

Information Technology

The Information Technology Department manages four separate funds, all of which are presented in this section, that provide all of the technology services county-wide including infrastructure, program development, support and maintenance, data systems, and geographic information systems. Information Technology is responsible for three divisions: Administration and Strategic Planning, Software Development and IT Operations, which includes Telecommunications. The new REET Electronic Technology Fund has also been placed in this section as it is technology related and the IT Department will have shared oversight of the activities in this account.

Major Accomplishments in 2008

Activity during 2008 in the **Auditor's Maintenance & Operations Fund** included the following: Pierce County Public Works and Utilities Electronic Records Management Project - Since installation of new imaging hardware and software, approximately 10,000 pages have been imaged to date of all sewer utility correspondence (Jan-Nov) and Pierce County Responds correspondence (Sept-Oct).

Auditor's Office - Efforts involved equipment replacement, a major platform conversion, and ongoing staff activities. Two desk top scanners, one large format printer, and large map scanner were replaced. The Anthem database was migrated from Oracle to Microsoft SQL enabling future savings and efficiencies. The Auditor's office went live with e-Recording in November. A significant Imaging Conversion Project involving all of the images from 1984 through 1998 was initiated in December and will be completed by mid-year 2009.

Pierce County Clerks Project - The scanning of newly filed court pleadings and the archiving of older, inactive case matters resulted in the creation of more than 11.1 million digital images (5.4 million current, and 5.7 million archive). The digitization of these records allowed for the destruction of the original paper documents which ultimately reduced the Clerk's physical storage requirements for court records by more than 1,200 linear feet (just under one quarter of a mile).

Pierce County **Geographic Information Systems** has completed a "refresh" of the county GIS system to lower capital equipment expenditures and stabilize yearly equipment costs by leasing instead of buying. The leased system cost over four years is 30% less than the purchased price for the equipment. This strategy provides a consistent and expected yearly equipment cost for budgeting and upgrades the processing capacity and power every four years.

Pierce County GIS provided CountyView subscription services to seven cities, the Health Department, Firecom, the Law Enforcement Support Agency, Port of Tacoma, Pierce Transit, United Way, a school district, Spokane County and 12 engineering firms for a revenue stream of approximately \$250,000 per year; in 2008.

To date, Pierce County has received over \$1.3 million in royalties based upon its GIS school threat mapping software, Pierce Responder, originally created in conjunction with the Columbine shooting tragedy. The software was purchased by Prepared Response, Inc. in exchange for a percentage of PRI's gross revenues from various services. The money is used to provide additional GIS services to county departments.

Projects to evaluate alternatives and assess risks showcased the business value of GIS data analysis to county departments and included: where sex offenders reside, their relative location to schools and daycares, most significant clusters, and socio-economic correlations to help law enforcement address the management of offenders; medical examiner case locations, comparison with vulnerable populations, and cluster analysis of suicides and infant deaths to quantify work load issues; and possible locations and justification for a new district court based on client locations, travel times in the county, and case load versus population analysis.

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The newest mobile GIS field applications include an integrated AVL/GPS/GIS system that enables tracking of GPS devices and viewing the data in the enterprise GIS. Another application, useful during emergencies when county staff are responding to events and reporting damages, is now deployed on Blackberries to allow viewing of corporate GIS map data, the recording of a location/attribution, and immediate data updates to the master county database.

GIS is completing the update of the 2008 enterprise orthophotography imagery database as well as updating planimetrics and topography in areas of large change. To maximize cost sharing and minimize product cost, the program is funded by all county departments, five cities, and seven engineering firms which split the cost between 25 entities. The program's success has allowed the County to additionally procure an impervious surface dataset, color-infrared imagery and updated LIDAR (light detection and ranging) terrain data.

Pierce County with **IT Operations** leadership funded, designed, contracted construction, and put into operation a new state of the art 1000 sq. ft. back-up data center that has greatly enhanced business continuity of Pierce County IT. This included relocation of the Annex PBX and all Co-location servers and services to this new "Delta Data Center."

