FY13/14 Annual Work Plan

City of Roseville Enterprise GIS

CITY OF ROSEVILLE CALIFORNIA

Change History

Version	Date	Description	Author(s)	Reviewer(s)
1.0	03-27-2013	First draft	Scott Adrian	Technical Committee Steering Committee
1.1	04-11-2013	Second draft	Scott Adrian	Technical Committee Steering Committee
1.2	05-08-2013	Final	Scott Adrian	Sponsor Group
1.2	07-25-2013	Final – adjusted resource and budget projections	Scott Adrian	Sponsor Group

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Executive Summary

This work plan summarizes the status of the GIS Program as of June 30, 2013 and outlines the work that is planned for FY13/14. It also presents the vision, business goals, resource projections, and other planning information used to build the work program.

GIS Vision

The business goals developed for this work plan are aligned with the GIS mission, vision, and values. To achieve those goals, the work program identifies projects and initiatives to be completed next year. The alignment of vision, goals, and work program ensures that the work completed under the GIS Program corresponds to the business objectives of the City.

Mission	Adding value and creating solutions through analysis, innovation, and technology.
Vision	Deriving knowledge from geographic data to advance and differentiate the City of Roseville.
Values	Collaboration | High Performance | Partnership | Prepared/Available | Regional Leadership | Responsive | Result Oriented | Strong Capabilities

Program Highlights

A number of fundamental changes have been made to the GIS Program since 2010. Most significantly, the GIS team has transitioned its mindset to focus attention on system maturity and growth (proactive) rather than reacting to change (reactive). Balancing workload and workforce was a continuing challenge from FY12. Notwithstanding, several significant internal[1], external[2], and maintenance projects were completed during FY13. Highlights include:

- *Baseline Competency Program (internal project)* - raising the technical skill levels of the enterprise GIS team was identified as a priority. As a result, a program to raise the baseline competencies of the team was launched in 2012.
- *Street Routing (external project)* - routing is a powerful GIS capability but it requires appropriate data and intelligence in the database. Necessitated by the new Public Safety CAD/RMS currently under implementation, the enterprise GIS was redesigned and new data added to support proximity dispatching.
- *Business Analyst Online (internal project)* - GIS is supporting citywide economic development efforts with a new web-based solution that combines GIS technology and extensive demographic, consumer spending, and business data to deliver analysis, reports, and maps. BAO's on-the-fly reporting and analysis capability allows immediate response to information requests from customers.
- *Accela Interface (external project)* – a new level of integration between GIS and the City Permits system was achieved through this effort, which implemented the necessary interface for sharing address, parcel, and ownership data.

Business Goals and Initiatives

Business goals for next fiscal year were developed from a combination of inputs including: industry trends, internal City studies, GIS and City visions, and a SWOT (Strengths Weaknesses Opportunities Threats) exercise. Goals were developed around three key focus areas.

1. Budget/Resources
- Implement replacement funding mechanism for CIP
- Implement flexible staffing solutions

2. Communication/Education
- Equip stakeholders to recognize/leverage GIS capabilities
- Conduct communication, marketing, and outreach efforts to demonstrate current value and future potential of GIS

3. Proactive Problem Solving
- Anticipate issues and identify trends
- Identify opportunities instead of waiting to meet needs

[1] Projects sponsored and managed by the GIS Steering and Technical Committees that benefit the GIS program as a whole.

[2] Projects requiring GIS team support but sponsored and managed external to the GIS Steering and Technical Committees, and completed for the benefit of one or more specific departments.

Several initiatives were also identified, including exercising more options for staff augmentation and contract support, and developing key capabilities such as problem solving within the GIS Steering and Technical teams.

Planned Work

The projects planned for FY14 comprise a portfolio designed to achieve the three primary business goals. The project portfolio contains four internal projects as follows:

- Operational Level Agreements/Service Level Agreements (OLA/SLA) – improve operations by developing operating and service level agreements;
- Baseline Competencies Phase 2 – grow the GIS team by strengthening skills and developing new capabilities;
- Quality Assurance Plan – prepare enterprise GIS data for increasing use in supporting business analytics and decision making; and
- Location Analytics Research Project – identify how to best position the GIS Program to support anticipated growth in data analytics, business intelligence, and decision support.

Three external projects round out the FY14 portfolio including RouteSmart Implementation, Enterprise Asset Management Phase 3, and the CAD/RMS Replacement.

Team Organization

To ensure collaboration and visibility among stakeholders, the GIS Program operates with a governance structure consisting of a Sponsor Group, Steering Committee, and Technical Committee.

Functionality Milestones

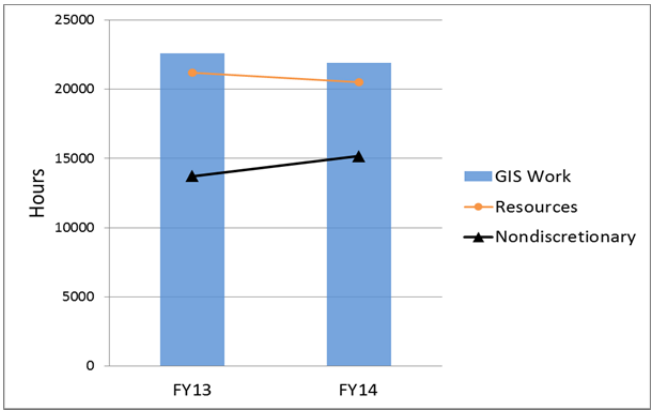
Several milestones are being planned for FY14 including expanding GIS infrastructure to the web, refreshing server hardware, and completing a software update.

Future Considerations

- *Maintenance for new enterprise systems will require additional GIS resources*
- *Expiring CIP will require a new funding source for GIS*
- *EAM changes have not been fully vetted*

Staffing Impacts

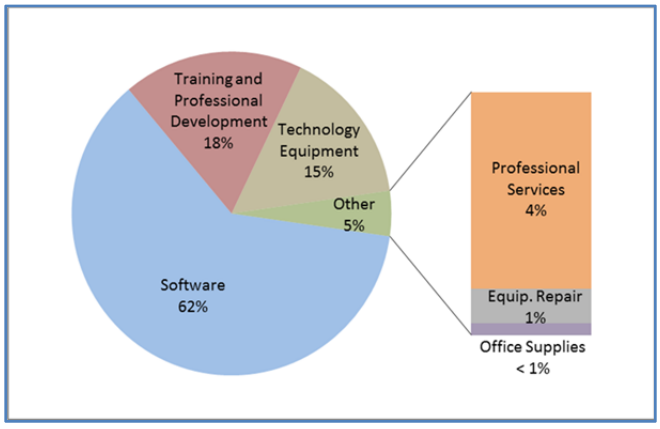
Slight downward trends in both GIS workload and resources are estimated for FY14. Projections indicate approximately 12.5 FTEs of work for FY14, which is 3% lower than FY13. Net available GIS resources will decrease by 3% resulting from realignment of various GIS positions and decreases in temporary staffing. The result is a 0.8 FTE resource shortfall for the GIS team as a whole.



