City of Carbondale

Organizational & Management Review

November 11, 2016

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November 11, 2016

Mr. Gary Williams
City Manager
City of Carbondale
200 South Illinois Avenue
Carbondale, IL 62901

Dear Mr. Williams:

We are pleased to provide you with a report regarding the Organizational & Management Review for the City of Carbondale. The report includes analysis of each of the City's departments and recommendations designed to help the City adapt to changing national, regional, and local trends.

The recommendations contained in this report are based on input and information provided by City staff and industry standards and best practices applicable to Carbondale. The City is staffed by thoughtful, dedicated employees who sincerely strive to do their best for the community and serve the organization. We believe the recommendations in this report will augment staff's ability to perform with increased efficiency and effectiveness. Implementing these recommendations will require coordination among all of the City's departments as well as close communication with elected officials.

Thank you for the opportunity to serve the City of Carbondale.

Sincerely,

Michelle Ferguson
Organizational Assessment Practice Leader

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Executive Summary

The Carbondale community finds itself at a critical juncture, managing the impact events at both the national and local level have on the delivery of local government services.

In both a physical and community sense, much of the City is built around Southern Illinois University – Carbondale (SIU), a public research university located on the City's south side. SIU is a major economic driver for the City, as well as its primary employer. It generates considerable population influx for the Carbondale community. Approximately 15,987 on-campus students were enrolled for the 2016 fall semester, compared to the City's existing population of 26,400 residents. Although SIU is a regional institution and attracts students from across the globe, on-campus enrollment declined 15% over the last five years. This decline is due in part to decreased higher education funding for all public universities in the State of Illinois.

Continued instability of funding and cuts to SIU's budget threaten hundreds of jobs which will directly affect the City's economy and tax revenues. Additionally, rising healthcare and pension costs put pressure on the City's ability to balance service delivery with the cost of personnel and benefits.

Nationally, the current changing climate of police/community relations is a relevant, emerging issue that is affecting law enforcement agencies across the country, from large urban departments to rural police jurisdictions. Carbondale, with its significant University presence, is not immune to the pressure to modernize equipment, reduce lethal force, and engage with the community.

Most, if not all, of these changes are beyond the City's direct control. Instead, the City finds itself grappling with the need to respond to its circumstances while continuing to provide effective, affordable services to the community. To its credit, the City has already taken proactive steps to shore up revenues in an effort to pay for critical investments in community infrastructure. In June 2016, the City Council passed a four cents per gallon increase on motor fuel, as well as new 2% sales taxes on food and beverages served at restaurants and a 4% packaged liquor tax. Revenue from these taxes will support infrastructure improvements as well as public safety pension liabilities.

In addition to these efforts, it is important to identify alternatives for mitigating and addressing outside influences. While eliminating services may result in initial budgetary savings, strategically prioritizing services can create financial stability while helping maximize the effectiveness of City spending. Cultivating alternative revenue sources and creating a high-performance, outcome-based culture will enable the City to invest in its infrastructure and economic growth, as well as support the creation of efficient and effective organization.

This Organizational & Management Review has revealed a number of recommended actions the City should employ while adapting to external changes. The recommendations in this report touch on all facets of City services, from investing in and protecting its public assets to professionalizing and streamlining City functions. Some will seem minor; others will challenge the organization by redesigning processes, procedures, and structures. Some can be implemented quickly; others will be an evolutionary process. It will take hard work and time to make these improvements.

By implementing these recommendations and focusing on appropriate adaptations to changes affecting the community, the City will enhance and support the tremendous community atmosphere throughout Carbondale while providing robust, streamlined services.

Summary of Recommendations

The following is a list of recommendations contained in this report.

General Government

1. Develop and implement a City-wide Performance Management System.
2. Fill the vacant Assistant City Manager position.
3. Enhance the capital planning and development process.
4. Assign CIP plan development to the City Manager's Office.
5. Adopt a practice of utilizing City-developed contract language for all service contracts.

Administrative Services Department

6. Reorganize the Administrative Services Department to create a dedicated Human Resources Division.
7. Establish and implement a formal Position Reclassification Policy for reclassification requests.
8. Purchase and implement recruitment software.
9. Develop a Carbondale Employee Handbook.
10. Require annual employee performance reviews for all City employees.
11. Implement an Employee Workplace Safety Program to reduce employee injuries and reduce costs associated with the City's Workers' Compensation Program.
12. Establish cost recovery goal and policy for the Civic Center.

Finance Department

13. Automate the City's payroll process as part of the New World conversion.
14. Revise the City's Purchasing Policy, and eliminate the requirement for Procurement Card transactions of $1,000 or more to require a Purchase Order.
15. Enhance financial reporting.
16. Develop and implement a City-wide Information Technology Strategic Plan to better address the organization's technology needs.
17. Implement a City-wide electronic document management system.

Police Department

18. Create two bureaus, each under the command of a Captain.
19. Staff each shift to meet adopted proactive policing standard.
20. Work with the Fraternal Order of Police Lodge #192 to negotiate a shift schedule that allows the Department to meet the demand profile and community policing standards as efficiently as possible.
21. Enhance data collection regarding Investigations Bureau workload indicators.
22. Assign one additional Detective to juvenile investigations.
23. Hire an Evidence Technician.
24. Reassign the School Resource Officer to the Patrol Division.
25. Revise schedule of the Street Crimes/Drug Unit to reflect its workload.
26. Assign a Lieutenant to the Support Services Division
27. Increase staffing of the Communications Center to 10 FTE Telecommunicators.
28. Assign a full time supervisor to the Communications Center.
29. Implement a proactive Quality Assurance program.
30. Implement ongoing training regarding Fire Department dispatching protocols.
31. Implement a vehicle replacement policy.
32. Implement a case management policy that includes anticipated dates of completion and supervisory monitoring of progress.

33. Implement a call-out procedure for Detectives.
34. Implement an intelligence-led, proactive policing strategy.
35. Pursue re-accreditation of the Department.
36. Provide investigative training related to Detectives' assignments.
37. Increase training opportunities for Patrol Officers.
38. Upgrade cellular telephones/mobile technology issued to Detectives.
39. Install a desktop scanner at the Evidence Control workstation.
40. Provide additional cameras for investigative personnel.
41. Ensure Department input into purchases of technology equipment – hardware and software.
42. Install an automated telephone information system ("phone tree").

Fire Department

43. Formalize Departmental service levels.
44. Create a Fire Department strategic plan.
45. Implement automatic aid agreements in lieu of mutual aid agreements where appropriate.
46. Develop specific performance metrics for response goals and outcome measures for Fire Department programs.
47. Update existing Standard Operating Guidelines.
48. Create a company inspections program to examine commercial properties at least annually.
49. Develop a comprehensive false alarm reduction program and fee structure for multiple false alarms.
50. Develop formal training standards as part of a comprehensive training program.
51. Create a Fire Department Safety Committee.
52. Implement an annual medical evaluation/physical program.
53. Budget for capital vehicle replacement using the regular CIP process.
54. Solicit input from employees regarding functionality and operability of vehicles and equipment.

Public Works Department

55. Create three formal functional divisions in Public Works: Utilities, Engineering, and Operations.
56. Create a Deputy Director of Utilities position to oversee the Utilities Division.
57. Create a City Engineer position to oversee the Engineering Division.
58. Reclassify the Maintenance and Environmental Services Manager position as a Deputy Director of Operations position to oversee the Operations Division.
59. Combine the Cemetery and Forestry divisions to achieve greater operational efficiencies.
60. Negotiate flexible workload assignment terms with Public Works unions.
61. Create a comprehensive asset management plan for all Department-related assets.
62. Utilize existing Equipment Maintenance asset information to inform a regular vehicle and equipment replacement process.
63. Expand the existing facility and building inventory and conduct Facility Condition Assessments.
64. Create a tree inventory and Urban Forest Management Plan.
65. Develop electronic street, sign, streetlight, and signal inventories and condition assessments.
66. Update and digitize existing Stormwater, Water, and Wastewater maps and asset inventories.
67. Create consistent time-tracking practices across all Public Works' divisions.
68. Utilize the existing SeeClickFix™ system to track work order requests Department-wide.
69. Implement a standardized trash container program and install tippers on existing garbage trucks.
70. Conduct a feasibility study to determine the appropriateness of automated refuse collection in the community.

71. Implement a City-led single hauler system for residential solid waste services.
72. Create a stormwater utility fee to provide funding for stormwater infrastructure and maintenance efforts.
73. Invest in technology to permit greater automated operation and off-site monitoring of water and wastewater facilities.
74. Develop a Department-wide standard operating procedures (SOPs) Manual to create consistent practices across Public Works' divisions.
75. Create a comprehensive training program.
76. Reconvene the Public Works Safety Committee to focus on occupational safety risks.

Development Services Department

77. Establish cost recovery goals for Development Services Department fees.
78. Establish a practice of annually reviewing and adjusting the Development Services fee structure to meet cost recovery goals.
79. Clearly define the roles and expectations of the Neighborhood Inspectors.
80. Revise the Rental Inspection Program to include enforcement and violation mechanisms.
81. Convert a Planner position to a GIS Specialist.
82. Upgrade development review and inspections software.

Methodology

In June 2016, the City of Carbondale retained the services of The Novak Consulting Group to conduct an Organizational & Management Review of the City's departments. The purpose of this study was to evaluate the effectiveness of the City's current organizational and management structure, policies and procedures, use of technology, and management practices throughout the organization. Additionally, The Novak Consulting Group was asked to assess the City's staffing levels, the human resources requirements needed to support City staff, administrative practices, deployment of resources, and to recommend improvements to the City's organizational structure.

To accomplish these tasks, The Novak Consulting Group conducted extensive field work which involved members of the Carbondale community as well as elected officials and staff from each City department. In total, nearly 100 City staff participated in individual interviews or focus group sessions. Additionally, interviews were conducted with members of the City Council and a community focus group was held with 18 participants representing various community, neighborhood, business, education, and nonprofit stakeholder organizations in Carbondale.

The Novak Consulting Group also requested and analyzed background information provided by staff from each City department. Evaluation of budgetary information, workload measures, performance indicators, and other data resulted in a thorough review of each department's core functions and activities. Additionally, an inventory of each department's core programs and services was developed and is included as Appendix A.

About the City of Carbondale

The City of Carbondale has a population of approximately 26,400 residents and is located in Jackson County in southern Illinois. According to the 2010 Decennial Census, the City encompasses 17.09 square miles. The following figure illustrates the City's geographic location.

Figure 1: City of Carbondale Location, 2016

The City's population has increased slightly since the 2000 Decennial Census, while the median age has declined slightly over the same period. The following table illustrates total population and median age estimates from the 2000 and 2010 U.S. Decennial Census, as well as the 2015 estimate from the Census Bureau's Population Estimates Program.

Table 1: City of Carbondale Population and Median Age, 2000-2015

Population Category	2000	2010	2015	Percent Change
Total Population	25,597	25,902	26,399	3.1%
Median Age	24.7	23.5	23.3	-5.7%

It is important to note that the City requested an official recount of its population after the 2000 Decennial Census. This recount yielded a population estimate of 25,597 persons; however, additional detailed information was not available from the Census Bureau.

According to the latest available estimate from the U.S. Census Bureau, persons aged 20 to 24 years comprise nearly one third of the City's population, as shown in the following figure.

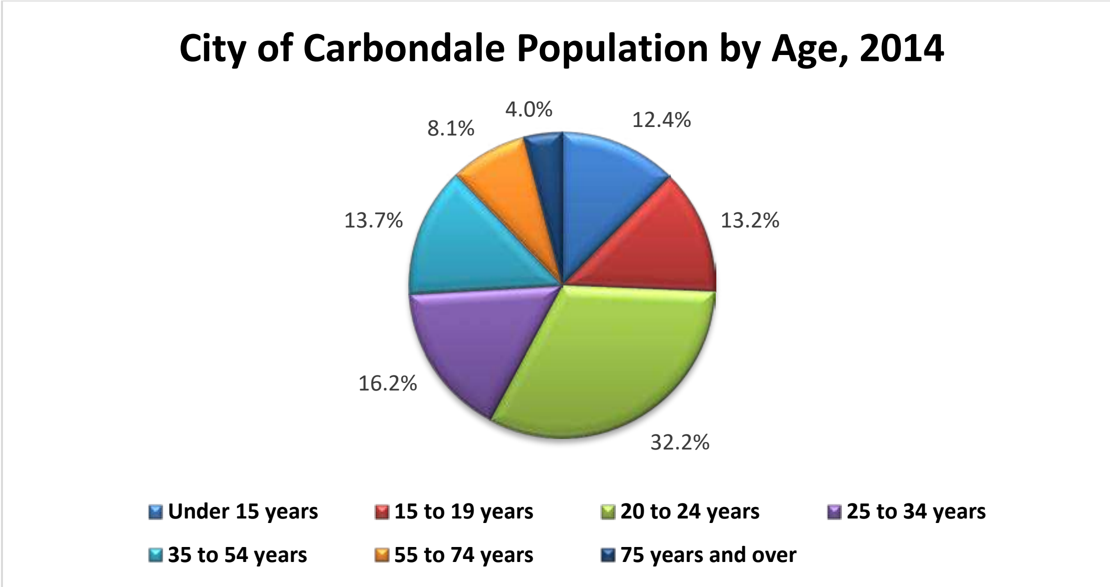

Figure 2: Carbondale Population Composition by Age, 2014

Collectively, nearly 58% of persons in the City of Carbondale are aged 24 and under. The following table illustrates estimated populations by age group according to the 2010 Decennial Census, as well as the Census Bureau's 2014 American Community Survey (ACS). At the time of this writing, information from the 2015 ACS had not been released by the Census Bureau. Information from the 2000 Decennial Census has been omitted due to the lack of specific information available related to the population recount.

Table 2: City of Carbondale Age Distribution, 2010-2014

Census Age Group	2010	2014 ACS	Percent of Total Population (2014 ACS)	Percent Change 2010-2014
Under 5 years	1,047	1,385	5.3%	32.3%
5 to 9 years	866	935	3.5%	8.0%
10 to 14 years	733	958	3.6%	30.7%
15 to 19 years	3,312	3,490	13.2%	5.4%
20 to 24 years	8,745	8,484	32.2%	-3.0%
25 to 34 years	4,173	4,285	16.2%	2.7%
35 to 44 years	1,862	1,884	7.1%	1.2%
45 to 54 years	1,670	1,742	6.6%	4.3%
55 to 59 years	854	779	3.0%	-8.8%
60 to 64 years	712	644	2.4%	-9.6%
65 to 74 years	845	725	2.7%	-14.2%
75 to 84 years	675	740	2.8%	9.6%
85 years and over	408	323	1.2%	-20.8%
Total Population	**25,902**	**26,374**	**100.0%**	**1.8%**

The racial composition of the City's population is somewhat diverse, with most residents classifying themselves as White, followed by Black or African American and Asian, as shown in the following figure.

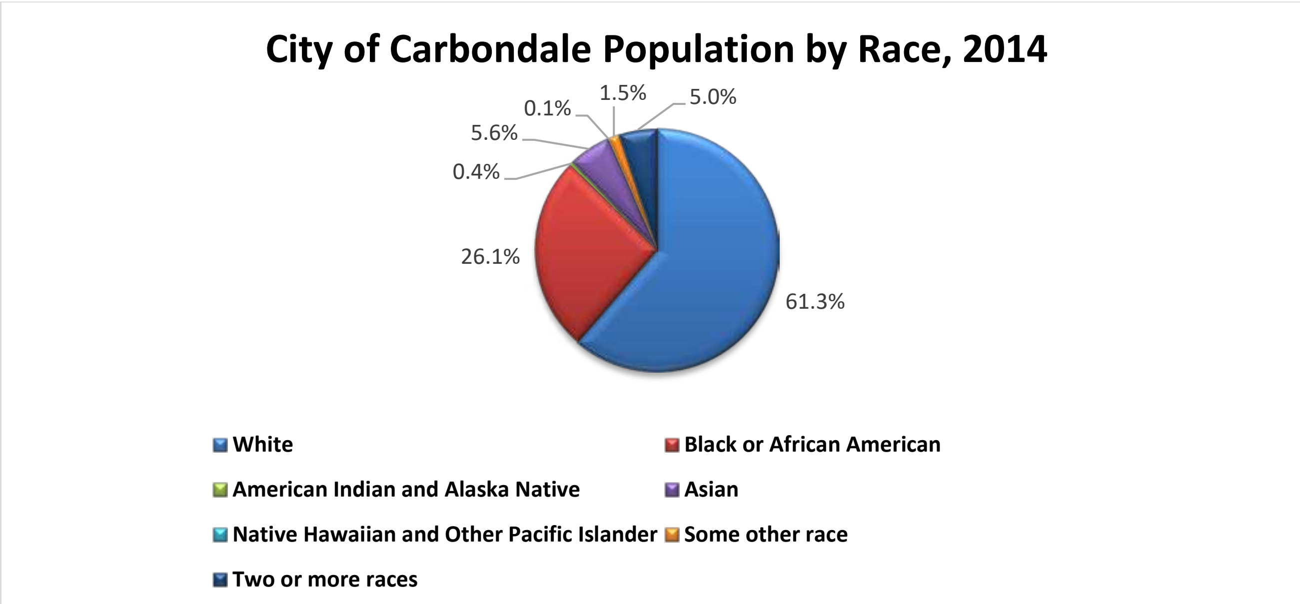

Figure 3: Carbondale Population Composition by Race, 2014

This distribution is similar to the 2010 Decennial Census. Approximately 6.7% of the City's residents identify as Hispanic or Latino, compared to 5.4% in 2010. The following table illustrates growth in the City's Hispanic and Latino population since the 2010 Census.

Table 3: Hispanic or Latino Ethnicity, 2010-2014

Ethnicity	2010	2014 ACS	Percent Change
Hispanic or Latino (of any race)	1,410	1,772	25.7%
Not Hispanic or Latino	24,492	24,602	0.4%
Total population	**25,902**	**26,374**	**1.8%**

Economy

The 2014 American Community Survey represents the latest available economic data from the U.S. Census Bureau. That year, the median household income in the United States was $53,482, compared to $17,677 in the City of Carbondale. Approximately 50.7% of the City's population lived below the Federal poverty level. The relative poverty of persons in the City is attributable to the high proportion of youth and students who have not yet achieved stable careers and peak earnings.

The City's economy is also heavily oriented towards education-related activities, with 51% of employed persons aged 16 and over working in educational services, health care, and social assistance. The following figure illustrates leading employment industries in the City.

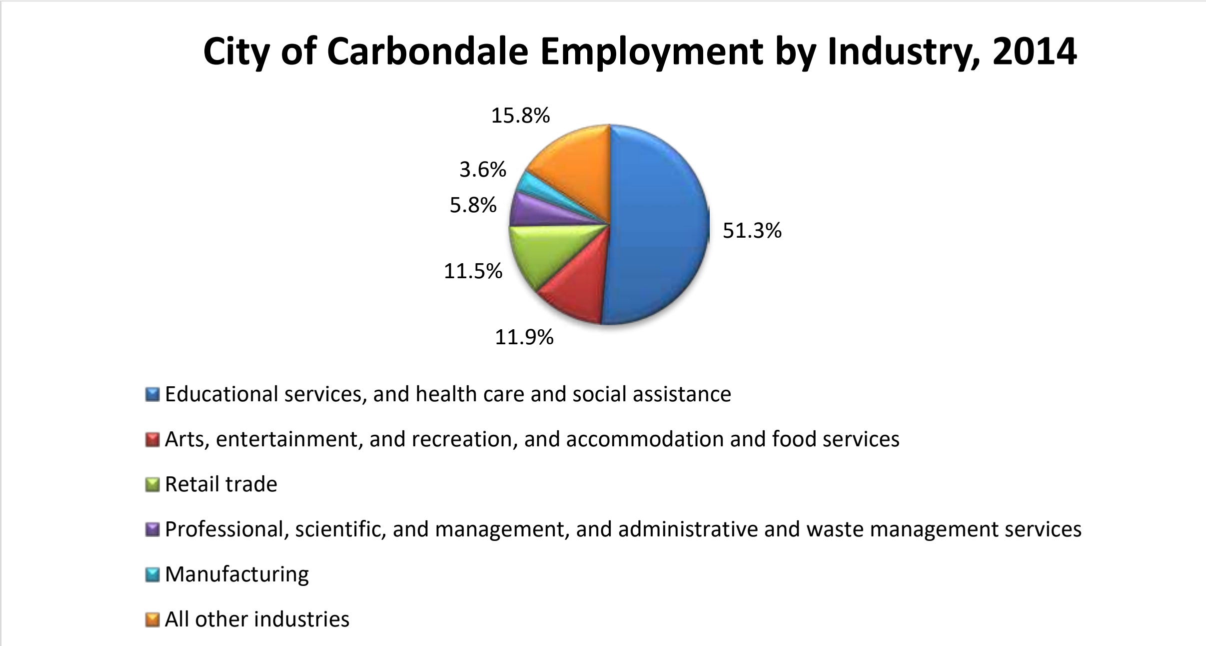

Figure 4: Carbondale Employment by Industry, 2014

Average annual unemployment in the City peaked in 2010 and 2013, but began to decline in 2014. The most recent available data from the Bureau of Labor Statistics indicates that the City's unemployment rate was 6.1% in 2015, which is the lowest rate since the start of the Great Recession in 2008. The following figure summarizes the average annual unemployment rate in the City of Carbondale over the last ten years.

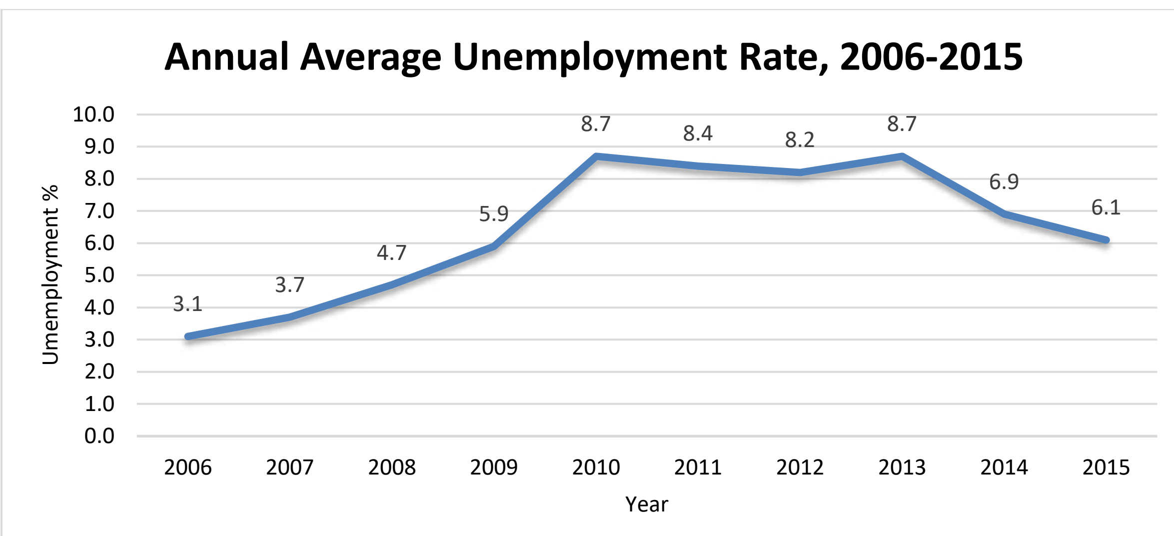

Figure 5: Carbondale - Average Annual Unemployment Rate, 2006-2015

Crime

Crime statistics for the City of Carbondale were obtained from the Federal Bureau of Investigation's Uniform Crime Reporting (UCR) tool. UCR data is available from 2006 through 2012 and tracks a variety of violent and property crimes reported by local law enforcement agencies. Violent crimes include murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault. Property crimes include burglary, larceny-theft, and motor vehicle theft.

The following table illustrates violent crimes reported by the Carbondale Police Department. Importantly, the FBI notes that Illinois police agencies did not utilize a data collection methodology for the offense of forcible rape which complied with UCR guidelines until 2010. Consequently, statistics for forcible rape offenses from 2006-2010 are shown as "Not Available" in the table below.

Table 4: Violent Crime UCR Data, 2006-2012

Year	2006	2007	2008	2009	2010	2011	2012	Percent Change
Murder and non-negligent manslaughter	0	0	0	0	1	1	0	-
Forcible rape	Not Available	Not Available	Not Available	Not Available	33	32	29	-
Robbery	52	39	50	65	47	38	36	-31%
Aggravated assault	130	155	105	123	163	201	195	50%
Violent crime total	**182**	**194**	**155**	**188**	**244**	**272**	**260**	**43%**

While robberies declined 31% between 2006 and 2012, aggravated assaults increased 50%, resulting in an overall violent crime increase of 43% given available data over this period.

Property crime in the City of Carbondale declined slightly, led by a 24% reduction in burglaries. While motor vehicle thefts increased 50% from 2006 to 2012, larceny-theft crimes increased approximately 2%, as shown in the following table.

Table 5: Property Crime UCR Data, 2006-2012

Year	2006	2007	2008	2009	2010	2011	2012	Percent Change
Burglary	321	439	309	415	302	320	246	-23%
Larceny-theft	779	876	771	746	821	768	798	2%
Motor vehicle theft	32	36	37	28	32	28	48	50%
Property crime total	**1,132**	**1,351**	**1,117**	**1,189**	**1,155**	**1,116**	**1,092**	**-4%**

Southern Illinois University - Carbondale

SIU was founded in 1869 and is the flagship campus of the Southern Illinois University system. SIU's main campus consists of over 1,100 acres situated on the south side of the City of Carbondale. SIU schedules classes on a semester system and publishes core facts regarding the school's demographics on its website. As of the Fall 2016 semester, the average age of undergraduates was 23.2 years and reflects 12,182 undergraduate students, of which 55% were male and 45% were female. Approximately 65% of enrolled undergraduates where White compared to other races or ethnicities, as illustrated in the following table.

Table 6: SIU Undergraduate Enrollment by Race/Ethnicity, Fall 2016

Race/Ethnicity	Fall 2016	% of Total
Amer. Ind./Alaska Nat.	24	0.2%
Asian	209	1.7%
Black	2,094	17.2%
Hispanic	1,075	8.8%
International	490	4.0%
Native Hawaiian/Other Pac. Islander	13	0.1%
Two or more races	393	3.2%
Unknown	11	0.1%
White	7,873	64.6%
Total Undergraduate Enrollment	**12,182**	**100.0%**

Total enrollment including undergraduate, postgraduate, and doctoral students at SIU was 15,987 students in Fall 2016. This figure includes a mixture of on- and off-campus students. SIU defines on-campus students as those enrolled at the Carbondale campus or the SIU School of Medicine in Springfield, while off-campus students include those enrolled in web-based online classes or on military bases.

Notably, total enrollment at SIU has declined 25% over the last 10 years, with most of the decline occurring in the on-campus population. The following table illustrates enrollment trends for on-campus, off-campus, and total enrolled students as well as the percentage change in each of these categories. While total enrollment information for Fall 2016 has been published, a breakout between on- and off-campus students was not available at the time of this writing.

