

Marina Coast Water District

Technology Plan

Appendix 2018 for
FY 2018-2019



Prepared for the
Marina Coast Water District Board of Directors

March 2018

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Executive Summary

The District Technology Plan (DTP) Appendix outlines the tasks and funding requirements associated with meeting the goals described in the DTP for fiscal year 2018-2019. Budgetary requirements are also presented for each Category.

The District currently has a Local Area Network (LAN) and a Wide Area Network (WAN) between the District offices through 20Mbps fiber-optic lines.

Billing/Financial/Operations Needs will improve Engineering project management and expense tracking. This effort will also implement Innozyze Water and Sewer modeling software.

Security and Monitoring Improvements will continue to improve the security and monitoring of systems to ensure consistent operational performance, and provide data for systems utilization assessment and future planning.

Technology Maintenance forms the basis of a long-term program that ensures the maintenance of existing District technology through the continued incorporation of improved hardware and software, and the enhanced ability of staff to use the technology. Planned replacement of outdated and aged hardware and software will keep the District systems effective.

Document Storage System (DSS) implementation began in FY 2010-2011. The DSS moves the District towards green sustainability practices. Once fully implemented, the DSS system will save the District substantial time and money. In addition, it creates improved customer service, efficient collaboration between departments, sharing of information internally and externally, easier document storage and retrieval, and reduced storage space. Improvements have been made in FY 2017-2018, and the objectives listed within the category “Document Storage System” will be achieved FY 2018-2019.

System Backups and Disaster Recovery Improvements has improved the security and reliability of backups, and significantly reduce possible data loss, and was completed in FY 2017-2018. Backups are being stored in the cloud, and a system backed up in the cloud can be restored and running in the cloud within a few hours.

LAN Implementation improved the networking performance between the two buildings, and this was completed in FY 2016-2017.

Communications and System Augmentation focuses on the assessment of the current communications technology and any augmentations needed in hardware, equipment, and staffing needs. These needs were met in FY 2016-2017.

While training is budgeted as part of District operations, training costs are referenced in the DTP for a comprehensive look at costs associated with District technology.

Category: Billing/Financial/Operations Needs
Proposed FY 2018-2019 Budget: \$22,000

This category addresses the need to upgrade and enhance the application systems that maintain billing, financial, and operations data. This system manages billing, financial, operation and maintenance needs, the meter reading system, the back-flow system, and the automated work order process system to track customer requests. These systems are critical for District operations and the information they produce is relied upon heavily for key analysis. The Customer Internet Account program has enabled District customers to access their account information online, pay bills using credit cards, and input service requests over the Internet.

The current Billing/Finance System contains the following features:

- Process credit cards via the Internet & Phone (w/o Customer Service assistance)
- Merge and automate Work Order Process
- Attach parcel maps to individual customer account (GIS)

Goal and Long- and Short-Term Objectives

- *Improving the billing/financial/operations applications beneficial to the District*
 - Implement Engineering project management for better tracking and billing of development projects.
 - Implement Innovyze water and sewer modeling software

Proposed Costs for FY 2018-2019

Expense Type	Estimated Cost	Comments
Engineering Project Management	\$7,000	Included in capitalized equipment budget
Staff training on new modules	\$5,000	Staff training included in budgeted operating costs
Water Modeling	\$10,000	Innovyze Water and Sewer Modeling

Category: Security and Monitoring Improvements
Proposed FY 2018-2019 Budget: \$17,500

The security and monitoring of systems is key to ensuring consistent operational performance, and reducing the risk of significant performance impacts, downtime, and data loss. Additionally, this data will be used to assess systems utilization, and plan for future system needs.

