

# 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 at an unprecedented level all while continuing to perform daily desktop support.

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 complete challenging tasks.

Key initiatives and accomplishments by the IT Department during Fiscal Year 2022

- Our new financial system – we went live with payroll on January 1, 2021. We expect to offer a web-based employee portal and a contract management system within Munis during 2022.
- Our involvement with the replacement of the permitting system, providing interfaces to GIS and exporting data from existing systems such as Community Plus as well as setting up new tablets and computers.
- Planning and implementation for the replacement of our storage area network and virtual servers.
- 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.
- Rollout of multi-factor authentication for all email accounts.
- We continue to support an active, remote workforce. At the peak, we enabled nearly 100 people to seamlessly work full time from home.
- We are quite pleased with the success of our automated inventory system by Belarc.
- 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.

*Despite the challenges of the pandemic, the Information Technology Department continued to ring up many successes. The professionalism of our department offset the challenges we experienced.*

*Other city departments depend on a solid foundation of infrastructure, technology, resources, and the enthusiasm of the IT staff. In spite of the pandemic and the unavailability of equipment, the Information Technology Department continues to not only support staff near and far on a day-to-day basis but also shines in our participation and support of so many projects.*

- **Financial System Upgrade**

We went live with the final installment of Munis on January 1, 2021. We have officially closed the book on Sungard / Pentamation / FinancePlus. We continue to tweak and modify subsystems and support the new Finance and Payroll Departments as they refine subsystems. We look forward to rolling out an employee portal as well as a Munis-contained contract management system.

- **Covid Response**

IT continues to support all staff whether they are on or off-site or a mix of both. As the pandemic wears on it is apparent to us that our safeguards and advance preparation served us very well.

- **Zoom and Public Meetings**

We support over twenty Zoom accounts with a mix of regular Zooms, webinars, a few licenses count increases and a terabyte of video storage. We have recommendations in place for support and best practices to avoid zoom-bombers. We continue to support full remote as well as hybrid meetings.

- **Website**

We are beginning our third year using the Granicus / Vision content management system. We have trained multiple users in nearly all departments to maintain their own data and documents. We are looking at enhancing the home page with further refinements.

- **Web Development**

We continue to migrate our in-house applications to the Amazon cloud. The benefits of cloud-based storage and application hosting at this level have been quite convenient. By hosting in the cloud, we remove the inherent vulnerabilities associated with on-site hosted systems that constantly require patching, updates, maintenance, and replacement. Any one of these tasks represent a potential security hole that could impact the city. Removing each of these tasks frees up staff time to address other challenges.

- **New Permitting and Municipal Information System**

With phase one in the rearview mirror, we have a very good feel for the NewGov application hosted by OpenGov. The system pulls data daily from GIS. We have exported massive slices of data from CommunityPlus. We have also done exports of smaller stand-alone systems and have removed several isolated applications and reduced our reliance on Microsoft Access. This project has been well led by ISD and our outside consultant Dottie Keene with IT support.

- **Security**

We are very proud of our current security measures. We are actively involved with outside penetration testing, risk assessment, phishing awareness and training, active, subscribed desktop and server antivirus, up-to-date firewalls and load balancing equipment, virtual LANs to segregate IOT equipment, multi-factor-authentication, reviews of software, special attention to domain controllers, Active Directory and strong enforcement of our written policies.

