

Information Technology Department

Mission

To provide the city with a telecommunications infrastructure that meets current and future technology needs and to provide accurate and timely information systems and technical support to all city departments and agencies and ultimately to its customers, the residents of Newton.

The Information Technology Department works with every department in the City to deliver infrastructure, equipment, phone services, Internet and critical access while protecting the data of our constituents and staff.

Our projects are greatly varied:

- Lead and primary implementor in the Financial system migration into Munis.
- Replaced aging 20-year-old system with (VoIP) Voice over IP system.
- Implemented phone trees for several departments.
- Review phone bills to enable reducing monthly land line costs by nearly 25% and counting.
- Replaced last copper trunk line (PRI) with modern Internet-based (SIP) technology and anticipate further savings every month.
- Continue to launch phishing awareness campaigns to raise awareness of anybody with a NewtonMa.gov email account.
- 2019 Phishing Awareness presentation shown live or pre-recorded to about 750 users.
- Replaced projection system in council chamber with state-of-the-art equipment.
- Enhanced custom applications for Public Safety, Elections and document tracking.
- Assist training in the maintenance of the City website.
- Assisted in evaluation and procurement, oversaw and implemented TimeMatters legal database management system for the Law Department.
- Responsible for the home page slide shows, emergency notice banner, live election results.
- Our Geographic Information Systems administration is so much more than maps; the layers of information determine everything from recycling routes to sidewalk snow removal to tree canopies and even our fiber routes.
- Converted to Office 365 subscription.
- Working with the DHS we have begun weekly blacklisting updates on our firewalls
- Continue to deliver desktop support to approximately 550 PCs in all municipal buildings.
- Maintain strong working relationships with other IT entities including the School Department, Library and the Fire and Wires Divisions.
- Continue to eliminate Windows 7 from our network.
- Actively participate in the Public Information Officer group to assist in the delivery of timely messages in a myriad of delivery options during both emergency and non-emergency situations.
- Preparing to implement Mobile Device Management on all city phones.

The IT department is a well-rounded group of individuals who work well as a team: resilience, professionalism, and dedication are all key traits that contribute to make IT one of the most reliable departments in the City.

The telecommunications foundation for the city has been successfully installed and maintained by the **Information Technology Department**. Our accomplishments since 2013 demonstrate our ability to effectively implement major infrastructure investments. Our team specialize in desktop support, web development, Geographic Information Systems, routing and networking, database administration, security and even social media.

- We look forward to the July 2020 third and final phase of our three-tiered financial migration as we move our financial system Tyler Technology's Munis product. This mission has been all-consuming for two of our full-time IT staff.

- We continue to facilitate new technologies to utilize the many opportunities created by the city-wide fiber network. The network supports the phone system, security surveillance video from many City buildings and our data. Our city-owned fiber network now supports our public safety radio systems. We are prepared to support additional needs with high-speed solutions as they arise. We anticipate the varied challenges of a responsive disaster recovery solution; a very fluid solution whose solution is dictated varies greatly whether it is weather, terror or pandemic related.

- From the perimeter outside of our network to our virtual servers, our cloud applications and our desktops, protecting ourselves first has evolved into our paramount priority across all scopes of work. We rely on an evolving combination of management of our Cisco software subscriptions on our firewalls, VLAN-protection via our switches, network monitoring, Microsoft Advanced Threat Protection, desktop anti-virus and constant updates based on weekly correspondence with the Department of Homeland Security

- The first line of support in our department are our Network Administrators. With excellent oversight and leadership our staff are an extremely organized, communicative group who perform exceptionally well, regardless of pressure and time constraints, and perform efficiently as a team or on their own.

- Our seemingly never-ending phishing awareness campaigns have proven invaluable during the past two years. The Law Department has been guided into it's first-ever legal management database system

(TimeMatters) which came at a key employee transition period for a department with many new faces. We continue to tweak our Active Directory system to refine access rights without inhibiting productivity. We continue to enhance our storage area network increasing virtual servers in hours instead of weeks for physical servers. We have begun looking into Amazon Web Services for disaster recovery, backup, applications hosting and listserv functions.

- We hope to unveil the new City website this July. After a dozen years, we have high expectations for enhanced, reliable searching, top notch calendars and better information distribution on all devices.

