Information Technology

PROGRAM DESCRIPTION

The Information Technology (IT) Department is responsible for supporting the District's computing infrastructure, including the Local Area Network, Wide Area Network, and Wireless Local Area Network. IT manages the District's servers and file systems, network infrastructure equipment, VoIP switches and phones, Internet access, databases, and email resources. IT supports approximately 350 workstations District-wide. The department maintains proper licensing and maintenance contracts for District owned software and hardware. The Information Technology Department partners with all divisions to evaluate technology needs and determine the best solutions to meet immediate needs, as well as the District's long-term needs. IT provides support for District–owned technology via the IT/Communications Service Desk. IT also provides 24x7 technical support for Integrated Operations through an after-hours on-call rotation.

BUDGET SUMMARY

Expenditures	2009-10 Actual	2010-11 Actual	2011-12 Budget	2012-13 Budget
Personnel Services	$1,037,513	$1,011,585	$1,203,085	**$1,081,998**
Materials and Services	592,940	796,051	812,815	**933,792**
Total Expenditures	$1,630,453	$1,807,636	$2,015,900	**$2,015,790**

PERSONNEL SUMMARY

Position	2009-10 Actual	2010-11 Actual	2011-12 Budget	2012-13 Budget
IT Manager	1.00	1.00	1.00	**1.00**
Sr. IT Systems Administrator	1.00	1.00	1.00	**1.00**
Sr. IT Database Administrator	1.00	1.00	1.00	**1.00**
IT Network Engineer	2.00	1.00	1.00	**1.00**
Systems Administrator-II	1.00	1.00	1.00	**1.00**
Service Desk Specialist-II	1.00	1.00	1.00	**1.00**
Systems Administrator-I	1.00	2.00	2.00	**1.00**
Service Desk Specialist-I	1.00	1.00	1.00	**1.00**
Total Full-Time Equivalents (FTE)	9.00	9.00	9.00	**8.00**

2012-13 SIGNIFICANT CHANGES

The reduction in Personnel Services is due to the removal of a temporary position hired to assist through peak workload the past two years and is offset in part by expected wage and benefit increases.

Materials and Services increased largely due to expenditures in account 5330 and 5368. Account 5330 includes items such as VoIP phone sets, UPS hardware, tablets, and laptop carts. Materials and Services, account 5340, reflects routine software licenses. Account 5368 serves to account for the ongoing costs of District-wide software applications, maintenance fees, network monitoring and security maintenance fees, costs of hardware maintenance contracts, and funds for in-house repairs. While the District's Microsoft software has been normally renewed on a three-year basis, $70,000 is budgeted for a one-year agreement in 5368 to enable further investigation into the next deployment strategy for desktop applications. Account 5414 provides funding for project consulting, engineering, and design work that current staffing cannot address, including engineering for a Controlled Substance Inventory Module, OnScene Pulse interface with WCCCA CAD codes, EMS electronic records, and other projects. This account includes funding for spam filtering services. District-wide costs of data connectivity, Internet, and video services are budgeted in Cable Access, account 5437. Account 5500, Dues & Subscriptions accounts for SSL and various online subscriptions.

Information Technology, continued

STATUS OF 2011-12 SERVICE MEASURES

- **Maintain the visibility and service offerings of Information Technology (IT)** by partnering with divisions to assist with business needs and budget planning.

Goal(s):	VII
Service Type(s):	Discretionary
Measured By:	Meet with each department and/or division annually to discuss business needs, project status, and future budget requests necessary to accomplish the District's strategic goals.
Status or Outcome:	Over the last two years, IT has not experienced a participation level to make these meetings meaningful. In addition, with the pre-plan budget process in place, the need for this forum is less critical to assist with budget preparation. IT remains committed to being an integral part of the budgeting process by partnering with budget managers.