Table 7: SIU Student Enrollment Trends, Fall 2005 – Fall 2016

Fall Semester	On-campus	Percent Change	Off-campus	Percent Change	Total Enrollment	Percent Change
2005	19,124	-	2,317	-	21,441	-
2006	18,548	-3%	2,455	6%	21,003	-2%
2007	18,851	2%	2,132	-13%	20,983	0%
2008	18,594	-1%	2,079	-2%	20,673	-1%
2009	18,327	-1%	2,023	-3%	20,350	-2%
2010	17,996	-2%	2,041	1%	20,037	-2%
2011	17,815	-1%	2,002	-2%	19,817	-1%

Fall Semester	On-campus	Percent Change	Off-campus	Percent Change	Total Enrollment	Percent Change
2012	16,804	-6%	2,043	2%	18,847	-5%
2013	16,277	-3%	1,687	-17%	17,964	-5%
2014	16,216	0%	1,773	5%	17,989	0%
2015	15,378	-5%	1,914	8%	17,292	-4%
2016	N/A	N/A	N/A	N/A	15,987	-8%
Cumulative Change		**-20%**		**-17%**		**-25%**

The University receives State revenues in three major categories. General Revenue appropriations receive most of the State's tax revenues and pay for the regular operations and expenses of State agencies. Educational Assistance revenue includes dedicated revenue from a portion of the State's income taxes. Income Fund revenue includes course fees and tuition. The following figure illustrates appropriations to the University from these revenue sources since 2006.

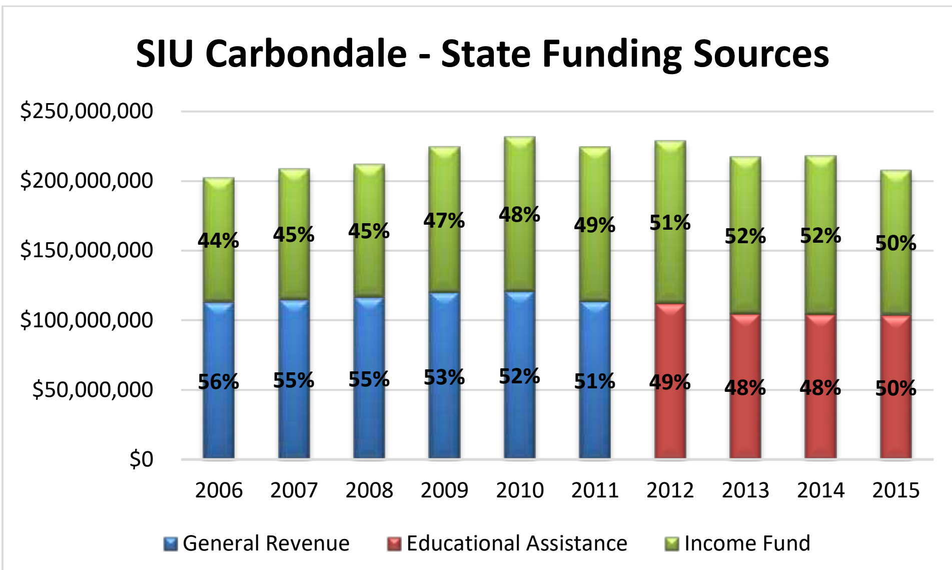

Figure 6: SIU Carbondale Campus Revenue Sources, 2006-2015

In an effort to combat declining enrollment and budgetary uncertainty, SIU is making investments in its admissions, enrollment, and marketing activities. According to a recent article published in The Southern Illinoisan,[1] SIU is focusing on recruiting students from junior colleges and retaining currently enrolled students.

[1] "SIU Chancellor optimistic about university's future." The Southern Illinoisan. Published September 18, 2016. http://thesouthern.com/news/local/siu-chancellor-optimistic-about-university-s-future/article_a7275133-12b0-5f2f-9b45-584209ff3c21.html

About the City Organization

The City of Carbondale utilizes a Council-Manager form of government and is led by a Mayor and six Councilmembers, all of whom are elected at-large to serve four-year terms. The City Council is responsible for appointing a City Manager to oversee staff and the professional administration of City functions. The City Manager oversees all City departments, as shown in the following organizational chart.

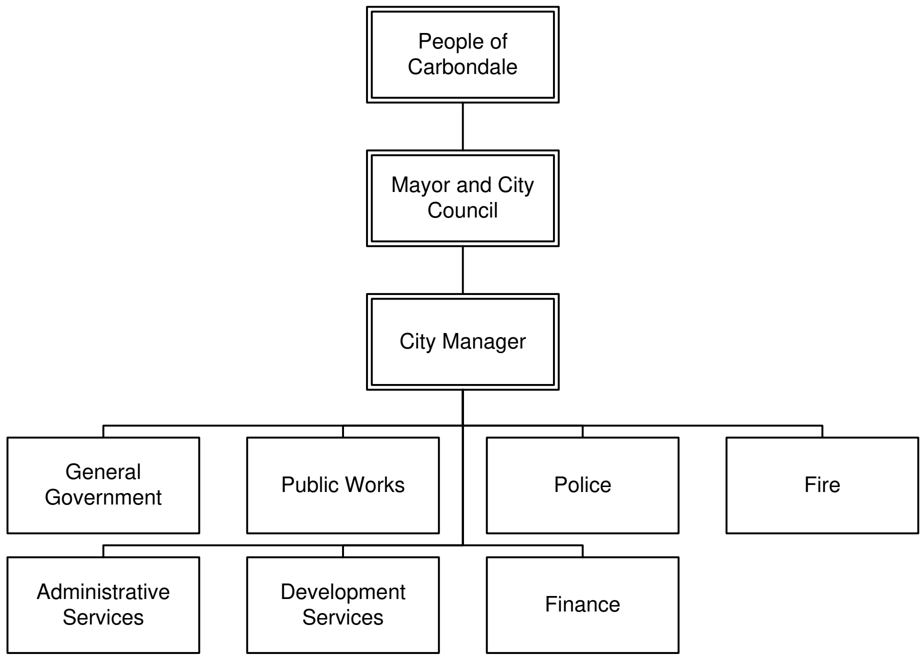

Figure 7: City of Carbondale Organizational Chart, FY2016

Staffing

In FY2017, the City budgeted for 262.3 full-time equivalent (FTE) employees across all departments. This represents an increase in staffing of 1.6% over FY2013 actual staffing levels, as shown in the following table.

Table 8: Staffing by Department, FY2013-FY2017

Department	Actual FY2013	Actual FY2014	Actual FY2015	Estimated FY2016	Budget FY2017	Percent Change
General Government	16.89	17.02	17.02	16.57	17.02	0.8%
Administrative Services	8.92	9.15	9.2	9.1	9.44	5.8%
Finance	15.97	16.82	16.65	16.98	17	6.4%
Police	83.65	86.84	86.05	81.19	82.56	-1.3%
Fire	30.75	31.2	30.94	31.09	31.04	0.9%
Development Services	15.7	16.03	16.48	16.48	13.9	-11.5%
Public Works	86.29	86.51	88.21	87.91	91.34	5.9%
Total	**258.17**	**263.57**	**264.55**	**259.32**	**262.3**	**1.6%**

The General Government Department consists of the Mayor and Council, City Manager's Office, City Clerk's Office, City Attorney's Office, and Economic Development Office, and accounts for less than 10% of total budgeted FTEs. The Public Works Department employs the largest number of FTEs, followed by the Police Department, as shown in the following figure.

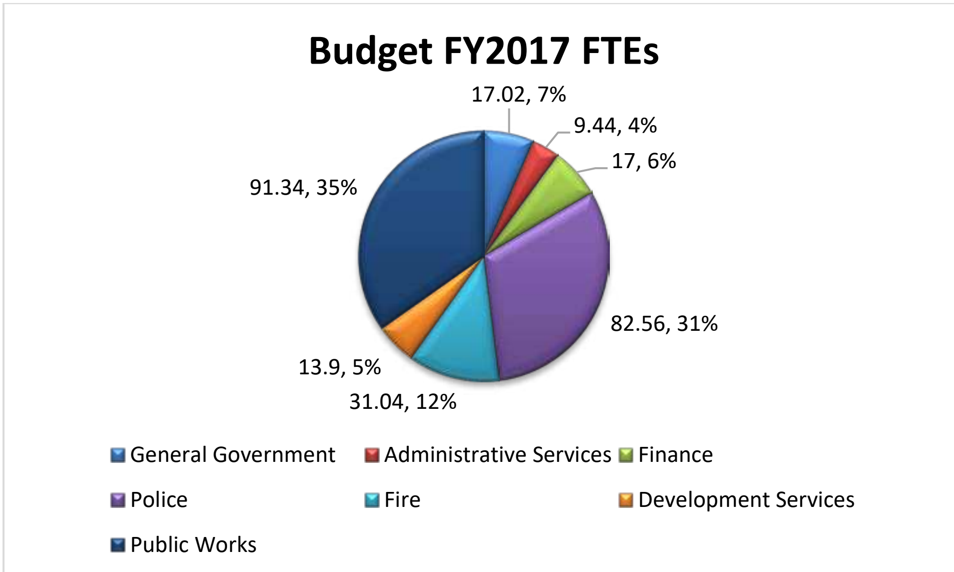

Figure 8: City of Carbondale Budgeted, FY2016

Expenditures

The City of Carbondale utilizes funds in two broad categories: Governmental Funds and Proprietary Funds. Governmental Funds include the General Fund, which provides for the City's general operating expenses; Special Revenue Funds, which account for revenues generated that are restricted for specific purposes; the Debt Service Fund, which accounts for resources to pay for general obligation debts; and the Community Investment Fund, which accounts for resources to be used for acquiring or constructing capital improvements to City facilities and infrastructure. In total, these funds represent 57% of the City's budgeted expenditures for FY2017.

In addition to these funds, the City utilizes Proprietary Funds which are supported by sales and service fees. This includes four enterprise funds: the Waterworks and Sewerage Fund, the Parking System Operations Fund, the Solid Waste Management Fund, and the Rental Properties Fund. These enterprise funds collect revenue from service fees, permits, and fines, which in turn must be spent only on operations and capital related to the fund. In addition to these, the Health Reimbursement Fund is an internal service fund which accounts for the City's group health insurance premiums.

The following table illustrates budgeted expenditures among each of these funds for FY2017 and the percentage of total expenditures each fund represents.

Table 9: Expenditures and Other Financing Sources by Type, FY2017

Expenditures by Fund	Budget FY2017	Percent of Total
General Fund	$26,379,022	47%
Motor Fuel Tax Fund	$1,008,123	2%
TIF District #1	$170,853	0%
TIF District #2	$34,007	0%
TIF District #3	$0	0%
Debt Service Fund	$2,396,601	4%
Community Investment Fund	$2,099,250	4%
Governmental Funds Total	***$32,087,856***	***57%***
Waterworks and Sewerage Fund	$18,140,514	32%
Parking System Operations Fund	$465,974	1%
Solid Waste Management Fund	$1,021,309	2%
Rental Properties Fund	$581,934	1%
Health Reimbursement Fund	$3,753,078	7%
Proprietary Funds Total	***$23,962,809***	***43%***
Total Expenditures – All Funds	**$56,050,665**	**100%**

Across all categories, Personal Services costs account for the greatest share of budgeted expenditures at 41.3%. These costs include wages, salaries, overtime, and benefits. Capital Outlay & Improvements account for 20% of expenditures and represent the second-highest share of budgeted expenditures. These costs include expenses related to land, buildings and facilities, equipment and vehicles, and infrastructure such as streets and water and sewer mains. The following table illustrates budgeted expenditures by category for FY2017.

Table 10: Expenditures by Category, FY2017

Type	Budget FY2017	Percent of Total
Personal Services	$23,142,697	41.3%
Capital Outlay & Improvement	$11,377,932	20.3%
Direct Operating Charges & Services	$9,895,375	17.7%
Debt Service	$3,776,063	6.7%
Non-Operating Charges	$3,380,910	6.0%
Net Transfers	$2,064,218	3.7%
Depreciation on Fixed Assets	$2,191,563	3.9%
Contingencies	$221,907	0.4%
Total	**$56,050,665**	**100.0%**

Revenues

As shown in the table below, the City's funds are supported by a variety of revenue sources, with most Sales & Service taxes supplying the largest share of monies. These taxes include local sales and utility taxes as well as the Municipal Motor Fuel tax and a hotel/motel tax. The second-largest source of revenue for the City includes Services, Charges, Permits, and Fees, which collectively supply 26% of the City's revenues and include fees for services supplied by Police, Fire, Public Works, Water, Sewer, Refuse, and Parking Meter operations.

Table 11: Revenues by Category, FY2017

Revenue Category	Budget FY2017	Percent of Total
Sales & Service Taxes	$20,406,792	42%
Services, Charges, Permits & Fees	$12,281,133	26%
Intergovernmental	$6,665,689	14%
Contributions & Assessments	$3,542,535	7%
Other Financing Sources	$2,378,560	5%
General Property Tax	$1,235,532	3%
Fines	$703,669	1%
Franchise Taxes & Licenses	$534,809	1%
Use of Money & Property	$326,088	1%
Total Revenue	**$48,074,807**	**100%**

Notably, total budgeted revenues are not projected to cover total budgeted expenditures for FY2017. This is due to a conscious effort to reinvest in the City's infrastructure, and much of the shortfall will be covered by existing fund balances in the Waterworks and Sewerage Fund. After absorbing these costs, the Waterworks and Sewerage Fund is estimated to end FY2017 with over $5.3 million in fund balance.

General Government

General Government refers to several key City leadership functions, including the Mayor and City Council, the City Manager's Office and the offices of the City Clerk and City Attorney.

The City Manager's Office is responsible for the implementation of the City's newly adopted Strategic Plan. In January 2016, the City Council and City leadership participated in a strategic visioning session to identify clear goals for the organization and assist staff in determining how to allocate its limited resources. The end result was the development of the City's Strategic Plan, which outlined the following goals:

1. Provide a high quality of life and foster a sense of community for all residents.
2. Encourage progressive economic development, tourism, arts and entertainment.
3. Demonstrate fiscal responsibility and transparency.
4. Provide high-quality City services and infrastructure.
5. Build on, expand and develop new relationships with Southern Illinois University.
6. Use the Downtown Master Plan as a guide to revitalize the City Center.
7. Beautify streetscapes and enhance residential development/rehabilitation.

The following figure illustrates General Government's current organizational structure.

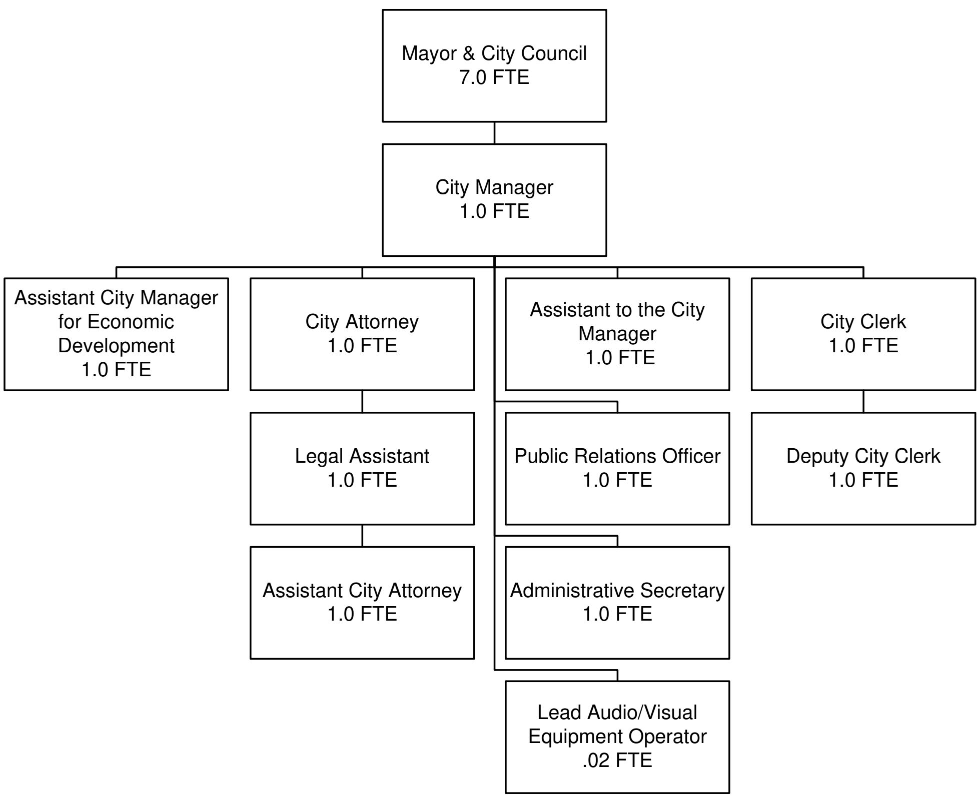

Figure 9: General Government Organizational Structure, FY2017

City Manager's Office

The City Manager's Office consists of four FTEs: the City Manager, Assistant City Manager for Economic Development, Public Relations Officer and the Assistant to the City Manager. The Public Relations Officer and Assistant City Manager positions were vacant at the time of this review.

The City Manager is responsible for the implementation of City Council goals, policies and programs and for the enforcement of all laws and ordinances within the municipality. The City Manager serves as the City's Budget Officer and prepares the annual operating budget and five-year capital planning budget for recommendation to the City Council. In addition, the City Manager supervises department directors and manages day-to-day operations of the City.

General economic development efforts fall under the auspices of the City Manager's Office; however Economic Development is recognized as its own Division in the City's budget. The Assistant City Manager is responsible for the economic development activities for the City, and is the sole employee in the Economic Development Division. This position coordinates the City's business recruitment, retention and expansion efforts. Other duties include the administration of the City's Enterprise Zone, Tax Increment Financing (TIF) Districts, and the Revolving and Facade Loan Programs. The City has publicly-owned property available for development, and the Assistant City Manager is responsible for promoting and managing these properties.

The Assistant to the City Manager provides administrative, analytical, and technical support to the City Manager's Office. In addition, the Assistant to the City Manager completes special projects on behalf of the City Manager.

The Public Relations Officer reports to the City Manager and is responsible for overseeing the City's internal and external communications. This position is intended to work with print, television, and social media outlets to promote and represent the City.

The City Manager's Office is also responsible for providing Support Services to the organization. The Support Services function includes two FTEs, an Audio Visual Equipment Operator who assists in streaming and broadcasting the City Council Meetings and an Administrative Support position for the City Council. The General Fund's portion of certain expenditures, which are not distributed to other departments, are charged to Support Services, including telephone infrastructure charges, insurance premiums, audit fees, the citizen newsletter, agenda production and other capital outlay items.

City Clerk's Office

The City Clerk's Office is responsible for preserving, publishing and maintaining the integrity of public records. This Office is responsible for voter registration and processing requests for public records under the Illinois Freedom of Information Act. The City Clerk's Office issues liquor licenses, raffle permits, taxicab licenses, vending permits and various other City business licenses and permits. The City Clerk's Office is also responsible for working with the City Manager to develop the City Council agenda and administers all City elections.

The City Clerk's Office consists of two FTEs, the City Clerk and the Deputy City Clerk. The City Clerk reports directly to the City Manager and supervises the Deputy City Clerk. The Deputy Clerk provides administrative support, interacts with the public and assists in the daily operations of the Office.

City Attorney's Office

The City Attorney's Office acts as the legal advisor to the City of Carbondale in matters involving general municipal operations and administrative matters. The City Attorney's Office advises the City Council and City staff on legal issues, represents the City in legal proceedings, and reviews and prepares legal documents and updates to the Carbondale Revised Code. In addition, the Office also prosecutes ordinance violations under the Carbondale Revised Code.

The City Attorney's Office consists of three FTEs, the City Attorney, Assistant City Attorney and a Legal Assistant. The City Attorney reports to the City Manager and oversees the staff in the City Attorney's Office.

The City Attorney is the City's chief legal officer and is responsible for the proper administration of the City's legal affairs. The Assistant City Attorney provides support to the City Attorney and serves as the City's prosecutor. The Legal Assistant provides general administrative and research support to the City Attorney's Office.

The following table illustrates the General Government staffing levels over the last five fiscal years, along with the percentage change in staffing since FY2013.

Table 12: General Government Staffing Trends, FY2013-FY2017

Division Staff (FTEs)	Actual FY2013	Actual FY2014	Actual FY2015	Actual FY2016	Budgeted FY2017	Percent Change
Mayor & City Council	7	7	7	7	7	0%
City Manager's Office/Economic Development	2.98	3	3	2.47	4	34.23%
City Clerk's Office	1.89	2	2	1.95	2	1%
City Attorney's Office	4	4	4	3.6	3	-25%
Support Services	1.02	1.02	1.02	1.02	1.02	0
TOTAL FTEs	**16.89**	**17.02**	**17.02**	**16.04**	**17.02**	**.76%**

In FY2017, the City Manager's Office created a new position, the Public Relations Officer. In contrast, the City Attorney's Office eliminated a position (Administrative Secretary).

General Government Budget

The total FY2017 budgeted expenditures for the General Government functions are $5,896,024, or 10.52% of City-wide budgeted expenditures.

The General Government budget includes funding for the City Manager's Office, Economic Development, City Clerk's Office, City Attorney's Office, Mayor and Council as well as Support Services, Tax Increment Financing Districts and Group Health Insurance.

The following table illustrates trends in the department's expenditures over the last five fiscal periods, along with the percentage change since FY2013.

Table 13: General Government Expenditures by Category, FY2013-FY2017

General Government	Actual FY2013	Actual FY2014	Actual FY2015	Estimated FY2016	Budgeted FY2017	Percent Change
Personal Services	$822,046	$856,288	$890,233	$978,564	$954,410	16%
Direct Operating Charges & Services	$2,651,596	$2,587,468	$2,851,368	$3,534,073	$4,090,290	54%
Services & Charges Transferred In	$3,350	$315	$735	$800	$800	-76%
Non-Operating Charges	$883,858	$683,495	$836,847	$658,543	$626,631	-29%
Capital Outlay	$6,500	$0	$3,190	$0	$0	-100%
Debt Service	$64,902	$64,969	$62,242	$48,893	$48,893	-25%
Contingencies	$0	$0	$0	$0	$175,000	
TOTAL	**$4,432,252**	**$4,192,535**	**$4,644,615**	**$5,220,873**	**$5,896,024**	**33%**

General Government has seen a 33% increase in funding FY2013 to FY2017. Increases in Personal Services are associated with changes in salaries, health insurance benefits and retirement benefits. The increase in Direct Operating Charges and Services can be attributed to the City's Group Health Insurance, which has seen an increase in health insurance claims and the addition of the City's Wellness Program.

Analysis and Recommendations

The General Government function and departments serve to provide support, oversight and executive leadership for each of the City's operating departments, City Council and the public. The primary opportunities in these areas relate to enhancing budgeting and performance measurement processes to augment the strategic plan implementation and measure success.

Performance Management

RECOMMENDATION 1: Develop and implement a City-wide Performance Management System.

In 2016, the City concluded a strategic planning process that defined a strategic framework and goals for the community. The development of a strategic plan provides an optimal opportunity for the City to implement a performance management system. This helps ensure the work of the organization is aligned to achieve the vision and goals of the strategic plan.

A performance management system typically consists of three core elements:

- Creating a strategic plan for the organization and individual work plans for each department aligned with the strategic plan;
- Using performance measures to track performance of the City's programs against established performance goals; and
- Sustaining a dialog between management and employees to ensure that the work of the organization is completed in conformance with established goals and implementation schedule.

In addition to monitoring the work, a good performance management system employs routine and structure. Under such a system, managers meet with subordinates on a regular basis to review organizational performance. Typically, the agenda is focused on four areas: customer, financial, operations, and employees. Performance measures, project management tools, customer surveys/complaints and employee issues are reviewed during these meetings. As the regularity of the management system becomes integrated into operations, discussions about performance become focused on important issues. This type of a management system allows managers to avoid crisis management, as the rigor of the system helps ensure regular meetings to discuss strategic issues rather than the crisis du jour. The City has begun this process at the executive level, with recurring executive staff meetings and bi-weekly one-on-one meetings between the City Manager and his direct reports to review work plan and project progress. This practice should be further expanded to additional layers of the organization. Furthermore, a performance measurement program should be developed that identify key performance indicators, data collections processes, and reporting methods.

The collection and use of performance measurement data is one critical element of a performance management system. Performance measurement provides an organization with numerical data used to evaluate the effectiveness and efficiency of its operations. For the City, this data will allow the City Manager and the City Council to make more informed choices about how to improve and when to change the organization's programs and services.

As noted in a variety of places in this report, historical and current data about program performance was not readily available throughout the City organization. The City has not developed a culture of data collection or measurement, but rather relied on the experience of tenured and skilled employees to make operational decisions. Without outcome metrics that go beyond counting of tasks completed, it is difficult to establish or track City priorities or performance, making objective evaluation of departments or workloads difficult. While routine outcome-based evaluation of City programs should be expected regardless of the staff in place, lack of such data becomes even more problematic as those same tenured employees leave City employment.

An evaluation system should be in place for each program in the City as part of the performance measurement system. Effectively evaluating City programs should include the following elements:

- Provision of clear direction and support from the City Manager;
- Inclusion of feedback from constituents and key stakeholders, collected through surveys, interviews, focus groups, and other similar means;
- Identification of information needed for measuring effectiveness and efficiency;
- Determination of criteria for effectiveness; and
- Identification of resources available for collecting information.

The City Manager and department directors should regularly discuss outcome-based performance data for all City programs and services, including internal and external functions. Key information from each department should be collected on a quarterly basis and presented to the City Council. Any important trends or changes should be discussed so that actions may be taken, as needed, by the City in response to those trends.

Implementation of a robust performance measurement system takes time and resources. Every program or service must be identified and then assessed to determine a specific set of performance measures. Employees need to be trained so that they understand the fundamentals of such a system and are engaged in its development. Only with active employee engagement can the organization successfully integrate performance measurement into its culture. It is recommended that the City grow a performance measurement program as capacity and expertise within the organization allows.

Executive Management Structure

RECOMMENDATION 2: Fill the vacant Assistant City Manager position.

The City's former Assistant City Manager is now serving as Carbondale's City Manager, resulting in a vacant Assistant City Manager position. Prior to the City Manager's promotion, the Assistant City Manager position was primarily focused on the City's Economic Development functions. This is an important responsibility and one that deserves continued attention. However, recognizing the City Manager's experience in economic development, this is an ideal time to evaluate the role and responsibilities of the Assistant City Manager position and to make adjustments to add additional management capacity to the organization.

This organizational and management review reveals a number of areas in administrative and support services where program development is needed. Specifically, recommendations have been offered to enhance human resources service delivery, capital and operating budgeting practices and processes, technology strategic planning, and performance measurement system development. These initiatives will serve to enhance internal and external service delivery and augment policy-makers' ability to make data-driven, strategic policy and budget decisions. However, these responsibilities will also require dedicated attention at the executive level to champion, execute and maintain. Given these considerations, it is appropriate to recruit and fill the Assistant City Manager position.

The Assistant City Manager will serve as project manager for the programs and projects summarized above, including economic development, but will also serve as acting City Manager in the City Manager's absence. The Assistant City Manager will directly supervise the newly recommended Human Resources Division and the Civic Center and provide special project support in the City Manager's Office.

