01/16/20	NA	NA	06/30/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	1.125%	1.594%	4,966,406.25	4,990,573.51	5,025,000.00	34,426.49
12/31/20	NA	NA	07/01/21	Aaa/NR/AAA	Treasury - Bill	US Treasury	10,000,000	0.090%	0.090%	9,995,450.00	9,996,250.00	9,995,450.00	(800.00)
01/19/21	NA	NA	07/15/21	Aaa/NR/AAA	Treasury - Bill	US Treasury	5,000,000	0.075%	0.076%	4,998,156.25	4,998,291.67	4,998,156.25	(135.42)
07/26/19	NA	NA	07/19/21	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.875%	1.927%	4,995,000.00	4,998,839.78	5,049,500.00	50,660.22
08/13/20	NA	NA	08/12/21	NR	FFCB - Discount Note	Fed Farm Credit Bank	10,000,000	0.140%	0.142%	9,985,844.44	9,992,533.33	9,932,300.00	(60,233.33)
08/13/20	NA	NA	08/13/21	Aaa/NR/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	0.125%	0.133%	9,999,220.00	9,999,587.56	9,993,900.00	(5,687.56)
08/01/19	NA	NA	08/31/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	1.125%	1.816%	4,929,687.50	4,980,504.68	5,034,000.00	53,495.32
09/17/20	NA	NA	09/17/21	NA	FHLB - Note	Fed Home Loan Bank	5,000,000	0.125%	0.132%	4,999,660.00	4,999,787.62	5,000,150.00	362.38
08/13/20	NA	NA	09/30/21	Aaa/AA+/NR	Treasury - Note	US Treasury	10,000,000	1.125%	0.133%	10,112,109.38	10,065,419.76	10,075,400.00	9,980.24
09/30/20	NA	NA	09/30/21	NA	FHLB - Note	Fed Home Loan Bank	10,000,000	0.125%	0.122%	10,000,336.80	10,000,222.38	10,003,000.00	2,777.62
08/13/20	NA	NA	10/07/21	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	10,000,000	1.375%	0.143%	10,141,500.00	10,083,552.38	10,095,400.00	11,847.62
10/11/19	NA	NA	10/15/21	Aaa/AA+/NR	Treasury - Note	US Treasury	5,000,000	2.875%	1.540%	5,131,640.63	5,045,850.34	5,107,600.00	61,749.66
10/22/19	NA	NA	10/15/21	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.400%	1.642%	4,976,500.00	4,991,690.61	5,051,600.00	59,909.39
10/29/20	NA	NA	10/19/21	Aaa/NR/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	0.125%	0.127%	9,999,800.00	9,999,853.52	10,002,700.00	2,846.48
10/27/20	NA	NA	10/26/21	NR	FFCB - Discount Note	Fed Farm Credit Bank	5,000,000	0.130%	0.132%	4,993,427.78	4,995,179.17	4,995,500.00	320.83
11/05/19	NA	NA	11/15/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.875%	1.610%	5,125,585.94	5,048,641.25	5,118,750.00	70,108.75
11/08/19	NA	NA	11/30/21	Aaa/AA+/NR	Treasury - Note	US Treasury	5,000,000	1.750%	1.680%	5,007,031.25	5,002,819.97	5,073,850.00	71,030.03
09/28/20	NA	NA	12/03/21	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	0.150%	0.120%	5,001,765.00	5,001,249.01	5,000,800.00	(449.01)
10/30/20	NA	NA	12/15/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.625%	0.127%	5,140,429.69	5,108,311.95	5,118,950.00	10,638.05
04/23/20	NA	NA	12/20/21	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	1.625%	0.309%	10,217,480.00	10,129,554.92	10,146,800.00	17,245.08
11/25/19	NA	NA	12/31/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.000%	1.619%	5,039,062.50	5,016,959.34	5,093,350.00	76,390.66
11/25/19	NA	NA	01/13/22	Aaa/NA/NR	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	2.375%	1.635%	5,077,250.00	5,034,267.31	5,115,600.00	81,332.69
08/14/20	NA	NA	01/13/22	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	2.375%	0.147%	5,157,297.23	5,105,270.49	5,115,600.00	10,329.51
03/08/19	NA	NA	01/15/22	Aaa/AA+/NR	Treasury - Note	US Treasury	5,000,000	2.500%	2.460%	5,005,468.75	5,001,822.92	5,122,450.00	120,627.08
10/21/20	Continuous after	04/21/21	01/21/22	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	0.150%	0.150%	5,000,000.00	5,000,000.00	5,000,250.00	250.00
12/19/19	NA	NA	01/31/22	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	1.875%	1.641%	5,024,218.75	5,011,389.70	5,094,550.00	83,160.30
03/21/19	NA	NA	02/03/22	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.030%	2.361%	4,954,350.00	4,984,044.24	5,103,000.00	118,955.76
11/13/20	Continuous after	05/04/21	02/04/22	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	0.140%	0.150%	4,999,390.00	4,999,498.93	5,000,250.00	751.07
12/19/19	NA	NA	02/15/22	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.500%	1.652%	5,089,453.13	5,042,969.25	5,133,000.00	90,030.75
11/13/20	NA	NA	02/28/22	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	1.875%	0.139%	5,112,304.69	5,093,270.00	5,101,550.00	8,280.00
11/19/20	NA	NA	02/28/22	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	1.750%	0.126%	5,103,710.94	5,087,241.82	5,094,550.00	7,308.18
03/08/19	NA	NA	03/11/22	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.500%	2.549%	5,002,750.00	5,001,008.42	5,141,500.00	140,491.58
12/23/20	NA	NA	03/22/22	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	10,000,000	0.090%	0.090%	10,000,000.00	10,000,000.00	10,054,900.00	54,900.00
12/19/19	NA	NA	03/31/22	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	1.875%	1.645%	5,025,585.94	5,012,992.62	5,109,400.00	96,407.38

IRVINE RANCH WATER DISTRICT
INVESTMENT SUMMARY REPORT

01/25/21

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE ⁽¹⁾ 1/25/2021	UNREALIZED ⁽²⁾ GAIN/(LOSS)
02/21/20	NA	NA	04/14/22	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.400%	1.414%	4,998,500.00	4,999,028.74	5,081,750.00	82,721.26
04/23/20	NA	NA	04/21/22	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	10,000,000	1.580%	0.320%	10,250,200.00	10,155,343.96	10,186,400.00	31,056.04
05/28/20	One Time	05/26/21	05/26/22	Aaa/NR/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.270%	0.270%	5,000,000.00	5,000,000.00	5,001,400.00	1,400.00
01/15/20	NA	NA	07/15/22	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.600%	1.594%	5,000,750.00	5,000,435.03	5,113,000.00	112,564.97
05/28/20	One Time	05/26/21	08/26/22	Aaa/NR/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.300%	0.300%	5,000,000.00	5,000,000.00	5,001,450.00	1,450.00
TOTAL INVESTMENTS							\$423,000,000			\$424,352,266.58	\$424,056,091.23	\$426,019,895.10	\$1,963,803.87

Petty Cash
Ck Balance

Bank of America

ECR 0.19%

3,400.00

11,752,995.25

\$436,108,661.83

⁽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

Outstanding Variable Rate Debt	\$251,100,000
Net Outstanding Variable Rate Debt (Less \$60 million fixed-payer swaps)	\$191,100,000
Investment Balance:	\$436,108,662
Investment to Variable Rate Debt Ratio:	228%
Portfolio - Average Number of Days To Maturity	201

This Investment Summary Report is in conformity with the 2021 Investment Policy and provides sufficient liquidity to meet the next six months estimated expenditures.

*S - Step up

	Investment Portfolio	Real Estate ⁽³⁾ Portfolio	Weighted Avg. Return
January	0.87%	10.96%	2.77%
December	0.96%	10.96%	2.88%
Change	-0.09%		-0.11%

IRVINE RANCH WATER DISTRICT
SUMMARY OF MATURITIES

01/25/21

DATE	TOTAL	%	LAIF	Agency Notes	Agency Discount Notes	Municipal Bonds	US Treasury
01/21	\$85,000,000	20.09%	\$75,000,000				10,000,000
02/21	20,000,000	4.73%		5,000,000			15,000,000
03/21	20,000,000	4.73%		20,000,000			
04/21	23,000,000	5.44%		8,000,000	10,000,000		5,000,000
05/21	20,000,000	4.73%			5,000,000		15,000,000
06/21	15,000,000	3.55%		5,000,000	5,000,000		5,000,000
07/21	20,000,000	4.73%		5,000,000			15,000,000
08/21	25,000,000	5.91%		10,000,000	10,000,000		5,000,000
09/21	25,000,000	5.91%		15,000,000			10,000,000
10/21	35,000,000	8.27%		25,000,000	5,000,000		5,000,000
11/21	10,000,000	2.36%		-			10,000,000
12/21	25,000,000	5.91%		15,000,000			10,000,000
SUB-TOTAL	\$323,000,000	76.36%	\$75,000,000	\$108,000,000	35,000,000		\$105,000,000
13 Months - 3 YEARS							
1/01/2022 - 3/31/2022	70,000,000	16.55%		40,000,000			30,000,000
04/01/2022 - 6/30/2022	20,000,000	4.73%		20,000,000			
07/01/2022 - 09/30/2022	10,000,000	2.36%		10,000,000			
10/01/2022 +	-						
	-						
	-						
	-						
	-						
	-						
TOTALS	\$423,000,000	100.00%	\$75,000,000	\$178,000,000	\$35,000,000		\$135,000,000

% OF PORTFOLIO	17.73%	42.09%	8.27%	31.91%
----------------	--------	--------	-------	--------

Irvine Ranch Water District
Summary of Real Estate - Income Producing Investments
12/31/2020

	ACQUISITION DATE	PROPERTY TYPE	OWNERSHIP INTEREST	ORIGINAL COST	MARKET VALUE 6/30/2020	ANNUALIZED RATE OF RETURN QUARTER ENDED 12/31/2020
Sycamore Canyon	Dec-92	Apartments	Fee Simple	\$ 43,550,810	\$ 152,340,625	19.83%
Wood Canyon Villas	Jun-91	Apartments	Limited Partner	\$ 6,000,000	\$ 30,432,947	8.51%
ITC (230 Commerce)	Jul-03	Office Building	Fee Simple	\$ 5,739,845	\$ 11,964,600	9.15%
Waterworks Business Pk.	Nov-08	Research & Dev.	Fee Simple	\$ 8,630,577	\$ 9,363,600	6.73%
Sand Canyon Professional Center - Medical Office	Jul-12	Medical Office	Fee Simple	\$ 8,648,594	\$ 11,444,400	8.76%
Sand Canyon Professional Center - General Office	Sep-20	Office Building	Fee Simple	\$ 25,985,968	\$ 28,770,000	-0.79%
Total - Income Properties				\$ 98,555,794	\$ 244,316,172	10.96%

**IRVINE RANCH WATER DISTRICT INVESTMENT SUMMARY REPORT
INVESTMENT ACTIVITY**

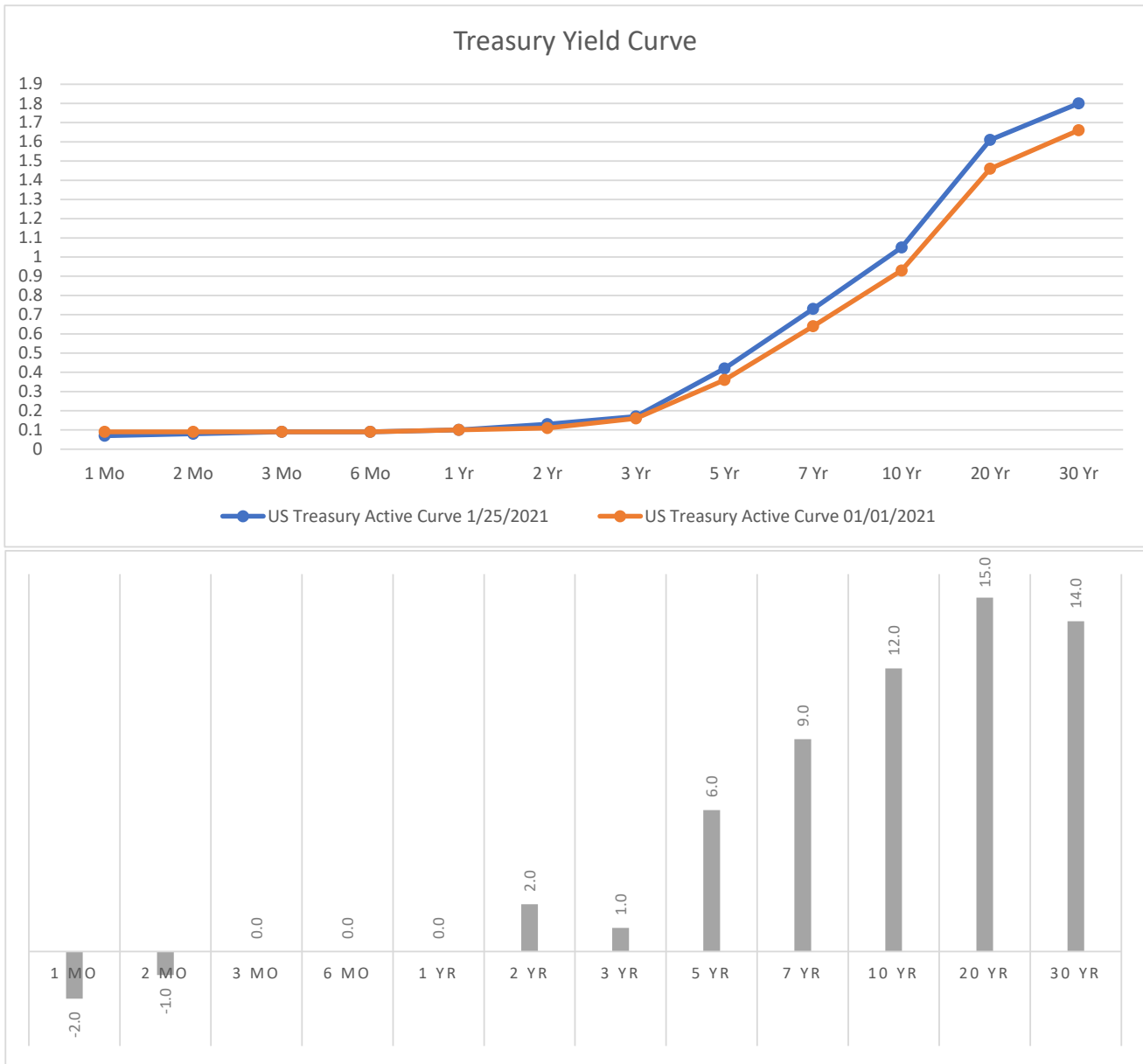
Jan-21

MATURITIES/SALES/CALLS

PURCHASES

DATE	SECURITY TYPE	PAR	YIELD	Settlement Date	Maturity Date	SECURITY TYPE	PAR	YIELD TO MATURITY
1/19/2021	FHLB - Discount Note	\$5,000,000	0.20%	1/19/2021	7/15/2021	US Treasury	\$5,000,000	0.08%

Exhibit "B"

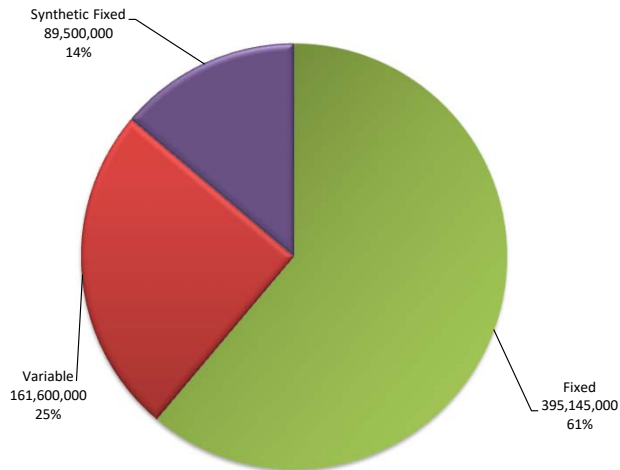


Tenor	US Treasury Active Curve 1/25/2021	US Treasury Active Curve 01/01/2021	Change
1 Mo	0.07	0.09	-2.0
2 Mo	0.08	0.09	-1.0
3 Mo	0.09	0.09	0.0
6 Mo	0.09	0.09	0.0
1 Yr	0.10	0.10	0.0
2 Yr	0.13	0.11	2.0
3 Yr	0.17	0.16	1.0
5 Yr	0.42	0.36	6.0
7 Yr	0.73	0.64	9.0
10 Yr	1.05	0.93	12.0
20 Yr	1.61	1.46	15.0
30 Yr	1.80	1.66	14.0

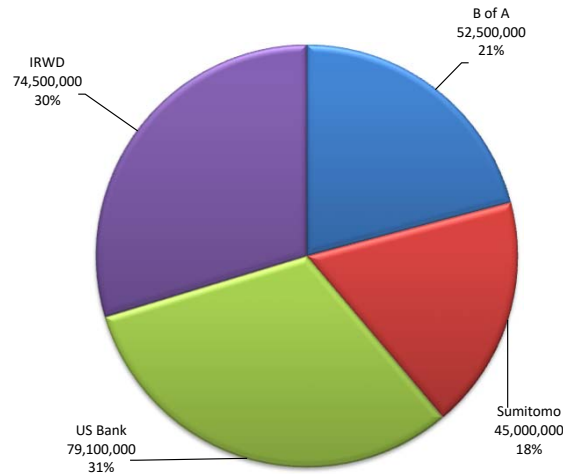
Note: This page is intentionally left blank.

Exhibit "C"
Irvine Ranch Water District
Summary of Fixed and Variable Rate Debt
January 2021

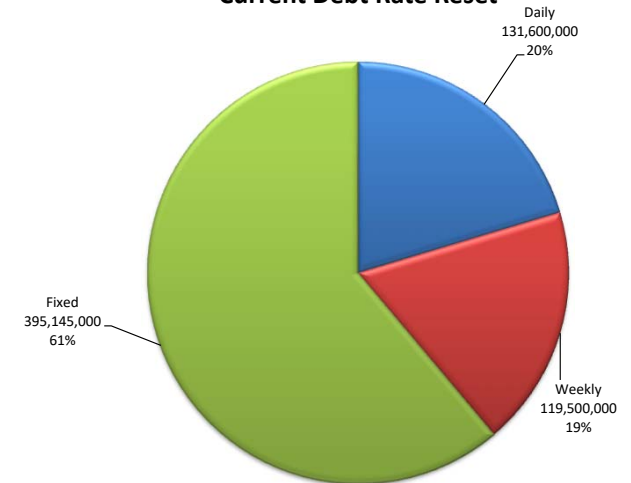
Current Debt Mix By Type



Letters of Credit / Support



Current Debt Rate Reset



Outstanding Par by Series

Series	Issue Date	Maturity Date	Remaining Principal	Percent	Letter of Credit/Support	Rmkt Agent	Mode	Reset
Series 1993	05/19/93	04/01/33	\$26,600,000	4.12%	US Bank	BAML	Variable	Daily
Series 2008-A Refunding	04/24/08	07/01/35	\$45,000,000	6.96%	Sumitomo	BAML	Variable	Weekly
Series 2011-A-1 Refunding	04/15/11	10/01/37	\$44,700,000	6.92%	IRWD	Goldman	Variable	Weekly
Series 2011-A-2 Refunding	04/15/11	10/01/37	\$29,800,000	4.61%	IRWD	Goldman	Variable	Weekly
Series 2009 - A	06/04/09	10/01/41	\$52,500,000	8.12%	US Bank	US Bank	Variable	Daily
Series 2009 - B	06/04/09	10/01/41	\$52,500,000	8.12%	B of A	Goldman	Variable	Daily
2016 COPS	09/01/16	03/01/46	\$116,745,000	18.07%	N/A	N/A	Fixed	Fixed
2010 Build America Taxable Bond	12/16/10	05/01/40	\$175,000,000	27.08%	N/A	N/A	Fixed	Fixed
Series 2016	10/12/16	02/01/46	\$103,400,000	16.00%	N/A	N/A	Fixed	Fixed
Total			\$646,245,000	100.00%				

IRVINE RANCH WATER DISTRICT
SUMMARY OF FIXED & VARIABLE RATE DEBT

January-21

ITN
Daily
Weekly

GENERAL BOND INFORMATION							LETTER OF CREDIT INFORMATION										TRUSTEE INFORMATION								
VARIABLE RATE ISSUES	Issue Date	Maturity Date	Principal Payment Date	Payment Date	Original Par Amount	Remaining Principal	Letter of Credit	Reimbursement Agreement Date	L/C Exp. Date		MOODY'S	S&P	FITCH	LOC Stated Amount	LOC Fee	Annual LOC Cost	Rmkt Agent	Reset	Rmkt Fees	Annual Cost	Trustee				
SERIES 1993	05/19/93	04/01/33	Apr 1	5th Bus. Day	\$38,300,000	\$26,600,000	US BANK	05/07/15	12/15/21		Aa3/VMIG1	AA-/A-1+	N/R	\$26,958,553	0.3300%	\$88,963	BAML	DAILY	0.10%	\$26,600	BANK OF NY				
SERIES 2008-A Refunding	04/24/08	07/01/35	Jul 1	5th Bus. Day	\$60,215,000	\$45,000,000	SUMITOMO	04/01/11	07/21/21		A1/P-1	A/A-1	A/F1	\$45,665,753	0.3150%	\$143,847	BAML	WED	0.07%	\$31,500	BANK OF NY				
SERIES 2011-A-1 Refunding	04/15/11	10/01/37	Oct 1	1st Bus. Day	\$60,545,000	\$44,700,000	N/A	N/A	N/A		Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$55,875	BANK OF NY				
SERIES 2011-A-2 Refunding	04/15/11	10/01/37	Oct 1	1st Bus. Day	\$40,370,000	\$29,800,000	N/A	N/A	N/A		Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$37,250	BANK OF NY				
SERIES 2009 - A	06/04/09	10/01/41	Oct 1	1st Bus. Day	\$75,000,000	\$52,500,000	US BANK	04/01/11	12/15/21		Aa2/VMIG 1	AA-/A-1+	AA/F1+	\$53,086,849	0.3300%	\$175,187	US Bank	DAILY	0.07%	\$36,750	US BANK				
SERIES 2009 - B	06/04/09	10/01/41	Oct 1	1st Bus. Day	\$75,000,000	\$52,500,000	B of A	04/01/11	05/16/22		Aa2/VMIG 1	A/A-1	A1/F1+	\$53,086,849	0.3000%	\$159,261	Goldman	DAILY	0.10%	\$52,500	US BANK				
					\$349,430,000	\$251,100,000	SUB-TOTAL VARIABLE RATE DEBT					\$178,798,005					0.3173%	\$567,258						0.10%	\$240,475
							(Wt. Avg)										(Wt. Avg)								
FIXED RATE ISSUES																									
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 (2021)	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 (2022)	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				
					\$395,145,000	\$395,145,000	SUB-TOTAL FIXED RATE DEBT																		
					\$744,575,000	\$646,245,000	TOTAL - FIXED & VARIABLE RATE DEBT																		

Remarketing Agents			GO VS COP's		
Goldman	127,000,000	51%	GO:	529,500,000	82%
BAML	71,600,000	29%	COPS:	116,745,000	18%
US Bank	52,500,000	21%	Total	<u>646,245,000</u>	
	<u>251,100,000</u>				

LOC Banks		Breakdown Between Variable & Fixed Rate Mode	
SUMITOMO	45,000,000	Daily Issues	131,600,000 20%
BANK OF AMERICA	52,500,000	Weekly Issues	45,000,000 7%
US BANK	79,100,000	ITN Issues	74,500,000 12%
	<u>176,600,000</u>	Sub-Total	<u>251,100,000</u>
		Fixed Rate Issues	\$395,145,000 61%
		Sub-Total - Fixed	<u>395,145,000</u>
		TOTAL DEBT	
		FIXED & VAR.	<u>646,245,000</u> 100%

Exhibit "D"
IRVINE RANCH WATER DISTRICT
SUMMARY OF DEBT RATES
Jan-21

Rmkt Agent Mode	GOLDMAN DAILY	GOLDMAN WEEKLY	GOLDMAN WEEKLY	MERRILL LYNCH DAILY	MERRILL LYNCH WEEKLY	US BANK DAILY
Bond Issue	2009 - B	2011 A-1	2011 A-2	1993	2008-A	2009-A
Par Amount	52,500,000	44,700,000	29,800,000	26,600,000	45,000,000	52,500,000
Bank	BOFA	(SIFMA -6)	(SIFMA -6)	US BANK	Sumitomo	US BANK
Reset		Wednesday	Wednesday		Wednesday	
1/1/2021	0.06%	0.03%	0.03%	0.08%	0.08%	0.06%
1/2/2021	0.06%	0.03%	0.03%	0.08%	0.08%	0.06%
1/3/2021	0.06%	0.03%	0.03%	0.08%	0.08%	0.06%
1/4/2021	0.01%	0.03%	0.03%	0.04%	0.08%	0.05%
1/5/2021	0.01%	0.03%	0.03%	0.03%	0.08%	0.01%
1/6/2021	0.01%	0.03%	0.03%	0.02%	0.08%	0.01%
1/7/2021	0.01%	0.01%	0.01%	0.01%	0.07%	0.01%
1/8/2021	0.01%	0.01%	0.01%	0.01%	0.07%	0.01%
1/9/2021	0.01%	0.01%	0.01%	0.01%	0.07%	0.01%
1/10/2021	0.01%	0.01%	0.01%	0.01%	0.07%	0.01%
1/11/2021	0.01%	0.01%	0.01%	0.01%	0.07%	0.01%
1/12/2021	0.01%	0.01%	0.01%	0.01%	0.07%	0.01%
1/13/2021	0.01%	0.01%	0.01%	0.01%	0.07%	0.01%
1/14/2021	0.01%	0.00%	0.00%	0.01%	0.06%	0.01%
1/15/2021	0.01%	0.00%	0.00%	0.01%	0.06%	0.01%
1/16/2021	0.01%	0.00%	0.00%	0.01%	0.06%	0.01%
1/17/2021	0.01%	0.00%	0.00%	0.01%	0.06%	0.01%
1/18/2021	0.01%	0.00%	0.00%	0.01%	0.06%	0.01%
1/19/2021	0.01%	0.00%	0.00%	0.01%	0.06%	0.01%
1/20/2021	0.01%	0.00%	0.00%	0.01%	0.06%	0.01%
1/21/2021	0.01%	0.00%	0.00%	0.01%	0.05%	0.01%
1/22/2021	0.01%	0.00%	0.00%	0.01%	0.05%	0.01%
1/23/2021	0.01%	0.00%	0.00%	0.01%	0.05%	0.01%
1/24/2021	0.01%	0.00%	0.00%	0.01%	0.05%	0.01%
1/25/2021	0.01%	0.00%	0.00%	0.01%	0.05%	0.01%
Avg Interest Rates	0.01%	0.01%	0.01%	0.02%	0.06%	0.02%
Rmkt Fee	0.10%	0.13%	0.13%	0.10%	0.07%	0.07%
LOC Fee	0.30%			0.33%	0.32%	0.33%
All-In Rate	0.41%	0.13%	0.13%	0.45%	0.45%	0.42%
Par Amount	97,200,000		29,800,000	71,600,000		52,500,000

Interest Rate Mode	Percent of Total Variable Rate Debt	Par Outstanding	Weighted All-In Average Rate	Base Rate Average
Daily	52.41%	131,600,000	0.42%	0.02%
Weekly	47.59%	119,500,000	0.25%	0.03%
	100.00%	\$ 251,100,000	0.34%	0.02%
Fixed				
COPS 2016	29.54%	116,745,000	2.90%	
BABS 2010	44.29%	175,000,000	4.44%	(1)
SERIES 2016	26.17%	103,400,000	3.32%	
	100.00%	\$ 395,145,000	3.69%	
All-In Debt Rate Including \$60 Million Notional Amount of Swaps				2.92%

(1) Rate adjusted up from 4.35% as a result of sequestration reducing BAB's subsidy by 5.7%

Note: This page is intentionally left blank.

February 2, 2021
Prepared by: M. Pulles
Submitted by: C. Clary
Approved by: Paul A. Cook



FINANCE AND PERSONNEL COMMITTEE

EXPENSES AND FEES OF BOARD MEMBERS AND GENERAL MANAGER PAID THROUGH THE SECOND QUARTER OF FY 2020-21

SUMMARY:

Pursuant to the Policy Regarding Business Expense Reimbursement, Travel, Meeting Compensation and Representation, staff has assembled for Committee review an Expense Summary, as shown in Exhibits “A” and “B”, for IRWD’s Board members and the General Manager through the second quarter of Fiscal Year (FY) 2020-21. Provided below is a summary of expenses paid to date.

	Name	Conference, Travel, and Other District-Related Expenses	Meeting Fees	Total
Board Members:	LaMar	\$ 0	\$ 18,000	\$ 18,000
	Matheis	1,498	17,700	19,198
	McLaughlin	0	0	0
	Reinhart	725	18,000	18,725
	Swan	7,092	18,000	25,092
	Withers	350	16,800	17,150
	<i>Total:</i>	<i>\$9,665</i>	<i>\$88,500</i>	<i>\$98,165</i>
General Manager:	Cook	\$ 332	N/A	\$ 332
	<i>Total:</i>	<i>\$ 332</i>	<i>N/A</i>	<i>\$ 332</i>

FISCAL IMPACTS:

Meeting fees total \$88,500 versus a budget of \$92,610 resulting in a positive variance of \$4,110 year to date. Conference and meeting-related travel expenses for both the Board of Directors and the General Manager totaled \$9,997 versus a budget of \$56,370, resulting in a positive variance of \$46,373.