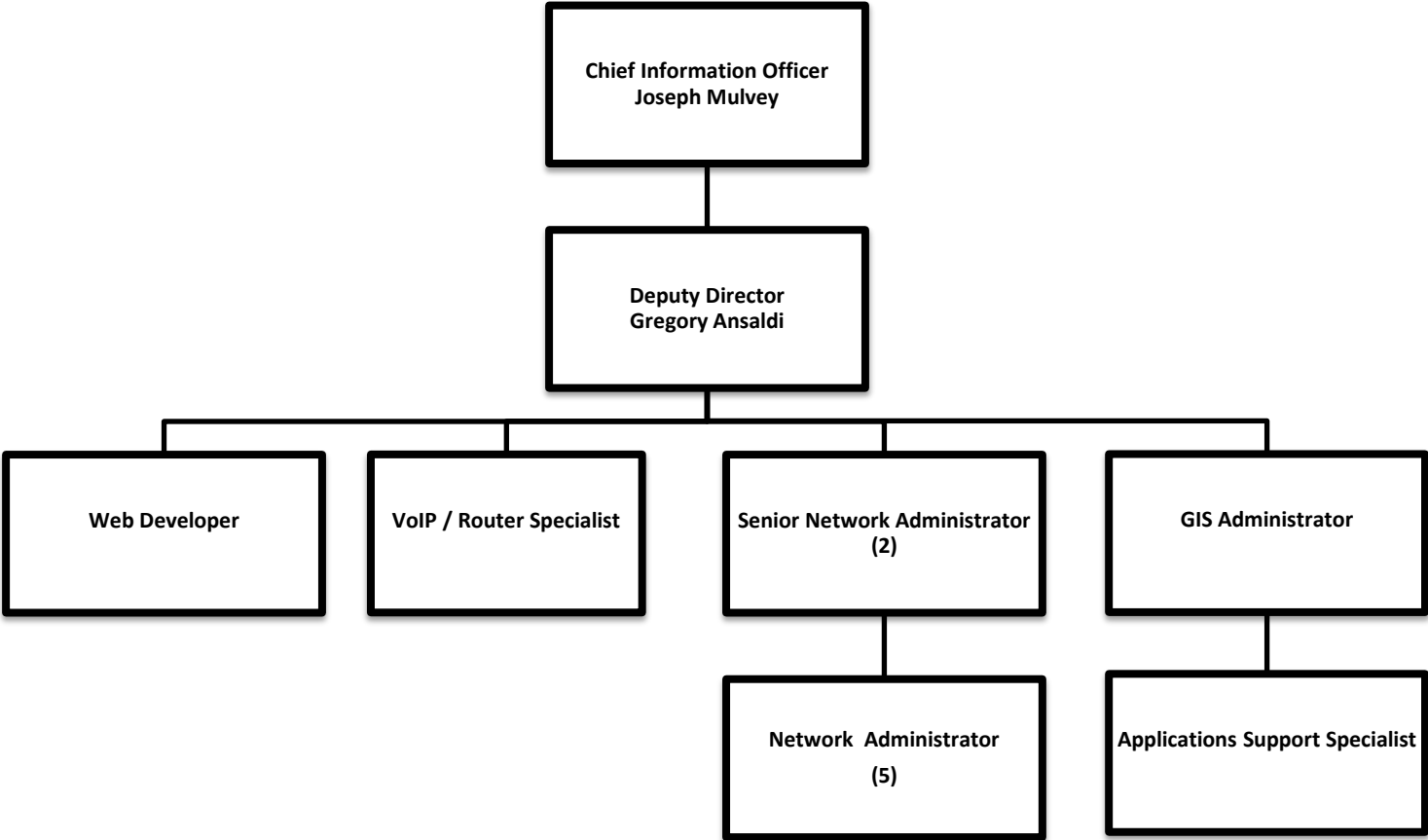
- **Geographic Information Systems**

GIS continues to be a critical facet in the city for a myriad of requirements. Redistricting, waste collection, snow maps, sidewalk assignments, fire hydrants, and critical interfaces to other systems are just some of the features our system accomplishes every day.

