Project Name: WRC Development Budget 2021 - 2022 Project ID: D50611DB

Department: Water Re (WRC)	sources Commis	sioner's Office	Division: Admir	nistrative				
Project Sponsor: Nand	cy Basch	Date Requeste	sted: 2/10/2020 PM Customer No. 61					
Request Type:	New Develo	<u>oment</u>	Enhancemer	Enhancement Custo				
	Planned Syst	em Maintenance	or Upgrade					
IT Team Name: Public	& Environmenta	Services	IT Team No: 5					
	er: Shashi Gowo	da		Customer	Water Resource			
Account Number: 28011	Account Description:	WRC Custor	n app support	Name:	Water Resources Commissioner			

Project Goal

To establish a Development Budget so that new technology can be leveraged to gain efficiency in the Water Resources Commissioner's office

Business Objective

To improve and expand the product enhancement technologies throughout the Water Resources Commissioner's Office.

Major Deliverables

- Application and/or System Requirements
- Updated Technical Architecture Diagram(s)
- Updated Systems
- Updated Disaster Recovery Toolkits
- Test Plans

Approach

- OCIT develops estimate and returns to WRC for approval
- WRC submits approval to OCIT
- Update Application Functionality
- Update Disaster Recovery Toolkit
- Update End User Documentation (Training Material)
- Implement Application Functionality Changes

Project Name: WRC Development Budget 2021 - 2022 Project ID: D50611DB

Research & Analysis

Gartner Research Recommendation – Research Conducted; Nothing Found

Benefits

See Return on Investment (ROI) Analysis Document

Impact

Number of Users 250+

Divisions Oakland County Water Resources Commissioner's Office

Leadership Groups Land

<u>Risk</u>

Business Environment Medium - Project will require some changes to existing business

processes.

Technical Environment Medium - Previously implemented technologies with new aspects

and/or new requirements.

<u>Assumptions</u>

Staffing IT Staffing: resources will be available for the hours indicated per the attached

project plan.

Other Staffing: additional staffing will be available as follows:

Role: Name Hours per Day

Project Sponsor: Nancy Basch As Needed

Dev Budget Coordinator Roy Smotherman As Needed

Project Name: WRC Development Budget 2021 - 2022	Project ID: D50611DB
Facilities	
N/A	
Technical	
N/A	
Funding	
WRC Funded	
Other	
N/A	
Priority	
TBD	
<u>Constraints</u>	
N/A	
<u>Exclusions</u>	
N/A	

Project Name: WRC Development Budget 2021 - 2022 Project ID: D50611DB

PROJECT PHASE AUTHORIZATION

Phase(s): WRC Development Preliminary Estimate									
Total Estimated Application Services	Hours: 1,400								
Total Estimated Technical Systems	Hours: 400								
Total Estimated CLEMIS	Hours:								
Total Estimated Internal Services	Hours:								
IT Application Services Division Manager Approval:		Date:							
IT Technical Systems Division Manager Approval:		Date:							
IT CLEMIS Division Manager Approval:		Date:							
IT Internal Services Division Manager Approval:		Date:							
IT Management Approval:									
Approved: Yes No		Date:							
Reason:									
Project Sponsor Approval:									
Title:		Date:							

PROJECT SUMMARY

Hours: 1,800	
Hours:	
Hours: 1 800	Cost: \$297,000

Project Name: WRC Development Budget 2021 - 2022 Project ID: D50611DB

PROJECT COMPLETION AUTHORIZATION

Customer Acceptance of Product:							
Title:	Date:						
Project Office Review:	Date:						

WRC Development Budget 2021-2022 - Size Estimate (+/- 10% to 50%)

1	Туре	ID	Task Name	Estimated	Estimate Notes
2				Hours	
3	Phase	000000	WRC DEVELOPMENT BUDGET	1,800	
4				1,800	