The total cost for Board and General Manager conference, travel, and other District-related expenses, including meeting fees, through the second quarter FY 2020-21 is \$98,497, resulting in a positive variance of \$50,483 to budget.

ENVIRONMENTAL COMPLIANCE:

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

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit “A” – Expense Summary Overview for the Board Members and General Manager
Exhibit “B” – Expense Summaries by Individual

Exhibit "A"



**Irvine Ranch Water District
Conference/Seminar and Monthly Expense Summary
For the Second Quarter, FY 2020-21**

All Board Members/General Manager

Name	Registration Fees	Airfare	Lodging	Meals	Taxi/Shuttle/ Auto Rental	Parking Fees	Other	Mileage Reimb		Reimb. By ACWA	Total
								# Miles	Amount		
Board Members:											
Steven LaMar	\$ -	\$ 320	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	(320)	\$ -
Mary Aileen Matheis	445	594	354	-	103	-	2	-	-	-	1,498
Karen McLaughlin	-	-	-	-	-	-	-	-	-	-	-
Doug Reinhart	725	-	-	-	-	-	-	-	-	-	725
Peer Swan	2,791	1,856	1,881	87	69	48	81	485	279	-	7,092
John Withers	350	-	-	-	-	-	-	-	-	-	350
											-
											-
											-
											-
											-
General Manager:											
Paul Cook	-	-	-	-	-	-	332	-	-	-	332
											-
											-
Total	\$ 4,311	\$ 2,770	\$ 2,235	\$ 87	\$ 172	\$ 48	\$ 415	485	\$ 279	\$ (320)	\$ 9,997

Note: This page is intentionally left blank.

Steven LaMar

*Detail of Description/Location provided on Expense Report



Mary Aileen Matheis

Mary Aileen Matheis

Mary Aileen Matheis



Karen McLaughlin

Karen McLaughlin

B-3



Date Paid	Date Incurred	Description/Location	Registration Fees	Airfare	Lodging	Meals	Taxi/Shuttle/ Auto Rental	Parking Fees	Other	Mileage Reimb		Reimb. By ACWA	Total	
										# Miles	Amount			
<u>Monthly Expense Reports</u>														
Paid Feb'20	July 2020	ACWA 2020 Spring/Summer Virtual Conf.(\$350 credit pending)	\$ 725.00										\$ 725.00	
	August 2020	Monthly Expense Report (no activity this period)												-
	September 2020	Monthly Expense Report (no activity this period)												-
	October 2020	Monthly Expense Report (no activity this period)												-
	November 2020	Monthly Expense Report (no activity this period)												-
	December 2020	Monthly Expense Report (no activity this period)												-
	January 2021	Monthly Expense Report (no activity this period)												-
	February 2021	Monthly Expense Report (no activity this period)												-
	March 2021	Monthly Expense Report (no activity this period)												-
	April 2021	Monthly Expense Report (no activity this period)												-
	May 2021	Monthly Expense Report (no activity this period)												-
	June 2021	Monthly Expense Report (no activity this period)												-
														-
<u>Conferences/Seminars and Other Non-local Travel</u>														
													-	
													-	
													-	
													-	
													-	
													-	
													-	
													-	
													-	
													-	
Total			\$ 725.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	\$ -	\$ 725.00	

*Detail of Description/Location provided on Expense Report



Peer Swan

Peer Swan

Peer Swan



**Irvine Ranch Water District
Conference/Seminar and Monthly Expense Summary
For the Second Quarter, FY 2020-21**

John Withers

[illegible]

*Detail of Description/Location provided on Expense Report



Paul Cook

Paul Cook

Paul Cook

Note: This page is intentionally left blank.

February 2, 2021
Prepared by: J. Tobar
Submitted by: C. Clary
Approved by Paul A. Cook



FINANCE AND PERSONNEL COMMITTEE

LEGAL FEES QUARTERLY UPDATE

SUMMARY:

Below is an analysis that provides a summary of legal fees incurred by IRWD through the second quarter of Fiscal Year (FY) 2020-21.

BACKGROUND:

Legal fees for IRWD's general operations through the second quarter of FY 2020-21 totaled \$939,933 compared to a budget of \$1,220,000, resulting in a positive variance of \$280,067, or 23.0%. Of the total legal fees attributable to operations, insurance litigation was over budget by \$58,921 due primarily to work associated with the Main Street line break. There were positive variances in all other categories including general services, litigation, special projects and personnel issues. Actual legal fees accounted for 1.04% of actual operating expenses and 2.47% of total expenditures.

Capitalized legal fees associated with major capital projects through the second quarter of FY 2020-21 totaled \$2,212,653. The Kern Fan Groundwater Storage Project and the Michelson Water Recycling Plant Biosolids and Energy Recovery Facility projects comprised 99.0% of the total legal fees associated with capital spending through the second quarter of FY 2020-21.

There were no non-operating legal fees through the second quarter of FY 2020-21.

Exhibit "A" provides a detailed comparison of actual to budgeted legal fees through the second quarter of FY 2020-21. Exhibit "B" provides a three-year comparison of fees incurred by the firms providing services to IRWD in FY 2018-19 through FY 2020-21, their hourly rates, and a general description of the services provided.

FISCAL IMPACTS:

Fiscal impacts are outlined above.

ENVIRONMENTAL COMPLIANCE:

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

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit “A” –Legal Fees, Fiscal Year 2020-21

Exhibit “B” –Comparative Analysis of Legal Fees for FY 2018-19 through FY 2020-21

Exhibit "A"

Legal Fees Fiscal Year 2020 - 2021

Firm	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	YTD Actual Operating Legal Fees	YTD Budget Operating Legal Fees	YTD % Actual vs Budget
Operating Legal Fees:							
<u>General Services:</u>							
Hanson Bridgett LLP	\$ 227,614	\$ 187,265	\$ -	\$ -	\$ 414,879		
Jackson Tidus, a Law Corporation	\$ -	\$ 1,386	\$ -	\$ -	\$ 1,386		
Kronick Moskowitz Tiedemann & Girard	\$ 7,126	\$ 15,772	\$ -	\$ -	\$ 22,898		
Sub-total	\$ 234,740	\$ 204,423	\$ -	\$ -	\$ 439,163	\$ 450,000	97.6%
<u>Litigation:</u>							
Alston & Bird LLP	\$ 36,589	\$ 118,697	\$ -	\$ -	\$ 155,286		
Hanson Bridgett LLP	\$ 7,574	\$ -	\$ -	\$ -	\$ 7,574		
Kronick Moskowitz Tiedemann & Girard	\$ 49,133	\$ 153,903	\$ -	\$ -	\$ 203,036		
Sub-total	\$ 93,296	\$ 272,600	\$ -	\$ -	\$ 365,896	\$ 550,000	66.5%
<u>Special Projects:</u>							
Sub-total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 100,000	0.0%
<u>Personnel Issues:</u>							
Burke, Williams & Sorensen, LLP	\$ 1,170	\$ -	\$ -	\$ -	\$ 1,170		
Payne & Fears LLP	\$ 2,057	\$ 6,110	\$ -	\$ -	\$ 8,167		
Pillsbury Winthrop Shaw Pittman LLP	\$ 16,616	\$ -	\$ -	\$ -	\$ 16,616		
Sub-total	\$ 19,843	\$ 6,110	\$ -	\$ -	\$ 25,953	\$ 70,000	37.1%
<u>Insurance Litigation:</u>							
Everett Dorey LLP	\$ 35,278	\$ 14,693	\$ -	\$ -	\$ 49,971		
Kutak Rock LLP	\$ 20,783	\$ 38,167	\$ -	\$ -	\$ 58,950		
Sub-total	\$ 56,061	\$ 52,860	\$ -	\$ -	\$ 108,921	\$ 50,000	217.8%
Total Operating Legal Fees	\$ 403,940	\$ 535,993	\$ -	\$ -	\$ 939,933	\$ 1,220,000	77.0%

Major Capital Projects Legal Fees:

Asset Optimization - Lake Forest Develop.	\$ 4,788	\$ -	\$ -	\$ -	\$ 4,788
Kern Fan Groundwater Storage	\$ 125,557	\$ (80,326)	\$ -	\$ -	\$ 45,231
MWRP Biosolids and Energy Recovery	\$ 1,472,972	\$ 673,108	\$ -	\$ -	\$ 2,146,080
Syphon Reservoir Improvements	\$ -	\$ 14,546	\$ -	\$ -	\$ 14,546
Other	\$ -	\$ 2,008	\$ -	\$ -	\$ 2,008
Capital Projects Total	\$ 1,603,317	\$ 609,336	\$ -	\$ -	\$ 2,212,653

Total Operating and Capital Legal Fees	\$ 2,007,257	\$ 1,145,329	\$ -	\$ -	\$ 3,152,586
---	---------------------	---------------------	-------------	-------------	---------------------

	YTD Actual	YTD Budget
Operating Expense	\$ 90,787,719	\$ 88,840,580
Operating Legal Fees	\$ 939,933	\$ 1,220,000
% of Legal to Operating	1.04%	1.37%
Capital Projects	\$ 36,761,963	\$ 46,883,186
Capital Legal Fees	\$ 2,212,653	
% of Legal to Capital	6.02%	
Total Operating and Capital Expenditures	\$ 127,549,682	\$ 135,723,766
Total Operating and Capital Legal Fees	\$ 3,152,586	
% of Legal Fees to Total Operating and Capital Expenditures	2.47%	

Non-operating Legal Fees:

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
<u>Bond Counsel:</u>					
Total	\$ -	\$ -	\$ -	\$ -	\$ -

Note: This page is intentionally left blank.

Exhibit "B"

Analysis of Legal Fees Second Quarter Ended December 31, 2018 - 2020


Firm	YTD Actual 2018-2019	YTD Actual 2019-2020	YTD Actual 2020-2021	Hourly Rate	Area of Expertise	Service Provided
<u>Operating Legal Fees:</u>						
Alston & Bird LLP	\$ 174,690	\$ 261,349	\$ 155,286	\$ 275 to \$ 585	Litigation	Orange County Water District litigation
Atkinson, Andelson, Loya, Ruud and Rom	\$ 8,129	\$ -	\$ -	\$ 220	IRWD legal counsel	District general counsel/legislative/litigation/special project
Burke, Williams & Sorensen, LLP	\$ 16,437	\$ 2,633	\$ 1,170	\$ 325	Employee relations	Personnel policy review and revision
Everett Dorey LLP ⁽¹⁾	\$ 34,988	\$ 41,177	\$ 49,971	\$ 235 to \$ 260	Litigation	County of Orange Litigation
Hanson Bridgett LLP	\$ -	\$ -	\$ 422,453	\$ 345 to \$ 490	IRWD legal counsel	District general counsel/legislative/litigation/special project
Jackson Tidus, a Law Corporation	\$ -	\$ -	\$ 1,386	\$ 225 to \$ 595	IRWD legal counsel	District general counsel/legislative/litigation/special project
Koeller Nebeker Carlson & Haluck LLP ⁽¹⁾	\$ 5,104	\$ -	\$ -	\$ 195	Legal Counsel	Legal counsel related to insurance claim issues
Kronick Moskowitz Tiedemann & Girard	\$ (32,260)	\$ 4,418	\$ 225,934	\$ 100 to \$ 350	IRWD legal counsel	Counsel services related to water resources and policy matters
Kutak Rock LLP ⁽¹⁾	\$ -	\$ -	\$ 58,950	\$ 395 to \$ 425	Legal Counsel	Legal counsel related to insurance claim issues
Law Office of Atoosa Vakili	\$ 763	\$ -	\$ -	\$ 75 to \$ 250	Employee relations	General personnel and human resources
Lewis Brisbois Bisgaard & Smith LLP	\$ 346,988	\$ 320,260	\$ -	\$ 335	IRWD legal counsel	District general counsel/legislative/litigation/special project
Lewis Brisbois Bisgaard & Smith LLP ⁽¹⁾	\$ 6,249	\$ -	\$ -	\$ 200	Legal Counsel	Legal counsel related to insurance claim issues
Olson, Hagel & Fishburn, LLP	\$ 128	\$ -	\$ -	\$ 255	IRWD legal counsel	District general counsel/legislative/litigation/special project
Payne & Fears, LLP	\$ 29,004	\$ 11,594	\$ 8,167	\$ 235 to \$ 550	Employee relations	General personnel and human resources
Pillsbury Winthrop Shaw Pittman LLP	\$ 25,909	\$ 19,160	\$ 16,616	\$ 695	Employee relations	Employee benefits
Woodruff, Spradlin & Smart ⁽¹⁾	\$ 1,689	\$ 128	\$ -	\$ 105 to \$ 255	Legal Counsel	Legal counsel related to insurance claim issues
Total Operating Legal Fees	\$ 617,818	\$ 660,719	\$ 939,933			
⁽¹⁾ Insurance Litigation						
<u>Capitalized Legal Fees:</u>						
Alston & Bird LLP	\$ 258,428	\$ 2,833,935	\$ 2,146,080	\$ 275 to \$ 585	IRWD legal counsel	Counsel services in connection with the Biosolids project
Burke, Williams & Sorensen, LLP	\$ 16,568	\$ -	\$ -	\$ 325	Employee relations	
Jackson Tidus, a Law Corporation	\$ 882	\$ 2,688	\$ 4,788	\$ 225 to \$ 595	IRWD legal counsel	Counsel services in connection with Serrano Summit property sale
Kronick Moskowitz Tiedemann & Girard	\$ 74,571	\$ 26,055	\$ 61,785	\$ 100 to \$ 350	IRWD legal counsel	Counsel services in connection with water resources and policy matters
Capitalized Legal Fees Total	\$ 350,449	\$ 2,862,678	\$ 2,212,653			
Total Operating and Capital Legal Fees	\$ 968,267	\$ 3,523,397	\$ 3,152,586			
<u>Non-operating Legal Fees:</u>						
Bond Counsel:						
Kutak Rock LLP	\$ 6,000	\$ -	\$ -	n/a	Bond counsel	Counsel in connection with the extension of the letter of credit
Non-operating Legal Fees Total	\$ 6,000	\$ -	\$ -			

Note: This page is intentionally left blank.

February 2, 2021

Prepared by: D. Pardee / C. Smithson

Submitted by: C. Clary

Approved by: Paul A. Cook 

FINANCE AND PERSONNEL COMMITTEE

FISCAL YEAR 2020-21 OPERATING AND NON-OPERATING FINANCIAL HIGHLIGHTS QUARTERLY UPDATE

SUMMARY:

Staff has prepared a financial analysis of the unaudited operating statements through the second quarter of the Fiscal Year (FY) 2020-21. Actual overall net expenses totaled \$90.8 million, compared with a budget of \$88.8 million. Net operating revenue was \$81.9 million, while total system operating expenses were \$81.3 million for a net operating income of \$0.6 million versus a budget of \$5.1 million. Net non-operating income was \$44.1 million, compared with a budget of \$43.9 million.

BACKGROUND:

Details of the unaudited results through the second quarter of FY 2020-21 are provided in the following documents:

- Actual to budget comparison of operating expenses, provided as Exhibit “A”;
- Actual to budget comparison of operating revenues and expenses by system, provided as Exhibit “B”;
- Actual to budget comparison of non-operating revenues and expenses, provided as Exhibit “C”;
- Budget to forecast comparison of operating expenses, provided as exhibit “D”; and
- Budget to forecast comparison of non-operating revenues and expenses, provided as Exhibit “E”.

The highlights of these documents are described in the following sections. Staff has increased the discussion of significant variances below to greater than \$0.5 million.

Overall Operating Expenses:

Overall net operating expenses were over budget by \$1.9 million. Exhibit “A” is a summary of actual to budget expenses by major category. Noteworthy variances to budget include:

- Regular Labor was under budget by \$0.6 million (3.6%) due to cost of living (COLA) increases of 0.7%, while the budget assumed 3.0%;
- Employee Benefits was over budget by \$2.2 million (19.9%). This is due to an increase in accumulated sick and vacation benefits of \$2.0 million resulting from lower use of paid time off due to COVID-19. Once employees resume using their accrued sick and vacation more regularly, there will be no impact to expenses.
- The cost of water was below budget by \$1.5 million (6.2%). Variances are summarized below:

- *Treated System* – Sales exceeded budget by 249 acre-feet (AF) (0.9%). Imported water purchases and native water used by the Baker Treatment Plant exceeded budget, while groundwater was under budget. Cost Impact: Expenses were \$0.1 million over budget.
- *Recycled Water System* – Sales were below budget by 182 AF (0.9%). Imported untreated water was significantly below budget while native, pumped and produced / stored water were over budget. Cost Impact: Expenses were \$1.6 million less than budget.

A more thorough discussion of the water system follows:

For the treated potable system, sales were over budget by 249 AF. IRWD used 1,192 AF more imported water than budgeted while pumped water was 1,350 AF under budget. Several wells were off for maintenance, including significantly reduced pumping at the Irvine Desalter Plant (1,494 AF).

Cost of water for the Baker Plant includes \$1.1 million for 1,675 AF of native water and \$2.7 million for 3,301 AF of untreated imported water. The Baker Partners reimbursed IRWD \$0.9 million for 1,271 AF of native water, which is included in reimbursements outlined in Exhibit “A”. Native water transferred to the recycled system was 2,550 AF.

	Treated Water					
	Acre Feet			Millions		
	Actual	Budget	Variance	Actual	Budget	Variance
Imported	4,306	3,114	(1,192)	\$5.6	\$4.1	(\$1.5)
Pumped	22,949	24,299	1,350	11.6	12.4	0.8
Baker Imported	3,301	3,616	315	2.7	3.3	0.6
Native Water	4,225		(4,225)	1.4	0.2	(1.2)
Native to Baker Partners	(1,271)		1,271			0.0
Native Tsfr to Recycled	(2,550)		2,550	(1.2)		1.2
Total	30,960	31,029	69	\$20.1	\$20.0	(\$0.1)
Process Waste	(459)	(486)	(27)			
System Loss	(1,333)	(1,625)	(291)			
Sales/Cost of Sales	<u>29,168</u>	<u>28,918</u>	<u>(249)</u>	\$20.1	\$20.0	(\$0.1)
Baker Reimbursement (Exhibit A)				(0.9)		\$0.9

The recycled water system sales were below budget by 182 AF. Produced / stored water was over budget by 1,485 AF and pumped water was over budget by 282 AF. Native water transferred from the potable system was over budget by 1,254 AF. Imported water was significantly under budget (2,993 AF) due to increased use of native and produced water.

	Recycled Water					
	Acre Feet			Millions		
	Actual	Budget	Variance	Actual	Budget	Variance
Imported	867	3,860	2,993	\$0.5	\$3.5	\$3.0
Native Tsfr	2,550	1,296	(1,254)	1.2	-	(1.2)
Pumped	2,582	2,300	(282)	1.4	1.2	(0.2)
Produced/ Storage	14,730	13,245	(1,485)	-	-	0.0
Total	20,729	20,701	(28)	\$3.1	\$4.7	\$1.6
Process Waste	(387)	(345)	42			
System Loss	(566)	(398)	168			
Sales/Cost of Sales	19,776	19,958	182	\$3.1	\$4.7	\$1.6

- Electricity was over budget by \$1.1 million (11.2%) due to:
 - Increased peak time-of-use costs;
 - Increased pumping; and
 - Timing of invoices for the Michelson Water Recycling Plant (MWRP);
- Chemicals were under budget by \$0.6 million (27.7%). This is due to the delay in the startup of the MWRP Biosolids facility which was budgeted to be fully operational in FY 2020-21;
- Repairs and Maintenance for OC SAN exceeded budget by \$5.7 million (211.2%). This is due to the delay in the startup of the biosolids facility. IRWD is currently billed based on FY 2019-20 demands which did not include any operation of the IRWD Biosolids Treatment Plant and should be trued up at a later date. The increased cost is partially offset by biosolids facility cost savings for other expenses as indicated elsewhere;
- Other Professional Fees were below budget by \$0.9 million (33.6%). This is due to the delay of several educational programs and other projects due to COVID-19 restrictions. The largest differences are for Public Affairs and Administration (\$0.5 million);
- Biosolids Disposals were under budget by \$0.5 million (97.5%) due to delays in the startup of the biosolids facility; and
- Reimbursements to the Baker Partners were higher by \$1.0 million (43.1%) due to the higher purchase of native water by the Partners.

Summary of System Actual to Budget Performance:

Exhibit “B” shows a detailed comparison of actual to budgeted revenue and expense by system through the second quarter of FY 2020-21. As discussed in prior Finance and Personnel Committee meetings, staff has reclassified employee benefits-related expenses from General and Administrative (G&A) to direct labor, which is included in operating expenses. The G&A overhead expense allocation percentage through the second quarter of FY 2020-21 is 108%.

The net operating income for IRWD (systems) was under budget by \$4.5 million. Net revenues were under budget by \$0.7 million (0.9%) and total expenses were over budget by \$3.8 million (4.9%). Significant variances by system over \$0.5 million are explained below. Overall, due to the impacts of COVID-19 on IRWD customers, the Board elected to defer rate increases of \$2.3 million which were partially offset by reduced third-party expenses of \$0.7 million through the first six months.

Potable Water System:

The net operating income for the potable water system was under budget by \$0.5 million. Net revenues were under budget by \$0.1 million (0.2%) and total expenses were over budget by \$0.4 million (1.1%).

Total revenues were under budget by \$0.1 million. Commodity revenues were over budget by \$0.4 million due to Palo Verde Irrigation District and water toll income. Service revenues were under budget by \$0.5 million mostly due to uncollected late fee charges resulting from waiving these fees for COVID-19 relief.

The cost of water was under budget by \$1.0 million as shown in the table below:

Potable Water Variances (in millions)	Imported and In Lieu	Clear and Process Wells	Baker WTP	Native Water	Total
Water	(\$1.5)	\$0.8	(\$0.5)	\$1.1	(\$0.1)
Labor and G&A	0.0	0.1	0.3	0.0	0.4
Electricity	0.0	(0.1)	(0.3)	0.0	(0.4)
Chemicals	0.0	0.1	0.0	0.0	0.1
Other	0.0	0.1	0.0	0.0	0.1
Baker Reimbursement	0.0	0.0	0.9	0.0	0.9
Total Cost of Water	(\$1.5)	\$1.0	\$0.4	\$1.1	1.0

Operations expenses were over budget by \$1.4 million, due primarily to:

- Increased electricity from peak time-of-use and increased pumping for the Baker Plant;
- Higher water system maintenance costs; and
- Vacation and sick accruals exceeding budget by \$0.8 million.

Recycled Water System:

The net operating income variance for the recycled water system was over budget by \$0.1 million. Net revenues were below budget by \$1.1 million (6.5%) and total expenses were under budget by \$1.2 million (7.9%).

Total revenues were under budget by \$1.1 million due to reduced commodity revenue of \$1.0 million. This is partially due to reduced agricultural and construction usage. Sales revenue was also lower due to deferment of the FY 2020-21 rate increase.

Cost of water was under budget by \$1.6 million. This is due to cost savings from reduced imported water, which was replaced with native and produced water.

Sewer System:

The net operating income variance for the sewer system was below budget by \$5.5 million. Net revenues were under budget by \$0.8 million (4.6%) and total expenses were over budget by \$4.7 million (28.6%).

Service revenues were under budget by \$1.2 million due to changes in the billing calculation for English Canyon sewer services and reduced commercial sales from business closures due to COVID-19.

Operating costs were under budget by \$1.1 million from reduced expenses related to delays in the MWRP Biosolids facility startup operations. OC SAN Operations and Maintenance was over budget by \$5.7 million due to increased OC SAN solids handling.

Over-allocation and NTS:

The net operating income variance for over-allocation and the Natural Treatment System was over budget by \$1.4 million. Net revenues were over budget by \$1.2 million (17.0%). Total expenses were under budget by \$0.2 million (2.5%).

Over-allocation total revenues were over budget by \$1.2 million from increased over-allocation usage by potable and recycled landscape customers.

Operations expense was below budget by \$0.6 million primarily from delayed and canceled education programs and lower participation in conservation rebates.

Summary of Non-Operating Actual-to-Budget Expense:

IRWD's non-operating revenues are related to income generated from sources other than user rates. They include property taxes, investment income, connection fees, and real estate. A portion of the non-operating revenues pay debt service. Property taxes and connection fees help to pay for new infrastructure. Exhibit "C" provides a detailed comparison of actual to budget net income through the second quarter of FY 2020-21.

Non-Operating Income/Expenses:

The non-operating net income was over budget by \$0.2 million. Revenues were below budget by \$1.7 million and expenses were lower by \$1.9 million.

Key variances greater than \$0.5 million are as follows:

	Variance (\$ millions)
Property Tax Revenue was over budget (4.5%) due to increased assessed values.	\$1.6
Investment Income was below budget due to lower than budgeted investment rates (Actual 1.16% versus 2.40%).	(1.9)
Connection fees were under budget due to delayed development completion, partially offset by the Musick Jail Expansion project (\$3.5 million).	(1.2)
Interest expense was under budget (20.3%) due to lower than budgeted variable rates (Actual 0.07% versus 2.25%).	2.1
Other variances under \$0.5 million.	(0.4)
Total	\$0.2

Summaries of Operating and Non-Operating Forecasts:

Exhibit “D” is a full-year forecast of operating expenses for FY 2020-21. Expenses at year end are forecasted to be at \$181.2 million after reimbursement from the Baker Partners versus a budget of \$175.9 million.

Exhibit “E” is a full-year forecast of non-operating revenues and expenses for FY 2020-21. Net income is forecasted to be \$6.0 million lower than budget.

FISCAL IMPACTS:

Fiscal impacts are outlined above and are included in the exhibits provided.

ENVIRONMENTAL COMPLIANCE:

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

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit “A” – Consolidated Operating Actual to Budget Expense
Exhibit “B” – Actual to Budget Operating Revenues and Expenses by System
Exhibit “C” – Consolidated Non-Operating Actual to Budget
Exhibit “D” – Consolidated Operating Budget to Forecast
Exhibit “E” – Consolidated Non-Operating Budget to Forecast

Exhibit A
Irvine Ranch Water District
Consol Operating Actual to Budget Expense (A vs B)
Fiscal Year 2020-21
Period Ending December 31, 2020

(in thousands)

Expense Group	Expense Name	Actual 12/31/20	Budget 12/31/20	Budget (Over)/Under	Budget Variance%
Salaries & Benefits	Regular Labor*	\$17,111	\$17,747	\$636	3.6%
	Overtime Labor	1,236	1,204	(32)	(2.6%)
	Contract Labor	861	975	114	11.7%
	Employee Benefits**	13,210	11,018	(2,192)	(19.9%)
Salaries & Benefits Total		\$32,417	\$30,943	(\$1,474)	(4.8%)
Purchased Water & Utilities	Water	23,156	24,695	1,539	6.2%
	Electricity	10,505	9,444	(1,060)	(11.2%)
	Fuel	381	542	162	29.8%
	Telecommunication	378	387	10	2.5%
	Other Utilities	127	105	(22)	(21.2%)
Purchased Water & Utilities Total		\$34,546	\$35,174	\$627	1.8%
Materials & Supplies	Chemicals	1,683	2,327	644	27.7%
	Operating Supplies	1,038	1,339	301	22.5%
	Printing	127	141	14	10.1%
	Postage	315	334	19	5.7%
	Permits, Licenses and Fees	1,369	1,591	222	14.0%
	Office Supplies	36	67	31	46.6%
	Duplicating Equipment	61	94	33	34.7%
	Equipment Rental	31	61	30	49.3%
Materials & Supplies Total		\$4,661	\$5,955	\$1,294	21.7%
Professional Services	Rep & Maint OCSD & Others	8,387	2,695	(5,692)	(211.2%)
	Rep & Maint IRWD	6,293	5,886	(408)	(6.9%)
	Insurance	715	776	61	7.9%
	Legal Fees	940	1,220	280	23.0%
	Engineering Fees	554	490	(64)	(13.1%)
	Accounting Fees	48	56	8	14.3%
	Data Processing	1,789	1,639	(150)	(9.2%)
	Personnel Training	489	773	285	36.8%
	Personnel Physicals	33	23	(10)	(46.4%)
	Other Professional Fees	1,764	2,658	894	33.6%
	Directors' Fees	89	93	4	4.4%
Professional Services Total		\$21,101	\$16,309	(\$4,793)	(29.4%)
Other	Mileage Reimbursement	77	75	(2)	(3.2%)
	Collection Fees	0	7	7	100.0%
	Election Expense	78	117	39	33.6%
	Safety	35	71	36	51.1%
	Alarm and Patrol Services	284	425	141	33.2%
	Biosolids Disposals	13	522	509	97.5%
	Commuter Program	2	130	128	98.7%
	Computer Backup Storage	1	6	5	77.5%
	Contract Meter Reading	622	775	153	19.7%
	Other	52	65	12	19.3%
	Conservation/Over-allocation	96	501	406	80.9%
Other Total		\$1,260	\$2,694	\$1,434	53.2%
Grand Total		\$93,985	\$91,075	(\$2,911)	(3.2%)
Less: Reimbursement from Partners		(3,198)	(2,234)	964	(43.1%)
Grand Total		\$ 90,788	\$ 88,841	\$ (1,947)	(2.2%)

* Vacation and sick accruals moved from Regular Labor to Employee Benefits for Actual and Budget

**Includes PERS payment in excess of ARC

Note: This page is intentionally left blank.

