

REVISED AGENDA
IRVINE RANCH WATER DISTRICT
ENGINEERING AND OPERATIONS COMMITTEE
TUESDAY, AUGUST 18, 2020

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 members of the Committee 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.my.webex.com/irwd.my/j.php?MTID=m35f954bbb620613e42163ab42e98feb5>

Meeting Number (Access Code): 126 875 0461

Meeting Password: 7paPUCKdQ23 (77278253 from phones and video systems)

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 by using the call-in information and attendee identification number provided.

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

PLEASE NOTE: Participants joining the meeting will be placed into the Webex lobby when the Committee enters closed session. Participants who remain in the "lobby" will automatically be returned to the open session of the Committee once the closed session has concluded. Participants who join the meeting while the Committee is in closed session will receive a notice that the meeting has been locked. They will be able to join the meeting once the closed session has concluded.

CALL TO ORDER 3:00 p.m.

ATTENDANCE Committee Chair: Doug Reinhart _____
Committee Member: John Withers _____

<u>ALSO PRESENT</u>	Paul Cook	_____	Kevin Burton	_____	Wendy Chambers	_____
	Jose Zepeda	_____	Paul Weghorst	_____	Cheryl Clary	_____
	Rich Mori	_____	Eric Akiyoshi	_____	Richard Mykitta	_____
	Kelly Lew	_____	Jim Colston	_____	Ken Pfister	_____
	Lars Oldewage	_____	Malcolm Cortez	_____	Scott Toland	_____
	John Dayer	_____	Bruce Newell	_____	Mitch Robinson	_____
	Belisario Rios	_____		_____		_____

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 10:30 a.m. on Tuesday, August 18, 2020.

ALL VOTES SHALL BE TAKEN BY A ROLL CALL VOTE.

COMMUNICATIONS

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

INFORMATION

5. UPCOMING PROJECTS STATUS REPORT – CORTEZ / AKIYOSHI / LEW / MORI / BURTON

Recommendation: Receive and file.

6. REPLACEMENT PLANNING MODEL PHASE 2 UNIT COSTS UPDATE – MARCACCI / AKIYOSHI / BURTON

Recommendation: Receive and file.

7. IRWD NON-POTABLE WATER STORAGE ANNUAL MANAGEMENT PLANS FOR FISCAL YEAR 2020-21 – PFISTER / CHAMBERS

Recommendation: Receive and file.

ACTION

8. ENTERPRISE ASSET MANAGEMENT MAXIMO MOBILE SOLUTION IMPLEMENTATION – MORENO / MYKITTA / CHAMBERS

Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement with Interpro Solutions for the Maximo Mobile Solution in the amount of \$292,600 and approve the addition of Projects 11679 and 11680, each in the amount of \$240,300 for a total of \$480,600, to the FY 2020-21 Capital Budget for the Maximo Mobile Implementation Project.

OTHER BUSINESS

9. Directors' Comments
10. Adjourn

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

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August 18, 2020

Prepared by: M. Cortez / E. Akiyoshi/
K. Lew / R. Mori

Submitted by: K. Burton

Approved by: Paul A. Cook



ENGINEERING AND OPERATIONS COMMITTEE

UPCOMING PROJECTS STATUS REPORT

SUMMARY:

A status report of Irvine Ranch Water District's Upcoming Projects is presented to the Committee for information.

BACKGROUND:

The information, which is provided as Exhibit "A", is a status report submitted quarterly to the Committee for review.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit "A" – Upcoming Projects Status Report

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EXHIBIT "A"

IRWD UPCOMING PROJECTS STATUS REPORT

Project Name	Start	Start	Construction	Construction
	Planning	Design	Award	Final Acceptance
Gillette/Morse DW Relocation			Fall 2020	
Turtle Ridge DW, RW Pipeline Rehabilitation				Winter 2021
University Drive Widening Appurtenance Relocations (RA w/ Irvine)				Fall 2020
Aliso Creek Remediation			Fall 2020	Winter 2021
2020 Vault Lid Replacement			Summer 2020	Summer 2021
Lake Forest Woods Sewer Improvements			Fall 2020	
MWRP Tertiary Filter Rehabilitation		Fall 2020		
MWRP MBR Fall Protection			Fall 2020	
MWRP Primary Tanks Replacement Covers			Fall 2020	Winter 2021
Culver and University Intersection DW Pipeline Relocation				Fall 2020
Crystal Cove RW PRV Improvements			Fall 2020	
Rattlesnake Outlet Pipe Assessment		Fall 2020		
MWRP Compressed Natural Gas Fueling Station		Fall 2020	Winter 2021	
San Joaquin Reservoir Filtration Facility			Fall 2020	
HATS Diversion Structure Relining			Fall 2020	
Santiago Canyon Pump Station Improvements			Fall 2020	
Sewer Siphon Improvements				Spring 2021
Baker Campus Entrance Improvements			Summer 2020	Fall 2020
Wells 5, 14 and 16 Rehabilitation				Fall 2020
Wells 1, 11, and 13 Rehabilitation		Summer 2020	Fall 2020	Spring 2021
DATS Miscellaneous Repairs			Fall 2020	
Silverado Bridge 174 DW Improvements		Winter 2021	Spring 2022	
Silverado Bridge 175 DW Improvements			Summer 2021	
Baker WTP Hydrochloric Acid Scrubber Evaluation			Summer 2020	Fall 2020
Lake Forest Zone C Pipeline			Summer 2020	Spring 2021
3.7 MG Zone 1 Reservoir				Summer 2020
Eastwood Zone A-B BPS and Zone A-C BPS				Fall 2020
Zone A to Rattlesnake Reservoir BPS			Summer 2020	Spring 2023
Lake Forest Zone B-C BPS			Winter 2021	
Serrano Creek Outlet Structure Improvements				Fall 2021
15 MG Zone 1 Reservoir Coating Replacement and Improvements			Spring 2021	
Zone C+ Reservoir Strainer Improvements				Fall 2020
Sewage Treatment Plant Master Plan		Winter 2021		
PDF Sodium Hypochlorite Storage and Feed System				Spring 2022
Santiago Creek Dam Improvements			Spring 2023	
Santiago Canyon Fleming Zone 8 Tank and Zone 8-9 BPS			Fall 2021	
MWRP Unit Substation T-1 Replacement				Winter 2021