Return on Investment Analysis

Project Summary

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Benefits/Savings:							
Tangible Benefits Subtotal:	0	0	0	0	0	0	0
Cost Avoidance Subtotal:	0	0	0	0	0	0	0
Costs:							
Development Services Subtotal:	297,000	0	0	0	0	0	297,000
Hardware Subtotal:	0	0	0	0	0	0	0
Software Subtotal:	0	0	0	0	0	0	0
Infrastructure Subtotal	0	0	0	0	0	0	0
Training Subtotal:	0	0	0	0	0	0	0
Other Subtotal:	0	0	0	0	0	0	0
Annual Statistics:							
Annual Total Savings	0	0	0	0	0	0	0
Annual Total Costs	297,000	0	0	0	0	0	297,000
Annual Return on Investment	(297,000)						(297,000)
Annual Costs/Savings Ratio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	, , ,
Project Cumulative Statistics:							
Cumulative Total Savings	0	0	0	0	0	0	0
Cumulative Total Costs	297,000	297,000	297,000	297,000	297,000	297,000	297,000
Cumulative Return on Investment	(297,000)	(297,000)	(297,000)	(297,000)	(297,000)	(297,000)	(297,000)
Cumulative Cost/Savings Ratio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Year Positive Payback Achieved							NO PAYBACK
State or Federal Mandate?							
Signatures:							
Benefits Reviewed By Project Sponsor	_			Date:			
Costs (including IT Resources) Reviewed By Information Technology Project Manager				Date:			
				- 3.00			

Return on Investment Analysis

Project Summary

Benefit/Savings Description	Project Savings Category	Budget Category/Funding Source	Unit Desc	Units	Rate per Unit	Total Savings	Annual Multiplier
Enhance existing WRC custom developed applications and provide additional functionality and time saving							
features to all supported applications.	Intangible Benefit					0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	

Project Summary

		Affects Project ROI?)I?		Potential Savings Extensions						
Benefit/Savings Description	Project Savings Category	Y1	Y2	Υ3	Ύ	4 `	1 5	Y6	Y1	Y2	Y3	Y4	Y5	Y6		
Enhance existing WRC custom developed applications and provide additional functionality and time saving features to all supported applications.	Intangible Benefit															
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						1	į						i 			

Project Summary

Benefit/Savings Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Tangible Benefit:							
Tangible Benefits Subtotal:							
Cost Avoidance:							
Cost Avoidance Subtotal:							
Intangible Benefit:							
Enhance existing WRC custom developed							
applications and provide additional							
functionality and time saving features to all							
supported applications.							
Savings Total:							

Return on Investment Analysis

Project Summary

								Af	fects	Pro	iect	RO	?
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual		1	Ī		T	
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3 '	Y4	Y5 `	Y 6
IT Hours - New Development	Development Svcs			1,800	165	297,000		Χ	ŀ	ł	丁	\equiv	
IT Hours - System Maintenance	Development Svcs				165	0			ŀ				
IT Hours - Customer Support	Development Svcs				165	0						i	
IT Hours - Planned Maintenance	Development Svcs				165	0							
User Hours - New Development	Development Svcs					0			ĺ				
User Hours - PTNE/OT	Development Svcs					0			ŀ				
Contractor Professional Services	Development Svcs					0			i	Ī			
PC System - Acquisition	Hardware				687	0							
PC System - Maintenance	Hardware				2,936	0			ĺ				
Notebook - Acquisition	Hardware				1,115	0			i	Ī			
Notebook - Maintenance	Hardware				3,024	0			i				
Tablet Notebook - Acquisition	Hardware				1,421	0			Î				
Tablet Notebook - Maintenance	Hardware				2,800	0			į				
Laserprinter - Acquisition	Hardware				1,432	0			İ	Ī			
Laserprinter - Maintenance	Hardware				1,408	0							
PC Maintenance User Owned	Hardware				2,720	0			ĺ				
Printer Maintenance User Owned	Hardware				1,264	0							
File Space (100GB)	Hardware		ANN		23	0			i	Ī			
Package Software - Acquisition	Software					0			ĺ				
Package Software - Maintenance	Software					0				Į		Ţ	
Business Objects Access	Software					0							
Term Emulation SFTW-Acquisition	Software					0			ĺ				
Term Emulation SFTW-Maintenance	Software					0				Ĭ			
Server - Acquisition/Upgrade	Infrastructure				8,000	0			į	ŀ			
Server - Maintenance	Infrastructure				360	0							
Server Sftwre - Acquisition/Upgrade	Infrastructure				335	0			ĺ	ĺ			
Server Sftwre - Maintenance	Infrastructure					0				Į		Ţ	
Server Rack Mount	Infrastructure				400	0			į	Ī			
Oracle Enterprise Per Processor -									l				
Includes Year 1 Maintenance	Infrastructure				21,372	0			İ	į	ĺ	- 1	
Oracle Enterprise Per Processor - Year									ļ	į			
2 and Beyond	Infrastructure				3,432	0			i		i	i	