*Joseph P. Mulvey*

Chief Information Officer

# INFORMATION TECHNOLOGY



# Financial and Operating Highlights

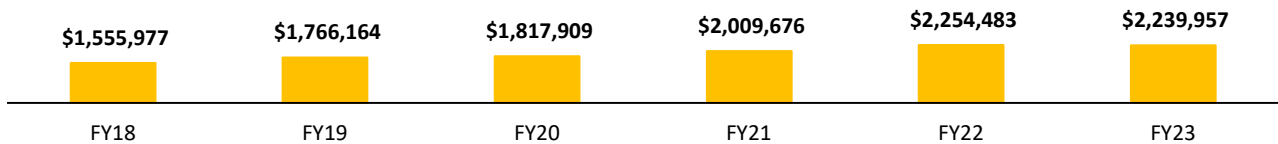
## Financial Highlights

	< -----Actual ----->				Original FY2022	Proposed FY2023
	FY2018	FY2019	FY2020	FY2021		
<b>Expenditure by Department</b>						
Administration	\$ 336,145	\$ 311,761	\$ 313,523	\$ 441,199	\$ 333,669	\$ <b>345,155</b>
Micro/Network	\$ 819,953	\$ 1,006,969	\$ 1,023,653	\$ 862,333	\$ 1,127,266	\$ <b>1,085,498</b>
Systems Program	\$ 260,620	\$ 299,954	\$ 330,067	\$ 548,578	\$ 628,403	\$ <b>640,415</b>
GIS	\$ 139,259	\$ 147,479	\$ 150,665	\$ 157,566	\$ 165,145	\$ <b>168,888</b>
<b>Total</b>	\$ 1,555,977	\$ 1,766,164	\$ 1,817,909	\$ 2,009,676	\$ 2,254,483	\$ <b>2,239,957</b>
<b>% Incr</b>	6.52%	13.51%	2.93%	10.55%	12.18%	-0.64%

## Personnel

Full-Time Employees	11	12	12	13	13	<b>13</b>
Part-Time Employees	0	0	1	1	0	<b>0</b>
<b>Total</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>13</b>	<b>13</b>

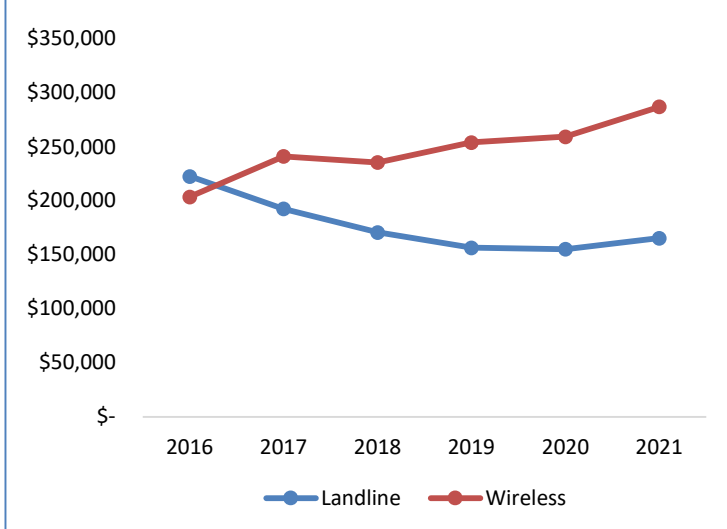
## Total IT Expenditures



## Operating Highlights

Municipal Email Accts	798
Email Rec.Last 6 mos	1,954,653
<b>Storage Area Network</b>	
Total Space	31.4 TB
Available Space	5.3 TB
<b>Reduce Non-Emergency 911 Calls</b>	
Fire Box Alarm App	6,438
<b>Number of GIS Layers</b>	220
<b>TimeMatters All Cases</b>	15,832
<b>Buildings on City Fiber</b>	64
<b>Security</b>	
Phishing Test Emails	14,742
<b>Website</b>	
Pageviews last year	3,184,728
Homepage Visits	505,227
<b>Online Census Receipts</b>	12,713

## Annual Costs: Cell & Landline



# Information Technology Department

## Fiscal Year 2023 Outcomes and Strategies

Especially in these most trying times with a pandemic, we know attention to security can easily fall by the wayside. Security measures must never be an afterthought. There are so many different types of threats: remote access, mobile devices, email, perimeter devices, vendor equipment, viruses, bots, ransomware, impersonation, and phishing.

The first line of defense is always an educated staff. We continue to promote our phishing awareness campaigns; we have also done poster campaigns and new to-the-point training videos.