Major department initiative support included: a supported move to new state of the art elections center and use of technology for successful Presidential and new rank choice voting election; helped with construction and occupation of a new, highly dependent on technology, regional Emergency Operations Center; assisted solution planning for Public Works Ferry camera system; upgraded Sheriff Corrections Inmate phone system, and provided new Voice Call Management processes.

PALS Zucker Report support included: installing a state of the art automated call handling system to be used by the Planning and Land Services Department to provide better telephone call handling encompassing call service statistics, intelligent call routing, expected wait times for answer, and option to leave messages without terminating the call.

IT Operation's Greening of IT initiative, in support of Pierce County's sustainability efforts, continues taking steps towards reducing PC-related power consumption through the use of Verdiem Surveyor software to realize energy cost-savings. We have also made extensive use of virtual machines not only for better provisioning of server environments and disaster recovery, but to further reduce power, space, and cooling needs. IT Ops also encouraged duplex printing through marketing and removal of all single sided printers from our bid list.

Two IT Operations staff, members of the multi-department Lenel Core Team, were recipients of the Pierce County Standing Ovation Change Champions award for their work on the smooth implementation of the Lenel card reader security system and their work on County security policies and strategies including the assignment of security responsibility to Facilities Management and the hiring of the County's first Security Manager.

IT Operations successfully piloted Microsoft Exchange and Outlook tools and proposed a County-wide migration to this new messaging platform to be completed 1st quarter 2009, and migrated all client devices from Novell E-Directory to Microsoft Active Directory (AD) as the primary access authentication. As part of this migration, a self-service password reset and change tool was implemented that included automatic password synchronization across eight systems and established an AD Trust with LESA allowing LESA users to use their Pierce County credentials to login to LESA simplifying the work environment of hundreds of County employees.

Infrastructure related initiatives included expanding and enhancing virtual server platforms to add this capability for Internet servers and deploying a NetApp SAN (storage area network) infrastructure to support storage needs. The SAN environment allowed consolidation of numerous silos of other types of storage for more rapid deployments, better utilization and management of available space, and improved business continuity with replication between primary and backup data centers. Furthermore, new backup processes are in development to provide better offsite disaster recovery storage in the event of a catastrophic regional event. The DB2 Database management software, zOs operating system, and all supporting software components near end of support life were upgraded to much more current release levels. Testing was also done to replace stand alone storage with storage provided on the NetApp Enterprise storage environment. The combination of x86 Linux/servers and more flexible enterprise storage should allow more dynamic

Information Technology

growth for existing and new Sybase DBMS applications. IT Operations staff were an integral part of the upgrade/replacement of the entire GIS server complex, a rigorous process of facility preparation for power, equipment racking, and network support.

DEPARTMENT BUDGETS

Department Name	2008 Budget	2009 Budget	Absolute Change	Percent Change
Auditor's Maint & Oper Fund	\$ 1,493,790	\$ 1,597,180	\$ 103,390	6.9 %
GIS Fund	4,286,870	3,611,830	(675,040)	(15.7)
Information Technology Fund	19,722,190	20,261,820	539,630	2.7
REET Electronic Technology Fund	300,000	370,000	70,000	23.3
Total Information Services	\$ 25,802,850	\$ 25,840,830	\$ 37,980	0.1 %

Auditor's Maintenance & Operations Fund

Special Revenue Fund

Departmental Summary:

The Auditor's Maintenance and Operation Fund receives a portion of a surcharge on each document recorded by the County Auditor. According to state law, half of the surcharge is retained by the County to be used for the ongoing preservation of historical documents. The other half is remitted to the State of Washington Centennial Document Preservation and Modernization Fund. A portion of the state's share is returned to each county to be used for the installation and maintenance of an improved system for copying, preserving, and indexing documents recorded by the County.