Return on Investment Analysis

Project Summary

								Af	fect	RO	l?		
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual				' !	I	
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y 3	Y4	Y5	Y6
SQL Server Enterprise - Per Processor											ŀ	ł	
(4 cores) - Purchased Sept 2016-Aug											į	į	
2017 - Includes Maintenance thru Aug											į	į	
2019	Infrastructure				24,533	0					į	į	
SQL Server Enterprise - Per Processor												I	
(4 cores) - Purchased Sept 2017-Aug											- 1	į	
2018 - Includes Maintenance thru Aug											į	1	
2019	Infrastructure				20,759	0					į	į	
SQL Server Enterprise - Per Processor												I	
(4 cores) - Purchased Sept 2018-Aug											į	į	
2019 - Includes Maintenance thru Aug											į	į	
2019	Infrastructure				16,985	0				i	İ	į	
SQL Server Enterprise - Maintenance,										i	į	ŀ	
Per Processor (4 cores) - Sept 2019											- 1	į	
and Beyond	Infrastructure				4,218	0					ı	į	
SQL Server Standard - Per Processor											ĺ	į	
(4 cores) - Purchased Sept 2016-Aug											ļ	į	
2017 - Includes Maintenance thru Aug											į	1	
2019	Infrastructure				6,398	0					į	į	
SQL Server Standard - Per Processor					·					:	İ	İ	
(4 cores) - Purchased Sept 2017-Aug											- 1	į	
2018 - Includes Maintenance thru Aug											į	1	
2019	Infrastructure				5,414	0					ı	į	
SQL Server Standard - Per Processor											İ	i	
(4 cores) - Purchased Sept 2018-Aug										!!	-	į	
2019 - Includes Maintenance thru Aug											- 1	1	
2019	Infrastructure				4,429	0					į	ŀ	
SQL Server - Standard Maintenance,											į	į	
Per Processor (4 cores) - Sept 2019										į	į	į	
and Beyond	Infrastructure				1,100	0					ı	į	
Websphere Basic Per Processor												į	
Single/Dual Core - Includes Year 1											į	į	
Maintenance	Infrastructure				3,506	0				<u> </u>	[į	