In FY2017, an existing administrative support position in the City Manager's Office was reclassified to Assistant to the City Manager. The Assistant to the City Manager position has a distinct and separate role from that of the Assistant City Manager. The Assistant to the City Manager position serves as a staff liaison for the Manager's Office on a variety of boards, commissions, and committees. In addition, the Assistant to the City Manager is responsible for completing special projects, conducting research and providing complex analysis to support the City Manager's decision-making and strategic direction. This is a critical need in the organization.

Capital Planning

RECOMMENDATION 3: Enhance the capital planning and development process.

Capital projects are economic activities that lead to the acquisition, construction or extension of the useful life of capital assets. Capital assets include land, facilities, parks, playgrounds and outdoor structures, streets, bridges, pedestrian and bicycle systems, water and sewer infrastructure, technology systems and equipment, traffic control devices and other items of value from which the community derives benefit for a significant number of years.

A Capital Improvement Plan (CIP) is a long-term planning tool for prioritization, financing and technical design, execution and timely completion of all capital projects. The CIP represents a five-year period of the City's ongoing capital improvements. Each year, the document is updated to represent the next five-year window. In each annual update, completed projects, as well as projects scheduled to be completed before the end of the fiscal year, will be removed from the document, new projects will be added and other previously-programmed projects may be re-prioritized. A well-planned and adequately funded annual capital improvement program is the sign of a financially healthy and viable community.

The City of Carbondale, in addition to developing an annual operating budget, develops a five year CIP to serve as a framework for capital planning and investment. This is a best practice that deserves recognition. However, there are opportunities to expand the process to better reflect total capital investment needs and the City's strategic priorities.

The City's CIP planning and development process is coordinated by the City Engineer's Office in the Department of Public Works. Though the City's CIP process is comprehensive in the area of transportation, water, sewer and storm water infrastructure, it does not consider capital projects that exist outside those categories. Capital outlay items such as vehicles, technology infrastructure, office equipment, and facility repairs are not typically included in the CIP but are considered during the operating budgeting process.

The City's current CIP planning process starts in October when the Engineering staff issues public notice in the local paper to solicit project ideas from the public. Concurrently, the City Engineer's Office develops project lists and estimates for new projects and updates the list of projects adopted during prior year CIP processes to reflect progress or changing conditions.

In November and December, Engineering staff provides a finalized list of CIP projects to the City Council for review, discussion and adoption. The CIP list is then considered during the course of the budgeting process where the City Engineer, under the direction and approval of the City Manager, prioritizes and schedules projects within the constraints of funding availability.

The current CIP includes projects ranging from $9,000 to over $4 million. Programmed projects include street surfacing, bridge maintenance, pump station renovations, waterline replacement, streetscape improvements and sanity sewer rehab. The total funds allocated to CIP projects in FY2017 was $10.7 million, and the estimated cost for the five-year plan was over $58 million.

The CIP is a planning document intended to assist in making choices about which projects should be implemented, how they should be financed, and when they should be implemented. The absence of IT, vehicle replacement, and building maintenance costs in the existing CIP process does not present an accurate picture of the true liabilities the City is anticipating in the current fiscal year. In addition, it limits the options available for City Council consideration as they seek to make budget allocation and policy decisions that reflect the goals identified in the City's strategic plan.

Ultimately, the core purpose of the CIP process must be two-fold. First, and foremost, it must present a full and accurate picture of issues and opportunities to policymakers for funding consideration and prioritization. Second, it must serve as strategic framework to guide staff's work through the year. It is appropriate to expand the scope of the CIP to ensure that these two objectives are met.

RECOMMENDATION 4: Assign CIP plan development to the City Manager's Office.
Currently, the operating budget is developed and managed by the City Manager's Office and the CIP is developed and managed by the City Engineer's Office. This has been an appropriate division of responsibility as the CIP has been primarily comprised of core infrastructure projects. However, with the recommendation that the CIP process be expanded to include broader capital needs, such as facilities and technology, it is appropriate that CIP development be assigned to the City Manager's Office.

The current CIP represents approximately $58 million in investment and those projects must be considered as part of the broader operating and capital resources available to meet the City's strategic objectives. The task of developing a comprehensive budget program that meets those objectives is the responsibility of the City Manager. As a result, it is appropriate that the City Manager's Office lead the capital budget process, as well as the operating budget process.

However, it is important to also recognize that the City Engineer's Office, and other City departments, must still play a critical role in CIP development and management. As such, it is appropriate to revise the process to utilize a CIP Development Committee and prioritization process to guide project evaluation, prioritization and assignment to the CIP. A CIP Committee is typically comprised of a select group of City staff whose function is to assess departmental capital requests within the context of City-wide needs, policy priorities, and available resources. The composition of the CIP Committee is defined by the City Manager. The Committee is tasked with making CIP recommendations to the City Manager for review, approval and presentation to the City Council to be considered during the budget approval process.

The Committee should be tasked with prioritizing capital project requests based on goals and prioritization criteria developed by, and specific to, the City of Carbondale. However, the following are a series of questions to consider in selecting and prioritizing capital program components:

- Has the project has been certified by all relevant staff, elected officials, and other key stakeholders as being in accordance with all applicable, established City plans?
- Have all agencies, departments, public utilities and others that may be impacted by the project been consulted?
- Is the project required to meet a federal or state mandate?
- Are Federal or State matching funds available for the project?
- Are grants, low interest loans, public or private partnerships, or other sources of external funding assistance available?
- Is the project required to fulfill a contractual obligation?
- Has independent value engineering been performed on individual projects in excess of $10 million in value?
- Will the project have a positive net present value?
- If the project is projected to have a positive net value, is the pay-back period reasonable?
- Is the project needed to solve an emergency situation?
- Will the project correct sub-standard existing infrastructure or facilities?
- Will the project alleviate a service deficiency or replace a deteriorated and/or non-functioning facility?
- Does the project prevent or correct an unacceptable environmental condition?
- Does the project maintain or improve the quality of life for in the City's neighborhoods?
- Does the project maintain or improve public safety?
- Does the project improve the quality of storm drainage?
- What is the economic and public safety impact of deferring the project?
- Does completion of this project depend on completion of a project not yet approved?
- Is there a viable alternative to the service or function for which the capital improvement is intended?
- In the case of vehicles or equipment, can equipment be rented or leased more economically on an as-needed basis?
- Will the project encourage economic development?

The ultimate goal with respect to existing capital assets is to maintain a high level of serviceability and functionality while minimizing net present costs. This is normally accomplished through a rigorous program of preventative maintenance, rehabilitation and replacement. Analysis of new capital items can be more complicated given the need to assign value (or cost avoidance) to a future benefit that may be quality of life based instead of purely economic. Regardless, the general principles are the same. The most effective way of meeting these obligations is through a well-developed and comprehensive Capital Improvement Program.

Contract Services

RECOMMENDATION 5: Adopt a practice of utilizing City-developed contract language for all service contracts.

Local governments typically utilize one of two primary methods to deliver services to the public: direct service delivery and contracted service delivery. The benefits of direct service delivery, whereby City staff directly manage and deliver public service, are control, flexibility, and serviceability. When a local government is responsible for directly delivering a program, they are able to easily assess service levels on an ongoing basis and make adjustments based on performance, evolving expectations, and changing environmental conditions. This level of control and flexibility creates value for the public. However, in some cases, the type of work is specialized or requires expertise or labor pool capacity that is beyond the scope of a local government to manage in a cost-effective manner. In these cases, many governments, including the City of Carbondale, utilize a contracted service model.

Under a contracted service model, the local government defines the scope of a project or service and issues an RFP or bid request. Potential contractors submit proposals and the local government will enter into a service contract with the lowest responsible bidder. This is generally the process that the City of Carbondale follows and it is an appropriate process; however, at the stage in the contracting process where a contract is developed, the City has adopted the policy to primarily rely upon the contractor's proposed contract language as the source document for the service contract. This policy is primarily driven by the City Attorney's office. Indeed, there are clear benefits, from a potential liability perspective, to this approach. If the contract is primarily crafted by the contractor then they legally take on the responsibility for any errors and omissions. However, there is a significant flaw with this contracting approach; its primary goal is to limit liability rather than ensure the best possible service from a contractor. The goal of a service contract is to deliver quality service to the public. The best contracts are those that not only allow for that service delivery, but maximize the local government's ability to define and measure performance expectations and adapt to changing conditions. The practice of primarily utilizing contractor language for contracts limits that flexibility. A more effective approach is for the City to develop contract language that the contractor can then seek to adjust. This will require more staff time at the front end of a contracting process, but it offers several key advantages.

First, the practice of developing the contract language requires enhanced due diligence during the specification and performance expectation development phase of the RFP or bid process. This will create an enhanced, systematic process whereby proactive effort is made at the front end of the process to clearly define needs. This will not only better protect the City's service delivery interests, but limit the potential need for change orders or contract adjustments. Second, it provides a mechanism for the City to structure contract language, performance expectations, and potential contract claw backs that primarily benefit the City's interest rather than the contractors.

Based on these considerations it is appropriate for the City to revise its contracting procedures to include City-developed contract language. This process will require participation from key departments who regularly contract for services (e.g., Public Works), as well as staff from the Purchasing, Finance, City Attorney, and City Manager's Offices.

Administrative Services Department

The Administrative Services Department consists of the Human Resources (HR) Division and the City Hall/Civic Center Division. In addition, City Hall receptionist personnel are included in the Administrative Services Department. The FY2017 budget includes a Department staffing level of 9.44 FTE.

The HR Division is responsible for overseeing core personnel functions including classification and compensation, training, employee/labor relations, recruitment, and benefits administration. The Carbondale Civic Center is located adjacent to City Hall and provides public space for meetings and special events. The Civic Center staff are responsible for event management (marketing, event set up and break down) as well as City Hall custodial services. The City's Receptionist is the first point of contact for visitors and customers of City Hall. The Receptionist is located inside the facility entrance and directs visitors to the appropriate area, answers questions and operates the City's switchboard.

The following figure illustrates the department's current organizational structure.

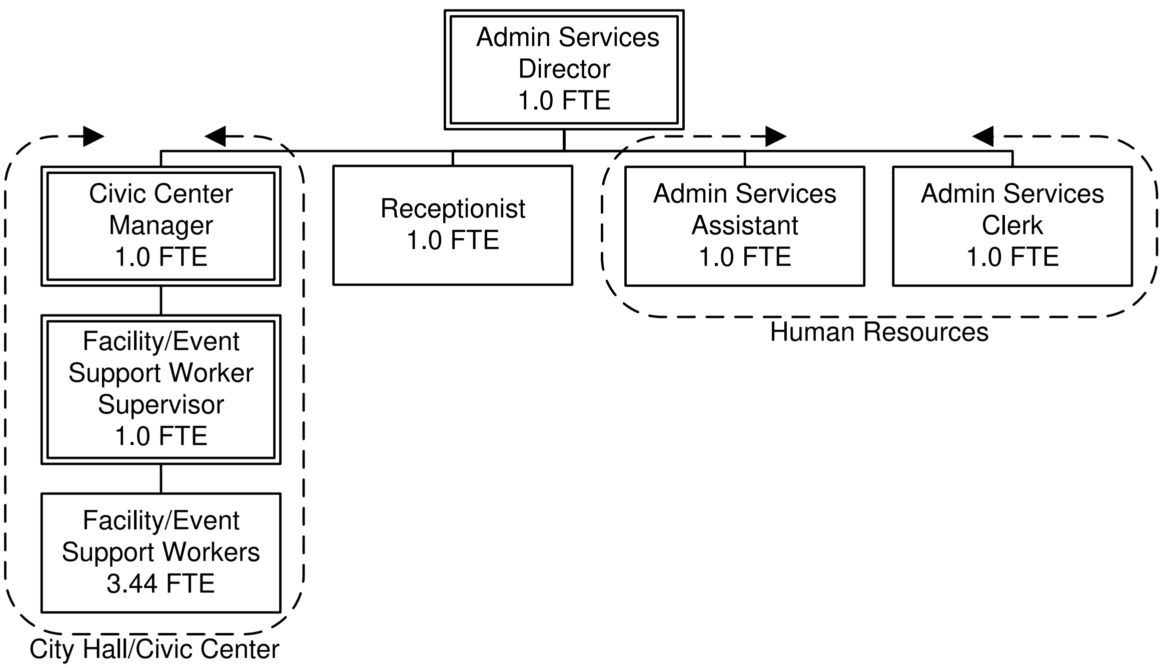

Figure 10: Administrative Services Organizational Structure, FY2017

Human Resources Division

The HR Division is responsible for overseeing and managing personnel and employee management functions of the City. Human Resources Division staff provide support to managers, supervisors and front-line personnel and seek to ensure that the City's personnel policies are appropriately interpreted and consistently applied.

This Division is responsible for setting compensation structures and evaluating competitive pay practices. Staff assists with legal compliance as it relates to personnel and/or HR practices such as wage and hour, social security, discrimination, benefits and safety and health policies.

The Administrative Services Director is the City's HR Manager and works closely with hiring managers, staff and bargaining units. In addition to the Director, this Division has two support positions, the Administrative Services Clerk and Administrative Services Assistant. These staff members assist with inputting payroll, processing health insurance deductions, confirming and verifying employment and conducting fire and police testing.

While the City Attorney manages all labor relations functions, and the Administrative Services Director provides some assistance with some aspects of this work, including negotiating collective bargaining agreements, processing grievances and rendering interpretations of labor union contract issues. In addition, the Director manages all the City's recruitment efforts and is responsible for advertising job postings, screening applicants, conducting preliminary interviews (when needed) and assists the hiring manager with the interview and selection process.

The HR Division provides staff support to the City's Non Bargaining Unit Employee Personnel Board, Board of Fire and Police Commissioners, Carbondale Human Relations Commission and various employee committees.

Civic Center Division

The Carbondale Civic Center is an 8,200 square foot multi-purpose facility, located adjacent to City Hall. The Civic Center is an event and meeting space available to the public for rental. The Civic Center space is often used for City meetings and various community boards and commissions (no fee charged). The facility is available for rent by the general public and can host a wide variety of special events including banquets, receptions, reunions, dances, workshops and conferences.

The Civic Center Manager is responsible for marketing and customer relations for all Civic Center events as well as scheduling of event staffing, set up and break down. In addition to managing reservations and scheduling events in the Civic Center, Division staff is responsible for managing reservations for the City's Downtown Pavilion. This includes event scheduling as well as payment receipt and processing. The Downtown Pavilion is an open air historic shelter located in the Town Square.

Facility staff is responsible for the set up and tear down for all Civic Center and City Hall events; staff also assist clients during events as needed. Additionally, these staff members provide custodial and maintenance support for City Hall, which includes daily cleaning, general maintenance, and grounds keeping tasks.

Some of the staff's specific custodial duties include garbage removal, vacuuming of office spaces and common areas, mopping floors and cleaning/stocking bathrooms. Staff is also responsible for sweeping the City Hall parking lot and completing landscaping and grounds keeping tasks around both facilities. Larger building maintenance issues such as repairing toilets, electrical issues and the HVAC system are referred to Public Works (Building Maintenance Division) for repair.

As of the FY2017 budget, this Division consists of 5.44 positions, the Civic Center Manager, Facility/Event Supervisor and Facility/Event Support Workers (3.44 FTEs).

The following table illustrates the department's FTE staffing levels over the last five fiscal periods, along with the percentage change in staffing since FY2013.

Table 14: Administrative Services Staffing Trends, FY2013-FY2017

Division Staff (FTEs)	Actual FY2013	Actual FY2014	Actual FY2015	Actual FY2016	Budgeted FY2017	Percent Change
Human Resources	3.60	3.60	3.60	3.69	4	11.11%
Civic Center	3.52	5.65	5.60	5.41	5.44	2.25%
TOTAL FTEs	**8.92**	**9.25**	**9.2**	**9.1**	**9.44**	**5.82%**

Administrative Services Budget

Total budgeted expenditures in the Administrative Services Department are $645,731 for FY2017, or 1.15% of Citywide budgeted expenditures. This Department is funded entirely by the General Fund. Major expenditures for the Administrative Services Department include Personal Services and Direct Operating Charges and Services.

The following table illustrates trends in the department's expenditures over the last five fiscal periods, along with the percentage change since FY2013.

Table 15: Administrative Services Expenditures, FY2013-FY2017

Administrative Services Expenses	Actual FY2013	Actual FY2014	Actual FY2015	Estimated FY2016	Budgeted FY2017	Percent Change
Personal Services	$509,182	$528,506	$519,437	$530,373	$553,455	9%
Direct Operating Charges & Services	$233,568	$99,121	$75,837	$77,999	$94,433	-60%
Services & Charges Transferred In	$20,066	$0	$899	$225	$300	-99%
Non-Operating Charges	$3,399	$4,839	$5,845	$3,945	$4,000	18%
Expenditures Transferred Out	-$4,063	-$4,185	-$4,940	-$6,354	-$6,457	59%
TOTAL	**$762,152**	**$628,281**	**$597,078**	**$606,188**	**$645,731**	**-15%**

The Administrative Services Department has seen a 15% decrease in funding over the last five fiscal years. The decrease is attributed to the amount of funding that was allocated to the Department for Direct Operating Charges & Services in FY2013.

In FY2013, Direct Operating Charges & Services expenses included $89,448 for the Civic Center's utilities charges (water, sewer, gas) and $38,520 for repairs and maintenance; in FY2014, a new Building Maintenance Division was created to manage the maintenance and repair of all City buildings and facilities and provide centralized oversight of expenses for items such as utilities, repairs, fire suppression and extinguisher system inspection and elevator contracts. The funds allocated for Civic Center utilities and maintenance were transferred to the Public Works Department in FY2014.

Analysis and Recommendations

Administrative Services provides valuable support services for the City's employees and its residents. The following recommendations are intended to maximize the Department's efficiency and improve internal and external service delivery.

Human Resources Service Delivery Model

RECOMMENDATION 6: Reorganize the Administrative Services Department to create a dedicated Human Resources Division.

Human resource management is a critical function of any organization. Highly functioning human resources departments provide a balance between professional human resources support to managers and employees and compliance management to ensure consistency and limit liability to the organization. There are two primary models of human resources service delivery in practice in many local government organization – centralized and decentralized.

Under centralized models, an organization is staffed with a robust central human resources professional staff that provides a single conduit for the resolution of personnel issues or the coordination of human resources services such as recruitment, training, classification and compensation, performance management, and recruitment and retention. The major benefit of a centralized model is that it creates the structure to ensure consistent interpretation and application of personnel policies and procedures. The primary negative attribute of a decentralized model is that the process of filtering all personnel issues through a single department can inhibit the responsiveness and negatively impact operating departments who are seeking to quickly address personnel issues that are impacting daily operations.

A decentralized model primarily relies on operating departments to manage human resource issues at the department level. Under this model, a small, centralized human resources staff provides the policy structure and guidance for HR procedures and policies and offers support in the resolution of HR issues; each operating department is responsible for individually interpreting and applying the organization's HR practices. The benefit of this model is that it is responsive and flexible. It allows operating departments to act quickly to address personnel issues that are impacting service delivery. The primary negative attribute of this model is that it can result in the inconsistent interpretation of policies from one department to another.

The most effective human resource departments are those that provide a balance between centralized and decentralized service, providing professional HR support and guidance when needed while also creating the structure and support system necessary to enable departments to effectively and consistently manage personnel issues.

The City of Carbondale has sought to provide a strong centralized human resources function. The Administrative Services Director oversees most major recruitment efforts; reviews and adjudicates all classification and compensation requests; and manages employee relations and disciplinary investigations. Administrative support personnel assist Carbondale employees with transactional HR activities such as benefit changes in the City's Human Resources Information System (HRIS). However, there are two significant limitations with the City's current Human Resources services delivery approach.

First, the Administrative Services Director is the sole HR employee equipped with specialized HR training. The two administrative support positions provide transactional support to employees and the Administrative Services Director, but are not trained to take on more advanced HR tasks that require knowledge of the principles of human resource management.

While the two support positions complete transactional administrative tasks, the Director handles all the technical personnel related functions including the entire recruitment process and provides assistance with disciplinary, health insurance, worker's compensation and benefit issues. The Director spends significant time answering questions and gathering information; the Director is also the individual that both supervisors and employees seek for assistance and to answer HR-related questions.

It is apparent that the Director is balancing a lot of responsibilities. With only one person handling the more complicated HR functions, it creates problems with timeliness and the ability to focus on anything other than the task at hand. This has resulted in managers making personnel and discipline decisions without consulting or seeking guidance from HR. This can create a liability for the organization as a whole and can result in inconsistent discipline actions throughout the organization. In addition, there are currently a number of critical organizational human resource needs that are not being met, including: the development of an employee orientation program; a review of the City's classification and compensation system; coordinating professional development training for employees; and working with supervisors to ensure reviews are completed.

To address this issue, it is necessary to engage in proactive training that ensures that HR staff are equipped not only to assist with transactional duties, but provide value-added support to departments on recruitment and retention practices, training programs, benefit questions, and general customer service. However, capacity to provide this training and professional development is currently constrained.

The second limitation to the current HR staffing model is that the Administrative Services Director not only serves as the HR director, but provides oversight and direction to the Civic Center as well as special projects that are periodically assigned to the department. This further limits time and capacity that can be dedicated to core HR functions.

These limitations have manifested themselves in a number of ways. The City is in the process of implementing a new financial management system; this system will require dedicated attention from human resources personnel. The majority of the City's expenses are personnel related (e.g., salaries and benefits) and, as a result, personnel data that is managed by the Human Resources Division will have a significant impact on the system. However, Human Resources staff have been unable to participate in the training or system onboarding process due to capacity issues.

In addition, and as discussed in later recommendations within this report, HR has been unable, due to capacity issues, to provide central monitoring of the employee performance review and appraisal process. As a result, employee performance reviews are inconsistently conducted from department to department. This is a common issue in many organizations. As departments progress with the day-to-day requirements of service delivery, the practice of regularly conducting timely performance appraisals can be overlooked. However, it is the role of HR to monitor the performance management process and ensure that the appraisals take place.

Another area that the Division has not been able to proactively manage is that of workers compensation claim management. HR is responsible for reviewing all workers compensation claims. Ideally this claim data should be reviewed on an ongoing basis and customized safety training programs developed and provided to decrease workers' compensations claims or address issues. Currently, HR is unable to dedicate sufficient staff to this task.

The Society for Human Resource Management (SHRM) recommends a target ratio of 1 HR professional for every 100 employees. The current ratio in the City of Carbondale is approximately 1 HR employee for every 88 employees. This indicates an appropriate number of human resource personnel in Carbondale. However, the needs discussed above indicate revisions to the City's approach to human resource service delivery is warranted.

Specifically, there is need to dedicate proactive attention to core HR functions and to increase training and professional development for HR personnel to increase the capacity of HR staff and enhance service delivery to the organization. This can be accomplished by reorganizing the Administrative Services Department to create a central Human Resources Division, led by a Human Resources Manager who reports to the Assistant City Manager. This would in turn require that Civic Center management and City Hall receptionist oversight be reassigned. It is recommended that these functions be placed under the direction of the City Manager's Office. Specifically, these responsibilities should be assigned to the Assistant to the City Manager.

Converting the Administrative Services Department to a Human Resources Division will provide additional staff support in HR and it will help professionalize the office by providing the organization with an individual who has the appropriate credentials, experience and knowledge to assist the organization. It will also give the Division the ability to be more proactive in how it approaches issues and identifies programs and needs for the future.

Across the country, many HR divisions/departments include Generalist and Specialist positions in addition to administrative staff. These positions assist with complicated personnel issues and can focus on specific areas like benefits and recruitment. The HR Manager should identify the greatest HR needs in the department, determine the best way to utilize existing support staff, and decide if additional professional HR staff are necessary to support the organization. The HR Manager should engage in proactive efforts to train and develop existing HR personnel.

The following figure represents the recommended organization structure for the Human Resources Division.

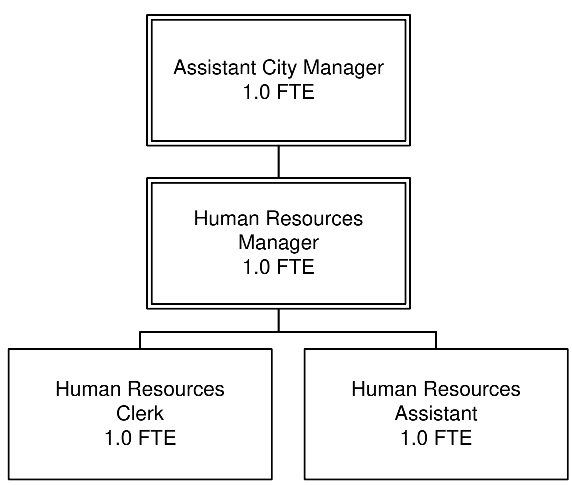

Figure 11: Recommended Human Resources Division Organizational Structure

Policies & Processes

RECOMMENDATION 7: Establish and implement a formal Position Reclassification Policy for reclassification requests.

HR is responsible for managing the City's classification and compensation management system. The classification and compensation system was developed in the late 1990s and serves as the framework for equitably applying a pay and benefit structure to positions, based on the education and experience required to perform the functions of the position, as well as the market pay and benefit structure for similar positions.

Though classification and compensation systems seek to provide a structure for pay and benefit levels, like all systems, they can have shortcomings. Therefore, mechanisms must be in place to assess, on a case by case basis, where deficiencies exist and how they should be addressed. This is typically accomplished through a reclassification or compensation adjustment request process whereby a manager submits a request to reclassify for adjusted compensation for position classification or an employee because of either market demands or the growth of an employee's job responsibilities extend beyond the pay and benefit limitations of their position.

Currently, the City does not have a formal, written policy or process for considering position reclassification requests; however, it has been using an unwritten practice for the past five years. Currently, department directors submit their requests directly to the City Manager via email, memo and/or in person. The City Manager then informs the Administrative Services Director of the request and his recommendation. While many department directors go to the City Manager to start the process, others go directly to the Administrative Services Director.

After the Administrative Services Director receives the request, the next step is to conduct an evaluation of the position. This generally involves a review and analysis of the position's duties and responsibilities, classification descriptions, organizational charts, class and position history file, position comparisons, and may include a discussion with the employee and/or supervisor.

Oftentimes when the Administrative Services Director receives the information from the City Manager's Office, the appropriate supporting documentation (to assist in the evaluation) is not included. When this happens, the Administrative Services Director is responsible for gathering the appropriate documentation.

Once the Administrative Services Director has gathered the appropriate backup documentation, the evaluation takes place. Many requests do not necessitate a reclassification, which results in the Administrative Services Director denying a request that may have already been verbally approved by the City Manager's Office.

The inconsistency of the process as well as the lack of clarity regarding the factors used to adjudicate reclassification requests creates confusion and frustration. It also limits the department's ability to proactively ensure that reclassification requests include all data necessary to develop an informed decision. Department directors and employees do not fully understand the evaluation process and not all requests are submitted in the same manner or with the same level of detail. This creates the perception of subjectivity and that the process does not treat all requests similarly.