- We have written custom applications to reduce incoming non-emergency calls to the dispatch center by alarm companies as well as automating census data collection for people with no change to their demographics. New projects include many intelligent forms workflow systems such as Noise Ordinance waiver request application and approvals, lost and found pets, and the rat reporter to name a few.

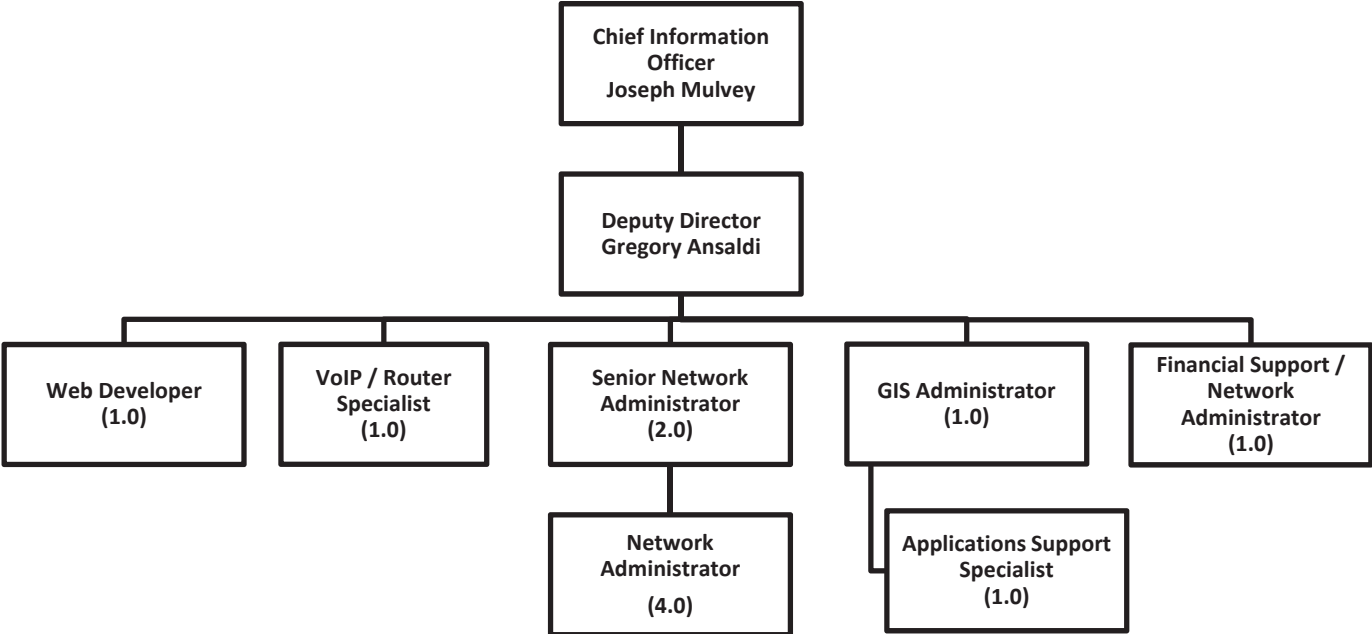
- GIS continues to increase its web footprint with new and improved applications for viewing and downloading data. The goal is to provide staff and residents with easy quick access to our data from everywhere. We have coordinated our data and workflows with many widely used software applications such as the Assessor's database, and various school and public works management packages as well as with State and Federal agencies. The system supports many projects, examples include zoning reform, school redistricting, evaluating solar sites and planning for major development projects.

Our budget requests remain stable and have only increased marginally to maintain the exceptional services expected of our department.