Return on Investment Analysis

Project Summary

								Aff	ect	s Pro	ojeci	t ROI?
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual	ĺ				
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3	Y4	Y5 Y6
Makankan Basis Ban Basasan												
Websphere Basic Per Processor	l				704	0		li		. !	ı	•
Single/Dual Core - Year 2 and Beyond	Infrastructure				701	0				┈┋		_ - '
Websphere ND Per Processor								ŀ	. !	. !	ı	
Single/Dual Core - Includes Year 1					40.400	0		li		. !	į	
Maintenance	Infrastructure				13,180	0		H		<u>:</u>	<u></u> į	i '
Websphere ND Per Processor									ļ	i İ		
Single/Dual Core - Year 2 and Beyond	Infrastructure				2,635	0		li		: [- 1	•
SSL Certificate	Infrastructure				845	0				 		
Internet Access	Infrastructure				180	0				. 		
Imperva Web Application Firewall	iiiii asii ucture				100	U		H				
(External Web Applications Only)	Infrastructure		ANN		500	0		li		ıİ	ı	•
App Code Directories on Consolidated	iiiiiasiiuciure		AININ		500	0		ŀ		 		
IIS Server (Virtual)	Infrastructure		ANN		415	0		li		. !	į	
Database (5 GB) on Consolidated SQL	iiiiiasiiuciuie		AININ		413	U		H		. 	—į	
	Infrastructure		ANN		930	0		li		: [- 1	•
Database Instance (125 GB DB) on	iiiiasiiuciure		AININ		930	U						
Consolidated SQL Server	Infrastructure		ANN		2 205	0				: !	į	
Database SQL Maint Server	Infrastructure		ANN		2,395	0				⊢	 i	
			ANN		834	0		H				
Database SQL Server Physical	Infrastructure		ANN		19,158	0		ŀ		\vdash	i	i '
(-) + /	Infrastructure		AININ		610	0		ŀ		. 	<u>;</u>	
DB Maintenance (Semi-Annual Cycle	lafa-aturatura		ANINI		4 000	0		li		. !	- 1	•
\$1220) DB Maintenance (Semi-Annual Cycle	Infrastructure		ANN		1,220	0		H				<u> </u>
•	lafa-aturatura		ANINI		0.440	0		li		. !	į	
\$2440) Dedicated Virtual Server	Infrastructure		ANN ANN		2,440	0		Hi		. 		
	Infrastructure		ANN		4,150	0				⊢ i	į	
DB Instance Setup	Infrastructure				976	0		į		⊢ i		
DBA MS SQL Database Creation on					000	0			ļ	. !	- 1	•
Exisitng Instance	Infrastructure				366	0				<u>. </u>		
E + 0 0 0 000 DAM 50000								li		. !	ı	•
Extra Small - 2 Core 8GB RAM, 500GB									ļ	į	- 1	•
Drive, 10 GB NIC - Cloud/Virtual = \$601	l									<u>.</u> [- 1	•
On Premise Physical Server = N/A	Infrastructure		ANN			0				<u> </u>		

Project Summary

								Aff	ects	Pro	ject	ROI?
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual		į			
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3 '	۲4 ۱	Y5 Y6
									Ī	ŀ	ŀ	
Small - 4 Core 16GB RAM, 500GB									į			
Drive, 10 GB NIC - Cloud/Virtual = \$951								li	į			
On Premise Physical Server = \$9,288	Infrastructure		ANN			0			ĺ	İ		
Medium - 8 Core 32GB RAM, 500GB									ĺ			
Drive, 10 GB NIC - Cloud/Virtual =									į	į	į	
\$1,702 On Premise Physical Server =								li	į	į	į	
\$9,751	Infrastructure		ANN			0			į	Ì	İ	
Large - 16 Core 64GB RAM, 500GB								li	į	į	į	
Drive, 10 GB NIC - Cloud/Virtual =								li	į	į	į	
\$3,167 On Premise Physical Server =									į	İ	İ	
\$10,446	Infrastructure		ANN			0			į	į		
Extra Large - 40 Core 160GB RAM,								li	į			
500GB Drive, 10 GB NIC - Cloud/Virtual									į	İ	İ	
= \$7,564 On Premise Physical Server =									- 1		į	
\$12,906	Infrastructure		ANN			0			į			