Budget Highlights:

The 2009 Auditor's Maintenance and Operations Fund (also known as the Imaging Fund) provides for the following major items:

- a) Auditors Staff who perform these above described functions;
- b) An ITS position to support County-wide policies/procedures/system development and coordination;
- c) Preservation of Historical Documents service contract;
- d) Conversion to Digital Records (Auditor's Office);
- e) Annual Hardware/Software System Maintenance Contracts (Auditor's Office);
- f) A new ITS position to implement the electronic filing project for the Clerks office and Superior Court; and
- g) Carryover completion of the Public Works electronic records management system project.

FUNDING SOURCES

	2006 Actual	2007 Actual	2008 Budget	2009 Budget	Absolute Change	Percent Change
Est Use of Begin Fund Balance	\$ —	\$ —	\$ 593,790	\$ 777,180	\$ 183,390	30.9 %
Intergovernmental Revenue	295,224	321,348	300,000	265,000	(35,000)	(11.7)
Charges for Services	664,447	580,019	600,000	555,000	(45,000)	(7.5)
Miscellaneous Revenue	20	—	—	—	—	—
Total	\$ 959,691	\$ 901,367	\$ 1,493,790	\$ 1,597,180	\$ 103,390	6.9 %

Auditor's Maintenance & Operations Fund

EXPENDITURES

	2006 Actual	2007 Actual	2008 Budget	2009 Budget	Absolute Change	Percent Change
Salaries & Wages	\$ 68,069	\$ 52,964	\$ 307,360	\$ 387,190	\$ 79,830	26.0 %
Personnel Benefits	24,485	21,921	120,290	155,060	34,770	28.9
Supplies	86,817	16,591	41,820	25,570	(16,250)	(38.9)
Other Services & Charges	561,826	217,910	1,024,320	689,360	(334,960)	(32.7)
Capital Outlays	5,295	417,526	—	340,000	340,000	∞
Total	\$ 746,492	\$ 726,912	\$ 1,493,790	\$ 1,597,180	\$ 103,390	6.9 %

STAFFING SUMMARY

	2004 FTE	2005 FTE	2006 FTE	2007 FTE	2008 FTE	2009 FTE
Information Tech Spec	—	—	—	—	1.00	2.00
Recording/Licensing Technician	—	—	2.00	2.00	1.70	3.70
Clerical Aide	—	—	—	—	3.00	1.00
Office Assistant	0.50	0.50	0.50	—	—	—
Total	0.50	0.50	2.50	2.00	5.70	6.70

Geographic Information System Fund

Special Revenue Fund

Departmental Summary:

Pierce County uses geographic information to perform a variety of activities related to property assessment, planning, public works, voter registration, health and emergency services, and numerous other tasks. The information is both graphic (maps) and non-graphic (manual and automated tabular files). The GIS project is funded to provide staff, hardware, software, and support resources to client departments who utilize GIS services and are participating in development of the system.

Budget Highlights:

The 2009 GIS budget reflects inflationary increases for staff and other operating expenses, County-wide software acquisition and system maintenance support, and server rental expenses. The 2009 budget is considerably below 2008 due to:

- a) No ortho flights in 2009; and
- b) Significant reduction in Information Technology expenses charged to this fund.

Performance Measures

- 1) By year's end, GIS will expand the deployment of GPS technology to at least two county departments or subscribing agencies in the areas of disaster recovery, public works, or employee safety by integrating various types of mobile data capture devices with the county's enterprise GIS. (Goals C, E, H)

FUNDING SOURCES							
	2006	2007	2008	2009	Absolute	Percent	
	Actual	Actual	Budget	Budget	Change	Change	
Est Use of Begin Fund Balance	\$ —	\$ —	\$ 975,720	\$ 782,980	\$ (192,740)		(19.8) %
Intergovernmental Revenue	13,697	2,303	7,500	—	(7,500)		(100.0)
Charges for Services	431,410	322,532	323,000	276,000	(47,000)		(14.6)
Miscellaneous Revenue	314,722	219,184	100,000	125,000	25,000		25.0
Other Financing Sources	2,222,099	4,273,350	2,880,650	2,427,850	(452,800)		(15.7)
Total	\$ 2,981,928	\$ 4,817,369	\$ 4,286,870	\$ 3,611,830	\$ (675,040)		(15.7) %