Exhibit B
 IRVINE RANCH WATER DISTRICT
 ACTUAL vs BUDGET CONSOLIDATED OPERATING NET INCOME
 Fiscal Year 2020-21
 Period Ending December 31, 2020
 (in thousands)

	Consolidated Total			
	Actual	Budget	Variance	Variance %
Revenues:				
Commodity	\$ 39,421	\$ 40,008	\$ (587)	
Service	48,672	50,510	(1,838)	
Over Allocation	8,534	7,294	1,240	
Total Revenues	96,627	97,812	(1,185)	1.2%
Contribution to Enhancement and Replacement Funds	(14,717)	(15,181)	464	
Net Revenues	\$ 81,910	\$ 82,631	\$ (721)	0.9%
Expenses:				
Cost of Water	\$ 32,682	\$ 35,269	\$ 2,587	
Operations	27,333	27,226	(107)	
Water Banking	1,361	1,097	(264)	
OCSD - O&M	7,751	2,062	(5,689)	
Customer Service	4,449	4,493	44	
General & Administrative	6,847	6,479	(368)	
General Plant	907	907	-	
Total Expenses	\$ 81,330	\$ 77,533	\$ (3,797)	4.9%
Net Operating Income (Loss)	\$ 580	\$ 5,098	\$ (4,518)	

Reconciliation of Exhibit B and Exhibit A

Total Operating Expenses from above	\$ 81,330
General Plant (Capital from above)	(907)
Capital Expenses (primarily labor and related G&A)	9,702
All Other Non-Operating Expenses (primarily labor and related G&A)	314
Baker G&A not Reimbursed by	390
All Other	(40)
Total Exhibit A	\$ 90,789

IRVINE RANCH WATER DISTRICT
 ACTUAL vs BUDGET SYSTEM OPERATING NET INCOME
 Fiscal Year 2020-21
 Period Ending December 31, 2020
 (in thousands)

	Potable Water*				Recycled Water**			
	Actual	Budget	Variance	Variance %	Actual	Budget	Variance	Variance %
Revenues:								
Commodity	\$ 27,008	\$ 26,626	\$ 382		\$ 12,413	\$ 13,382	\$ (969)	
Service	18,534	19,014	(480)		3,409	3,536	(127)	
Total Revenues	45,542	45,640	(98)	-0.2%	15,822	16,918	(1,096)	-6.5%
Contribution to Enhancement and Replacement Funds	(4,373)	(4,388)	15		(538)	(577)	39	
Net Revenues	\$ 41,169	\$ 41,252	\$ (83)	-0.2%	\$ 15,284	\$ 16,341	\$ (1,057)	-6.5%
Expenses:								
Cost of Water	\$ 25,287	\$ 26,250	\$ 963		\$ 7,395	\$ 9,019	\$ 1,624	
Operations	10,162	8,728	(1,434)		4,201	3,836	(365)	
Customer Service	2,002	2,022	20		667	674	7	
General & Administrative	2,013	2,035	22		1,115	1,011	(104)	
General Plant	508	508	-		152	152	-	
Total Expenses	\$ 39,972	\$ 39,543	\$ (429)	-1.1%	\$ 13,530	\$ 14,692	\$ 1,162	7.9%
Net Operating Income (Loss)	\$ 1,197	\$ 1,709	\$ (512)		\$ 1,754	\$ 1,649	\$ 105	
	Sewer				Over-allocation/NTS			
	Actual	Budget	Variance	Variance %	Actual	Budget	Variance	Variance %
Revenues:								
Service	\$ 26,729	\$ 27,960	\$ (1,231)		\$ -	\$ -	\$ -	
Over Allocation			-		8,534	7,294	1,240	
Total Revenues	26,729	27,960	(1,231)	-4.4%	8,534	7,294	1,240	17.0%
Contribution to Enhancement and Replacement Funds	(9,806)	(10,216)	410		-	-	-	
Net Revenues	\$ 16,923	\$ 17,744	\$ (821)	-4.6%	\$ 8,534	\$ 7,294	\$ 1,240	17.0%
Expenses:								
Operations	\$ 9,002	\$ 10,099	\$ 1,097		\$ 3,968	\$ 4,563	\$ 595	
Water Banking					1,361	1,097	(264)	
OCSD - O&M	7,751	2,062	(5,689)					
Customer Service	1,335	1,348	13		445	449	4	
General & Administrative	2,880	2,761	(119)		839	672	(167)	
General Plant	179	179	-		68	68	-	
Total Expenses	\$ 21,147	\$ 16,449	\$ (4,698)	-28.6%	\$ 6,681	\$ 6,849	\$ 168	2.5%
Net Operating Income (Loss)	\$ (4,224)	\$ 1,295	\$ (5,519)		\$ 1,853	\$ 445	\$ 1,408	

*The untreated system was budgeted in the recycled system but moved to the potable system this fiscal year. Therefore actual costs are included in the potable system.

** Recycle budget adjusted to transfer \$ million in operations costs that belong to cost of water.

Exhibit C
 IRVINE RANCH WATER DISTRICT
 CONSOLIDATED NON-OPERATING NET INCOME vs BUDGET
 Fiscal Year 2020-21
 Period Ending December 31, 2020
 (in thousands)

Revenues:	Actual 12/31/20	Budget 12/31/20	Budget Variance
Property Taxes	35,411	33,800	\$ 1,611
Investment Income	3,124	5,000	(1,876)
Connection Fees	7,764	9,000	(1,236)
Real Estate Income	7,773	8,030	(257)
Other Income	3,574	3,500	74
Total Revenues	<u>\$ 57,646</u>	<u>\$ 59,330</u>	<u>\$ (1,684)</u>
Expenses:			
Interest Expense	\$ 10,365	\$ 12,470	\$ 2,105
Real Estate Expense	3,086	2,850	(236)
Other Expenses	118	100	(18)
Total Expenses	<u>\$ 13,569</u>	<u>\$ 15,420</u>	<u>\$ 1,851</u>
Net Income	<u><u>\$ 44,077</u></u>	<u><u>\$ 43,910</u></u>	<u><u>\$ 167</u></u>

Note: This page is intentionally left blank.

Exhibit D
IRVINE RANCH WATER DISTRICT
CONSOLIDATED OPERATING FORECAST EXPENSE
Period Ending December 31, 2020


(in thousands)						Forecast vs Budget	
Expense Group	Expense Name	Actual 12/31/20	Budget FY 2020-21	Forecast FY 2020-21	(Over)/ Under	%	
Salaries & Benefits	Regular Labor	\$ 17,111	\$ 38,641	\$ 37,241	\$ 1,400	3.6%	
	Overtime Labor	1,236	2,426	2,426	-	-	
	Contract Labor	861	1,851	1,851	-	-	
	Employee Benefits	13,210	21,593	25,593	(4,000)	(18.5%)	
Salaries & Benefits Total		\$ 32,417	\$ 64,512	\$ 67,112	(2,600)	(4.0%)	
Water & Utilities	Water	23,156	44,681	43,681	1,000	2.2%	
	Electricity	10,505	18,537	20,037	(1,500)	(8.1%)	
	Fuel	381	1,074	1,074	-	-	
	Telecommunication	378	775	775	-	-	
	Other Utilities	127	194	194	-	-	
Water & Utilities Total		\$ 34,546	\$ 65,261	\$ 65,761	(500)	(0.8%)	
Materials & Supplies	Chemicals	1,683	4,529	3,829	700	15.5%	
	Operating Supplies	1,038	2,707	2,407	300	11.1%	
	Printing	127	357	357	-	-	
	Postage	315	669	669	-	-	
	Permits, Licenses and Fees	1,369	1,872	1,872	-	-	
	Office Supplies	36	113	113	-	-	
	Duplicating Equipment	61	188	188	-	-	
	Equipment Rental	31	123	123	-	-	
Materials & Supplies Total		\$ 4,661	\$ 10,557	\$ 9,557	1,000	9.5%	
Professional Services	Rep & Maint OCSD & Others	8,387	5,398	13,398	(8,000)	(148.2%)	
	Rep & Maint IRWD	6,293	11,742	11,742	-	-	
	Insurance	715	1,552	1,552	-	-	
	Legal Fees	940	2,440	2,240	200	8.2%	
	Engineering Fees	554	823	823	-	-	
	Accounting Fees	48	111	111	-	-	
	Data Processing	1,789	3,224	3,224	-	-	
	Personnel Training	489	1,541	1,041	500	32.4%	
	Personnel Physicals	33	45	45	-	-	
	Other Professional Fees	1,764	5,391	4,091	1,300	24.1%	
	Directors' Fees	89	186	186	-	-	
Professional Services Total		\$ 21,101	\$ 32,454	\$ 38,454	(6,000)	(18.5%)	
Other	Mileage Reimbursement	77	150	150	-	-	
	Collection Fees	0	13	13	-	-	
	Election Expense	78	155	155	-	-	
	Safety	35	143	143	-	-	
	Alarm and Patrol Services	284	850	850	-	-	
	Biosolids Disposals	13	1,044	244	800	76.6%	
	Commuter Program	2	260	10	250	96.1%	
	Computer Backup Storage	1	12	12	-	-	
	Contract Meter Reading	622	1,550	1,550	-	-	
	Other	52	129	129	-	-	
	Conservation/Over-allocation	96	1,003	203	800	79.8%	
Other Total		\$ 1,260	\$ 5,309	\$ 3,459	1,850	34.8%	
Grand Total		\$ 93,985	\$ 178,094	\$ 184,344	\$ (6,250)	(3.5%)	
Less: Reimbursement from Partners		(3,198)	(2,234)	(3,134)	900	40.3%	
Grand Total		\$ 90,788	\$ 175,860	\$ 181,210	\$ (5,350)	(3.0%)	

Note: This page is intentionally left blank.

Exhibit E
 IRVINE RANCH WATER DISTRICT
 CONSOLIDATED NON-OPERATING NET INCOME
 FULL YEAR FORECAST AS OF DECEMBER 31, 2020
 (in thousands)

Non-operating Revenues:	Actual 12/31/20	Budget 6/30/21	Full Year Forecast	Forecast Variance
Property Taxes	\$ 35,411	\$ 68,700	\$ 71,000	\$ 2,300
Investment Income	3,124	10,000	5,000	(5,000)
Connection Fees	7,764	18,000	12,000	(6,000)
Real Estate Income	7,773	16,600	15,600	(1,000)
Other Income	3,574	8,000	8,000	-
Total Revenues	<u>\$ 57,646</u>	<u>\$ 127,900</u>	<u>\$ 118,200</u>	<u>\$ (9,700)</u>
Non-operating Expenses:				
Interest Expense	\$ 10,365	\$ 24,900	\$ 21,000	\$ 3,900
Real Estate Expense	3,801	5,700	5,900	(200)
Other Expenses	118	2,000	2,000	-
Total Expenses	<u>\$ 14,284</u>	<u>\$ 32,600</u>	<u>\$ 28,900</u>	<u>\$ 3,700</u>
Net Income	<u><u>\$ 43,362</u></u>	<u><u>\$ 95,300</u></u>	<u><u>\$ 89,300</u></u>	<u><u>\$ (6,000)</u></u>

Note: This page is intentionally left blank.

February 2, 2021
Prepared by: J. Davis
Submitted by: R. Jacobson / C. Clary
Approved by: Paul A. Cook 

FINANCE AND PERSONNEL COMMITTEE

QUARTERLY DEFERRED COMPENSATION PLAN AND FUND REVIEW

SUMMARY:

The following is submitted for the Committee's review:

- A Summary of the Deferred Compensation Program and Distribution of Assets as of December 31, 2020, as outlined in Exhibit "A", and
- Mutual Fund Performance Review as of December 31, 2020, as outlined in Exhibit "B".

BACKGROUND:

Overview of the Deferred Compensation Assets:

As of December 31, 2020, IRWD's Sections 457(b) and 401(a) Plans (collectively, the "Plans") assets totaled \$82,908,180, which represented a \$9,975,502 increase from the quarter ended September 30, 2020, and a \$13,512,621 increase for the one-year period. The changes in Plan assets over these two periods are summarized as follows:

	<i>For the One-Year Period Ending December 31, 2020</i>	<i>For the Quarter Ending December 31, 2020</i>
Beginning Balance	\$69,395,559	\$72,932,678
Employee Contributions	3,383,252	705,134
District Contributions	1,308,317	307,730
Transfers to/from Other Plans	380,857	131,468
Distributions	(2,961,152)	(781,071)
Loan Distributions ⁽¹⁾	(392,307)	(67,877)
Loan Repayments	296,399	76,208
Net Investment Gain (Loss)	11,497,255	9,603,909
Ending Balance – December 31, 2020	\$82,908,180	\$82,908,180
Change in Assets for the Period	\$13,512,621	\$9,975,502

(1) Number of loans outstanding: 80

Review of Investment Options:

IRWD'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. For the quarter ended December 31, 2020, the Victory Integrity Small-Cap Value R6 Fund failed the LTRA for its fourth consecutive quarter and should be replaced. The Hartford Midcap R6 Fund

failed its third consecutive quarter in the past 12 months. IRWD will retain a consultant to evaluate alternative small-cap value funds and provide a recommended replacement for the Victory Integrity Small-Cap Value Fund to the Committee when completed. The Fund Performance Review as of December 31, 2020 is provided as Exhibit “B”.

FISCAL IMPACTS:

As of December 31, 2020, the District’s Plan assets totaled \$82,908,180, which represented a \$9,975,502 increase from the quarter ended September 30, 2020 and a \$13,512,621 increase for the one-year period.

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
December 31, 2020

Deferred Compensation IRS Section 457 (Employee Contributions) Money Purchase Pension Plan & Executive Plan - IRS Section 401 (a) (District Contributions)			
	457	401 (a)	GRAND TOTAL
Assets	\$62,944,630	\$19,963,551	\$82,908,180
<i>Change From Prior Quarter</i>	\$7,290,325	\$2,685,177	\$9,975,502
<i>Change From Prior Year (12/2019)</i>	\$9,744,451	\$3,768,170	\$13,512,621
Quarterly Contributions	\$705,134	\$307,730	\$1,012,864
*Change From Prior Quarter	(\$118,233)	(\$46,353)	

*Reduction in contributions is due to one additional pay period in the quarter ended September 30, 2020.

	For the One Year Period Ending December 31, 2020	For the Quarter Ending December 31, 2020
Beginning Balance	\$69,395,559	\$72,932,678
Employee Contributions	3,383,252	705,134
District Contributions	1,308,317	307,730
Transfers to/from other plans	380,857	131,468
Distributions	(2,961,152)	(781,071)
Loan Distributions ⁽¹⁾	(392,307)	(67,877)
Loan Repayment	296,399	76,208
Net Investment Gain (Loss)	11,497,255	9,603,909
Ending Balance - December 31, 2020	\$82,908,180	\$82,908,180
Change in assets for the period	\$13,512,621	\$9,975,502

⁽¹⁾ Number of loans outstanding as of 12/31/20 : 80

Employee Participation	
Full-time Employees	398
Employees Participating	353
Percent Participation	89%

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

December 31, 2020

Fund	457	401	Assets	Percent of Assets	Change from previous quarter
PROFILE FUNDS					
Aggressive Profile Fund	6,442,736.55	3,053,274.83	9,496,011	11.5%	0.0%
Moderate Profile Fund	5,894,144.70	1,327,716.05	7,221,861	8.7%	-0.1%
Conservative Profile Fund	4,285,914.09	1,533,680.15	5,819,594	7.0%	0.2%
Sub Total			22,537,466	27.2%	0.1%
INTERNATIONAL FUND					
American Funds EuroPacific Gr R6	2,055,012.53	636,517.65	2,691,530	3.2%	0.2%
Vanguard Total Intl Stock Index Admiral	1,312,746.73	289,646.84	1,602,394	1.9%	0.1%
Sub Total			4,293,924	5.1%	0.3%
SMALL CAP FUNDS					
Hood River Small-Cap Growth Retirement	2,690,391.73	1,139,788.53	3,830,180	4.6%	0.8%
Victory Integrity Small Cap Value R6	713,354.83	329,264.89	1,042,620	1.3%	0.3%
Vanguard Small Cap Index	1,232,973.22	330,356.84	1,563,330	1.9%	-0.1%
Sub Total			6,436,130	7.8%	1.1%
MEDIUM CAP FUNDS					
Hartford MidCap R6	1,703,685.88	933,755.56	2,637,441	3.2%	0.3%
Wells Fargo Spec Md Cp Val R6	2,050,278.42	657,716.08	2,707,995	3.3%	0.2%
Vanguard Mid-Cap Index Fund	1,583,872.59	327,219.58	1,911,092	2.3%	0.1%
Sub Total			7,256,528	8.8%	0.5%
LARGE CAP FUNDS					
American Funds Growth Fund of Amer R6	5,405,999.01	1,822,958.58	7,228,958	8.7%	0.4%
Vanguard Institutional Index	6,206,531.90	1,345,182.30	7,551,714	9.1%	-0.4%
Diamond Hill Large-Cap Fund	1,804,363.80	633,138.65	2,437,502	2.9%	0.1%
Sub Total			17,218,174	20.7%	0.0%
BOND FUND					
Metropolitan West Total Return Bond Plan	4,164,642.30	1,084,954.40	5,249,597	6.3%	-0.5%
Sub Total			5,249,597	6.3%	-0.5%
STABLE VALUE FUND					
Putnam Stable Value	8,004,614.67	2,296,121.25	10,300,736	12.4%	-1.5%
Sub Total			10,300,736	12.4%	-1.5%
TARGET DATE FUND					
Vanguard Target Retirement Income Inv	690,370.23	763,754.18	1,454,124	1.8%	-0.1%
Vanguard Target Retirement 2020 Inv	1,222,510.27	243,813.90	1,466,324	1.8%	0.0%
Vanguard Target Retirement 2025 Inv	343,944.17	29,759.73	373,704	0.5%	0.0%
Vanguard Target Retirement 2030 Inv	284,043.42	41,731.20	325,775	0.4%	0.0%
Vanguard Target Retirement 2035 Inv	353,875.10	122,810.44	476,686	0.6%	0.0%
Vanguard Target Retirement 2040 Inv	395,508.14	48,470.16	443,978	0.5%	0.0%
Vanguard Target Retirement 2045 Inv	62,287.56	50,264.85	112,552	0.1%	0.0%
Vanguard Target Retirement 2050 Inv	561,613.05	47,426.87	609,040	0.7%	0.0%
Vanguard Target Retirement 2055 Inv	206,730.41	37,611.44	244,342	0.3%	0.1%
Vanguard Target Retirement 2060 Inv	135,574.79	9,607.54	145,182	0.2%	0.0%
Sub Total			5,651,707	6.9%	0.0%
OTHER					
Ameritrade Brokerage	3,136,909.44	827,008.24	3,963,918	4.8%	0.3%
Total Assets	62,944,630	19,963,551	\$82,908,179	100%	
LOAN BALANCE OUTSTANDING			\$766,855		



FUND PERFORMANCE REVIEW

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

Reporting Period Ending December 31, 2020

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 Performance 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.

Unpublished Work © 2003-2020

Not intended as an offer or solicitation of securities.

AM469530T-0618

FUND PERFORMANCE REVIEW



IMPORTANT DISCLOSURES:

The Fund Performance Review is compiled at the request of the Plan fiduciary based on the specific criteria specified by the Plan fiduciary. It is designed as a high level analytical tool to aide plan fiduciaries in carrying out their fiduciary responsibilities. Great-West is not providing impartial investment advice in a fiduciary capacity to the plan with respect to the Fund Performance Review. The Plan fiduciaries are solely responsible for the selection and monitoring of the Plan's investment options and for determining the reasonableness of all plan fees and expenses. Great-West and its affiliates receive investment management and other fees and revenue from any Great-West or Putnam investment options included in the Fund Performance Review. In addition, Great-West and its affiliates may receive revenue sharing type payments in relation to the investment options provided on the Fund Performance Review. Please contact your Empower Retirement representative for more information. Plan Sponsors may wish to review the enclosed material with their investment adviser, consultant or broker, if necessary, prior to making final investment decisions.

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.*

GWFS Equities, Inc. registered representatives may also be investment adviser representatives of GWFS affiliate, Advised Assets Group, LLC. Representatives do not offer or provide investment, fiduciary, financial, legal or tax advice or act in a fiduciary capacity for any client unless explicitly described in writing. 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 may vary depending on the particular set of facts and circumstances. You should consult with and rely on your own financial, legal and tax advisers.

- OBJECTIVE:**
- * To quantify historical fund performance relative to peer group benchmarks.
 - * To identify funds that have performed below a peer group median 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 based on Morningstar, Inc. fund categories.

- SOURCE:**
- * Statistics are derived from an independent third-party source: primarily Morningstar[®] DirectSM

- 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.

Although data is gathered from reliable sources, including but not limited to Morningstar, Inc., the completeness or accuracy of the data shown cannot be guaranteed. Where data obtained from Morningstar, ©2020 Morningstar, Inc. All Rights Reserved. The data: (1) is proprietary to Morningstar and/or its content providers; (2) may not be copied or distributed and (3) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information.

Required performance information may appear on more than one page. The "Return Analysis" page includes the 1, 5, and 10 Year/Since Inception performance percentages as well as the inception date for each of the funds.

It is important to note that when applicable, performance shown prior to inception date reflects performance achieved by the oldest share class of the same fund as determined by Morningstar. While the newer share class is less expensive than the oldest share class of the same fund, performance was not adjusted upwards to display higher returns.

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.

FUND PERFORMANCE REVIEW (FPR): CRITERIA



OVERALL RATING: Based on a combination of 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	③, ④, or ⑤	Above
≥ 50.0%	OR	③, ④, or ⑤	Neutral
< 50.0%	AND	①, or ②	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	Watch
OR			
Overall Rating: < 25.0%			Watch

*'Pass' and 'Watch' 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.

CONFIDENTIAL - DO NOT DISCLOSE OR DISSEMINATE

Data Source: Morningstar® DirectSM

FOR PLAN SPONSOR USE ONLY - NOT FOR USE WITH PLAN PARTICIPANTS

Not intended as an offer or solicitation of securities

Performance Summary: Irvine Ranch Water District

period ended 12/31/2020

				Overall Rating					Long-Term Rolling Analysis		
				Composite %'s			Overall Morningstar Rating		Consecutive Quarters Below	# of Quarters Below out of trailing 12	
				Overall	Return	Sharpe					
Intl	Foreign Large Growth	RERGX	American Funds Europacific Growth R6	56.6	61.7	51.5	3	Above	0	0 out of 12	Pass
Small-Cap	Small Growth	HRSIX	Hood River Small-Cap Growth Retirement	70.8	76.7	65.0	4	Above	0	0 out of 12	Pass
	Small Value	MVSSX	Victory Integrity Small-Cap Value R6	35.5	40.0	31.0	2	Below	4	4 out of 12	Watch
Mid-Cap	Mid-Cap Growth	HFMVX	Hartford MidCap R6	24.4	30.3	18.5	3	Below	3	3 out of 12	Watch
	Mid-Cap Value	WFPRX	Wells Fargo Special Mid Cap Value R6	91.6	92.7	90.5	4	Above	0	0 out of 12	Pass
Large-Cap	Large Growth	RGAGX	American Funds Growth Fund of Amer R6	48.6	49.7	47.5	3	Neutral	0	0 out of 12	Pass
	Large Value	DHLYX	Diamond Hill Large Cap Y	92.8	96.0	89.5	5	Above	0	0 out of 12	Pass
Asst All/Other	Target-Date Retirement	VTINX	Vanguard Target Retirement Income Inv	79.0	72.0	86.0	4	Above	0	0 out of 12	N/A
	Target-Date 2020	VTWNX	Vanguard Target Retirement 2020 Inv	76.2	78.3	74.0	4	Above	0	0 out of 12	N/A
	Target-Date 2025	VTTVX	Vanguard Target Retirement 2025 Inv	74.3	78.7	70.0	4	Above	0	0 out of 12	N/A
	Target-Date 2030	VTHRX	Vanguard Target Retirement 2030 Inv	72.4	73.3	71.5	4	Above	0	0 out of 12	N/A
	Target-Date 2035	VTTHX	Vanguard Target Retirement 2035 Inv	72.3	70.7	74.0	4	Above	0	0 out of 12	N/A
	Target-Date 2040	VFORX	Vanguard Target Retirement 2040 Inv	72.5	74.0	71.0	4	Above	0	0 out of 12	N/A
	Target-Date 2045	VTIVX	Vanguard Target Retirement 2045 Inv	72.4	74.3	70.5	4	Above	0	0 out of 12	N/A
	Target-Date 2050	VFIFX	Vanguard Target Retirement 2050 Inv	69.7	70.3	69.0	4	Above	0	0 out of 12	N/A
	Target-Date 2055	VFFVX	Vanguard Target Retirement 2055 Inv	67.8	64.0	71.5	4	Above	0	0 out of 12	N/A
	Target-Date 2060+	VTTSX	Vanguard Target Retirement 2060 Inv	59.5	57.0	62.0	3	Above	0	0 out of 12	N/A
Bond	Intermediate Core-Plus Bond	MWTSX	Metropolitan West Total Return Bd Plan	77.6	65.7	89.5	3	Above	0	0 out of 12	Pass
Index Funds	Foreign Large Blend	VTIAX	Vanguard Total Intl Stock Index Admiral (Idx)	66.2	61.3	71.0	3	N/A	N/A	0 out of 12	Pass
	Small Blend	VSMAX	Vanguard Small Cap Index Adm (Idx)	91.9	92.3	91.5	5	N/A	N/A	0 out of 12	Pass
	Mid-Cap Blend	VIMAX	Vanguard Mid Cap Index Admiral (Idx)	83.3	83.7	83.0	5	N/A	N/A	0 out of 12	Pass
	Large Blend	VINIX	Vanguard Institutional Index I (Idx)	82.1	82.7	81.5	5	N/A	N/A	0 out of 12	Pass

Data Source: Morningstar® DirectSM

Please refer to the Appendix page for additional disclosures.

FOR PLAN SPONSOR USE ONLY - NOT FOR USE WITH PLAN PARTICIPANTS

Not intended as an offer or solicitation of securities.

Return Analysis: Irvine Ranch Water District

period ended 12/31/2020

	Fund Name	4th Qtr 2020 Return	4th Qtr 2020 Percentile	Performance vs. Benchmark (Annualized Returns and Return Percentiles %)								Return Since Inception	Incept. Date
				1 Year Return	1 Year Percentile	3 Year Return	3 Year Percentile	5 Year Return	5 Year Percentile	10 Year Return	10 Year Percentile		
Intl	Foreign Large Growth Peer Group	13.96	50	21.59	50	10.27	50	11.60	50	7.69	50		
	American Funds Europacific Growth R6	19.95	92	25.27	69	10.74	57	12.47	64	8.14	64	10.70	5/1/2009
Small-Cap	Small Growth Peer Group	26.71	50	36.93	50	18.45	50	17.43	50	14.09	50		
	Hood River Small-Cap Growth Retirement	30.84	86	60.81	89	23.02	70	20.61	73	16.71	87	21.84	3/3/2017
	Small Value Peer Group	32.07	50	3.62	50	2.17	50	7.96	50	8.10	50		
	Victory Integrity Small-Cap Value R6	39.78	95	1.33	36	0.63	21	7.40	38	8.42	61	10.68	6/1/2012
Mid-Cap	Mid-Cap Growth Peer Group	19.82	50	35.15	50	20.23	50	17.92	50	14.29	50		
	Hartford MidCap R6	26.29	91	25.06	21	15.46	17	16.46	29	14.05	45	13.80	11/7/2014
	Mid-Cap Value Peer Group	21.94	50	2.93	50	4.11	50	8.77	50	9.05	50		
	Wells Fargo Special Mid Cap Value R6	19.92	31	3.36	54	6.85	89	10.56	91	11.49	98	10.66	6/28/2013
Large-Cap	Large Growth Peer Group	11.92	50	34.80	50	21.12	50	18.69	50	15.47	50		
	American Funds Growth Fund of Amer R6	16.13	88	38.28	64	20.07	41	18.97	54	15.66	54	16.84	5/1/2009
	Large Value Peer Group	15.61	50	2.68	50	5.69	50	9.34	50	9.75	50		
	Diamond Hill Large Cap Y	15.00	41	9.07	91	9.30	94	12.53	96	12.12	98	13.25	12/30/2011
Asst All/Other	Target-Date Retirement Peer Group	5.61	50	9.78	50	6.24	50	6.59	50	5.17	50		
	Vanguard Target Retirement Income Inv	5.15	36	10.02	59	6.86	73	6.86	60	5.88	83	5.64	10/27/2003
	Target-Date 2020 Peer Group	7.76	50	11.61	50	7.44	50	8.34	50	7.34	50		
	Vanguard Target Retirement 2020 Inv	7.86	53	12.04	58	8.07	76	9.02	75	7.93	84	6.85	6/7/2006
	Target-Date 2025 Peer Group	9.08	50	12.20	50	7.97	50	9.09	50	7.99	50		
	Vanguard Target Retirement 2025 Inv	9.33	64	13.30	67	8.73	77	9.88	77	8.54	82	7.33	10/27/2003
	Target-Date 2030 Peer Group	10.47	50	13.31	50	8.51	50	9.84	50	8.50	50		
	Vanguard Target Retirement 2030 Inv	10.52	52	14.10	61	9.16	73	10.51	72	9.04	75	7.39	6/7/2006
	Target-Date 2035 Peer Group	11.88	50	14.04	50	8.98	50	10.59	50	9.07	50		
	Vanguard Target Retirement 2035 Inv	11.62	38	14.79	64	9.50	71	11.11	68	9.51	73	8.03	10/27/2003
	Target-Date 2040 Peer Group	13.13	50	14.96	50	9.30	50	11.00	50	9.36	50		
	Vanguard Target Retirement 2040 Inv	12.76	37	15.47	61	9.85	71	11.71	72	9.90	79	7.89	6/7/2006
	Target-Date 2045 Peer Group	14.22	50	15.20	50	9.53	50	11.37	50	9.61	50		
	Vanguard Target Retirement 2045 Inv	13.90	44	16.30	70	10.20	72	12.09	73	10.09	78	8.56	10/27/2003
	Target-Date 2050 Peer Group	14.46	50	15.68	50	9.58	50	11.52	50	9.67	50		
	Vanguard Target Retirement 2050 Inv	14.01	41	16.39	65	10.24	69	12.10	72	10.09	70	8.06	6/7/2006
	Target-Date 2055 Peer Group	14.79	50	15.42	50	9.72	50	11.64	50	10.00	50		
	Vanguard Target Retirement 2055 Inv	13.97	24	16.32	65	10.22	68	12.09	67	10.10	57	11.21	8/18/2010
	Target-Date 2060+ Peer Group	14.75	50	16.18	50	9.82	50	12.03	50	9.78	50		
	Vanguard Target Retirement 2060 Inv	13.96	25	16.32	53	10.22	62	12.08	52	N/A	N/A	11.10	1/19/2012
Bond	Intermediate Core-Plus Bond Peer Group	1.96	50	8.53	50	5.54	50	4.95	50	4.27	50		
	Metropolitan West Total Return Bd Plan	1.29	18	9.18	69	6.15	77	4.89	46	4.73	74	4.61	7/29/2011
Index Funds	Vanguard Total Intl Stock Index Admiral (Idx)	16.90	67	11.28	66	4.98	64	9.09	80	5.13	40	5.80	11/29/2010
	Vanguard Small Cap Index Adm (Idx)	27.10	30	19.11	74	11.22	91	13.60	93	12.01	93	9.68	11/13/2000
	Vanguard Mid Cap Index Admiral (Idx)	18.02	22	18.24	80	12.04	84	13.28	80	12.40	87	10.53	11/12/2001
	Vanguard Institutional Index I (Idx)	12.15	51	18.39	66	14.15	77	15.19	82	13.86	89	10.34	7/31/1990

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

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® DirectSM

Please refer to the Appendix page for additional disclosures

FOR PLAN SPONSOR USE ONLY - NOT FOR USE WITH PLAN PARTICIPANTS

Not intended as an offer or solicitation of securities.