It is recommended that the City establish and implement a formal Position Reclassification Request Policy to use when considering requests. The policy should include the process and/or procedures for submitting requests and include an explanation of how requests are evaluated. As part of implementing a formal policy and process, a standard Position Reclassification Form should be developed. The form should ask for the necessary documentation or information needed to complete the position evaluation. A sample Position Reclassification Policy is attached in the Appendix B.

An example of a traditional Position Reclassification process includes the following steps:

- Department director submits the Position Reclassification Request Form to HR.
- Administrative Services Director reviews and evaluates the request. Additional information may be requested or the Director may meet with staff.
- If the request is denied, the Administrative Services Director notifies the Department and provides explanation as to why the change was not warranted.
- If the request is approved, it is forwarded to the City Manager (or designee) for approval.
- If the City Manager denies the request, the Department is notified.
- If the City Manager approves the request, the appropriate documentation is completed by HR.

Having an approved Position Reclassification Policy will ensure that employees fully understand how requests are considered and will make the process more transparent. As all requests will be submitted using the same form with appropriate documentation, HR staff will spend less time doing research and gathering supporting materials. An established policy and process will help educate employees about the evaluation process and why some requests are granted while others are not. Ultimately, it allows the City Manager to be the final decision maker and inserts the Administrative Services Director into the beginning of the process.

RECOMMENDATION 8: Purchase and implement recruitment software.

The Administrative Services Director, as the City's HR manager, is responsible for managing all employee recruitment processes. To initiate a recruitment, a hiring manager must complete a position requisition form (paper form), which must be signed by the Department Director, Administrative Services Director and the City Manager. Once the requisition has been received with the appropriate signatures, the position can be posted. Job postings are placed in various locations and publications – including online, in the local paper and trade/professional publications. Traditionally HR bears this cost, but a department might share if the cost to advertise was higher than expected.

Once the position is opened, applications are accepted through the deadline. Applicants can print a City Job Application from the website or pick one up in the HR office. While the application is available on the website, it cannot be filled out online or accepted electronically. A paper application must be submitted.

When the position closes, the Administrative Services Director reviews applications for minimum qualifications and works with the hiring manager to determine who to interview. Interviews are then conducted. Once a final candidate has been selected, the City Manager must sign off on the hiring decision before an offer of employment can be given.

The process the City currently uses is not user friendly for staff or applicants. It is a time intensive and an entirely paper process. This limits access to the recruitment process or applicant data during the recruitment and also limits the City's ability to review core performance metrics about the recruitment process (such as process time, applicant pool data, etc.). This data could be used to improve the recruitment process. In addition, many of the steps that are currently competed manually, such as sorting for minimum qualifications, communicating with applicants, and requesting follow-up information from applicants, can be streamlined by implementing an electronic recruitment and retention software system.

The implementation of recruitment support software would create a faster and more efficient recruitment process for both staff and the applicants. For staff, efficiency is gained by automating labor intensive processes; the employee requisition process, screening of applicants and testing can be completed electronically. There is also the ability to integrate the performance review process into many software systems, providing a mechanism to track and schedule employee performance appraisals.

Automating the recruitment process has the ability to improve the City's candidate pool. Applicants are provided with an easy-to-use portal and may find that applying for jobs with the City of Carbondale is easier than before. In addition, applicants have the ability to save their information in the system, which can be updated and used for future job applications.

One example of available software used by many government human resource departments is NEOGOV HR™ which is tailored for the public sector and can streamline the recruitment process. The software has the ability to automate the entire hiring, onboarding, and performance evaluation process. There are other software packages available, and it is recommended that the City develop its specifications for recruitment software and issue a Request for Proposals to solicit information about software that would meet the City's needs and be compatible with the City's new enterprise resource planning system.

RECOMMENDATION 9: Develop a Carbondale Employee Handbook.
Employee Handbooks are a way to communicate an organization's expectations including work rules, standards and policies as well as the consequences for not meeting those expectations. Employee Handbooks can also help reduce confusion in the workplace.

A well-developed Employee Handbook provides legal protection for the organization, can be a tool to guide managers and is an effective way to communicate management's expectations. Employees often reference Employee Handbooks for items such as safety and security, and for understanding the organization's processes for handling items such as grievances, attendance issues, worker's compensation and the Family Medical Leave Act.

The City does not currently have an Employee Handbook. It is, therefore, recommended that the City of Carbondale develop one. The handbook should be reviewed and updated regularly (at least every 2-3 years). This ensures that the handbook is current, reflects the organizational policies, is in compliance with local and state laws and addresses other changes throughout the organization.

When Carbondale develops its Employee Handbook and anytime the handbook is updated, the City should provide training or information sessions so employees understand the changes and have an opportunity to ask questions as needed. It is also a best practice to have employees sign an acknowledgement form which allows the City to ensure that all employees have received the appropriate training on important policies that impact their work environment.

RECOMMENDATION 10: Require annual employee performance reviews for all City employees.
The City of Carbondale has two standard employee performance appraisal forms that supervisors can use when evaluating employees – one for probationary employees and one for regular employees who have completed the probationary period. However, supervisors are not

completing reviews consistently throughout the organization. Unfortunately, some employees report not receiving a formal review in over seven years.

The inconsistency in the completion of performance reviews is due to a number of factors. There is a pervasive belief in the organization that the primary role of performance appraisals is to determine pay increases, and if pay increases are not available then performance reviews are not necessary. Despite this perception, there is a clear benefit to providing consistent employee performance reviews in an organization. That benefit extends beyond compensation considerations.

The employee performance review process is a structured mechanism to ensure that supervisors and staff communicate about performance, expectations, and aspirations. The conversations that take place during the review process can strengthen management and employee relationships. The most effective performance review processes are those that are used as a professional development tool that supports employee development and organizational accountability.

The review process can be stressful for both the employee and supervisor. To eliminate some of the stress, best practices indicate that performance discussions should take place frequently. When this is done, the more formal review can be a summary of what has occurred throughout the reporting period.

Recognizing that employee performance reviews can serve as an essential professional development and communication tool, it is recommended that the City of Carbondale require supervisors to complete annual employee performance reviews.

To reinforce the organization's commitment to the completion of annual performance reviews, it will be important for executive leadership to communicate their importance and explain that it is management's expectation that all supervisors complete reviews for those they supervise. The organization can reinforce the importance of performance reviews, and alleviate a supervisor's fear and apprehension by providing training opportunities. Training sessions can be designed to provide supervisors with the tools and skills necessary to engage in productive and meaningful conversations with staff, techniques for tackling difficult conversations and tips on how to provide constructive feedback.

In addition, the Human Resources Division should take on the responsibility of tracking performance review deadlines for each department and communicate with department directors when appraisals are overdue.

Workplace Safety

RECOMMENDATION 11: Implement an Employee Workplace Safety Program to reduce employee injuries and reduce costs associated with the City's Workers' Compensation Program.

An effective workers' compensation management program meets two major objectives. The first objective is to reduce workers' compensation expenses by limiting the incidence of workers' claims. The second, and equally important objective, is to protect the life and safety of employees by ensuring a safe work environment.

Currently, the City's workers' compensation insurance provider works with the City to schedule basic training sessions two to three times per year. In addition, the Risk Manager, a position reporting to the Finance Director, staffs a departmental Accident Committee which meets quarterly to review non-workers' compensation-related accident history and hear any employee complaints about safety issues so that proactive interventions can take place.

In addition, some departments have established Safety Committees. The committees are intended to meet quarterly to discuss safety issues and workers' compensation claims and develop proactive training interventions. However, in actuality safety meetings occur rarely and it is primarily left to each department to evaluate workers compensation claims and to determine what steps, if any, should be made at the department level to mitigate risk.

HR serves as the primary point of contact for workers' compensation claims and has ready access to claim data. However, there is no cooperative approach between HR, as the major training resource in the organization, and Risk Management, to develop a training regimen and program beyond the basic safety training offered by the workers' compensation insurance provider.

It is recommended that HR and the Risk Manager coordinate to develop and implement an Employee Workplace Safety Program. Establishing an effective safety and health training program can benefit the City in a number of ways. Implementation can result in fewer workplace injuries and claims, better employee morale, lower insurance premiums and a decrease in workers' compensation costs.

In order to effectively implement an Employee Workplace Safety Program, and reduce confusion, one individual needs to be identified as the Workplace Safety Coordinator. The coordinator should establish a Workplace-Safety Committee, made up of representatives from various departments. Utilizing a committee allows the coordinator to better identify the organization's safety issues, encourages buy-in at all levels of the organization and engages employees in the City's safety efforts.

The Workplace Safety Committee should meet regularly and identify the organization's safety issues and determine training needs as well as facilitate, lead or coordinate safety training workshops/sessions. The committee members should develop safety checklists and conduct regular workplace inspections and safety audits. In addition, the committee should review incidents, accident investigation reports, claim summaries and identify trends and future training needs.

The City's Safety Committee should follow these steps to implement an effective Employee Workplace Safety Program:

1. **Identify What Safety Training is Needed** - Review current safety issues. This can be done by looking at the trends in injury and claim history. Are accidents and injuries happening more often in a particular area or department? Is the City seeing an increase in a particular type of injury more often? Data regarding the types of injuries and locations was not available for this review.
2. **Identify Safety Training Goals and Objectives** - Once safety training needs have been clearly identified, the City must set clear and measurable goals and objectives for the program.
3. **Develop Workplace Safety Learning Activities/Training** – The City should develop training opportunities and learning activities that support the program's objectives.
4. **Conduct Safety Training** – Schedule and conduct safety training. This can be provided a number of ways – in person training, webinars, online training programs, workshops, etc.

5. **Evaluate Workplace Safety Training Program Effectiveness** - After training is conducted, staff should evaluate its effectiveness in accomplishing defined goals.
6. **Improve the Safety Training Program** - Based on the training program feedback, the City should continuously look for ways to improve future training sessions. [2]

Creating an effective Employee Workplace Safety Training Program will require planning and staff time, but will result in a safer and productive workplace.

Cost Recovery

RECOMMENDATION 12: Establish cost recovery goal and policy for the Civic Center.

The Carbondale Civic Center is an 8,600 square foot event space that is owned and operated by the City. The Civic Center serves two primary functions. First, the center serves as a banquet or meeting space available for any member of the public to rent at market rates. In this function, the Civic Center competes with other event space providers in the region. The second function that the Civic Center serves is to provide a meeting space to government, non-profit and community members. In this function, the City often offers the space free or at reduced rates. In this model, fees generated through market rentals subsidize the availability of meeting space for non-profit and government functions. This approach also increases the utilization of the facilities. The merit of this approach, however, is contingent upon the policy determination regarding the intended role of the Civic Center – Is it to be a profit generator or is it intended to be a funding mechanism for broader public service goals?

The Novak Consulting Group's review of the Civic Center indicates a lack of clarity regarding the Civic Center's role and questions as to whether the Center generates sufficient revenue. To that end it is appropriate to determine a cost recovery goal for the Civic Center. This cost recovery goal can range from over 100% of center operating and capital expenses to a smaller recovery goal that reflects an intentional decision about the purposes and role of the Civic Center. The first step in developing a cost recovery goal is to develop a detailed estimate of actual Civic Center operating costs.

The FY2017 approved Civic Center budget totals $303,376. Approximately 89% of budgeted expenditures are dedicated to personnel expenses for 5.4 FTE positions, including a full-time Civic Center Manager, a full-time Facility/Event Support Supervisor and part-time Facility/Event Support Workers. The Civic Center manager position is primarily dedicated to event marketing and management and employee management. The Facility Event Supervisor and Facility Support workers divide their time between Civic Center event set up and breakdown, and City Hall custodial and grounds keeping responsibilities.

According to data collected through 2015 via the employee timekeeping process, approximately 61% of total Civic Center staff labor hours were dedicated toward direct Civic Center space and event management. Given the high percentage of the total unit budget that is dedicated to labor costs (approximately 89%), it is reasonable to apply this ratio to the total budget of $303,376 to estimate Civic Center operating costs. Applying this methodology results in an estimated annual Civic Center operating expense of $185,000. In 2015, the Civic Center generated approximately $70,000 in revenue, which equates to an estimated cost recovery of approximately 38%. The following table summarizes the 2015 cost recovery metrics for the Civic Center.

[2] Adapted from the National Safety Council - 7 Steps to Create an Effective Workplace Safety Training Program

Table 16. Civic Center Cost Recovery, 2015 Calendar Year

Category	Amount
Civic Center Revenue	$70,000
Civic Center Operating Expenses	$185,000
Civic Center Operating Surplus/(Deficit)	**($115,000)**
Cost Recovery Ratio	38%

Though Civic Center operating expenses were subsidized with approximately $115,000 in General Fund revenue in 2015, the economies of scale associated with staff sharing between the Center and City Hall results in additional complexity beyond this recovery metric. Were the City to determine that it no longer makes financial sense to maintain the Civic Center as a space for public rental, many fixed costs would still remain.

The Civic Center represents 8,600 square feet of an approximately 65,000 square foot City Hall complex. The International Facility Management Association conducts an annual benchmarking survey to provide guidance regarding the level of custodial and facility maintenance staffing needed by type of facility. To continue to clean and maintain the City Hall complex, it is estimated that a ratio of one custodial position per 26,000 square feet would be required. The estimated square footage for City Hall is approximately 65,000 square feet. This would require approximately 3.84 custodial FTE positions to service.

The current FY2017 staffing for the Civic Center/City Hall operation is budgeted at 5.4 FTEs, including the Civic Center Manager and Facility/Event Support Supervisor. Were the City to eliminate the Civic Center as a public meeting space, it would be appropriate to reassign front-line custodial positions to the Public Work's Building Maintenance Division for supervision. Under this scenario, the Building Maintenance Division would take on responsibility for supervising four full-time custodial positions, including one crew leader.

This would enable the elimination of the Civic Center Manager and Facility/Event Support Supervisor positions, which would generate approximately $147,000 per year in gross salary and benefit reductions. However, this would also require elimination of the practice of renting Civic Center space to the public and, with it, approximately $70,000 per year in annual revenue. This offsets salary and benefit savings. Lastly, the conversion of part-time Facility/Event Support workers to full-time workers would require an additional $44,275 per year in salary and benefit expenses. Taking these factors into account, eliminating the Civic Center rental operation would generate a net savings of approximately $32,000 per year. If the City chooses to discontinue the renting of the facility, it may be possible to eliminate the support workers, those increasing the savings to the City.

Taking this analysis into account, it is appropriate for the City to engage in an intentional conversation and policy development process concerning cost recovery goals for the Civic Center. The Civic Center serves as a cost effective option for event and meetings for the public, non-profit, and student communities. Currently, the General Fund subsidizes the Civic Center operation by approximately $32,000 per year. The following table summarizes the current costs recovery and General Fund Subsidy level for the Civic Center. The determination concerning whether this is an appropriate subsidy is a policy decision; however, whatever the policy guidance, the City should seek to develop a marketing plan that meets these goals.

Finance Department

The Finance Department is responsible for maintaining a fiscally sound government organization and for providing sound financial advice to the City Manager, City departments and City Council. The Finance Department consists of the Financial Management and Information Systems (IS) Divisions. The FY2017 budget includes a Department staffing level of 17 FTEs.

The Financial Management Division is responsible for managing the City's assets and provides various financial services including budget preparation and execution, accounting services, utility billing, processing and customer service support, preparation of the annual property tax levy and management of the City's investments. The IS Division is responsible for establishing, monitoring and maintaining the City's information technology systems and services.

The following figure illustrates the department's current organizational structure.

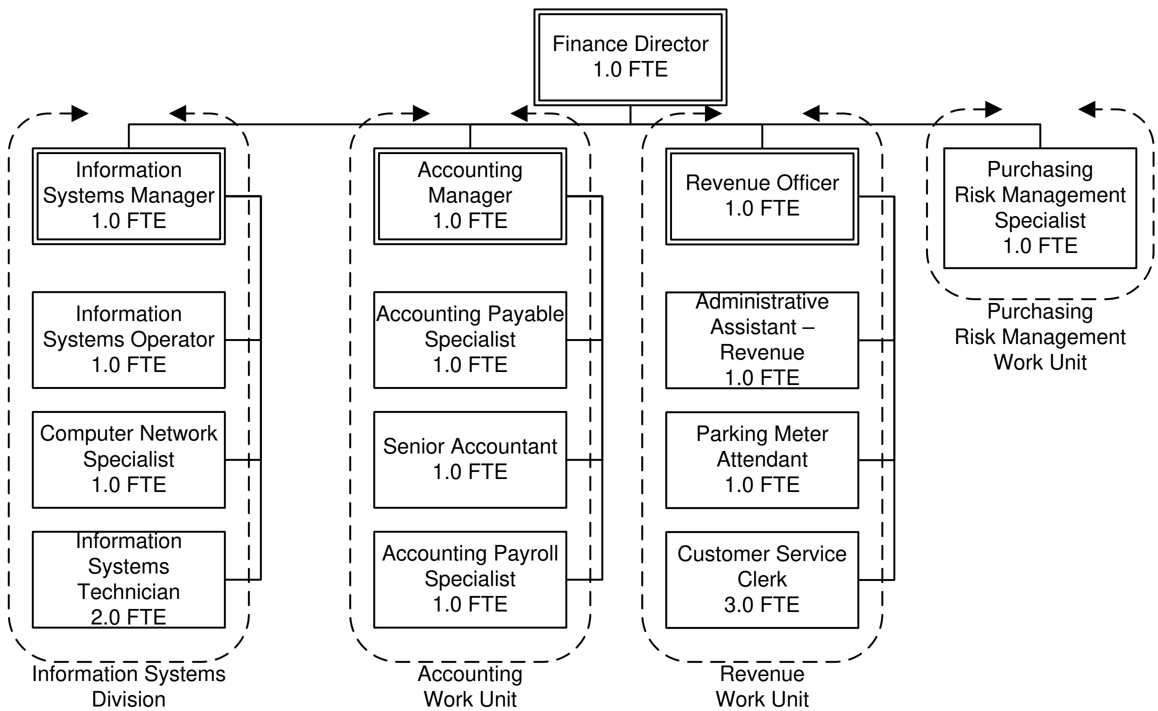

Figure 12: Finance Department Organizational Structure, FY2017

Financial Management Division

The Financial Management Division is made up four work units - Administration, Accounting, Revenue and Purchasing/Risk Management. As of FY2017, this Division is staffed with 12 FTEs.

The Financial Administration work unit is made up of the Finance Director who provides Department oversight and is directly responsible for budget process management and oversight of the City's accounting function.

The Accounting work unit provides services including financial reporting, payroll, accounts payable, accounts receivable, cash management and financial accounting for the Police and Fire pension funds. This work unit consists of 4 FTEs.

The Purchasing and Risk Management work unit administers the City's property and liability insurance, coordinates City-wide purchasing activity and is responsible for safety training programs. This work unit consists of 1 FTE.

The Revenue work unit provides billing and collection services for water, sewer, refuse, landscape waste, parking permits and weed mowing. Locally imposed and collected taxes include the Hotel/Motel Room Rental Tax, the three-cent per gallon Municipal Motor Fuel Tax and Utility Taxes on water, electricity, and natural gas. The unit will also be collecting the newly enacted food and beverage tax. It also administers the City's parking enforcement functions. This work unit consists of 6 FTEs, which includes the Parking Meter Attendant. This position is funded through the Parking Services Fund, but is considered a member of the Revenue work unit and reports to the Revenue Officer.

Information Systems Division

The IS Division is responsible for the hardware, software and networking of the City's computers and phone system. This Division maintains the City's payroll software and other specialized software programs related to water, sewer, and trash billing, parking violations, land use and the City's accounting system. Staff in this Division helps troubleshoot computer/network issues and provide staff assistance and support through the help desk. As of FY2017, Information Services is staffed with 5 FTEs.

The following table illustrates the department's FTE staffing levels over the last five fiscal periods, along with the percentage change in staffing since FY2013.

Table 17: Finance Department Staffing Trends, FY2013-FY2017

Division Staff (FTEs)	Actual FY2013	Actual FY2014	Actual FY2015	Actual FY2016	Budgeted FY2017	Percent Change
Financial Management	11.63	11.89	11.65	10.79	11	-5.42%
Public Parking Services	.77	1.03	1	1	1	29.87%
Information Systems	3.57	3.73	4	5.19	5	40.06%
TOTAL FTEs	**15.97**	**16.65**	**16.65**	**16.98**	**17**	**6.45%**

Finance Department Budget

Total budgeted expenditures in the Finance Department are $1,438,011 for FY2017, or 2.57% of City-wide budgeted expenditures. The following table illustrates trends in the Department's expenditures over the last five fiscal periods, along with the percentage change since FY2013.

Table 18: Finance Department Expenditures by Category, FY2013-FY2017

Finance	Actual FY2013	Actual FY2014	Actual FY2015	Estimated FY2016	Budgeted FY2017	Percent Change
Personal Services	$1,039,826	$1,107,333	$1,116,942	$1,155,498	$1,190,863	15%
Direct Operating Charges & Services	$345,983	$352,021	$380,320	$412,775	$431,300	25%
Services & Charges Transferred In	$85,468	$81,510	$81,716	$84,761	$91,645	7%
Non-Operating Charges	$49	$3,996	$0	$0	$100	104%
Capital Outlay	$0	$21,480	$0	$245,529	$188,222	-
Contingency	$0	$0	$0	$0	$15,000	-

Finance	Actual FY2013	Actual FY2014	Actual FY2015	Estimated FY2016	Budgeted FY2017	Percent Change
Depreciation Expense	$67,642	$67,526	$68,274	$67,642	$67,642	0%
Expenditures Transferred Out	-$426,160	-$409,187	-$451,080	-$523,174	-$546,761	28%
TOTAL	**$1,112,808**	**$1,224,679**	**$1,196,172**	**$1,443,031**	**$1,438,011**	29%

Major expenditures for the Finance Department are in the areas of Personal Services, Direct Operating Charges and Services and Capital Outlay.

In FY2016 the City, under the direction of the IS Division, began the process to replace the financial management, general ledger, payroll, human resources, property management and utility billing software modules. The New World™ enterprise resource planning (ERP) system was selected. Funding for the New World system ($400,000) was approved in the FY2016 budget and is reflected in the Capital Outlay expenses in both FY2016 and FY2017.

The increases in Direct Operating Charges are attributed to the implementation of an agenda management software system, which is designed to help streamline the creation of the City Council agenda. Other increases in in this area are due to funds being allocated for website design updates.

Increases in Personal Services are attributed to increases in overtime expenses, health insurance benefits and retirement benefits. The Department's overtime expenses increased in FY2014 due to the implementation of the City's procurement card (P-card) process. Overtime was used to allow staff additional time to learn the reconciliation and balancing process associated with the P-cards. Once staff was trained on the process, overtime was reduced. The overtime budget was increased in FY2017 due to the anticipated staffing needs associated with the conversion to the New World ERP system and with new Governmental Accounting Standards Board (GASB) audit requirements.

Analysis and Recommendations

The Finance Department is responsible for providing accounting, budgetary support, and information technology support to the City. In addition to daily transactional financial processing, the Finance Department is responsible for overseeing the financial condition of the City and providing ongoing financial reports.

In 2015, the City issued a request for proposal for an ERP system that would include financial management, general ledger, payroll, human resources, property management and utility billing software modules for the entire organization. The City selected New World™ ERP systems, and the software replacement began in January 2016. It is anticipated that implementation will take approximately 14 months to complete. This is a major undertaking, but one that is designed to create significant efficiency and process improvement in the organization.

Staff in the Finance Department are taking the lead on the City-wide ERP implementation. Replacing the City's software system is a time intensive process which involves working with New World representatives to set up/design the system for Carbondale as well as extensive data conversion and inputting. During the conversion, Finance Department staff will need to learn how to operate the various modules and how to run the appropriate reports. In addition, staff throughout the organization must be trained on how to use the system.

Once implemented, New World will provide process improvements for the Finance Department. For example, the implementation should create opportunities to provide on-line bill pay options for customers, improve the City's manual payroll process as well as enhance accounting and human resources functions.

Though New World should serve to add significant value to the organization and public and increase efficiency, this review has identified a number of recommendations for the Finance Department that address process and policy challenges as well as strategic planning efforts. These recommendations are detailed below.

Process Improvements

RECOMMENDATION 13: Automate the City's payroll process as part of the New World conversion.

As discussed above, the City is currently in the process of implementing a new ERP. The City's initial focus is to implement the accounting modules (e.g., general ledger, purchasing, accounts payable and accounts receivable); it intends to implement additional modules following the financial system implementation. Once that is complete, it is recommended that the City implement the automated payroll process module.

The City is currently utilizing a manual payroll process. Under the current payroll process, each Department is responsible for collecting paper timesheets for their staff and submitting them to HR for processing. HR staff then reviews the timesheets for leave/vacation time and creates an exception/leave spreadsheet. The timesheets and the leave/exception spreadsheet are sent to the Financial Management Division for processing so that leave accruals are properly reflected in the existing personnel management system, GEMS™. As part of the payroll process, Financial Management staff are responsible for processing all deductions for child support, wage garnishments, optional and mandatory insurance deductions and benefits. Each payroll period, staff also completes the required payments for payroll taxes and insurance premiums. Once entered, the Finance Director or Accounting Manager reviews and approves the journal entries and then check and wire requests are conducted. The timesheets are then provided to HR staff for retention and filing.

While payroll data is ultimately inputted into an electronic operating system for processing, the information comes to HR and Financial Management Divisions in a paper format and has to be entered manually into GEMS. This process is a manual, duplicative data entry process which unnecessarily increases the number of labor hours required to process payroll. Additionally, the act of manually transferring the data on the paper timesheets into electronic format creates an increased likelihood of data entry error. Though data was not readily available regarding the frequency of payroll adjustments, staff indicate that the requirement to issue back pay for payroll errors is a recurring problem.

The current payroll process is time consuming and labor intensive. Not including processing time in Departments, three staff members – one in HR and two in Financial Management - process payroll every two weeks. The process of manually entering timesheets into the GEMs system requires approximately 32 hours every two weeks. This limits labor hours available for other core financial management tasks such bank account reconciliations, accounts payable processes, and ongoing customer service duties.

It is recommended that the City transition to an automated payroll process as a component of the New World conversion. Under the automated process, staff will be responsible for completing timesheets electronically in the New World timekeeping module. Departments will continue to be responsible for auditing time of their employees but Financial Management and HR staff time dedicated to payroll processing will be reduced significantly and the opportunity for data entry error further limited.

In addition, automating the timekeeping process will offer additional efficiencies outside of the payroll process. Automating the timekeeping process within each department, and linking that process to the New World financial management and human resource management modules, will allow central support departments and operating departments to more effectively monitor employee schedules and leave accruals. Automated systems make it easier to add new employees and make salary adjustments or record when an employee leaves employment with the City. If tax rates change, tax tables can also be automatically updated in a computer-based system which negates the need to manually update each employee file. Automated systems also have the capability of providing employees with access to paycheck and benefit information through end user log in.

Policy Revisions

RECOMMENDATION 14: Revise the City's Purchasing Policy, and eliminate the requirement for Procurement Card transactions of $1,000 or more to require a Purchase Order.

In FY2013, the City implemented the use of Procurement Cards (P-cards) for official City purchases and outlined their use and intent in Section 8 of the City's Purchasing Policy. The P-cards were intended to reduce processing time and paperwork as well as streamline the purchasing process. P-cards allow cardholders to obtain goods and services in a quick and convenient way, while still complying with City purchasing rules.