The current System Backups and Disaster Recovery Improvements contains the following features:

- All devices, systems, and 3rd parties connecting into the MCWD network and computer systems require use of a VPN on their client systems, or will use a top-tier remote-access application. This significantly improves security and reduce the risk of cyber intrusion.
- Encryption of confidential business data, and customer personal identifiable information (PII), stored in databases is encrypted when stored outside of databases (at rest).
- Customer PII data stored outside of the database is encrypted.
- Security of database systems has been improved, particularly with access from external or 3rd party systems.
- Employee training has been conducted on cyber intrusion recognition, and PII data handling.
- Improved email and virus security

Goal and Long- and Short-Term Objectives

Implement security improvements and systems monitoring:

- Real-time intrusion prevention system (IPS) hardware and software will quickly identify intrusion attempts.
- Active monitoring will allow MCWD to respond quickly.
- Separate *guest* wireless network, that will provide Internet access to non-employee visitors, will allow printing to a local printer, but will not allow access to the corporate network.

Proposed Costs for FY 2018-2019

Expense Type	Estimated Cost	Comments
Network Monitoring & Improved Security: One-time hardware and software implementation	\$10,000	Network IPS devices, Network Monitoring Software, Implementation
Network Monitoring & Improved Security: Annual monitoring expense	\$7,000	Active monitoring and alerts
Employee cyber security training	\$500	Annual employee training

Category: Technology Maintenance
Proposed FY 2018-2019 Budget: \$33,000

To sustain the efficiency and effectiveness of the District’s technological systems, hardware and software upgrades and additions will be required. If ongoing systems maintenance is not a priority, District systems will gradually become less effective.

Goals and Long- and Short-Term Objectives

- *Improve productivity by replacing outdated hardware technology*
 - Upgrade or replace 25% of PCs connected to LAN each year
 - Upgrade and maintain server performance
 - Upgrade or replace output devices: printers, etc.
 - Perform a needs analysis annually to determine budgetary framework – *Ongoing*

- *Improve productivity by replacing outdated software technology*
 - Maintain compatibility of desktop operating systems – *Ongoing*
 - Perform a needs analysis annually to determine budgetary framework – *Ongoing*
 - Upgrade server operating system (OS) software *Ongoing*

- *Improve and maintain computer training opportunities*
 - Identify District staff training needs – *Ongoing*
 - Develop training plans – *Ongoing*
 - Develop matrix showing benefits of technology training - *Ongoing*

Based on a needs analysis performed by the District’s Applications Systems Analyst and the Information Technology consultant, the District will replace/consolidate aging computer hardware, and will implement the latest technology hardware and software for a robust and safer computing environment in FY 2018-2019.

Proposed Costs for FY 2018-2019

Expense Type	Estimated Cost	Comments
Upgrade/Replace PCs and monitors	\$11,000	Replacement of 6 PCs with monitors & MS Office Software included in operating budget.
Network and phone system support	\$2,000	Out of contract repairs or improvements
Server Upgrade	\$20,000	Replacement of 5 year old Server

Category: Document Storage System
Proposed FY 2018-2019 Budget: \$2,500

A Document Storage System includes the strategies, methods and tools used to capture, manage, store, preserve, and deliver documents related to organizational processes. DSS tools and strategies allow the management of an organization's unstructured information, wherever that information exists. It reduces or eliminates the need for paper documents and allows for remote access of documents by employees. The DSS will help the District move towards green sustainability practices. The DSS systems will save the District substantial time and money. In addition, it will enhance customer service, efficient collaboration between departments, sharing of information internally and externally, easier document storage and retrieval, reduced storage space, and other benefits.

Improvements and enhancements have been made in FY 2017-2018, and will continue to be made, by the new District Applications Systems Analyst.

Laserfiche Document Management/Storage System provides the following capabilities:

- Improve efficiency of document access
- Allow for remote document access
- Reduce storage space required to store paper files
- Enhance customer service, improved collaboration

Goals and Long- and Short-Term Objectives

- *Laserfiche development*
 - Full implementation and use of the DSS throughout the District in FY 2018-2019.

Proposed Costs for FY 2018-2019

Expense Type	Estimated Cost	Comments
Consulting Expense	\$2,500	Assist with continuing development

Category: System Backups and Disaster Recovery Improvements
Proposed FY 2018-2019 Budget: \$0

The security, availability, and reliability of data and data backups is critical to continuity of the business. Data loss can be difficult and time consuming to replace.