Sharpe Ratio and Expense Analysis: Irvine Ranch Water District

period ended 12/31/2020

Fund Name	Sharpe Ratios and Percentiles %				Standard Deviation		Expense Ratio	Expense Percentile %	Manager Tenure (yrs)	Fund Size \$MM
	3 Yr Ratio	3 Yr %	5 Yr Ratio	5 Yr %	3 Yr	5 Yr				
Intl	Foreign Large Growth Peer Group	0.57	50	0.73	50	17.96	15.37	1.02	50	
	American Funds Europacific Growth R6	0.55	47	0.74	56	19.13	16.05	0.46	4	20
Small-Cap	Small Growth Peer Group	0.75	50	0.84	50	25.03	20.98	1.12	50	197,424
	Hood River Small-Cap Growth Retirement	0.85	66	0.90	64	26.96	22.45	0.99	34	18
	Small Value Peer Group	0.16	50	0.40	50	27.06	22.49	1.13	50	1,004
	Victory Integrity Small-Cap Value R6	0.12	29	0.37	33	29.88	24.95	0.97	31	17
Mid-Cap	Mid-Cap Growth Peer Group	0.89	50	0.95	50	21.97	18.41	1.05	50	1,942
	Hartford MidCap R6	0.67	15	0.84	22	23.06	18.99	0.75	13	11
	Mid-Cap Value Peer Group	0.23	50	0.48	50	23.60	19.24	0.99	50	
	Wells Fargo Special Mid Cap Value R6	0.34	90	0.58	91	22.51	18.14	0.72	13	12
Large-Cap	Large Growth Peer Group	0.99	50	1.06	50	19.78	16.54	0.91	50	10,627
	American Funds Growth Fund of Amer R6	0.95	39	1.08	56	19.72	16.27	0.30	3	27
	Large Value Peer Group	0.30	50	0.56	50	19.87	16.28	0.89	50	263,237
	Diamond Hill Large Cap Y	0.46	90	0.71	89	20.98	17.10	0.55	12	18
Asst All/Other	Target-Date Retirement Peer Group	0.70	50	0.95	50	6.93	5.57	0.64	50	8,302
	Vanguard Target Retirement Income Inv	0.85	86	1.09	86	6.22	5.10	0.12	4	8
	Target-Date 2020 Peer Group	0.63	50	0.91	50	9.51	7.89	0.61	50	
	Vanguard Target Retirement 2020 Inv	0.68	73	0.96	75	9.85	8.14	0.13	5	8
	Target-Date 2025 Peer Group	0.61	50	0.88	50	11.17	9.28	0.64	50	33,172
	Vanguard Target Retirement 2025 Inv	0.65	68	0.91	72	11.60	9.53	0.13	4	8
	Target-Date 2030 Peer Group	0.58	50	0.84	50	12.95	10.65	0.67	50	49,979
	Vanguard Target Retirement 2030 Inv	0.62	70	0.88	73	12.98	10.65	0.14	5	8
	Target-Date 2035 Peer Group	0.56	50	0.81	50	14.51	11.99	0.66	50	45,904
	Vanguard Target Retirement 2035 Inv	0.60	72	0.85	76	14.36	11.78	0.14	5	8
	Target-Date 2040 Peer Group	0.55	50	0.79	50	15.76	12.93	0.68	50	44,588
	Vanguard Target Retirement 2040 Inv	0.58	68	0.83	74	15.74	12.91	0.14	5	8
	Target-Date 2045 Peer Group	0.54	50	0.77	50	17.02	13.87	0.67	50	35,841
	Vanguard Target Retirement 2045 Inv	0.57	70	0.81	71	16.97	13.83	0.15	5	8
	Target-Date 2050 Peer Group	0.53	50	0.77	50	17.08	13.96	0.70	50	33,864
	Vanguard Target Retirement 2050 Inv	0.57	69	0.81	69	16.99	13.85	0.15	6	8
	Target-Date 2055 Peer Group	0.53	50	0.76	50	17.46	14.27	0.68	50	25,823
	Vanguard Target Retirement 2055 Inv	0.57	71	0.81	72	16.98	13.84	0.15	6	8
	Target-Date 2060+ Peer Group	0.53	50	0.78	50	17.51	14.25	0.69	50	14,600
	Vanguard Target Retirement 2060 Inv	0.57	66	0.81	58	16.97	13.84	0.15	6	8
Bond	Intermediate Core-Plus Bond Peer Group	0.89	50	0.98	50	4.42	3.89	0.70	50	6,980
	Metropolitan West Total Return Bd Plan	1.28	93	1.16	86	3.55	3.16	0.38	8	24
Index Funds	Vanguard Total Intl Stock Index Admiral (Idx)	0.27	63	0.56	79	18.60	15.55	0.11	4	12
	Vanguard Small Cap Index Adm (Idx)	0.49	91	0.67	92	24.71	20.38	0.05	2	5
	Vanguard Mid Cap Index Admiral (Idx)	0.56	84	0.73	82	21.69	17.79	0.05	4	23
	Vanguard Institutional Index I (Idx)	0.72	79	0.93	84	18.79	15.26	0.04	3	20

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

Data Source: Morningstar® DirectSM

Please refer to the Appendix page for additional disclosures

FOR PLAN SPONSOR USE ONLY - NOT FOR USE WITH PLAN PARTICIPANTS

Not intended as an offer or solicitation of securities.

Annual Returns and Statistics: Irvine Ranch Water District

period ended 12/31/2020

	Fund Name	Calendar Year Returns					Modern Portfolio Theory Statistics (3 year)			Portfolio Construction		
		2020	2019	2018	2017	2016	Alpha	Beta	R2	Turnover Ratio	Number of Holdings	% in top 10 holdings
Intl	Foreign Large Growth Peer Group	21.60	27.86	-14.12	31.08	-1.11						
	American Funds Europacific Growth R6	25.27	27.40	-14.91	31.17	1.01	4.76	1.03	98	38	332	22%
Small-Cap	Small Growth Peer Group	37.06	28.53	-5.22	22.85	10.54						
	Hood River Small-Cap Growth Retirement	60.81	24.19	-6.78	20.78	13.50	1.41	1.09	95	157	94	28%
	Small Value Peer Group	3.62	22.10	-15.20	8.97	25.95						
	Victory Integrity Small-Cap Value R6	1.33	23.28	-18.42	12.59	24.52	-2.68	1.12	99	80	166	10%
Mid-Cap	Mid-Cap Growth Peer Group	35.19	33.82	-5.12	24.95	5.34						
	Hartford MidCap R6	25.06	32.75	-7.29	24.42	11.87	2.48	1.03	96	31	103	19%
	Mid-Cap Value Peer Group	2.93	26.83	-13.41	13.41	17.62						
	Wells Fargo Special Mid Cap Value R6	3.36	35.68	-13.02	11.27	21.68	4.20	0.93	97	51	74	28%
Large-Cap	Large Growth Peer Group	34.80	32.53	-1.55	28.92	2.98						
	American Funds Growth Fund of Amer R6	38.28	28.54	-2.60	26.53	8.82	-1.34	0.96	97	28	378	36%
	Large Value Peer Group	2.68	25.58	-8.77	16.25	14.54						
	Diamond Hill Large Cap Y	9.07	32.34	-9.53	20.42	14.74	2.97	1.04	98	22	53	31%
Asst All/Other	Target-Date Retirement Peer Group	9.78	13.16	-3.29	8.48	5.20						
	Vanguard Target Retirement Income Inv	10.02	13.16	-1.99	8.47	5.25	0.63	0.70	99	17	6	100%
	Target-Date 2020 Peer Group	11.61	16.77	-4.53	13.22	6.85						
	Vanguard Target Retirement 2020 Inv	12.04	17.63	-4.24	14.08	6.95	0.62	0.76	99	19	6	100%
	Target-Date 2025 Peer Group	12.20	18.50	-5.37	14.95	7.13						
	Vanguard Target Retirement 2025 Inv	13.30	19.63	-5.15	15.94	7.48	0.34	0.90	100	21	6	100%
	Target-Date 2030 Peer Group	13.31	20.54	-6.24	16.76	7.61						
	Vanguard Target Retirement 2030 Inv	14.10	21.07	-5.86	17.52	7.85	0.83	0.87	100	21	5	100%
	Target-Date 2035 Peer Group	14.04	22.43	-7.19	18.39	8.04						
	Vanguard Target Retirement 2035 Inv	14.79	22.44	-6.58	19.12	8.26	0.68	0.94	100	18	5	100%
	Target-Date 2040 Peer Group	14.96	23.73	-7.87	19.52	8.40						
	Vanguard Target Retirement 2040 Inv	15.47	23.86	-7.32	20.71	8.73	0.44	1.03	100	13	4	100%
	Target-Date 2045 Peer Group	15.20	24.70	-8.19	20.35	8.47						
	Vanguard Target Retirement 2045 Inv	16.30	24.94	-7.90	21.42	8.87	0.28	1.11	100	9	5	100%
	Target-Date 2050 Peer Group	15.68	24.88	-8.39	20.55	8.65						
	Vanguard Target Retirement 2050 Inv	16.39	24.98	-7.90	21.39	8.85	0.31	1.11	100	9	4	100%
	Target-Date 2055 Peer Group	15.42	25.21	-8.47	20.85	8.53						
	Vanguard Target Retirement 2055 Inv	16.32	24.98	-7.89	21.38	8.88	0.30	1.11	100	8	5	100%
	Target-Date 2060+ Peer Group	16.18	25.25	-8.50	21.04	8.80						
	Vanguard Target Retirement 2060 Inv	16.32	24.96	-7.87	21.36	8.84	0.31	1.11	100	6	5	100%
Bond	Intermediate Core-Plus Bond Peer Group	8.53	9.29	-0.76	4.32	3.93						
	Metropolitan West Total Return Bd Plan	9.18	9.23	0.29	3.49	2.56	0.61	1.01	97	405	1898	39%
Index Funds	Vanguard Total Intl Stock Index Admiral (Idx)	11.28	21.51	-14.43	27.55	4.67	-0.57	1.01	99	7	7454	10%
	Vanguard Small Cap Index Adm (Idx)	19.11	27.37	-9.31	16.24	18.30	2.33	0.96	100	16	1413	4%
	Vanguard Mid Cap Index Admiral (Idx)	18.24	31.03	-9.23	19.25	11.22	-0.30	0.99	100	15	349	8%
	Vanguard Institutional Index I (Idx)	18.39	31.46	-4.42	21.79	11.93	-0.02	1.00	100	4	508	27%

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.

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® DirectSM

Please refer to the Appendix page for additional disclosures

FOR PLAN SPONSOR USE ONLY - NOT FOR USE WITH PLAN PARTICIPANTS

Not intended as an offer or solicitation of securities.

Index Performance

period ending 12/31/2020

	Index	Total Return 1 Year	Total Return Annlzd 3 Year	Total Return Annlzd 5 Year	Total Return Annlzd 10 Year	Annual Return 2020	Annual Return 2019	Annual Return 2018	Annual Return 2017	Annual Return 2016
International	MSCI EMF ID	15.84	3.68	10.21	1.15	15.84	15.42	-16.63	34.35	8.58
	MSCI Eafe Ndtr_D	7.82	4.28	7.45	5.51	7.82	22.01	-13.79	25.03	1.00
	MSCI World Ndtr_D	15.90	10.54	12.19	9.87	15.90	27.67	-8.71	22.40	7.51
Small-Cap	Russell 2000 Growth	34.63	16.20	16.36	13.48	34.63	28.48	-9.31	22.17	11.32
	Russell 2000	19.96	10.25	13.26	11.20	19.96	25.52	-11.01	14.65	21.31
	Russell 2000 Value	4.63	3.72	9.65	8.66	4.63	22.39	-12.86	7.84	31.74
Mid-Cap	Russell Midcap Growth	35.59	20.50	18.66	15.04	35.59	35.47	-4.75	25.27	7.33
	Standard & Poor's Midcap 400	13.66	8.45	12.35	11.51	13.66	26.20	-11.08	16.24	20.74
	Russell Midcap Value	4.96	5.37	9.73	10.49	4.96	27.06	-12.29	13.34	20.00
Large-Cap	Russell 1000 Growth	38.49	22.99	21.00	17.21	38.49	36.39	-1.51	30.21	7.08
	Standard & Poor's 500 TR	18.40	14.18	15.22	13.88	18.40	31.49	-4.38	21.83	11.96
	Russell 1000 Value	2.80	6.07	9.74	10.50	2.80	26.54	-8.27	13.66	17.34
Bond	BBgBarc US Aggregate Bond	7.51	5.34	4.44	3.84	7.51	8.72	0.01	3.54	2.65
	BBgBarc US Capital Credit	9.35	6.80	6.44	5.40	9.35	13.80	-2.11	6.18	5.63
	BBgBarc US Mortgage-Backed	3.87	3.71	3.05	3.01	3.87	6.35	0.99	2.47	1.67
	BBgBarc US Government Bond	7.94	5.17	3.76	3.26	7.94	6.83	0.88	2.30	1.05
	BBgBarc US 1-3 Year Government	3.14	2.77	1.92	1.32	3.14	3.59	1.58	0.45	0.87

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 Government	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® DirectSM

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

Securities offered or distributed through GWFS Equities, Inc., Member FINRA/SIPC and a subsidiary of Great-West Life & Annuity Insurance Company.

Carefully consider the investment objectives, risks, fees and expenses of the investment product. Contact us for a prospectus, a summary prospectus and disclosure document, as available, containing this information. Read them carefully before investing.

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.

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.



Great-West Financial®, Empower Retirement and Great-West Investments™ are the marketing names of GWL&A, Corporate Headquarters: Greenwood Village, CO; Great-West Life & Annuity Insurance Company of New York, Home Office: NY, NY, and their subsidiaries and affiliates, including Advised Assets Group, LLC and Great-West Capital Management, LLC. 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.

The principal underwriter of Great-West Funds, Inc. is its affiliate GWFS Equities, Inc., Member FINRA/SIPC. Great-West Capital Management, LLC is the investment adviser.

Shares of Great-West Funds, Inc. are not sold directly to the general public but are offered to permitted accounts as defined in the prospectus. Asset allocation funds of Great-West Funds may invest in funds that are advised by Great-West Capital Management, LLC or are sub-advised by affiliates of GWCM. Asset allocation funds may also invest in a fixed-interest contract issued by GWL&A. While certain sub-advised funds may be managed similar to or modeled after other mutual funds with similar names and investment objectives, the Great-West Funds are not directly related to them. Consequently, the investment performance and other features of other mutual funds and any similarly named Great-West Fund may differ substantially.

About Overall Morningstar Rating™

For each fund with at least a three-year history, Morningstar calculates a Morningstar Rating™ 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. Please note, for any funds with a newer share class, the rating information is based on extended performance, which is derived from the historical performance of the older class shares, not adjusted for fees. 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 classes 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. Please note, for any funds with a newer share class, the ranking information is based on extended performance, which is derived from the historical performance of the older class shares, not adjusted for fees.

Morningstar® is a registered trademark and Overall Morningstar Rating™ is a trademark of Morningstar, Inc. Morningstar, Inc. is not affiliated with GWL&A or any other affiliated companies and/or subsidiaries.

©2020 Great-West Life & Annuity Insurance Company. All rights reserved. AM469530-0618

PLAN SPONSOR USE ONLY - NOT FOR USE WITH PARTICIPANTS

Not intended as an offer or solicitation of securities.

Page 11 of 15

APPENDIX - GLOSSARY



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 value 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-backed, bank loans and junk bonds.

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.

APPENDIX - GLOSSARY (CONT.)



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.

Great-West Funds S&P 500®, S&P Mid Cap 400® Index and S&P Small Cap 600® Index are registered trademarks of Standard & Poor's Financial Services LLC and have been licensed for use by Great-West Life & Annuity Insurance Company. The funds are not sponsored, endorsed, sold or promoted by Standard & Poor's, and Standard & Poor's makes no representation regarding the advisability of investing in the funds. The Great-West International Index Fund seeks to track the total return of the MSCI EAFE Index. The fund or securities referred to herein are not sponsored, endorsed or promoted by MSCI Inc., and MSCI bears no liability with respect to any such fund or securities or any index on which such fund or securities may be based. The prospectus contains a more detailed description of the limited relationship MSCI has with Great-West Capital Management, LLC and any related portfolios. The Great-West Real Estate Index Fund seeks to track the total return of the Dow Jones U.S. Select REIT IndexSM. Standard & Poor's® and S&P® are registered trademarks of Standard & Poor's Financial Services LLC, and Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC. Both have been licensed for use by S&P Dow Jones Indices LLC and its affiliates and sublicensed for certain purposes by Great-West Capital Management, LLC. The Dow Jones U.S. Select REIT Index is a product of S&P Dow Jones Indices LLC or its affiliates and has been licensed for use by GWCM. The Great-West Real Estate Index Fund is not sponsored, endorsed, sold or promoted by S&P Dow Jones Indices LLC, Dow Jones, S&P or their respective affiliates, and S&P Dow Jones Indices LLC; Dow Jones, S&P; and their respective affiliates make no representation regarding the advisability of investing in the fund. The Great-West Stock Index Fund seeks to track the total return of the S&P 500® Index and S&P Mid Cap 400® Index, weighted according to their pro rata share of the market. S&P 500® and S&P Mid Cap 400® are trademarks of Standard & Poor's and have been licensed for use by Great-West Life & Annuity Insurance Company. The fund is not sponsored, endorsed, sold or promoted by Standard & Poor's or its third-party licensors, and neither Standard & Poor's nor its third-party licensors make any representation regarding the advisability of investing in the fund.

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.

PLAN SPONSOR USE ONLY - NOT FOR USE WITH PARTICIPANTS

Not intended as an offer or solicitation of securities.

Page 13 of 15

APPENDIX - GLOSSARY (CONT.)



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 Ndr_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. Ndr_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, Ndr_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 Ndr_D Includes all 23 MSCI developed market countries. Ndr_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, Ndr_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.

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.

Note: This page is intentionally left blank.

February 2, 2021
Prepared by: T. Malone
Submitted by: C. Clary
Approved by: Paul A. Cook



FINANCE AND PERSONNEL COMMITTEE

ORACLE CUSTOMER CARE & BILLING UPGRADE

SUMMARY:

IRWD's primary billing system, Oracle Customer Care & Billing (CC&B), was implemented in 2014. The version of the software used by the District, CC&B v2.4, is at the end of life and Oracle will not provide further updates to the existing software. Staff recommends the Board authorize the General Manager to execute a Professional Services Agreement with Origin Consulting in an amount not to exceed \$1,200,000 for the Oracle CC&B Upgrade Project.

BACKGROUND:

IRWD implemented Oracle CC&B v2.4 in 2014. CC&B is the District's main customer billing and management system which includes monthly billing, tracking of customer interactions with the District, scheduling of service appointments and billing history. Oracle Utilities Analytics (OUA) is an adjacent application used to provide reporting and analysis of customer information and is part of the upgrade proposal. Oracle CC&B v2.4 is at the end of life and Oracle will not provide further updates to the existing software.

In anticipation of the end of life on the existing version of CC&B, in April 2018, the Board approved Projects 10546 and 10547, each in the amount of \$1,424,500, for a total of \$2,849,000 to fund an initiative to upgrade CC&B to the latest version (v2.7). The scope of the initiative is to perform a technical upgrade of CC&B with minimal change to existing business processes.

Staff issued a request for proposal in November 2020 to five consultants with experience supporting utilities using Oracle CC&B: Infosys, Origin Consulting, Red Clay, Tata Consulting Services (TCS) and Utility Solutions. All firms, except for TCS, submitted a proposal. Staff reviewed and ranked the proposals and selected the top two firms for interviews: Infosys and Origin Consulting. After conducting interviews, staff updated the rankings, as shown in the Consultant Selection Matrix provided as Exhibit "A".

Based on the interviews and proposal rankings, staff believes that Origin Consulting has the best understanding of the Oracle CC&B Upgrade project and the most experienced and talented project team with the CC&B application. Origin Consulting submitted an optimal and realistic project schedule, and staff believes it is the most capable of implementing a successful upgrade. The Oracle CC&B Upgrade project is expected to cost up to \$2,000,000, which includes Origin Consulting's proposal of \$1,200,000 and an additional estimated \$800,000 of internal staff time. The upgrade project does not require the acquisition of additional licenses from Oracle or additional hardware.

Origin Consulting is headquartered in Las Vegas, Nevada, has approximately 90 consultants and specializes exclusively in Oracle CC&B support. IRWD has previously worked with Origin and

has a positive working relationship with the firm. It extensively leverages a modern agile methodology that significantly reduces the time and effort required to perform its projects. As part of its proposal, Origin will also prepare IRWD to eventually move CC&B to the cloud by converting custom programming code to a new standard, cloud-ready code. The other consultants did not offer this feature. Origin Consulting's proposal is provided as Exhibit "B".

FISCAL IMPACTS:

The Oracle CC&B Upgrade will be funded through replacement funds allocated to Projects 10546 and 10547, which were previously approved by the Board.

Project No.	Current Budget	Addition <Reduction>	Total Budget
10546	\$1,424,500	\$0	\$1,424,500
10547	\$1,424,500	\$0	\$1,424,500
Total	\$2,849,000	\$0	\$2,849,000

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 General Manager to execute a Professional Services Agreement with Origin Consulting in an amount not to exceed \$1,200,000 for the Oracle CC&B Upgrade Project, Projects 10546 and 10547.

LIST OF EXHIBITS:

Exhibit "A" – Oracle CC&B Upgrade – Consultant Evaluation Matrix

Exhibit "B" – Oracle CC&B Upgrade – Origin Consulting Statement of Work and Fee Proposal

EXHIBIT "A"
CONSULTANT EVALUATION MATRIX

ORACLE CUSTOMER CARE & BILLING UPGRADE										
Item	Description	Weights	Infosys		Origin Consulting		Red Clay		Utility Solutions	
A	<u>TECHNICAL APPROACH</u>	40%	RANK	WEIGHTED SCORE	RANK	WEIGHTED SCORE	RANK	WEIGHTED SCORE	RANK	WEIGHTED SCORE
1	Overall Project Understanding / Approach	40%	2.0	0.8	1.0	0.4	4.0	1.6	3.0	1.2
2	Scope of Proposal	60%	2.0	1.2	1.0	0.6	3.0	1.8	4.0	2.4
	<u>Weighted Score (Technical Approach)</u>		1.5	2.0	0.8	1.0	2.6	3.4	2.7	3.6
B	<u>QUALIFICATION AND EXPERIENCE</u>	60%								
1	Project Manager	40%	3.0	1.2	1.0	0.4	2.0	0.8	4.0	1.6
2	Project Team	40%	4.0	1.6	1.0	0.4	3.0	1.2	2.0	0.8
3	Sub Consultants	20%	2.0	0.4	2.0	0.4	2.0	0.4	2.0	0.4
4	Firm's Experience	20%	2.0	0.4	1.0	0.2	3.0	0.6	4.0	0.8
	<u>Weighted Score (Experience)</u>		2.8	3.6	1.3	1.4	2.5	3.0	3.0	3.6
	<u>COMBINED WEIGHTED SCORE</u>		2.3	3.0	1.1	1.2	2.5	3.2	2.9	3.6
	Ranking of Consultants		2		1		3		4	
C	<u>SCOPE OF WORK</u>									
COST/EFFORT			Task Hours	FEE	Task Hours	FEE	Task Hours	FEE	Task Hours	FEE
	TOTAL HOURS AND FEE		16,068	\$824,400	7,305	\$1,185,310	17,692	\$1,495,280	17,601	\$1,947,976
D	<u>OTHER</u>									
	Separate Resources for CC&B & OUA		No		Yes		Yes		Yes	
	Separate Resource as DBA		No		Yes		Yes		Yes	
	Team Availability in US Time Zones		No		Yes		Yes		Yes	
	Prior Experience Working with IRWD		Yes		Yes		No		No	
	Convert Java to Groovy Scripting (Prepare for Cloud Future)		No		Yes					

Note: This page is intentionally left blank.

Exhibit "B"



Consulting Services to Upgrade Oracle Customer Care and Billing (CCB) and Oracle Utilities Business Intelligence (OUBI)

Response Due Date: December 18, 2020
Best and Final Offer (BAFO): January 24, 2021

1930 Village Center Circle #3-704 Las Vegas, NV 89134

Table of Contents

1. Cover Letter	2
2. Executive Summary	3
3. Experience.....	4
4. Team.....	7
5. Project Approach and Timeline.....	10
6. Schedule	29
7. References	29
8. Cost Proposal	31
9. Joint Venture	34
10. Conflict of Interest	34
11. Insurance	34

1. Cover Letter

A signature by a Principal or officer having the authority to negotiate and contractually bind and extend the terms of the written proposal.

Dear Mr. Saini and Malone:

Origin Consulting, LLC (Origin) has prepared this proposal in response to Irvine Ranch Water District's (IRWD) request for proposal for consulting services to upgrade Oracle Customer Care and Billing (CC&B) and Oracle Utilities Business Intelligence (OUBI) issued on November 9, 2020.

After 14 years in business, Origin has become a name brand across North America for providing top quality services in the utility industry. Our consultants, most of whom have more than 15 years of experience implementing Oracle products, are familiar with industry best practices used for implementations, upgrades, and Meter to Cash (M2C) business operations. In addition, we believe one of our most important key differentiators is our proven track record of building and maintaining a trusted, service-minded relationship with our clients.

We hope you find Origin's capabilities and experience an excellent fit for IRWD's objectives. Origin strives to deliver a level of service in our solutions that are above industry standard and are delivered in a manner that is caring and thoughtful. Our references attest to the validity of our claim.

Origin certifies that all the information in this proposal is true, accurate, and complete. While we believe that this proposal represents an honorable commitment to your organization, it is based on our understanding of the information that you have provided us.

For purposes of inquiry, negotiation, or other matters, please consider me to be Origin's primary point of contact. I have the authority to negotiate and contractually bind and extend the terms of this written proposal.

Thank you in advance for reviewing our proposal. We look forward to learning more about your needs and sharing additional details about our approach during the finalist interview session.

Warmest regards,

Corey Labor, Vice President
Origin Consulting, LLC
clabor@originconsults.com
802-233-2970

2. Executive Summary

A description of the understanding, approach, and methodology proposed to meet the District's objectives.

Recently, the District won a prestigious award: **Utility of the Future**. This award demonstrates to Origin that partnering on this upgrade is a perfect pairing. Origin is dedicated to leading utility modernization, as evident in the development of our cutting-edge customer self-service offering Origin Customer Experience (OXC) and our mobile work management solution MobileLite.

Since our founding in 2007, Origin Consulting has provided professional business and technical consulting to utility clients using Oracle's Utilities solutions. We are industry leaders: Experts in the Oracle applications that support meter-to-cash (M2C) and field operations. We offer solutions for full or partial application replacements, upgrades, production support, and introduction of new application features. We are an Oracle Implementation Partner and are closely aligned with Oracle product roadmaps and strategies.

This upgrade of CC&B from version 2.4 to 2.7 is a key opportunity to refine legacy business processes, leverage the latest features of the solution, and address pain points experienced with your current deployment of CC&B. The Origin team has successfully guided many of our clients through a very similar scope as what is outlined in your RFP.

The upgrade of OUBI 2.4 to OUA 2.7 enhances IRWD's data replication performance to near real-time leveraging Oracle GoldenGate (OGG) and Oracle Data Integrator (ODI). OUA comes with the latest OBIEE 12c, while introducing new features like powerful visualizations, graphs, heat matrix views, enhanced dashboards, and mobile integration.

"Based on the successful results of the project, my original assertion of Origin's capabilities has been met and exceeded. Artesian continues to be properly positioned to serve our customer needs for the foreseeable future."

Raymond Kelly, Director of IT at Artesian Water Company

Our firm is organized to ensure that all Origin clients have executive oversight. Our executives are hands-on, easy to reach, and have a background in systems integration and Oracle implementations. The firm is founded and built by professional services leaders with utility backgrounds. We have a proven track record of creating current and future success for our clients.