Also expected for FY 14 is an increase in nondiscretionary hours (maintenance and work requests) associated with increased maintenance requirements for Accela, CAD/RMS, and Enterprise Asset Management. Once fully operational, maintenance requirements for these systems will require additional GIS resources.

Fiscal Impacts

Operational expenses for GIS are funded through a Capital Improvement Project (CIP), which is expected to expire at the end of FY14. Other funding mechanisms will need to be explored throughout FY14 and implemented prior to the CIP's expiration. The projected beginning CIP balance for FY14 is approximately $176,000. Software, training and professional development, and technology equipment comprise the largest budget categories. Software includes new software licenses and maintenance for existing licenses. Technology equipment covered by the CIP includes GIS server hardware, which will be replaced in FY14.



2 Program Organization

The organizational structure that provides the basis for coordinating the GIS resources that contribute to the citywide GIS consists of three parts:

- Sponsor Group – oversees GIS Program. Represented by department heads of departments contributing to GIS;
- Steering Committee – oversees GIS operation and responsible for business functions, business needs, and policy. Represented by managers from each department with significant GIS investment; and
- Technical Committee – advises on GIS technical issues and responsible for project recommendations and planning, execution, and interdepartmental cooperation. Represented by GIS business experts in the departments that contribute to operating the GIS.

The Steering and Technical committees meet individually each month and quarterly they have joint meetings. The committee chairs meet twice a year with the Sponsor Group.

Day to day GIS operations are carried out by operational staff, some of which perform centralized functions and others which perform distributed functions. The staff that carry out these functions are organized into four business-centric functional teams. The departments that comprise these teams and the functions they are responsible for are summarized in Table 2.1 below:

Table 2.1
Functional Teams

Functional Team	Departments	Functions
Assets/Utilities	Environmental Utilities, Electric	Distributed • Business need identification • Business solutions • Implementation and development • Data analysis, reporting, mapping • Data custodianship • Enterprise data maintenance • Participation in governance • Security user practices
Built/Natural Environment	Parks, Planning, Public Works	
Public Safety	Police, Fire	
Enterprise Infrastructure	Information Technology	Centralized • Business solutions • Implementation and development • Information security • Infrastructure management • Management practices and standards • Participation in governance • Project execution

3 Program Status

The 2010 Business Process Review (BPR) initiated a number of significant changes in the GIS Program. The next two years saw a continued focus on change initiatives such as addressing workload/workforce imbalance, instituting work management, and incorporating annual business planning into GIS operations. Enterprise-wide system implementations like the Permits System Upgrade, Enterprise Asset Management (EAM), and the CAD/RMS Replacement were also responsible for driving change.

The GIS Program is still experiencing a period of change, but a shift from a change-perspective to a maturity- and growth-perspective is underway. The following sections provide additional information on the work initiated or completed in FY 12/13 and highlights program successes, challenges, and issues.

Projects

Under the GIS Program projects are divided into internal and external categories. Internal projects are sponsored and managed by the GIS Steering and Technical Committees and benefit the GIS Program as a whole. External projects are sponsored and managed external to the two GIS committees and completed for the benefit of one or more specific departments.

Table 3.1 lists the internal projects that were worked on during FY12/13. Six projects were part of the FY12/13 work plan and six were carried over from the previous year's plan. For each project, the completed, carry-over, and deferred project hours are shown. Projects indicated as closed are those removed from the project portfolio because they no longer aligned with goals and objectives or their work was restructured and included in other efforts.

Table 3.1
FY 12/13 Internal Projects

Internal Projects	Fiscal Year	Completion		Carry Over Hrs	Defer Hrs
		Percent	Hrs		
ArcGIS 10 Upgrade	FY12	100%	407		
ArcGIS Online Implementation	FY13	0%	0	150	
ArcSDE Updates	FY13	100%	133		
Business Analyst Online Implementation	FY13	15%	6	34	
Common Operating Picture for EOC	FY13	5%	4	76	
GIS Efficiency – Baseline Comp. Phase 1	FY12	94%	516	30	
GIS Efficiency – Business Applications (closed)	FY12	--	--		
GIS Efficiency – OLA/SLAs	FY12	10%	53	477	
GIS Efficiency – Organizational Improvements	FY13	0%		300	
GIS Efficiency – Process Improvements (closed)	FY12	--	--		
GIS Efficiency – SWOT	FY12	100%	50		
Mobile Research Project	FY13	0%			240
Total			**1199**	**1037**	**240**
Percentage			**47%**	**43%**	**10%**

Hours in this table are estimates and not actuals.

Table 3.2 lists the external projects that were worked on. Out of the five external projects in the work plan, one was completed and two are still in progress. In addition, two projects were deferred due to delays in other projects. The Permits System Upgrade project was completed. The CAD/RMS Replacement project and the Enterprise Asset Management Phase 3 project are

multi-year projects that are scheduled to be completed in FY13/14. It is important to note that the percent complete for external projects refers to the GIS tasks on the projects, not the project as a whole.

Table 3.2
FY 12/13 External Projects

External Projects	Percent Complete	Completed Hours	Carry-Over Hours	Deferred Hours
Permits System Upgrade	100%	316		
CAD/RMS Replacement	65%	455	245	
Enterprise Asset Management Phase 3	25%	1433	4297	
EU Mobile Solution	0%			94
Granite XP	0%			60
Total		**2204**	**4542**	**154**
Percentage		**32%**	**66%**	**2%**

Hours in this table are estimates and not actuals.

Successes

Several of the successes achieved during FY12/13 are described below:

- Baseline Competency Program - raising the technical skill levels of the enterprise GIS team was identified as a priority last year. As a result, a program to raise the baseline competencies of the team was launched in 2012. Approaches and strategies were identified and a training plan developed. Training classes were completed and expanding the program is planned for FY13/14.
- Street Routing - routing is a powerful GIS capability but it requires appropriate data and intelligence in the database. To provide this, the enterprise GIS was redesigned and new data added. Routing will be used initially to support proximity dispatching in the new CAD/RMS system being implemented for Public Safety. Future uses are now being identified for streamlining fleet operations, generating service areas, and optimizing facility locations.
- GIS Governance - last year the GIS Steering committee was reformed with a new charter and mission. Continued improvements this year included developing a program vision and values to which business goals and projects could be aligned. The annual planning process that was begun two years ago was streamlined and new components such as a SWOT (Strengths Weaknesses Opportunities Threats) exercise were added to further improve the process.
- Business Analyst Online - GIS is supporting economic development efforts in the City with this web-based solution that combines GIS technology and extensive demographic, consumer spending, and business data to deliver analysis, reports, and maps. Uses include analyzing potential site locations for businesses, determining population and demographics, and exploring markets.
- Accela Interface - adding maps and information from GIS to the City Permits system was achieved through this effort, which implemented an interface between the two systems that provides the means for sharing address, parcel, and ownership data. This effort was significant because it represents a new level of integration between these two systems.