Geographic Information System Fund

PROGRAM EXPENDITURES						
	2008	2009	2008	2009	Absolute	Percent
	FTE	FTE	Budget	Budget	Change	Change
Administration	2.30	2.30	\$ 953,250	\$ 523,170	\$ (430,080)	(45.1) %
Pierce Responder	1.00	1.00	149,270	156,450	7,180	4.8
Database Development	19.70	19.70	2,769,770	2,841,530	71,760	2.6
Orthophotography/Contours	—	—	414,580	90,680	(323,900)	(78.1)
Total	23.00	23.00	\$ 4,286,870	\$ 3,611,830	\$ (675,040)	(15.7) %

STAFFING SUMMARY						
	2004	2005	2006	2007	2008	2009
	FTE	FTE	FTE	FTE	FTE	FTE
GIS Manager	1.00	1.00	1.00	1.00	1.00	1.00
Information Tech Spec	12.00	12.00	13.00	14.00	15.00	15.00
GIS Technician	4.00	4.00	5.00	5.00	5.00	5.00
Office Assistant	—	—	—	—	2.00	2.00
Total	17.00	17.00	19.00	20.00	23.00	23.00

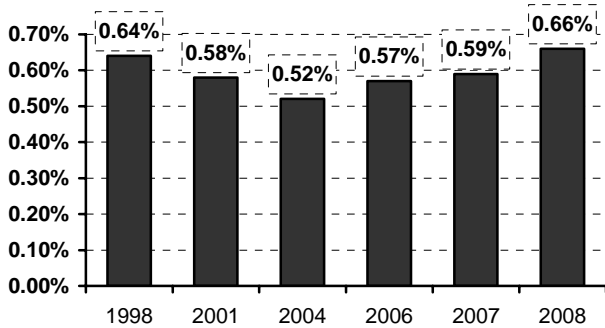
WORKLOAD SERVICE DATA							
	Unit of	2004	2005	2006	2007	2008	2009
	Measure	Actual	Actual	Actual	Actual	Estimate	Estimate
GIS Data Storage	Gigabytes	3,000	6,000	9,000	12,000	21,000	25,000
CountyView Users ¹	Persons	700	700	790	800	1,000	1,000
Number of Business Applications	System				80	85	97
Application Development	Hours	13,728	12,800	10,618	11,468	13,598	12,775
Support/Training	Hours	10,400	10,400	9,035	6,969	7,974	7,974
DataBase Construction/Maint/Mgt.	Hours	11,440	10,520	12,799	18,593	17,868	19,948
Data Requests Processed ²	Number	153	190	214	183	150	100
Subscribers	Persons	—	75	90	155	200	225

¹New technology acquired in 2004 (IBM Blades).