Our critical hardware is duplicated for redundancy. Our firewalls and load balancers have been replaced. Our data center is duplicated off site. We have a mobile device plan, a mobile device policy and SOPs, and continually review staff on best practices. We see the bad actors knocking on the firewall doors.. We work with the Department of Homeland Security and regularly update 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 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 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

---

The multi-year conversion into Munis 11.3 was a success. It took a lot of time and effort. It was implementing with continuity in paychecks, benefits, vendor payments. It consolidated our financial system into a single silo, a desire that has been listed as a long-term goal for many years.

We continue to roll out additional modules and features as well as reviewing salary, overtime and benefits systems. A financial system will always be in some form of transformation whether it is calendar-based changes, union contract agreements, changes in the myriad rate tables, state and federal changes, and more.

---

Phase I of NewGov, our new permitting and information management system, has gone live after 15 years relying on

CommunityPlus. Phase I includes mechanical permits – plumbing, gas, and electrical permits comprise the most

permits in our system. NewGov is a cloud-based, scalable, tailor-able solution that accommodates any workflow, unlimited storage, online application and payments and an ease of use that residents and contractors have never before experienced with Newton permits. We expect Phase II to cover Building permits in the spring of 2022. IT staff continue to support this project on the back end with key interactions involving Community Plus, GIS, smaller, stand-alone systems, and access to attachments.

---

## Outcome 3

### Assist in the Implementation of NewGov

---

---

## Outcome 4

### Develop an In-house, Online Document Tracking System for the City Council

---

When President Albright first approached us with the proposal of an in-house development of a cloud-based docket-tracking system, I knew that the scope of work could be quite daunting for our IT Department web developer. Three different companies had failed to meet our

requirements and minimal expectations. 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, and 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  
DEPARTMENTAL DETAIL

	ACTUAL 2019	ACTUAL 2020	ACTUAL 2021	ORIGINAL 2022	RECOMMENDED 2023	CHANGE 2022 to 2023
<b>111 - INFORMATION TECHNOLOGY</b>						
<b>0111153 - IT ADMINISTRATION</b>						
<b>PERSONNEL SERVICES</b>						
511001 FULL TIME SALARIES	238,326	247,408	363,178	265,454	273,509	8,055
511101 PART TIME < 20 HRS/WK	6,534	4,509	0	0	0	0
514001 LONGEVITY	5,500	4,500	4,500	4,500	5,000	500
<b>TOTAL PERSONNEL SERVICES</b>	<b>250,360</b>	<b>256,417</b>	<b>367,678</b>	<b>269,954</b>	<b>278,509</b>	<b>8,555</b>
<b>EXPENSES</b>						
527400 RENTAL - EQUIPMENT	1,268	1,685	1,502	1,900	1,900	0
531900 TRAINING EXPENSES	7,710	0	7,180	5,000	7,000	2,000
534010 TELEPHONE	141	88	103	150	150	0
534020 CELLULAR TELEPHONES	3,185	4,624	3,414	3,000	2,000	-1,000
534100 POSTAGE	8	7	0	20	20	0
534200 PRINTING	0	2	37	20	20	0
542000 OFFICE SUPPLIES	4,170	3,696	2,294	3,000	3,000	0
548000 GASOLINE	29	0	0	0	0	0
559200 BOOKS/MANUALS/PERIODI	0	48	344	0	0	0
571001 PERSONAL EQUIP REIMBU	0	400	400	0	0	0
571100 IN-STATE CONFERENCES	271	0	0	300	300	0
573000 DUES & SUBSCRIPTIONS	281	583	0	600	600	0
<b>TOTAL EXPENSES</b>	<b>17,064</b>	<b>11,133</b>	<b>15,273</b>	<b>13,990</b>	<b>14,990</b>	<b>1,000</b>
<b>FRINGE BENEFITS</b>						
57DENT DENTAL INSURANCE	560	561	1,063	501	501	0
57HLTH HEALTH INSURANCE	40,178	41,785	48,099	45,195	47,003	1,808
57LIFE BASIC LIFE INSURANCE	113	113	113	114	114	0
57MEDA MEDICARE PAYROLL TAX	3,460	3,514	5,062	3,914	4,038	124
57OPEB OPEB CONTRIBUTION	0	0	3,910	0	0	0
<b>TOTAL FRINGE BENEFITS</b>	<b>44,311</b>	<b>45,973</b>	<b>58,248</b>	<b>49,725</b>	<b>51,656</b>	<b>1,932</b>
<b>CAPITAL EXPENSES</b>						
585111 PC HARDWARE-ADMIN	27	0	0	0	0	0
<b>TOTAL CAPITAL EXPENSES</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL IT ADMINISTRATION</b>	<b>311,761</b>	<b>313,523</b>	<b>441,199</b>	<b>333,669</b>	<b>345,155</b>	<b>11,486</b>

