



● **Board of Directors**
Organization, Personnel and Technology Committee

12/12/2017 Board Meeting

8-1

Subject

Adopt CEQA determination and appropriate \$3.4 million; award a not-to-exceed \$678,000 procurement to Oracle Corp., for database licenses and installation services; award a not-to-exceed \$395,000 procurement to Nth Generation Computing Inc. for Hewlett-Packard Server equipment and installation services; award a not to exceed \$410,000 procurement to EMC Corp. for data storage equipment and installation services; and authorize a system upgrade for Metropolitan's disaster recovery data center (Appropriation 15487)

Executive Summary

As part of a comprehensive effort, the Information Technology Strategic Plan recommends necessary upgrades to key Information Technology (IT) Disaster Recovery infrastructure components for continued reliability of Metropolitan's systems. These systems are used to run the core business applications that support Metropolitan's water and business operations and to support current and new disaster recovery needs. Metropolitan has outgrown the capacity of the existing IT disaster recovery hardware and software, which was last upgraded in 2006. Staff has planned upgrades to server, storage, and software systems to address capacity and performance requirements. Metropolitan's critical business functions are dependent on IT applications, data, and the supporting infrastructure. Loss of any of these components could result in disruption to critical IT systems. This project addresses the need for Metropolitan to increase its capability to recover and restore its critical IT systems in the event of a disaster so that water operations and business functions can be operational or recovered quickly following a disaster such as an earthquake or fire.

Timing and Urgency

Metropolitan's IT disaster recovery data center was last upgraded over ten years ago and currently requires additional capacity to meet expanding data growth with new applications deployed. Hardware and software upgrades are needed to meet business recovery objectives of Metropolitan information assets.

This project has been reviewed with Metropolitan's Capital Investment Plan (CIP) prioritization criteria and is included in the System Reliability Program. Funds for this action are available within Metropolitan's capital expenditure plan for fiscal year 2017/18.

Details

Background

The purpose of this project is to upgrade server, storage, and software systems at Metropolitan's Disaster Recovery Facility in Riverside. This upgrade will ensure continued operations of the systems to run MWD's core business applications in the event that the Headquarters primary datacenter is not available after a major disaster such as a fire or earthquake.

Metropolitan's critical business functions such as the delivery and treatment of water, compliance with regulatory requirements, and accurate and timely water billings are dependent on IT applications, data, and supporting data center infrastructure. As such, critical IT systems such as water billing, SCADA, telephone, email, and financial

systems need to be readily available should Metropolitan's primary data center at Headquarters be unavailable after a disaster.

In 2006, Metropolitan's Disaster Recovery Facility was upgraded for \$3.1 million to accommodate 70 critical applications and associated data. Since then, the Disaster Recovery Facility has not had a major upgrade to its servers, storage, and software to accommodate new applications added to the IT disaster recovery list such as the Geographical Information System and additional system resources required by systems that were upgraded such as the Oracle Financials suite.

During the IT disaster recovery drills, which are conducted periodically, it became increasingly difficult to accommodate critical applications with concurrent users as Metropolitan disaster recovery requirements have outgrown their present capacity in terms of servers, storage, and software licenses. As a workaround, staff had to shut down and startup the applications to allow each group of users to conduct their IT disaster recovery testing independently. In the event of a real disaster, this load shedding approach would not be optimum as not all users would be able to concurrently access their applications. Moreover, the complex effort to shut down/startup databases and recover the data for each application is error-prone and inefficient.

The proposed upgrades will provide sufficient capacity for concurrent applications and users while providing additional technology improvements in hardware and software that have been made in the industry over the past few years. For example, the data is more easily backed up requiring less manual intervention. Data is more easily recovered to allow applications to be available sooner to the user. New server virtualization technologies combined with Oracle database software upgrades will be able to handle growing data needs. Complexity of backup, recovery, and retention processes will be reduced and there is lower cost for handling larger volumes of data and users at the same time. Further, conducting disaster recovery exercises would be less complex and more efficient. As an added benefit, the additional capacity at the Disaster Recovery Facility could handle planned outages during system upgrades or routine maintenance occurring at the primary data center at Headquarters.

Metropolitan initiated three separate procurements for this upgrade as discussed below.

Oracle Software and Licenses – Procurement

Metropolitan presently utilizes Oracle database applications for its water billing financial and accounting systems. Additional licenses will be required to operate the new database servers that will host the IT disaster recovery applications. Oracle Corporation was originally selected through a competitive bidding process to provide application and database software for Metropolitan's enterprise applications. It is impracticable for Metropolitan to obtain the needed database licenses through a new competitive procurement from a different vendor because this would result in new databases that are incompatible with existing ones.

Metropolitan Administrative Code Section 8140(1)(d) provides that competitive procurement is not required if the unique nature of the work makes such procurement impracticable. In accordance with Section 8140(1)(d), Metropolitan established Oracle Corporation as the sole brand for database licenses. Metropolitan was granted manufacturer-direct discounts from Oracle Corporation which resulted in lower pricing than through competitive bidding in the reseller market. The pricing was further verified by Gartner Consulting who concluded that the pricing received by Metropolitan was very competitive. Staff therefore recommends that an agreement be authorized with Oracle Corporation to provide database application licenses for upgrading the existing servers and new disaster recovery servers.