The current System Backups and Disaster Recovery Improvements contains the following features:

- Data is backed up into the *cloud* – off site to a major cloud backup vendor.
- Key data is backed up into the cloud several times a day, minimizing the potential data loss in the event of on-premises systems loss.
- A system can be restored and running in the cloud, within 2 hours, in the case of a major hardware failure on-site.

Goal and Long- and Short-Term Objectives

Reduce the potential for data loss and improve systems recovery.

Proposed Costs for FY 2018-2019

Expense Type	Estimated Cost	Comments
	0	

Category: LAN Implementation
FY 2018-2019 Budget: \$0

The implementation of a Local Area Network (LAN) has greatly benefited the District. This LAN has enabled staff to share computer resources and network printers and other functions among staff members. The LAN has enabled the District staff members to communicate with one another via electronic mail, thus reducing the use of paper to move documents from one location to another, as well as increasing staff response time. Both sites are protected with firewalls within a dedicated Virtual Private Network.

The LAN Implementation provides the following capabilities:

- Backup data off site on a nightly basis
- Transfer data between District offices to maintain redundant systems
- Improved server and data access through an upgraded 20Mbps network

Goal and Long- and Short-Term Objectives

- *None*

Proposed Costs for FY 2018-2019

Expense Type	Estimated Cost	Comments
	\$0	

Category: Communications and System Augmentations
FY 2018-2019 Budget: \$0

The District attempts to keep abreast of innovative communication technologies and strives to implement them to effectively communicate with the public and other agencies. Throughout the life span of any system, additions or upgrades are necessary to sustain productivity. In addition to LAN system maintenance, other improvements will increase efficiency and decrease staff costs. The District also strives to maximize usage of current communication and business software in order to provide the clear and useful information to the Board for decision making regarding policy and to be as transparent to the public as possible.

The District has the following communications enhancements in place:

- Upgraded Voice Over Internet Protocol (VOIP) phone system, replacing original phone system from 2007.
- New hire *Applications Systems Analyst*

Goals and Long- and Short-Term Objectives

- *None*

Proposed Costs for FY 2018-2019

Expense Type	Estimated Cost	Comments
	\$0	

Summary

Summary of FY 2018-2019 Budget: \$75,000

Category Type	Estimated Cost	Operating Budget	Capitalized Equipment Budget
Billing/Financial Needs	\$ 22,000	\$ 5,000	\$ 17,000
Security and Monitoring Improvements	\$ 17,500	\$ 7,500	\$ 10,000
Technology Maintenance	\$ 33,000	\$ 13,000	\$ 20,000
Document Storage System	\$ 2,500	\$ 2,500	\$ 0
System Backups and Disaster Recovery Improvements	\$ 0	\$ 0	\$ 0
LAN Implementation	\$ 0	\$ 0	\$ 0
Communications and System Augmentations	\$ 0	\$ 0	\$ 0
TOTAL:	\$ 75,000	\$ 28,000	\$ 47,000

This Appendix 2018 represents a comprehensive plan with identified funding requirements necessary for the continued implementation of the District Technology Plan for FY 2018-2019. The approval and implementation of this appendix document will support the District's efforts of technology maintenance; technological enhancements to improve staff efficiency while continuing to better respond to the needs of the public.

Appendix A: Server Listing

SERVERS	Date of Purchase	Model	Mem	C Drive	D Drive	Operating System	Warranty Expires
SBS 2011- FileServer	Feb 12, 2012	Dell R710 /64bit	32Gb	146Gb	900Gb	Win SBS2011	Sep 28, 2018
APPS - CityWorks, SQL 2008, ArcGIS	May 12, 2012	Dell R720 /64bit	64Gb	146Gb	900Gb	Win 2008	Sep 28, 2018
Finance - SprBrk 7.17		64bit				Win 2008	
Terminal Server		64bit				Win 2008	
HVS - Application Server	Dec 15, 2015	Dell R730 /64 bit	128Gb	300Gb	1.4Tb	Win 2012R2	Dec 1, 2020
Mcwdsrv2- SpringBrook 6.05		64bit	4Gb			Win 2003	
Mcwdsrv5		32bit	4Gb			Win 2003	
APP2 - McAfee - XC2		64bit	32Gb			Win 2012R2	
DMS - LaserFiche		64bit	16Gb			Win 2012R2	