- **Provide consistent up-time of 99.90% for IT core systems.**

Goal(s):	VI, VII
Service Type(s):	Essential
Measured By:	Real-time monitoring and reporting allows IT to evaluate this metric on a per system basis and apply resources as needed to meet this goal.
Status or Outcome:	This Service Measure was initially established to track system outages to collect and evaluate metrics on problematic and/or unstable systems. The data was used to justify capital investment requests to improve overall system availability and reliability. It has served its purpose well in that the environment is notably more stable today. As a result, this Service Measure will not be carried forward and used as a measure of success.

- **Forecast IT expenditures and meet budgetary expectations.**

Goal(s):	VIII
Service Type(s):	Essential
Measured By:	Provide Finance with a 15-year capital spending plan to meet District technology requests.
Status or Outcome:	Completed and posted to the SharePoint budget site.

- **Support divisions by mining and analyzing data** and providing ad-hoc reports from systems such as MUNIS and First OnScene intended to support decision making by managers for projects and business process improvements.

Goal(s):	VII
Service Type(s):	Varies depending on request
Measured By:	Customers' needs and response interval
Status or Outcome:	This service continues to morph as business needs change and demand continues to increase. For example, before the end of the fiscal year, the legacy FireRMS occupancy database is expected to be replaced by the addition of a module within First OnScene. The reporting functions were designed to provide open access for the District's business partners. With this access, the function has smoothly transitioned beyond IT to Planning, Finance, and the Fire Chief's Office. As a result, this Service Measure will not be carried forward and used as a measure of success.

Information Technology, continued

STATUS OF 2011-12 CHANGE STRATEGIES

- **Achieve an integrated business operations system by evaluating the usefulness of critical databases and defining functional requirements for several key divisions –** Eliminate stand-alone legacy databases that cannot be integrated into the existing database architecture. Ensure the database structure is flexible to adapt to the business needs and that it allows access to valuable data for analysis of critical decision criteria. Identify and address functional requirements that are shared District-wide. Strive to utilize existing resources to meet the business needs. Clearly identify and address areas of the business that are not being met.

Goal(s)/Call(s) for Action:	VII/C and D
Budget Impact:	Increase required
Duration:	Year 1 of 1
Budget Description:	Proposed occupancy database (DB) management system
Partner(s):	Integrated Operations, Training
Status or Outcome:	The occupancy records portion of the legacy FireRMS database is expected to be replaced by the addition of an occupancy database module within First OnScene before the end of the fiscal year.

- **Enhance proactive network monitoring tools to maintain consistent uptime of essential systems –** The District introduced network monitoring in 2007. Since that time, the infrastructure and complexity has changed significantly, and IT has determined that an "enterprise" business solution that includes hardware monitoring would enhance the monitoring capabilities to support the network. This solution monitors all business critical servers, network hardware, storage systems, and Onboard Mobile Gateways (OMGs) for failures and performance metrics. Proper monitoring allows IT to react as quickly and accurately as possible to a failure.

Goal(s)/Call(s) for Action:	VI/B
Budget Impact:	Increase required
Duration:	Year 1 of 1
Budget Description:	Network monitoring solution
Partner(s):	Not applicable
Status or Outcome:	Currently, potential vendor solutions are being tested and evaluated by the Sr. Systems Administrator and the Network Engineer. The monitoring solution is expected to be purchased and implemented in this fiscal year.

- **Enhance security solution for security threat management and eliminate single points of failure** – The existing internet security devices in use by the District are depreciated, non-redundant, and require disparate management systems. Of the utmost concern is the lack of redundancy in the hardware. The existing devices are single points of failure for critical services such as Virtual Private Network (VPN) and the secure firewall. The current older VPN device used to connect the OMGs to the network is not supported by In Motion, the OMG vendor. The solution is industry standard, modular in features and supported security hardware, with hardware redundancy and automatic failover that will replace up to three devices and associated maintenance agreements.

Goal(s)/Call(s) for Action:	VI/B
Budget Impact:	Increase required
Duration:	Year 1 of 1
Budget Description:	Internet security solution
Partner(s):	Not applicable
Status or Outcome:	The appliance was purchased in early fiscal year 2012. A project plan was developed, and critical milestones and timelines were established. Implementation began in October 2011. The major goals are accomplished. Remaining ancillary tasks are expected to be completed in March 2012.