IRWD UPCOMING PROJECTS STATUS REPORT

Project Name	Start	Start	Construction	Construction
	Planning	Design	Award	Final Acceptance
MWRP Biosolids and Energy Recovery Facilities				Winter 2021
Syphon Reservoir Improvements		Fall 2020		
PA 1, Orchard Hills Neighborhood 3 RW (RA w/ICDC)				Winter 2021
PA 6, Neighborhood 5B and C Phase 2 RW (RA w/ICDC)				Winter 2021
PA 12, Innovation Park DW and RW (RA w/ICDC)				Spring 2021
PA 12, Innovation Park DW (RA w/ICDC)				Spring 2021
PA 1, Jeffrey Road Extension RW (RA w/CDC)			Winter 2021	
Tustin Legacy, Moffett at Peters Canyon Channel DW, RW (RA w/Tustin)				Winter 2021
Tustin Legacy, Flight Drive RW (RA w/Tustin)				Winter 2021
Tustin Legacy, Neighborhood South Phase 1, S (RA with/Tustin)				Summer 2021
PA 51, Marine Way DW, RW (RA w/Heritage Fields)				Winter 2021
PA 51, South C St and LY St, S, RW (RA w/Heritage Fields)				Winter 2021
PA 51, Alton Pkwy from Technology to Muirlands, DW S, RW (RA w/Heritage Fields)				Winter 2021
PA 51, Marine Way from Barranca Pkwy to Alton Pkwy, DW S, RW (RA w/Heritage Fields)				Winter 2021
PA 51, Alton Interceptor Sewer (RA w/Heritage Fields)				Winter 2021
PA 51, Marine Way from Alton to Barranca Sewer (RA w/Heritage Fields)				Winter 2021
PA 51, Sociable from Z St to B St, RW (RA w/Heritage Fields)				Winter 2021
PA 51, GP1 St DW, S, RW (RA w/Heritage Fields)				Winter 2021
PA 51, GP2 St, DW, S, RW (RA w/Heritage Fields)				Winter 2021
PA 51, Magnet from Ridge Valley to Bosque RW (RA w/Heritage Fields)				Winter 2021
PA 51, Cadence South DW, S, RW (RA w/Heritage Fields)				Winter 2021
PA 51, District 5 A St DW, RW (RA w/Heritage Fields)				Winter 2021
PA 51, Chinon from Cadence South to Cadence (RA w/Heritage Fields)				Winter 2021
PA 51, Marine Way Reach C Sewer RW (RA w/Heritage Fields)				Winter 2021
PA 51, District 5, F and N St DW, RW				Spring 2021
PA 51, District 5, E St RW (RA w/Heritage Fields)				Spring 2021
PA 51, District 5, Astor DW, RW (RA w/Heritage Fields)				Spring 2021
PA 51, District 5, Merit DW, RW (RA w/Heritage Fields)				Spring 2021
PA 51, District 5, BB St RW (RA w/Heritage Fields)				Spring 2021
PA 51, District 5, P St and Cadence DW, RW (RA w/Heritage Fields)				Spring 2021
PA 51, Marine Way from Alton Pkwy to Bake Pkwy DW, RW (RA w/Heritage Fields)				Fall 2021
Serrano Summit Phase 2 DW, RW				Winter 2021
Criticality Based Pump Station, Reservoir and Well Capital Improvement Program	Summer 2020			
Phase 2 Water Demand Factor Calibration	Fall 2020			
Non-Potable Hydraulic Model Updates	In-Process			
Potable Hydraulic Model Updates	Summer 2020			
Generator Fuel Storage Upgrades and Site Evaluations	In-Process			
2020 Urban Water Management Plan Technical Support	Winter 2021			

IRWD UPCOMING PROJECTS STATUS REPORT


Project Name	Start	Start	Construction	Construction
	Planning	Design	Award	Final Acceptance
Updates to Water Resources Master Plan for 2020 Urban Water Management Plan	Fall 2020			
			Category	Months
			Winter	Jan. Feb. & Mar.
			Spring	Apr. May & June
			Summer	Jul. Aug. & Sep.
			Fall	Oct. Nov. & Dec.

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August 18, 2020

Prepared by: M. Marcacci / E. Akiyoshi

Submitted by: K. Burton

Approved by: Paul A. Cook 

ENGINEERING AND OPERATIONS COMMITTEE

REPLACEMENT PLANNING MODEL PHASE 2 UNIT COSTS UPDATE

SUMMARY:

IRWD uses various planning tools, such as its Replacement Planning Model (RPM) and Replacement Fund Balance Model, to assist in the long-term financial planning for setting customer rates. The RPM Phase 2 Unit Costs Update Project modernized the approach to estimating replacement and rehabilitation unit costs for pipelines, treatment plants, and other facilities. This updated approach increased the escalated 50-year replacement funding needs by \$3.9 billion – from \$6.8 billion to \$10.7 billion. At the Committee meeting, staff will present its analysis and the resulting conclusions.

BACKGROUND:

At the Finance and Personnel Committee meeting held on November 6, 2018, staff initiated a process to update IRWD replacement costs funding strategy, specifically by describing the RPM Phase 1 Update which included an update of the Replacement Fund Balance Model. The IRWD RPM Phase 1 work added all new facilities constructed between 2010 and 2018 and used Continuous Refurbishment – an innovative and more accurate approach to modeling future replacement needs. Continuous Refurbishment is a hybrid approach of refurbishment, repair, and periodic replacement that identifies future expenditures on a more realistic timeline.

Since then, IRWD retained engineering consultant West Yost Associates for the Phase 2 Update work to update the construction unit costs for all facility types in the RPM. Kayuga Solution, an asset management consultant, was also retained to provide an independent, third-party review. While the 2010 RPM used industry-standard practices for unit cost development, the 2020 update builds on previous efforts and “ground truths” the costs with actual construction costs from IRWD and other local water agencies’ projects. Also, this effort captures the increased cost of construction in modern, more fully-developed cities with expanded regulatory and local agency requirements. In order to reflect the entire cost of replacement projects, the unit costs also now include design and construction management services.

As a result of the updated unit costs, the 50-year escalated replacement needs of IRWD’s water, sewer, and recycled infrastructure increased by \$3.9 billion, from \$6.8 billion in 2018 to \$10.7 billion, in 2020.

The following table presents the cost changes for the 50-year planning horizon shown at the major component level:

Facility Type	Total Change (\$ in billions)	Percent
Pipes	\$2.8	71%
Treatment Plants	\$1.6	41%
Wells	\$0.2	5%
Pump Stations	\$0.1	3%
Reservoirs & Dams	\$0.0	1%
Manholes	(\$0.2)	-6%
Meters and PRVs	(\$0.6)	-15%
TOTAL	\$3.9	100%

The following table shows the total 50-year escalated replacement needs shown by each major system.

SYSTEM	Total (\$ in billions)
Non-Potable	\$3.8
Potable	\$4.1
Sewer	\$2.8
<i>TOTALS</i>	<i>\$10.7</i>

At the Committee meeting, staff will provide more detail on the analysis and results.