According to the City's Purchasing Policy, all purchases over $1,000 require a Purchase Order (PO). This policy does not make an exception or distinction for P-cards. This makes the use of the P-card no different than purchasing an item with a PO. Before a purchase or service for over $1,000 can be made with a P-card, a PO request must be submitted, processed and approved by Financial Management staff.

The PO process requires the cardholder or originating department to submit a request for a PO to staff in the Financial Management Division. The PO request is then processed and approved. Once the PO is approved, the cardholder can make the purchase with the P-card. Once the purchase is made, the cardholder and/or department representative must log the transaction information into the financial system, indicate the appropriate account to charge the transaction to, and then the purchase is once again reviewed, verified and approved. Once approved by Financial Management staff, the charge is paid by the City.

This process is creating a duplication of work, making the purchasing process more cumbersome and taking away from the intended ease of use of the P-card. During interviews, it was shared that cardholders often avoid the PO requirement by breaking up P-card purchases into smaller transactions, which is in violation of the City's Purchasing Policy. It is important to note, however, that this violation is acted upon to acquire equipment and materials necessary to complete work or deliver services to the public in a timely and efficient manner.

According to the Government Finance Officers Association (GFOA), a purchasing/procurement card program is used as an alternative to the traditional purchasing process and can result in a significant reduction in the volume of purchase orders, invoices, and checks processed. Purchasing cards can be used whenever a purchase order, check request, or petty cash would have been processed and with any vendor that accepts credit cards.[3]

It is recommended that the City of Carbondale revise its Purchasing Policy, and eliminate the requirement for P-card transactions of $1,000 or more to require a PO. This change will streamline the purchasing process and save both the cardholder and staff in the Financial Management Division time.

If the City is concerned about staff using the P-card for non-approved items or excessive spending, there are other methods the City can utilize for monitoring and managing use. For example, setting dollar and transaction limits (policy already allows for this) or requiring pre-authorization by the Department Director or Finance Director for large expenses. In addition, POs can be required, but at a threshold that better services the needs of the cardholders and Finance staff. For example, a PO could be required for transactions over $5,000, which should continue to streamline the process, but hold staff accountable for spending.

Financial Reporting

RECOMMENDATION 15: Enhance financial reporting.

The role of the Finance Department, similar to most internal service departments, is to strike a balance between management support and fiscal control and oversight. The Finance Department must monitor spending and ensure that revenue and expenditures meet expectations or drive adjustments if they are not tracking as anticipated. The Finance Department must also support departments, City management and elected officials by providing information to inform operating and governance decisions.

One of the primary mechanisms used to provide these services is through financial reporting. Currently, the Finance Department aims to provide quarterly financial reports, which include budget to actual reporting and trend analysis. However, in practice, standard reporting is provided infrequently. The delay in providing recurring financial reporting is primarily related to two factors. First, the demands placed on staff for New World implementation, as well as daily financial management, leave little time for ancillary duties. Reporting tasks are supplanted due to pressing time sensitive tasks. Second, the process of developing the quarterly reports is time consuming, requiring manual extraction and manipulation of data from the City's existing financial system.

Though these challenges and considerations are real, it is nevertheless important to maintain a proactive financial analysis and reporting process to ensure that trends are properly monitored so that adjustments can made, where appropriate. It is appropriate to adopt a standard to produce quarterly financial reports within 45 days of the end of the quarter for review by City management.

As recommended by GFOA, "a government should undertake a process at least quarterly to ensure the ongoing completeness and accuracy of the financial data it collects. This process should include appropriate reconciliations to identify needed adjustments, as well as financial analysis of interim management reports to identify anomalous or incomplete data that may need to be corrected." Ensuring that these reviews take place on a set schedule will allow the City to make budget adjustments as needed throughout the fiscal year.

Though recurring quarterly financial reporting should serve as the baseline expectation for financial reporting practices, the City is also in a unique position, with the ongoing implementation of New World, to develop additional dashboards and reporting features that can be easily

[3] Purchasing Card Programs – GFOA Best Practice, February 2011

accessed and reported on a more frequent basis (e.g., monthly or as needed). The Finance Department should avail itself of these new features, and City management should require more detailed, on-time quarterly reporting as soon as implementation of the ERP is completed.

Technology Strategic Planning

RECOMMENDATION 16: Develop and implement a City-wide Information Technology (IT) Strategic Plan to better address the organization's technology needs.

One of the most valuable tools that an organization can leverage to maximize the efficiency and effectiveness of government services is technology. Technology, when thoughtfully applied, facilitates communications and problem solving, streamlines workflow, and connects the government to the people they serve. As a result of these attributes, technology has evolved into a fully integrated element of local government service delivery. The nature of technology, however, creates two fundamental challenges.

First, effective technology management requires a high level of technical skill which in turn requires a high level of training. Second, technology evolves at an exponential rate, which not only requires a dedicated commitment to skill maintenance and new skill development, but thoughtful and consistent strategic planning. Dedicated IT strategic planning is necessary to ensure that costly IT purchases or upgrades are appropriately suited to an organization's specific needs and that the pace of technological evolution within an organization at least allows that organization to maintain support for its technology infrastructure.

Currently, the City does not have a process in place to systematically assess and identify the technology needs and priorities of the organization. As a result, IT hardware and software requests are evaluated annually within the constraints of the budget process without the benefit of a broader perspective to inform resource allocation priorities. This limits the ability of the City to centrally assess IT needs and, just as importantly, capacity to service new IT systems. For example, if departmental purchases are made without consulting staff in Information Services, there is the possibility that the new technology will not be compatible with the City's existing operating systems, additional equipment or software may be necessary, and staff may not have the ability or expertise to support it after implementation.

It is recommended that the City of Carbondale develop and implement a City-wide Information Technology Strategic Plan to better address the organization's technology needs. An IT Strategic Plan will assist staff in addressing the City's current technology needs and provide a mechanism for identifying the long-range software, hardware and technology priorities. A centralized approach will provide the City with a holistic picture of all technology needs, which in turn will help staff better plan for the future.

The development of the IT Strategic Plan should be led by IS staff. However, the process should also engage departments and City management. This can be accomplished by establishing an IT Steering Committee. The role of the IT Steering Committee will be to identify short- and long-term IT related issues, needs and opportunities and to develop and prioritize standards based on the City's strategic goals and operating needs. The IT Committee should be responsible for reviewing all IT requests and analyzing them within the context of those priorities and objectives. The Committee's analysis and recommendations would then be considered during the City's budget process. Once this occurs, funding requests can be incorporated into the budget process and the City's executive leadership can establish priorities and assist in the development of the strategic plan. The committee serves as a tool and resource for Information Services staff. Members can solicit needs, ideas and opinions from other staff members and customers. The

Committee should consist of representatives from throughout the organization, especially those areas which rely heavily on technology.

As referenced in the “General Government” section of this report, it is recommended that the City expand its capital planning process beyond an infrastructure focus. The outcome of the strategic planning process, and the specific related funding recommendations of the IT committee, should be incorporated into the capital planning process. Incorporating technology projects into the CIP will provide executive leadership with a more accurate picture of all the liabilities and needs the City is anticipating in the current fiscal year.

A component of the IT Strategic Plan should include a discussion about the funding mechanisms used to support the City’s technology needs. Currently funding comes directly from the General Fund. The City may want to consider the implementation of an IT chargeback, which would be charged to the departments it supports. An IT chargeback would apply the costs associated with IT services, hardware or software to the department in which they are used.

Document Management

RECOMMENDATION 17: Implement a City-wide electronic document management system.
The City is required to retain and destroy documents in accordance with the State’s retention schedule. Managing so many paper documents throughout various locations can become cumbersome, difficult and almost impossible. Because documents are stored in various locations, searching and finding documents for research purposes, Freedom of Information Act (FOIA) requests as well as document destruction can be a difficult and tedious task.

It is recommended that the City implement a City-wide electronic document management system. Electronic document management systems are used to track, manage and store documents and reduce the organization’s reliance on paper records/documents. The use of an electronic data management system would allow staff to record, file, image, index and archive documents electronically.

The electronic document management system serves as a central repository for records and enables documents to be managed in accordance with requirements outlined in recordkeeping legislation, standards and best practices. These systems allow users to search and retrieve documents much easier than navigating large records storage areas, which makes finding files, searching by date and keywords or responding to Freedom of Information Act requests much simpler and less time consuming.

The cost to implement an electronic data management system varies and is based on a number of factors. Cost will be based on the modules purchased, the City’s document storage needs and can fluctuate by region. It is recommended that the City issue an RFP for a document management system to solicit specific bids for a system.

Police Department

The City of Carbondale Police Department is responsible for all aspects of policing in the City of Carbondale, including patrol, response to calls for service, and investigation of crimes. The Department's stated mission is "to work in partnership with our community to preserve life, maintain human rights, protect property, and improve the quality of life by providing quality police services to all in a fair, sensitive and professional manner."

The FY2017 budget authorizes the Department to employ 82.56 FTEs. The authorized sworn headcount is 64, including: one Chief of Police; one Deputy Chief; four Lieutenants; 10 Sergeants; six Detectives;[4] and 42 Police Officers. At the time of this review, one officer is on long term injury leave; one is on long term military leave; one recently resigned; one is in the process of resigning for employment with a federal agency; one is on administrative leave; and three are on extended medical leave (anticipated to be approximately six months in duration). Consequently, 56 sworn members are actually available for duty. The Department's 18.56 non-sworn employees include two Administrative Assistants; 8.43 FTE Telecommunicators; one Records Supervisor; three Records Technicians; one Crime Victims Advocate; one Animal Control Officer; one Support Services Specialist; 0.96 FTE Community Support Officer; and 0.17 FTE Car Wash Detailer. The Support Services Specialist position that is currently vacant is in the process of being converted to a non-sworn Evidence and Property Technician position.

The following figure illustrates the Department's current organizational structure under the FY2017 Budget.

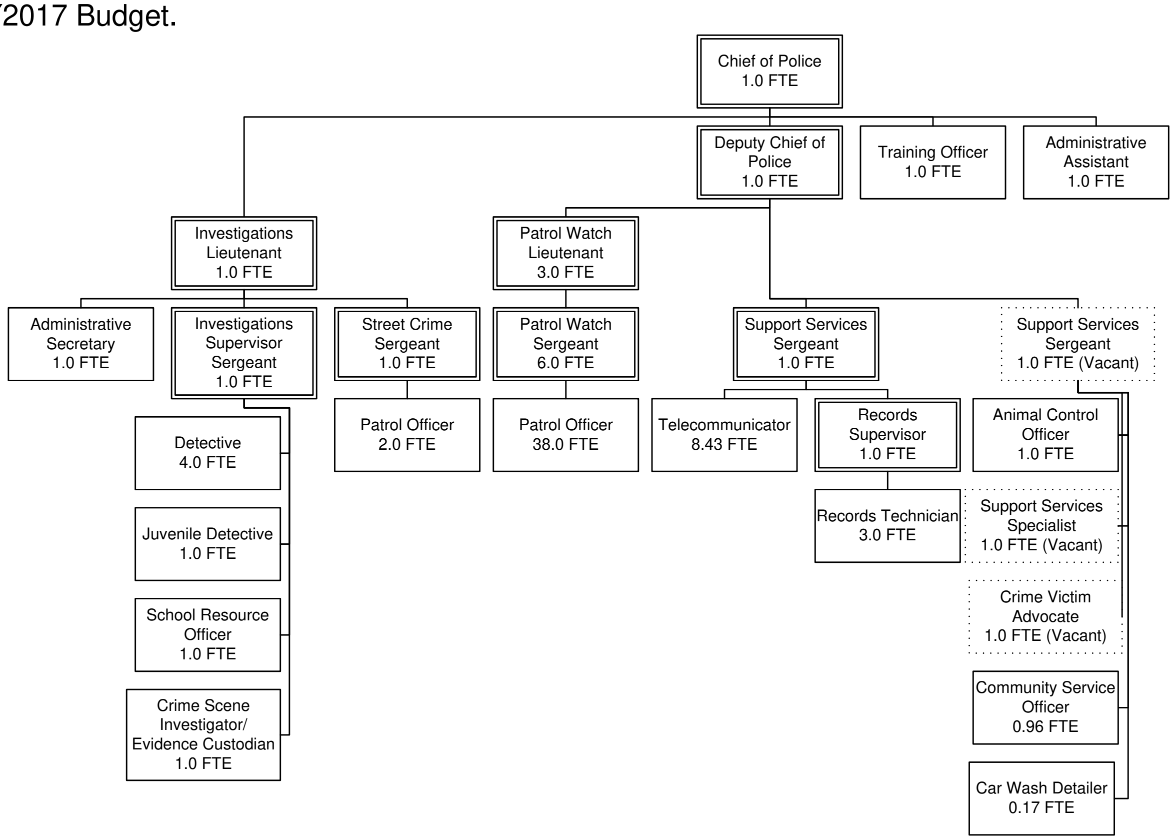

Figure 13: Police Organizational Structure, FY2017

[4] Detectives are Police Officers assigned to investigative duties.

The Chief of Police is the chief executive officer of the Department and "the final Departmental authority in all matters of policy, operations and discipline subject to the authority and control of the City Manager... responsible for planning, directing, coordinating, controlling, and staffing all activities of the Department, for its continued and efficient operations, for the enforcement of rules and regulations within the Department, for the completion and forwarding of such reports as may be required by competent authority, and for the Department's relations with the citizens of Carbondale, the City government, and other agencies."[5] The Chief has four direct reports: the Deputy Chief of Police; the Training Officer; an Administrative Assistant; and the Investigations Lieutenant.

The Deputy Chief oversees the Patrol Division and the Support Services Division. Prior to August, 2014, there were two Deputy Chiefs, one of whom oversaw the Support Services Division.

The Patrol Division performs 10-hour shifts that overlap by 30 minutes for shift change coverage and briefing. Shifts are selected by bid three times each year. Watches 2 and 3 overlap during the late evening/overnight hours. Watch 1, which covers the hours of 8:00 AM to 6:00 PM, is assigned 11 Police Officers. Watch 2 works from 5:30 PM to 3:30 AM with 11 officers. Watch 3, with 12 officers, works from 10:30 PM to 8:30 AM.

Two Sergeants are assigned to each watch, and work the same 10-hour tours as Police Officers. One Sergeant on each watch is off from Thursday through Saturday, while the other is off Sunday through Tuesday, resulting in an overlap every Wednesday. Sergeants supervise Patrol Officers and manage field operations during their shifts.

One Lieutenant is assigned to each watch. The Watch 1 Lieutenant works eight-hour tours, Monday through Friday. The Watch 2 and 3 Lieutenants vary their tours according to the SIU academic calendar. From August through October and mid-March to mid-May, they work five eight-hour shifts per week; the Watch 2 Lieutenant works from 4:00 PM to Midnight, except on Friday and Saturday, when s/he works from 7:00 PM to 3:00 AM. The Watch 3 Lieutenant works from 10:30 PM to 6:30 AM. One Lieutenant is off on Thursday and Friday; the other is off Saturday and Sunday. The remainder of the year, the Lieutenants work four 10 hour shifts weekly. The Watch 2 Lieutenant works from 5:00 PM to 3:00 AM, and the Watch 3 Lieutenant works from 10:30 PM to 8:30 AM. One is off Wednesday through Friday; the other is off Saturday through Monday. Lieutenants supervise the Patrol Sergeants, provide a higher level of supervision during critical incidents, review reports, authorize leave after preliminary approval by the Sergeants, handle certain categories of internal investigations, and attend community meetings in lieu of the Chief of Police as needed.

A total of 11 or 12 Police Officers are assigned to each watch in order to provide seven-day coverage; that results in lower numbers actually available on each shift, as shown in the following table. These figures represent the highest number of potentially available personnel; they do not reflect absences due to vacation, injury, sick leave, or other authorized excusals.

Table 19: Number of Patrol Officers Scheduled, by Shift

Shift	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Watch 1	7	6	6	6	6	6	7
Watch 2	6	6	6	6	6	7	7
Watch 3	6	6	6	7	7	8	8

[5] Department Manual, §200.01 – 200.02.

There is little margin between the number of available officers and the number of officers needed to meet minimum staffing levels. As a result, officers assigned to specialized duties, such as the Investigations Unit and the Traffic Unit, are often utilized for patrol shift coverage. Staff also reports that it is difficult to obtain approval for time off or time for training due to minimum staffing requirements.

Minimum patrol staffing is one Sergeant and five Police Officers per shift. For deployment purposes, the City is divided into five districts. One Police Officer is assigned to each district. During evening shifts or other times when more than the minimum number of personnel are available, additional officers are assigned to districts in the central part of the City. One K9 officer is assigned to each Watch, and is included in the staffing figures provided above.

Two Police Officers are assigned to the Traffic Unit during Watch 1. They were formerly assigned to a Traffic Sergeant, who was reassigned to patrol, and are now primarily supervised by the Watch Commander.

The Support Services Division also reports to the Deputy Chief. Positions formerly held by a Deputy Chief of Administration and a Lieutenant have not been filled; the unit is currently supervised by a Sergeant, who works day shifts Monday through Friday. A second Sergeant was assigned to the Division until that employee resigned for other law enforcement employment in July 2016. In addition to supervision of the Division and its sub-units, the Sergeant's duties include coordination of field training for newly hired officers; acting as the Department's Public Information Officer, handling news releases, press inquiries, website postings, and social media; and coordinating community outreach. Additional duties that were previously handled largely by a second Sergeant include supervision of the Communications Center and the Records Unit; updating policies and procedures; preparing weekly updates for the City Manager; overseeing the K9 program to ensure that training and certifications remain current and records are maintained; preparation of the Department's annual budget; oversight of the administrative tow program, which utilizes three contract towing agencies on a rotation; and reconciling procurement cards used by the Department.

Only one additional sworn member is assigned to the unit, a Police Officer designated as Community Resource Officer, who is involved with the Sergeant in a number of community outreach programs, including presentations and community events such as "Coffee with a Cop," street fairs, events at the recently opened water park, "Kid Print" and "Ident-a-Kid" programs, and Alcohol Task Force awareness programs at SIU; prepares news releases; monitors sex offender registration; and teaches the Drug Abuse Resistance Education (D.A.R.E.) program, sharing that responsibility with the Youth Detective.

Non-sworn staff includes:

- Three Community Service Officers, paid part-time interns who work 19 hours per week. They take reports that do not involve identified suspects; assist in the Records Unit and with various projects; and show a visible presence in the downtown area.
- One Crime Victim advocate, who assists victims in obtaining orders of protection and making court appearances; maintains domestic violence statistics; and supervises two student interns per semester. In FY2015, Crime Victim Advocate services were made available to 1,751 people, and in FY2016, 1,728 people.[6]
- One Animal Control Officer, who responds to animal complaints involving both domesticated animals and wildlife, enforces animal control ordinances, and provides

[6] FY2016 estimated actual figure.

educational programs. In 2015, the Animal Control Officer responded to 660 requests for service; transported 372 animals to the Humane Society; issued 308 citations or warnings for pet violations; mailed 581 license applications; licensed 960 dogs; handled 36 animal bite cases; and handled 115 cruelty/neglect complaints.

- One Support Services Specialist, who primarily handled the submission and administration of grants, including a four year grant to operate a "Batterers Project" in cooperation with the Women's Center of Carbondale. That position was recently vacated, and is currently being converted to augment Evidence and Property staffing. Most of the duties of the position are being absorbed by the Support Services Sergeant.
- One Computer Network Technician, who handles the Department's Information Technology needs, is housed at the Department but is employed by the City's Information Technology Department.

The Support Services Division oversees the Records Unit, which is staffed by one Records Supervisor and three Records Technicians. The Records Supervisor is a working supervisor who assumes a portion of the unit's workload, concentrating on Freedom of Information Act requests, which average more than 1,000 per year. The three Records Clerks share customer service duties – answering telephone calls and assisting citizens at the public counter, dog licensing, and background checks – and each have primary areas of responsibility. One handles non-traffic criminal matters, such as entry of summonses for offenses not related to traffic, notices to appear, and civil summonses; requests for criminal information; copies of reports; and parking tickets. A second clerk focuses on traffic-related matters, such as accident reports; documentation related to Driving Under the Influence (DUI) cases; traffic tickets; administrative vehicle towing; and maintaining the Circuit Court schedule. The third handles court matters, including maintenance of the case management system; assigning cases to the Investigations Unit; and assembling court packets for submission to the State's Attorney's Office.

The Communications Unit handles approximately 80,000 calls per year. Additionally, as a result of a statewide consolidation of Public Safety Answering Points (PSAPs), the Communications Center also answers 911 calls for the SIU Police Department. The staff handles both Police Department and Fire Department dispatching, utilizing two Carbondale Police frequencies and a Fire Department frequency; they monitor two additional channels, a fire mutual aid channel and the SIU Police Department channel. Emergency medical calls are transferred to the Jackson County Sheriff's Office for dispatch of County ambulances, but all dispatchers are trained in Emergency Medical Dispatch (EMD) protocols.

Dispatchers also handle data entry for house watch and extra patrol requests, private tow documentation, and release of vehicles impounded by the Police Department.

The unit is currently staffed by seven full time and one part-time Telecommunicator positions. One of the seven full-time dispatchers is currently in training, and one is a supervisor. They work four 10-hour tours weekly, covering three shifts: 8:00 AM to 6:00 PM; 5:30 PM to 3:30 AM; and 10:00 PM to 8:00 AM. Although the goal is to have two dispatchers on duty at all times, normally only one is assigned from 3:30 AM to 8:00 AM. There are three operable work stations in the Communications Center, with equipment available for installation of a fourth. Telecommunicators handle both Police and Fire Department dispatching, and serve as call takers for 911 calls made to the SIU Police Department.

The Investigations Division is supervised by a Lieutenant, who reports directly to the Chief of Police. The Lieutenant works eight hour shifts, Monday through Friday, as do all members of the Division. The Investigations Lieutenant handles formal internal affairs investigations – routine cases are investigated by the Watch Commanders – and maintains all internal affairs files. The Lieutenant oversees the Investigations Bureau, the Street Crime/Drug Unit, and the Bomb Squad.

The Investigations Bureau is staffed by:

- one Sergeant;
- four general investigations Detectives;
- one Detective assigned to juvenile/youth investigations, who also teaches the D.A.R.E. and G.R.E.A.T. (Gang Resistance Education And Training) programs;
- one Detective assigned as crime scene investigator and evidence custodian;
- one Secretary; and
- one School Resource Officer.

Aside from the Youth Detective, all investigators are generalists, but have certain areas of expertise and are informally assigned cases primarily within those areas. For example, burglaries are normally assigned to the unit's newest Detective; one Detective has expertise in computer fraud and technology-related cases; one handles high profile cases involving major crimes; and one handles most sexual assault cases.

The Detective assigned to crime scene investigation and evidence custodian duty processes major crime scenes. Nine Patrol Officers are trained as evidence technicians; they receive three days of training in basic crime scene processing techniques, such as dusting for latent fingerprints, taking footwear impressions, and evidence collection. They are utilized as necessary. The Detective is also solely responsible for the intake, management, and disposal of evidence and property taken into the custody of the Department; in the past, one sworn and two civilian employees were assigned to that function.

The School Resource Officer (SRO) is assigned to the high school, where the primary responsibility is security of the campus and interaction with the students. The SRO salary is largely funded by the school district. When school is not in session, the SRO assists the Investigations Unit with miscellaneous tasks.

The Investigations Unit Sergeant is the unit's first line supervisor, and is responsible for case management. The Sergeant reviews all patrol reports with case numbers and assigns cases to Detectives for investigation; reviews Detectives' reports and clearances and assigns additional tasks as needed; and prepares cases for the State's Attorney.

All Detectives work day shifts, Monday through Friday. They hold a formal meeting each morning to receive assignments, discuss cases, and share information. Detectives are called out after hours when needed for serious incidents; there is no formal callout procedure or rotation.

The Street Crime Unit is the legacy unit of two separate units: the Street Crime Unit and the Drug Unit. It primarily focuses on narcotics investigation, as well as illegal firearms and prostitution complaints. One Sergeant, two Detectives, and one SIU Police Officer are assigned; they work day shifts, Monday through Friday, with occasional flexibility to address conditions occurring outside those hours.

The Investigations Lieutenant also serves as commander of the Bomb Squad, one of eight such units in the State of Illinois, which was formed in 1998 as a joint effort of the Department and the SIU Police Department. Four certified explosive ordinance device technicians are assigned to the unit: the Lieutenant and one Carbondale Officer, and two SIU Officers. All serve as bomb technicians on a part-time basis, in addition to their regular assignments. The unit trains twice monthly; all training and equipment is federally funded. It averages six to 10 callouts annually.

The Department maintains a Special Response Team, often referred to as SWAT, which includes officers from the SIU Police Department. Approximately 12 Carbondale officers and eight SIU officers are currently assigned to the team. All are mobilized from their regular assignments as needed. The team trains monthly.

The Department participates in two task forces under the auspices of the Illinois Law Enforcement Alarm System (ILEAS), a consortium created to meet the needs of local law enforcement throughout the State of Illinois in matters of mutual aid, emergency response and the combining of resources for public safety and terrorism prevention and response. Two SRT operators are part of the Weapons of Mass Destruction Special Response Team (WMDSRT), one of nine state funded multijurisdictional mutual aid teams trained to respond to terrorist attacks as well as to provide SRT response to smaller communities in the region. The Department commands the joint District 9/District 11 Mobile Field Force (MFF), one of seven such teams statewide trained to provide disorder control assistance upon a community's request. Five officers participate in the MFF. Two members of the Department are trained as hostage negotiators.

The Department has three K9 teams, one assigned to each watch. Each team is assigned to patrol duty on a watch; however, all are excused for training on alternate Tuesdays, which impacts the ability of other members of the watch to utilize vacation time.

Members of the Department responded to 77,032 calls for service[7] in Fiscal Year 2015 and 63,503 in FY2016.[8]

The Police Department is housed in a 32,648 square foot building at 501 South Washington Avenue, built in 2011. It also has a firing range located at 105 Bigler Road; a bicycle storage facility at 600 East College Street; two garages on the grounds of the Southern Illinois Airport used to store Bomb Squad and Mobile Field Force vehicles; and two former bunkers on the grounds of the Crab Orchard Refuge in Marion, Illinois utilized by the Bomb Squad. The Department operates a fleet of 42 vehicles.

The Department's staffing level has decreased by one percent over the last five fiscal years. The following table illustrates the department's FTE staffing levels over the last five fiscal periods, along with the percentage change in staffing since FY2013.

Table 20: Police Department Staffing Trends (FTEs), FY2013-FY2017

Staffing by Division	Actual FY2013	Actual FY2014	Actual FY2015	Actual FY2016	Budgeted FY2017	Percent Change
Police Protection	83.65	86.84	86.05	81.19	82.56	-1%
TOTAL FTEs	**83.65**	**86.84**	**86.05**	**81.19**	**82.56**	**-1%**

[7] According to Department's annual performance measures.
[8] Much of the Department's data is maintained by Fiscal Year.