<b>CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL</b>
--

		ACTUAL 2019	ACTUAL 2020	ACTUAL 2021	ORIGINAL 2022	RECOMMENDED 2023	CHANGE 2022 to 2023
<b>0111154 - MICRO/NETWORK SVS</b>							
<b>PERSONNEL SERVICES</b>							
511001	FULL TIME SALARIES	710,086	708,264	611,677	810,960	812,902	1,942
514001	LONGEVITY	5,500	5,400	4,650	6,900	7,150	250
514309	OTHER STIPENDS	0	0	0	10,000	0	-10,000
515005	BONUSES	10,300	0	0	20,000	0	-20,000
515006	VACATION BUY BACK	0	9,715	0	0	0	0
515102	CLEANING ALLOWANCE	500	500	500	500	500	0
<b>TOTAL PERSONNEL SERVICES</b>		<b>726,386</b>	<b>723,879</b>	<b>616,827</b>	<b>848,360</b>	<b>820,552</b>	<b>-27,808</b>
<b>EXPENSES</b>							
524010	OFFICE EQUIPMENT R-M	13,500	11,169	3,410	3,500	3,500	0
524100	SOFTWARE MAINTENANC	14,765	16,489	8,711	15,000	15,000	0
532100	TUITION ASSISTANCE	500	0	0	0	0	0
548000	GASOLINE	31	0	0	0	0	0
571001	PERSONAL EQUIP REIMBU	0	1,800	1,800	1,800	1,800	0
<b>TOTAL EXPENSES</b>		<b>28,796</b>	<b>29,458</b>	<b>13,921</b>	<b>20,300</b>	<b>20,300</b>	<b>0</b>
<b>FRINGE BENEFITS</b>							
57DENT	DENTAL INSURANCE	3,538	3,787	2,966	3,612	2,609	-1,002
57HLTH	HEALTH INSURANCE	111,633	124,991	115,961	122,880	119,053	-3,827
57LIFE	BASIC LIFE INSURANCE	203	241	284	285	114	-171
57MEDA	MEDICARE PAYROLL TAX	9,776	9,554	8,128	11,866	11,898	32
57OPEB	OPEB CONTRIBUTION	10,421	12,638	9,307	13,963	10,972	-2,991
<b>TOTAL FRINGE BENEFITS</b>		<b>135,572</b>	<b>151,211</b>	<b>136,645</b>	<b>152,606</b>	<b>144,646</b>	<b>-7,960</b>
<b>CAPITAL EXPENSES</b>							
585110	COMPUTER SERVER HAR	9,997	6,219	10,808	8,000	5,000	-3,000
585111	PC HARDWARE-ADMIN	49,969	46,029	44,618	45,000	45,000	0
585120	COMPUTER SERVER SOF	38,649	55,414	34,839	45,000	45,000	0
585121	PC SOFTWARE-ADMIN	17,601	11,444	4,675	8,000	5,000	-3,000
<b>TOTAL CAPITAL EXPENSES</b>		<b>116,215</b>	<b>119,105</b>	<b>94,940</b>	<b>106,000</b>	<b>100,000</b>	<b>-6,000</b>
<b>TOTAL MICRO/NETWORK SVS</b>		<b>1,006,969</b>	<b>1,023,653</b>	<b>862,333</b>	<b>1,127,266</b>	<b>1,085,498</b>	<b>-41,768</b>