FISCAL IMPACTS:

The updated RPM projections will be incorporated into the financial Replacement Fund Balance Model and the updated Replacement Funding Strategy will be presented to the Board of Directors in late 2020.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit “A” – RPM Phase 2 Unit Costs Update PowerPoint Presentation



DRAFT

Replacement Planning Model Phase 2 Unit Costs Update

Engineering and Operations Committee
August 18, 2020



1



Agenda

- Replacement Planning Model
 - Phase 1 Review
 - Phase 2 Goals
 - Unit Costs Updates
 - Updated Facilities and Assets
 - Summary of Results
- Next Steps



Michelson Water Recycling Plan and Biosolids Dewatering Facilities



Baker Water Treatment Plant

Irvine Ranch Water District

2

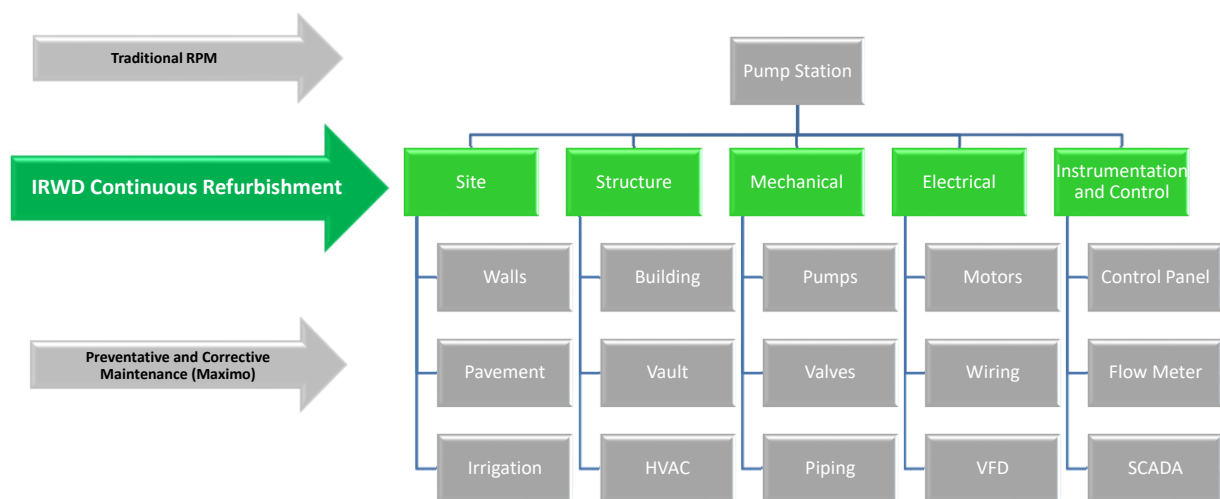
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Phase 1 Review

- Escalated old unit costs from 2010 to 2018
- Upgraded RPM software: “IRIS” by Kayuga Solution
- Updated 50-Year RPM Projections
- Implemented “Continuous Refurbishment” Strategy

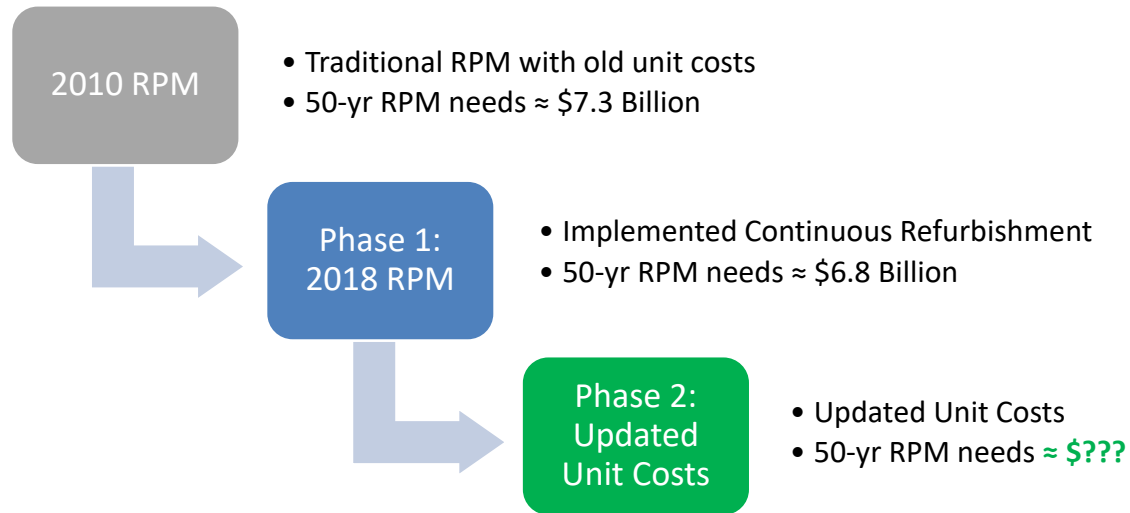
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IRWD Continuous Refurbishment RPM Strategy



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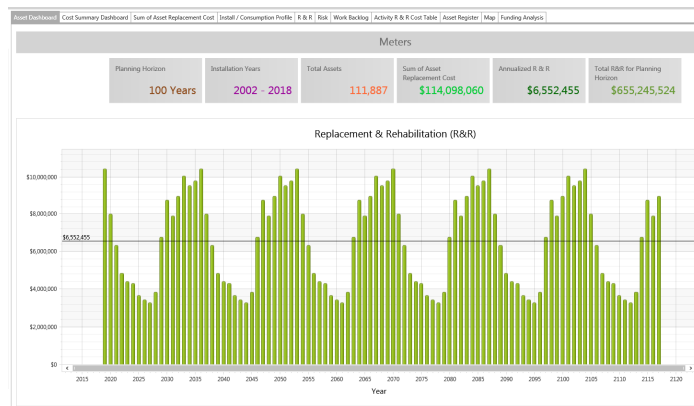
Phase 1 Review: 50-year Projection



5

Phase 2 Goals

- Develop Replacement unit costs
- Develop Rehabilitation unit costs
- Update 50-year RPM projections



6

Unit Costs Updates

- Used IRWD past projects
- Reviewed industry standard cost databases
- Included design and construction management costs
- Reflected increased city, regulatory, and permit requirements
- Engineering News-Record (ENR) indices used as a QC check
- Third-party reviewed and confirmed accuracy (Kayuga Solution)

Updated Facilities and Assets

- Included all assets through March 2020
- Included facilities recently constructed
- Added near-term planned projects