Joseph P. Mulvey

Chief Information Officer

INFORMATION TECHNOLOGY



Financial and Operating Highlights

Financial Highlights

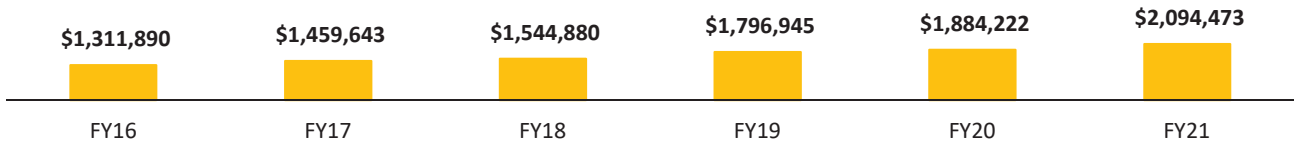
	Actual			Adj Budget		Proposed
	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021
Expenditure by Department						
Administration	\$ 276,365	\$ 315,979	\$ 305,701	\$ 303,104	\$ 314,872	\$ 323,078
Micro/Network	\$ 707,570	\$ 774,556	\$ 822,753	\$ 1,033,101	\$ 1,091,350	\$ 1,005,666
Systems Program	\$ 192,331	\$ 228,191	\$ 276,616	\$ 312,886	\$ 324,883	\$ 607,883
GIS	\$ 135,624	\$ 140,917	\$ 139,810	\$ 147,854	\$ 153,117	\$ 157,846
Total	\$ 1,311,890	\$ 1,459,643	\$ 1,544,880	\$ 1,796,945	\$ 1,884,222	\$ 2,094,473
% Incr		9.94%	11.26%	5.84%	16.32%	4.86%

Personnel

Full-Time Employees	9	11	12	12	13	13*
Part-Time Employees	0	0	1	1	0	0
Total	9	11	13	13	13	13

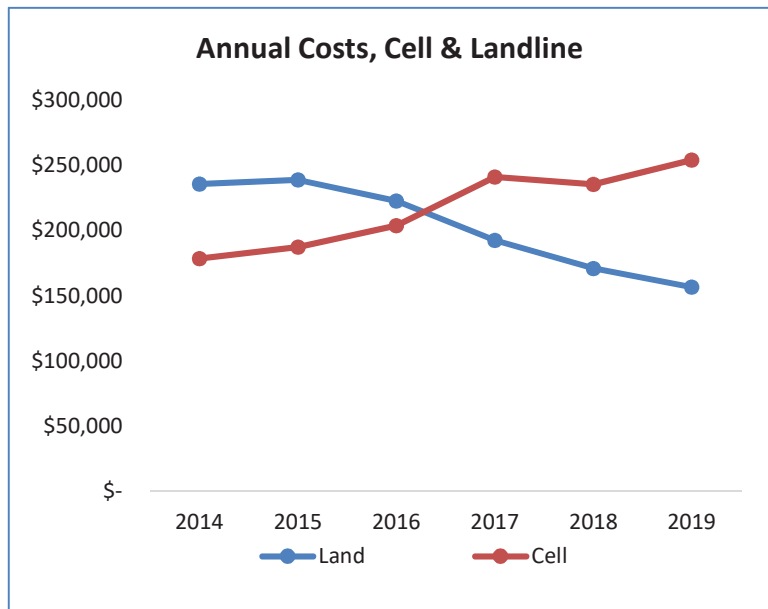
*Network Administrator deferred to FY2022

Total IT Expenditures



Operating Highlights

Municipal Email Accts	857
Email Rec.Last 6 mos	1,647,013
Storage Area Network	
Total Space	21.6 TB
Available Space	3.2 TB
Reduce Non-Emergency 911 Calls	
Fire Box Alarm App	9598
Number of GIS Layers	60
TimeMatters All Cases	15123
Buildings on City Fiber	62
Security	
Phishing Test Emails	10081
Website	
Visits last year	574,000
Sessions last year	1,100,000
Homepage Visits	441,741



Information Technology Department

Fiscal Year 2021 Outcomes and Strategies

Security measures must be applied intelligently at all levels of our network. There are many facets to this challenge: mobile devices, email, perimeter devices, vendor equipment, remote access from employee personal equipment, viruses, worms, ransomware and phishing

The first line of defense is an educated staff.

Employee awareness and subscription-based phishing campaigns have proven their worth and we will continue these practices. Critical hardware is duplicated for redundancy. Our data center is duplicated off site. We are implementing a mobile device solution, creating a mobile device policy and SOPs, and training IT staff on best practices. We see the bad guys knocking on the firewall doors probing for access each Monday in our weekly report. We work with the Department of Homeland Security and regularly add the IP addresses of bad actors to our blacklist.

We rely more and more on our Active Directory system to protect our data. We are preparing to implement a more sophisticated password system comparable to requirements set forth in the financial industry. We continue to invest additional funds each subsequent fiscal year towards protecting ourselves and continually review current solutions, new trends and future concerns.