Police Department Budget

Personal Services is the Police Department's largest expenditure category, making up 92% of the FY2017 budget. This expenditure category is also the only expenditure category that has increased (by a total of 16%) over the last five years. However, this increase is not the result of additional staff, rather the increase is primarily due to a 48% increase in the employee retirement benefits line item, a 7% increase in the employee salary and wages line item, and an 11% increase in the employee health insurance benefits line item. Overtime expenses for sworn personnel have been reduced by 25% since FY2013, from $310,296 to $232,042.

Expenditures in the Direct Operating Charges & Services category have decreased by 12% over the last five years. This decrease is primarily the result of a 91% decrease in the operating equipment line item, a 100% decrease in the utilities line item, and a 100% decrease in the repairs and maintenance – buildings and structures line item. The "Services and Charges Transferred In" category of expenditures decreased by 59% over the last five years, primarily due to 100% decreases in the building and structure maintenance, engineering services, and property management services line items. The Capital Outlay expenditure category decreased by 100% over the last five years, primarily due to a 100% decrease in the licensed vehicles line item.

The following table illustrates trends in the department's expenditures over the last five fiscal years, along with the percentage change since FY2013.

Table 21: Police Department Expenditures by Category, 2016

Expenditures by Category	Actual FY2013	Actual FY2014	Actual FY2015	Estimated FY2016	Budgeted FY2017	Percent Change
Personal Services	$7,826,537	$8,452,330	$8,663,108	$8,700,029	$9,068,063	16%
Direct Operating Charges & Services	$818,159	$734,268	$743,150	$714,964	$716,052	-12%
Services and Charges Transferred In	$167,411	$85,653	$83,124	$76,000	$68,000	-59%
Capital Outlay	$165,568	$144,512	$52,468	$232,336	$0	-100%
TOTAL	**$8,977,675**	**$9,416,763**	**$9,541,850**	**$9,723,329**	**$9,852,115**	**10%**

Analysis and Recommendations

The Carbondale Police Department operates in a complex policing environment. With a population of 26,399 residents plus 15,987 SIU students in 17.09 miles, the Police Department has a sizeable area of responsibility, especially when the daytime population increase of approximately 10,000[9] people is considered. The United States Census Bureau lists the City's commuter-adjusted daytime population as 36,181. The City is the largest urban area in the region, and attracts many non-residents for shopping and entertainment purposes. Its neighborhoods include retail strips, entertainment centers, a central downtown area, and a mix of housing options. The Department's area of responsibility has expanded as tracts of land bordering the City have been annexed.

Most importantly, Carbondale is a college town. The focal point of the City is SIU. Although SIU has its own police department, with 37 sworn members, the SIU Police Department's jurisdiction is limited to the SIU campus and university-owned properties. The City and SIU Police Departments work closely: SIU is represented in the Street Crimes/Drug Unit and the Special

[9] U.S. Census Bureau, Commuter-Adjusted Daytime Population, 2012

Response Team; the Bomb Squad is a joint effort; and Carbondale's Communications Center serves as the PSAP for SIU calls to 911. However, the Carbondale Police Department is responsible for students when they are outside the confines of the SIU campus, and the impact of a large university on a community is considerable. Thousands of young people between the ages of 18 and 23 spend the bulk of the year in Carbondale and use its retail and other facilities. Many are new to independent living, and seek entertainment off campus. SIU has a long history of student activism, a factor that will become increasingly relevant in the current changing climate of police/community relations nationwide. It is also known for large scale off-campus events, such as the "Polar Bear" and "Solar Bear" events, annual off-campus underage drinking events that draw thousands, and extensive Halloween celebrations.

The Carbondale Police Department has been quite successful in reducing crime. A comparison of 2014 FBI crime statistics (the most current published statistics) with 2009 figures reflects a decrease of 27% in violent crime[10] and a 21% reduction in property crime.[11] Aggravated Assaults dropped by 63%, and Burglaries by 19%. Robberies showed an increase of 2% for the period; this represented a spike following a period of steady decline. In 2013, 37% fewer robberies were reported than in 2009. FBI data for the period is shown below.

Table 22: Property Crime UCR Data, 2009-2014[12]

Year	2009	2010	2011	2012	2013	2014	% Change
Murder/non-negligent Manslaughter	0	1	1	0	2	0	0%
Forcible rape	Data Not Available[13]	33	32	29	14	26	-21%
Robbery	65	47	38	36	41	66	2%
Aggravated assault	123	163	201	195	187	46	-63%
Violent Crime Total	**188**	**244**	**272**	**260**	**244**	**138**	**-27%**
Burglary	415	302	320	246	272	335	-19%
Larceny/theft	746	821	768	798	731	566	-24%
Motor Vehicle Theft	28	32	28	48	28	39	39%
Property Crime Total	**1,189**	**1,155**	**1,116**	**1,092**	**1,031**	**940**	**-21%**

However, 2016 has seen an uptick in violence with 18 shootings reported as of August. That is higher than any annual figure for more than a decade; the highest total was recorded in 2010 with 10. Most of the 2016 incidents are believed to be drug related.

Performance measures tracking workload and enforcement activity reflect a substantial amount of activity. The following table includes the performance measures tracked by the Department for FY2016.

Table 23: Police Department Performance Measures, FY2016

[10] Violent crimes include murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault.
[11] Property crimes include burglary, larceny-theft, and motor vehicle theft.
[12] The most current published FBI Uniform Crime Reports are for 2014.
[13] The FBI notes that Illinois police agencies did not utilize a data collection methodology for the offense of forcible rape which complied with UCR guidelines until 2010. Consequently, statistics for forcible rape offenses are shown as "Not Available" in the table.

Performance Measure	FY2016
Total Calls for Service	61,074
Public Assistance Call Responses	27,116
Felony Arrests	610
Misdemeanor Arrests	1,155
Traffic Arrests	2,214
Driving Under the Influence (DUI) Stops	173
Ordinance Violation Arrests	895
House Watches Conducted	1,931
Extra Patrols Conducted	11,955
Park and Walks Conducted	157
Underage Alcohol Violations	223
Traffic Stops	3,702
Traffic Warning Citations Issued	1,996
Freedom of Information Act (FOIA) Requests Processed	1,208

The Department has also implemented a robust community outreach program. The Department tracks its community outreach efforts on a monthly basis, including staff hours spent on both events and preparation. In addition to routine officer/citizen interaction, initiatives include:

- Citizen's Police Academy, which provides members of the public with insight into the operations of the Department and the challenges faced by law enforcement.
- Charitable Activities include the Law Enforcement Torch Run and the Ducky Derby Dash, which raise money for Special Olympics; a Community Christmas Store for at-risk children; a coat drive in partnership with the SIU Athletics Department; and "No Shave November" to raise money for the Good Samaritan House.
- Child Identification Kits provide photographs, fingerprints, and DNA samples of children to be retained by their parents for use if needed.
- Child Passenger Restraint System Checks: certified Police Officer technicians ensure that car seats are installed correctly.
- Coffee with a Cop provides residents with an opportunity to meet with officers informally in a coffee shop setting to discuss issues of concern.
- Community Meetings and Events provide interaction in forums such as the Rotary Club, Lions Club, Sparrow Coalition, Boys and Girls Club of Carbondale, Carbondale Public Library, Spirit if Attucks, and the Jackson County Health Department.
- Crimestoppers provides a means for citizens to report criminal information anonymously.
- Crime Prevention through Environmental Design (CPTED) in conjunction with the Development Assistance Committee enables Crime Prevention-certified officers to review site plans for new developments to promote safety. Officers also perform security surveys upon request for residents, businesses, and churches.
- Drug Abuse Resistance Education (D.A.R.E.) teaches students strategies for avoiding risky behaviors that lead to drug and alcohol abuse, criminal behavior, and bullying.
- Elderly Services Officers are knowledgeable regarding services available for the elderly and assist senior citizens in obtaining them.
- Extra Patrol/Housewatch provides extra patrol for residents, businesses, and houses of worship in response to reports of suspicious activity or criminal incidents and exterior residence checks of residences while their occupants are away from home.
- Media Relations efforts include posting of news releases on the Department's website and providing follow-up information to media representatives.

- Neighborhood Watch groups educate residents regarding crime prevention strategies for their areas. The Department assists interested residents in organizing these groups.
- Personal Safety for Women classes teach women precaution and prevention techniques geared toward sexual assault prevention.
- Police and Community Together Halloween Event is a joint effort of the Police Department, Fire Department, Park District, Jackson County Ambulance, Jackson County State's Attorney's Office, Jackson County Sheriff's Department, Carbondale/Southern Illinois University Crimestoppers, and the Big Brothers/Big Sisters of Jackson County at Attucks Park to provide activities for children of trick-or-treating age.
- Police Chaplain Program is designed to provide a list of religious leaders who will volunteer their services to assist victims and families during critical incidents.
- Presentations on Crime Prevention and Safety are provided for children's groups, senior citizens groups, businesses, houses of worship, and other interested organizations.
- Pumpkin Patrol organizes volunteers as observers and visual deterrents during Halloween activities.
- Ride Along Program affords residents an opportunity to ride with Police Officers on patrol to become acquainted with police patrol operations.
- Southern Illinois Batterers Intervention Program is a joint effort with the Jackson County Probation Department, Sheriff's Department, State's Attorney's Office, and the Women's Center of Carbondale to reduce domestic violence.

The Police Department has been in a lengthy period of transition. The departure of the previous Chief of Police was followed by a period of 14 months with an interim Chief before the new Chief was permanently appointed to the position. Shortly thereafter, there was a change in City Managers, resulting in a freeze on hiring and promotion. Supervisory and command positions have been left vacant, resulting in uncertainty regarding the organization's structure, and impeding the Chief's opportunity to fully restore the necessary level of clarity. This organizational transition coincides with a nationwide period of challenge and change in law enforcement that has, to some extent, impacted all law enforcement agencies and their officers.

The recommendations in this report are intended to validate the appropriate staffing levels for the Department and to provide guidance for moving forward as an organization.

Organizational Structure

The organizational structure of the Department has been in flux since 2014, when the previous Chief of Police vacated the position. A Deputy Chief position that became vacant upon the Chief's promotion, a Lieutenant's position that became vacant due to retirement, and the position of Traffic Sergeant have not been filled.

Clarity regarding the structure of a Department is important to its employees. Having an effective structure is even more important. An organization can become top heavy and full of silos; an organization that is too flat may lead to an insufficient chain of command, unequal representation of certain segments, and poor communication.

This is also a time of change in American policing. Many organizations are shifting from an enforcement orientation to a greater emphasis on community policing and outreach. The position of Chief of Police is changing as well, as the need to meet community outreach obligations and maintain a high profile outside of police headquarters reduces Chiefs' availability for hands-on management of routine matters. That creates a need for greater involvement of a Deputy Chief in the daily operations of the Department.

Currently there are three major functional groups within the Department. Patrol has three Lieutenant/Watch Commanders who report to the Deputy Chief. Support Services, formerly reporting to a Lieutenant and a Deputy Chief, currently is managed by a Sergeant who reports to the Deputy Chief. The Investigations Division reports to a Lieutenant, who reports directly to the Chief, bypassing the Deputy Chief.

RECOMMENDATION 18: Create two bureaus, each under the command of a Captain.
Combining the three current areas into two bureaus, each under a newly created Captain's position, could be accomplished with existing staff. It would streamline the organization and provide enhanced career development opportunities that would expose senior staff to management in a way that will better prepare them to assume leadership roles in the Department in the future.

The Patrol Bureau would oversee patrol operations, the largest and most visible part of the Department. The three Lieutenants currently assigned to patrol would be reduced to two: a Day Watch Commander and a Night Watch Commander. This would eliminate the overlap that currently exists between the Watch 2 and 3 Commanders, as the Night Watch Commander would assume overall responsibility for both watches. Although the overlap of Police Officers and Sergeants on those watches has the impact of a "power shift" during the hours when additional personnel may be needed, an extensive overlap at the command level has the potential to either waste an important resource or lead to confusion and conflict among the staff.

Under this model, the Communications Center, which could appropriately be placed either in Support Services or Patrol, where it formerly resided, could return to Patrol. Dispatching is intertwined with patrol operations, and the availability of a Captain with overall responsibility and a civilian first-line supervisor would provide adequate supervision.

The remaining units would be part of a Support Services Bureau, commanded by a Captain. The position of Investigations Lieutenant would be eliminated. The Support Services Bureau would oversee investigative and administrative functions: the Investigations Bureau, the Street Crimes/Drug Unit, Professional Standards (formerly part of the Investigations Lieutenant's duties), the existing Support Services Division and its sub-units – the Community Service Officer, the Crime Victim Advocate, the Animal Control Officer, the Support Services Specialist,[14] and the Computer Network Technician[15] -- the Records Unit, and evidence management.

This model would streamline the Department into two functional bureaus, and would ensure that every unit was ultimately commanded by and represented by a person of equal rank – a Captain. It would eliminate the existing system under which the investigative functions of the agency do not report to the Deputy Chief. The newly created Captains would not increase the table of organization.

However, it would require the creation of a new title. Captains would be appointed, and not subject to collective bargaining. However, as a new position, there is uncertainty as to whether they would be subject to the City's residency requirement, as is the Chief of Police, or eligible for the exemption that allows other ranks, including Deputy Chiefs, to reside within a nine mile radius.

[14] If the position is funded and retained.
[15] An employee of the City's IT Department who is housed at the Police Department and under the daily supervision of Support Services.

Legislative action would likely be required. Creating and filling this additional rank would cost an estimated $11,200.[16]

The Department's organization chart would resemble the following figure (all staffing and structure changes recommended throughout the report are included in grey).

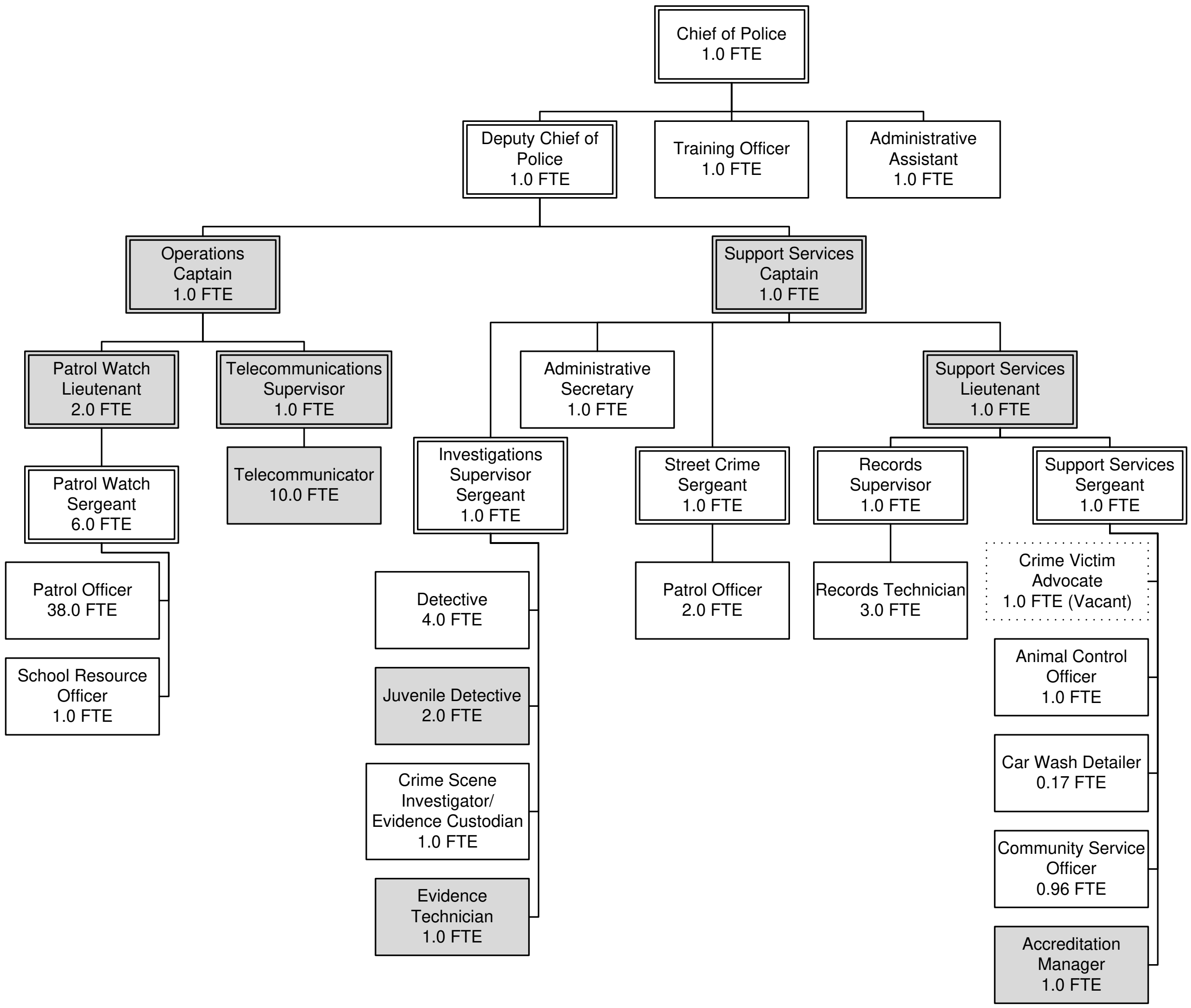

Figure 14: Proposed Police Department Organizational Structure

[16] Assumes Lieutenant salary of $68,000 and Captain salary of $72,000 plus 40% benefits

Patrol Staffing and Scheduling

Determining an appropriate staffing level for a municipality is complicated. Staffing levels should be based on calls for service and community expectations for enforcement and service, which may be impacted by the following: traffic patterns; business versus residential concentration; population; density; socioeconomic character; daytime population increase; presence of educational, religious, medical, and cultural institutions; and planned development. Governing bodies face the challenge of ensuring that their public safety agencies are staffed, equipped, and trained to respond to any contingency, while funding them within the locality's ability to pay, and in a way that ensures the future affordability of government services.

The core responsibility of a police department is the work done by its patrol division: basic patrol and response to emergency calls for service, traffic enforcement, preliminary investigation, and suppression of crime. Every community handles these core functions in a slightly different way; there are a wide of variety of shift schedules, minimum staffing goals, and deployment schemes.

The goal in analyzing patrol staffing is to identify staffing levels and deployment practices that provide adequate coverage for response to calls for service while also enabling officers to engage in the level of proactive policing desired by the community – that is, to be proactive as well as reactive. Proactive policing affords an agency the opportunity to strategically deploy personnel to focus on identified trends and high crime areas, thereby preventing and reducing crime. Whether it is referred to as Community Policing, Problem Solving Policing, Data-Driven Policing, or by some other term, the goal is largely the same: provide sufficient time for Patrol Officers to identify problem areas or conditions; develop and implement strategies to address those conditions; establish relationships with members of the community to partner in developing long-term solutions to issues; gather intelligence; and show police presence through interaction with residents and businesses as well as team-led enforcement initiatives. It includes targeted patrols, narcotics sweeps, traffic enforcement, and community outreach.

While a community's proactive policing level of service standard is a policy decision, the International Association of Chiefs of Police recommends that at least 33% of an officer's time be allocated to proactive policing; the remaining two-thirds is divided equally between response to calls for service and administrative duties. Put differently, an officer should, in theory, spend 20 minutes of each hour on calls for service; 20 minutes on the resulting administrative tasks (preparation of reports, etc.); and 20 minutes on proactive policing.

Directed Calls for Service (DCFS) are the primary driver of police activity. To determine a department's ability to meet the 33% goal for proactive policing, call data must be exported from the Computer Aided Dispatch (CAD) system and then analyzed to determine how much of officers' time is absorbed responding to DCFS by hour of the day and day of the week. For this project, the Department provided all available call log data from October 2013 through September 2015. This time period was selected for analysis since the Department implemented a new CAD system at the end of September 2015.

The Carbondale Police Department tracks an impressive amount of data regarding staff activities in its CAD system – everything from time spent responding to calls to time spent writing reports is tracked. For reference, between October 2013 and September 2014, the Department tracked nearly 130,000 events. Events are not the same thing as calls for service. For example, if multiple officers respond to a call, multiple events would be created in the system (an event capturing each officer's engagement). Officers can also self-initiate an event when they proactively engage in an activity or respond to an incident (i.e., foot patrol, park and walk, etc.) or if they log an administrative activity (i.e., report writing, follow up, etc.).

The amount of time officers spend responding just to DCFS could not be generated by the system. In the interim, in order to assess the volume of calls for service and time spent responding to calls for service, the data originally provided by the Department had to be carefully reviewed and filtered.

The following is a description of the steps The Novak Consulting Group took to distill the data provided by the Department. First, a total of 61 events (out of 129,136 for the year ending September 2014) and 69 events (out of 92,000 for the year ending September 2015) were excluded from this analysis because the clear time was before the dispatch time. Second, a total of 1,906 events in the year ending September 2014 and 1,608 events in the year ending September 2015 were not included in this analysis because they were never cleared.

Third, the amount of time Sergeants, Lieutenants, the Deputy Chief, and the Chief spent responding to calls has also been excluded from this analysis. This is because an analysis of patrol staffing levels should not take into consideration the capacity of those positions as they should not be relied upon to provide direct response to calls. Rather, patrol supervisors should be available to provide supervision and to backup officers as necessary. While there may be a percentage of calls for which the Sergeant is actually the reporting officer, there is not a simple way to isolate those calls. The following table summarizes the data filtering process up to this point.

Table 24: Summary of Data Filtering Process, October 2013 – September 2015

Events	Year Ending 9/2014	Year Ending 9/2015
Included in Analysis	**118,335**	**83,826**
Not Included in Analysis	**10,801**	**8,174**
Cleared Before Dispatch	61	69
Never Cleared	1,906	1,608
Non-Patrol Response	8,834	6,497
TOTAL	**129,136**	**92,000**

Further filtering was required in order to ascertain how many calls for service the Department responded to each year. To do this, all call types were categorized as either reactive, proactive or administrative. This step was necessary because the Department uses the CAD system to capture more than just calls for service. The Department categorizes calls as priorities one through four, where Priority 1 calls are defined as emergencies, Priority 2 calls are urgent, Priority 3 calls are routine, and Priority 4 calls are delayed. Typically, calls for service could be distilled based on priority, since higher priority calls (Priority 1 and Priority 2) are reactive in nature, but that is not the case in Carbondale. Some report writing, car wash, and other administrative and proactive activities are categorized as Priority 1 in the system. Therefore, each individual call type had to be categorized as either reactive, proactive, or administrative.

The following table shows the call types that have been categorized as administrative and proactive for the purposes of this analysis. It may be that certain events in some of these call type categories did involve a call for service, but it is likely that most of these events were not reactive.

Table 25: Number of Events by Call Type Categorized as Administrative or Proactive, 10/2015 – 8/2016

Call Type	Year Ending 9/2014	Year Ending 9/2015
Admin Duties	6,268	3,612
Car Wash	29	19
Confidential Informant	20	11
Court	56	29
Crime Scene	1	
Fingerprints	76	197
Follow Up	4,203	2,939
Information	45	23
Miscellaneous/Other	149	15
Report Writing	5,689	2,837
Sex Offender	27	130
Summons/Subpoena	656	403
Towing	93	78
Training	872	669
Total Administrative Events	**18,184**	**10,962**
911 Non-Emergency	79	114
Bar Check	932	689
Bicycle Stop	262	78
Business Check	16,967	5,961
Directed Patrol	20	52
Extra Patrol	18,951	16,040
Foot Patrol	2,689	1,810
House Watch	4,627	2,967
Hunting	1	
Parking Enforcement	1,063	486
Radar Enforcement	4,857	368
Search Warrant	94	57
Surveillance	87	100
Total Proactive Events	**50,629**	**28,722**

The following table summarizes the number of events logged in the system for each activity type (proactive, reactive, and administrative) between October 2014 and September 2016.

Table 26: Number of Events by Activity Type, 10/2013-9/2015

Activity Type	Year Ending 9/2014	Year Ending 9/2015
Administrative	18,184	10,962
Proactive	50,629	28,722
Reactive	49,522	44,142
TOTAL	**118,335**	**83,826**

The number of events logged in the system decreased by nearly 30% between the year ending September 2014 and the year ending September 2015. However, it is not possible to determine whether this is part of a larger trend or just a routine fluctuation since only two years' worth of data was available. The Department should monitor the workload data in the new CAD system to determine whether demand for services is decreasing over time.

While 49,522 events were included in this staffing analysis, this is not the same as the number of calls for service. As was previously mentioned, multiple events may be associated with each reactive call for service, so the unique call numbers to which officers responded must then be counted in order to calculate the number of calls to which officers responded. The result of this process of distilling the Department's CAD data is that the Department responded to 30,959 unique reactive calls for service between October 2013 and September 2014 and 25,463 unique reactive calls for service between October 2014 and September 2015. For reference, the Department reported responding to 77,032 calls for service in FY2015 and 61,074 calls for service in FY2016, but those numbers have not undergone this data filtering process.

The amount of time officers spend responding to calls for service fluctuates depending on the hour of the day, day of the week, and month of the year. The following figure shows the total number of minutes officers spent responding to calls for service each month during the two years for which data is available. In general, Spring (March, April, and May) and October are busy periods for the Department. As can be seen in the following figure, officers spent less time responding to calls for service during the summer of 2015 than they did during the summer of 2014. Again, the Department should monitor its CAD data in order to determine whether this is part of a larger trend.

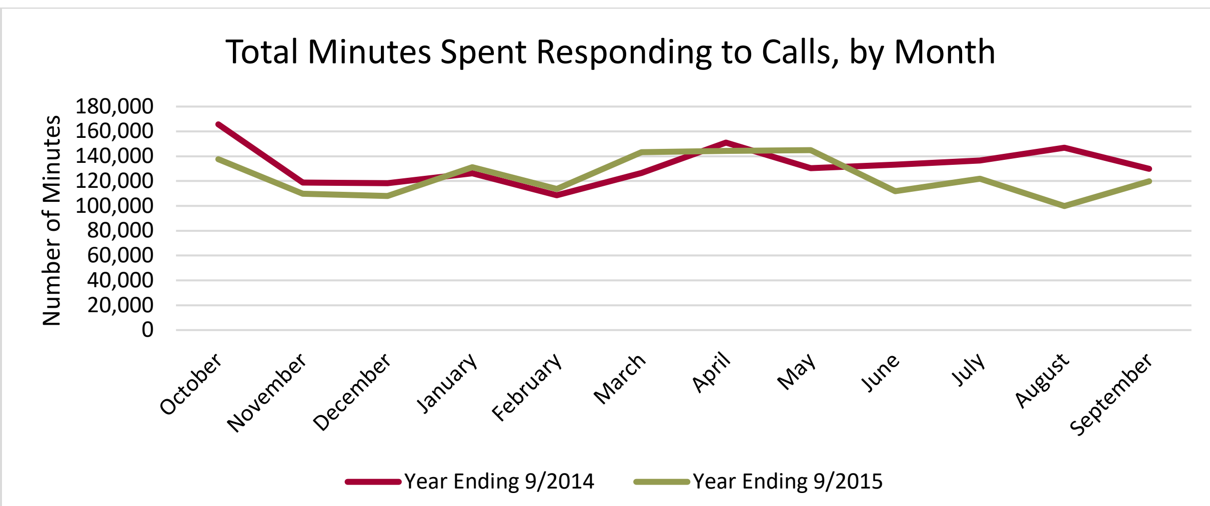

Figure 15: Minutes Spent Responding to Calls by Month, 10/2013-9/2015

Thursdays, Fridays, and Saturdays are the busiest days of the week for the Department, while Mondays and Tuesdays are the slowest, according to the data available. The following figure shows the total number of minutes officers spent responding to calls for service each day of the week compared with the average per day of the week.

