

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 is fully committed towards continual enhancements in Municipal security, taking full advantage of our city-wide fiber, replacing and upgrading our storage area network and virtual servers, supporting our state-of-the-art phone system, enhancing our new financial and permitting systems, overseeing the city website, and supporting remote access as a standard business operating procedure. Investing in software and infrastructure is an important step towards a finished product. Importantly, key personnel with expertise, experience, patience, and dedication are critical to the completion of challenging tasks.

Key initiatives and accomplishments by the IT Department during Fiscal Year 2023

- Our new financial system – we went live with payroll on January 1, 2021. We continue to train, tweak and evolve our processes and enhance with new modules.
- We intend to roll out a web-based employee portal, a paperless contract management system, further automation of approval workflow to reduce paper, and online job applications within a Munis job applicant portal.
- Assisted NPD by procuring 90 phones, 90 new PCs, rewiring all three buildings, consolidation of software, replacement of all switches and doubled wireless access points.
- Implemented a Police Officer Voicemail system for staff without a desk phone.
- Completion of the upsized replacement of our storage area network and virtual servers.
- Integrated Geographic Information into workflows for more efficient routing of garbage collection, DPW repair crews and school transportation.
- Better integration of addressing with Engineering and our NewGov permitting system.
- Rolled out phase one of our in-house Docket Tracking system.
- Continued protection of our network and data: In an era of software hacking and bold phishing attempts, we have avoided dire consequences. This is not by accident; this success is based on a determined IT department with qualified individuals making the right decisions.
- Enrolled in CISA Cyber Hygiene subscription. Weekly updates to all changes to our web-facing footprint.
- We continue to support an active, remote workforce. Work from home is becoming a new standard.
- We are quite pleased with the success of our automated inventory system.
- Moved NewtonPolice.com from an outdated stand-alone server onto the City of Newton website.
- Continue to enhance our website both within the Granicus Content Management System (CMS) as well as with Amazon Web Services (AWS) offering cloud storage for our in-house-web-based applications.
- Assisting with technical support to Health and Human Services and Human Resources with solutions regarding Covid reporting and communications.

In the face of the challenges of the pandemic, the Information Technology Department continues to go above and beyond with technical support. The professionalism of our IT staff coupled with our teamwork approach have helped us address the challenges we experienced.

All city departments depend on a solid foundation of infrastructure, technology, resources, and benefit from the enthusiasm of the IT staff. The Information Technology Department continues to not only support staff near and far on a day-to-day basis but also breaks new ground in our participation and support of many disparate projects.

- **Financial System Enhancements**

In 2022, we upgraded from Munis version 2018 to Munis 2019. This allowed us to keep pace with the parent company's recommendations, enabling us to stay current without excessive additional costs.

- **Newton Police Tech Upgrade**

In April 2022, we were called in to assist the Police Department with a full upgrade of desktop equipment and more. We oversaw full rewiring of three buildings, replaced 90 old phones with VoIP, replaced nearly 100 PCs with new hardware running Windows 11, enhanced the wireless systems, replaced all switches with HP POE switches in a redundant setup to ensure uptime. We also built a voicemail tree for officers without desks. We supported NPD as it transitioned to new in-house IT staff.

- **Covid Response**

We have supported employees who partially work from home, helping increase productivity, attend nighttime meetings, and remotely during inclement weather.

- **Zoom and Public Meetings**

We have upgraded to 50 full-service Zoom accounts and unlimited video storage online. We send out best practice information to keep users aware of security concerns, tips and tricks, and more.

- **Website**

In 2022, we moved NewtonPolice.com onto the City's hosted pages and provided support. We continue to develop a better search page to encompass all of our sites.

- **Web Development**

We continue to migrate our in-house applications to Amazon. The benefits of cloud-based storage and application hosting at this level have been quite convenient. Significantly, Phase One of the City Council/Clerk Docket Tracking System has been released. Security threats and support costs related to maintaining applications servers on site make our reliance on Amazon a welcome, cost-effective opportunity.

- **NewGov Permitting System**

With important phases of this project complete, our day to day participation is centered around the data that feeds into NewGov.

- **Audio/Visual**

The IT Department provides sound and video for major events such as the Mayor's Community Breakfast, in person Override discussions, assistance for gatherings such as hybrid- and in-person events such as the MLK annual celebration and Chief swearing in ceremonies.