Outcome 1

Protect Our Data and Networks using Hardware, Software, Awareness Training and Employee Education

Outcome 2

Complete the Financial System Upgrade

Perhaps the biggest feather in our technology cap will be the completed consolidation of our dual financial systems into one modern, forward facing, single vendor solution. Since 1995 we have maintained two financial systems: Tyler

Technology's Munis for receivables and Central Square's Finance Plus for accounting, payroll, benefits and procurement. By consolidating with one system, we eliminate the maintenance of software bridges, dual entry, mounting customizations, a company providing diminished support staff while having a wonderful opportunity to rebuild our data to achieve better efficiency and security.

Accounting and Procurement modules went live on July 1, 2019. While conversion day was a non-event, the subsequent weeks revealed gaps in workflow, reporting and rights that all required correction. The conversion could be called successful, but the process was bumpy and uncomfortable. January 7, 2020 saw the conversion of the receivables (Real Estate, Personal Property, Motor Vehicle and Boat Excise as well as Utility Billing). Originally slated for July 1, 2019, this phase ran quite smoothly despite the six-month delay.

The third and final phase of the conversion will be the most exciting and impactful - the conversion of our employee data. All related workflow processes and tables required to run our payroll will be tweaked, recreated from scratch or corrected into data that will serve us well for the next twenty years.

We continue to meet weekly discussing progress, red flags and next steps. We meet online for full days of preparation, questions and answers, table population and training approximately 6 days per month. In between, we are charged with dozens of tasks to be addressed prior to each push forward. We report regularly to the Mayor's Office with a bullet list of where we stand.

Upon completion of the financial system migration we will once again cast our sights upon the massive Permitting System challenge.

We signed an agreement to upgrade from Civica to the new Vision content management system owned by Granicus.

We expect to go live in July of 2020 and look forward to a higher level of data organization, context-sensitive search-ability and the calendar to end all calendars.

Outcome 3

Improve our Website

Outcome 4

Reduce Monthly Costs for City Landlines and Cell Phones

With the advent of 5G technology, we are concerned that upgrading the non-compliant equipment could exacerbate our monthly costs.

We propose working with Verizon, the Mayor, Purchasing, Police, Fire, Public Works, Public Buildings, Inspectional Services and Parks & Recreation to create a policy that builds a framework to minimize costs without inhibiting efficiency and productivity.

Meanwhile, we have successfully consolidated our landlines by eliminating hundreds of unused Centrex lines. We have converted our ten PRI lines at six locations into a cost-effective three location solution founded on current technology. We have seen our monthly landlines bills reduced by nearly 25%. We strive to continue to use technology for further consolidation without sacrificing service or quality.

In 2014 the IT Department assisted in the consolidation of all City cell phones into a state contract using Verizon. At that time, we brought 314 phones into a shared plan that allowed better oversight and administration and enabled consistency in billing. Since that time, we have doubled our cell subscription devices.