Challenges

Similar to the previous year, balancing workload and workforce was a major challenge during FY12/13. Three simultaneous, enterprise-wide technology projects stretched available resources. To relieve some of the resource shortfall, contract staff was used to augment existing City staff. Consulting support was also used to provide technical expertise and implementation support. As in past years, the team also deferred lower priority projects. The team expects to see some relief from the project workload this next year as enterprise projects are completed.

4 GIS Functionality Roadmap

The functionality roadmap identifies milestones in the developing capabilities of the City's GIS and contributes to the annual planning process by identifying anticipated or planned technology changes at both the industry and City levels. It also identifies windows of opportunity to make strategic changes in the GIS by leveraging existing City projects.

Most milestones are achieved through existing maintenance or already identified project efforts both ongoing and future. Some elements of the roadmap are indicated as being new for FY13/14; the remaining elements have been carried over from previous years due to project delays or changes in priorities.

Milestones accomplished during the past year include completing the interface between the new Accela permits system and GIS, implementing new ArcFM data models in development for Environmental Utilities, and adding routing capabilities to the street centerlines in the enterprise geodatabase. Future milestones are presented below as three, six, and 12 month targets. Milestones that are further out than one year are considered long-range targets.

3 Month Milestones (July to September 2013)

- Protect default ArcSDE version;
- Move ArcFM for Environmental Utilities from development to production;
- Implement published database for Maximo Spatial;
- Provide ArcGIS map services outside the City network;
- Implement ArcGIS Online; and
- Implement ArcGIS Server Image extension (Note: this is a Tier 2 project to be implemented if approved).

6 Month Milestones (October to December 2013)

- Refresh GIS server hardware (new);
- Implement enterprise geodatabase replication (new);
- Migrate to native SQL Server spatial data type (new); and
- Upgrade to ArcGIS 10.1 (new).

12 Month Milestones (January to June 2014)

- Upgrade web development platform.

Long Range (July 2014 or later)

- Implement CIS interface;
- Redesign existing use feature class; and
- Implement parcel history.

5 Business Goals and Initiatives

The business goals for the GIS Program were developed from several different lines of input including industry trends, internal City studies, GIS and City visions, and a SWOT (Strengths Weaknesses Opportunities Threats) exercise. The goals, initiatives, and their influences are described below.

Business Goals

The GIS Steering Committee developed the following business goals for FY13/14:

Budget/Resources

- Implement replacement funding mechanism for expiring CIP; and
- Implement flexible staffing solutions.

Communication/Education

- Equip stakeholders to recognize and leverage GIS capabilities; and
- Conduct communication, marketing, and outreach efforts to demonstrate current value and future potential of GIS.

Proactive Problem Solving

- Anticipate issues and identify trends; and
- Identify opportunities instead of waiting to meet needs.

Initiatives

In addition to business goals, several initiatives were identified for incorporation into the functioning of the GIS Program:

- Exercise more options for contract/vendor support;
- Expand scope of baseline competencies;
- Leverage technology governance more;
- Develop key strategies; and
    - Adding staff to address increasing maintenance and skill-set gaps
    - Improving GIS architecture and data
    - Decreasing the time it takes to develop solutions
- Develop key capabilities.
    - Raising awareness of GIS value
    - Problem solving

The remainder of this section describes each of the alignment inputs that contributed to goal and initiative development.

Goal and Initiative Influences

Developing the above goals and initiatives was influenced by several lines of input described below.

SWOT Exercise

A SWOT exercise was conducted at the beginning of the annual planning process with the purpose of soliciting input from team members about the functioning of the GIS Program during the past year. The input was used to inform goal and initiative setting by identifying:

- Strengths to leverage;
- Weaknesses to improve;
- Opportunities to develop; and
- Threats to minimize.

In addition to providing annual planning input, action plans were developed to respond to the SWOT findings. The Steering and Technical Committees will focus on the following action plans during the next fiscal year:

- Leverage baseline competency training plan;
    - Allocate additional training funds
    - Develop skills needed to realize full GIS potential
    - Add business skills to team capabilities
    - Address core competency gaps
- Develop communication/marketing plan; and
- Improve identification of opportunities for GIS adoption and use.

Internal City Studies

Input used to develop the business goals and initiatives also came from internal studies such as the 2010 Business Process Review and the Infrastructure/Staffing Analysis and Security Compliance Assessment performed in 2011 by Moss Adams LLP. The following recommendations from those studies again provided valuable input to the annual planning process:

- Clarify roles, responsibilities, expectations, and authorities in the form of SLAs/OLAs;
- Explore options for getting IT better integrated with departments;
- Focus on efficiencies and improvements;
- Organize functional area teams; and
- Perform strategic/business planning.

Industry Trends and Challenges

External studies and research were used to identify industry trends and challenges that are or will be impacting the GIS Program. That information is being used to better position the team to leverage future change, prepare for user requirements, and make better decisions related to the GIS Program. The outcome of this effort was also used in a threat analysis that identified potentially disruptive change and areas of high risk. Last year the Technical Committee identified three major trends and two major challenges. This year the committee added one new trend and one new challenge as shown in Table 5.1 below.

Table 5.1
Industry Trends and Challenges Summary

	Major Trends	Major Challenges
FY13	1. Pervasive technology change is the norm. 2. Mobile technology is undergoing major	1. Complexity is reaching critical mass and will necessitate a high degree of teamwork/collaboration,

	Major Trends	Major Challenges
	growth. 3. Applications and services are migrating to the cloud.	training, soft skills, and service management. 2. Obsolescence will require continual retraining as well as new approaches for mitigating its affects.
FY14	4. Increased business demand for information is shifting the focus from technology to information.	3. Accommodating the amount and pace of change.

6 Planned Work

To accomplish the identified business goals and initiatives as well as respond to the other lines of input discussed in the previous section, the Technical Committee identified a number of internal projects. To evaluate their effectiveness in doing so and to ensure a good return on the efforts of the GIS team, a balanced scorecard approach was used to evaluate the projects.

In addition to the scorecard, a prioritization method was used to help determine which projects to complete first and to build a project portfolio that meets program objectives.

Using these two best practices created an evaluation process that is transparent, systematic, objective, repeatable, and engages the Technical and Steering Committees in the decision making process. The outcomes of this process are described below.

Balanced Scorecard Results

The balanced scorecard ranks and categorizes projects based on their impact (e.g., benefit) and effort (e.g., cost, time, and risk). The output from the scorecard is the business value of the projects as measured by their return on investment (ROI). Projects that are well aligned with the GIS vision, objectives, and strategies score high and provide the highest ROI. Using the scorecard results, the projects were organized into three tiers with varying return:

- **First tier** – highest average return project group. Two of the four projects are "quick wins" (low hour, high return) and two are major projects (high hour, high return). These projects will be completed first and are the highest priority for the GIS team.
- **Second tier** – this group is comprised of one fill-in and one major project. These projects will be the next priority for the GIS team to complete if the first tier is completed.
- **Third tier** – this group is also comprised of one fill-in and one major project. These projects will be the next priority if the first two tiers are completed. These two efforts will be completed as one project. Even though the average benefit of this group is higher than the second tier, placing it after the second tier was done because interim planning measures are already in place allowing the effort to be deferred.