Return on Investment Analysis

Project Summary

	Potential Cost Extensions								
	Project Cost	į		!			 		
Cost Description	Category	Y1	Y2	Y3	Y4	Y5	Y6		
IT Hours - New Development	Development Svcs	297,000.00							
IT Hours - System Maintenance	Development Svcs								
IT Hours - Customer Support	Development Svcs	<u> </u>		į	į		į		
IT Hours - Planned Maintenance	Development Svcs	<u> </u>		j					
User Hours - New Development	Development Svcs	!			ļ	! ! !	<u> </u>		
User Hours - PTNE/OT	Development Svcs								
Contractor Professional Services	Development Svcs			}	[-		
PC System - Acquisition	Hardware			Ì	}		}		
PC System - Maintenance	Hardware	j]		<u> </u>			
Notebook - Acquisition	Hardware			į					
Notebook - Maintenance	Hardware								
Tablet Notebook - Acquisition	Hardware	İ		ĺ					
Tablet Notebook - Maintenance	Hardware	!		į	!		!		
Laserprinter - Acquisition	Hardware			İ		<u>.</u> !			
Laserprinter - Maintenance	Hardware								
PC Maintenance User Owned	Hardware	İ		Ì		Ĭ I I			
Printer Maintenance User Owned	Hardware								
File Space (100GB)	Hardware	:		1					
Package Software - Acquisition	Software	İ		ĺ					
Package Software - Maintenance	Software	!		į	!		!		
Business Objects Access	Software			į					
Term Emulation SFTW-Acquisition	Software								
Term Emulation SFTW-Maintenance	Software) !			
Server - Acquisition/Upgrade	Infrastructure								
Server - Maintenance	Infrastructure	:		į.					
Server Sftwre - Acquisition/Upgrade	Infrastructure								
Server Sftwre - Maintenance	Infrastructure			!		! !			
Server Rack Mount	Infrastructure								
Oracle Enterprise Per Processor -				1	-		1		
Includes Year 1 Maintenance	Infrastructure			ĺ		İ	1		
Oracle Enterprise Per Processor - Year				!		1 1 1			
2 and Beyond	Infrastructure			•					

Return on Investment Analysis

Project Summary

		Potential Cost Extensions						
	Project Cost			1				
Cost Description	Category	Y1	Y2	Y3	Y4	Y5	Y6	
SQL Server Enterprise - Per Processor			į	ļ		<u> </u>		
(4 cores) - Purchased Sept 2016-Aug								
2017 - Includes Maintenance thru Aug				į.				
2019	Infrastructure				į			
SQL Server Enterprise - Per Processor			İ	Î		Ĭ I	Ĭ	
(4 cores) - Purchased Sept 2017-Aug				Į.	ļ.	<u>!</u>		
2018 - Includes Maintenance thru Aug								
2019	Infrastructure			į.				
SQL Server Enterprise - Per Processor			Ì	Ì	i			
(4 cores) - Purchased Sept 2018-Aug					}			
2019 - Includes Maintenance thru Aug								
2019	Infrastructure			į.				
SQL Server Enterprise - Maintenance,								
Per Processor (4 cores) - Sept 2019			-		•			
and Beyond	Infrastructure							
SQL Server Standard - Per Processor			1		!	ļ		
(4 cores) - Purchased Sept 2016-Aug			İ					
2017 - Includes Maintenance thru Aug			-		•			
2019	Infrastructure							
SQL Server Standard - Per Processor			1		<u> </u>			
(4 cores) - Purchased Sept 2017-Aug				Ì	•			
2018 - Includes Maintenance thru Aug				Į.	Į.	<u>!</u>		
2019	Infrastructure							
SQL Server Standard - Per Processor			1		•	<u> </u>		
(4 cores) - Purchased Sept 2018-Aug			Ì		•			
2019 - Includes Maintenance thru Aug								
2019	Infrastructure							
SQL Server - Standard Maintenance,			İ	<u> </u>		<u> </u>		
Per Processor (4 cores) - Sept 2019			}					
and Beyond	Infrastructure		į	•	1	!		
Websphere Basic Per Processor	iiii adii adiai d		<u> </u>	<u> </u>				
Single/Dual Core - Includes Year 1				İ	•	į	<u> </u>	
Maintenance	Infrastructure		}			İ		
Mantichance	mmastructure		1	1	<u> </u>	1	ı	