FUND: 0001 - GENERAL FUND
DEPARTMENT: 111 - INFORMATION TECHNOLOGY

CITY OF NEWTON BUDGET
DEPARTMENT LEGAL LEVEL OF CONTROL

	ACTUAL 2017	ACTUAL 2018	ACTUAL 2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
INFORMATION TECHNOLOGY SUMMARY						
51 - PERSONAL SERVICES	902,120	943,875	1,083,449	1,147,148	1,101,586	-45,562
52 - EXPENSES	279,226	320,546	380,091	393,303	660,303	267,000
58 - DEBT AND CAPITAL	123,791	154,788	124,509	125,000	106,000	-19,000
57 - FRINGE BENEFITS	157,953	156,136	200,229	218,771	226,585	7,814
TOTAL DEPARTMENT	1,463,090	1,575,345	1,788,278	1,884,222	2,094,474	210,252
IT ADMINISTRATION						
51 - PERSONAL SERVICES	261,576	250,812	250,360	251,918	258,358	6,440
52 - EXPENSES	12,297	14,090	17,042	16,820	16,820	0
58 - DEBT AND CAPITAL	0	30,000	27	0	0	0
57 - FRINGE BENEFITS	42,127	41,264	44,311	46,134	47,900	1,766
TOTAL IT ADMINISTRATION	315,999	336,166	311,740	314,872	323,078	8,206
MICRO/NETWORK SVS						
51 - PERSONAL SERVICES	538,748	588,489	726,386	783,455	727,565	-55,890
52 - EXPENSES	18,143	13,500	28,796	31,500	15,500	-16,000
58 - DEBT AND CAPITAL	123,791	124,788	124,482	125,000	106,000	-19,000
57 - FRINGE BENEFITS	97,302	95,975	135,572	151,395	156,601	5,206
TOTAL MICRO/NETWORK SVS	777,983	822,753	1,015,236	1,091,350	1,005,666	-85,684
SYSTEMS PROGRAMMING						
52 - EXPENSES	228,191	276,616	314,418	324,883	607,883	283,000
TOTAL SYSTEMS PROGRAMMING	228,191	276,616	314,418	324,883	607,883	283,000
GIS ADMINISTRATION						
51 - PERSONAL SERVICES	101,797	104,573	106,704	111,775	115,662	3,888
52 - EXPENSES	20,596	16,339	19,834	20,100	20,100	0
57 - FRINGE BENEFITS	18,524	18,897	20,347	21,242	22,084	842
TOTAL GIS ADMINISTRATION	140,917	139,810	146,885	153,117	157,846	4,729

FUND: 0001 - GENERAL FUND
DEPARTMENT: 111 - INFORMATION TECHNOLOGY

CITY OF NEWTON BUDGET
DEPARTMENTAL DETAIL

	ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
111 - INFORMATION TECHNOLOGY						
0111153 - IT ADMINISTRATION						
PERSONAL SERVICES						
511001 FULL TIME SALARIES	225,448	231,898	238,326	247,418	253,858	6,440
511101 PART TIME < 20 HRS/WK	34,178	15,414	6,534	0	0	0
514001 LONGEVITY	1,950	3,500	5,500	4,500	4,500	0
TOTAL PERSONAL SERVICES	261,576	250,812	250,360	251,918	258,358	6,440
EXPENSES						
527400 RENTAL - EQUIPMENT	1,594	1,522	1,268	1,830	1,830	0
531900 TRAINING EXPENSES	4,718	5,000	7,710	5,000	5,000	0
534010 TELEPHONE	84	109	141	150	150	0
534020 CELLULAR TELEPHONES	1,239	3,153	3,185	5,000	5,000	0
534100 POSTAGE	16	0	8	20	20	0
534200 PRINTING	0	0	0	20	20	0
542000 OFFICE SUPPLIES	3,991	2,525	4,170	3,500	3,000	-500
548000 GASOLINE	0	0	29	0	500	500
559200 BOOKS/MANUALS/PERIODI	400	422	0	400	400	0
571000 VEHICLE USE REIMBURSE	20	0	0	0	0	0
571100 IN-STATE CONFERENCES	60	536	271	300	300	0
572000 OUT-OF-STATE TRAVEL	0	466	0	0	0	0
573000 DUES & SUBSCRIPTIONS	175	357	260	600	600	0
TOTAL EXPENSES	12,297	14,090	17,042	16,820	16,820	0
FRINGE BENEFITS						
57DENT DENTAL INSURANCE	517	538	560	582	582	0
57HLTH HEALTH INSURANCE	37,876	37,147	40,178	41,786	43,458	1,672
57LIFE BASIC LIFE INSURANCE	113	113	113	114	114	0
57MEDA MEDICARE PAYROLL TAX	3,620	3,466	3,460	3,652	3,746	94
TOTAL FRINGE BENEFITS	42,127	41,264	44,311	46,134	47,900	1,766
DEBT AND CAPITAL						
585010 AUTOMOBILES/LIGHT TRU	0	30,000	0	0	0	0
585111 PC HARDWARE-ADMIN	0	0	27	0	0	0
TOTAL DEBT AND CAPITAL	0	30,000	27	0	0	0
TOTAL IT ADMINISTRATION	315,999	336,166	311,740	314,872	323,078	8,206

CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL
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	ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
0111154 - MICRO/NETWORK SVS						
PERSONAL SERVICES						
511001 FULL TIME SALARIES	534,357	583,089	710,086	767,555	720,915	-46,640
514001 LONGEVITY	2,650	4,550	5,500	5,400	6,150	750
514309 OTHER STIPENDS	0	0	0	10,000	0	-10,000
515005 BONUSES	0	350	10,300	0	0	0
515006 VACATION BUY BACK	740	0	0	0	0	0
515102 CLEANING ALLOWANCE	1,000	500	500	500	500	0
TOTAL PERSONAL SERVICES	538,748	588,489	726,386	783,455	727,565	-55,890
EXPENSES						
524010 OFFICE EQUIPMENT R-M	13,500	13,500	13,500	13,500	3,500	-10,000
524100 SOFTWARE MAINTENANC	1,956	0	14,765	18,000	12,000	-6,000
532100 TUITION ASSISTANCE	0	0	500	0	0	0
548000 GASOLINE	0	0	31	0	0	0
558500 COMPUTER SUPPLIES	2,687	0	0	0	0	0
TOTAL EXPENSES	18,143	13,500	28,796	31,500	15,500	-16,000
FRINGE BENEFITS						
57DENT DENTAL INSURANCE	2,542	2,585	3,538	3,960	3,726	-234
57HLTH HEALTH INSURANCE	80,531	78,825	111,633	124,119	129,084	4,965
57LIFE BASIC LIFE INSURANCE	113	113	203	171	228	57
57MEDA MEDICARE PAYROLL TAX	7,284	8,018	9,776	11,197	10,550	-647
57OPEB OPEB CONTRIBUTION	6,832	6,434	10,421	11,948	13,013	1,065
TOTAL FRINGE BENEFITS	97,302	95,975	135,572	151,395	156,601	5,206
DEBT AND CAPITAL						
585110 COMPUTER SERVER HAR	9,915	10,072	9,997	10,000	8,000	-2,000
585111 PC HARDWARE-ADMIN	51,774	49,795	49,969	50,000	45,000	-5,000
585120 COMPUTER SERVER SOFT	47,116	50,134	49,541	50,000	45,000	-5,000
585121 PC SOFTWARE-ADMIN	14,986	14,787	14,976	15,000	8,000	-7,000
TOTAL DEBT AND CAPITAL	123,791	124,788	124,482	125,000	106,000	-19,000
TOTAL MICRO/NETWORK SVS	777,983	822,753	1,015,236	1,091,350	1,005,666	-85,684

CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL
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	ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
0111156 - SYSTEMS PROGRAMMING						
EXPENSES						
524011	0	27,849	29,700	29,700	29,700	0
524012	5,465	20,000	20,000	20,000	20,000	0
524013	0	12,000	12,000	12,000	12,000	0
524100	86,970	26,084	60,856	60,300	60,300	0
524101	54,783	50,500	50,500	50,500	50,500	0
524102	0	0	0	0	260,000	260,000
524106	39,534	83,048	78,000	90,000	115,000	25,000
524107	0	9,000	7,446	10,000	10,000	0
524108	0	6,600	6,600	9,600	9,600	0
534040	30,267	30,633	28,783	28,783	28,783	0
534200	69	41	4	0	0	0
558500	11,104	10,862	20,528	14,000	12,000	-2,000
TOTAL EXPENSES	228,191	276,616	314,418	324,883	607,883	283,000
TOTAL SYSTEMS PROGRAMMING	228,191	276,616	314,418	324,883	607,883	283,000
0111157 - GIS ADMINISTRATION						
PERSONAL SERVICES						
511001	100,922	103,573	106,704	110,775	113,662	2,888
514001	875	1,000	0	1,000	2,000	1,000
TOTAL PERSONAL SERVICES	101,797	104,573	106,704	111,775	115,662	3,888
EXPENSES						
524100	16,000	12,300	15,963	16,000	16,000	0
531900	0	665	0	100	100	0
558500	4,596	3,374	3,871	4,000	4,000	0
TOTAL EXPENSES	20,596	16,339	19,834	20,100	20,100	0
FRINGE BENEFITS						
57HLTH	17,115	17,444	18,868	19,622	20,407	785
57MEDA	1,409	1,453	1,479	1,620	1,677	57
TOTAL FRINGE BENEFITS	18,524	18,897	20,347	21,242	22,084	842
TOTAL GIS ADMINISTRATION	140,917	139,810	146,885	153,117	157,846	4,729
TOTAL INFORMATION TECHNOLOGY	1,463,090	1,575,345	1,788,278	1,884,222	2,094,474	210,252