Origin's proposed core team has an average of 15 years in the utility industry and 8 years working with the Oracle Utilities software applications below. This core team is supported by the Origin Technology Center (OTC), our dedicated team of developers with similarly deep knowledge on the Oracle suite of applications.

- Customer Care and Billing (CC&B)
- Customer Cloud Service (CCS)
- Customer to Meter (C2M)
- Oracle Utility Analytics (OUA)

- Oracle Utilities Business Intelligence (OUBI)
- Oracle Cloud Infrastructure (OCI)
- Mobile Workforce Management (MWM)
- Meter Data Management (MDM)
- Smart Grid Gateway (SGG)
- Operational Device Management (ODM)
- Process Integration Pack (PIP)
- Integrations between Oracle Utilities solutions and third-party / legacy solutions

Origin is uniquely qualified to lead IRWD to a successful completion of the CC&B and OUBI upgrade. Our team of experts has years of experience successfully delivering projects to our clients that include all the scope components outlined in your RFP. As the Oracle product suite has evolved, so has our team.

Our most recent success story was a project with another of our clients, City of Tempe, to upgrade their CC&B solution to version 2.7, retire customizations, move the solution from on premise to the Oracle Platform-as-a-Service (PaaS) infrastructure, and migrate all infrastructure and application monitoring responsibilities to our Origin SmartOps Operations team post go-live. We consider our team industry leaders in these areas—we have built a reputation of excellence through these projects with our clients.

Origin looks forward to engaging IRWD to not only succeed with your upgrade project, but to also lay the foundation for IRWD to continue to architect, enhance, and optimize business operations. Our firm is very adept at solving business problems from both business and application perspectives. The Origin team's skills, experience, and culture make us the right partner. Our methodologies and best practices, outlined in this proposal, differentiate our firm from others, large or small.

3. Experience

Provide a brief description of the firm's history, size, and organization. Describe the experience of the firm with performing the following work streams:

- Conducting the upgrade to Oracle CC&B version 2.7
- Performing configuration changes as required by the upgrade.
- Automated tools used for testing
- Performing remediation of CC&B to improve overall use of the solution
- Conducting the upgrade to OUBI/OBIEE

Company History

Origin Consulting was established in 2007 with a primary focus on providing professional services to Oracle Utilities customers. Since that time, Origin has continued to grow in number of consultants, number of client partnerships, and expansion of our offerings based on our commitment to delivering excellence in the utility industry.

Our business model is focused solely on the utility industry and primarily on Oracle Utilities applications. We provide expert implementation services for the Oracle Utility Application Suite to the utility industry, with a primary focus on CC&B, OUA, C2M, CCS, MWM, MDM and Customer Self Service.

Our team has extensive experience in implementing and upgrading Oracle Utilities Applications utilizing various approaches, such as agile or variations of stage gate models. Origin was involved in the first North American implementations of various Oracle's applications, leading utilities and the market in new technologies. We offer solutions for full or partial application replacements, upgrades, support, and introduction of new application features.

Our consultants have more than 320 years of combined Utility Industry experience and more than 300 years of combined experience in implementing, upgrading and supporting Oracle's Customer Information System (CIS) applications across our practice. In addition to depth of experience, our resources are considered some of the best in the industry in implementing, upgrading, and supporting the Oracle Utilities suite of applications and integrations between them. Many have also held senior level positions at Oracle with specific emphasis on the implementation of large-scale utility projects utilizing Oracle's flagship utility product, CC&B. Our consulting leadership team and Project Managers have also worked primarily in the utility industry with clients across the United States.

Our resources have deep industry experience with an average of 10 years of hands-on experience implementing solutions in the Utility Industry. Our professionals are skilled Project Managers, Functional and Technical Architects, Integration Architects, Conversion Architects, Business Analysts, Trainers, Testers, Designers and Developers certified across the Oracle Utilities application suite. Our resources have experience working with gas, electric, sewer, wastewater, municipal waste, water, and steam utilities.

Over the course of Origin's 14-year history, we have earned a record of being 100% client referenceable and litigation-free in the delivery of upgrades, system implementations, managed services support, and advisory services.

CC&B History

Origin has significant experience implementing, upgrading, supporting, maintaining, and enhancing CC&B alongside the other Oracle Utilities applications that utilize the same framework. We have performed 7 CC&B upgrades as a company since 2015. Our development, functional, and technical capabilities are considered the best in the industry. Many of our team members originated with Oracle, some having worked with the applications since their inception. Our resources are certified by Oracle as CC&B implementation specialists.

Origin's extensive history with CC&B is demonstrated through our successful partnerships, many of which touch specifically on our upgrade capability.

Origin's partnership with ENSTAR exemplifies our ability to upgrade CC&B and lead innovation at the same time. Initially, the ENSTAR upgrade from v2.4 to v2.7 was intended as a technical upgrade only. Early in the project, the client requested additional enhancements to address their specific pain points and leverage new functionality. The new scope was identified, and the change was formalized into the upgrade project.

The enhancements Origin made for ENSTAR included adding a flag in Control Central for customers who are active web self-service users, attaching caution alerts to the customer record rather than at the SA level, and allowing customers to initiate payment arrangements through

the IVR. In total, 15 enhancements were added to the scope, and the team nevertheless achieved the original launch date within the original budget.

Origin partnered with Artesian Water Company (AWC), a utility providing water, wastewater, and service line protection services to approximately 85,000 meters, to upgrade to CC&B 2.6 in November 2018. This upgrade encompassed CC&B, MWM, and Field Work Process Integration Pack (FWPIP). In addition to the application upgrades, Origin collaborated with AWC to reengineer business processes and optimize their meter-to-cash workflow.

Spire, Inc. (Spire) is a natural gas distribution company that Origin has worked with across two CC&B upgrades. Like many utilities, Spire has multiple rates for different customer services. Origin transitioned some of their rates to the new rate engine available in CC&B 2.4. Along with base CC&B functionality, Origin worked on multiple Inbound Web Services (IWS) service enhancements to add new functionality to their Customer Self Service (CSS) portal. Origin is currently leading the effort to migrate an acquired utility onto AWC's CC&B platform, which includes data conversion and M2C business process analysis and optimization for the future state business.

As mentioned in Section 2, the Executive Summary, Origin partnered with the City of Tempe to upgrade their CC&B solution from version 2.3 to version 2.7. We retired customizations, moved the solution from on premise to the Oracle PaaS infrastructure, and migrated all infrastructure and application monitoring responsibilities to our SmartOps Operations team post go-live.

Origin has also worked with Green Mountain Power (GMP) to implement CC&B, along with MDM, MWM, CSS, ODM and Service Oriented Architecture (SOA). As part of the CC&B Implementation, Origin expanded the core functionality of CC&B to Integrate CC&B with the head end system for remote connections and disconnections, thereby eliminating the need for personnel to log into the HES to perform these actions. This was before Oracle had deployed Service Order Management (SOM), which is now included with CCS.

The Origin team has performed upgrades to OUA to configure standard, out-of-the-box ELT loads, reports, and dashboards. Our team has also migrated existing custom OUBI reports into OUA. The team is versed in identifying and remediating functional gaps in existing BI Publisher Reports to validate and migrate to the new OUA. Origin also has extensive knowledge in providing training to the Customer Service staff and Information Service team on the new customizations.

The team most recently upgraded GMP from OUBI v2.4 to OUA v2.7 (converting first to v2.5.2), leading the architecture, planning, and sizing of database servers for multiple BI projects. Performance tuning and patching, including resolving out-of-the-box ETL data issues, were also part of this initiative.

In addition, the team completed an implementation of OUA with Nashville Electric Service (NES). NES uses Oracle's C2M product. The team also coordinated testing efforts and provided training on the reporting and ETL tools.

Defining and deploying various programs to meet marketing objectives enables clients to use base CC&B functionality to create new programs or enhance existing programs. Origin also deployed program management to manage the sale, installation, and billing for heat pumps for GMP.

In 2019, Origin partnered with South Jersey Industries (SJI), a natural gas utility serving 750,000 meters, as they began an upgrade of CC&B (from v2.4 to v2.6) and Maximo (from v7.5 to v7.6.1.1) that was completed in 2020. Origin led the effort to align all application versions across the three SJI Utilities companies and move toward business process standardization.

In terms of automated testing, Origin has performed automated load testing using K6 and LoadNinja to simulate many online users. The Origin team is also versed on Oracle Utilities Testing Accelerator (OUTA) which is deployed in the Origin solutions lab for custom automated testing scenarios. Origin is also a business partner with UiPath, a leader in Robotic Process Automation. With UiPath, Origin has built bots to automate redundant manual processes.

In Origin's technical upgrades, applications are moved to a more current release, and the underlying technology stack including WebLogic and Database are upgraded. As part of this upgrade, custom COBOL must be eliminated. If a base product functionality accomplishes the same business objective, that functionality is deployed through configuration.

4. Team

Provide the specific experience and capabilities, qualifications and resumes of the designated resources assigned to perform the work. Vendor can not replace the resources mentioned in the RFP response with different resources after signing the PSA and for actual project startup. Any changes in personnel resources must be given in writing before PSA signing. After the project kickoff, Personnel resources assigned to the project shall not be reassigned without prior written approval from IRWD. If using sub-consultants, provide the company profile and define the responsibilities and services to be performed by the sub-consultants. Include the primary point of contact, person responsible for overall corporate commitment (Principal) and project manager. Describe the responsibilities of the individuals who will be working on the project and extent of involvement with the project. Include a schedule showing the percentage of time each member will contribute to the project. IRWD is open to leveraging on-site, off-site and off-shore resources as appropriate for project success. Due to the current Covid situation, IRWD is open to execute this project entirely remotely, however, during the implementation or close to Go Live, if the situation improves, IRWD expects the key resources to be present on-site. While working remotely on the project, the key resources assigned to the project should be available for online meetings at US Pacific Standard Time (PST) zone.

During COVID restrictions, the project is implemented remotely. However, the goal is to work onsite once it is safe to do so. We understand our clients desire varying levels of onsite presence and we can be flexible in our approach. Our experience has been that the typical cadence for a project of this type is 1 week onsite, 3 weeks offsite. Origin employs a mix of on-shore and off-shore resources, although most of the team resides in the United States. The team is onsite during the week before and weeks immediately after go-live.

All Origin team members are available during US Pacific Standard Time business hours.

The team members listed below guide IRWD through the upgrade. In the following table, we have provided a synopsis of their experience relevant to this upgrade and the role(s) they fulfill. Full resumes for each team member are also provided after the Appendices section at the end of this proposal.

The lead point of contact for this response is your account executive, Corey Labor
(clabor@originconsults.com / 802.233.2970).

Team Members	Role & Relevant Experience
Corey Labor	<p>Account Executive—Provides oversight of the engagement to ensure the Origin team is delivering quality and working in the best interest of IRWD. Acts as a point of escalation to resolve any issues that may affect the success of the project.</p> <p>Experience - Corey has over 21 years of experience providing leadership for teams and enterprise projects. He has spent the last 17 years specifically dedicated to the utility industry providing leadership for the execution of complex M2C system implementation projects. These projects have encompassed solutions such as CIS Utility Billing, MDM, MWM, CSS, and Operational Device Management (ODM), as well as other utility solutions. Corey has also served as an Account Executive on projects for Spire Energy in their upgrade from CC&B v2.4 to v2.6 and AWC in their upgrade from CC&B v2.3 to v2.6 and understands some of the project pain points.</p>
Mechelle Davidson	<p>Project Manager—Responsible for the overall Origin project performance, and the execution and acceptance of all Origin statement of work (SOW) deliverables. Understands the project business objectives and has a clear vision of how to achieve those objectives. Resolves the conflict among the differing objectives of the various parties to the project. Primarily faces outwards from the project and handles project issues and ensures they do not impede the project. Makes sure the project work remains within the agreed upon scope, and guards against scope creep. Reviews major work products - particularly those from the earlier phases of the project. Responsible for comparing the project planning, resourcing, monitoring, and reporting progress against the plan. Responsible for ensuring that activities are performed.</p> <p>Experience - Mechelle has more than 20 years of experience in the utility space. She has worked with both regulated and deregulated markets in several states throughout the United States. She has worked on several CIS platforms, including CC&B, SAP for Utilities, Banner, ABP3000, and Peace Energy, among others. Mechelle served as the Project Manager for the ENSTAR Natural Gas upgrade to CC&B 2.7.</p>
Melgar Oleas	<p>Technical Architect Lead—Responsible for overseeing all technical deliverables during the project. Provides quality assurance oversight on all environment, data, and technical areas.</p> <p>Experience - Melgar is an experienced and skilled technical architect for the Oracle Utilities Product Suite with a focus on CC&B and MDM. Melgar has completed CC&B v2.7.0.3.0 upgrades for ENSTAR Natural Gas and the City of Tempe as the Technical Architect.</p>
Alfred Felipe	<p>Technical Architect—Key resource for delivering technical cutover activities. Manages project environments and troubleshoots database and environment performance.</p> <p>Experience - Alfred has over eleven years of experience delivering customer implementation solutions for Oracle Utilities applications such as CC&B, MDM, MWM, CSS, and C2M as a Technical Architect. Alfred has been a part of numerous implementations and upgrades, including AWC's upgrade from CC&B</p>

Team Members	Role & Relevant Experience
	v2.6.0 and MWM v2.3.0, SJI's upgrade from CC&B v2.6.0.1 and MWM v2.3.0, and ENSTAR's upgrade CC&B DEV from v2.4 to v2.7.0.3.
Madhur Jain (MJ)	<p>Solution Architect—Identifies those areas within the current solution requiring transformation. Facilitates the effort necessary to identify reports, configuration, conversion, enhancements, and workflow. Proposes specific solutions that fit within the enterprise's business environment and business objectives and can be shown to address the business problems and exploit opportunities.</p> <p>Experience – MJ has over twelve years of Customer Information System (CIS) Software Development Life cycle (SDLC) experience in the gas, electric, and water industries. Madhur has led multiple CC&B Implementations in multiple leadership roles such as Solution Architect and Functional Lead Architect. His projects include SJI's upgrade from CC&B 2.4 to 2.6.0.1, MID's implementation of CC&B 2.5, and AWC's upgrade from CC&B 2.3 to 2.6.</p>
Diane Lampa	<p>Designer / Developer—Develops technical solution designs. Participates in understanding business requirements and turns them into functional and technical designs for IRWD approval and development.</p> <p>Experience – Diane has over 14 years of experience working on customizations to Oracle Utilities applications, with an emphasis on CC&B. She has participated in various phases of the implementation process including design, development, testing, and support. Diane has been a part of numerous implementations and upgrades such as Spire's CC&B 2.6 upgrade, AWC's upgrade from CC&B 2.3 to CC&B 2.6, and MID's implementation of CC&B 2.5.</p>
Joshua "Ace" Vitug	<p>Developer—Develops technical solution designs. Code development, configuration, and testing for the CC&B application. Develop documentation and runbooks necessary to support CC&B after go-live.</p> <p>Experience – Ace has more than 5 years of experience creating components, unit testing, and providing client support for OUA applications using the prescribed SDLC standards. He has created custom components for CC&B using Java, COBOL, and the Oracle Service Bus (OSB). Ace has been a part of numerous upgrades such as Tempe's CC&B 2.7 upgrade enhancements Spire's CC&B 2.6 upgrade enhancements, and CC&B 2.6 upgrade enhancements for Orlando Utilities Commission (OUC).</p>
Venkat Dongara	<p>Analytics Architect—Analyzes the current OUBI environments and provides hardware config required for new servers. Works on new OUA environments build and upgrade, configure out of the box ELTs, Reports and Dashboards. Migrate all custom OUBI objects and BI Publisher reports into OUA, Setup daily ETL loads, define OBIEE security, backup, and migration strategies. Conducts the necessary admin trainings to the client's team.</p> <p>Experience – Venkat has over 20 years of experience in Data Warehousing, Data Integration, and Business Intelligence (BI) using industry standards and advanced Data Visualization and ETL tools. He has successfully implemented numerous Oracle BI Solutions for Oracle Utilities Applications like CC&B, MDM, and MWM, as well as for Oracle ERP Systems like EBS and PeopleSoft. Venkat recently completed an implementation of OUBI 2.4 for CC&B, MDM and MWM applications for GMP.</p>

Team Members	Role & Relevant Experience
Nechal Singh	<p>Analytics Developer—Analyzes all custom ETLs and reports, identify the changes needed and fix them. Works with client to understand new requirements, then design, develop and test new ETL interfaces, OBIEE and BI Publisher reports. Conducts the necessary training on reports usage to the end users.</p> <p>Experience —Nechal has over 13 years of experience working in Data Warehousing, Data Integration, and BI in various industries including Utilities, Government, Energy, and Capital markets. He has experience in CC&B, OUA, and C2M. Nechal has been a part of numerous upgrades, including Nashville Electric Service, where he configured the OUA admin tool to feed information for Revenue Analytics. He was also part of the Pacific Gas and Electric project, where he managed the installation and configuration of the ETL and front-end reporting stack across environments.</p>
Jinelle D’Souza	<p>CC&B Functional Architect / Training Lead - Works with clients to define solution requirements and map those requirements to the solution. Conducts the analysis necessary to understand risks, assumptions, and dependencies associated with the business processes and applications. Manages all aspects of training including class agenda, class material and data, and training delivery. Responsible for customer enablement and transition.</p> <p>Experience —Jinelle has been involved in four \$20-\$40M revenue recovery projects as part of a SWAT Team to alleviate delayed revenue. Jinelle has implemented several processes for client billing efficiency, leak adjustment management, field work, collections, and to-do management.</p>

The table below identifies the Origin project team member roles and the percentage of time that they are engaged in the project throughout each of the project lifecycle Origin methodology OnPoint phases: Engage, Enable, Construct, Confirm, and Transition & Operate (T&O).

Allocation % for Origin Resources						
Name	Role	Engage	Enable	Construct	Confirm	T & O
Mechelle Davidson	Project Manager	100%	100%	51%	67%	45%
Melgar Olaes	Technical Architect Lead	100%	100%	86%	100%	41%
Alfred Felipe	Technical Architect	--	25%	26%	8%	--
MJ Jain	Solution Architect	73%	100%	72%	80%	39%
Jinelle D’Souza	CC&B Functional Architect	--	100%	72%	52%	30%
	Training Lead	17%	--	9%	28%	11%
Diane Lampa	Designer / Developer	38%	38%	56%	5%	8%

Allocation % for Origin Resources						
Name	Role	Engage	Enable	Construct	Confirm	T & O
Ace Vitug	Developer	--	56%	56%	35%	15%
Venkat Dongara	Analytics Architect	--	50%	100%	75%	32%
Nechal Singh	Analytics Developer	--	50%	100%	79%	28%

5. Project Approach and Timeline

Provide a work plan, including major activities and schedule for the project, deliverables and milestone dates. Provide a detailed scope of work and the upgrade / implementation methodology. Describe how you will approach each of the tasks outlined in the scope of work, including interaction with District staff. The description shall comprehensively define and describe the individual tasks for the work effort. Outline in detail a phased project approach to accomplish both CC&B and OUBI upgrades. The project plan should be provided with each task and sub task represented. Alternatively, project plan can be in a format providing in-depth details covering each phase of the project and summarizing in a way to cover all tasks and subtasks.

Using Origin's onPoint methodology as a backbone for the project, it will take 10 months to achieve all the Project Objectives. Based on your goals and our experience, we recommend a single-phase go-live approach, with OUA launching one day after CC&B. Together, we agree on the plan that upgrades and readies your systems in the first 7 months and provide requested hypercare for 2 months post go-live. This "Big Bang" approach enables the teams to efficiently and effectively upgrade both applications as an entire solution. It also mitigates risks around environment management, duplicative testing, and extended timelines. The project timeline is based on the collective experience working with similar customers to achieve similar goals. These customers are now experiencing the rewards of operating on stable, supported versions, while taking advantage of newer technologies and advances in base functionality.

The chart in figure 1 presents the proposed 9-month timeline for upgrading CC&B and OUBI, according to your scope and objectives, which are listed below. Origin works with IRWD to develop a project timeline based on your organizational needs to perform the upgrade, testing, training, and hypercare support.

- Perform Technical Upgrade of the CC&B Application (v2.4 to v2.7)
- Install Oracle Utilities Analytics (OUA)
- Remediate and Test Customizations, Interfaces and Batches
- Set Up ETL Batches in CC&B for Oracle Utilities Analytics (OUA)
- Configure and Validate Oracle Standard Out of the Box (OOB) Reports and Customized OUBI Reports to OUA
- Remediate, Validate and Migrate BI Publisher (BIP) Reports from OUBI to OUA.
- Customize and Extend Data Warehouse, ETL, and OBIEE Metadata
- Launch Oracle CC&B and OUA Disaster Recovery (DR) on Cloud
- Training End Users on CC&B and OUA
- Post-Production Support (2 Months)

The approach outlined below was built and refined over the last 14 years as part of the Origin methodology. For many of our team, this expertise in implementing, upgrading, and maintaining Oracle Utilities solutions extends well beyond those years. This experience, combined with the knowledge of IRWD's staff and systems due to our direct involvement in the Paymentus integration project, is what builds our confidence in delivering this upgrade to IRWD in the 10-month timeline described over the following pages. Origin has many lessons learned from similar engagements. These, along with key insights from our involvement with product direction and customer groups, allow us to provide IRWD with expert guidance.

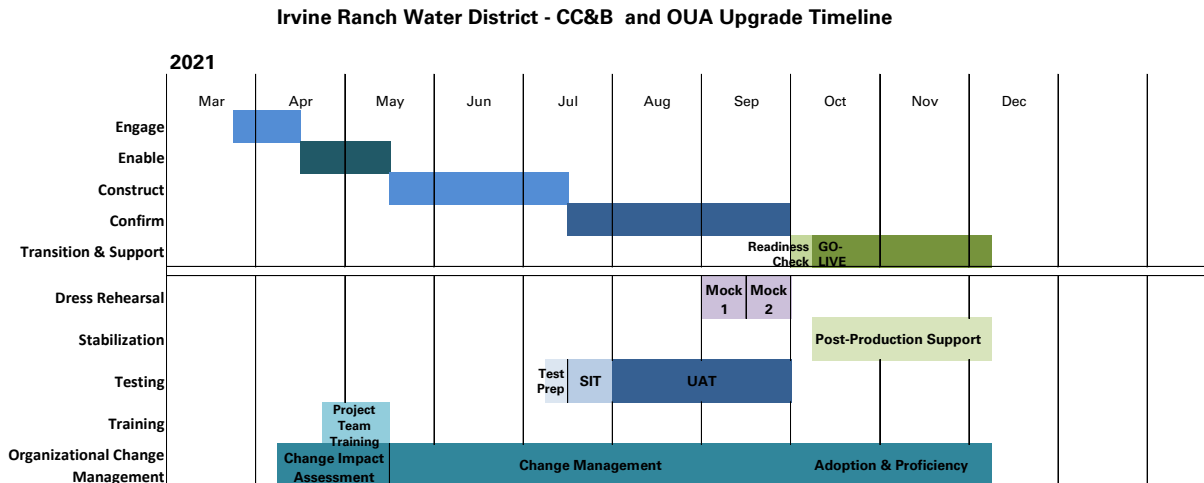


Figure 1 – IRWD Upgrade Timeline

Proposed Upgrade Approach

onPoint, the delivery methodology, is a hybrid methodology organized by specific phases with embedded agile concepts. This approach provides the structure necessary to deliver IRWD's upgrade while allowing for more rapid feedback and delivery. Project phases span the complete software lifecycle. onPoint provides a transformation framework to deliver the CC&B and OUA upgrades in a collaborative manner. onPoint is designed to create a business solution—not simply to upgrade software. Our approach focuses teams on designing and delivering effective results.

The project phases illustrated in *Figure 2* span the complete software lifecycle. For each project phase, specific tasks, deliverables, dependencies, and milestones are defined. Each phase builds on the previous phase(s), ensuring that decisions are consistent with the core design of the solution.

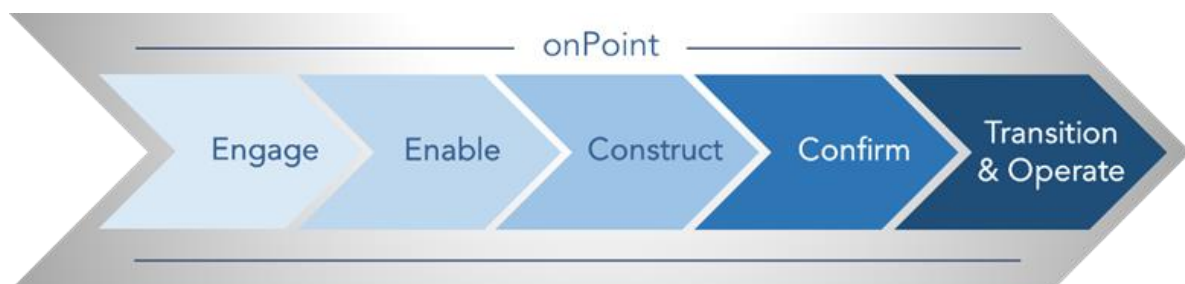


Figure 2 - onPoint Delivery Methodology

- **Engage Phase** – Define project objectives and mobilize the team
- **Enable Phase** – Establish the point of origin for the project and share the approach
- **Construct Phase** – Construct, configure, and validate the solution
- **Confirm Phase** – Test, train, and prepare for go-live
- **Transition & Operate Phase** – Deploy to production and stabilize operations

Engage - Define the project objectives and mobilize the team

Phase Objectives:

- Set expectations for the entire project
- Conduct workshops to compare and contrast the current / new features of CC&B and OUA to determine business process impacts
- Train IRWD's project team on Origin's agile approach for the initiative
- Deploy a copy of IRWD's OUBI and CC&B environments in Origin's solution lab
- Upgrade/deploy the IRWD DEV environments

Description:

During the Engage phase, Origin facilitates workshops to identify existing processes, challenges, and pain points experienced with IRWD's M2C processes, as well as helping search for potential process improvement opportunities to be initiated with the upgraded CC&B and OUA applications. We feel it's critical to also understand your innovation roadmap as it relates to your M2C processes and customer service offerings to ensure the upgraded solutions are best positioned to support future initiatives. Documenting the current state and identifying an improved to-be state, allows Origin and IRWD to collaborate on a project roadmap that carries forward into the Enable phase. In addition, the Origin Technical Architect works with IRWD technical staff to review current deployment landscape as well as plan and execute the upgrade of the Development (DEV) environments.

Key Activities:

- Identify key stakeholders and levels of engagement
- Establish project governance
 - Document and communicate the project charter
 - Document and communicate the project plan and baseline project schedule
 - Establish and initiate project status reporting
- Define workshop logistics (e.g., who should be involved, time commitment from various stakeholders, etc.)
- Conduct workshops to provide the Origin team a shared understanding of the current application infrastructure and solution architecture
- Create the Enable phase workshop schedule
- Deliver agile (i.e. project methodology) foundation training
- Provide inventory of customizations, integrations, reports, and dashboards
- Grant access to integration/network documentation and environments
- Document upgrade procedures for development environments and begin lower environment upgrade activities

Enable – Establish the point of origin for the project, share the approach

Phase Objectives:

- Upgrade/deploy the IRWD TEST environments
- Review differences between current features and functionality for CC&B and OUBI to versions being proposed for implementation
- Schedule and conduct user story workshops (to define requirements and user acceptance test scenarios)
- Define functional design/configuration parameters to support existing business processes that could be impacted by changes in the new versions of CC&B and OUA
- Prepare project team and key stakeholders for the Construct phase

Description:

The team utilizes workshops during the Enable phase to gather initial information and determine the detailed approach to transition to the new versions of CC&B and OUA. Origin documents IRWD functional and technical requirements, including acceptance criteria. During these workshops, the project team prioritizes the requirements and identifies the ones necessary for go-live.

Once requirements have been gathered and prioritized, the team reviews the Construct phase activities. This includes the iterative configuration process, Origin's agile methodology, and expectations for Origin and IRWD.

Key Activities:

- Provide an overview of CC&B v2.7 and OUA v2.7 functional capabilities
 - Prepare a project team training plan
 - Deliver project team training to IRWD
- Capture functional requirements for business processes that may be impacted by the upgraded systems.
- Create functional and technical requirements, including both acceptance criteria (how the requirement is successfully validated) and demo instructions (how the feature/functionality will be demonstrated to IRWD)
- Document interfaces and reports
 - Confirm the interface and report inventory
 - Identify any impacts to reports or interfaces due to changes in schemas
- Validate security parameters
- Document validation (testing) approach
 - Utilize the user story acceptance criteria to define formal test scenarios
 - Partner with IRWD to craft a testing plan including resources, activities, and timeline
- Refine user story delivery schedule
 - Combine the prioritized backlog of user stories and Construct phase calendar to define the schedule, activities, and effort
 - Categorize user stories into sprints to provide a high-level view of the detailed sprint schedule
- Conduct technical upgrade workshops
- Prepare high level environment upgrade strategy

Construct - Construct, configure, and validate the solution

Phase Objectives:

- Prepare the application environment for configuration activities
- Upgrade the test environment to CC&B 2.7
- Upgrade the test environment to OUA 2.7
- Establish CC&B and OUA disaster recovery (DR)
- Continue to refine the Construct phase calendar
- Validate functionality

Description:

For IRWD's CC&B upgrade, Origin employs a hybrid of waterfall and agile project methodologies. The onPoint phases Engage and Enable follow a more traditional waterfall strategy. During the Construct phase, the strategy transitions to an agile approach, which has been proven to be a more effective method for building the solution changes and increasing the speed of adoption. Agile projects use an iterative process of configuring and validating the solution as illustrated in Figure 3 - Agile Iterative Process.