RPM Results



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Phase 2 Analysis Results

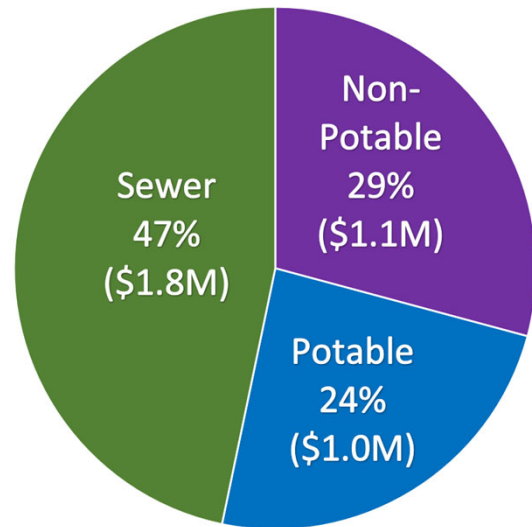
Total Phase 2 Increases by Major Categories:

Category	Billion \$	Percent
Pipes	\$2.8	71%
Treatment Plants	\$1.6	41%
Wells	\$0.2	5%
Pump Stations	\$0.1	3%
Reservoirs & Dams	\$0.0	1%
Manholes	(\$0.2)	-6%
Meters and PRVs	(\$0.6)	-15%
TOTAL	\$3.9	100%

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Phase 2 Analysis Results

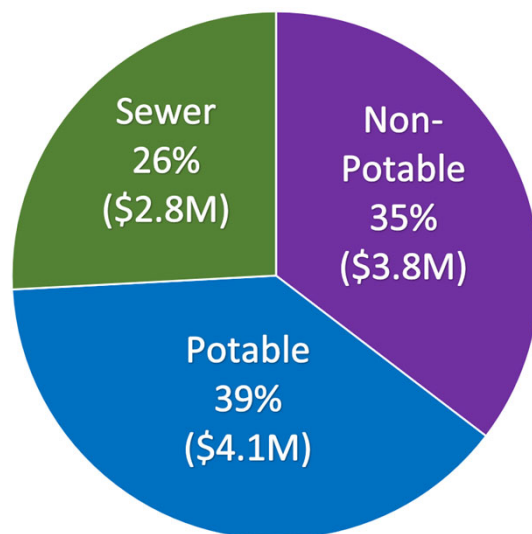
- Total Increase of approximately \$3.9 billion
- Percent increase by system consistent with expectations
- Utilized true sewer pipe depths from GIS & hydraulic model



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Phase 2 Analysis Results

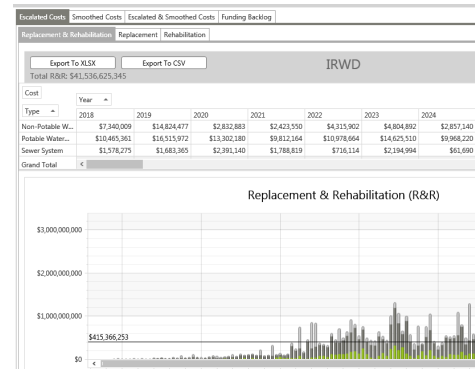
Total 50-year RPM Needs:
approximately \$10.7 billion



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Next Steps

- Update Financial Replacement Model to include new costs
- Update RPM annually as part of Capital Program
- Every 3 to 5 years, re-assess RPM cost basis and assumptions
- Finalize report from West Yost




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August 18, 2020

Prepared by: K. Pfister

Submitted by: W. Chambers

Approved by: Paul A. Cook 

ENGINEERING AND OPERATIONS COMMITTEE

IRWD NON-POTABLE WATER STORAGE ANNUAL MANAGEMENT PLANS FOR FISCAL YEAR 2020-21

SUMMARY:

Staff has developed the annual Reservoir Management Plan (RMP) for IRWD's non-potable seasonal water storage reservoirs. At the Committee meeting, staff will discuss the assumptions made and system limitations considered for the preparation of the Recycled Water Seasonal Storage Reservoirs and Irvine Lake Reservoir Management Plans for Fiscal Year 2020-21.

BACKGROUND:

Recycled Water Seasonal Storage Reservoir Management Plan:

IRWD owns and operates the following four seasonal recycled water storage reservoirs with a combined maximum capacity of 5,300 acre-feet (AF):

- San Joaquin Reservoir, maximum capacity 2,910 AF;
- Rattlesnake Reservoir, maximum capacity 1,102 AF;
- Sand Canyon Reservoir, maximum capacity 788 AF; and
- Syphon Reservoir, maximum capacity 500 AF.

The seasonal storage reservoirs generally operate at capacity in the winter months when demands are low, and discharge to the recycled system in the summer months when demands are high.

The purpose of the RMP is to assist staff with managing the individual and combined storage capacity of the reservoirs to accept recycled water from the Michelson Water Recycling Plant and groundwater produced by the El Toro Groundwater Remediation wells. The RMP also optimizes recycled water inventory to minimize the purchase of untreated supplemental water. The annual RMP is a forecast of recycled water system supply, demands, and rainfall amounts that also considers system constraints and was developed with the following assumptions:

- Beginning storage of 3,455 acre-feet as of July 1, 2020;
- Recycled system water demands of 28,809 AF;
- Recycled system supplies of 31,139 AF;
- Capture of 280 AF of rainfall annually;
- Diversion of 1,375 AF of recycled water to the Green Acres Project and/or Orange County Sanitation District outfall;
- Mandatory operation of Wells 78, ET-1 and ET-2 for 10 months of the year; and
- Achieve a combined maximum storage level for all reservoirs of 95% or 5,000 AF by May 31, 2021.

The Recycled Water RMP is provided as Exhibit "A".

Irvine Lake Reservoir Management Plan:

As co-owners of Irvine Lake with the Serrano Water District, IRWD operates this facility primarily as a water storage facility. IRWD utilizes its water stored in Irvine Lake as a source of supply to the IRWD non-potable water system and as a source – both regular supply and emergency supply – for the Baker Water Treatment Plant. Irvine Lake has a capacity of approximately 25,000 AF, owned 75% by IRWD and 25% by Serrano.

The RMP prepared for Irvine Lake anticipates utilization of 7,000 AF of native water that was allocated to IRWD on April 20, 2020. Staff does not project the need to purchase additional untreated water to meet demands or to supplement the recycled water system. The reservoir will be operated in accordance with guidelines in the Santiago Reservoir Interim Lake Level Operation Plan that was implemented in March 2020 to reduce the probability of discharging a significant flow over the spillway until the existing spillway has been replaced. The Irvine Lake Reservoir Management Plan was developed with the following assumptions:

- Beginning storage of 9,229 AF as of July 1, 2020;
- Demands of 8,865 AF based on a two-year average, including 3,136 AF of supply for the year to the Baker Plant;
- Supply of 2,292 AF to Serrano's Howler Plant; and
- Annual rainfall capturing 8,000 AF of runoff into Irvine Lake.