All three tiers of projects are shown in the Table 6.1 below.

Table 6.1
Balanced Score Card Results

	FY14 Projects	ROI	Quadrant	Benefit	Impact Rank	Hours
First Tier	GIS Efficiency - OLA/SLAs	High	Major Project	4.8	1	965
	GIS Efficiency - Baseline Competencies Ph2*	High	Major Project	4.2	3	752
	Quality Assurance Plan	High	Quick Win	4.2	4	430
	Location Analytics Research Project	Medium	Quick Win	3.8	5	180
				4.25		**2327**
Second Tier	1) Image Server Implementation	Low	Fill In	2.2	8	80
	2) GIS Efficiency - Organizational Improvements	Medium	Major Project	3.6	6	315
				2.9		**395**
Third Tier	3) GIS Efficiency - Needs Assessment/Strategic Planning	High	Major Project	4.8	2	330
	3) Communication and Marketing Plan	Low	Fill In	2.2	7	80
				3.5		**410**

Additional information regarding the scoring results and ranking criteria used with the balanced scorecard are included in Appendix A.

Project Portfolio

The internal projects evaluated using the balanced scorecard and discussed above are sponsored and managed by the GIS Steering and Technical Committees. These projects along with external projects, which are sponsored and managed by departments external to the two GIS committees, comprise the project portfolio for the GIS Program. The portfolio is managed to facilitate an effective City GIS function in each of the following areas:

- Maintaining GIS hardware, software, and data;
- Providing GIS services and products to the City;
- Supporting applications and users; and
- Completing projects that support customer needs as well as develop the GIS team.

Available GIS resource hours are not sufficient to complete all three tiers of internal projects along with the external projects and other nondiscretionary work without staffing shortfalls. Therefore, only Tier 1 projects will be included in the project portfolio as active projects for FY13/14. The remaining Tier 2 and 3 projects will be classified as conditional projects, meaning they will be completed after any higher tier projects are completed first and there is resource availability. See Section 7 for a discussion of staffing impacts and resource availability.

Table 6.2 below lists all the internal, external, and conditional projects in the portfolio and indicates the project sponsor (champion and ultimate project responsibility). It also shows the level of effort required for completion and priority for internal projects. These projects have either been approved or are pending approval through the technology governance process or by the GIS Sponsor Group.

Table 6.2
FY 13/14 Internal and External Project Portfolio

Effort[1]	Priority	Project	Sponsorship
Internally Sponsored/Managed Projects			
H	Tier 1	GIS Efficiency - OLA/SLAs	Steering
H	Tier 1	GIS Efficiency - Baseline Competencies Phase 2	Steering
M	Tier 1	Quality Assurance Plan	Steering
M	Tier 1	Location Analytics Research Project	Steering
Conditional Internal Projects[2]			
L	Tier 2	1) Image Server Implementation	Steering
M	Tier 2	2) GIS Efficiency - Organizational Improvements	Steering
M	Tier 3	3) GIS Efficiency – Needs Assessment/Strategic Planning	Steering
L	Tier 3	3) Communication and Marketing Plan	Steering

Effort[1]	Priority	Project	Sponsorship
Externally Sponsored/Managed Projects			
H		CAD/RMS Replacement	Police
H		Enterprise Asset Management Phase 3	EU, RE
M		RouteSmart Implementation	EU

[1]L=80 hours or less, M=80 to 500 hours, H=greater than 500 hours
[2]To be completed in the order indicated; Tier 3 projects will be completed in a single effort.

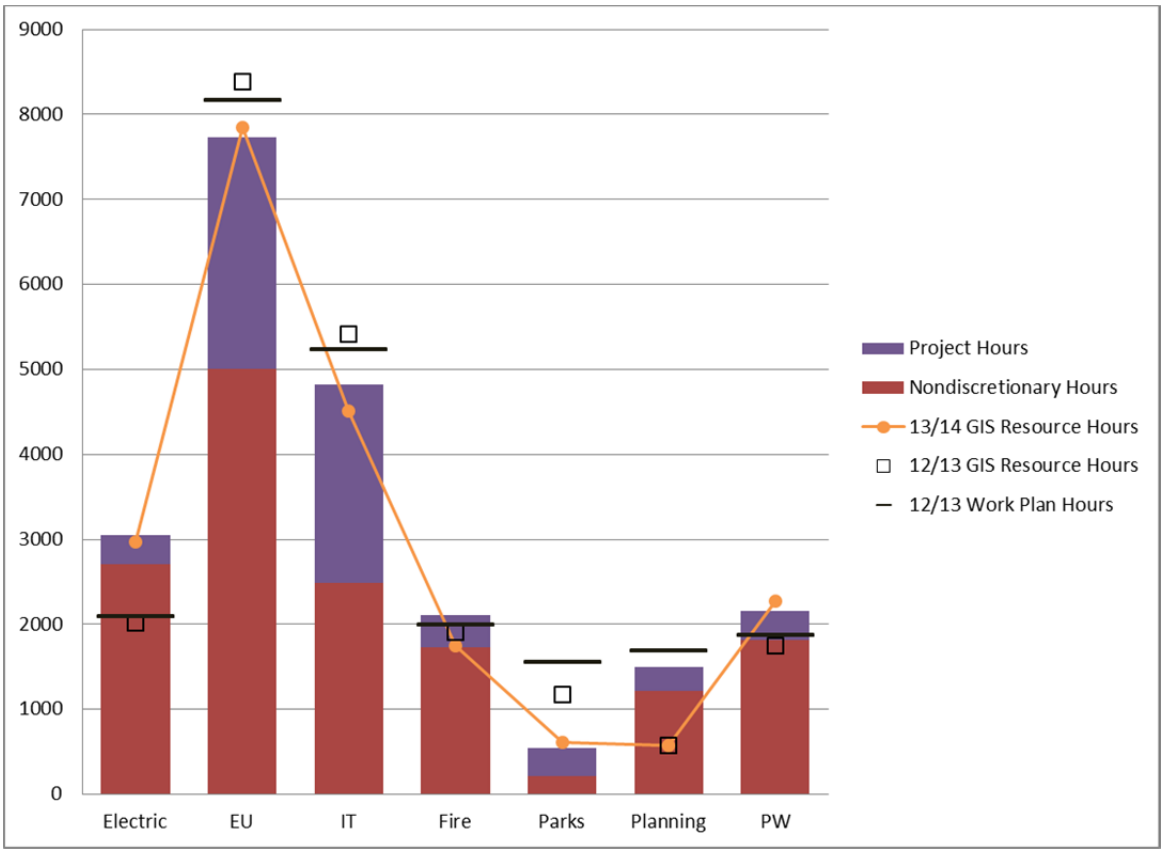
Projects that are still active at year-end will be reviewed by the GIS Technical and Steering Committees to monitor progress, check alignment with City priorities, and ensure adequate staffing and budget commitments are still in place to complete them.

Please refer to Appendix B for descriptions of the projects discussed in this section.