²Companies will sign up to directly access CountyView Web as subscribers

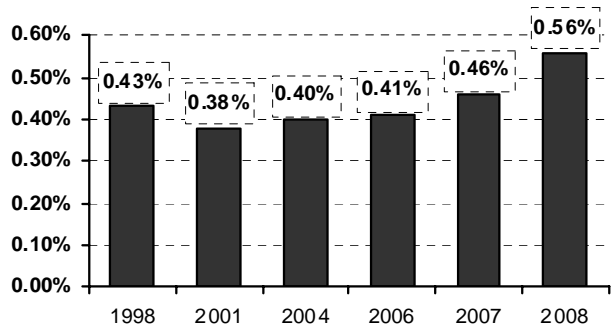
BUDGET RATIOS

Percent of Total County Employees



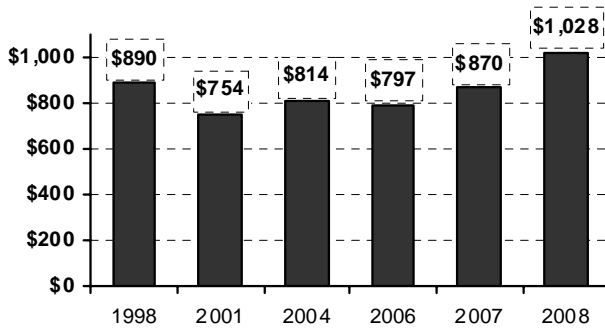
❖ From 1998 to 2008 GIS employees as a percent of all County regular employees increased 4%. The ten year average is 0.58%.

Percent of Total County Expenditures



❖ From 1998 to 2008 GIS expenditures, excluding Orthophotography/Contours costs, as a percent of all County expenditures increased 29%. The ten year average is 0.42%.

Expenditures per County Employee



❖ From 1998 to 2008 GIS expenditures per County regular employee increased 15% after adjusting for inflation. The ten year average is \$807.

Geographic Information System Fund

Information Technology Fund

Internal Service Fund

The Information Technology Department delivers solution-oriented information technology services that empower and support our customers in the accomplishment of their missions.

Departmental Summary:

Administration and Strategic Planning facilitates the development of the County's information technology plans, provides fiscal and administrative support and services to the departments and performs special projects.

Software Development writes, acquires, modifies, tests and implements new or modified application systems.

IT Operations manages and maintains both the County's centralized and distributed computing environments including all client computers, all servers, the data and voice networks, external connectivity, messaging systems, infrastructure security, multiple data centers, a Service Desk Call Center, voice communications, and support for a wide variety of applications.

Budget Highlights:

The Information Technology Fund budget for fiscal 2009 is 2.7% above the prior year's level. This budget reflects the following items:

- a) Inflationary increases for staff and operating costs;
- b) Infrastructure software and hardware expenses necessary to support or enhance the county systems;
- c) The reduction of two positions; and
- d) The transition to Microsoft Exchange for our messaging platform.

This proposed budget will require the use of \$753,410 in fund balance, mostly allocated for (d) above.

Performance Measures

- 1) By the end of the second quarter, 2009, finish an important step in our adoption of the ITIL framework by completing our Service Portfolio to include a Service Catalogue with associated published rates for users. ^(Goal H)
- 2) IT Operations will continue to support initiatives that improve the efficiency of the use of IT technology on limited resources. Through the first full year of using power saving technologies on our computers, we expect to save the County over \$35,000 in electrical costs by the end of 2009. IT Operations will also advocate more efficient use of printer supplies such as paper and ink cartridges. Virtual server technology will be used to solve as many server needs as possible expanding the VM count by 50% by the end of 2009. ^(Goal H)
- 3) By year's end migrate the County's email system to the Microsoft Exchange platform. Using the market leading email system will allow improved interoperability with regional agencies, improved employee productivity from better office systems integration, and decreased employee training needs (saving 160 days of productivity a year). ^(Goal H)
- 4) Improve the efficiency of County business operations by deploying additional on-line processing capabilities via the Pierce County Internet site for County business functions (LINX, PALS Online, and Online Jobs) and increasing the number of 2009 external site visits by 15% over 2008. ^(Goals E, H)

Information Technology Fund

5) By year end, survey all executive departments to align ITD's Strategic Information

Technology Plan with the business needs of those departments. (Goals E, H)

FUNDING SOURCES

	2006 Actual	2007 Actual	2008 Budget	2009 Budget	Absolute Change	Percent Change
Est Use of Begin Fund Balance	\$ —	\$ —	\$ 322,410	\$ 753,410	\$ 431,000	133.7 %
Charges for Services	16,373,086	18,202,742	19,291,630	19,508,410	216,780	1.1
Miscellaneous Revenue	15,123	61,561	—	—	—	—
Other Financing Sources	192,740	438,979	108,150	—	(108,150)	(100.0)
Total	\$ 16,580,949	\$ 18,703,282	\$ 19,722,190	\$ 20,261,820	\$ 539,630	2.7 %