- **Security**

We are very proud of our current security measures. We work with DHS, CISA, other state agencies, and vendors on best practices and communicate frequently among all of the IT entities in the City.

- **Geographic Information Systems**

GIS continues to be critical in the City for a myriad of requirements. GIS is integral to waste collection, district assignments, snow removal, sidewalk information, fire hydrant and other infrastructure repairs. Critical interfaces to other systems, data visualizations, sustainability planning and school attendance projections are examples of the features our system accomplishes every day.

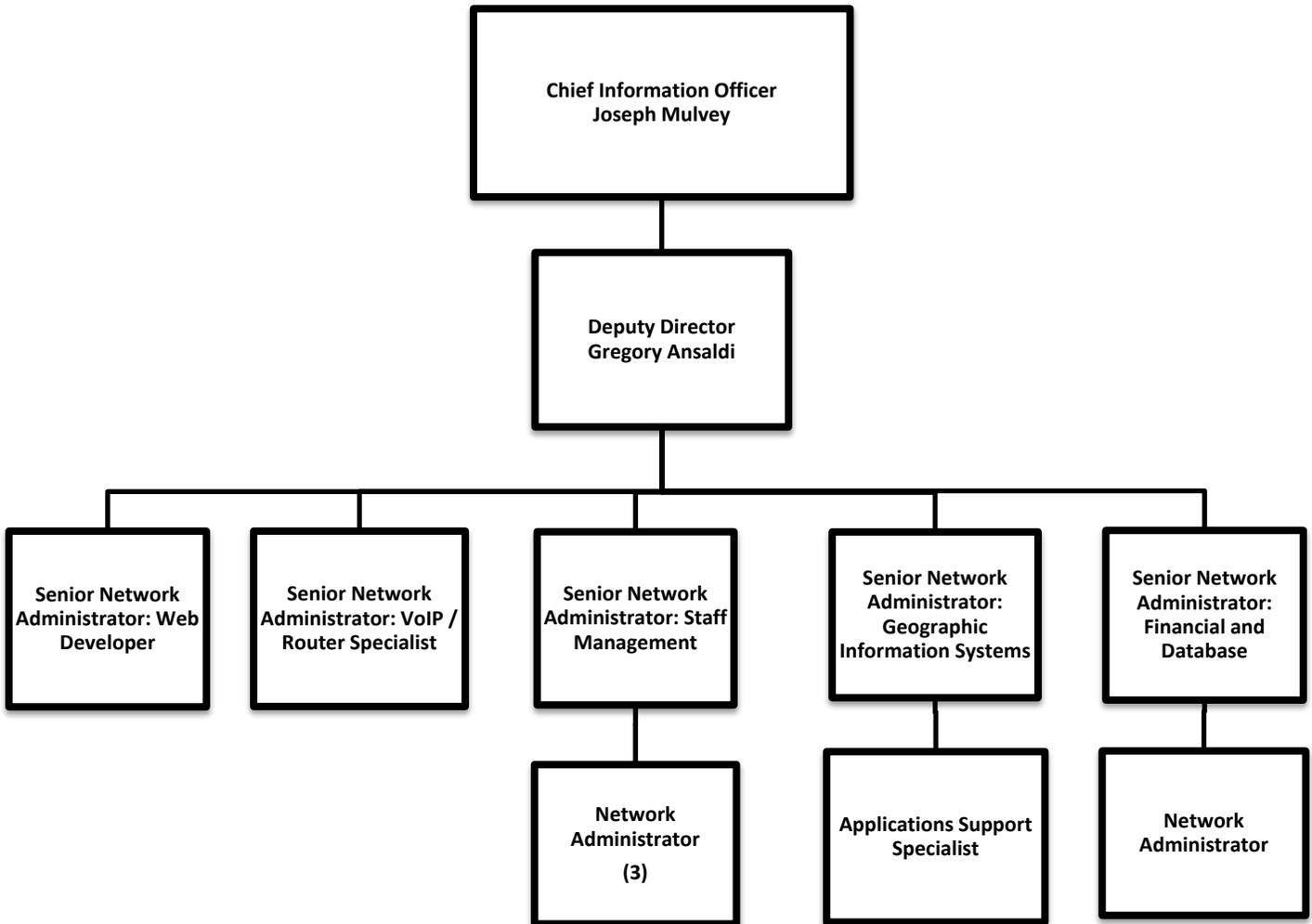
- **Department Moves**

In 2022, we assisted the Senior Center in vacating its premises to three temporary locations with all necessary resources at each site. We assisted DPW and Engineering moves between Vernon Street, Crafts Street and Elliot. We participated in the preparation of the Police office at Elliot Street.