This action awards a not-to-exceed \$678,000 procurement to Oracle Corp. for database licenses and installation services to support the new and upgraded disaster recovery applications. Future annual maintenance fees for the licenses will be included within Metropolitan's biennial Operations and Maintenance budget. Final configuration and testing of the installed databases will be performed by certified Oracle consultants and Metropolitan IT staff.

HP Itanium Servers and Associated Equipment - Procurement

A request for bids (RFB-VT-339355) for the HP enterprise server and associated equipment procurement was advertised on October 16, 2017. As shown in **Attachment 2**, five bids were received and opened on October 25, 2017. The low bid from Nth Generation Computing Inc. in the amount of \$370,000 complies with the requirements of the specifications. The four higher bids ranged from approximately \$395,000 to \$511,000. The budgetary estimate of this equipment, based on quotes from prospective bidders, was \$400,000.

For bid evaluation purposes, a \$12,500 bid-price-reduction credit was provided to each of the bidders who qualified as a Small Business Enterprise (SBE) and/or a Regional Business Enterprise (RBE), with a maximum credit of \$12,500. The low bidder, Nth Generation is an SBE and RBE, and therefore received a \$25,000 bid-price-reduction credit during the bid evaluation.

This action awards a not-to-exceed \$395,000 procurement to Nth Generation Computing Inc. for Hewlett-Packard Server equipment and installation services. The contract amount includes \$25,000 towards freight charges and sales taxes imposed by the state of California. Installation of these servers and equipment will be performed by a licensed HP professional and supervised by Metropolitan IT staff.

EMC Unity Hybrid Storage Equipment - Procurement

The EMC storage equipment procurement was initiated under Metropolitan Administrative Code Section 8140(1)(1), which allows Metropolitan to “piggy-back,” i.e., gain access to, contracts established by other public agencies, often working together, that substantially follow Metropolitan’s own competitive procurement process. In 2015, the State of Minnesota as the lead agency, along with several other agencies, completed a competitive bid for computer equipment and services. Currently, forty states use this contract (Minnesota Western States Cooperative Alliance “WSCA” Price Agreement), including the State of California. Pursuant to Section 8140(1)(1), Metropolitan’s Office of the General Counsel has determined that the competitive process under which this contract was established substantially complies with Metropolitan’s competitive procurement process. Metropolitan used this “piggy-back” contract in 2016 to obtain deep discounts for the EMC storage equipment and services to upgrade its data center storage equipment at Headquarters.

This action awards a not-to-exceed \$410,000 procurement to EMC Corp. for data storage equipment and installation services. The contract amount includes freight charges and all sales and use taxes imposed by the state of California, as well as storage software licensing fees. Installation of these servers and storage equipment will be performed by a licensed EMC professional and supervised by Metropolitan IT staff.

Summary

This action appropriates \$3.4 million and awards a not-to-exceed \$678,000 procurement to Oracle Corp., a not-to-exceed \$395,000 procurement to Nth Generation Computing Inc. for Hewlett-Packard Server equipment, and a not-to-exceed \$410,000 procurement to EMC Corp. for data storage equipment; and authorizes a system upgrade for Metropolitan’s Disaster Recovery Facility in Riverside.

Requested funds include \$1,063,000 for Metropolitan labor to install upgraded equipment, migrate the data and application software, complete user testing of the 73 disaster recovery applications on the new components, and project management; \$226,000 for professional services; \$1,802,000 for procurement of materials that includes Oracle licenses, HP servers, EMC storage devices, network switches, backup equipment and licenses, operating system licenses; and \$309,000 for remaining budget. Specialized technical services may be provided by consulting firms selected via a competitive process to perform various elements of the installation work which will be awarded under the General Manager’s contracting authority.

This project is included within Appropriation No. 15487, IT Infrastructure Reliability Appropriation – FY 2013/14 through 2017/18, which was initiated in fiscal year 2013/14. With this action, the total funding for Appropriation No. 15487 will increase from \$11.24 million to \$14.64 million. The proposed upgrade will have an estimated annual recurring operating cost of \$125,000.

This project has been evaluated and recommended by Metropolitan’s CIP Evaluation Team, and funds are available within the fiscal year 2017/18 capital expenditure plan. See **Attachment 1** for the Financial Statement.

Project Milestones

January 2018 – Completion of procurement of Oracle software and licenses

March 2018 – Completion of procurement of HP servers, EMC storage

October 2018 – Completion of installation of upgrades to Metropolitan’s Disaster Recovery Facility

June 2019 – Completion of data and application software migration and user testing

Policy

Metropolitan Water District Administrative Code Section 5108: Appropriations

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Sections 8140(1)(d) and (1)(l): Competitive Procurement

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it involves continuing administrative activities that will not result in direct or indirect physical changes to the environment (Section 15378(b)(2) and Section 15378(b)(5) of the State CEQA Guidelines).