PROGRAM EXPENDITURES

	2008 FTE	2009 FTE	2008 Budget	2009 Budget	Absolute Change	Percent Change
Information Tech Acq Pgm	0.15	0.15	\$ 528,040	\$ 386,030	\$ (142,010)	(8.1) %
Admin/Special Projects	19.23	18.23	2,411,460	2,455,090	43,630	1.6
Telecommunications	5.85	5.85	1,584,440	1,630,550	46,110	3.0
PC Lifecycle	0.29	0.29	362,950	360,510	(2,440)	(0.7)
IT Operations	58.98	57.98	7,277,430	7,665,550	388,120	5.4
Software Development	34.00	34.00	4,714,040	4,777,540	63,500	1.4
Enterprise Infrastructure	—	—	2,843,830	2,986,550	142,720	5.1
Total	118.50	116.50	\$ 19,722,190	\$ 20,261,820	\$ 539,630	2.7 %

WORKLOAD SERVICE DATA

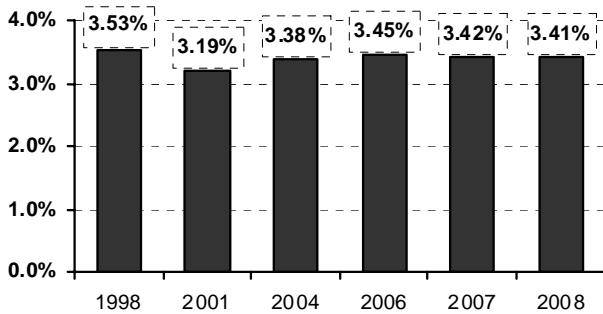
	Unit of Measure	2004 Actual	2005 Actual	2006 Actual	2007 Actual	2008 Estimate	2009 Estimate
Software Development Time	Hours	51,570	50,241	52,579	52,579	54,450	54,450
IT Operations Billable Time	Hours	36,427	38,920	37,857	37,014	37,332	37,332
Users of Pierce County Systems	Number	3,600	3,644	3,693	3,757	3,807	3,857
Personal Computers Supported	Number	4,535	4,860	4,999	4,979	4,800	4,900
Personal Computers Purchased	Number	1,025	1,043	992	925	950	975
DASD Storage	Gigabytes	19,925	25,133	35,200	35,200	102,000	130,000
Service Desk Calls	Number	11,462	11,499	12,051	11,699	12,152	12,895
Telecommunications Wrk Orders	Number	308	289	283	300	280	129

Information Technology Fund

STAFFING SUMMARY						
	2004 FTE	2005 FTE	2006 FTE	2007 FTE	2008 FTE	2009 FTE
Dir - Information Technology	1.00	1.00	1.00	1.00	1.00	1.00
Communication Supv - IT	1.00	1.00	1.00	1.00	1.00	1.00
Information Tech Spec	77.00	79.00	85.00	88.00	93.00	92.00
Admin/Strategic Plng Mgr	1.00	1.00	1.00	1.00	1.00	1.00
PC & Network Services Mgr	1.00	1.00	1.00	1.00	1.00	1.00
Software Development Mgr	1.00	1.00	1.00	1.00	1.00	1.00
Fiscal Services Manager	1.00	1.00	1.00	1.00	1.00	1.00
Production Services Mgr	1.00	1.00	1.00	1.00	1.00	1.00
Help Desk Specialist	3.00	3.00	3.00	2.00	1.00	1.00
Operator/Network Tech	5.00	5.00	5.00	5.00	5.00	5.00
Telecomm Network Spec	1.00	1.00	1.00	2.00	2.00	2.00
Telecommunications Coord	2.00	2.00	2.00	2.00	2.00	2.00
Supervisory Admin Asst	—	—	—	1.00	1.00	1.00
Information Tech Trainee	2.00	1.00	3.00	3.00	2.00	1.00
Administrative Aide	2.00	2.00	1.00	1.00	1.00	1.00
Accounting Assistant	2.00	2.00	2.00	2.00	2.00	2.00
Office Assistant	3.00	3.00	2.00	2.00	2.00	2.50
Data Entry Tech	2.00	2.00	0.50	0.50	0.50	—
Telecommunications Tech	1.00	1.00	1.00	—	—	—
Administrative Assistant	1.00	1.00	1.00	—	—	—
Permit/Dev Counter Tech	1.00	1.00	—	—	—	—
Operations Supervisor	1.00	1.00	1.00	—	—	—
Total	110.00	111.00	114.50	115.50	118.50	116.50