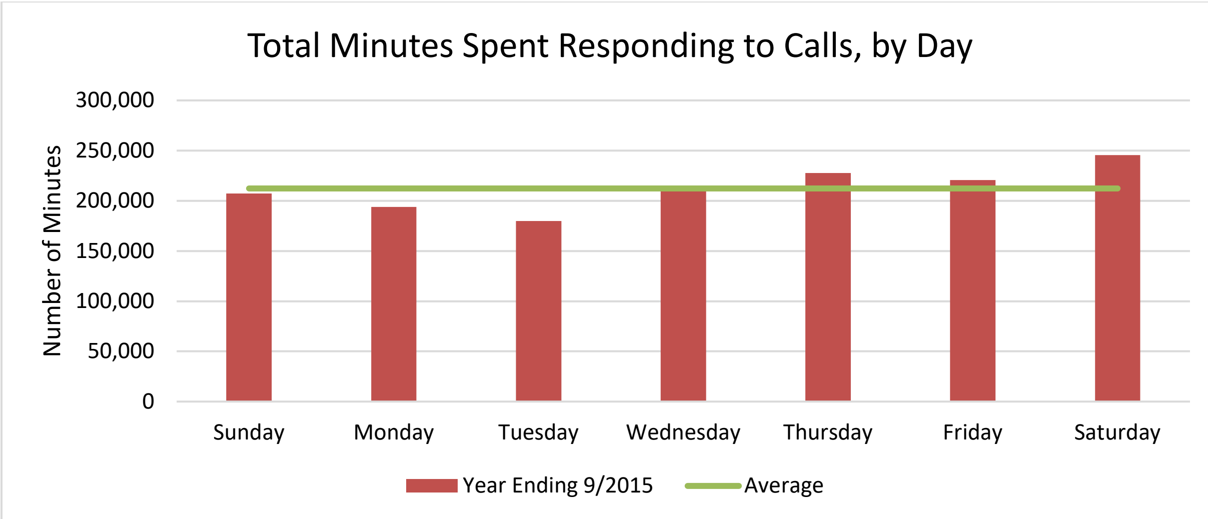

Figure 16: Minutes Spent Responding to Calls by Day, 10/2014-9/2015

Now that the CAD data has been appropriately filtered, it is possible to extrapolate how many officers are needed to meet a proactive policing standard of 33% and clarify the City's unique workload profile. This is done by reviewing the average amount of time that is absorbed responding to calls each hour of each day. This in turn allows for a comparison of that workload profile against the various deployment models and shift schedules that are commonly used in law enforcement, permitting determination of the most efficient and effective model for the Carbondale Police Department.

It is important to note that there are additional factors that must be considered in determining the appropriate level of staffing for a police department that do not lend themselves to such data-driven analysis; they are based on a community's unique needs and tolerances, and are ultimately dependent on policy decisions. An initial example is the determination of the community's desired level of service. Although the IACP guidelines cited previously call for a minimum of 33% proactive time, many communities choose to staff to a higher level to allow for greater community interaction, quicker response time or additional patrol capacity, such as business district foot patrol.

Geography is a second major consideration. Although a certain number of officers may be sufficient to meet the average calls for service workload, additional officers may be required to provide adequate coverage, visibility, backup, and availability for emergency response. The Carbondale Police Department, for example, is responsible for an area in excess of seventeen square miles, with no limited access highways and areas that are separated by railroad tracks. Since many calls require the assignment of at least two officers, when a single call is being handled, a minimum staffing level of three officers would leave only one officer to cover the remainder of the seventeen square mile area, without a second officer to respond on a priority call, and without a backup officer if an incident occurs. Policy determinations regarding staffing should account for sufficient staffing to ensure that adequate and timely backup is available, given the size of a community and the presence of any geographical barriers.

The Department's capacity to respond to unplanned events must also be considered; this, again, is a policy decision largely based not strictly on data, but on local knowledge. Carbondale is a university community with a historically activist student body. It has a shopping mall, a hospital, and numerous bars and entertainment venues. The immediate availability of mutual aid personnel to respond to critical incidents is limited. It is important to determine the appropriate level of staffing to ensure that adequate personnel are available at appropriate hours to handle the early stages of such events to a degree that meets the standards expected by the community and by the governing body.

These factors should be used as an overlay to the statistical staffing model when determining a final staffing level.

RECOMMENDATION 19: Staff each shift to meet adopted proactive policing standard. Taking into consideration the industry best practice of having officers spend 33% of their time engaged in reactive policing activities, the number of officers that must be on duty during each hour of the day can be calculated. For example, if officers were to spend an average of 20 minutes responding to calls each hour, then only one officer would need to be on duty because 20 minutes is 33% of 60 minutes. If officers were to spend between 21 and 40 minutes responding to calls each hour, then two officers would need to be on duty to handle the workload.

The following table shows the number of officers that must be on duty to handle the Department's call volume with a 33% reactive target time (or 33% proactive target time). The amount of time spent responding to a call is attributed to the hour in which the call is dispatched. Therefore, some hours may appear to have a very heavy call volume when in fact a call for service requiring significant response time is attributed to that hour. The impact these anomalies have on workload are managed by averaging the amount of time responding to calls across an entire shift.

Table 27: Number of Officers Required to Respond to Calls for Service by Day of Week and Hour of the Day, 10/2013-9/2015

Hour of the Day	Number of Officers Required						
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
12AM - 1AM	18	9	8	10	10	12	18
1AM - 2AM	17	8	9	7	8	12	20
2AM - 3AM	21	8	8	6	7	13	22
3AM - 4AM	10	5	4	2	4	6	9
4AM - 5AM	6	2	2	4	4	2	8
5AM - 6AM	4	2	2	2	4	3	3
6AM - 7AM	4	2	3	2	2	3	2
7AM - 8AM	4	3	4	3	7	4	4
8AM - 9AM	2	4	4	7	6	4	4
9AM - 10AM	7	6	9	7	6	8	5
10AM - 11AM	6	8	7	12	9	7	8
11AM - 12PM	6	7	7	6	12	6	7
12PM - 1PM	6	7	6	10	10	12	7
1PM - 2PM	6	8	7	14	11	9	7
2PM - 3PM	6	8	9	10	11	7	7
3PM - 4PM	5	8	10	10	11	7	7
4PM - 5PM	4	8	6	7	7	6	6
5PM - 6PM	5	6	5	7	6	5	5
6PM - 7PM	6	6	6	8	6	7	8
7PM - 8PM	6	6	7	6	8	6	8

Hour of the Day	Number of Officers Required						
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8PM - 9PM	6	6	7	4	7	6	7
9PM - 10PM	8	5	8	6	6	6	9
10PM - 11PM	5	6	5	6	5	7	7
11PM - 12AM	11	12	7	8	10	16	14

The Department is currently adequately staffed to meet its minimum shift staffing level of five officers. However, at that minimum staffing level the Department is unable to meet the recommended proactive policing target approximately 15 hours of each weekday and 20 hours of each weekend day. As such, while the Department is adequately staffed to meet the current minimum staffing level of five officers assigned to each shift, it is not appropriately staffed to meet a proactive policing standard of 33%. The following table shows the gap that exists between the number of officers necessary and the number of officers assigned by hour of the day and day of the week. Negative values indicate times when the Department is likely unable to engage in proactive policing activities.

Table 28: Gap Between Number of Officers Required to Respond to Calls for Service and Minimum Staffing Level, by Day of Week and Hour of the Day, 10/2013-9/2015

Hour of the Day	Number of Officers Required						
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
12AM - 1AM	-8	1	2	0	0	-2	-8
1AM - 2AM	-7	2	1	3	2	-2	-10
2AM - 3AM	-11	2	2	4	3	-3	-12
3AM - 4AM	-5	0	1	3	1	-1	-4
4AM - 5AM	-1	3	3	1	1	3	-3
5AM - 6AM	1	3	3	4	1	3	2
6AM - 7AM	1	3	2	3	3	2	3
7AM - 8AM	1	2	1	2	-2	1	1
8AM - 9AM	3	1	1	-2	-1	1	1
9AM - 10AM	-2	-1	-4	-2	-1	-3	0
10AM - 11AM	-1	-3	-2	-7	-4	-2	-3
11AM - 12PM	-1	-2	-2	-1	-7	-1	-2
12PM - 1PM	-1	-2	-1	-5	-5	-7	-2
1PM - 2PM	-1	-3	-2	-9	-6	-4	-2
2PM - 3PM	-1	-3	-4	-5	-6	-2	-2
3PM - 4PM	0	-3	-5	-5	-6	-2	-2
4PM - 5PM	1	-3	-1	-2	-2	-1	-1
5PM - 6PM	0	-1	0	-2	-1	0	0
6PM - 7PM	-1	-1	-1	-3	-1	-2	-3
7PM - 8PM	-1	-1	-2	-1	-3	-1	-3
8PM - 9PM	-1	-1	-2	1	-2	-1	-2
9PM - 10PM	-3	0	-3	-1	-1	-1	-4
10PM - 11PM	0	-1	0	-1	0	-2	-2
11PM - 12AM	-1	-2	3	2	0	-6	-4

As was previously discussed, the Department's workload profile fluctuates significantly by day of the week and by hour of the day, with significant peaks on weekend nights and smaller peaks during weekdays. Minimum staffing levels should not be based on peak workload periods; while there may be an hour where more officers are needed to respond to calls for service, the entire shift should not be staffed to handle that one hour. As such, it is difficult to find a schedule that will enable the Department to meet the recommended proactive policing standard while also not inefficiently deploying resources during nonpeak periods.

In order to adequately meet the 33% proactive standard with the current schedule, the Department would need to adopt the following shift minimum staffing levels: eight officers on Watch 1, seven officers on Watch 2, and five officers on Watch 3.

The minimum staffing level adopted by the Department is not the same as the total number of officers necessary to staff the patrol function because leave must be taken into consideration. In order to calculate the number of officers the Department needs to adequately cover all shifts, response time data is compared with the number of hours actually worked by officers, which is the number of hours scheduled less vacation, sick leave, and other absences or obligations that make them unavailable. The result is what is known as the patrol division's "staffing factor."

The staffing factor is the number of FTEs necessary to consistently staff one position on a given shift for an entire year. As an example, each Police Officer is scheduled to work 208 10-hour shifts per year under the current schedule. However, they are actually available for an average of only 189 shifts per year as a result of such factors as authorized leave, sick leave, and mandatory training. Consequently, each shift's staffing factor is 1.1, meaning that to staff a minimum staffing level of one officer on duty year-round, 1.1 FTEs must be hired. Consequently, to meet the current minimum staffing level of five Police Officers, 6 full-time officers must be assigned each day. In order to achieve full coverage throughout the week, a total of 12 officers must be assigned to each shift.

Applying this staffing factor means the proposed minimum staffing levels would require a total of 46 patrol officers – 10 more officers than the Department currently has assigned to patrol in order to meet the 33% proactive time standard. The following table shows the gap between the number of officers needed to meet the 33% proactive time standard and the recommended minimum number of officers per shift. As can be seen in the table, there will still be times when the Department will not be able to engage in proactive policing activities and times the Department will be overstaffed, but the proposed minimum staffing levels will enable the Department to always meet the reactive and administrative time requirements.

Table 29: Gap Between Number of Officers Required to Respond to Calls for Service and Proposed Minimum Staffing Level, by Day of Week and Hour of the Day, 10/2013-9/2015

Hour of the Day	Number of Officers Required						
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
12AM - 1AM	-6	3	4	2	2	0	-6
1AM - 2AM	-5	4	3	5	4	0	-8
2AM - 3AM	-9	4	4	6	5	-1	-10
3AM - 4AM	2	7	8	10	8	6	3
4AM - 5AM	-1	3	3	1	1	3	-3
5AM - 6AM	1	3	3	4	1	3	2
6AM - 7AM	1	3	2	3	3	2	3
7AM - 8AM	1	2	1	2	-2	1	1
8AM - 9AM	6	4	4	1	2	4	4
9AM - 10AM	2	2	-1	1	2	0	3
10AM - 11AM	2	0	1	-4	-1	1	0
11AM - 12PM	2	1	1	2	-4	2	1
12PM - 1PM	2	1	3	-2	-2	-4	2
1PM - 2PM	3	0	1	-6	-3	-1	1
2PM - 3PM	2	0	-1	-2	-3	1	2
3PM - 4PM	3	0	-2	-2	-3	1	2
4PM - 5PM	4	0	2	1	1	2	2
5PM - 6PM	3	2	3	1	2	3	3
6PM - 7PM	1	1	2	-1	2	0	-1
7PM - 8PM	1	1	0	1	-1	1	-1
8PM - 9PM	1	1	1	3	0	1	0
9PM - 10PM	-1	2	-1	1	1	1	-2
10PM - 11PM	2	1	2	1	2	0	0
11PM - 12AM	1	0	5	4	2	-4	-2

This is the optimal arrangement for the Department given the current schedule and workload profile. However, if the proposed minimum staffing levels are determined to be cost prohibitive, the City does have other viable options for consideration.

Certain times of day (particularly during daylight hours) are more conducive to officers engaging with residents and the community. Adopting proactive policing targets is a policy decision to be made by City leadership. As such, City leadership may want to consider adopting two separate proactive policing targets: a 33% proactive policing target between 4:00 AM and 10:00 PM and a lower proactive policing target between 10:00 PM and 4:00 AM. Essentially, this approach clarifies the service level expectations of the Department during busy weekend night shifts by explicitly stating that during these busy periods officers will only be expected to respond to calls for service and complete the corresponding administrative tasks. Adopting two proactive policing standards serves to level out the weekend-night peaks in the Department's workload.

The following table includes the gap between the number of officers required to meet the demand for services and the Department's current minimum staffing level (of five officers), given the adjusted proactive policing targets. As can be seen in the table, adopting two separate proactive policing standards more efficiently deploys resources to manage the weekend night workload peak. However, the Department will still not be able to engage in proactive policing (at the 33% target) during business hours on weekdays with the minimum shift staffing level of five officers.

Table 30: Gap Between Number of Officers Required to Respond to Calls for Service and Meet Separate Proactive Policing Standards and Minimum Staffing Level, by Day of Week and Hour of the Day, 10/2013-9/2015

Hour of the Day	Number of Officers Required						
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
12AM - 1AM	1	6	6	5	5	4	1
1AM - 2AM	2	6	5	7	6	4	0
2AM - 3AM	-1	6	6	7	7	4	-1
3AM - 4AM	5	8	8	9	8	7	5
4AM - 5AM	-1	3	3	1	1	3	-3
5AM - 6AM	1	3	3	4	1	3	2
6AM - 7AM	1	3	2	3	3	2	3
7AM - 8AM	1	2	1	2	-2	1	1
8AM - 9AM	3	1	1	-2	-1	1	1
9AM - 10AM	-2	-1	-4	-2	-1	-3	0
10AM - 11AM	-1	-3	-2	-7	-4	-2	-3
11AM - 12PM	-1	-2	-2	-1	-7	-1	-2
12PM - 1PM	-1	-2	-1	-5	-5	-7	-2
1PM - 2PM	-1	-3	-2	-9	-6	-4	-2
2PM - 3PM	-1	-3	-4	-5	-6	-2	-2
3PM - 4PM	0	-3	-5	-5	-6	-2	-2
4PM - 5PM	1	-3	-1	-2	-2	-1	-1
5PM - 6PM	0	-1	0	-2	-1	0	0
6PM - 7PM	-1	-1	-1	-3	-1	-2	-3
7PM - 8PM	-1	-1	-2	-1	-3	-1	-3
8PM - 9PM	-1	-1	-2	1	-2	-1	-2
9PM - 10PM	-3	0	-3	-1	-1	-1	-4
10PM - 11PM	0	-1	0	-1	0	-2	-2
11PM - 12AM	-1	-2	3	2	0	-6	-4

The City may also consider adding a power shift. A "power shift" involves scheduling officers which will supplement those officers that are part of a regularly scheduled shift during peak workload periods.

Adding an eight-hour power shift from 9:00 AM to 5:00 PM would increase staffing during the Department's daytime workload peak. Based on the Department's staffing factor, adding a power shift with a minimum staffing level of five officers would require six patrol officer positions (in addition to the Department's current 36 officers assigned to patrol). The following table includes the gap between the number of officers required to meet the minimum staffing level once a power shift is added, given the adjusted proactive policing targets.

Table 31: Gap Between Number of Officers Required to Respond to Calls for Service and Meet Separate Proactive Policing Standards and Minimum Staffing Level, by Day of Week and Hour of the Day, 10/2013-9/2015

Hour of the Day	Number of Officers Required						
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
12AM - 1AM	1	6	6	5	5	4	1
1AM - 2AM	2	6	5	7	6	4	0
2AM - 3AM	-1	6	6	7	7	4	-1
3AM - 4AM	5	8	8	9	8	7	5
4AM - 5AM	-1	3	3	1	1	3	-3
5AM - 6AM	1	3	3	4	1	3	2
6AM - 7AM	1	3	2	3	3	2	3
7AM - 8AM	1	2	1	2	-2	1	1
8AM - 9AM	3	1	1	-2	-1	1	1
9AM - 10AM	-2	4	2	3	4	2	0
10AM - 11AM	-1	2	3	-2	1	3	-3
11AM - 12PM	-1	3	3	4	-2	4	-2
12PM - 1PM	-1	3	5	0	1	-2	-2
1PM - 2PM	-1	2	3	-4	-1	2	-2
2PM - 3PM	-1	2	1	0	-1	3	-2
3PM - 4PM	0	2	0	0	-1	3	-2
4PM - 5PM	1	2	4	3	3	4	-1
5PM - 6PM	0	-1	0	-2	-1	0	0
6PM - 7PM	-1	-1	-1	-3	-1	-2	-3
7PM - 8PM	-1	-1	-2	-1	-3	-1	-3
8PM - 9PM	-1	-1	-2	1	-2	-1	-2
9PM - 10PM	-3	0	-3	-1	-1	-1	-4
10PM - 11PM	0	-1	0	-1	0	-2	-2
11PM - 12AM	-1	-2	3	2	0	-6	-4

Adding a power shift and adopting two separate service level standards will enable the Department to respond to calls for service and also engage in critical proactive policing activities at the 33% target.

RECOMMENDATION 20: Work with the Fraternal Order of Police Lodge #192 to negotiate a shift schedule that allows the Department to meet the demand profile and community policing standards as efficiently as possible.

The Carbondale Police Department currently works a 4-3 Fixed schedule. Under this schedule, officers work four consecutive days (the same four days every week) and then are off for three days. Officers work the same shift year-round.[17] The Carbondale Police Department's current schedule is designed to handle a workload that peaks between 11:00 PM and 3:00 AM. The following table illustrates the overlaps that result from the Department's current patrol shift schedule.

[17] While officers select their shifts three times annually through a bid process, the overall schedule configuration does not change.

Table 32: Carbondale Police Department Current Shift Overlaps

Hour of the Day																							
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7
Watch 1																							
									Watch 2														
														Watch 3									

The more common version of this schedule is a 4-3 Rotating schedule, which involves six teams rotating across the different shifts (i.e., officers work four consecutive Watch 1 shifts, followed by three days off duty, work four consecutive Watch 2 shifts, followed by three days off duty, and then work four consecutive Watch 3 shifts). Departments select a 4-3 Rotating schedule because: (a) 10-hour shifts result in six hours of overlap, which is helpful during peak workload periods, usually during the morning rush hour, at the end of the school/workday, or after bars close, depending on the community; and (b) all teams are scheduled to work on the same day once per week, which can be beneficial for in-service training.

The current schedule may not be the best option for the Department going forward. As previously shown, the Carbondale Police Department's workload varies significantly throughout the day. The Department's current schedule is designed to handle a peak workload on weekend nights. However, daytime demand has increasingly become a more significant portion of the Department's workload profile. As the Department's workload profile changes over time, the current 10-hour shift schedule may not be the most efficient way of meeting the Department's needs. In addition, the fixed version of the 4-3 schedule does not involve all teams working one day per week, so the Department does not benefit from that aspect of a 4-3 Rotating schedule.

Other patrol schedules that are common in law enforcement may be more efficient, depending on the minimum staffing level (which should be based on the desired service level standard) adopted by the Department. However, Section 11.2 of the collective bargaining agreement with the Fraternal Order of Police places very specific restrictions on the patrol schedule of the Department. The agreement places the following limitations:

- The work week shall consist of 40 hours in a consecutive seven-day period
- Only four days/tours of work or five days/tours of work are permissible
- Only eight-hour and 10-hour tours are permissible

As such, the Department has limited options when it comes to schedule configurations. However, there are other schedule configurations that would enable the Department to maintain or improve the level of service it provides to the community while more efficiently deploying its resources. Therefore, the City should work with the Fraternal Order of Police Lodge #192 to negotiate more flexibility when it comes to scheduling resources.

Given the workload profile of the Department and the fact that demand peaks for longer than the 6-hour overlap period that 10-hour shifts afford, it is recommended that the contract be modified to enable the patrol division to work 12-hour shifts. With 12-hour shifts, the Department's 36 patrol officers could be deployed in a manner that would meet a minimum staffing level of five officers during one 12-hour shift and 10 officers during the other 12-hour shift (currently a minimum staffing level of 10 officers is only met five hours each day). Basically, 12-hour shifts would enable the Department to meet the higher minimum staffing level for more hours each day using the same number of officers by more efficiently deploying resources.

Investigative Staffing

The Investigative Bureau is currently staffed by a Sergeant, four general investigators, a youth Detective, a Detective assigned as Crime Scene Technician/Evidence Custodian; a SRO; and an administrative assistant. The Street Crimes Unit is staffed by one Sergeant, two Carbondale Detectives, and one SIU Police Department Detective. The Investigations Lieutenant oversees both units.

Staffing levels for investigative units do not lend themselves to the same sort of analysis as patrol or dispatch operations, which have recognized national standards that can be applied as general workload guidelines. Case load and clearance rates are the most frequently used and valid metrics, but they cannot be used as raw numbers without further scrutiny. The workload of a homicide Detective may show a relatively small number of cases, but each is a labor-intensive major investigation. Conversely, some property crimes with no significant leads may be routinely closed based on a quick telephone call to the victim, so a higher case load may not reflect a significantly higher workload. Other factors impact even that analogy, however. Property crime investigations, for example, have become more numerous and complex with the advent of identity theft and cybercrime, and the increasing availability of surveillance video and digital evidence from computers and cell phones has increased both the solvability and the scope of investigations.

The standard of customer service set by the agency and expected by the community also impacts the workload by raising or lowering the standards for accepting cases for investigation and determining when they are to be closed. The assignment of cases is essentially a triage process that evaluates a number of factors: the level of the crime; the presence of a willing complainant; the availability of evidence or witnesses; the extent to which the suspect is or can be identified; and the availability of investigative resources. There is a segment of cases that are not amenable to successful investigation and should be closed; there is a segment that clearly merits further investigation; and there is a cutoff point between cases that are investigated and those that might be solvable if additional resources were available, but must be closed based on a cost-benefit analysis.

RECOMMENDATION 21: Enhance data collection regarding Investigations Bureau workload indicators.

Data regarding basic indicators, such as investigative caseload and clearance rates, is invaluable. It provides police and municipal administrators an empirical basis for evaluating performance, making staffing and deployment decisions, and submitting budget, grant, and other funding requests that are supported by facts. It enables elected officials and other decision makers to make informed choices, and validates to residents and businesses the return on their investment of tax dollars.

Two measures generally used to assess investigative work are clearance rates and case load. The clearance rate – essentially the percentage of cases that are solved -- reflects individual performance, as well as the overall performance of a unit in successfully completing investigations. Case load is a measurement that provides a snapshot of the workload of a Detective at a given point in time: the number of open cases for which each Detective is responsible. Both metrics should be immediately available and reviewed on both a monthly and an annual basis, in order to track short term needs for deployment adjustment and long term performance.

Although these are basic indicators, the amount of effort required by a particular case or category of investigation can vary widely. For example, a complicated homicide investigation can require numerous interviews and canvasses, invoicing of evidence, surveillance, multiple search warrants, coordination with outside agencies, repeated conferrals with prosecutors, and production of witnesses for multiple hearings. A simple theft case may require little beyond an interview with the victim and perhaps review of security video. Consequently, a single-digit caseload for one Detective may be equally or more demanding than another Detective's caseload that numbers in the dozens.

Analysis of the staffing level of the Investigations Bureau is hindered by limited availability of data. The Department transitioned to a new records management system in October 2015. Data regarding case assignment and clearance rates has been furnished for 2012, 2013, and 2014. Statistics for 2015 and 2016 to date are not retrievable at this time, due to the reporting limitations of the new system. The Department should work with its software vendor to update the records management system to ensure that it provides ready access, in a user friendly manner, to current case closure and caseload statistics, and to account for the time invested in investigations by Detectives. The Investigations Sergeant currently obtains a report from the records management system[18] that provides a listing of the cases assigned to each investigator, although it does not provide a numerical total and each entry must be counted to determine the caseload. Access to that information on both a daily snapshot basis and on an annual basis would assist in the assessment of both short term and long term staffing and deployment needs. The availability of both types of information is particularly important due to the fact that it is not unusual for a major case to require an "all hands" investigation for several weeks, which delays the investigation of routine cases and can result in spikes in caseload volume.

In addition, Detectives are routinely assigned to patrol shifts to cover vacancies. A quirk in the newest records management system does not allow them to reassign cases that result from their response to a call for service as a Patrol Officer, or to add such cases to their personal caseloads. This should also be corrected to enhance the accuracy of data.

It is important to acknowledge that the investigative process is not linear; cases are not received, investigated, and closed in an assembly line fashion. Based on workload, witness availability, and the occurrence of priority incidents, Detectives work on cases as time allows, frequently touching on multiple cases during a shift. When a major case is received – a homicide or an officer involved shooting, for example – the entire unit is often fully occupied with that investigation for weeks, and unable to work on their regular caseloads. Detectives do not conduct interviews or apprehend suspects alone; although a case may be assigned to a particular Detective, several others may be involved in the investigation, and that time is not necessarily reflected in their own caseloads. Precise accounting for every minute of a Detective's time is virtually impossible; however, a reasonable estimate of investigators' activity in a user-friendly system can yield valuable results that will inform decisions regarding performance, staffing, and allocation of resources. It will also help document time spent assisting cases that are officially assigned to other Detectives, which can consume a substantial portion of an investigator's time.

RECOMMENDATION 22: Assign one additional Detective to juvenile investigations.
As noted, the availability of statistics regarding case intake and clearance is dated; data since October 2015, is not retrievable at this time. There are certain trends that are discernable from the information that has been made available as shown in the table below.