Information Technology, continued

- **Increase protection and provide redundancy of physical critical servers and file systems –** Participate in the design of the Station 56 South Operating Center (SOC) remodel to incorporate a communications room to support a secondary Fire Operations Center (FOC). Relocate the District's disaster recovery systems from the North Operating Center (NOC) to the SOC.

Goal(s)/Call(s) for Action:	III/A
Budget Impact:	Resource neutral
Duration:	Year 2 of 2
Budget Description:	Physical move of disaster recovery systems
Partner(s):	Not applicable
Status or Outcome:	Due to unforeseen delays relating to site permits, the start of construction of the SOC has been significantly delayed. Site plans have been reviewed and approved to support this change strategy. However, the actual move of the recovery systems to the new location will not be completed this fiscal year and will be carried forward.

- **Formalize a model for the District's mobile computing needs using the functional requirements developed in fiscal year 2011. Purchase and configure new hardware for the capital replacement of Mobile Data Computers (MDCs) -** At the direction of the Assistant Chiefs, a placeholder amount is being submitted until such time that a final needs analysis and matrix can be completed. The specific replacement hardware selection has not been determined. The project team is performing extensive research to determine the best solution for the mobile needs of the District. Functional requirements have been completed with the departments directly affected by mobile technology and a District-wide survey was reviewed. A matrix is being developed that will identify the necessary technology needs for each job description and role for Integrated Operations and Logistics before the purchase is made. While the purchase is planned for early fiscal year 2012, the implementation and installation process is likely to expand beyond one fiscal year due to the size of the project and impact on the technical staff.

Goal(s)/Call(s) for Action:	VI/C, VII/C
Budget Impact:	Increase required (significant)
Duration:	Year 1 of 2
Budget Description:	Mobile computing technology upgrade
Partner(s):	Communications, Integrated Operations, Fleet
Status or Outcome:	Functional requirements were developed for the District in August 2010. The technology matrix is being developed by the Logistics Division Chief. The technology matrix will be a dynamic, ever-changing model in order to adapt to evolving technology that best suits the District's needs. IT will work with the Assistant Fire Marshal to purchase the necessary mobile platform to support the business need before the end of this fiscal year. The new MDCs were ordered in December 2011. The selected hardware platform allows for a significant savings in installation time. This Change Strategy is expected to be completed in this fiscal year and will not be carried forward.

ADDITIONAL 2011-12 ACCOMPLISHMENTS

- TVF&R's firewall, VPN concentrator, and Web content filtering solutions have been replaced by a consolidated firewall appliance that provides this functionality managed from a single intuitive Web-based interface. The previous hardware solutions were managed via disparate interfaces and hardware. The new appliance is also redundant (zero downtime except during planned maintenance events). The consolidation saved the District $3,000 in annual maintenance fees.

ADDITIONAL 2011-12 ACCOMPLISHMENTS, CONTINUED

- Traditional tape backups had grown in size, becoming both expensive and too slow to provide timely data recovery. Instead of making a significant capital investment in a new tape library, it was determined that there was more benefit in changing the data protection strategy by writing backups straight to disk rather than tapes. The new storage solution leverages the backup FOC site for data replication for data center redundancy, as well as existing technology to backup and replicate data quickly and more efficiently.
- Leased printing services were introduced to eliminate a majority of the stand-alone networked printers, significantly reducing the costs to maintain the printing environment. Eligible leases were consolidated to one provider. The initial report from Finance shows that annual direct costs were lower by approximately $8,000 to $10,000 per year, and expected to continue to decrease as the older leases are consolidated into the new contract. The Service Desk realized a dramatic reduction in support calls associated with printer/fax/scanner issues. Total annual/fiscal savings is approximately $38,000 to $40,000 (fiscal year 2011 versus fiscal year 2009).
- Two major MUNIS server and client upgrades were successfully performed and accomplished without disruption to business operations.