If the 8,000 AF of runoff is not captured, imported untreated water will be purchased at a rate of \$777 per acre-foot to meet demands.

The Irvine Lake RMP is provided as Exhibit "B".

FISCAL IMPACTS:

None.

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.

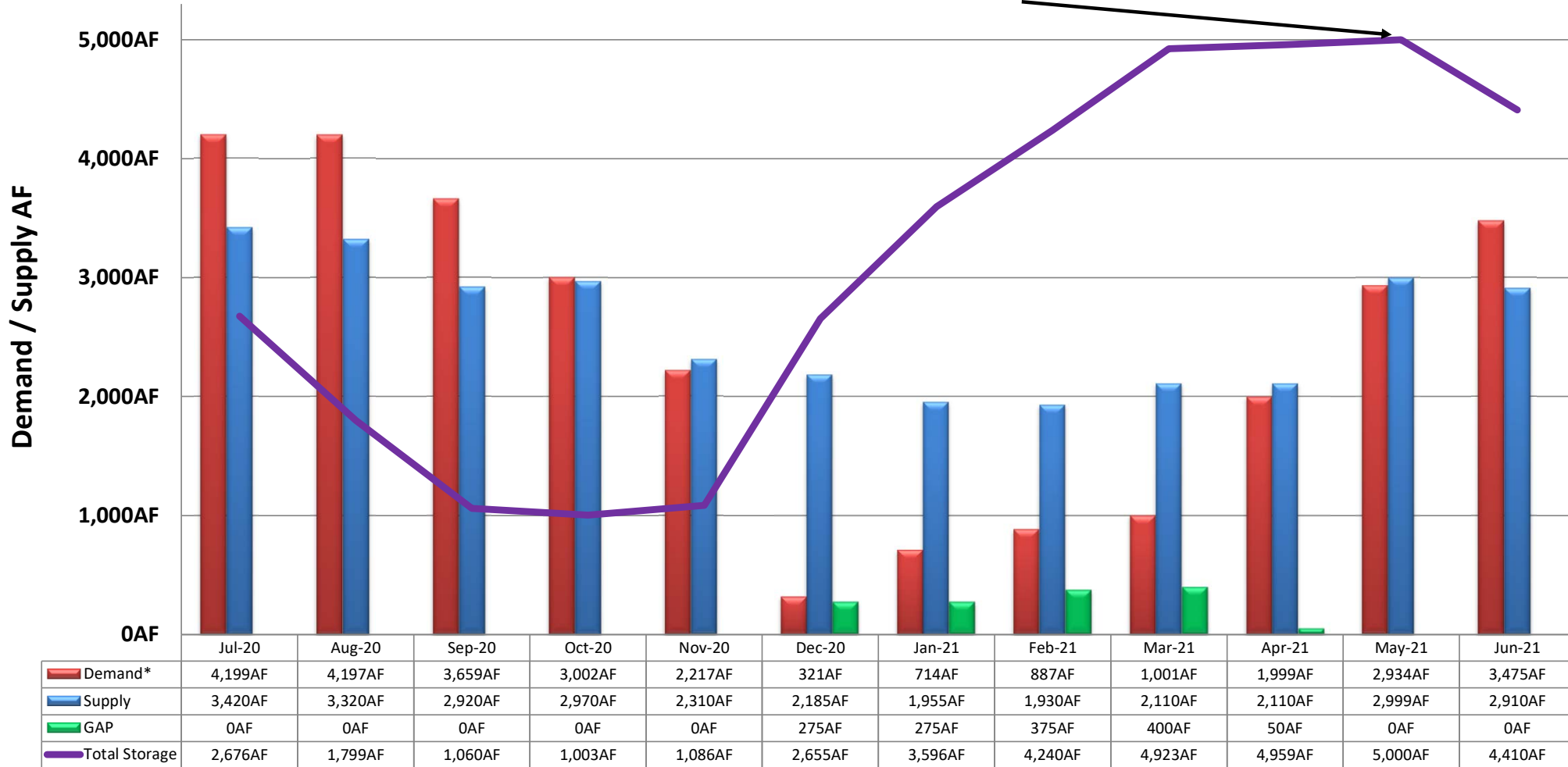
LIST OF EXHIBITS:

Exhibit "A" – Recycled Reservoir Management Plan FY 2020-21
Exhibit "B" – Irvine Lake Reservoir Management FY 2020-21