7 Staffing Impacts

This section presents a brief analysis of the FY13/14 workload for the GIS team. This analysis is based on labor hour projections for the internal and external projects discussed in the previous section plus ongoing nondiscretionary work such as maintenance and GIS work requests. Figure 7.1 below shows the distribution of project and nondiscretionary work among individual departments along with three benchmarks: total available GIS resource hours for FY13/14 (orange line), GIS resource hours from FY12/13 (black boxes), and projected hours from the FY12/13 work plan (horizontal black lines).

Figure 7.1
FY13/14 Work Projections



Some notable findings from the resource analysis:

- Total workload – there are 21,922 hours or approximately 12.5 FTEs of projected work for FY13/14. Internal projects comprise 2,584 hours or 11.8% of these hours, external projects 4,173 hours 19%, and nondiscretionary work 15,165 hours or 69.2% of total workload. The distribution of these hours among the departments performing the work is shown on the chart.
- Decreased workload – the projected hours for FY13/14 are 3% lower than those projected in the FY11/12 work plan. This decrease equates to 669 fewer hours of work, and results mainly from completing enterprise projects this year and next. The chart

shows changes in workload as the difference between the horizontal black lines (12/13 Work Plan Hours) and the bars representing project and nondiscretionary hours.

- Change in available resources – there is a net decrease in available GIS resource hours of 681 hours or 3% compared to FY12/13. The majority of this decrease is resulting from the realignment of a GIS position in Environmental Utilities, a decrease in temporary staffing in IT that was previously supporting the EAM Project, and a reallocation of GIS hours in Parks. There is an increase in available GIS resource hours in Electric resulting from a new GIS Analyst position.
- Workload/workforce balance –for the team as a whole there is a 0.8 FTE resource shortfall. However, the distribution of the workload is uneven with surpluses in some departments and shortfalls in others. The chart shows the shortfall for each department as the difference between the orange line (GIS Resource Hours) and the bars representing projected hours.

Table 7.1 contains the data used to develop the above chart plus additional breakdowns of the chart information such as FTEs and percent calculations. Please note that the data includes internal Tier 1 projects and external projects only. It does not include the internal conditional projects that are part of the project portfolio.

Table 7.1
Work Projections Data Summary

	Electric	EU	IT	Fire	Parks	Planning	PW	Total
FY 13/14 GIS Work Plan								
GIS Work Plan Hours	3055	7727	4825	2108	545	1503	2159	**21922**
FTEs	1.75	4.43	2.77	1.21	0.31	0.86	1.24	12.56
Hour Breakdown by Category								
Project Hours	351	2725	2337	376	334	287	347	6757
FTEs	0.20	1.56	1.34	0.22	0.19	0.16	0.20	
Percent of Dept. Hours	11%	35%	48%	18%	61%	19%	16%	31%
Nondiscretionary Hours	2704	5002	2488	1732	211	1216	1812	15165
FTEs	1.55	2.87	1.43	0.99	0.12	0.70	1.04	8.69
Percent of Dept. Hours	89%	65%	52%	82%	39%	81%	84%	69%
Existing GIS Resource Allocation								
13/14 GIS Resource Hours	2967	7853	4508	1745	611	576	2269	**20527**
FTEs	1.70	4.50	2.58	1.00	0.35	0.33	1.30	**11.76**
Difference between GIS Work Plan Hours and Existing GIS Resource Allocation								
Hours[a]	(88)	126	(317)	(363)	66	(927)	110	(1395)
FTEs	(0.05)	0.07	(0.18)	(0.21)	0.04	(0.53)	0.06	(0.80)
Baseline Comparison								
12/13 Work Plan Hours	2091	8168	5229	1989	1553	1686	1875	**22591**
FTEs	1.20	4.68	3.00	1.14	0.89	0.97	1.07	12.95
Difference between 13/14 Projected Hours and 12/13 Projected Hours								
Percent Change	46%	-5%	-8%	6%	-65%	-11%	15%	-3%
Hours	964	-441	-404	119	-1008	-183	284	-669
FTEs	0.55	-0.25	-0.23	0.07	-0.58	-0.10	0.16	-0.38

[a]Includes temporary staffing for EU, IT, and Parks

Please refer to Appendix C for information on the work projections used in developing the resource analysis discussed above.

8 Fiscal Impacts

Operational expenses for the GIS (excluding labor costs) are funded through a Capital Improvement Project (CIP). The GIS CIP is a five-year CIP that is in its eighth year of implementation. Cost deferral over the last several years and lower than planned expenses in previous years have resulted in carry-forward balances that allow the City to extend the CIP at through FY13/14.

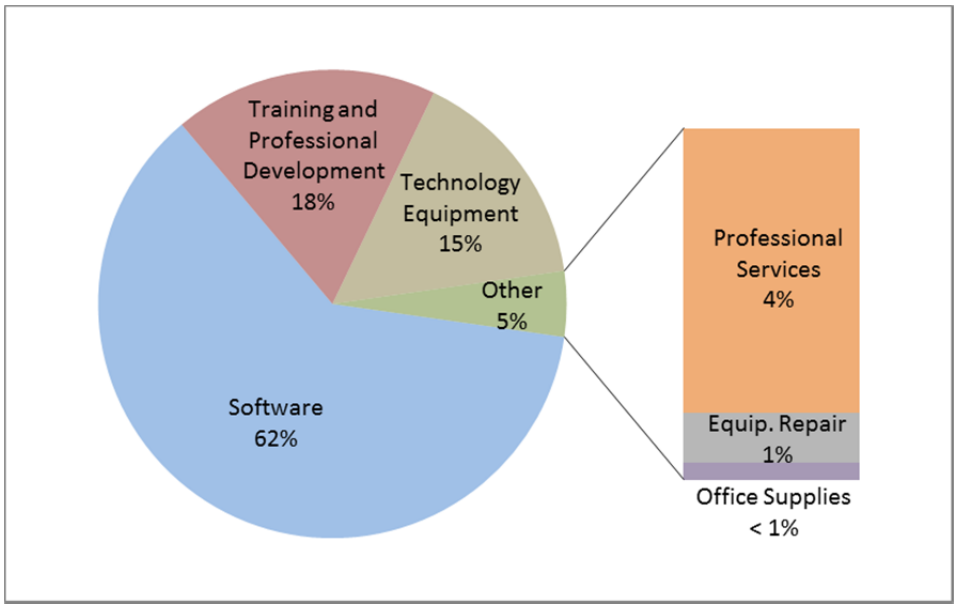
After FY13/14, other funding mechanisms will be used. Proposals include handling hardware and system replacement costs using a technology replacement fund and budgeting for other expenses such as software maintenance, licensing, and training in the IT departmental budget. Labor costs will continue to be budgeted through departmental budgets.

The expenses for the FY12/13 fiscal year were approximately $97,000; after those expenses are accounted for the CIP balance at the end of the fiscal year is projected to be approximately $176,000. The balance will be carried forward to FY13/14 to fund this work plan. Next year expenses are projected to be approximately $159,000 and will include the following:

- Annual maintenance for existing software;
- New server hardware;
- New software licenses;
- Professional services; and
- Training costs associated with the baseline competency effort.

Figure 8.1 shows the projected allocation of that remaining balance (through FY13/14) across budget categories.