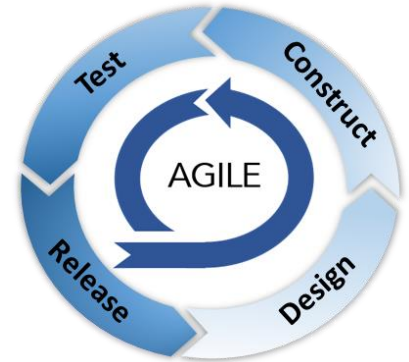


Figure 3 - Agile Iterative Process

Using the requirements that were captured in the Enable phase, the team creates solution blueprints to document the configuration changes for the solution. Following the solution blueprints, the team configures the solution. Requirements are grouped into logical categories, enabling the team to set the timeline for the features and functionality to be delivered.

Work is broken up into three-week periods known as sprints. At the beginning of each sprint, the team commits to the requirements and the progress to be demonstrated to IRWD at the conclusion of each sprint. Once configured, the team performs testing to ensure it is working as intended.

The Construct phase includes several meetings in which the teams continually review progress and adjust their trajectory if necessary. At the beginning of each sprint, requirements are reviewed and prioritized, and a set of requirements is committed for completion in that sprint. This is known as the sprint planning meeting. Sprint planning allows the team to agree upon the work to be completed next.

Midway through each sprint, the team engages in a refinement activity in which the list of requirements is reviewed again and reprioritized, if necessary, to identify the next set of features and functionality to be constructed. At the conclusion of the sprint, the team conducts a sprint review with the larger project team to demonstrate features and functionality created during the sprint if applicable.

Finally, the core team participates in a retrospective meeting at the end of each sprint. This meeting serves as an opportunity for team members to provide feedback (both positive and constructive) to increase the effectiveness of future sprints.

The OUA upgrade adopts a slightly different path, following the waterfall methodology. As with the CC&B upgrade, the team uses the Engage and Enable phases to identify out of the box ETL

loads, reports, and dashboards, and to determine any new custom reports. This is a two-phase upgrade, first moving from v2.4 to v2.5 and then upgrading to v2.7, accomplished during the Construct phase. In addition, the DR OUA database is created during Construct. The OUA upgrade moves from the Construct phase to the Confirm phase at the same time as the CC&B upgrade, allowing testing of both systems to occur during the same period.

Key Activities:

- Prioritize and commit requirements
 - IRWD reviews the prioritized requirements with the team to gain approval
 - Requirements are reviewed and sized, enabling the team to understand how many requirements can be completed during the allotted sprint timeframe
 - The core team commits to complete specific requirements during the specified sprint
- Configure features and functionality
- Unit testing is performed on the completed configuration
- Conduct and attend sprint ceremonies
 - Project team members attend the following meetings and ceremonies throughout each sprint:
 - Sprint planning
 - Requirement refinement
 - Sprint review / demo
 - Retrospective
 - Daily stand-up meetings for the core project team (known as *daily scrums*)
 - Based on acceptance criteria and demo instructions gathered for each requirement, IRWD approves the resulting configuration as demonstrated during the review sessions
- Establish disaster recovery for CC&B and OUA

Key Deliverables:

- Updated Construct phase calendar
- List of requirements
- Sprint demo agenda
- System integration and user acceptance test scenarios
- Testing strategy

Confirm - Test, train, and prepare for go-live

Phase Objective(s):

- Confirm existing functionality
- Validate new features and functionality from upgraded systems
- Create and deliver training instruction to end-users and technical resources
- Perform operational-readiness activities to ensure IRWD is prepared for launch

Description:

During the Confirm phase, specific activities are carried out to ensure that both the systems and the people are ready for the launch of the new system. Using the acceptance criteria that were gathered during the requirement workshops as well as the standard regression testing scenarios, the project team tests the new solution to ensure it functions as expected.

The IRWD team is trained to support the new system from both an end-user and technical perspective. Teams complete the operational-readiness checklist to step through the activities that occur from acceptance testing to launch.

Key Activities:

- Coordinate user-acceptance testing
 - IRWD's team leads the testing effort, with Origin coordinating activities to ensure testing is completed within the established timeframe
 - Defects are formally logged and completed, and IRWD retests to ensure the functionality works as documented
- Ensure IRWD validation / approval of functionality
 - IRWD provides written approval upon completion of validation and acceptance of the new functionality
 - Establish exit criteria to move from the Confirm phase to the Transition & Operate phase
- Complete mock cutovers
- Develop and deliver training
 - The Origin project team gives IRWD access to the training materials
 - Origin collaborates with IRWD to conduct CC&B training sessions
 - Origin provides training for OUA to the IRWD support team

Transition & Operate - Deploy the solution to production and stabilize operations

Phase Objective(s):

- Confirm that the upgraded systems are accepted by IRWD and that IRWD is ready to transition
- Launch the upgraded systems
- Effectively manage the transition to steady-state operations

Description:

The goal of the Transition & Operate phase is to deploy the upgraded systems into the organization. All elements must come together to transition successfully to active production use.

During Transition & Operate, the configuration that was validated during the Confirm phase is moved to the production CC&B and OUA environments along with the validated integrations and extensions. A final validation review is conducted with users and stakeholders to verify that the systems are ready for production use, and an assessment is made of operational readiness. The phase culminates with the new systems being put into use. CC&B is upgraded during a weekend maintenance window, with the three-month hypercare period beginning immediately after the upgrade is complete. The OUA upgrade is expected to launch one day after the CC&B upgrade, with the eight-week hypercare period beginning immediately thereafter.

Once active use of the system begins, steady-state operations are managed. This includes hypercare support, final acceptance of the system, and closeout of the project and related processes. Once the production solution has been verified and handed over for normal business operations, Origin prepares a series of artifacts including the project summary and stabilization report and the project closeout letter.

Key Activities:

- Ensure operational readiness
 - o Work with IRWD to complete operational readiness checklists, ensuring all team members are prepared to support deployment
 - o Verify that the Transition & Operate phase implementation checklist has been completed
- Review and approve all phase deliverables
- Confirm go-live resource requirements

The following work plan provides a view of the tasks and sub-tasks that are conducted during IRWD's upgrade project, including deliverables (identified by the word "Deliverable" before the task name) and milestones (identified by the word "MILESTONE" before the task name).

IRWD Upgrade Schedule						
ID	WBS	Task Name	Duration	Start	Finish	Predecessors
1	1	IRWD CCB 2.4.0.1 to 2.7 Upgrade	184 days	Mon 3/22/21	Fri 12/03/21	
2	1.1	Initiation	15 days	Mon 3/22/21	Fri 4/9/21	
3	1.1.1	SOW Signed	1 day	Mon 3/22/21	Mon 3/22/21	
4	1.1.2	PMO Office Setup	1 day	Tue 3/23/21	Tue 3/23/21	3
5	1.1.3	Project Plan Development	2 days	Wed 3/24/21	Thu 3/25/21	4
6	1.1.4	Draft Plan Delivered to Customer	1 day	Fri 3/26/21	Fri 3/26/21	5
7	1.1.5	Project Plan Finalized	1 day	Fri 3/26/21	Fri 3/26/21	6FF
8	1.1.6	Provide Origin with Code Promotion Procedure Document	1 day	Wed 3/24/21	Wed 3/24/21	4
9	1.1.7	Deliverable D01 - Project Plan	0 days	Mon 3/29/21	Mon 3/29/21	7
10	1.1.8	Deliverable D02 - Communications Plan	0 days	Mon 3/29/21	Mon 3/29/21	7
11	1.1.9	MILESTONE M01 - Project Management Plans	0 days	Fri 3/26/21	Fri 3/26/21	9
12	1.1.10	Origin Solution Lab Setup	15 days	Mon 3/22/21	Fri 4/9/21	

IRWD Upgrade Schedule						
ID	WBS	Task Name	Duration	Start	Finish	Predecessors
13	1.1.10.1	Provide Origin with IRWD Env (config, code, schema)	5 days	Mon 3/22/21	Fri 3/26/21	
14	1.1.10.2	Provide Origin with Code Promotion Procedure Document	5 days	Mon 3/29/21	Fri 4/2/21	13
15	1.1.10.3	Initial Environment Review	5 days	Mon 3/29/21	Fri 4/2/21	13
16	1.1.10.4	Compare databases to identify differences	5 days	Mon 3/29/21	Fri 4/2/21	13
17	1.1.10.5	Analysis for any customizations	5 days	Mon 3/29/21	Fri 4/2/21	13
18	1.1.10.6	Smoke Test Environment	5 days	Mon 4/5/21	Fri 4/9/21	17
19	1.2	Engage (3 Weeks)	15 days	Mon 3/22/21	Fri 4/9/21	
20	1.2.1	On-Site Project Kick Off	5 days	Mon 3/22/21	Fri 3/26/21	3SS
21	1.2.2	Provide Inventory of Customizations	5 days	Mon 3/22/21	Fri 3/26/21	3SS
22	1.2.3	Provide Inventory of Reports/Dashboards	5 days	Mon 3/22/21	Fri 3/26/21	3SS
23	1.2.4	Provide Access to Integration/Network Documentation	5 days	Mon 3/22/21	Fri 3/26/21	3SS
24	1.2.5	Remote Review of Current Configuration	5 days	Mon 3/22/21	Fri 3/26/21	3SS
25	1.2.6	Code Promotion Procedure Review	5 days	Mon 3/22/21	Fri 3/26/21	3SS
26	1.2.7	Discover Workshop CC&B	5 days	Mon 3/29/21	Fri 4/2/21	
27	1.2.7.1	Technical Upgrade Q&A	5 days	Mon 3/29/21	Fri 4/2/21	23
28	1.2.7.2	Database Changes Q&A	5 days	Mon 3/29/21	Fri 4/2/21	23
29	1.2.7.3	Environment Analysis Q&A	5 days	Mon 3/29/21	Fri 4/2/21	23
30	1.2.7.4	CC&B 2.7 Q&A	5 days	Mon 3/29/21	Fri 4/2/21	23

IRWD Upgrade Schedule						
ID	WBS	Task Name	Duration	Start	Finish	Predecessors
31	1.2.7.5	Custom Code Analysis Q&A	5 days	Mon 3/29/21	Fri 4/2/21	23
32	1.2.7.6	Review Testing Procedures and Defect Management	5 days	Mon 3/29/21	Fri 4/2/21	23
33	1.2.7.7	Review Status Reporting	5 days	Mon 3/29/21	Fri 4/2/21	23
34	1.2.7.8	Finalize and Approve Project Schedule	5 days	Mon 3/29/21	Fri 4/2/21	23
35	1.2.8	CC&B Environment Builds	11 days	Fri 3/26/21	Fri 4/9/21	
36	1.2.8.1	Submit Request for Upgrade Environments	1 day	Fri 3/26/21	Fri 3/26/21	23FF
37	1.2.8.2	Take DB Snapshot for DEV	1 day	Mon 3/29/21	Mon 3/29/21	36
38	1.2.8.3	Dev Environment	9 days	Tue 3/30/21	Fri 4/9/21	
39	1.2.8.3.1	Build a New Database on Target Oracle Version	5 days	Tue 3/30/21	Mon 4/5/21	37
40	1.2.8.3.2	Export Production Data Model and Import into Target New Oracle Version	5 days	Tue 3/30/21	Mon 4/5/21	37
41	1.2.8.3.3	Execute Update Scripts to Migrate Data from 2.4 to 2.7 (CC&B and OUA)	5 days	Tue 3/30/21	Mon 4/5/21	37
42	1.2.8.3.4	Build a New Application Server for CC&B and OUA 2.7	5 days	Tue 3/30/21	Mon 4/5/21	37
43	1.2.8.3.5	Build Native Weblogic domain	5 days	Tue 3/30/21	Mon 4/5/21	37
44	1.2.8.3.6	Document Upgrade Procedures for DEV	5 days	Tue 3/30/21	Mon 4/5/21	37
45	1.2.8.3.7	Deploy customizations into upgraded environments	5 days	Tue 3/30/21	Mon 4/5/21	37
46	1.2.8.3.8	Smoke Test Environment (Basic Navigation)	2 days	Mon 4/5/21	Tue 4/6/21	45FS-1 day
47	1.2.8.3.9	Verify & Test Integrated DEV (SP)	3 days	Wed 4/7/21	Fri 4/9/21	46
48	1.3	Deliverable Do3 - Project Kick-Off Materials	0 days	Mon 3/29/21	Mon 3/29/21	20

IRWD Upgrade Schedule						
ID	WBS	Task Name	Duration	Start	Finish	Predecessors
49	1.4	Deliverable Do4 - Customizations Inventory	0 days	Mon 3/29/21	Mon 3/29/21	21
50	1.5	MILESTONE Mo2 - Engage Phase Complete	0 days	Fri 4/9/21	Fri 4/9/21	12,19,26,35,38,85
51	1.6	Close Engage Phase	1 day	Fri 4/9/21	Fri 4/9/21	26,35,85
52	1.7	Enable (4 Weeks)	20 days	Mon 4/12/21	Fri 5/7/21	
53	1.7.1	Test Environment	20 days	Mon 4/12/21	Fri 5/7/21	
54	1.7.1.1	Test Environment Hardware Available	1 day	Mon 4/12/21	Mon 4/12/21	51
55	1.7.1.2	Test Environment Build	15 days	Tue 4/13/21	Mon 5/3/21	54
56	1.7.1.3	Test Environment Verify & Test	4 days	Tue 5/4/21	Fri 5/7/21	55
57	1.7.2	Conduct Functional Requirements Workshops	10 days	Mon 4/12/21	Fri 4/23/21	
58	1.7.2.1	Core Team Training - Part 2.1	5 days	Mon 4/12/21	Fri 4/16/21	
59	1.7.2.1.1	Update Core Team Training Documentation	1 day	Mon 4/12/21	Mon 4/12/21	38
60	1.7.2.1.2	Deliver Core Team Training	4 days	Tue 4/13/21	Fri 4/16/21	59
61	1.7.2.2	Core Team Training - Part 2.2	5 days	Mon 4/19/21	Fri 4/23/21	
62	1.7.2.2.1	Deliver Core Team Training	5 days	Mon 4/19/21	Fri 4/23/21	60
63	1.7.3	Design Review of Customizations, Integrations, and Interfaces	20 days	Mon 4/12/21	Fri 5/7/21	
64	1.7.3.1	Review Customizations (761)	20 days	Mon 4/12/21	Fri 5/7/21	59SS
65	1.7.3.2	Review Integrations/Interfaces (33)	20 days	Mon 4/12/21	Fri 5/7/21	59SS
66	1.7.3.3	Review Reports/Dashboards (147)	20 days	Mon 4/12/21	Fri 5/7/21	59SS
67	1.7.3.4	Review Design Docs	20 days	Mon 4/12/21	Fri 5/7/21	59SS

IRWD Upgrade Schedule						
ID	WBS	Task Name	Duration	Start	Finish	Predecessors
68	1.7.3.5	Review Fit-Gap Analysis	20 days	Mon 4/12/21	Fri 5/7/21	59SS
69	1.7.3.6	Review Report Design Docs	20 days	Mon 4/12/21	Fri 5/7/21	59SS
70	1.7.3.7	Develop Future State Roadmap	20 days	Mon 4/12/21	Fri 5/7/21	59SS
71	1.7.3.8	Develop Training Needs Assessment	20 days	Mon 4/12/21	Fri 5/7/21	59SS
72	1.7.3.9	Develop User Stories	20 days	Mon 4/12/21	Fri 5/7/21	59SS
73	1.7.4	Conduct Technical Upgrade Workshops	5 days	Mon 5/3/21	Fri 5/7/21	
74	1.7.4.1	Environment	5 days	Mon 5/3/21	Fri 5/7/21	63FF
75	1.7.4.2	Database	5 days	Mon 5/3/21	Fri 5/7/21	63FF
76	1.7.4.3	Interfaces	5 days	Mon 5/3/21	Fri 5/7/21	63FF
77	1.7.4.4	Reports/Dashboards	5 days	Mon 5/3/21	Fri 5/7/21	63FF
78	1.7.4.5	Conversion	5 days	Mon 5/3/21	Fri 5/7/21	63FF
79	1.7.4.6	Performance Planning	5 days	Mon 5/3/21	Fri 5/7/21	63FF
80	1.7.4.7	Auditability Planning	5 days	Mon 5/3/21	Fri 5/7/21	63FF
81	1.7.4.8	Security Planning	5 days	Mon 5/3/21	Fri 5/7/21	63FF
82	1.7.4.9	Availability Planning	5 days	Mon 5/3/21	Fri 5/7/21	63FF
83	1.7.4.10	Capacity Planning	5 days	Mon 5/3/21	Fri 5/7/21	63FF
84	1.7.4.11	Interoperability Planning	5 days	Mon 5/3/21	Fri 5/7/21	63FF
85	1.7.5	Discover Workshop OUA	5 days	Mon 5/3/21	Fri 5/7/21	
86	1.7.5.1	Technical Upgrade Q&A	5 days	Mon 5/3/21	Fri 5/7/21	73SS

IRWD Upgrade Schedule						
ID	WBS	Task Name	Duration	Start	Finish	Predecessors
87	1.7.5.2	Database Changes Q&A	5 days	Mon 5/3/21	Fri 5/7/21	73SS
88	1.7.5.3	Environment Analysis Q&A	5 days	Mon 5/3/21	Fri 5/7/21	73SS
89	1.7.5.4	OUA 2.7 Q&A	5 days	Mon 5/3/21	Fri 5/7/21	73SS
90	1.7.5.5	Custom Code Analysis Q&A	5 days	Mon 5/3/21	Fri 5/7/21	73SS
91	1.7.6	Prepare High Level Environment Strategy	10 days	Mon 4/26/21	Fri 5/7/21	
92	1.7.6.1	Review /Approve Draft Solution Blueprint Documents	10 days	Mon 4/26/21	Fri 5/7/21	63FF
93	1.8	DELIVERABLE Do5 - High Level Environment Strategy Document	0 days	Fri 5/7/21	Fri 5/7/21	74
94	1.9	DELIVERABLE Do6 - Interface Strategy and Plan Document	0 days	Fri 5/7/21	Fri 5/7/21	92
95	1.1	MILESTONE Mo3 - Enable Phase Complete	0 days	Fri 5/7/21	Fri 5/7/21	53,57,63,73,91
96	1.11	Close Enable Phase	0 days	Fri 5/7/21	Fri 5/7/21	53,57,63,73,91
97	1.12	Construct (10 Weeks)	58 days	Mon 5/10/21	Fri 7/30/21	
98	1.12.1	Prepare High-Level Data Migration Strategy	5 days	Mon 5/10/21	Fri 5/14/21	
99	1.12.1.1	Create Data Migration / Remediation Strategy Document	5 days	Mon 5/10/21	Fri 5/14/21	96FS+1 day
100	1.12.1.2	Conduct Data Migration / Remediation Strategy Review and Approval	1 day	Fri 5/14/21	Fri 5/14/21	99FF
101	1.12.2	DELIVERABLE Do7 - High Level Migration / Remediation Strategy Document	0 days	Fri 5/14/21	Fri 5/14/21	100
102	1.13	OUA Upgrade Development	58 days	Mon 5/10/21	Fri 7/30/21	
103	1.13.1	Install OUASA 2.4 to 2.7	58 days	Mon 5/10/21	Fri 7/30/21	98SS
104	1.13.2	Setup/Configure standard out of the box ELT loads, Reports and Dashboards and migrate existing custom OUBI reports into OUA	58 days	Mon 5/10/21	Fri 7/30/21	98SS

IRWD Upgrade Schedule						
ID	WBS	Task Name	Duration	Start	Finish	Predecessors
105	1.13.3	Identify functional gaps in existing BI Publisher Reports, Remediate, validate and migrate to new OUA.	58 days	Mon 5/10/21	Fri 7/30/21	98SS
106	1.13.4	Design, development and testing of custom ETLs for WEODW functionality	58 days	Mon 5/10/21	Fri 7/30/21	98SS
107	1.13.5	Setup Disaster Recovery (DR) for OUA database	58 days	Mon 5/10/21	Fri 7/30/21	98SS
108	1.13.6	Origin CC&B 2.7 Development - Sprint 1	15 days	Mon 5/10/21	Fri 5/28/21	
109	1.13.6.1	Compile all Java code and resolve any errors	15 days	Mon 5/10/21	Fri 5/28/21	98SS
110	1.13.6.2	Complete Cobol-Java Conversion	15 days	Mon 5/10/21	Fri 5/28/21	98SS
111	1.13.6.3	Complete XAI to IWS Conversion	15 days	Mon 5/10/21	Fri 5/28/21	98SS
112	1.13.6.4	Smoke test business processes that involve Java Code	15 days	Mon 5/10/21	Fri 5/28/21	98SS
113	1.13.6.5	Smoke Test xml schemas by executing all Inbound Web Services and SPLApp objects	15 days	Mon 5/10/21	Fri 5/28/21	98SS
114	1.13.6.6	Execute and test all custom batch and custom real-time interfaces	15 days	Mon 5/10/21	Fri 5/28/21	98SS
115	1.13.6.7	Resolve issues resulting from smoke testing	15 days	Mon 5/10/21	Fri 5/28/21	98SS
116	1.13.6.8	Create a Code Drop to contain upgraded code	15 days	Mon 5/10/21	Fri 5/28/21	98SS
117	1.13.6.9	Smoke test business processes that involve Configuration Tools Objects	15 days	Mon 5/10/21	Fri 5/28/21	98SS
118	1.13.6.10	Smoke Test the database objects (triggers, stored procedures, etc.)	15 days	Mon 5/10/21	Fri 5/28/21	98SS
119	1.13.6.11	Functional Testing of Installed Code Drop on CC&B 2.7 DEV	15 days	Mon 5/10/21	Fri 5/28/21	98SS
120	1.13.6.12	Create Configuration Workbook - finalize and update after design review	15 days	Mon 5/10/21	Fri 5/28/21	98SS
121	1.13.6.13	Conduct Sprint Demo	1 day	Fri 5/28/21	Fri 5/28/21	120FF
122	1.13.7	Origin CC&B 2.7 Development - Sprint 2	14 days	Tue 6/1/21	Fri 6/18/21	

IRWD Upgrade Schedule						
ID	WBS	Task Name	Duration	Start	Finish	Predecessors
123	1.13.7.1	Compile all Java code and resolve any errors	14 days	Tue 6/1/21	Fri 6/18/21	108
124	1.13.7.2	Complete Cobol-Java Conversion	14 days	Tue 6/1/21	Fri 6/18/21	123SS
125	1.13.7.3	Complete XAI to IWS Conversion	14 days	Tue 6/1/21	Fri 6/18/21	123SS
126	1.13.7.4	Smoke test business processes that involve Java Code	14 days	Tue 6/1/21	Fri 6/18/21	123SS
127	1.13.7.5	Smoke Test xml schemas by executing all Inbound Web Services and SPLApp objects	14 days	Tue 6/1/21	Fri 6/18/21	123SS
128	1.13.7.6	Execute and test all custom batch and custom real-time interfaces	14 days	Tue 6/1/21	Fri 6/18/21	123SS
129	1.13.7.7	Resolve issues resulting from smoke testing	14 days	Tue 6/1/21	Fri 6/18/21	123SS
130	1.13.7.8	Create a Code Drop to contain upgraded code	14 days	Tue 6/1/21	Fri 6/18/21	123SS
131	1.13.7.9	Smoke test business processes that involve Configuration Tools Objects	14 days	Tue 6/1/21	Fri 6/18/21	123SS
132	1.13.7.10	Smoke Test the database objects (triggers, stored procedures, etc.)	14 days	Tue 6/1/21	Fri 6/18/21	123SS
133	1.13.7.11	Functional Testing of Installed Code Drop on CC&B 2.7 DEV	14 days	Tue 6/1/21	Fri 6/18/21	123SS
134	1.13.7.12	Create Configuration Workbook - finalize and update after design review	14 days	Tue 6/1/21	Fri 6/18/21	123SS
135	1.13.7.13	Conduct Sprint Demo	1 day	Fri 6/18/21	Fri 6/18/21	134FF
136	1.13.8	Origin CC&B 2.7 Development - Sprint 3	14 days	Mon 6/21/21	Fri 7/9/21	
137	1.13.8.1	Compile all Java code and resolve any errors	14 days	Mon 6/21/21	Fri 7/9/21	122
138	1.13.8.2	Complete Cobol-Java Conversion	14 days	Mon 6/21/21	Fri 7/9/21	137SS
139	1.13.8.3	Complete XAI to IWS Conversion	14 days	Mon 6/21/21	Fri 7/9/21	137SS
140	1.13.8.4	Smoke test business processes that involve Java Code	14 days	Mon 6/21/21	Fri 7/9/21	137SS

IRWD Upgrade Schedule						
ID	WBS	Task Name	Duration	Start	Finish	Predecessors
141	1.13.8.5	Smoke Test xml schemas by executing all Inbound Web Services and SPLApp objects	14 days	Mon 6/21/21	Fri 7/9/21	137SS
142	1.13.8.6	Execute and test all custom batch and custom real-time interfaces	14 days	Mon 6/21/21	Fri 7/9/21	137SS
143	1.13.8.7	Resolve issues resulting from smoke testing	14 days	Mon 6/21/21	Fri 7/9/21	137SS
144	1.13.8.8	Create a Code Drop to contain upgraded code	14 days	Mon 6/21/21	Fri 7/9/21	137SS
145	1.13.8.9	Smoke test business processes that involve Configuration Tools Objects	14 days	Mon 6/21/21	Fri 7/9/21	137SS
146	1.13.8.10	Smoke Test the database objects (triggers, stored procedures, etc.)	14 days	Mon 6/21/21	Fri 7/9/21	137SS
147	1.13.8.11	Functional Testing of Installed Code Drop on CC&B 2.7 DEV	14 days	Mon 6/21/21	Fri 7/9/21	137SS
148	1.13.8.12	Create Configuration Workbook - finalize and update after design review	14 days	Mon 6/21/21	Fri 7/9/21	137SS
149	1.13.8.13	Conduct Sprint Demo	1 day	Fri 7/9/21	Fri 7/9/21	148FF
150	1.13.9	Prepare for Testing	14 days	Mon 6/28/21	Fri 7/16/21	
151	1.13.9.1	Prepare System Integration Testing (SIT) Plan	10 days	Mon 6/28/21	Mon 7/12/21	136SS+5 days
152	1.13.9.2	Prepare User Acceptance Testing (UAT) Plan	10 days	Mon 6/28/21	Mon 7/12/21	151SS
153	1.13.9.3	Prepare SIT and UAT Materials	4 days	Tue 7/13/21	Fri 7/16/21	151,152
154	1.13.10	Prepare End-User Training - OUA Only	5 days	Mon 6/28/21	Fri 7/2/21	150SS
155	1.13.10.1	Prepare End-User OUA Training Schedule	5 days	Mon 6/28/21	Fri 7/2/21	
156	1.13.10.2	Prepare End-User OUA Training Materials and CC&B Screen Shots	5 days	Mon 6/28/21	Fri 7/2/21	155SS
157	1.13.11	Deliverable Do8 - Configuration Workbooks	0 days	Mon 7/12/21	Mon 7/12/21	108,122,136
158	1.13.12	Deliverable Do9 - SIT Plan	0 days	Fri 7/16/21	Fri 7/16/21	150

IRWD Upgrade Schedule						
ID	WBS	Task Name	Duration	Start	Finish	Predecessors
159	1.13.13	Deliverable D10 - UAT Plan	0 days	Fri 7/16/21	Fri 7/16/21	150
160	1.13.14	Deliverable D11 - Training Plan	0 days	Fri 7/2/21	Fri 7/2/21	154
161	1.13.15	Deliverable D12 - Training Calendar	0 days	Fri 7/2/21	Fri 7/2/21	154
162	1.13.16	MILESTONE Mo4 - Construct Phase Complete	0 days	Fri 7/16/21	Fri 7/16/21	150
163	1.13.17	Close Construct Phase	0 days	Fri 7/16/21	Fri 7/16/21	150
164	1.14	Confirm (11 Weeks)	44 days	Mon 8/2/21	Fri 10/1/21	
165	1.14.1	Integration Testing	10 days	Mon 8/2/21	Fri 8/13/21	
166	1.14.1.1	Integration Test Execution	10 days	Mon 8/2/21	Fri 8/13/21	56
167	1.14.1.2	Integration Testing Defect Correction	10 days	Mon 8/2/21	Fri 8/13/21	166SS
168	1.14.2	User Acceptance Testing	34 days	Mon 8/16/21	Fri 10/1/21	
169	1.14.2.1	UAT Execution	34 days	Mon 8/16/21	Fri 10/1/21	165
170	1.14.2.2	UAT Defect Correction	34 days	Mon 8/16/21	Fri 10/1/21	169SS
171	1.14.3	Mock Cutovers	16 days	Mon 8/30/21	Tue 9/21/21	
172	1.14.3.1	Mock Cutover 1	14 days	Mon 8/30/21	Fri 9/17/21	165
173	1.14.3.1.1	Prepare for Mock Cutover	3 days	Mon 8/30/21	Wed 9/1/21	169SS+10 days
174	1.14.3.1.2	Conduct Mock Cutover	3 days	Thu 9/2/21	Tue 9/7/21	173
175	1.14.3.1.3	Document Timing and Issues	2 days	Wed 9/8/21	Thu 9/9/21	174
176	1.14.3.1.4	Review Mock 1 Results & Update Cutover Checklist	6 days	Fri 9/10/21	Fri 9/17/21	175
177	1.14.3.2	Mock Cutover 2	10 days	Wed 9/8/21	Tue 9/21/21	

IRWD Upgrade Schedule						
ID	WBS	Task Name	Duration	Start	Finish	Predecessors
178	1.14.3.2.1	Prepare for Mock Cutover	2 days	Wed 9/8/21	Thu 9/9/21	175SS
179	1.14.3.2.2	Conduct Mock Cutover	3 days	Fri 9/10/21	Tue 9/14/21	178
180	1.14.3.2.3	Document Timing and Issues	2 days	Wed 9/15/21	Thu 9/16/21	179
181	1.14.3.2.4	Review Mock 2 Results and Update Cutover Checklist	3 days	Fri 9/17/21	Tue 9/21/21	180
182	1.14.4	Deliver OUA Training	8 days	Wed 9/22/21	Fri 10/1/21	
183	1.14.4.1	Complete OUA End-User Training Development	3 days	Wed 9/22/21	Fri 9/24/21	181
184	1.14.4.2	Train IRWD's Training Team	3 days	Mon 9/27/21	Wed 9/29/21	183
185	1.14.4.3	Schedule Make-Up Classes	2 days	Thu 9/30/21	Fri 10/1/21	184
186	1.14.5	Deliverable D13 - UAT Results w/Approval	0 days	Fri 10/1/21	Fri 10/1/21	168
187	1.14.6	Deliverable D14 - Cutover Checklist w/Task Durations	0 days	Tue 9/21/21	Tue 9/21/21	181
188	1.14.7	Deliverable D15 - Training Materials	0 days	Fri 10/1/21	Fri 10/1/21	182
189	1.14.8	MILESTONE Mo5 - Production-Ready Platform	0 days	Fri 10/1/21	Fri 10/1/21	182
190	1.14.9	MILESTONE Mo6 - Confirm Phase Complete	0 days	Fri 10/1/21	Fri 10/1/21	182
191	1.14.10	Close Confirm Phase	0 days	Fri 10/1/21	Fri 10/1/21	182
192	1.15	Transition & Operate (13 Weeks)	61 days	Mon 10/4/21	Thu 12/30/21	
193	1.15.1	Production Launch	61 days	Mon 10/4/21	Thu 12/30/21	
194	1.15.1.1	Go-Live Code Freeze (CC&B 2.7 & OUA 2.7)	1 day	Mon 10/4/21	Mon 10/4/21	191
195	1.15.1.2	Review Deployment Checklist	1 day	Tue 10/5/21	Tue 10/5/21	194

IRWD Upgrade Schedule						
ID	WBS	Task Name	Duration	Start	Finish	Predecessors
196	1.15.1.3	Conduct Go-live and Deployment Readiness Assessment	2 days	Wed 10/6/21	Thu 10/7/21	195
197	1.15.1.4	Go/No-Go Readiness Report	1 day	Fri 10/8/21	Fri 10/8/21	196
198	1.15.1.5	Conduct Production Deployment (CC&B on 11/6 and OUA on 11/7)	2 days	Fri 10/8/21	Mon 10/11/21	197FS-1 day
199	1.15.1.6	Go-Live Complete	0 days	Mon 10/11/21	Mon 10/11/21	198
200	1.15.1.7	Post Go Live Support	40 days	Mon 10/11/21	Fri 12/03/21	199FS-1 day
201	1.15.2	Project Close-Out	5 days	Mon 11/29/21	Fri 12/03/21	
202	1.15.2.1	Create Project Close-Out and Stabilization Report	5 days	Mon 11/29/21	Fri 12/03/21	200FS-5 days
203	1.15.2.2	Conduct Project Close-Out Meeting	1 day	Fri 12/03/21	Fri 12/03/21	202FF
204	1.15.3	Deliverable D16 - Readiness Assessment	0 days	Fri 10/8/21	Fri 10/8/21	197
205	1.15.4	Deliverable D17 - Project Close-Out & Stabilization Report	0 days	Fri 12/03/21	Fri 12/03/21	201
206	1.15.5	MILESTONE Mo7 - Stable Production Operations	0 days	Fri 12/03/21	Fri 12/03/21	201
207	1.15.6	MILESTONE Mo8 - Transition & Operate Phase Complete	0 days	Fri 12/03/21	Fri 12/03/21	201
208	1.15.7	Close Transition & Support Phase	0 days	Fri 12/03/21	Fri 12/03/21	201

6. Schedule

Assurance of the firm's ability to complete all work considering the firm's current and planned workload based on the proposed schedule.