Recycled Water Reservoir Management Plan FY 2020-2021

San Joaquin, Rattlesnake, Syphon and Sand Canyon

Combined Reservoir Storage of 5,000 (95%) AF by May 30, 2021

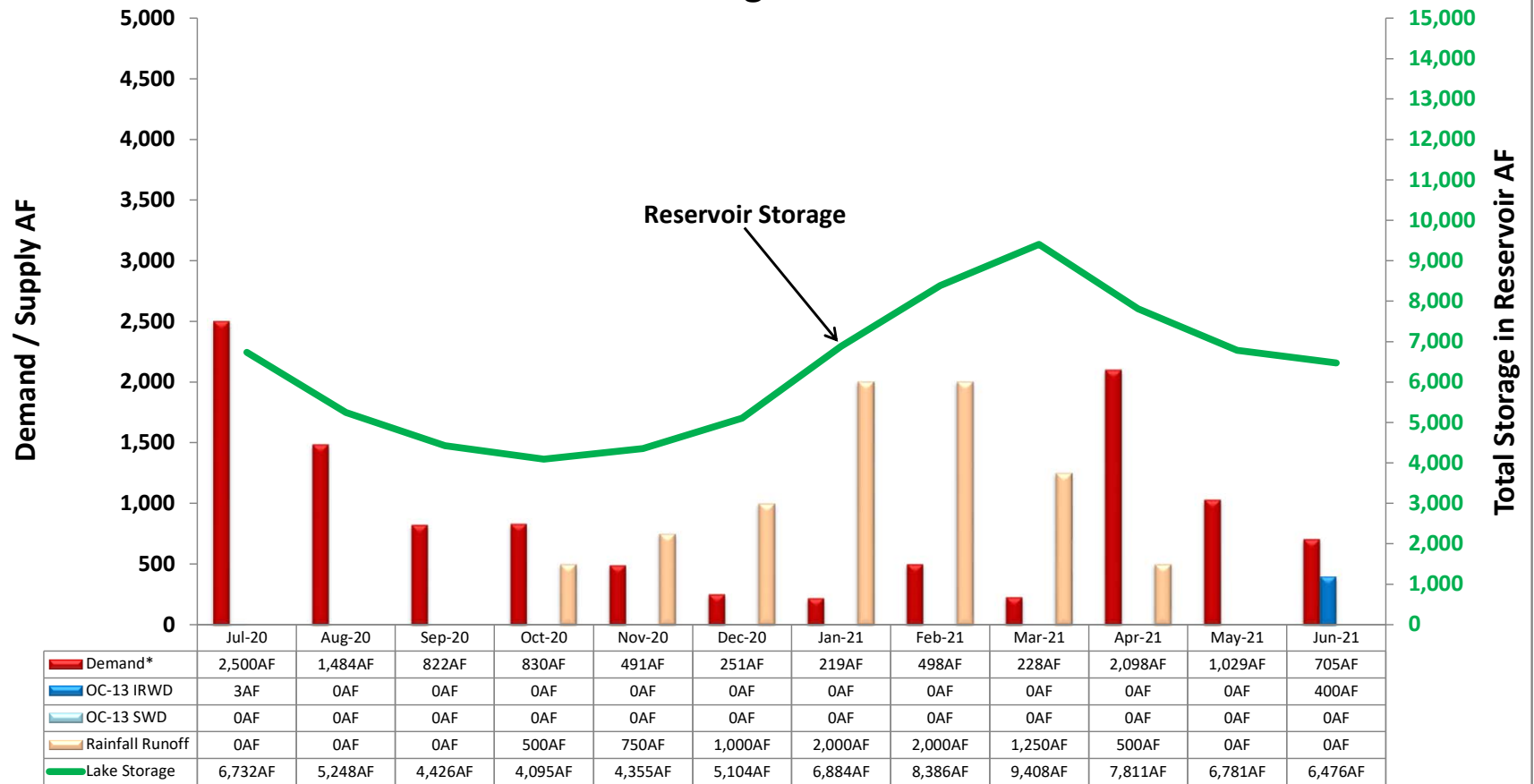


*Demand Projections Based on a 2 Year Average

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EXHIBIT "B"

Irvine Lake Reservoir Management Plan FY 2020-21



*Demand and Rainfall Projections Based on a 2 Year Average and includes evaporation loss

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August 18, 2020
Prepared by: D. Moreno
Submitted by: R. Mykitta / W. Chambers
Approved by: Paul A. Cook 

ENGINEERING AND OPERATIONS

ENTERPRISE ASSET MANAGEMENT MAXIMO MOBILE SOLUTION IMPLEMENTATION

SUMMARY:

In March 2020, staff completed the successful integration of IRWD's linear assets (including pipelines, sewers and appurtenances) into the database of IRWD's Enterprise Asset Management (EAM), Maximo. To improve work management of field operations, a mobile work order management system is now recommended. This system will better connect the Maximo system with field staff, and facilitating the transmittal of work orders remotely, improving emergency response, and enhancing the collection of field data. Additional funding is also required to support the continuation of the Maximo Mobile Implementation Project. Staff recommends the Board authorize the General Manager to execute a Professional Services Agreement with Interpro Solutions for Maximo Mobile Solution in the amount of \$292,600, and approve the addition of Projects 11679 and 11680, each in the amount of \$240,300 for a total of \$480,600, to the FY 2020-21 Capital Budget for the Maximo Mobile Implementation Project.

BACKGROUND:

Maintenance of vertical assets (including treatment plants, well sites, and pump stations) is being managed within IRWD's Maximo EAM system. The recent integration project has added IRWD's linear assets (e.g., pipelines, sewers and appurtenances) to the Maximo system. Since linear assets are external to treatment plant facilities and are not located in a single geographic area, a work management system is required that connects the central Maximo database with field staff working remotely.

A mobile work management system offers staff the ability to view on a device (such as a tablet or cell phone) all work orders that have been assigned or created within the Maximo system. New and emergency work orders can also be dispatched remotely to staff.

In June 2020, a Request for Proposal was sent to three mobility software vendors. Each vendor provided its projected costs and provided a product demonstration to IRWD staff. Following a detailed analysis and thorough evaluation of the proposals, EZ Max Mobile software by Interpro Solutions was selected as the best product to meet IRWD's requirements. EZ Max Mobile is a state-of-the-art mobility integration software used by many industries, including utilities. A summary of the costs for developing, implementing and licensing this solution is as follows:

Implementation Cost	\$73,500
License Fee (240 Users)	<u>\$219,100</u>
Total to Interpro Solutions	\$292,600

The scope of work and cost of services is provided in Exhibit "A".

FISCAL IMPACTS:

Projects 11679 and 11680 require addition to the FY 2020-21 Capital Budget as shown in the following table; funding is from the Regional Potable and Regional Sewer Improvement District. The total budgeted amount includes all internal costs, professional services, the Interpro Solutions contract, the EZ Max Mobile purchase and continuation of the project. Funding for annual software fees will be included in future operating budgets.

Project No.	Current Budget	FY 2020-21 Addition	Total Budget
11679	-0-	\$240,300	\$240,300
11680	-0-	\$240,300	\$240,300
Total	0	\$480,600	\$480,600

ENVIRONMENTAL COMPLIANCE:

This activity is not subject to the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15060 (c)(1) Preliminary Review. An activity is not subject to CEQA if the activity will not result in a direct reasonably foreseeable indirect physical change to the environment.

RECOMMENDATION:

That the Board authorize the General Manager to execute a Professional Services Agreement with Interpro Solutions for the Maximo Mobile Solution in the amount of \$292,600 and approve the addition of Projects 11679 and 11680, each in the amount of \$240,300 for a total of \$480,600, to the FY 2020-21 Capital Budget for the Maximo Mobile Implementation Project.

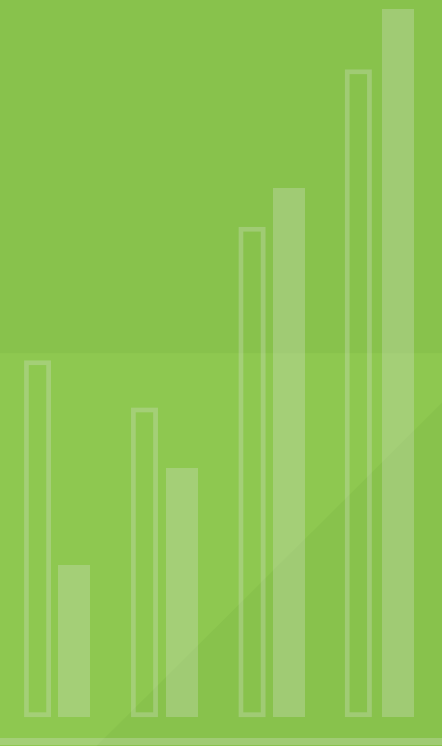
LIST OF EXHIBITS:

Exhibit "A" – Interpro Solutions EZ Max Mobile Proposal



INTERPRO

SOLUTIONS



Proposal : Maximo Mobile Application

June 26, 2020



Irvine Ranch
WATER DISTRICT



June 23, 2020

Irvine Ranch Water District
Attn: Richard Mykitta, Director of Maintenance
3512 Michelson Drive
Irvine, CA 92612

RE: RFP – Maximo Mobile Application

Dear Mr. Mykitta,

InterPro Solutions appreciates the opportunity and is pleased to present a proposal in response to your request for our Maximo Mobile solution, EZMaxMobile. We hope that you find the information contained in these documents responsive to your requirements and on target with your business objectives.