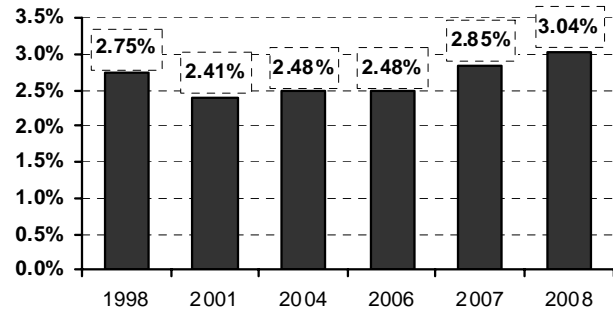
BUDGET RATIOS

Percent of Total County Employees



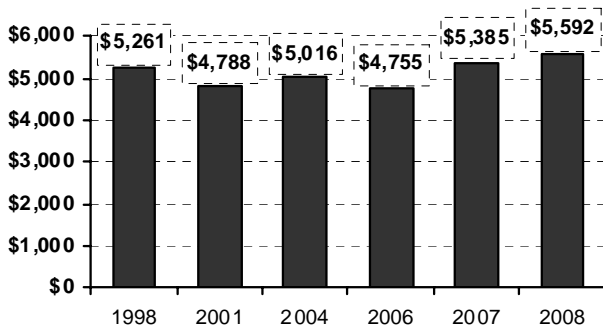
❖ From 1998 to 2008 Information Technology Department employees as a percent of all County employees decreased 3%. The ten year average is 3.4%.

Percent of Total County Expenditures



❖ From 1998 to 2008 Information Technology Department expenditures as a percent of total County expenditures increased 10%. The ten year average is 2.61%.

Expenditure per County Employee



❖ From 1998 to 2008 Information Technology Department expenditures per County employee increased 6% after adjusting for inflation. The ten year average is \$5,080.

REET Electronic Technology Fund

Special Revenue Fund

Departmental Summary:

New State legislation enacted a \$5 recording filing fee increase (effective July 1, 2005) to provide funds to develop automated systems that allow counties to send real estate excise tax affidavit data electronically to the state.

Budget Highlights:

The 2009 budget allocates \$370,000 to accomplish the purpose for which the new fee was enacted, which will likely require a significant software modification to our current REET excise tax module.

FUNDING SOURCES

	2006 Actual	2007 Actual	2008 Budget	2009 Budget	Absolute Change	Percent Change
Est Use of Begin Fund Balance	\$ —	\$ —	\$ 230,000	\$ 300,000	\$ 70,000	30.4 %
Taxes	30,905	—	—	—	—	—
Intergovernmental Revenue	76,288	72,814	70,000	70,000	—	—
Total	\$ 107,193	\$ 72,814	\$ 300,000	\$ 370,000	\$ 70,000	23.3 %

EXPENDITURES

	2006 Actual	2007 Actual	2008 Budget	2009 Budget	Absolute Change	Percent Change
Other Services & Charges	\$ —	\$ 1,675	\$ 300,000	\$ 370,000	\$ 70,000	23.3 %
Total	\$ —	\$ 1,675	\$ 300,000	\$ 370,000	\$ 70,000	23.3 %