2012-13 SERVICE MEASURES

Service Measure	2009-10 Actual	2010-11 Actual	2011-12 Estimated	2012-13 Projected
Service Desk work orders	3,217	2,582	1,825	**1,873**
IT systems uptime (%)	99.94%	99.95%	99.95%	**99.96%**

- **Provide technical support for and maintain the network infrastructure and maintenance needs of the District. Ensure the security of the network is consistent with internal and BUG policies.**

Goal(s):	VI/3, VII/A
Service Type(s):	Mandatory
Measured By:	MUNIS work orders are monitored to ensure issues are dealt with in a timely fashion. Actively participate in the BUG/BOT meetings, and maintain a representative in the BUG technical group.

- **Participate as an active partner in project management, planning and implementation to support District-wide business technology solutions.**

Goal(s):	VI/5, VII/A
Service Type(s):	Management
Measured By:	Open lines of communication are experienced from inception to completion, resulting in a smooth and successful conclusion of the project.

- **Forecast IT expenditures and meet budgetary expectations.**

Goal(s):	VIII/5
Service Type(s):	Essential
Measured By:	Provide Finance with a 15-year capital spending plan to meet District technology requests.

Information Technology, continued

2012-13 SERVICE MEASURES, CONTINUED

- Monitor opportunities and proactively engage with partner agencies to support and encourage efforts in the area of electronic information system integration.

Goal(s):	VII/3
Service Type(s):	Essential
Measured By:	Prior to implementing new technology for large-scale projects as modeled by the MDC replacement project, engage with partner agencies as part of the learning and research phase. Entertain alternative purchasing options to ensure the best opportunities are realized.

2012-13 CHANGE STRATEGIES

- **Increase protection and provide redundancy of physical critical servers and file systems** – Participate in the design of the Station 56 South Operating Center (SOC) remodel to incorporate a communications room to support a secondary Fire Operations Center (FOC). Relocate the District's disaster recovery systems from the North Operating Center (NOC) to the SOC.

Goal(s)/Call(s) for Action:	III/3
Budget Impact:	Increase required
Duration:	Year 3 of 3
Budget Description:	Physical move of disaster recovery systems
Partner(s):	Not applicable

- **Reduce the potential bottleneck of data throughput** – Provides improved performance in overall access to the District's critical systems. This is a multiple year Change Strategy in order to adapt as technology changes and capacity needs expanded, e.g., IGA to provide hosted services to partner agencies. In addition, this allows Information Technology to prepare and plan for an innovative and cost-effective approach to replace physical workstations for the next hardware upgrade cycle. Particularly ideal for the fire stations, the move from traditional computer hardware to a virtualized solution is anticipated. In fiscal year 2012, a proof of concept project is underway with the FCO to reduce the number of pieces of hardware necessary to access secure enterprise network resources. Overall, a significant decrease in hardware costs, as well as administrative overhead to support the environment is the expected measurable outcomes. This initiative is also likely to result in a reduction in overall energy costs throughout the District.

Goal(s)/Call(s) for Action:	VI/6
Budget Impact:	Increase required
Duration:	Year 1 of 3
Budget Description:	Modules to upgrade data links to data storage network
Partner(s):	Not applicable

- **Introduce redundancy to the wireless LAN to support an increased demand for the use of mobile devices and the re-activation of the apparatus Wi-Fi MDC updates** - The purchase leverages the existing wireless controller solution while providing redundancy where fault tolerance does not exist today.

Goal(s)/Call(s) for Action:	VII/1
Budget Impact:	Increase required
Duration:	Year 1 of 1
Budget Description:	Additional Aruba Wireless Controller
Partner(s):	Not applicable

2012-13 CHANGE STRATEGIES, CONTINUED

- **Evaluate opportunities for IT to provide an external service delivery model** to support regional agencies. Develop an enterprise service delivery model to accommodate technology needs over extended geographical locations.