The CEQA determination is: Determine that the proposed action is not defined as a project under CEQA pursuant to Sections 15378(b)(2) and 15378(b)(5) of the State CEQA Guidelines.

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination that the proposed action is not defined as a project and

- a. Appropriate \$3.4 million in budgeted funds; and
- b. Award a not-to-exceed \$678,000 procurement to Oracle Corp. for database licenses and installation services
- c. Award a not-to-exceed \$395,000 procurement to Nth Generation Computing Inc. for Hewlett-Packard Server equipment and installation services
- d. Award a not-to-exceed \$410,000 procurement to EMC Corp. for data storage equipment and installation services
- e. Authorize a system upgrade for Metropolitan’s disaster recovery datacenter.

Fiscal Impact: \$3.4 million in budgeted funds under Appropriation 15487

Business Analysis: This improvement will enhance the reliability, capacity and performance of the Disaster Recovery Facility, protecting the critical business functions related to IT applications, data, and the supporting IT infrastructure, as identified in Metropolitan’s Business Continuity Plan.

Option #2

Do not upgrade the servers, storage, and software licenses in the Disaster Recovery Facility.

Fiscal Impact: Approximate cost is \$100,000 per year, assuming four IT disaster recovery testing exercises incurring \$25,000 additional costs each time to conduct the cumbersome process of installing and uninstalling various critical systems to allow various user groups to conduct their respective tests.

Business Analysis: Not proceeding with this upgrade will expose Metropolitan to increased potential risk to the reliability, availability, data loss, and security of critical Metropolitan data assets in the event the Disaster Recovery Facility needs to be activated. This option may increase the risk of disruption of Metropolitan's critical business application systems and operational data due to inability to concurrently run all the critical applications in the event of a disaster.

Staff Recommendation

Option #1

	11/20/2017
Charles Eckstrom Group Manager, Information Technology	<i>Date</i>

	11/27/2017
Jeffrey Kightlinger General Manager	<i>Date</i>

Attachment 1 – Financial Statement

Attachment 2 – Abstract of Bids

Ref# bt12660184

Financial Statement for the IT Infrastructure Reliability Appropriation

A breakdown of Board Action No. 5 for Appropriation No. 15487 for the Business System Disaster Recovery project¹ is as follows:

	Previous Total Appropriated Amount (Dec. 2016)	Current Board Action No. 5 (Dec. 2017)	New Total Appropriated Amount
Labor	\$ 2,823,889	\$ 1,063,000	\$ 3,886,889
Owner Costs	59,000	-	59,000
Construction Inspection & Support	139,000	-	139,000
Metropolitan Force Construction	19,000	-	19,000
Materials & Supplies	5,595,000	1,802,000	7,397,000
Incidental Expenses	-	-	-
Professional/Technical Services	621,000	226,000	847,000
Equipment Use	-	-	-
Contracts	1,786,483	-	1,786,483
Remaining Budget	196,628 ²	309,000	505,628
Total	\$ 11,240,000	\$ 3,400,000	\$ 14,640,000

Funding Request

Appropriation Name:	IT Infrastructure Reliability Appropriation		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15487	Board Action No.:	5
Requested Amount:	\$ 3,400,000	Budget Page No.:	237
Total Appropriated Amount:	\$ 14,640,000	Total Appropriation Estimate:	\$ 18,100,000

¹This is the initial appropriation to install a data storage system at Metropolitan's Headquarters Building. The total estimated cost to complete this project, including the current funds requested, is anticipated to range from \$3.09 million to \$3.4 million.

²Includes a previous reallocation from remaining budget of \$311,000 to the IT Network Reliability Upgrades project; and \$196,000 to the HQ Datacenter SAN Upgrade project.

The Metropolitan Water District of Southern California

Abstract of Bids Received on October 25, 2017

Request for Bids No. RFB-VT-339355

HP Itanium Servers & Associated Equipment

This contract includes procurement of HP Itanium Servers and VMWARE hosts needed to run mission critical applications/databases at both headquarters and Lake Mathews DRF Datacenters.

Budgetary Cost Estimate: \$400,000

	Bidder	Bid Price	Small \$ Credit	Regional \$ Credit	Bid Eval Price¹
1	Nth Generation Computing, Inc	\$370,000.00	\$12,500.00	\$12,500.00	\$345,000.00
2	RICOM, Inc.	\$394,902.44	\$12,500.00	\$12,500.00	\$369,902.44
3	Apex Computer Systems, Inc.	\$500,052.42	\$12,500.00	\$12,500.00	\$475,052.42
4	ConvergeOne	\$501,761.20	\$0.00	\$12,500.00	\$489,261.20
5	Gear One Enterprise	\$511,191.00	\$12,500.00	\$12,500.00	\$486,191.00

¹ Includes SBE/RBE (Small Business Enterprise/Regional Business Enterprise) bid-price-reduction credits for the evaluated bid total. The maximum credit per bidder is \$25,000.