<b>CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL</b>
--

	ACTUAL 2019	ACTUAL 2020	ACTUAL 2021	ORIGINAL 2022	RECOMMENDED 2023	CHANGE 2022 to 2023	
<b>0111156 - SYSTEMS PROGRAMMING</b>							
<b>EXPENSES</b>							
524011	GRANICUS/CIVIC R&M	29,700	29,700	29,700	30,591	30,000	-591
524012	SAN HARDWARE M&S	7,820	6,388	40,390	0	0	0
524013	SAN SOFTWARE M&S	12,000	23,666	10,727	0	0	0
524100	SOFTWARE MAINTENANC	60,856	60,300	59,911	62,109	62,100	-9
524101	REVERSE 911 SOFTWARE	50,500	50,500	50,500	52,015	52,015	0
524102	FINANCIAL SOFTWARE MA	0	0	193,225	301,050	315,000	13,950
524106	MS OUTLOOK SOFTWARE	79,180	89,801	115,000	118,450	125,000	6,550
524107	FOIA SOFTWARE SUB & M	10,446	10,000	4,938	10,300	10,300	0
524108	HYRELL SOFTWARE SUB&	6,600	9,600	8,415	9,888	10,000	112
534040	INTERNET ACCESS CHAR	28,783	26,724	23,350	32,000	24,000	-8,000
534200	PRINTING	4	0	37	0	0	0
558500	COMPUTER SUPPLIES	14,066	23,388	12,386	12,000	12,000	0
<b>TOTAL EXPENSES</b>		<b>299,954</b>	<b>330,067</b>	<b>548,578</b>	<b>628,403</b>	<b>640,415</b>	<b>12,012</b>
<b>TOTAL SYSTEMS PROGRAMMING</b>		<b>299,954</b>	<b>330,067</b>	<b>548,578</b>	<b>628,403</b>	<b>640,415</b>	<b>12,012</b>
<b>0111157 - GIS ADMINISTRATION</b>							
<b>PERSONNEL SERVICES</b>							
511001	FULL TIME SALARIES	106,704	110,775	113,687	118,854	122,447	3,593
514001	LONGEVITY	0	1,000	2,000	2,000	2,000	0
<b>TOTAL PERSONNEL SERVICES</b>		<b>106,704</b>	<b>111,775</b>	<b>115,687</b>	<b>120,854</b>	<b>124,447</b>	<b>3,593</b>
<b>EXPENSES</b>							
524100	SOFTWARE MAINTENANC	15,963	13,908	17,215	17,215	17,215	0
531900	TRAINING EXPENSES	594	0	0	100	0	-100
558500	COMPUTER SUPPLIES	3,871	3,623	2,460	4,000	3,350	-650
571001	PERSONAL EQUIP REIMBU	0	200	200	0	0	0
<b>TOTAL EXPENSES</b>		<b>20,428</b>	<b>17,731</b>	<b>19,875</b>	<b>21,315</b>	<b>20,565</b>	<b>-750</b>
<b>FRINGE BENEFITS</b>							
57HLTH	HEALTH INSURANCE	18,868	19,622	20,407	21,224	22,072	849
57MEDA	MEDICARE PAYROLL TAX	1,479	1,538	1,597	1,752	1,804	52
<b>TOTAL FRINGE BENEFITS</b>		<b>20,347</b>	<b>21,160</b>	<b>22,004</b>	<b>22,976</b>	<b>23,876</b>	<b>900</b>
<b>TOTAL GIS ADMINISTRATION</b>		<b>147,479</b>	<b>150,665</b>	<b>157,566</b>	<b>165,145</b>	<b>168,888</b>	<b>3,743</b>
<b>TOTAL INFORMATION TECHNOLOGY</b>		<b>1,766,164</b>	<b>1,817,909</b>	<b>2,009,676</b>	<b>2,254,483</b>	<b>2,239,957</b>	<b>-14,526</b>