Goal(s)/Call(s) for Action:	VII/1 and 3, VIII
Budget Impact:	Resource neutral
Duration:	Year 1 of 1
Budget Description:	Not applicable
Partner(s):	Communications

Information Technology, continued

		Actual Prior FY 2010	Actual Prior FY 2011	Budget Prior FY 2012	Budget Proposed FY 2013	Budget Approved FY 2013	Budget Adopted FY 2013
10215	General Fund						
5001	Salaries & Wages Union	16,875	3,060	19,800			
5002	Salaries & Wages Nonunion	609,649	576,171	674,929	622,816	622,816	622,816
5004	Vacation Taken Nonunion	45,573	53,452	66,751	47,909	47,909	47,909
5006	Sick Taken Nonunion	16,942	34,622		9,582	9,582	9,582
5008	Personal Leave Taken Nonunion	3,638	3,671		4,106	4,106	4,106
5010	Comp Taken Nonunion	1,333	488				
5015	Vacation Sold		3,748	14,263	16,452	16,452	16,452
5016	Vacation Sold at Retirement	11,177					
5021	Deferred Comp Match Nonunion	6,214	6,520	25,959	27,377	27,377	27,377
5120	Overtime Union	630	6,660		5,400	5,400	5,400
5121	Overtime Nonunion	9,251	6,606	10,000	7,000	7,000	7,000
5123	Comp Time Sold Nonunion		138				
5201	PERS Taxes	127,652	124,351	156,834	147,832	147,832	147,832
5203	FICA/MEDI	53,072	51,155	62,095	56,659	56,659	56,659
5206	Worker's Comp	9,731	12,427	20,293	13,332	13,332	13,332
5207	TriMet/Wilsonville Tax	4,695	4,673	5,615	5,198	5,198	5,198
5208	OR Worker's Benefit Fund Tax	235	211	318	283	283	283
5211	Medical Ins Nonunion	89,925	89,580	107,824	89,552	89,552	89,552
5221	Post Retire Ins Nonunion	8,250	6,525	8,100	7,200	7,200	7,200
5230	Dental Ins Nonunion	11,583	11,431	13,965	11,363	11,363	11,363
5240	Life/Disability Insurance	7,819	7,241	8,647	9,387	9,387	9,387
5270	Uniform Allowance	6	171	300	550	550	550
5290	Employee Tuition Reimburse	3,265	8,683	7,392			
	Total Personnel Services	1,037,513	1,011,585	1,203,085	1,081,998	1,081,998	1,081,998
5300	Office Supplies	93	78	500	250	250	250
5301	Special Department Supplies	3,874	8,635	9,500	7,100	7,100	7,100
5302	Training Supplies	108	101	500			
5330	Noncapital Furniture & Equip	4,762	22,557	9,900	21,598	21,598	21,598
5340	Software Expense/Upgrades	26,761	11,985	11,340	10,797	10,797	10,797
5350	Apparatus Fuel/Lubricants	714	758	1,100	1,100	1,100	1,100
5361	M&R Bldg/Bldg Equip & Improv	15,511	80				
5367	M&R Office Equip		1,909	2,818	2,820	2,820	2,820
5368	M&R Computer Equip & Software	431,536	444,399	494,327	544,358	544,358	544,358
5414	Other Professional Services	34,643	50,672	42,334	103,304	103,304	103,304
5415	Printing	31	36				
5417	Temporary Services	411	88				
5437	Cable Access	72,355	250,056	229,096	229,774	229,774	229,774
5461	External Training	783	1,907	4,500	6,595	6,595	6,595
5462	Travel and Per Diem	249	1,393	1,830	4,196	4,196	4,196
5500	Dues & Subscriptions	878	1,294	4,020	1,600	1,600	1,600
5570	Misc Business Exp	233	102	300	300	300	300
5571	Planning Retreat Expense			750			
	Total Materials & Services	592,940	796,051	812,815	933,792	933,792	933,792
	Total General Fund	1,630,453	1,807,636	2,015,900	2,015,790	2,015,790	2,015,790