Return on Investment Analysis

Project Summary

		Potential Cost Extensions								
	Project Cost					1	•			
Cost Description	Category	Y1	Y2	Y3	Y4	Y5	Y6			
			İ							
Websphere Basic Per Processor			į	•	•	•				
Single/Dual Core - Year 2 and Beyond	Infrastructure									
Websphere ND Per Processor			!	•	!	•	! !			
Single/Dual Core - Includes Year 1										
Maintenance	Infrastructure		<u> </u>							
Websphere ND Per Processor				į			į			
1	Infrastructure		!	į	į	•	!			
SSL Certificate	Infrastructure									
Internet Access	Infrastructure		<u> </u>			1	 			
Imperva Web Application Firewall	inirastructure		<u> </u>			<u> </u>	<u> </u>			
	la fan a fan i a fa i a a		1		•	•				
(External Web Applications Only)	Infrastructure		İ	<u> </u>	<u> </u>					
App Code Directories on Consolidated	lf		İ	•	ļ	}				
IIS Server (Virtual)	Infrastructure					<u> </u>				
Database (5 GB) on Consolidated SQL	l f		1		į	•				
Instance Server	Infrastructure									
Database Instance (125 GB DB) on			!	•	!	•	! !			
Consolidated SQL Server	Infrastructure									
Database SQL Maint Server	Infrastructure		<u> </u>							
Database SQL Server Physical	Infrastructure		i	<u>i</u>	<u>i</u>	<u>i</u>				
DB Maintenance (Annual Cycle \$610)	Infrastructure		1	i I	i I					
DB Maintenance (Semi-Annual Cycle						ļ				
\$1220)	Infrastructure		<u> </u>							
DB Maintenance (Semi-Annual Cycle			İ	•		}				
\$2440)	Infrastructure		<u> </u>	 	 	1	! !			
Dedicated Virtual Server	Infrastructure									
DB Instance Setup	Infrastructure					ļ	<u> </u>			
DBA MS SQL Database Creation on	l						•			
Exisitng Instance	Infrastructure									
Extra Small - 2 Core 8GB RAM, 500GB										
Drive, 10 GB NIC - Cloud/Virtual = \$601							!			
On Premise Physical Server = N/A	Infrastructure						!			
Off Fromise Frigstoar Oct vot - N/A	Illinastracture	<u> </u>	!	!	!	!	!			

Return on Investment Analysis

Project Summary

		Potential Cost Extensions							
Cost Description	Project Cost Category	Y1	Y2	Y3	Y4	Y5	Y6		
				! !		! !	I I !		
Small - 4 Core 16GB RAM, 500GB				į	•	i !	i !		
Drive, 10 GB NIC - Cloud/Virtual = \$951				İ	•	i !			
On Premise Physical Server = \$9,288	Infrastructure			İ					
Medium - 8 Core 32GB RAM, 500GB									
Drive, 10 GB NIC - Cloud/Virtual =					ļ	! ! !	I I <u>!</u>		
\$1,702 On Premise Physical Server =				į					
\$9,751	Infrastructure			•			i !		
Large - 16 Core 64GB RAM, 500GB				<u> </u>		ř I I	ř I I		
Drive, 10 GB NIC - Cloud/Virtual =				į					
\$3,167 On Premise Physical Server =				•		i !	i !		
\$10,446	Infrastructure			İ					
Extra Large - 40 Core 160GB RAM,				!	!	! !	! !		
500GB Drive, 10 GB NIC - Cloud/Virtual									
= \$7,564 On Premise Physical Server =				•	•		i !		
\$12,906	Infrastructure						i i i		

Return on Investment Analysis

Project Summary

Cost Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Development Services:							
IT Hours - New Development	297,000						297,000
IT Hours - System Maintenance							
IT Hours - Customer Support IT Hours - Planned Maintenance							
IT Hours - Planned Maintenance							
User Hours - New Development							
User Hours - PTNE/OT							
Contractor Professional Services							
Development Services Subtotal:	297,000						297,000
Hardware:							
Hardware Subtotal:							
Software:							
Software Subtotal:							
Infrastructure:							
Infrastructure Subtotal							
Training:							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	297,000						297,000

Budget 2021-22 Date: 5/28/2020

Project Summary

Date	Assumption Description
18-Feb-20	Additional State Zero effort will be handled in a separate project.