Origin is ready, willing, and able to perform the work as outlined in IRWD's RFP. Origin has the resources to perform the work in the timeline outlined in section 5 above.

7. References

A description of the project team's past record of performance on similar projects for which your firm has provided services. Include a discussion of such factors as control of costs, quality of work and ability to meet schedules. Provide three references for implementation/upgrade projects involving Oracle CC&B and Oracle OUBI/OBIEE. Each reference must include:

- a. Client name and contact information*
- b. Project description*
- c. Role of key project team members*

Origin's onPoint project methodology with our change control and risk management processes ensures that a quality product is delivered on time, within scope, and within budget. Communication is one of the keys to a successful delivery, ensuring that any changes to the original plan are thoroughly reviewed. A solid change control process gives the project team the latitude to make necessary changes while providing transparency to stakeholders of the impacts a change could have to the overall project. In addition to the stringent processes we follow, Origin puts the right people in place to ensure success for this upgrade. We have many talented resources on the Origin team. The referenced projects below don't include all of the team members that we are proposing, due to timing of project start and resource availability across the organization. Rest assured, the team we are proposing is highly qualified, as shown in section 4 and in the attached resumes, to deliver a successful project. The following list of references provides a glimpse of similar upgrades.

Client References (1 of 4)

ENSTAR Natural Gas	Matt Kosht – IT Director	907-334-7630 matt.kosht@enstarnaturalgas.com
ENSTAR is a natural gas utility that upgraded from CC&B v2.4 to v2.7. The initiative was originally intended as a technical upgrade only. However, multiple enhancements were added to take advantage of new functionality. Even with the added scope, the original launch date and budget were achieved.		
Account Executive – Kelley Isbrandtsen	Technical Architect – Melgar Olaes	
Project Manager – Mechelle Davidson	Solution Architect – Jasmin Joaquin	
Designer – Gerard Cinco	Business Analyst – Samuel Gates	

Client References (2 of 4)

Artesian Water (AWC)	Ray Kelley – Director of Information Technology	302-453-6984 rkelly@artesianwater.com
Artesian Water is a utility providing water, wastewater, and service line protection services to approximately 85,000 meters. AWC upgraded from CC&B v2.3 to v2.6 in November of 2018. This upgrade encompassed CC&B, MWM, and FWPIP. In addition to the application upgrades, Origin collaborated with AWC to reengineer business processes and optimize the M2C workflow. Origin's PM worked closely with AWC's PM throughout the entire project duration to determine whether the original timeline and budget could accommodate any new scope requests. Some changes were absorbed and lower priority or nice to have changes were inventoried as possible phase II project scope. The Origin team included AWC's team in all phases of project execution to ensure requirements we accurately captured, both groups agreed with solution designs or approaches, and that any deficiencies in a deliverable was resolved immediately.		
Account Executive – Corey Labor	Technical Architect – Jayakar Akarapu	

Client References (2 of 4)

Project Manager – Dante Magtoto	Solution Architect – MJ Jain
Designer – Diane Lampa	Business Analyst – Jasmin Joaquin

Client References (3 of 4)

Spire Energy	Barbara Armstrong Product Manager	205-365-7840 barbara.armstrong@spireenergy.com
Spire Energy is a gas and utility, serving 1.7 million meters. In 2019, they upgraded from CC&B v2.4 to v2.6. Origin led the environment upgrade, design, and development of a new CC&B to G4 integration, and a new tokenization integration. Origin also implemented its database archiving tool, MonArch. The Origin team worked closely with the Spire team to ensure timeline and budget goals were met, and the Spire team was included in all phases to ensure quality in meeting all the captured requirements. At every step, Origin worked closely with Spire to make sure they agreed on solution designs.		
Account Executive – Corey Labor	Technical Architect – Jayakar Akarapu	
Project Manager – Beth Maxwell	Solution Architect – Stephen Miranda	
Designer – Gerard Cinco	Business Analyst – Kyle Christensen	

Client References (4 of 4)

South Jersey Industries	Leonard Brinson, Jr. VP & Chief Information Officer	609-878-9161 lbrinsonjr@sjindustries.com
South Jersey Industries (SJI) is a natural gas utility serving 750,000 meters. In 2019, SJI began an upgrade of CC&B (from v2.4 to v2.6) and Maximo (from v7.5 to v7.6.1.1). The upgrade was completed in 2020. Origin led the effort to align all application versions across the three SJI Utilities companies and move toward business process standardization. The Origin team successfully managed the project scope, cost, and quality by conducting weekly meetings with a large team of stakeholders to monitor the project schedule, the key project tasks status, and the RAID log. Frequent communications and accountability points ensured the success of this upgrade.		
Account Executive – Dan Nelson	Technical Architect – Alfred Felipe	
Project Manager – Shannon Laney	Solution Architect – MJ Jain	
Designer – Erik Esteban	Business Analyst – Kyle Christensen	

8. Cost Proposal

Provide a detailed breakdown of labor hours by task and position, including sub-consultants. A listing of billing rates by employee, and a time and materials maximum not-to-exceed project fee, inclusive of all direct and indirect costs associated with the project. In addition, complete the attached Cost Matrix separately for CC&B and OUBI upgrade. (Appendix K and Appendix P).

The services and scope outlined in this proposal are provided on a time and materials ("T&M") not to exceed basis. IRWD shall pay Origin for all the time spent performing such service as well as any travel expenses.

Detailed Breakdown of Tasks and Costs		
Task	Hours	Cost
CC&B Upgrade Tasks (BAFO updated Cost from Appendix K)	5,223	\$895,440
CC&B Upgrade Tasks (Original Cost)		\$1,041,690
Task 1: Technical Upgrade of CC&B Application	1,861	\$340,980
Task 2: Remediate and Test Customizations, Interfaces, and Batches	2,199	\$358,520
Task 3: Training	108	\$18,980
Task 4: Post-Production Support	645	\$94,370
Task 5: Setup Oracle CC&B Disaster Recovery (DR) on Cloud	378	\$76,940
Task 6: Setup ETL Batches in CC&B for Oracle Utilities Analytics (OUA)	32	\$5,650
OUA Upgrade Tasks (BAFO updated Cost from Appendix P)	2,082	\$364,870
OUA Upgrade Tasks (Original Cost)		\$392,870
Task 1: Install Oracle Utilities Analytics	694	\$121,575
Task 2: Configure and Validate Oracle Standard Out of the Box Reports and Migrate Customized OUBI Reports to OUA	514	\$90,025
Task 3: Remediate, Validate, and Migrate BI Publisher (BIP) Reports from OUBI to OUA	273	\$47,890
Task 4: Customize and Extend Data-warehouse, ETL, and OBIEE Metadata – WEODW	186	\$32,650

Detailed Breakdown of Tasks and Costs		
Task	Hours	Cost
Task 5: Training	86	\$15,080
Task 6: Post-production Support	219	\$38,350
Task 7: Setup Oracle OUBI Disaster Recovery (DR) on Cloud	110	\$19,300
Task Total	7,305	\$1,260,310
Travel (34 Trips)	\$1,800/trip	\$63,000
Discount		\$138,000
Original – ENGAGEMENT TOTAL		\$1,373,960
BAFO – FINAL ENGAGEMENT TOTAL		\$1,185,310

Rate Card	
Role	Rate / Hour
Project Manager	\$180
Solution Architect	\$180
Technical Architect	\$225
CC&B Functional Architect	\$175
Lead Trainer	\$175
Analytics Architect	\$175
OUA / ETL / Report Developer	\$175
Designer	\$90
Developer	\$90

9. Joint Venture

Origin is not proposing any joint ventures or subcontractor use for this upgrade.

10. Conflict of Interest

Origin does not have any known conflicts of interest.

11. Insurance

Origin affirms our compliance with the insurance requirements laid out by the District, which are indicated as follows:

IRWD requires professional liability coverage to be a minimum of \$1,000,000, general liability and property damage to be a minimum of \$1,000,000. Any additional premium that is required by the insurance carrier for such coverage shall be included in your proposed fee. IRWD does not pay a separate insurance surcharge for the required coverage.

Appendices

Appendix K – BAFO Cost Matrix – CC&B Upgrade

As part of this BAFO, Origin will upgrade following items not listed in the IRWD RFP:

Integrations between IRWD CCB and Paymentus:

1. Real Time Integration – Customer Information
2. Real Time Integration – Payments
3. E-Bill Enrollment/De-enrollment File (Opt – In File)
4. Payment Reconciliation File

CC&B Upgrade – Cost Matrix				
Task	Classification (e.g. Project Manager, Technical Architect, etc.)	Estimated Hours by Classification	Cost by Classification	Total Cost by Task
Task 1: Technical Upgrade of CCB Application	Project Manager	263	\$47,340	\$340,980
	Technical Arch.	756	\$170,100	
	Solution Arch.	253	\$45,540	
	Functional Arch.	294	\$51,450	
	Developer	295	\$26,550	
Task 2: Remediate and Test Customizations, Interfaces, and Batches	Project Manager	285	\$51,300	\$358,520
	Technical Arch.	484	\$108,900	
	Solution Arch.	443	\$79,740	
	Functional Arch.	350	\$61,250	
	Developer	637	\$57,330	
Task 3: Training	Project Manager	16	\$2,880	\$18,980
	Training Lead	92	\$16,100	
Task 4: Post- Production Support	Project Manager	75	\$13,500	\$94,370
	Technical Arch.	24	\$5,400	
	Solution Arch.	149	\$26,820	

CC&B Upgrade – Cost Matrix				
Task	Classification (e.g. Project Manager, Technical Architect, etc.)	Estimated Hours by Classification	Cost by Classification	Total Cost by Task
	Functional Arch.	152	\$26,600	
	Developer	245	\$22,050	
Task 5: Setup Oracle CCB Disaster Recovery (DR) on Cloud	Project Manager	118	\$21,240	\$76,940
	Technical Arch.	200	\$45,000	
	Solution Arch.	40	\$7,200	
	Functional Arch.	20	\$3,500	
Task 6: Setup ETL Batches in CCB for Oracle Utilities Analytics (OUA)	Project Manager	10	\$1,800	\$5,650
	Analytics Arch.	22	\$3,850	

Appendix P – BAFO Cost Matrix – OUBI Upgrade

OUBI to OUA Upgrade – Cost Matrix				
Task	Classification (e.g. Project Manager, Technical Architect, etc.)	Estimated Hours by Classification	Cost by Classification	Total Cost by Task
Task 1: Install Oracle Utilities Analytics	Project Manager	25	\$4,500	\$121,575
	Analytics Arch.	360	\$63,000	
	Analytics Developer	309	\$54,075	
Task 2: Configure and Validate Oracle Standard Out of the Box Reports and Migrate Customized OUBI Reports to OUA	Project Manager	15	\$2,700	\$90,025
	Analytics Arch.	240	\$42,000	
	Analytics Developer	259	\$45,325	
Task 3: Remediate, Validate, and Migrate BI Publisher (BIP) Reports from OUBI to OUA	Project Manager	23	\$4,140	\$47,890
	Analytics Arch.	120	\$21,000	
	Analytics Developer	130	\$22,750	
Task 4: Customize and Extend Data-warehouse, ETL, and OBIEE Metadata – WEODW	Project Manager	20	\$3,600	\$32,650
	Analytics Arch.	80	\$14,000	
	Analytics Developer	86	\$15,050	
Task 5: Training	Project Manager	6	\$1,080	\$15,080
	Analytics Developer	80	\$14,000	
Task 6: Post-production Support	Project Manager	5	\$900	\$38,350
	Analytics Arch.	78	\$13,650	
	Analytics Developer	136	\$23,800	
Task 7: Setup Oracle OUBI Disaster Recovery (DR) on Cloud	Project Manager	10	\$1,800	\$19,300
	Analytics Arch.	100	\$17,500	

Resumes

Corey Labor - *Vice President / Executive Sponsor*

SPECIALIZATION

Corey has over 21 years of experience providing leadership for teams and enterprise projects. He has spent the last 17 years specifically dedicated to the utility industry providing leadership for the execution of complex Meter-to-Cash (M2C) system implementation projects. These projects have encompassed solutions such as Customer Information System (CIS) Utility Billing, Meter Data Management (MDM), Mobile Workforce Management (MWM), Customer Self Service (CSS), and Operational Device Management (ODM), as well as other utility solutions. Corey has successfully led many strategic projects that have allowed clients to take advantage of advanced technology offerings, automation of business processes and an overall improved customer experience and lower total cost of ownership.

ACCOMPLISHMENTS

Corey has demonstrated his leadership capabilities through the successful delivery of multiple full lifecycle implementations, upgrades, and IT projects. When he initially started in the Utility CIS space, he was a functional lead, which allowed Corey to develop a solid understanding of the utility meter to cash processes and the supporting technology. As Corey progressed his career, he moved into a project management role where he leveraged his functional lead experience to effectively manage large complex utility billing Customer Information System (CIS) implementations. During his time as a Project Manager, Corey helped shape CIS implementation methodologies and develop project tools / accelerators to help clients navigate through the transformation process efficiently.

PROFESSIONAL EXPERIENCE

Origin Consulting | Vice President

- Leads assigned group in delivering required services to meet client expectations for each engagement.
- Demonstrates in-depth understanding of the client industry in order to appropriately provide guidance to clients and to develop opportunities to address client needs through incremental professional service engagements.
- Takes ultimate responsibility for the delivery of service offerings to clients, ensuring engagements are completed on-time, to standard, within budget, and results in a high levels of client satisfaction.
- Manages multiple project delivery teams in the execution of defined methodologies to meet engagement requirements and expectations.

Spire Energy | Executive Oversight

Project Overview: Upgrade of CIS Utility Billing solution

- Technical upgrade as well as replacement of Multi-Purpose Listener (MPL) and design of new Field Activity (FA) process leveraging Oracle Service Bus (OSB).
- Responsible for implementing a project governance model.
- Continual oversight of project performance from a scope, timeline, and budget perspective.

- Worked with the project management team to review risk and implement mitigation strategies.
- Responsible for ensuring quality delivery of the contracted scope of services.

Artesian Water Company | Executive Oversight*Project Overview: Upgrade of CIS Utility Billing and MWM*

- Upgrade of utility and MWM plus XAI and Cobol remediation and Service Oriented Architecture (SOA) / integration upgrade.
- Worked closely with Origin PM to provide overall internal project oversight to ensure delivery of a quality scope.
- Responsible for monthly client executive steering committee project status delivery.
- Performed bi-weekly internal audits to ensure project performance.
- Participated in weekly project status meetings.

Green Mountain Power | Project Director*Project Overview: Technical upgrade – CIS Utility Billing and Mobile Work Management*

- Responsible for the development of the project management plan.
- Created detailed project plan and managed to the approved plan.
- Identified project requirements and assigned tasks to team members.
- Provided project leadership for a team of functional and technical resources both onshore and offshore.
- Managed project timeline, scope, and budget.
- Provide weekly project status reports that outline project performance, key risks and issues and associated mitigation plans.

Middlesex Water Company | Project Director*Project Overview: Upgrade of MWM and Integration Architecture*

- Upgrade plus design, development, and implementation of customized screens.
- Responsible for all aspects of project management.
- Developed and delivered monthly executive steering committee report.
- Led a team of functional and technical resources.
- Provide weekly project status reports that outline project performance, key risks and issues and associated mitigation plans.

Green Mountain Power | Project Director*Project Overview: Migration/Implementation of CIS Utility Billing and MDM*

- Provided project management expertise as part of a larger PMO team.
- Coordinated with other vendor project managers to ensure project performance.
- Responsible for the creation of the overall project timeline / plan.
- Managed a team of technical resources responsible for system integration as well as third-party integration.

Mechelle Davidson – *Project Manager*

SPECIALIZATION

Mechelle Davidson has more than 20 years of experience in the utility space, specifically within the gas and electric industries. She has worked with both regulated and deregulated markets in several states throughout the United States. Mechelle is skilled in leading projects in both waterfall and agile methodologies. She is a Project Management Professional (PMP), a Certified Scrum Master (CSM), a Certified Six Sigma Black Belt (CSSBB), and a Certified Scrum Product Owner (CSPO). Mechelle has worked on several Customer Information System (CIS) platforms, including Oracle Utilities Customer Care & Billing (CC&B), SAP for Utilities, Banner, ABP3000, and Peace Energy, among others. In addition to her project management expertise, Mechelle advises clients on process improvement using Lean tools and techniques. Partnering with clients, Mechelle facilitates workshops aimed at improving the customer experience and refining internal processes.

ACCOMPLISHMENTS

Mechelle has led several initiatives in which new CIS platforms were being implemented as well as new operations departments were being formed. She has performed tasks at all stages of the software development life cycle, including Ideation: helping clients understand what they are trying to accomplish, Requirements Elicitation: defining requirements in such a way that everyone agrees and understands the features to be built, Testing and Coordinating Efforts, then documenting results, Training Development / Delivery: ensuring teams are ready to support any new functionality, Change Management: guiding all levels of the organization through new processes or protocols, and Deployment, collaborating with all project team members for production support. Mechelle has also guided clients through short-term and long-range planning activities to help them meet their goals and objectives.

PROFESSIONAL EXPERIENCE

City of Myrtle Beach | Project Manager

Project Overview: Implementation of utility billing solution.

- Worked as a project manager for the billing component of a large program in which the City is completely updating its systems.

ENSTAR Natural Gas | Project Manager

Project Overview: CC&B 2.7 Upgrade

- Managed technical and operational aspects of the upgrade.
- Coordinated new features and functionality to enhance the customer experience.

ENSTAR Natural Gas | Project Manager

Project Overview: MWM 2.3 Upgrade

- Managed technical and operational aspects of the upgrade.
- Coordinated testing and deployment activities between ENSTAR, Origin, and the Origin Technology Center.

ENSTAR Natural Gas | Project Manager

Project Overview: Smart Customer Mobile (SCM) Implementation

- Acted as a liaison between ENSTAR, SCM provider, and Smart Energy Water (SEW).
- Coordinated activities between the SEW development team and the Origin development team.
- Ensured proper documentation was captured and stored in ENSTAR's document repository.

ENSTAR Natural Gas | Project Manager

Project Overview: Database Upgrade

- Partnered with the third-party development team to accomplish tasks.
- Coordinated both internal testing and user-acceptance testing for the new functionality.

TXU Energy | Scrum Master

Project Overview: Scrum Master for Data & Analytics and Enterprise Data Management Teams

- Partnered with product owners to capture user stories and prioritize work.
- Facilitated all team ceremonies.
- Acted as an escalation point for issues or risks that were not being resolved.
- Reported findings to TXU Energy leadership.
- Led "big room planning" sessions to identify short- and long-term goals.

TXU Energy | Scrum Master

Project Overview: Scrum Master for Commodity and Non-Commodity Products Team

- Created and maintained product roadmap, with a 12-month view of product launches.
- Worked with TXU Energy leadership to coordinate resources.
- Facilitated all team ceremonies.
- Managed weekly cross-functionality meetings to align all teams on product launch activities.

TXU Energy | Business Project Manager

Project Overview: Chaired the professional development committee within Performance Excellence, working with managers to develop and deliver training focused on project management, and business analyst activities

- Managed projects using the waterfall methodology for the following programs and projects.
- Cash Back Program – TXU Energy's annual cash-back initiative, totaling over \$45,000,000 in customer payouts.
- High Bill Program – working with TXU leadership to identify and addressed the biggest issues with summer and winter high bill season.
- Customer Communication Program – completely revamped the communications that are sent to customers and changed the way they are created, delivered, and stored.
- SAP Implementation Program – implementation of new customer information and billing system, as well as establishing 3 new call centers.

Melgar Olaes – *Technical Architect Lead*

SPECIALIZATION

Melgar is an Information Technology (IT) professional with 20+ years of experience in various project implementations such as Customer Information Systems and Enterprise Management Systems. He started his career as a Solaris System Administrator, and later worked as an Application Administrator for Enterprise Management Systems as well as a Technical Architect for the Oracle Utilities Product Suite. Melgar is an experienced and skilled technical architect for the Oracle Utilities Product Suite with a focus on Customer Care & Billing (CC&B) and Oracle Utilities Meter Data Management (MDM). He is very knowledgeable with Mobile Workforce Management (MWM), Customer Self Service (CSS), and Customer to Meter (C2M) as a Technical Architect. He is also familiar with Fusion Middleware software products which include WebLogic Server and SOA Suite. Aside from Oracle Utilities applications, Melgar is also proficient with Unix and Linux platform System Administration and is knowledgeable with Microsoft products including desktop applications and Windows Servers.

ACCOMPLISHMENTS

Melgar has been part of several project implementations from development to deployment to the customer sites. He has also worked on several version upgrades for several applications of Oracle Utilities Product Suite. Melgar has helped developers by providing them with the development environments, assistance, and support until customer requirements are successfully delivered. Melgar also provided support to clients by helping them with patch installations, customer modifications deployment, troubleshooting, and root-cause analysis whenever necessary. Melgar also holds certification for CompTIA A+, ITIL 4 Foundation CPD, Oracle Cloud Infrastructure Foundation 2020 Associate, Oracle Cloud Infrastructure 2019 Certified Architect Associate, Oracle Cloud Infrastructure 2019 Certified Architect Professional, Oracle Cloud Infrastructure 2019 Cloud Operations Certified Associate, and Oracle Autonomous Database Cloud 2019 Certified Specialist.

PROFESSIONAL EXPERIENCE

ENSTAR Natural Gas | Technical Architect

Project Overview: CC&B v2.7.0.3.0 upgrade

- Setup CC&B v2.7.0.3.0 test, training, and production environments to be used by the offshore team.
- Upgraded client's CC&B application and database to CC&B v2.7.0.3.0.
- Provided technical assistance to the development team for code migration.
- Installed CC&B Roll-Up Patches from Oracle.
- Installed Single-Fix to CC&B environments.
- Applied Oracle Critical Patch Updates to all CC&B environments.
- Provided maintenance service to client's environments.
- Provided technical assistance to the development team.
- Provided technical support to clients for environment-related technical issues.

City of Tempe | Technical Architect

Project Overview: CC&B v2.7.0.3.0 upgrade

- Setup CC&B v2.7.0.3.0 test and pre-production environments to be used by the offshore team.
- Upgraded client's CC&B application and database to CC&B v2.7.0.3.0.

- Provided technical assistance to the development team for code migration.
- Installed CC&B Roll-Up Patches from Oracle.
- Installed Single-Fix to CC&B environments.
- Provided maintenance service to client's environments.
- Provided technical assistance to the development team.
- Provided technical support to clients for environment-related technical issues.

Synersys Consulting Inc. | Technical Architect / IT Manager*Project Overview: Technical Resource / Technical Architect*

- Acted as the decision-maker for all IT related concerns.
- Evaluated and recommended IT software and hardware to support internal and external requirements.
- Managed servers and IT infrastructures of the organization.
- Built environments for the development team that accommodated the client's requirements.
- Prepared and installed bug fixes and service packs for Oracle Utilities Product Suites.
- Provided technical support to the development team.

Keppel Electric | Technical Architect*Project Overview: Maintenance and Support for CC&B and MDM*

- Provided maintenance and support for environment operations development, User Acceptance Testing (UAT), System Integration Testing (SIT), and production including refreshes and scheduled maintenance.
- Provided technical support and assistance to the development and functional team for custom modification testing and deployment.
- Collaborated with internal and external teams (Backup, Infrastructure, Middleware System, and Database) regularly for the smooth operation of Oracle Utilities Products.

Aboitiz Power | Technical Architect*Project Overview: Upgrade of CC&B and Implementation of MDM*

- Managed environment backups and upgrades for CC&B.
- Provided technical assistance to the development team for code migration.
- Installed and configured Oracle Utilities MDM.
- Assisted in setting up Oracle Utilities CC&B and Oracle Utilities MDM integration.
- Provided recommendations in environment creations for development, pre-production, and production environments.
- Provided maintenance service to client's environments.

EDF Energy | Technical Architect*Project Overview: Maintenance and Support for CC&B and MDM*

- Acted as the primary resource person during the start of the environment build.
- Provided recommendations and suggestions in the environment build for development and non-development environments.
- Involved in process creation for environment builds.

- Acted as a resource person in translating Oracle Utilities tools to the client's internal tool / application.
- Provided support for testers and developers.
- Performed constant coordination with onshore counterparts to maintain process alignment.
- Conducted training for the new Technical Architects of the client.

Baltimore Gas and Electric | Technical Architect*Project Overview: Maintenance and Support for CC&B*

- Responsible for making sure that customer requirements and custom modification requests were packaged completely and applied successfully to the desired environments.
- Provided technical support to testers and developers.
- Provided continuous coordination with onshore counterparts to maintain the process alignment.

Oracle Philippines| Manager / Release Services*Project Overview: Technical Resource / Technical Support*

- Built and maintained the software build processes of the Oracle Utilities Product Suites.
- Provided technical assistance to the Product Development, Quality Assurance, and Customer Support that included all stages in the product lifecycle from development to the successful installation and operation of the product at the customer sites.
- Built environments that were used by different teams in the product development lifecycle.
- Ensured all environment's availability and reliability with minimal downtime.
- Conducted regular monitoring of system resources for all applications and environments.
- Prepared and installed bug fixes, services packs, and version release for the Oracle Utilities Product Suites.
- Provided technical support to Quality Assurance and Development Teams.

Alfred Felipe – *Technical Architect*

SPECIALIZATION

Alfred has over nine years of experience delivering customer implementation solutions for Oracle Utilities applications such as Customer Care and Billing (CC&B), Meter Data Management (MDM), Mobile Workforce Management (MWM), Customer Self-Service (CSS), and Customer to Meter (C2M) as a Technical Architect. He has expertise with product integration such as CC&B to MDM and CC&B to CSS and possesses strong technical skills in a variety of system architectures. He is proficient in Oracle Utilities Application Framework (OUAF) environment and infrastructure management, installation, re-configuration, product upgrade, fine-tuning, and backup and recovery.