If you have any questions please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Zachary Rose".

Zachary Rose
Director of Technical Services
(781) 213-1166
zrose@interprosoft.com

Executive Summary

The primary objective for this project is to provide mobility to Irvine Ranch Water District's Maximo user community. The introduction and utilization of mobile devices by members of your work force will help increase productivity, improve data integrity and streamline work processes.

The secondary objective is to provide IRWD's technical staff with enough knowledge transfer throughout the project to be self-sufficient maintainers of the EZMaxMobile software. InterPro is always available to any customer for support or configuration services after an implementation is complete, but a customer that can maintain their own enterprise mobile software will save time and money year over year.

Project Assumptions & Dependencies

Assumptions

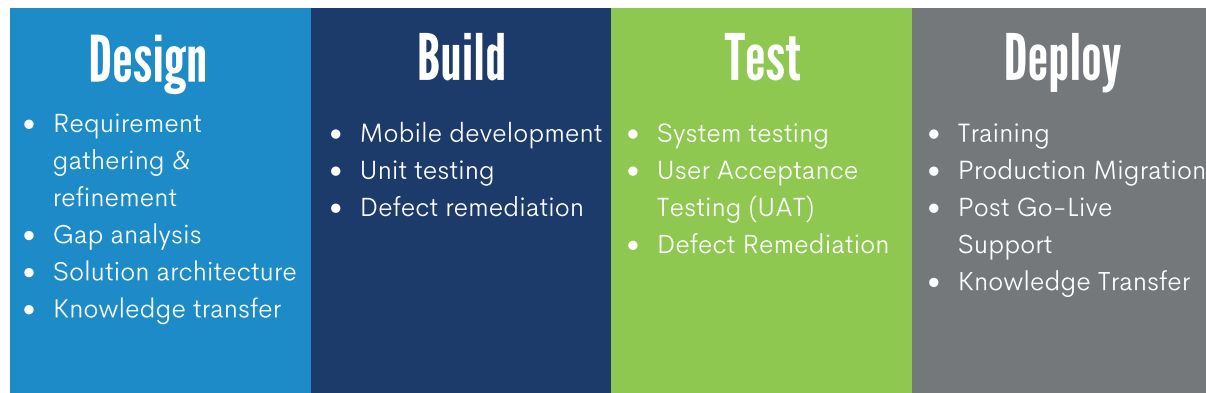
- Maximo has been installed and configured by a certified Maximo professional.
- Performance (speed) of the current Maximo production environment is acceptable to the user community.
- Maximo pre-production environments are equal in versioning and configuration to the Maximo production environment.
- If possible, a backup copy of the Maximo production database and Maximo.ear file will be provided to InterPro to allow for a local development environment to be built by InterPro.
- A VPN account which allows access to customer's pre-production Maximo and EZMaxMobile environments will be provided to InterPro.
- Customer will run on-site system testing and user acceptance testing.
- Customer will run and schedule end-user training.
- Customer will provide a project manager and project sponsor.
- Customer will procure and provision mobile devices.
- Customer will install EZMaxMobile on all mobile devices via the app store or by leveraging Mobile Device Management (MDM) software.
- Customer will identify and make available the business subject matter experts and core members of the user community to participate in the gap analysis, system testing and user acceptance testing tasks.
- Customer will make available a Maximo system administrator to participate in the deployments of all EZMaxMobile builds throughout the project.
- All durations listed are estimated and subject to change.

Dependencies

- EZMaxMobile depends on the Maximo production environment to have been properly implemented and configured. EZMaxMobile's performance (speed) greatly depends on the quality of the customer's network infrastructure currently supporting the Maximo production environment.

Project Approach

InterPro utilizes a realistic, hands-on approach for EZMaxMobile implementations. This approach has four phases; Design, Build, Test and Deploy which are explained below:



Experience

InterPro Solutions focuses on and is a market leader in providing professional services and product add-ons for IBM's Maximo application system. InterPro has been implementing, supporting and developing value-added solutions for Maximo since version 2.0, which covers a span of over 20 years.

The corporate office for InterPro Solutions is located in Stoneham, Massachusetts where we maintain a state-of-the-art Maximo development, testing and training environment. Our modern facility allows InterPro staff to provide on-going support and training to our local clients as well as clients located throughout the United States and in places such as Canada, Great Britain, Australia, Hong Kong, Sweden, Europe and Kuwait.

InterPro Solutions has a wide range of Maximo clients in many diverse industries such as higher education, water-wastewater, energy, government, healthcare, aerospace, utilities and more.

Project Approach & Timeline

Phase I: Design

Task I – Server Setup

Working with IRWD, install EZMaxMobile onto pre-production environments (up to three.) Upon completion of the installation, perform tests to validate connectivity, security, performance and functionality.

Knowledge transfer will be a key part of this task as InterPro will remotely perform the installation of EZMaxMobile in Dev and Test with IRWD monitoring.

Deliverables:

- EZMaxMobile documentation (as-is):
 - Technical Installation Guide
 - Architecture Diagrams
- EZMaxMobile deployment assistance
- Knowledge transfer

Acceptance Criteria:

- EZMaxMobile is operational in pre-production environments

Resources:

- EZMaxMobile Technical Project Manager (remote)
- EZMaxMobile Implementation Specialist (remote)
- IRWD Maximo Administrator

Duration: 3 Days

Task II – Gap Analysis

Working with IRWD's business users, match the targeted mobile work processes with EZMaxMobile's out-of-the-box functionality and document the gap.

Items such as cosmetic changes (adding/removing fields, order of fields, color-coding, etc.), page flow adjustments, data download criteria and IRWD specific Maximo business rules need to be documented.

This task will be accomplished with remote design workshops run by InterPro resources. InterPro will document the gap and provide documentation to IRWD for review and approval prior to moving forward. Design workshops usually span 3 days.

It is assumed that the scope of work will be limited to the following areas / modules:

Scope:

- The scope of work for this implementation is outlined in the IRWD Maximo Mobile RFP under section V – Minimum Required Functionality.

