

## MEMORANDUM

Date: January 7, 2025  
To: Board of Directors  
From: Mimi Morris, General Manager  
Subject: Information Technology Costs 23-24 and 24-25

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### BACKGROUND

Since 2013 the District has utilized the services of an outside Information Technology consulting firm for the basic information technology services of the District. Separate software and service agreements have been in place for multiple years for a variety of specialized information technology services.

These include: gate control, bar code tracking, customer contact information, video camera feeds, treatment plant conditions; lift operations; document retention; financial recordkeeping; utility billing; requisitions, purchase orders, and check payments. Even the District's phone system is managed by a separate software system.

The diversity of special software, most of which must interface with the underlying operating systems of roughly 100 devices (servers, cameras, readers, individual computers and printers) adds to the complexity of the IT system.

The District's system includes not only the diverse software, but also essential hardware like servers and Uninterruptible Power Supply (UPS) devices that ensure that if power goes out, our activities continue. This is critical for reliable provision of services like pumping water and removing wastewater and ensuring the gates function.

As in most modern organizations, security of all that data and the system itself adds another layer of necessary sophistication to the overall system. Security encompasses the physical access as well as the virtual, cyber access to prevent dangerous and potentially expensive attacks on the system.

The activities of the IT professional transcend user support and touch almost every aspect of the District's operations. Of specific importance is the IT Manager's knowledge of software security, especially with the transition to cloud-based servers.

Historically, the individual user operating system software (Microsoft Office suite software, Adobe) and security (password protection, cybersecurity) software were procured through the IT vendor. Similarly, all hardware (replacement devices, new equipment) were

purchased through the IT firm, which could image the devices with the licenses they provided.

The contracted IT service included all the licenses and network administration and user support. However, staff was limited to bi-weekly in-person visits that were intended to address whatever issues had arisen over the prior two-week period. A Help Line was available for staff to call between visits, but the system merely tracked the need and a service technician would need to call the user back at a later time. This led to lost productivity and frustration as missed calls created endless rounds of phone tag.

After six months of living with this ineffective system, the GM proposed bringing a part-time, in-house consultant to the District. The Personnel Committee directed the GM to expand the part-time consultant to a full-time position given the anticipated increase in video surveillance as a security strategy. The GM prepared projected cost savings from future consolidations of information technology services and related expenses to help justify the value of an in-house information technology manager.

On March 25, 2024, the District hired an in-house information technology manager who began the process of becoming knowledgeable regarding the complex system in place. He quickly determined that there were a variety of patchwork fixes that were going to be difficult to unwind. By July of 2023, the original, local consultant had sold the consulting business to a national vendor called Intelligent Technical Solutions (ITS). One ITS veteran with extensive knowledge of the system remained available to assist from Utah and another was assigned to other duties in the new organization. The on-site ITS staff had little institutional knowledge regarding the overall system. The local consultant was primarily a user support person, but that individual was only on site every two weeks. As a result, network servers were not being properly maintained with firmware updates because there was no local expert on network administration. There was poor documentation in place regarding the system. There were no standard operating procedures and oversight. Any computing issues had to be routed through the help system described previously.

The IT manager determined that the District would need to continue to rely on the firm's software for the next few years as a complete transition to new software licensing throughout the organization would be both disruptive and expensive.

Every step of the way there has been a cost-benefit analysis with an eye toward continuity of operations while transitioning to an in-house IT professional. The IT Manager has added value to the organization through a variety of corrective actions that have eliminated productivity obstacles over the last nine months. A sample of the disruptive situations and resulting corrections is listed in the table below.

#	Situation	Action	Result
1.	Weekly Power Failures at the Gates every Wednesday due to non-sinewave compatible generators	Replaced Uninterruptible Power Supply devices (UPS's) in both Gates	No more weekly power failures at the Gates
2.	All Network Connectivity was dropping at noon several times a week and requiring a manual reset.	Performed a Diagnostic Assessment and implemented Network Maintenance	No mid-day outage; no gate traffic, no lost productivity, service restored
3.	General HW Neglect: Not anchored or mounted properly; console not working - no visibility of various network servers	Performed a Diagnostic Assessment and Reconfigured the console	Able to see the entire network configuration and more easily troubleshoot
4.	WTP Sophos Appliance Failed: Connectivity between SCADA and HQ broken; no internet; no file access; no email; no document sharing; no phones	Diagnosed the Sophos problem and restored a backup and reconfigured it to get it back online	Completely Functional internet communication at the WTP
5.	Unsupported software. Immediate Issue: slow processing; failure to print; Longer Term Issue: Lack of support for outdated software including security software; overall loss of productivity.	Independently buying new hardware that is compatible with the newer, supported software; putting the new HW into operation;	Elimination of security holes resulting from outdated software; stronger cybersecurity; greater productivity; elimination of lost work.
6.	Recurring HQ Sophos Failures: lost all internet connectivity	Diagnosed the Sophos problem and restored a backup and reconfigured it to get it back online	Completely Functional internet communication throughout the organization.
7.	Security Risk: Exposed staff email addresses	Diagnosed the issue and working with Streamline to hide emails and block robotic intrusions.	Fewer spams and greater security
8.	Unanticipated Shutdowns in all virtual machines and independent user devices/Loss of work due to outdated Firmware (native code that runs under the operating systems); damaging to productivity	Diagnosed the cause of the shutdowns, Updated firmware (DRAC) on main virtual machine hosts and on individual devices.	Functioning devices; increased productivity; significant reduction in random shutdowns
9.	Unanticipated HW failures	Image & Deploy/Purchase & Image replacement HW within 24 hours	Continuity of Operations; Less Costly Devices (no consultant markup)
10.	Security Risks from Active User Accounts for Inactive Employees; bloated software costs from inactive users	Evaluated lists, disabled outdated ee accounts & removed inactive employees from Distribution Lists.	Enhanced system security; rightsized licensing needs to match users and reduced SW expense.

In December, Board President Stephen Booth requested that IT costs for fiscal years 23-24 and 24-25 be provided for today's meeting; however, there are over 100 invoices involved in the request and the accounting staff has been working on addressing the auditors' documentation requirements. Additionally, he has been working on the fiscal close process for November and December 2024 which are expected to be presented at the January Finance Committee and Board meetings. End of Month financial reporting is still a manual process and there has been little time to pull IT-related payment information into a presentation with all the competing priorities.

Additionally, the timeframe creates an "apples to oranges" comparison rather than an "apples to apples" comparison since only six months of the 24-25 fiscal year have transpired while 23-24 includes a full twelve months, making any year over year comparisons unreliable at this point in the fiscal year. Staff will be happy to produce a valid comparison of the two fiscal years in July.

The general consensus among both staff and leadership is that the existence of an in-house IT manager has been of substantial value to the organization, improving productivity, reducing and eliminating down time, and increasing the overall reliability of our systems across all departments.

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