ACCOMPLISHMENTS

Alfred has worked with a large number of projects as a Technical Architect, making sure that tasks and requirements are completed successfully, on time, and within budget. Because of his “can-do” attitude and excellent troubleshooting skills, he was able to resolve minor to major issues found in different Oracle Utilities Implementations. He also has expertise with several cloud services such as ServerPoint, Amazon Web Services (AWS) and Oracle Cloud, which can be used to further simplify the process of standing up a server as well as maximize the full potential of OUAF. He has not only broadened his experience but also strengthened his skillset with every challenge he has faced.

PROFESSIONAL EXPERIENCE

Artesian Water Company | Technical Architect

Project Overview: Implementation of CC&B v2.6.0 and MWM v2.3.0

- Setup native CC&B v2.6.0 and MWM v2.3.0 development, testing, and staging environments. Installed service pack upgrades and patch updates. Setup AWS (EC2) environments using T2.Large as instance type.
- Performed code drop installation and performance tuning. Resolved development and environment technical issues.
- Responsible for environment defect remediation during go-live.

South Jersey Industries | Technical Architect

Project Overview: Implementation of CC&B v2.6.0.1 and MWM v2.3.0

- Setup MWM v2.3.0 development and staging environments on AWS.
- Remediated environment technical issues such as failing to start up, hybrid mobile not deploying, and some compilation issues.
- Perform Oracle patches and custom code drop deployments on MWM DEV and TST environments.
- Setup CCB v2.6.0.1 environment on Citrix VDI instances for development purposes.

Spire Energy | Technical Architect

Project Overview: Implementation of &B v2.4.0 & v2.6.0.1

- Setup embedded CC&B v2.4.0 & native CC&B v2.6.0.1 development and staging environments on AWS. Installed service pack and patch updates to ensure the environments were up to date. Provide infrastructure remediation
- Performed code drop installation and resolved environment technical issues such as failing to start up and code not reflecting updates.
- Author environment build, change management, and issue remediation documentation.

Golden State Water Company | Technical Architect

Project Overview: Implementation of CC&B v2.4.0 and MWM v2.3.0

- Setup embedded CC&B v2.4.0 and MWM v2.3.0 development and staging environments. Installed service pack and patch updates to ensure the environment is up to date.
- Diagnose and remediate environment technical issues such as environment failing to startup correctly due to missing configurations.

Modesto Irrigation District | Technical Architect

Project Overview: Implementation of CC&B v2.5.0 and MDM v2.1.0

- Setup embedded CC&B v2.5.0 and MDM v2.1.0 development and staging environments. Installed service pack and patch updates to ensure the environments were up to date.
- Diagnosed and resolved environment technical issues such as environment failing to startup.
- Setup Linux Servers and install 3rd party applications for Smart OPS Proof of concept.

Miami Dade County | Technical Architect

Project Overview: Implementation of CC&B v2.4.0 and MWM v2.2.0

- Deployed embedded CC&B v2.4.0 and MWM v2.2.0 development and staging environment. Installed service pack and patch updates to ensure the environment were up to date.
- Diagnosed and remediated TLS issues found on the v1.2 for use with client's CCB environment.

Orlando Utilities Commission | Technical Architect

Project Overview: Implementation of CC&B v2.5.0 and MDM v2.1.0

- Setup embedded CC&B v2.5.0 and MDM v2.1.0 development and staging environments. Installed patch update.
- Diagnosed and resolved environment technical issues such as environment failing to startup.

Middlesex Water Company | Technical Architect

Project Overview: Implementation of CC&B v2.5.0 and MWM v2.3.0

- Setup embedded CC&B v2.5.0 and MWM v2.3.0 development and staging environments. Performed code drop installation on development, testing, and production environments. Installed service pack upgrades and patch installs.
- Diagnosed and remediated issues with the hybrid mobile app, which became stuck after logging in. Resolved configuration issues that make the environment fail to startup due to an error in the database configuration.

Madhur Jain – *Solution Architect*

SPECIALIZATION

Madhur Jain has over twelve years of Customer Information System (CIS) Software Development Life cycle (SDLC) experience in the gas, electric, and water industries. He has extensive full life cycle implementation and upgrades experience following both Waterfall and Agile methodologies for both cloud and premise. Madhur has led multiple Oracle Utilities Customer Care and Billing (CC&B) Implementations in multiple leadership roles such as Solution Architect and Functional Lead Architect. He continues to lead IT Projects delivering Oracle Utilities CC&B, Meter Data Management (MDM), Mobile Workforce Management (MWM), Oracle Utilities Customer Self Service (OUCSS), Oracle Utility Analytics (OUA), Service Oriented Architecture (SOA), and Oracle Fusion Middleware for both productized integrations like Field Work Process Integration Pack (FWPIP) and custom productized interfaces between Oracle systems and non-Oracle systems like Salesforce and Maximo, to name a few.

ACCOMPLISHMENTS

Madhur is a certified Scrum Master and the product owner for Origin Customer Experience (OCX), Origin's Software as a Service (SaaS) Customer web self-service portal who has demonstrated his leadership capabilities through the successful delivery of multiple full life cycle implementations, upgrades, and IT projects. Early in his career, he was responsible for configuration, functional design, and complex issues resolution and triage. Understanding CIS business processes and technology has given him an advantage when leading delivery projects. He has helped shape CIS implementation methodologies and develop project documentation templates/accelerators to help clients through the transformation process.

PROFESSIONAL EXPERIENCE

South Jersey Industries | Solution Architect

Project Overview: Upgrade of CC&B 2.4 to 2.6.0.1 and upgrade of Maximo from 7.5.10 to 7.6.1

- Worked directly with the client's core project team for the full upgrade cycle.
- Worked with over 2 dozen edge applications to upgrade the associated interfaces.
- Lead the Origin team and worked with the client and other vendor teams successfully.

Modesto Irrigation District | Solution Architect

Project Overview: Implementation of Oracle Utilities CC&B 2.5, MDM 2.1, CSS 2.1, and Origin's MobileLite and SmartAct

- Worked directly with the client's core project team for the full implementation cycle.
- Responsible for holding analysis workshops with the client, addressing requirements, and creating high-level solution blueprints.
- Responsible for converting solution blueprints into designs for the developers.
- Responsible for configuring, customizing, and bringing clients up to speed with CC&B and getting them comfortable with it.
- Responsible for leading defect triage sessions as the project progresses into the testing phase.

Artesian Water | Functional Lead

Project Overview: Upgrade of CC&B 2.3 to 2.6, upgrade of MWM 2.1 to 2.3, FWPIP upgrade to 12C.

Responsible for a CC&B/FWPIP/APGL upgrade project as part of a bigger project including an MWM upgrade.

- Responsible for holding discovery/analysis workshops with the client, created user stories, addressing requirements, and creating high-level solution blueprints.
- Responsible for helping the client's IT and Business teams to work together through the entire SDLC.

South Jersey Industries | Integration Architect

Project Overview: Migrating recently acquired companies into SJI's environment.

- Part of the Agile team participated in sprint planning, review, and retrospect.
- Responsible for integrating MWM with the clients' existing CC&B and Maximo systems.
- Responsible for creating new interfaces to support additional functionality brought over with the acquisition.

Orlando Utilities Commission | Functional Lead

Project Overview: Implementation of Oracle Utilities CC&B and MDM

- Responsible for the MDM Implementation for the client as part of a bigger project including multiple OU edge apps.
- Responsible for holding JAD sessions with the clients: addressing their requirements and creating high-level solution blueprints.

Duquesne Light Company | Integration Architect

Project Overview: Implementation of Oracle Utilities CC&B, MWM, WAM, MDM, FWPIP, and DI

- Responsible for all integration including both FW PIP integration (which integrates CC&B, MWM, and WAM) and Direct Integration between CC&B and MDM.
- Responsible for implementing, maintaining, and troubleshooting integration products and customizing a solution to the client's specific needs through the configuration of edge apps along with Oracle middleware.
- Added and maintained custom data value maps to contain client-specific data and certain enhancements where the base products could not be customized to meet customer-specific needs.
- Involved in designing solutions for other development teams and developing / customizing BPEL composites to meet customer requirements.
- Provided time/resource estimates for design and development did onsite and offshore. In-depth experience working with XML, XSL and XSD transformations, J2EE, SQL Developer, BPEL on a Linux platform running Weblogic.
- Actively involved in code reviews, pre-release testing and creating specific maintenance documents which enabled the client to easily manage the integration.

Green Mountain Power | Integration Architect

Project Overview: Upgrading Oracle Utilities CC&B, MWM, MDM, and FWPIP

- Responsible for all Oracle productized integration including FW PIP and Direct Integration between CC&B and MDM.

ENSTAR Natural Gas | Integration Architect

Project Overview: Upgrading Oracle Utilities CC&B, MWM, and FWPIP

- Responsible for supporting FW PIP, base product, and customizations as per customer needs. Designing and developing custom interfaces for CC&B and MWM to connect to third-party systems not supported by Oracle out of the box.

Diane Lampa – *Designer / Developer*

SPECIALIZATION

Diane is an IT consultant with over 14 years of experience working on customizations to Oracle Utilities applications, with an emphasis on Oracle Utilities Customer Care and Billing (CC&B). She has participated in various phases of the implementation process including design, development, testing, and support. Diane is an experienced team player with excellent technical, analytical, communication, and interpersonal skills.

ACCOMPLISHMENTS

Diane has played multiple roles on various projects, gaining proficiency in both the functional and technical aspects of the Oracle Utilities Application Framework (OUAF). She has shown leadership by managing her work and helping coordinate task assignments for the offshore development team. Diane has worked extensively with various versions of CC&B but is also experienced with technologies such as Oracle BI Publisher, Meter Data Management (MDM), and Mobile Workforce Management (MWM).

PROFESSIONAL EXPERIENCE

City of Tempe | Designer / Developer

Project Overview: Enhancements for CC&B 2.3 and Oracle CC&B 2.3 to CC&B 2.7 SP 3 upgrade with scope including Cobol to Java / Config Tools / Groovy Conversion, XAI Services to Integrated Web Services (IWS)

- Coordinated work assignments for the offshore development team.
- Collaborated with the onshore team and made recommendations for tactical and strategic solutions.
- Key participant in defect triage and resolution of the enhancements developed for CC&B 2.3.
- Key participants in the design and development of modules converted from COBOL to either Java, Config Tools, or Groovy.
- Tested customizations for higher version compatibility, identified issues, and recommended solutions.
- Designed custom CC&B modules for CC&B 2.7 including enhancements for creating device tests via batch.

Spire | Designer

Project Overview: CC&B 2.6 Upgrade and real-time ViryaNet G4 Work Order Integration

- Coordinated work assignments for the offshore development team.
- Collaborated with the onshore team and made recommendations for tactical and strategic solutions.
- Reviewed code and unit test plans.
- Key member of the team that handled investigation and defect resolutions during the 2.6 implementation.
- Coordinated delivery releases.

Artesian Water Company | Designer / Developer

Project Overview: CC&B 2.3 to CC&B 2.6 and MWM 2.1 to 2.3 SP 2 upgrade with scope including Cobol to Java Conversion, XAI Services to IWS, UC4 Integration, New Rate Engine Conversion, and full transition to Hybrid Mobile Communication Platform (MCP)

- Collaborated with an onshore team and made recommendations for tactical and strategic solutions.
- Coordinated work assignments for the offshore development team.
- Key participant in the design and development of modules converted from COBOL to Java.
- Tested customizations for higher version compatibility, identified issues, and recommended solutions.
- Designed custom CC&B modules including enhancements to rate check portal and online bill display.
- Successfully migrated configuration data between environments through the OUAF CMA tool.
- Led an offshore team in defect triage and resolution.
- Provided production support during and after project go-live.

Modesto Irrigation District | Designer / Developer

Project Overview: Implementation of CC&B 2.5, MDM 2.1, Customer Self-Service (CSS) 2.1, BI Publisher and Origin's MobileLite

- Coordinated work assignments for the offshore development team.
- Designed and developed custom reports via BI Publisher and PL / SQL including reports on cashier totals, franchise fees as well as returned payments.
- Conducted BI Publisher training with the client resources on creating custom reports.
- Key participant in defect triage and resolution.
- Prepared and coordinated delivery releases across multiple products.
- Provided production support during and after project go-live.

Miami-Dade County | Developer

Project Overview: MWM Upgrade

- Designed and developed custom CC&B algorithms for subsystems including credit and collections.

Golden State Water Company | Developer

Project Overview: Enhancements and production support for CC&B

- Defect triage and resolution.

Green Mountain Power | Developer

Project Overview: Enhancements and production support for CC&B

- Developed custom CC&B algorithms for various subsystems including billing.
- Ensured quality of deliverables by performing code reviews.
- Helped with the investigation and resolution of defects.

City of Jackson | Designer / Developer

Project Overview: Enhancements and production support for CC&B V2.4 and BI Publisher

- Designed and developed custom CC&B algorithms and batches for various subsystems including credit and collections, meter reads, and letters.
- Designed and developed custom reports via BI Publisher and PL / SQL including reports on consumer deposits, consumer refunds, and payment backouts.
- Key participant in the investigation and resolution of production defects.
- Coordinated delivery releases.

Southern Maryland Electric Cooperative | Developer

Project Overview: Enhancements and production support for CC&B

- Defect triage and resolution.
- Reviewed code and unit test plans.

ENSTAR Natural Gas | Developer

Project Overview: MWM Upgrade

- Developed custom CC&B modules that enhance the CC&B-MWM integration per the business requirements.

Colorado Springs Utilities | Designer / Developer

Project Overview: Enhancements and production support for CC&B

- Developed custom CC&B modules, including custom algorithms to interface CC&B field activities to the Clevest MWM application.
- Developed customization on the e-Bill enhancement module implemented in PL / SQL.
- Defect triage and resolution.
- Ensured quality of releases by performing code reviews.

Seraya Energy | Analyst Programmer

Project Overview: CC&B Implementation

- Senior member of the in-house support team for CC&B Implementation.
- Responsible for gathering business requirements and developing custom modules for CC&B V1.5.15.
- Packaged customized modules for release to the production environment.
- Defect triage and resolution.

Pacific Gas and Electric | Developer

Project Overview: CC&B Implementation

- Assigned on-site, working directly with the client to define business processes and needs.
- Participated in full-scale testing of delivered custom modules for CC&B V1.5.
- Developed custom modules for various subsystems including customer information, billing, interval billing, adjustments, credit and collections, field activity, and letters.
- Tested customizations for version compatibility, identified issues, and implemented solutions.

Joshua "Ace" Vitug – *Developer*

SPECIALIZATION

Ace is a software developer with more than 5 years of experience creating source code components, unit testing, and providing client support for the Oracle Utilities Applications Framework (OUAF) under the prescribed Software Development Life Cycle (SDLC). He has created custom components for Customer Care & Billing (CC&B) using Java, COBOL, and the Oracle Service Bus (OSB).

ACCOMPLISHMENTS

Ace has been a key part of the development team responsible for the successful implementation of several Customer Information System (CIS) replacements and CIS upgrade projects, from initiation to completion. He has successfully created source codes during the development phase that met functional requirements and supported the solution during the maintenance phase of the project.

PROFESSIONAL EXPERIENCE

SpireOne | Developer

Project Overview: Oracle Utilities CC&B 2.6 Custom Code Implementation

- Developed defect fixes for the business Credit Refund Algorithm to transfer customer's balance following specific business rules before issuing a refund for the customer.
- Developed algorithms that facilitated special requirements for bankrupt customer cases.
- Developed enhancements for existing custom modules that adhere to the new requirements defined by the client.

South Jersey Industries | Developer

Project Overview: Oracle Utilities CC&B 2.6 Performance Testing

- Tested various functionalities in CC&B to ensure each module was able to complete their designated task within an acceptable timeframe.

City of Tempe | Developer

Project Overview: Oracle Utilities CC&B 2.7 Custom Code Implementations

- Created a custom algorithm and batch to select eligible devices / meters for device testing based on client criteria.

Spire | Developer

Project Overview: Oracle Utilities CC&B 2.6 Upgrade Compatibility Testing

- Tested various customizations to ensure compatibility with the targeted CC&B 2.6 environment.
- Updated customizations that utilized deprecated implementations.

Spire | Developer*Project Overview: CC&B 2.4 and 2.6 Custom Code Implementations*

- Developed an inbound web service that extracted relevant information from linked accounts.
- Created customizations that transferred the balance of different service agreements under certain criteria.
- Created a CC&B batch program that expired quotes under certain criteria.
- Created code drops for the customizations for deployment to a higher environment.
- Investigated, fixed, and provided support for defects.

City of Jackson | Developer*Project Overview: Support for fixing Stranded Bills*

- Assisted in resolving issues that prevented bills from being processed.

Orlando Utilities Commission | Developer*Project Overview: CC&B 2.6 Custom Code Implementations*

- Created CC&B batch programs that extracted customer and financial information.
- Created CC&B customizations that updated dates in a usage request under certain criteria.
- Created components for proactive alerts, primarily inbound web services, which were used by the client to gather customer information and to reconnect services for eligible customers.
- Investigated, fixed defects, and provided support for various customizations.
- Created code drops for customizations for deployment to a higher environment.

Artesian Water | Developer*Project Overview: CC&B 2.6 Upgrade Conversion of Custom Common Business Oriented Language (COBOL) components to Java*

- Translated custom 2.4 COBOL codes to Java for 2.6.
- Investigated, fixed defects, and provided support for the various customizations.

Green Mountain Power | Developer*Project Overview: CC&B Custom Code Implementations*

- Extended CC&B's base bill print extract by retrieving additional financial information and customer consumption for display in a histogram.

Modesto Irrigation District | Developer*Project Overview: CC&B Custom Code Implementations*

- Investigated, fixed defects, and provided support for the various customizations.

ENSTAR | Developer*Project Overview: CC&B 2.4 Custom Code Implementations*

- Extended CC&B's base bill print extract.

Ergon Energy | Developer and Dev Support*Project Overview: CC&B 2.4 Solution Implementation*

- Created a sub-module in COBOL that calculated interval data for processing.
- Created customizations in COBOL that calculated customer usage by grouping them by Time-Of-Use (PEAK or OFFPEAK) and entries in the SQL entry table of a bill segment.
- Created custom OSB components that facilitated communication between third parties and CC&B.
- Executed test scripts for the various CC&B components.
- Investigated, fixed defects, and provided support for the various customizations during the User Acceptance Testing (UAT) phase.
- Assisted in the stabilization efforts of the solution after go-live.
- Responsible for handling and resolving incident and problem tickets related to OSB and CC&B components.
- Created a Representational State Transfer (REST) Web Service in OSB for a digital display that forwards the request to a particular CC&B Explainable AI (XAI) inbound service depending on the request received.
- Created the Web Services Description Language (WSDL) for the REST Web Service and the XSLs needed to transform the request into a message that CC&B could process.

Électricité de France Energy | Developer*Project Overview: CC&B 2.4 Solution Implementation*

- Modified the sub-modules of a custom bill print for CC&B in Java and COBOL.
- Investigated, fixed defects, and provided support for the various customizations.
- Modified the WSDL of FUSION Web Services.

Venkat Dongara – *Analytics Architect*

SPECIALIZATION

Venkat is an IT consultant with over 20 years of experience in Data Warehousing, Data Integration, and Business Intelligence using industry standards and advanced Data Visualization and ETL tools. He has successfully implemented numerous Oracle BI Solutions for Oracle Utilities Applications (CC&B, MDM, WMW, etc.) as well as for Oracle ERP Systems like EBS and Peoplesoft. He has implemented custom Datawarehouse solutions from scratch and delivered advance reporting solutions. Venkat has excellent knowledge of various Oracle Utilities Applications, ERP Systems, and government and retail domains. He is experienced working with multiple teams across various geographies and possesses excellent communication and interpersonal skills, analytical skills, troubleshooting skills. Venkat's attention to detail and his ability to learn quickly and be highly adaptable to new technologies and tools makes him a valuable member of any project team.

ACCOMPLISHMENTS

Venkat has been a key member of the successful delivery of multiple full life cycle implementations, upgrades, and IT projects. He has provided solution designs and data modeling for various BI implementation projects as well as served as a key project member to troubleshoot and fix out-of-the-box ETL, data, and reporting issues. Venkat is experienced in providing post-production support and user training, as well as coordinating with various teams in the project and participating in technical and process reviews.

PROFESSIONAL EXPERIENCE

Green Mountain Power | Sr. Oracle BI Architect / Consultant

Project Overview: Implementation of OUBI 2.4 for CC&B, MDM and MWM applications; Implementation of BIApps for EBS Financials, HR, Payroll and budgeting; Upgrade OUBI 2.4 to OUA 2.5.2 and then to OUA 2.7; Implementation of BigData / Hadoop Cloudera Cluster to handle huge set of measurement data from smart meters to fulfill various reporting needs using OBIEE and Tableau reporting tools

- Conducted the installation and configuration of OUBI / OUA, ODI, Oracle GoldenGate and OBIEE for CC&B, MDM, MWM, GIS as source applications.
- Provided administration and DBA support to all BI projects.
- Performed data/application refreshes and monitored ETL loads and application performance.

Fayetteville Public Works Commission | Oracle BI / DBA Consultant

Project Overview: Implementation of CC&B, MWM, WAM and BIApps for EBS

- Conducted infrastructure planning and sizing of BI and other utilities applications (CC&B, MWM and WAM).
- Lead the install and configuration of OBIEE, BIApps, Informatica and DAC for various EBS modules.
- Setup ETL jobs, monitored daily loads, and completed upgrades and patching.

City of Raleigh, Raleigh, NC | Sr. Oracle DBA Consultant*Project Overview: Implementation of CC&B and Peoplesoft*

- Provided DBA support for SOA, PeopleSoft Upgrade
- Reviewed database upgrade and cutover planning steps while following best practices to minimize upgrade time.
- Monitored database and servers during peak & non-peak business hours to identify performance bottlenecks.

American Electric Power (AEP), Columbus, OH | Sr. Oracle DBA*Project Overview: PeopleSoft Upgrade, Commercial Operations, DWMS and IT IS / ArcGIS Projects*

- Provided DBA support for SOA, Peoplesoft Upgrade
- Reviewed database upgrade and cutover planning steps while following best practices to minimize upgrade time.
- Monitored database and servers during peak & non-peak business hours to identify performance bottlenecks.

Nechal Singh – *Analytics Developer*

SPECIALIZATION

Nechal is an IT consultant with over 13 years of experience working in Data Warehousing, Data Integration, and Business Intelligence (BI) in various industries including utilities, government, energy, and capital markets. He has experience in Oracle Customer to Meter (C2M), Oracle Utility Analytics (OUA), and Customer Care & Billing (CC&B). He is well versed in using industry standards and advanced Data Visualization and ETL tools. He has technical expertise in building Custom Data Warehouses from scratch and delivering reporting solutions. Nechal possesses excellent communication and interpersonal skills, good analytical reasoning, and has the ability to learn quickly and be highly adaptable to new technologies and tools.

ACCOMPLISHMENTS

Nechal has been a key member of the successful delivery of multiple full life cycle implementations, upgrades, and IT projects. He has helped businesses achieve a single view of the business-critical data from disparate and duplicate information sources as well as helped businesses achieve a 360-degree view of customer relationships. Overall, Nechal is well versed in identifying the relationship insights within the data to locate connections between customers, products, suppliers, and accounts.

PROFESSIONAL EXPERIENCE

Nashville Electric Service | Sr. Oracle BI Consultant (ETL and OBIEE)

Project Overview: The encompass project uses the C2M system as their primary data source to generate analytical and operational reports to serve various lines of business with day to day reporting needs using OUA.

- Converted functional requirements into technical design using the hybrid methodology with star schema and snowflake Datawarehouse design.
- Managed the Installation and configuration of the ETL and front-end reporting stack across environments
- Configured the OUA admin tool to feed information for Revenue Analytics, A/R analytics, Customer Analytics, Credit and Collections Analytics, Meter management Analytics and Usage Analytics.

Pacific Gas and Electric | Sr. Oracle BI Consultant (ODI and OBIEE)

Project Overview: The Customer Revenue Critical Reporting project uses the CC&B system as their primary data source to generate analytical and operational reports to serve Corporate Accounting, Revenue operations, Billing operations & Field operations line of businesses with day-to-day reporting needs using OUA.

- Helped the business with Plan and Analyze and fit gap analysis to identify the scope of work involving Revenue Analytics, A/R analytics, Customer Analytics, Credit and Collections Analytics, Meter management Analytics and Usage Analytics.
- Converted functional requirements into logical and physical data models using the hybrid methodology with star schema and snowflake Datawarehouse design.
- Managed the Installation and configuration of the ETL and front-end reporting stack across environments

Jinelle D'souza – **CC&B Functional Architect / Training Lead**

SPECIALIZATION

Jinelle is a Business Analyst with a specialization in helping clients recover revenue and achieve steady state as part of their post-production support. She is proficient in documenting requirements, developing solution designs, validating system functionality, configuring and testing Meter-to-Cash (M2C) modules for Customer Care and Billing (CC&B), Meter Data Management (MDM), and 3rd party interfaces. She has played a pivotal role in helping clients resolve high-volume exceptions generated post go-live and developing solutions for reducing delayed unbilled revenue.

ACCOMPLISHMENTS

Jinelle has been involved in four large \$20-\$40M revenue recovery projects as part of a SWAT Team to alleviate delayed revenue. Jinelle has implemented several processes for client billing efficiency, leak adjustment management, field work, collections, and to-do management. A recent highlight is a process she developed to forecast collections volume at various debt thresholds to help the client manage their daily workload for the volume of disconnect letters and turn-off field activities.

PROFESSIONAL EXPERIENCE

City of Jackson | Lead Business Analyst

Project Overview: Business Operations Support for the effective rollout of the Credit & Collections process, Meter & Field Work backlog resolution, and billing efficiency

- Responsible for the configuration and rollout of the Credit & Collections processes. Strategized the target accounts for Collections which increased monthly collections by 25%.
- Provided a forecasting process to manage the client's daily volume of disconnects to help them effectively allocate resources for collecting payments, performing disconnects, and reconnects.
- Helped resolve CC&B billing exceptions which enabled the client to bring 20,000 customers to current. In addition, billed over \$13M in missing revenue over three months.
- Performed configuration of cases to meet business needs for High Bill Complaints and Leaks.
- Re-configured the meter reading and billing windows for each billing cycle to ensure meter reads in CC&B fall within the acceptable selection range for billing.
- Provided scripts to identify and resolve hi-low exceptions generated by meter reads within the billing window.
- Implemented a process and developed a calculator to expedite adjustments for accounts with a Leak Alert seen in the MDM system.
- Designed and developed strategic and operational dashboards in QLIK Sense Analytics to drive Revenue Management and Collections strategy.
- Developed reports using SQL to provide insight into the issues affecting the client's business stability related to billing, collections, field work backlog, and meters not communicating in MDM.
- Collaborated with the client to identify business requirements and designed customizations to enhance base application functionality and introduce additional controls to drive future state business processes.

- Performed testing of a custom batch to process meter exchanges at the Mueller MDM system / CC&B interface.

Orlando Utilities Commission | Functional Architect

Project Overview: Customer Relationship Management IT Support Team, Revenue Recovery for multi-month delayed bills

- Developed requirements and functional design documents for meter reading, water meter backflow device testing, and maintenance.
- Reviewed technical designs provided by the developer to ensure all functional requirements were correctly mapped.
- Developed SQL scripts / reports to provide insight into customer data to drive business decisions.
- Helped write-off billing usage associated with delayed multi-month bills and add adjustments for customers with large leaks that had not received their bill for up to 3 months.
- Resolved CC&B exceptions for negative usage and service agreements that were activated but never billed.
- Performed scalar override for Initial Measurement Data (IMD) reads in MDM to ensure good reads are used for billing.
- Provided training to the client billing team for resolving delayed bills with payment arrangements.

Modesto Irrigation District | Functional Analyst

Project Overview: Customer Information System (CIS) Implementation to replace all legacy systems with CC&B, MDM, CSS, and Analytics

- Identified functional gaps between CC&B and the client's legacy system and assisted in establishing modified business processes based on industry best practices.
- Reviewed business processes to map out and configure the workflow of events in CC&B with the interfaces.
- Configured the system for security profiles for users based on business roles for the various functional areas like field work, meter reading, billing, accounting, and payment arrangement.
- Developed test scripts for all 3rd party payment applications interfacing with CC&B, field work, bill print testing, collection letters, and payment files.
- Resolved meter reading validations exceptions from MDM due to inconsistencies in meter programming and read file values.
- Led the defect triage sessions to identify and resolve defects related to CSS, payments, and MDM to dos.
- Performed testing and support activities to facilitate the Credit and Collections rollout.
- Provided front-line post-production support for the Billing and Customer Service departments.

Los Angeles Department of Water & Power | Quality Assurance Lead

Project Overview: \$40M Revenue Recovery effort as part of the SWAT go-live team

- Piloted a Quality Assurance process by defining performance metrics to audit 60,000 delayed bills, reduce billing and establish an accountability system for the client's billing department.
- Managed the worklist of backlog accounts from pending ITRON smart meter installations, start / stop service agreements, and legacy system data conversion issues to alleviate the high revenue.

- Subject Matter Expert (SME) to the Executive team for Oracle CC&B queries and rebilling of inaccurate accounts to ensure minimum customer impact for premier accounts.
- Performed User Acceptance Testing (UAT) testing and training for customizations for estimation and high / low exception parameters.
- Responsible for evaluating the weekly performance of 40 analysts to ensure high quality deliverables and conducted review sessions to suggest improvements.
- Conducted and produced training material for on-boarding of new Business Analysts specifically in business procedures, CC&B operations, and utilities overview to ensure on-par performance with project standards.
- Responsible for the system improvement project to perform data clean-up, modification to system configurations and billing support of back-log tasks to ensure successful system functionality.
- Coordinated weekly review sessions with the Project / Client team to maintain Project Timelines.
- Standardized and documented business processes for the client to facilitate knowledge transfer during the project hand-off.