Joseph P. Mulvey

Chief Information Officer

INFORMATION TECHNOLOGY



Financial and Operating Highlights

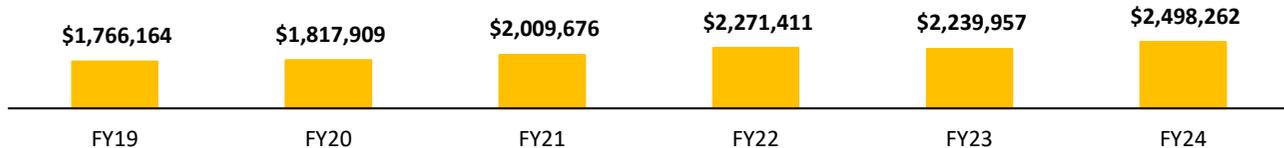
Financial Highlights

	< -----Actual ----->				Original	Proposed
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
Expenditure by Department						
Administration	\$ 311,761	\$ 313,523	\$ 441,199	\$ 331,194	\$ 345,155	\$ 370,293
Micro/Network	\$ 1,006,969	\$ 1,023,653	\$ 862,333	\$ 1,068,821	\$ 1,085,498	\$ 1,082,905
Systems Program	\$ 299,954	\$ 330,067	\$ 548,578	\$ 709,869	\$ 640,415	\$ 871,712
GIS	\$ 147,479	\$ 150,665	\$ 157,566	\$ 161,527	\$ 168,888	\$ 173,352
Total	\$ 1,766,164	\$ 1,817,909	\$ 2,009,676	\$ 2,271,411	\$ 2,239,957	\$ 2,498,262
% Incr	13.51%	2.93%	10.55%	13.02%	-1.38%	11.53%

Personnel

Full-Time	12	12	13	13	13	12
Part-Time	0	1	1	0	0	0
Total	12	13	14	13	13	12

Total IT Expenditures



2022 Zoom Statistics

Total Meetings	4,613
Meeting Minutes	2,316,619
Participants	40,679

Last 6 Months of 2022 E-mail

Sent	383,743
Received	1,886,081
Read	1,727,321

Storage Area Network

Total Space	112.5 TB
Available Space	75.5 TB

Reduce Non-Emergency 911 Calls

Fire Box Alarm App	6,327
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Buildings on City Fiber 65

Website Statistics

Home Page	473,276
Bill Pay	148,696
Sustainable Materials	58,592
ISD Home	47,227
Recycling	43,018
Department List	38,376
Assessing	35,527
How Do I	32,199
Parking	26,823
Police	25,129

Phishing Awareness Training & Testing

Reported	7,216
Simulated	4,280
Non-Sim.	2,936

Phishing Security Tests, All Time: 219

Information Technology Department

Fiscal Year 2024 Outcomes and Strategies

Even with our many priorities, security measures must never be an afterthought. We face so many different types of threats: remote access, mobile devices, email, perimeter devices, vendor equipment, viruses, bots, ransomware, impersonation, and phishing to name a few significant categories.

The first line of defense will always be an educated work force. We continue to promote phishing awareness; we have also done poster campaigns and new to-the-point training videos. We recognized October as Cyber-Security Awareness Month by rolling out next level testing, short videos, fresh poster awareness campaigns all while continuing to tweak our systems.

Critical hardware is duplicated for redundancy. Our firewalls and load balancers have been replaced. Our data center is duplicated and is now off site. We have a mobile device plan, a mobile device policy and SOPs, and continually review best practices with staff. We see the bad actors knocking on the firewall doors. We work with the Cybersecurity & Infrastructure Security Agency (CISA), part of the Department of Homeland Security, and we regularly update and block IP addresses that are known threats. We are working on eliminating older servers and ensuring our in-house applications do not leave openings for bad actors. We are taking advantage of Amazon Web Services for housing our web apps.