Deliverables:

- On-site design workshops
- Gap documentation

Acceptance Criteria:

- Customer signs off and accepts the gap documentation

Resources:

- InterPro Project Manager (remote)
- EZMaxMobile Implementation Specialist (on-site)
- EZMaxMobile Developer (on-site)
- Customer business subject matter experts and core members of the user community

Duration: 3 Weeks

Phase II: Build

Task III – EZMaxMobile Online Mode Adjustments

Once the gap analysis documentation is approved by IRWD, InterPro staff will close this gap by adjusting EZMaxMobile to match IRWD's targeted online mobile work processes.

InterPro will be performing internal unit-testing and subsequent defect remediation as part of this task.

The scope of EZMaxMobile changes will be limited to the specific areas and functions as documented during the gap analysis task.

Weekly touch-point meetings will be scheduled during this task in order to demonstrate progress and provide a forum for any questions or issues.

Deliverables:

- Configuration changes and developed code for gaps in functionality
- Conference room pilot demo to key stakeholders

Acceptance Criteria:

- None – work from this task is accepted during Task V (system testing).

Resources:

- EZMaxMobile Technical Project Manager (remote)
- EZMaxMobile Developer (remote)
- IRWD Maximo Administrator

Duration: 4 Weeks

Task IV – EZMaxMobile Offline Mode Adjustments

Once the gap analysis documentation is approved by IRWD, InterPro staff will close this gap by adjusting EZMaxMobile to match IRWD's targeted offline mobile work processes.

InterPro will be performing internal unit-testing and subsequent defect remediation as part of this task.

The scope of EZMaxMobile changes will be limited to the specific areas and functions as documented during the gap analysis task.

Weekly touch-point meetings during this task in order to demonstrate progress and provide a forum for any questions or issues.

Deliverables:

- Configuration changes and developed code for gaps in functionality
- Conference room pilot demo to key stakeholders

Acceptance Criteria:

- None – work from this task is accepted during Task V (system testing)

Resources:

- EZMaxMobile Technical Project Manager (remote)
- EZMaxMobile Developer (remote)
- IRWD Maximo Administrator

Duration: 6 Weeks

Phase III: Test

Task V – System Testing

Once the gap has been closed, InterPro will deploy an updated EZMaxMobile package in a test environment for system testing.

IRWD business representatives will perform system testing and any defects will be documented by IRWD and sent using an online portal provided by InterPro. It is expected that IRWD will perform system testing without coordination from InterPro.

InterPro will remediate recorded defects and provide additional EZMaxMobile deployment files to IRWD as needed for final verification.

It is assumed that the gap documentation from Task II will be used by IRWD to test the system and verify it is working as expected.

Deliverables:

- Remediation of reported defects

Acceptance Criteria:

- Verification of system against gap documentation

Resources:

- EZMaxMobile Technical Project Manager (remote)
- EZMaxMobile Implementation Specialist (remote)
- EZMaxMobile Developer (remote)
- IRWD business users / subject matter experts

Duration: 3 Weeks

Task VI – User Acceptance Testing

IRWD will work with a select group of end-users from the IRWD user community and perform UAT. It is expected that IRWD will schedule and run UAT sessions without coordination from InterPro.

UAT results will be sent at the end of each UAT session using an online portal provided by InterPro. InterPro will remediate any recorded defects in parallel to UAT sessions.

It is assumed that the gap documentation from Task II will be used by IRWD to test the system and verify it is working as expected.

Deliverables:

- Remediation of reported defects

Acceptance Criteria:

- Verification of system against gap documentation

Resources:

- EZMaxMobile Technical Project Manager (remote)
- EZMaxMobile Implementation Specialist (remote)
- EZMaxMobile Developer (remote)
- IRWD business users / subject matter experts and core members of the user community

Duration: 2 Weeks

Phase IV: Deploy

Task VII – Train the Trainer

Via remote sessions, InterPro will provide train the trainer training to IRWD representatives tasked with delivering end-user training. Training will be functional in nature, any training on business processes will be handled by a member of the IRWD business team. InterPro will also provide administrative training to IRWD staff tasked with supporting and maintaining EZMaxMobile.

Deliverables:

- Remote training sessions

Acceptance Criteria:

- Training sessions completed

Resources:

- EZMaxMobile Technical Project Manager (remote)
- EZMaxMobile Implementation Specialist (remote)
- IRWD end-user trainers
- IRWD administrative staff

Duration: 3 days

Task VIII – Deploy EZMaxMobile to Production

Once approval has been received from IRWD, InterPro will work with IRWD to schedule a date and time for the deployment of EZMaxMobile into production. Upon completion of the installation, perform smoke testing to validate connectivity, security, performance and functionality.

Deliverables:

- EZMaxMobile deployment assistance

Acceptance Criteria:

- Deployment successful in production environment

Resources:

- EZMaxMobile Technical Project Manager (remote)
- EZMaxMobile Implementation Specialist (remote)
- IRWD Maximo Administrator
- IRWD WebSphere Administrator

Duration: 1 Days

Task IX – Post Go-Live Support

InterPro will provide remote post-go-live support during normal business hours (8–6 EDT) for the first 3 days following go-live.

Milestone Chart

Milestone	Tasks	Deliverables	Duration	Expected Complete
Phase I	I & II	Listed in tasks above	3.5 Weeks	9/23/20
Phase II	II & IV	Listed in tasks above	10 Weeks	12/8/20
Phase III	V & VI	Listed in tasks above	5 Weeks	1/15/21
Phase IV	VII, VIII & IX	Listed in tasks above	1.5 Weeks	1/28/21

Cost Proposal

Resource Plan - Times and Materials Not to Exceed (NTE)

This project will require an EZMaxMobile Technical Project Manager, Developer and Implementation Specialist from InterPro. Below is a table indicating each role, hourly rate and estimated hours. The names of the resources are TBD based on scheduling and availability. InterPro will not use resources located outside of the United States to complete the services. A list of potential resources and their experience has been provided in a previous section of this response.

EZMaxMobile User Licensing	Name	Hours	Rate	Total Cost
EZMaxMobile Technical Project Manager	TBD	80	\$175	\$14,000
EZMaxMobile Implementation Specialist	TBD	100	\$175	\$17,500
EZMaxMobile Developer	TBD	240	\$175	\$42,000
Sub Total				\$73,500
Travel				\$0
Services Total (NTE)				\$73,500

Licensing Options

Perpetual Model

Description	Unit Cost
EZMaxMobile Named User License - 30% discount	\$840 per user
EZMaxMobile Premium Mapping License (server license) - 30% discount	\$17,500 per server
EZMaxMobile Annual Support	20% of all license fees

Subscription Model*

Description	Unit Cost
EZMaxMobile Subscription License - 30% discount	\$45 per user per month
EZMaxMobile Premium Mapping Subscription License (server license) - 30% discount	\$1,289 per server per month

*Annual Support fees are included in the cost of each subscription license