Figure 8.1
GIS Budget Allocation through FY 13/14



Additional budget details are included in Appendix D.

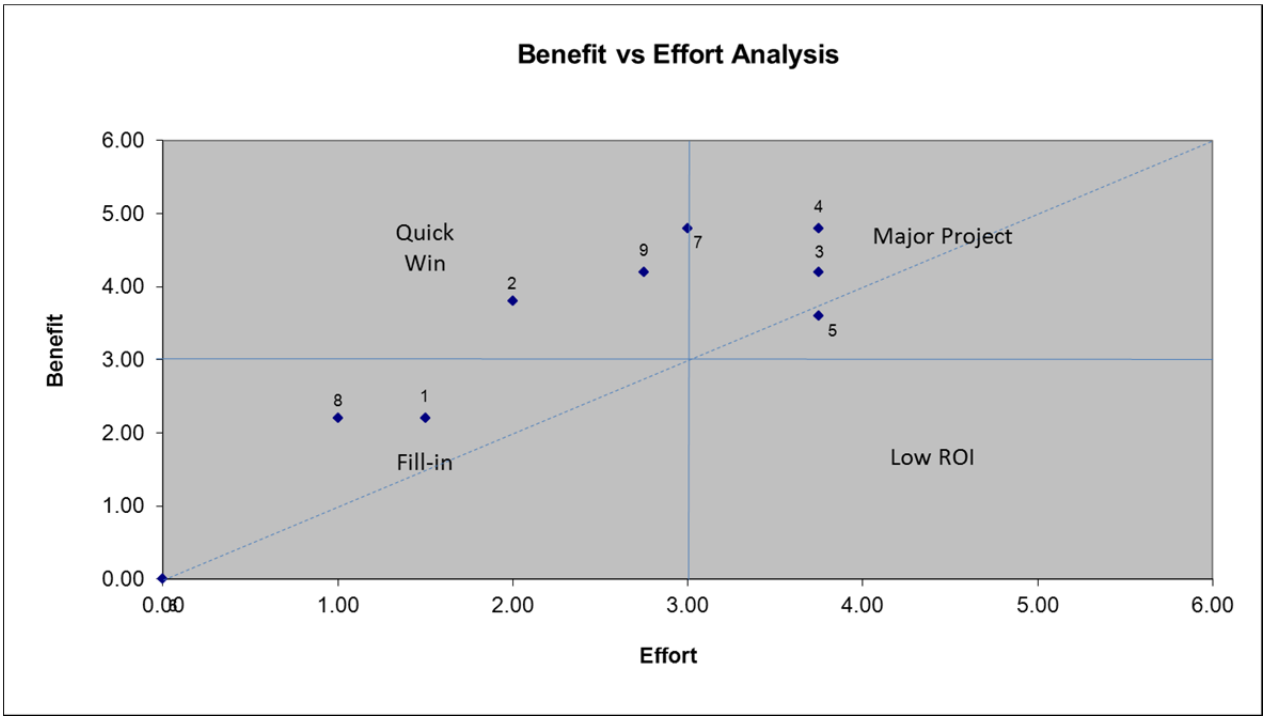
Appendices

Appendix A – Balanced Scorecard Results

Balanced Scorecard Analysis

		IMPACT (0, 1, 3, 6)							EFFORT (0, 1, 3, 6)								
		Business Impact	Customer Value	Enterprise Benefit	Collaboration/Partnership	Positions GIS for Future	TOTAL BENEFIT	Weighted Score	Effort Level	Implementation Cost	Implementation Time	Risk Level		TOTAL EFFORT	Weighted Score	CALCULATED SCORE	RECOMMENDED PRIORITY
Project No.	Project Title	0.20	0.20	0.20	0.20	0.20	1.00		0.25	0.25	0.25	0.25		1.00			
001	N - Communication and Marketing Plan	3	1	3	1	3	11	2.20	1	1	3	1		6	1.50	3.70	
002	N - Location Analytics Research Project	6	3	3	1	6	19	3.80	3	1	3	1		8	2.00	5.80	
003	R - GIS Efficiency - Baseline Competencies Ph2	6	3	6	3	3	21	4.20	3	3	6	3		15	3.75	7.95	
004	R - GIS Efficiency - OLA/SLAs (include PI/SOPs)	3	6	6	6	3	24	4.80	6	0	6	3		15	3.75	8.55	
005	R - GIS Efficiency - Organizational Improvements	3	3	6	3	3	18	3.60	3	0	6	6		15	3.75	7.35	
006	~~R - GIS Efficiency - Process Improvements~~						0	0.00						0	0.00	0.00	
007	R - GIS Efficiency - NA/Strategic Planning	3	6	6	3	6	24	4.80	3	3	3	3		12	3.00	7.80	
008	R - Image Server Implementation	3	3	3	1	1	11	2.20	1	1	1	1		4	1.00	3.20	
009	R - Quality Assurance Plan	3	6	6	3	3	21	4.20	3	1	6	1		11	2.75	6.95	

Notes: N=New Project; R=Reprioritize Approved Project



IMPACT		Assigned point value			
Measure	**Description**	**0**	**1**	**3**	**6**
Business Impact (medium, 0.20)	Moves GIS toward involvement in key City decision making, leverages GIS for economic development, and supports growth/revitalization. Helps develop an agile, knowledgeable, and well trained team.	No Impact	Low	Medium	High
Customer Value (medium, 0.20)	Improves ability to interact with and be available to support City and community needs for resources, tools, and services. Contributes to meeting/exceeding increased expectations for data availability, services, and support. Contributes to the team being well versed in sophisticated technology and its application.	No Impact	Low	Medium	High
Enterprise Benefit (medium, 0.2)	Has impacts across the enterprise that extend beyond individual business units.	1 business unit impacted	2 to 5 business units impacted	6 to 10 business units impacted	> 10 business units impacted
Collaboration/Partnership (medium, 0.2)	Contributes to seamless interactions/transactions and services. Improves partnering with vendors, departments, and community.	No Impact	Low	Medium	High
Positions GIS for Future (medium, 0.2)	Positions the enterprise GIS to leverage and respond to technology changes and industry trends.	No Impact	Low	Medium	High

EFFORT		Assigned point value			
Measure	**Description**	**0**	**1**	**3**	**6**
Effort Level	Number of hours required across all departments to complete project.	None	< 80 hrs	80 to 500 hrs	> 500 hrs
Implementation Cost	Total cost associated with developing and implementing the project solution including capital	None	< $20000	$20000 to $50000	> $50000
Implementation Time	Total number of months to complete the project from project kickoff to project closeout.	< 1month	1-3 months	3-6 months	> 6 months
Risk Level	Likelihood of the project not succeeding due to constraints, barriers, political issues, or other	None	Low	Medium	High

Appendix B – Project Descriptions

External Projects

CAD/RMS Replacement
Key Roles: Adrian, Johnson, Moss
Key Stakeholders: Fire, Police
Description: This Public Safety project to replace the City's computer aided dispatch and records management system has GIS components. These include providing address information to the system and data to support street routing.