Appendix B: Workstation Listing

User Name	Dept	Location	Description	Purchase Date
Chem Lab	Lab	Beach	Optiplex 760	7/3/2008
J Rodriguez	OM	Ord	Optiplex 780	10/26/2009
W Foster	OM	Ord	Optiplex 780	10/26/2009
R Green	OM	Ord	Optiplex 780	10/26/2009
M Rosales	OM	Ord	Optiplex 790	6/10/2011
Temp	OM	Ord	Optiplex 7010	3/13/2012
R Magdaleno	OM	Ord	Optiplex 790	3/30/2012
Chem Lab Intern	CS	Beach	Optiplex 7010	8/13/2012
T Nguyen	OM	Ord	Optiplex 7010	8/13/2012
J Pineda	OM	Ord	Optiplex 7010	8/13/2012
J Hollida	Eng	Ord	Optiplex 9010	8/15/2013
M Duplissie	Cons	Ord	Optiplex 9010	8/15/2013
St Intern	Cons	Ord	Optiplex 9010	8/15/2013
B True	Eng	Ord	Optiplex 9010	8/15/2013
M Wegley	Adm	Ord	MacBook Air	3/1/2014
Acct Tech	Fin	Ord	Optiplex 9020	7/23/2014
J Correa	OM	Ord	Optiplex 9020	7/23/2014
T Barkhurst	Lab	Ord	Optiplex 9020	7/23/2014
IT Support	Adm	Beach	Optiplex 9020	7/23/2014
P Riso	Adm	Beach	Optiplex 9020	3/30/3015
St Intern/Spare	CS	Beach	Optiplex 9020	3/30/3015
Presentation LTop	Adm	Beach	Latitute E6540	5/15/2015
K Cadiante	Fin	Ord	Optiplex 9020	6/15/2015
D Walker	Cons	Ord	Optiplex 9020	6/15/2015
St Intern	Eng	Ord	Optiplex 9020	4/15/2016
B Montanti	CS	Beach	Optiplex 9020	5/15/2016
B West	OM	Ord	Optiplex 3020	6/15/2016
T Kelsey	OM	Ord	Optiplex 3020	6/15/2016
J Premutati	CS	Beach	Optiplex 7040	10/15/2016
C Cuisinier	CS	Beach	Optiplex 7040	10/15/2016
S Verduzco	Eng	Ord	Optiplex 7040	10/15/2016
M Wegley	Eng	Ord	Optiplex 7040	10/15/2016
J Bardos	Adm	Ord	Inspiron 7000	12/1/2016
S Kiefert	CS	Beach	Optiplex 7050	4/1/2017
L Farrel	CS	Beach	Optiplex 7050	4/1/2017
FrontDesk1	CS	Beach	Optiplex 7050	4/1/2017
FrontDesk2	CS	Beach	Optiplex 7050	4/1/2017

J Russell	CS	Beach	Panasonic CF-54	4/15/2017
T Martens	CS	Beach	Panasonic CF-54	4/15/2017
A Racza	Eng	Ord	Optiplex 7040	6/1/2017
K Van Der Maaten	GM	Beach	Optiplex 7050SFF	9/15/2017
P Lord	Cons	Ord	Optiplex 7050SFF	9/15/2017
L Ybarra	Fin	Ord	Optiplex 7050SFF	9/15/2017
T Hatfield	Fin	Ord	Optiplex 7050SFF	9/15/2017
P Breen	Eng	Ord	Optiplex 7050SFF	9/15/2017
D Cray	OM	Ord	Optiplex 7050SFF	9/15/2017