We use our Active Directory system to protect our data. We have rolled out multi-factor authentication (MFA) to most of our email accounts. We continue to invest to protect 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

Enhance Our Financial System

The conversion into Munis 2019.1 creates many new opportunities for all departments, especially Human Resources, Payroll, Schools, Parks, Recreation & Culture, and Purchasing. We will work with staff in these departments to roll out many new solutions.

The Employee Self Service portal will allow us to enable employees to request modifications to benefits, update their status, and make other requests for changes via a secure online interface. This portal will also allow potential employees to create accounts, apply for positions, upload required documents and reduce physical paper and workflow document shuffling to increase efficiency.

The Bids and Contracts module will function around a Vendor Self Service portal that will enable registered vendors to retrieve purchase orders. Munis will host our bids online and allow registered vendors to submit bid proposals inside the portal which, once approved through workflow will promote into our contract tracking module. This will reduce paper shuffle, lost contracts and increase turnaround time.

With the change in staff at the Police Department, the Information Technology team happily stepped in and oversaw the replacement of the wiring, switches, VoIP phones, and desktop computers while an outside organization worked on other public safety specific challenges. We took on oversight of NewtonPolice.com and brought the web structure onto our cloud-based CMS. We continue to work with the department to make online document requests simple and quick.

We will continue to support NPD. We look forward to working with their capable new IT staff and will prioritize their support and assist in any way needed to ensure the department exceeds expectations in all aspects of information technology.

Outcome 3

Assist in the Upgrade of Newton Police Technology Systems

Outcome 4

Continue with Phase 2 of our In-house, Online Document Tracking System for the City Council

When three different companies failed to meet our requirements and minimal expectations for a cloud-based docket-tracking system for the City Council, we decided to create it in-house. Our IT web-developer, Rufen Liao, has met every request from the Docket Review Working Group and continues to flourish as she

enhances the product. The system conforms to the processes employed by the City Council as stated in our Charter, Council rules, and City Ordinances. The system maintains document versions, shows document paths through Committees, shows how Councilors voted, is searchable and will be up to date.

Every vendor we have discussed this challenge with has fallen far short of the mark. But looking in-house, we are finding incredible results to a challenging project.

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

CITY OF NEWTON BUDGET
DEPARTMENT LEGAL LEVEL OF CONTROL

	ACTUAL 2020	ACTUAL 2021	ACTUAL 2022	ORIGINAL 2023	RECOMMENDED 2024	CHANGE 2023 to 2024
INFORMATION TECHNOLOGY SUMMARY						
51 - PERSONNEL SERVICES	1,087,562	1,100,192	1,125,224	1,223,508	1,260,251	36,743
52 - EXPENSES	388,389	597,646	752,385	696,270	929,817	233,547
58 - CAPITAL EXPENSES	119,105	94,940	203,883	100,000	100,000	0
57 - FRINGE BENEFITS	218,344	216,897	189,919	220,179	208,194	-11,985
TOTAL DEPARTMENT	1,813,400	2,009,676	2,271,411	2,239,957	2,498,262	258,305
IT ADMINISTRATION						
51 - PERSONNEL SERVICES	251,908	367,678	270,012	278,509	298,518	20,009
52 - EXPENSES	11,133	15,273	10,491	14,990	17,240	2,250
58 - CAPITAL EXPENSES	0	0	1,179	0	0	0
57 - FRINGE BENEFITS	45,973	58,248	49,511	51,656	54,535	2,879
TOTAL IT ADMINISTRATION	309,014	441,199	331,194	345,155	370,293	25,138
MICRO/NETWORK SVS						
51 - PERSONNEL SERVICES	723,879	616,827	734,331	820,552	834,069	13,517
52 - EXPENSES	29,458	13,921	14,270	20,300	20,300	0
58 - CAPITAL EXPENSES	119,105	94,940	202,704	100,000	100,000	0
57 - FRINGE BENEFITS	151,211	136,645	117,516	144,646	128,536	-16,110
TOTAL MICRO/NETWORK SVS	1,023,653	862,333	1,068,821	1,085,498	1,082,905	-2,593
SYSTEMS PROGRAMMING						
52 - EXPENSES	330,067	548,578	709,869	640,415	871,712	231,297
TOTAL SYSTEMS PROGRAMMING	330,067	548,578	709,869	640,415	871,712	231,297
GIS ADMINISTRATION						
51 - PERSONNEL SERVICES	111,775	115,687	120,880	124,447	127,664	3,217
52 - EXPENSES	17,731	19,875	17,755	20,565	20,565	0
57 - FRINGE BENEFITS	21,160	22,004	22,892	23,876	25,123	1,247
TOTAL GIS ADMINISTRATION	150,665	157,566	161,527	168,888	173,352	4,464