Enterprise Asset Management Phase 3
Key Roles: VanNess, Heisler, Canlas, McKinney, Wilcox, Johnson, Hewitt, Ball, Adrian
Key Stakeholders: EU, Electric, Public Works, Parks
Description: The EAM Project has several GIS components including ArcFM implementations in Electric and Environmental Utilities and an IBM Spatial implementation for Electric, Environmental Utilities, Public Works, and Parks. Major tasks include database design, data migration, business process design, and configuration.

EU Mobile Solution – Deferred
Key Roles: VanNess
Key Stakeholders: Environmental Utilities
Description: This research project will explore options and platforms available to deploy a mobile GIS solution in the field for multiple work groups in Environmental Utilities.

RouteSmart Implementation
Key Roles: VanNess, Nordquist, Johnson
Key Stakeholders: EU
Description: This project will implement RouteSmart for the Solid Waste Division in EU, which will then be used to optimize routing for residential and commercial solid waste pickups.

Internal Projects

Note: number in parentheses is the balanced scorecard project number.

Annual ArcSDE Updates
Alignment: ***Maintenance***
Description: Incorporate voice of customer into the GIS enterprise database design for the purpose of better meeting business requirements. Project scope includes collecting requirements, designing a modified database, testing, and then putting the changes into production.

Communication and Marketing Plan (1)
Alignment: Open for Business > Results Oriented > Market capabilities and successes
Description: The 2012 SWOT exercise identified several areas where communication and marketing strategies and plans would benefit the enterprise GIS. These areas include marketing program successes, educating stakeholder groups, and improving citywide understanding of the capabilities of GIS technology. The goal of the plan is to improve the use of and return from the

GIS. The scope of this effort will be included in the Needs Assessment/Strategic Planning project if it is approved for FY13/14 completion.

GIS Efficiency – Baseline Competency Phase 2 (3)

Alignment: Open for Business > Prepared/available > Raise team competency level

Description: A baseline competency project is currently in progress and this effort would continue that work in the soft skill area. Skill development as part of this additional phase of training would include project management, communication, collaboration, and team performance. Specific goals for skill development in these areas include: strengthening team relationships, improving collaboration skills, and building team capabilities.

GIS Efficiency – Needs Assessment/Strategic Planning (7)

Alignment: Open for Business > Prepared/available > Perform strategic planning

Description: The project scope includes developing a high-level strategic planning framework as well as planning tools such as a communication/marketing outreach strategy and plan, voice of customer assessment, needs assessment, goals/mission/vision development, and strategic/business plans.

GIS Efficiency – OLA/SLAs (4)

Alignment: Open for Business > Results oriented > Develop and use SLAs

Description: This effort consists of two parts. The first is focused on developing an Operating Level Agreement (OLA) for the City GIS. Upon completion of the OLA, this effort would continue on with a focus on key Service Level Agreements (SLAs). Developing Standard Operating Procedures (SOPs) and incorporating process improvements where they are identified will also be included in the scope of this effort.

GIS Efficiency – Organizational Improvements (5)

Alignment: One City > Collaboration > One team/Leverage functional teams

Description: This project will develop and execute a plan to fully leverage the functional team organizational model to generate higher-return business outcomes from GIS as well as increase GIS effectiveness in the City. Initial steps will identify how GIS specifically contributes to the success of each functional area business. Subsequent improvement steps will focus on three areas: key business processes , new tools, and incorporating business-oriented and outcome-driven thinking into daily operations. Success will be measured using metrics and key performance indicators developed as a component of this project.

Image Server Implementation (8)

Alignment: Urban to metropolitan > Strong Capabilities > Develop continuous improvement mentality

Description: This project implements the ArcGIS Server Image Extension from ESRI to better manage City aerial photography in the GIS and to reduce the amount of time spent preprocessing imagery data before loading into ArcSDE.

Location Analytics Research Project (2)

Alignment: Urban to metropolitan > Prepared/available > Raise team competency level/forward-thinking mindset

Description: Gartner predicts that the need for business analytics and intelligence will continue to undergo significant growth as the technology industry shifts from an infrastructure focus to an information focus. Within the City, there are already increasing demands for data-drive decision support, which the GIS Program can meet through the location analytics capability of GIS. This effort will be focused on performing research and developing new capabilities that will better position the enterprise GIS so it is ready for this shift. Deliverables will include a lessons-learned analysis, implementation strategies, and a pilot project.

Quality Assurance Plan (9)

Alignment: Open for Business > Prepared/available > Develop and apply quality standards

Description: Perform an audit and review for all enterprise GIS data to evaluate current data quality. Then develop and implement a quality assurance plan for the GIS Program including determining quality standards, processes, and tools.

Web 2.0 App Upgrades

Alignment: ***Maintenance***

Description: The existing development platform for web-based mapping applications in the City is nearing end of life. This project will migrate our existing web mapping applications (WebRLI, WebPIT, and WebTCT) to a new platform that will prepare us for the next generation of web-based mapping applications.

Appendix C – Work Projections

FY13/14 GIS Work Projections

v4 7/25/2013

Nondiscretionary Work	**Neil**	**Daniel**	**Tiffany**	**Rick**	**Roy**	**Jonathan**	**Jon**	**Michelle**	**EU Temp (1500)**	**EU Temp (1500)**	**Brian**	**Marc**	**Scott**	**THS Position**	**Intern/Volunteer**	**Doro**	**THS Position**	**Rjahja**	**Tech Staff**	**Joe**	**Jackie**	**Joey**	**Jeff**	**Total**	**FY14 Professional Services**	**FY14 Staff Augmentation**	**Notes**						**Mandatory (Nondiscretionary)**		
Annual ArcSDE Updates		8			8		100	40				60				8		8		8			8	248			Priority maintenance project								
Application Maintenance											100									30				130											
ArcGIS 10.1 Upgrade																								0											
Database Management/Maintenance		675	660	175	150	900	200	700	1000	550		80				1110		25	50	214	214	200	620	7523											
Documentation	4	40	10	4							70	130				20			25					303											
Server Management											340	75												415											
Web 2.0 App Upgrades											180							4						184			Priority maintenance project, move to FY14								
Total Maintenance	**4**	**723**	**670**	**179**	**158**	**900**	**300**	**740**	**1000**	**550**	**690**	**345**	**0**	**0**	**0**	**1138**	**0**	**37**	**75**	**252**	**214**	**200**	**628**	**8803**									8803		
Application Support	300	450	150		40		50	50			180	225				100				222		230	230	2227											
Research and Development											80	80	80							20				260											
Enterprise Support	48	48	×	×	48	×	×	×	×	×	48	48	500	×		48		48	×	48	×	×	48	932			12x(1.5+0.5 hrs) mtg + 12x2 hrs support								
Work Plan Support	16	16	×	×	16	×	×	×	×	×	16	16	80	×		16		16	×	16	×	×	16	224			4x2 hrs workshops + 2 hrs proj + 6 hrs review								
Total Support	**364**	**514**	**150**	**0**	**104**	**0**	**50**	**50**	**0**	**0**	**324**	**369**	**660**	**0**	**0**	**164**	**0**	**64**	**0**	**306**	**0**	**230**	**294**	**3643**									3643		
Mapping and Geoprocessing Services		100			100	300	200	200	100	250	60	40				430		10	25	222	222	230	230	2719											
Total Services	**0**	**100**	**0**	**0**	**100**	**300**	**200**	**200**	**100**	**250**	**60**	**40**	**0**	**0**	**0**	**430**	**0**	**10**	**25**	**222**	**222**	**230**	**230**	**2719**									2719		
Nondiscretionary Total	**368**	**1337**	**820**	**179**	**362**	**1200**	**550**	**990**	**1100**	**800**	**1074**	**754**	**660**	**0**	**0**	**1732**	**0**	**111**	**100**	**780**	**436**	**660**	**1152**	**15165**											