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

CITY OF NEWTON BUDGET
DEPARTMENTAL DETAIL

	ACTUAL 2020	ACTUAL 2021	ACTUAL 2022	ORIGINAL 2023	RECOMMENDED 2024	CHANGE 2023 to 2024
111 - INFORMATION TECHNOLOGY						
0111153 - IT ADMINISTRATION						
PERSONNEL SERVICES						
511001 FULL TIME SALARIES	247,408	363,178	265,512	273,509	293,518	20,009
511101 PART TIME < 20 HRS/WK	4,509	0	0	0	0	0
514001 LONGEVITY	4,500	4,500	4,500	5,000	5,000	0
TOTAL PERSONNEL SERVICES	256,417	367,678	270,012	278,509	298,518	20,009
EXPENSES						
527400 RENTAL - EQUIPMENT	1,685	1,502	1,638	1,900	1,900	0
531900 TRAINING EXPENSES	0	7,180	4,252	7,000	10,000	3,000
534010 TELEPHONE	88	103	88	150	150	0
534020 CELLULAR TELEPHONES	4,624	3,414	842	2,000	1,250	-750
534100 POSTAGE	7	0	0	20	20	0
534200 PRINTING	2	37	14	20	20	0
542000 OFFICE SUPPLIES	3,696	2,294	3,113	3,000	3,000	0
559200 BOOKS/MANUALS/PERIODI	48	344	0	0	0	0
571001 PERSONAL EQUIP REIMBU	400	400	400	0	0	0
571100 IN-STATE CONFERENCES	0	0	144	300	300	0
573000 DUES & SUBSCRIPTIONS	583	0	0	600	600	0
TOTAL EXPENSES	11,133	15,273	10,491	14,990	17,240	2,250
FRINGE BENEFITS						
57DENT DENTAL INSURANCE	561	1,063	501	501	528	27
57HLTH HEALTH INSURANCE	41,785	48,099	45,195	47,003	49,543	2,540
57LIFE BASIC LIFE INSURANCE	113	113	104	114	119	5
57MEDA MEDICARE PAYROLL TAX	3,514	5,062	3,710	4,038	4,345	307
57OPEB OPEB CONTRIBUTION	0	3,910	0	0	0	0
TOTAL FRINGE BENEFITS	45,973	58,248	49,511	51,656	54,535	2,879
CAPITAL EXPENSES						
585111 PC HARDWARE-ADMIN	0	0	1,179	0	0	0
TOTAL CAPITAL EXPENSES	0	0	1,179	0	0	0
TOTAL IT ADMINISTRATION	313,523	441,199	331,194	345,155	370,293	25,138

CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL
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	ACTUAL 2020	ACTUAL 2021	ACTUAL 2022	ORIGINAL 2023	RECOMMENDED 2024	CHANGE 2023 to 2024
0111154 - MICRO/NETWORK SVS						
PERSONNEL SERVICES						
511001 FULL TIME SALARIES	708,264	611,677	702,591	812,902	825,519	12,617
514001 LONGEVITY	5,400	4,650	6,150	7,150	8,050	900
514309 OTHER STIPENDS	0	0	10,000	0	0	0
515006 VACATION BUY BACK	9,715	0	15,090	0	0	0
515102 CLEANING ALLOWANCE	500	500	500	500	500	0
TOTAL PERSONNEL SERVICES	723,879	616,827	734,331	820,552	834,069	13,517
EXPENSES						
524010 OFFICE EQUIPMENT R-M	11,169	3,410	3,566	3,500	3,500	0
524100 SOFTWARE MAINTENANC	16,489	8,711	9,104	15,000	15,000	0
571001 PERSONAL EQUIP REIMBU	1,800	1,800	1,600	1,800	1,800	0
TOTAL EXPENSES	29,458	13,921	14,270	20,300	20,300	0
FRINGE BENEFITS						
57DENT DENTAL INSURANCE	3,787	2,966	3,026	2,609	3,175	566
57HLTH HEALTH INSURANCE	124,991	115,961	93,436	119,053	98,515	-20,538
57LIFE BASIC LIFE INSURANCE	241	284	180	114	238	124
57MEDA MEDICARE PAYROLL TAX	9,554	8,128	10,021	11,898	12,551	653
57OPEB OPEB CONTRIBUTION	12,638	9,307	10,855	10,972	14,057	3,085
TOTAL FRINGE BENEFITS	151,211	136,645	117,516	144,646	128,536	-16,110
CAPITAL EXPENSES						
585110 COMPUTER SERVER HAR	6,219	10,808	7,968	5,000	5,000	0
585111 PC HARDWARE-ADMIN	46,029	44,618	130,746	45,000	45,000	0
585120 COMPUTER SERVER SOFT	55,414	34,839	50,201	45,000	45,000	0
585121 PC SOFTWARE-ADMIN	11,444	4,675	13,789	5,000	5,000	0
TOTAL CAPITAL EXPENSES	119,105	94,940	202,704	100,000	100,000	0
TOTAL MICRO/NETWORK SVS	1,023,653	862,333	1,068,821	1,085,498	1,082,905	-2,593

CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL
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	ACTUAL 2020	ACTUAL 2021	ACTUAL 2022	ORIGINAL 2023	RECOMMENDED 2024	CHANGE 2023 to 2024	
0111156 - SYSTEMS PROGRAMMING							
EXPENSES							
524011	GRANICUS/CIVIC R&M	29,700	29,700	18,023	30,000	35,000	5,000
524012	SAN HARDWARE M&S	6,388	40,390	3,563	0	0	0
524013	SAN SOFTWARE M&&S	23,666	10,727	0	0	0	0
524100	SOFTWARE MAINTENANC	60,300	59,911	45,090	62,100	85,000	22,900
524101	REVERSE 911 SOFTWARE	50,500	50,500	52,015	52,015	54,500	2,485
524102	FINANCIAL SOFTWARE MA	0	193,225	428,417	315,000	335,412	20,412
524106	MS OUTLOOK SOFTWARE	89,801	115,000	118,450	125,000	150,000	25,000
524107	FOIA SOFTWARE SUB & M	10,000	4,938	5,238	10,300	10,300	0
524108	KELDAIR SOFTWARE MAIN	9,600	8,415	9,803	10,000	12,000	2,000
524109	DEBTBOOK SOFTWARE				0	13,500	13,500
524111	NEWGOV ANNUAL MAINT				0	140,000	140,000
534040	INTERNET ACCESS CHAR	26,724	23,350	24,802	24,000	24,000	0
534200	PRINTING	0	37	0	0	0	0
542000	OFFICE SUPPLIES			20	0	0	0
558500	COMPUTER SUPPLIES	23,388	12,386	4,447	12,000	12,000	0
	TOTAL EXPENSES	330,067	548,578	709,869	640,415	871,712	231,297
	TOTAL SYSTEMS PROGRAMMING	330,067	548,578	709,869	640,415	871,712	231,297
0111157 - GIS ADMINISTRATION							
PERSONNEL SERVICES							
511001	FULL TIME SALARIES	110,775	113,687	118,880	122,447	125,664	3,217
514001	LONGEVITY	1,000	2,000	2,000	2,000	2,000	0
	TOTAL PERSONNEL SERVICES	111,775	115,687	120,880	124,447	127,664	3,217
EXPENSES							
524100	SOFTWARE MAINTENANC	13,908	17,215	16,092	17,215	17,215	0
558500	COMPUTER SUPPLIES	3,623	2,460	1,463	3,350	3,350	0
571001	PERSONAL EQUIP REIMBU	200	200	200	0	0	0
	TOTAL EXPENSES	17,731	19,875	17,755	20,565	20,565	0
FRINGE BENEFITS							
57HLTH	HEALTH INSURANCE	19,622	20,407	21,224	22,072	23,265	1,193
57MEDA	MEDICARE PAYROLL TAX	1,538	1,597	1,668	1,804	1,858	54
	TOTAL FRINGE BENEFITS	21,160	22,004	22,892	23,876	25,123	1,247
	TOTAL GIS ADMINISTRATION	150,665	157,566	161,527	168,888	173,352	4,464
TOTAL INFORMATION TECHNOLOGY		1,817,909	2,009,676	2,271,411	2,239,957	2,498,262	258,305