Discretionary Work/Projects	**Neil**	**Daniel**	**Tiffany**	**Rick**	**Roy**	**Jonathan**	**Jon**	**Michelle**	**EU Temp (1500)**	**EU Temp (1500)**	**Brian**	**Marc**	**Scott**	**THS Position**	**Intern/Volunteer**	**Doro**	**THS Position**	**Rjahja**	**Tech Staff**	**Joe**	**Jackie**	**Joey**	**Jeff**	**Total GIS Xfunctional**			**Notes**	**Tier 1**	**Tier 2**	**Tier 3**	**FY11/12 Carryover***	**Mandatory (Projects)**	**Mandatory (Nondiscretionary)**	**Internal Projects (T1 only)**	**External Projects**
ArcGIS Online Implementation					10						70	30	20			10				10				150			Assumed 0% complete at FY12/13 end				150			150	
Business Analyst Online Implementation											34													34			Assumed 15% complete at FY12/13 end				34			34	
CAD/RMS Replacement					40						40	20	20			160				40				320			Assumed 65% complete at FY12/13 end					320			320
Common Operating Picture for EOC											36		20			20								76			Assumed 5% complete at FY12/13 end				76			76	
Enterprise Asset Management Phase 3		79			375	100	800	200		500	35	500	35	550				50	100			26	63	3413			Using prorated FY13 projections					3413			3413
EU Mobile Solution																								0			FY15								
GIS Efficiency - Baseline Competencies Ph1	6						6											6		6	6			30			Web courses remaining				30			30	
Mobile Research Project																								0			Assumed 100% complete at FY12/13 end								
RouteSmart Implementation					120			300			20													440								440			440
WebUMA																								0			FY15								
T1 - GIS Efficiency - Baseline Competencies Ph2		32	56	48	48	32	32	32			48	144				56		48		40	40	72	56	784			44 instructor-led days; 28 web-module days	784						784	
T1 - GIS Efficiency - OLA		50					50				50	50	120			50		50		50	5		50	525			Assumed ~10% complete at FY12/13 end	525						525	
T1 - GIS Efficiency - SLAs		45					45					45	80			45		45		45	5		45	400				400						400	
T1 - Location Analytics Research Project		10					10				20	50	50			10		10		10			10	180				180						180	
T1 - Quality Assurance Plan		25					25					100	150			25		25		25	5		25	405				405						405	
T2 - GIS Efficiency - Organizational Improvements																											Assumed 0% complete at FY12/13 end		0						
T2 - Image Server Implementation																													0						
T3 - Communications and Marketing Plan																														0					
T3 - NA/Strategic Plan (deferred)																														0					
Discretionary Total	**6**	**241**	**56**	**48**	**593**	**132**	**968**	**532**	**0**	**500**	**353**	**939**	**495**	**550**	**0**	**376**		**234**	**100**	**226**	**61**	**98**	**249**	**6757**				**2294**	**0**	**0**	**290**	**4173**	**15165**	**2584**	**4173**
Services and Staffing Total																									**$0**	**$0**							69.2%	11.8%	19.0%

Work Plan Totals																								
Discretionary (Projects)	6	241	56	48	593	132	968	532	0	500	353	939	495	550	0	376	0	234	100	226	61	98	249	6757
Nondiscretionary (Maintenance, Support, Services)	368	1337	820	179	362	1200	550	990	1100	800	1074	754	660	0	0	1732	0	111	100	780	436	660	1152	15165
Total hours of work	**374**	**1578**	**876**	**227**	**955**	**1332**	**1518**	**1522**	**1100**	**1300**	**1427**	**1693**	**1155**	**550**	**0**	**2108**	**0**	**345**	**200**	**1006**	**497**	**758**	**1401**	**21922**
Total FTEs of work	0.21	0.90	0.50	0.13	0.55	0.76	0.87	0.87	0.63	0.74	0.82	0.97	0.66	0.32	0.00	1.21	0.00	0.20	0.11	0.58	0.28	0.43	0.80	12.56
																				0.44	*0.22*			
Available Resource Hours (FTEs)	0.20	0.90	0.50	0.10	0.60	0.75	0.90	0.85	0.65	0.75	0.75	0.90	0.60	0.33		1.00		0.20	0.15	0.22	0.11	0.50	0.80	11.76
% Resource Allocation	107%	100%	100%	130%	91%	102%	97%	103%	97%	99%	109%	108%	110%	95%		121%		99%	76%	262%	259%	87%	100%	

(T1-T3) + CO + External + Nondiscret.	**21922**
(T1) + CO + External + Nondiscret.	**21922**

Appendix D – GIS CIP Budget Detail

Object Code	Description	Budget Amount
5101	**Professional Services**	
	Interface Maintenance (North Arrow, Websoft, Omega)	$5,000
	SiteAlarm Monitoring	$817
5200	**Office Supplies**	
	Plotter Paper and Ink	$350
5210	**Software**	
	E911 Data Licensing	$2,100
	ESRI ArcGIS Online Subscription	$2,500
	ESRI ArcGIS Image Server Extension	$10,000
	ESRI ArcGIS Editor New Licenses (3)	$19,500
	ESRI ArcGIS Basic New Licenses (2)	$3,500
	ESRI Maplex New Licenses (2)	$2,500
	ESRI PLTS Data Reviewer New Licenses (2)	$5,000
	ESRI Maintenance - Enterprise GIS	$35,000
	ESRI Maintenance - Police GIS	$8,800
	MapLogic Maintenance	$625
	Omega Maintenance - Police	$3,075
	OpenLM Maintenance	$990
	Small Software Upgrades and New Tools	$750
	SmarterStats Upgrade	$150
	SQL Server Upgrade	$700
	XTools Upgrade	$2,500
5216	**Technology Equipment (Under 5K)**	
	Small Equipment	$750
6002	**Technology Equipment**	
	AGS Physical Servers (2)	$12,000
	SDE Physical Servers (2)	$12,000
5330	**Equipment Repair and Maintenance**	
	IT Plotter Maintenance	$1,000
5500	**Training and Professional Development**	
	GIS Baseline Competencies	$24,850
	ESRI User Conference (training materials)	$500
	ESRI Developer Summit	$1,900
	Link Conference	$1,700
	Professional Memberships	
	FY Total:	**$158,557**