[18] "Investigations by Offense and Status"

Table 33: Investigative Unit Case Intake and Clearance, 2012 - 2014

Year	Cases Assigned	Cleared by Arrest	Sent to State's Attorney	Unfounded	Inactive	Remained Active at End of Year	Percent Cleared[19]
2012	1,085	266	105	14	661	39	35%
2013	1,222	212	87	9	762	152	25%
2014	949	106	65	8	683	87	21%

It is noteworthy that one additional Detective was assigned to the Investigations Bureau during 2012. Statistics for the two succeeding years show a decrease of 12.5% in cases assigned to Detectives, a 60% decrease in cases cleared by arrest, and a decrease of 15% in the Bureau's overall clearance rate. There was a small increase of 3% in cases classified as inactive, essentially closed without results, during the period.

While clearance rates are a measure of performance over a period of time, caseload information presents a snapshot of current workload. Historical caseload data is not available from the old system, but the Investigations Sergeant is able to access information regarding currently open cases in the new system. The following table reflects investigative caseload as of July 2016. Although they handle a range of investigations, Detectives are identified by the category of case to which they are primarily assigned.

Table 34: Investigative Unit Caseload, July 2016

Detective	Primary area of responsibility	Caseload
A	Homicide/robbery/violent crime	45
B	Sexual assault	28
C	Fraud/forgery/financial crimes	52
D	Burglary	48
E	Juvenile investigations	45
F	Crime Scene Technician/Evidence Custodian	90

For purposes of analysis, the workload of the Crime Scene Technician/Evidence Custodian will be dealt with as a separate category.

A cursory review of this data reveals an average caseload of 43.6 cases per Detective, with the lowest number assigned to the Detective who specializes in sexual assault cases and the highest number to the fraud/forgery/financial crimes Detective. However, several points should be noted. All burglaries are referred to the investigative unit, regardless of their amenability to investigation. Many are closed with a telephone call to the victim. Several Detectives are carrying cases initiated prior to 2016, as reflected in the following table, which in addition to caseload shows the number of burglaries and cases pre-dating 2016.

Table 35: Investigative Unit Caseload with Burglaries and Pre-2016 cases, July, 2016

Detective	Primary area of responsibility	Caseload	Burglaries	Cases prior to 2016
A	Homicide/robbery/violent crime	45	6	12
B	Sexual assault	28	2	0
C	Fraud/forgery/financial crimes	52	1	6

[19] "Percent cleared" refers to cases closed by arrest, referred to the State's Attorney's Office, or determined to be unfounded.

Detective	Primary area of responsibility	Caseload	Burglaries	Cases prior to 2016
D	Burglary	48	38	7
E	Juvenile investigations	45	2	15

To some degree these figures, particularly the age of cases being carried, reflect the complexity of a Detective's caseload, and can be used as a means of comparison. Homicides and violent crimes tend to remain open for longer periods, both because they are subject to a higher threshold for closure, and because investigation and prosecution is more complex and lengthy; the ratio of trials to plea agreements is higher. Juvenile investigations face similar issues; in addition to the level of sensitivity that is generally involved, they include complex investigations into such areas as organized prostitution and child pornography.

This illustrates some of the nuances of caseload analysis, and the impracticality of applying generalized standards.

Additional factors have made investigations more labor intensive. Courts and prosecutors increasingly require search warrants, rather than subpoenas, for virtually all evidentiary seizures. Preparation of search warrant applications, particularly the initial application on a case, can take many hours. Certain areas, such as sex crimes investigations, are less dependent on search warrants. However, the enhanced initial response to such cases, including extensive examination, evidence collection, and interviews, is time-consuming. Property crimes now routinely require obtaining and processing surveillance video and other digital evidence. Analysis of cell phones and computers has become part of most cases; it requires expertise and considerable time. The reality is that in recent years the investigative process has become gradually more labor-intensive.

After review of these factors, it is recommended that the Department assign one additional Juvenile Detective. The workload of that position goes beyond its caseload, which is high and involves sensitive and specialized investigations. In addition to assigned investigations, the Juvenile Detective works on cases referred directly from the Department of Children and Family Services, from schools, and from individual case workers. There is an extensive liaison role with the Department of Children and Family Services, the school district, the Child Advocacy Center, and various social service agencies and committees. The Juvenile Detective reviews all youth-related cases, as well as juvenile contact cards, which are required as documentation of all police/juvenile contacts; 50 to 75 are filed each month. The Detective teaches the D.A.R.E. program for 10 weeks each year. Although another Police Officer shares D.A.R.E. duties, and the function could be assigned outside of the Investigations Bureau, it is a valuable means of establishing relationships with children that can greatly benefit investigations. The Juvenile Detective has a role in many community events, and a significant duty of the position is forming relationships with children, teens, parents, educators, and service providers.

In sum, assignment of an additional Detective to this position, which at one time was filled by three people, will result in a reasonable workload and improve the level of service that is provided in this critical area. It will also provide an additional Detective within the Investigations Bureau who can contribute to the overall unit workload by serving as a supplementary resource for major cases and as a secondary investigator both on juvenile and general cases.

RECOMMENDATION 23: Hire an Evidence Technician.

Evidence and Property Control is a critical function for every police department; it is an essential part of the investigation and prosecution of criminal cases. The workload associated with this function has grown significantly in recent years with the increased use of digital evidence – security camera footage, crime scene photographs, and especially in-car video and body-cam recordings – and the demand for production of such evidence in court. Most importantly, there is no room for error in this area; mistakes or omissions can result in the dismissal of cases and cause lasting harm to a department's reputation.

One Detective is assigned as Crime Scene Technician and Evidence Custodian. As Crime Scene Technician, this position is responsible for processing all major crime scenes, collection and processing of evidence, and delivery of evidence to the laboratory for analysis. The Evidence Custodian assisted by several Patrol Evidence Technicians, who have much more limited training than the Evidence Custodian in dusting for fingerprints, taking footwear impressions, and evidence collection. The Patrol Evidence Technicians assist at major scenes and process some routine scenes. There appears to be some uncertainty at this time among patrol supervisors regarding the number and identity of the Patrol Technicians.

As Evidence Custodian, the Detective has sole responsibility for the intake, security, delivery to the lab when necessary, and disposition of all evidence and property taken into the custody of the Department. Approximately 150 items are invoiced each week, and approximately 60 DVDs of video evidence are created each week.[20]

In accordance with best practices regarding evidence and property, access to the evidence room is limited to only two people: the Evidence Custodian and their direct supervisor, the Investigations Bureau Sergeant. Officers place invoiced property in temporary storage lockers. The Evidence Custodian must move it from the temporary lockers into the secure room, verify the inventory, log it, and store it in a designated location for retrieval when needed for court or investigative purposes. The Evidence Custodian must determine when it is no longer required to be retained, i.e., the underlying criminal case has been concluded, the rightful owner of found property has been located, or a statutory period for retention has expired. As an indication of the current workload, disposition of property is ideally conducted each month. The most recent disposal was done eight months ago.

At one time, the Crime Scene/Evidence function was performed by three employees: one sworn and two civilian. Despite the reduction in personnel, the workload continues to grow as technology has resulted in new categories of evidence. The Detective is now responsible for the retention and production for court case video evidence from the Department's in-car video systems, TASER Cams, and other sources.

It is appropriate to have a sworn officer as the primary Crime Scene Technician and as the lead Evidence Custodian. However, many of the evidence processing duties can be handled by a non-sworn assistant. The Department should hire and assign a secondary civilian Evidence Technician to the Investigations Bureau.

Hiring an additional Evidence Technician would cost an estimated $63,000 annually.[21] The Department is currently in the process of reallocating a vacant non-sworn Support Services Specialist to fund this position.

RECOMMENDATION 24: Reassign the School Resource Officer to the Patrol Division.

The School Resource Officer, whose principal duty is security of the school campus and interaction with the students, is assigned to the Investigations Bureau. When school is not in

[20] Watch Commanders are responsible for producing audio recordings of 911 calls and radio transmissions when necessary.

[21] Assumes salary of $45,000 and 40% benefits.

session, the School Resource Officer uses vacation, completes training, backfills patrol shortages, and assists the Investigations Unit with investigations and administrative tasks. The School Resource Officer's assignment is primarily a uniformed post; however, the School Resource Officer receives limited supervision since the position's direct supervisor, the Investigative Bureau Sergeant, is primarily involved with case management and supervising investigators. The function should be reassigned to the Patrol Division to provide for greater supervision and to increase the utility of the position.

RECOMMENDATION 25: Revise schedule of the Street Crimes/Drug Unit to reflect its workload.

It is not unusual for investigative personnel to be scheduled to work during normal business hours. Although there are times when their services are needed during evening and overnight hours, much of their work involves interaction with courts, prosecutors, other agencies, and businesses, and if the unit is small, its effectiveness and supervision are diluted when members' shifts are spread around the clock. It is acceptable practice, therefore, for the Investigations Bureau to work primarily day shifts, Monday through Friday.

However, the Street Crimes/Drug Unit, which consists of one Sergeant, two Carbondale Detectives, and one SIU Detective, focuses its attention primarily on narcotics investigations. Narcotics users and dealers typically operate not during business hours, but during the afternoon and at night. Members of Street Crimes/Drug Unit, whose work involves observations of drug activity, arranging "buys" by confidential informants, gathering information for search warrants, and related tasks that sometimes involve undercover work, are normally scheduled for day shifts, Monday through Friday, and are held to the same dress and grooming standards as general investigators.

The Department should adjust the unit's scheduling by permitting flexibility to more closely reflect its workload.

Support Services Staffing

There is a sizeable administrative burden associated with the operation of a modern police department. Training, scheduling, record keeping, statistical analysis, updating of policies, evidence management, review of reports, legal updates, human resources administration, information technology, recruitment and retention, compliance with Freedom of Information/Open Records Law requirements, and similar tasks apart from routine patrol and investigation continue to grow in both complexity and importance. The "back office" operation of any law enforcement agency is a critical – and sometimes underestimated – component. The Support Services Division handles many of these tasks and oversees two units – the Communications Unit and the Records Unit – that provide essential support functions. It also oversees the Department's public information and community outreach functions, areas with workloads that have increased as technology has fueled growth in media outlets and demand for information, and police/community relations undergo a period of transition nationwide.

Currently, only two sworn officers are assigned to the Support Services Division: one Sergeant who supervises the entire Division, and one Police Officer designated as Community Resource Officer whose duties include community outreach and presentations, D.A.R.E. instruction, public information, and sex offender registration.

RECOMMENDATION 26: Assign a Lieutenant to the Support Services Division
The Support Services Division was previously overseen by a Deputy Chief of Administration, and included two sections: Support Services, which was supervised by a Lieutenant and a Sergeant, and Records, which was managed by a civilian supervisor. The Communications Center was assigned to the Patrol Section of the Operations Bureau. Vacancies in the Deputy Chief and Lieutenant positions have not been filled, and the Communications Center has been moved to the Support Services Bureau.

There are two reasons for this recommendation. First, the rank of Sergeant is commonly a first-line supervisory rank. Since the Records Unit and the Communications Center have individual supervisors, it is more appropriate that they report to a Lieutenant. Secondly, the Support Services Section has five direct reports and a number of duties that fall primarily on the supervisor's position, including coordination of field training; acting as the Department's Public Information Officer; coordinating community outreach; updating policies and procedures; preparing weekly updates for the City Manager; preparation of the Department's annual budget; oversight of the administrative tow program; and reconciling procurement cards used by the Department. The span of control and the scope of the position's duties warrant the assignment of a Sergeant, who can serve as the Lieutenant's second-in-command regarding issues involving the Records Unit and the Communications Center in the Lieutenant's absence.

The restoration of the position of Lieutenant is appropriate given the scope of the Division and the nature of its duties. Assigning a Lieutenant to the Support Services Division would cost an estimated $12,600 annually by converting the vacant Support Services Sergeant position to the rank of Lieutenant.[22]

RECOMMENDATION 27: Increase staffing of the Communications Center to 10 FTE Telecommunicators.
The Communications Unit is currently staffed by seven Telecommunicators, one of whom is a Lead Telecommunicator and one of whom is in training, as well as one part-time Telecommunicator. The budgeted headcount is 8.43 FTE; staff reports that once candidates complete training, they tend to stay with the Department, but many leave during the rigorous training process. The unit handles approximately 80,000 calls per year. It is responsible for both Police Department and Fire Department dispatching, utilizing two Carbondale Police frequencies and a Fire Department frequency; it also monitors two additional channels, a fire mutual aid channel and the Southern Illinois University Police Department channel.

Dispatchers work four 10-hour shifts weekly, covering three shifts: 8:00 AM to 6:00 PM; 5:30 PM to 3:30 AM; and 10:00 PM to 8:00 AM. Although the goal is to have two dispatchers on duty at all times, normally only one is assigned from 3:30 AM to 8:00 AM. There are three operable work stations in the Communications Center, with equipment available for installation of a fourth.

Of particular concern is the fact that Carbondale's Telecommunicators handle both police and fire dispatching. Police dispatching tends to be more constant in the course of a shift, and represents the majority of a Telecommunicator's work. Fire dispatching, on the other hand, is a much smaller part of the workload, but when an active incident is in progress there is a high demand on the dispatcher as units are dispatched, additional personnel and resources are mobilized, and mutual aid is activated to provide assistance at the incident scene or to backfill empty stations. In the meantime, the usual police dispatch workload continues. During incidents involving both services, such as serious motor vehicle accidents, there is high demand on both frequencies.

[22] Assumes Lieutenant salary of $68,000 and Sergeant salary of $60,000 plus 40% benefits

It is a best practice for organizations to have as a goal that, under ideal circumstances, dispatchers and call takers do not exceed an average of 18 minutes per hour actively engaged in calls. This is in order to avoid burnout in what can be a stressful assignment, and to allow time for associated duties such as data entry regarding calls. In addition, when a Communications Center handles both police and fire calls, the best practice is to assign a dedicated dispatcher for each channel. Application of these guidelines can vary by community, but ideally, occupied time should not exceed 30 minutes per hour.

Data is not retrievable from the Department's phone system to support an accurate analysis of the on-call minutes utilized by the Communications Center staff. Necessary adjustments to the current system should be made to track relevant information for future use. Consequently, data is not available to support a recommended staffing level of three Telecommunicators per shift. It is clear, however, that a minimum of two is necessary. Currently, only one Telecommunicator is on duty for at least four and one-half hours per day, from 3:30 AM to 8:00 AM. Under the current schedule, a complement of at least 10 FTE (an additional 1.57 FTE on top of the 8.43 authorized FTEs) is needed to staff two positions 24 hours per day. The total salary and benefit costs of adding 1.57 FTE would be approximately $78,500[23].

That staffing level and the Communications Center's duty schedule should be reassessed as sufficient data becomes available to fully analyze the volume and timing of the peak workload.

RECOMMENDATION 28: Assign a full time supervisor to the Communications Center.
The Communications Center is led essentially by a "Lead Telecommunicator," who performs some supervisory tasks while covering a board position. A police/fire dispatch center handling the volume of calls handled by the Carbondale Communications Center is a sufficiently sophisticated operation to warrant the assignment of a full time non-sworn supervisor reporting to the Support Services Division commander.

One of the important duties of a Communications Center Supervisor is to develop and implement a quality control program in which a sampling of calls is routinely monitored to ensure compliance with procedures and that a satisfactory level of customer service is maintained, and to identify training needs and corrective measures. The Supervisor would be tasked with ensuring that Telecommunicators routinely receive required training and would handle scheduling and administrative matters. The Supervisor would also oversee the technical needs of the Communications Center, including identification, acquisition, and maintenance of hardware and software. The Department should appoint a full time Communications Center Supervisor, bringing the recommended overall unit staffing level to 11 FTEs. Adding this additional position would cost an estimated $70,000.[24]

RECOMMENDATION 29: Implement a proactive Quality Assurance program.
The Communications Center's current staffing level limits the opportunity to effectively audit calls to ensure compliance with procedures and overall quality. A good Quality Assurance program is a foundation for an effective training program. It ensures consistency of service and supports evaluation of unit and individual employee performance. It also promotes better data collection, which will benefit the Department's ability to evaluate staffing and deployment needs and address shortcomings in that area.

[23] Assumes $35,000 salary and 40% cost of benefits
[24] Assumes $50,000 plus 40% benefits.

The Association for Public Safety Communications Officials (APCO) is an international organization that acts as a best practices clearinghouse and training resource for emergency communications agencies. IN association with the National Emergency Number Association (NENA), APCO has developed standards for the recommended minimum components of a public safety communications center Quality Assurance Program. They include:

- *Case Review Criteria:* Criteria should be established for the review of incidents. All components of an incident should be evaluated by a supervisor, including, but not limited to, call-taking, dispatching, data entry, status recording, and other key Telecommunicator tasks. Ideally, employees' work should be evaluated at random and specific intervals, and corrections or adjustments made in recurring meetings between the Quality Assurance supervisor and the Telecommunicator.
- *Evaluation Guidelines:* The program should establish standard evaluation guidelines defining minimum performance expectations to reflect Department standards and industry protocols. Expectations should be clearly defined, measurable, and effectively communicated. Guidelines should be informed by standard operating procedures. The process should adequately measure the quality of service provided, including analysis of performance trends, compliance with protocols and standard operating procedures, customer service, optimizing use of agency resources, overall performance of each employee, and review of the operation as a whole.
- *Oversight Committees:* Especially since the Communications Center serves both the Police and Fire Departments, discipline-specific oversight committees representing both services should be established and meet regularly to ensure compliance with policies and procedures. Minutes should be maintained and outcomes should be communicated to the Communications Center staff.
- *Program Monitoring:* The program should review at least two percent of all calls for service, as well as a sampling of calls for each Telecommunicator. Particularly demanding calls, or calls involving major incidents, should be reviewed as soon as possible after the call, or at least within a specified time period, such as five days after the incident, absent extenuating circumstances.
- *Record Keeping:* Quality Assurance records should be maintained in a system that permits storage and evaluation of case records in a confidential manner. And in accordance with a records retention policy.
- *Reporting and Feedback:* The Communications Center should establish a mechanism for reporting quality assurance/performance improvement outcomes to appropriate personnel on a regular basis. Systems should inform management as well as employees regarding performance levels and identify areas of superior performance as well as those needing improvement or remedial action.
- *Written Directives:* The Quality Assurance program should be based on a series of written directives and standard operating procedures, and should be used to update and improve the Communications Center's procedures on an ongoing basis.

RECOMMENDATION 30: Implement ongoing training regarding Fire Department dispatching protocols.

As previously mentioned, the bulk of Telecommunicators' work is concentrated on police dispatching; consequently, employees may be less practiced when major fire incidents occur. Routine refresher training should be conducted, concentrating particularly on areas identified by the Quality Assurance program as being in need of improvement. In addition, formal procedures should be established to ensure that changes in Fire Department protocols are clearly communicated to the Communications Center staff in a clear and timely manner.

Operational Issues

RECOMMENDATION 31: Implement a vehicle replacement policy.

The Department operates a fleet of 42 vehicles. Sixteen are marked patrol vehicles assigned to patrol; of the unmarked vehicles, one is assigned to the Chief of Police, one to the Deputy Chief, one to the Investigations Lieutenant; and seven to the Detective Bureau (including the SRO). Other vehicles include:

- One Special Response Team van;
- One Van assigned to the Mobile Field Force/ILEAS;[25]
- One pickup truck assigned to the Animal Control Officer;
- One pickup truck assigned to the Special Response Team/ILEAS;
- One SUV assigned to the Special Response Team/ILEAS;
- One box truck assigned to the Bomb Squad;
- One minivan assigned to the Crime Scene Unit;
- Four trailers;
- Five sedans assigned to fleet and administrative units; and
- One “Mule” off-road utility vehicle.

Take home vehicles are assigned to the Chief of Police, the Deputy Chief, the Investigations Lieutenant, three K9 officers, and the SRO, who has a vehicle funded by the school district. The average mileage of the patrol fleet is approximately 59,643 miles; the highest mileage is 103,652 and the lowest is 12,828.[26]

Maintenance is performed by the City Garage in the Public Works Department. A Patrol Sergeant serves as a liaison regarding maintenance issues.

There is no formal vehicle replacement policy. The City determines a number of police vehicles to be purchased in its annual budget and the Department selects vehicles for replacement based on mileage and condition. Purchasing is coordinated by the Chief of Police and the Manager of the City Garage. Patrol vehicles are equipped with Mobile Digital Terminals (MDTs) capable of filing reports from the field and accessing information through the Computer Aided Dispatch (CAD) system.

There is no formal vehicle replacement policy. The City determines a number of police vehicles to be purchased in its annual budget and the Department selects vehicles for replacement based on mileage and condition.

A police department cannot operate effectively without safe and reliable vehicles. There are no complaints regarding the state of the fleet or the City’s providing adequate funding for regular replacements. However, best practice is to establish general guidelines for vehicle replacement, a policy that promotes an acceptable lifecycle without the disruption that can arise during times of financial challenges, political disagreement, or changes in managerial styles. A good policy protects both the Police Department, by ensuring that the fleet will be maintained in good condition, and the governing body, by ensuring that technically sound and fiscally prudent standards are in place. A well designed policy bases replacement criteria on multiple factors, such as age, mileage, type of use (take home vehicle vs. fleet vehicle subject to around the clock use; marked emergency response vehicle vs. unmarked administrative vehicle; sedan vs. truck), mechanical condition, and repair history.

[25] Illinois Law Enforcement Alarm System
[26] Fleet information and mileage submitted by the Department dated July 28, 2016.

The Department should implement a formalized vehicle replacement policy.

RECOMMENDATION 32: Implement a case management policy that includes anticipated dates of completion and supervisory monitoring of progress.

When cases are assigned to Detectives, they are given a target date for completion of two months. Supervisors indicated that most cases were completed within that time frame. However, there is no schedule for routine follow-ups, and the records management system does not generate reminder notices to evaluate case status and progress.

In fact, a substantial number of current cases have been open for more than two months. Since caseload information supplied by the Department was dated July 14, 2016, the following table shows the number of cases that pre-date May 1, 2016.

Table 36: Investigative Unit Cases assigned prior to May 1, 2016

Detective	Caseload	Cases assigned prior to May 1, 2016
A	45	23
B	28	11
C	52	14
D	48	21
E	45	35

This figure is not intended as a reflection on Detectives' performance; there are many reasons why investigations may take far more than 60 days to complete. Many cases are complex and dependent on variables such as the development of leads, availability of witness interviews, execution of search warrants, and liaison with other agencies. Many investigations take their own course and cannot be rushed. In addition, during early 2016 several major incidents, including a shooting on Easter Sunday and an officer involved shooting in July, required the attention of the entire unit, which prevented Detectives from doing substantial work on their own assigned cases for an extended period. The intention is to illustrate that the duration of many investigations is such that a mechanism for routine progress checks – preferably by means of reminders automatically generated by the records management system – is important to the efficiency of the unit.

The Department should create a follow-up process to monitor the progress of investigations, and should work with its software vendor to have reminders automatically generated by the records management system.

RECOMMENDATION 33: Implement a call-out procedure for Detectives.

The Department does not have a formal call-out procedure for Detectives needed to respond while off duty. When an incident occurs that requires the presence of one or more Detectives, the Communications Center notifies the Investigations Lieutenant, who notifies the Investigations Bureau Sergeant. They mutually determine the appropriate level of response, and the Sergeant notifies individual Detectives. While there are cases that will clearly require the response of the Crime Scene Technician or the Juvenile Detective, others are called based either on their expertise regarding a certain area of investigation, or on their anticipated availability.

This practice, intended to meet the Department's need for personnel while accommodating the convenience of staff during their off-duty time, has created some perceptions of inequity, ranging from the allocation of overtime to the distribution of work to, in some cases, a feeling of being "left out." Detectives indicated a preference for a more formal system.

Call-out systems typically involve either an on-call schedule, which can have legal or contractual implications, or a random rotating procedure. The Department should implement a procedure under which, absent a need for specialized skills (such as the Crime Scene Technician), Detectives are called on a rotation. If a Detective is unable to respond, the next one is called until the necessary complement is reached.

RECOMMENDATION 34: Implement an intelligence-led, proactive policing strategy.
The Department currently does not have a formal crime analysis component, and there are limited processes for communicating intelligence regarding crime trends to officers on patrol. Information sharing regarding crime trends is primarily done by means of reading log book entries at shift briefings. Investigative supervisors share information with Watch Commanders and other supervisors informally and through discussions at weekly staff meetings. It is important to note that despite a recent spike in shootings, the Department has been quite successful in reducing crime. However, the Department is of sufficient size to warrant formal means of sharing intelligence information. The recent violence, the fact that Carbondale is a regional retail and entertainment center that draws sizeable numbers of non-residents, and its status as a university community all suggest a need for focused efforts to maintain its low crime rate.

Many municipalities have adopted and found success with programs based on the Compstat model. Compstat relies on four basic principles:

- Timely and accurate intelligence;
- Effective tactics;
- Rapid and effective deployment; and
- Relentless follow-up and assessment.

The implementation of these principles can differ significantly in each jurisdiction, but the basic components of the process are the same: efficient collection and analysis of crime statistics; transmittal of relevant information to supervisors and line personnel to form the basis for personnel deployment and enforcement initiatives; and assessment, often in the form of command-level meetings that ensure that appropriate information has been shared, that all units within the agency are coordinating their efforts and providing necessary support, and that all members of the agency are actively engaged in its mission. A publication by the Police Executive Research Forum (PERF) summarized the impact of Compstat*: "…instead of merely responding to calls and investigating crimes after they were committed, police gathered accurate, timely information to identify emerging crime trends, held regular meetings to discuss countermeasures, and deployed resources to break up crime patterns and prevent crimes. (And they succeeded; the national violent crime rate in 1994 was 66 percent higher than the comparable figure for 2009; and the property crime rate was 53 percent higher in 1994 than in 2009, according to the FBI.)*[27]

Compstat is not a "one size fits all" solution; it is a concept that must be adapted to the needs and operating practices of each agency, and may not be an appropriate tool for all. However, intelligence-driven policing appears to be an appropriate and adaptable concept for the City of Carbondale.

It is recommended that the Police Department implement a proactive, intelligence-led crime reduction strategy based on the principles of the Compstat model that includes:

- A formal crime analysis component to identify crime trends and put relevant intelligence into the hands of the staff who can apply it in the field through deployment of personnel and enforcement initiatives;

[27] Police Executive Research Forum, ***"Subject to Debate,"*** Vol. 25, No. 2, March/April 2011

- Assessment, in the form of command-level meetings or other methods most suitable to the needs of the Department, to ensure that appropriate information has been shared, and that all units within the agency are coordinating their efforts and providing necessary support; and
- Accountability, to ensure that all members of the agency are actively engaged in its mission.

It should include not only analysis of crime statistics, but processes for monitoring data that tracks patrol and investigative performance, and should incorporate the community outreach efforts that are already tracked by the Department. Community outreach plays as important a role in the crime reduction process as does enforcement, particularly in developing information about conditions of concern to the residents. It must be recognized equally, and subject to the same level of accountability and analysis, as traditional enforcement. The Department's positive relationship with the community it serves will be an asset in this area.

As part of this process, it will be necessary to assign personnel with appropriate rank and position within the agency to coordinate the implementation of strategies and accountability for the performance of personnel and cooperation between units, as well as personnel capable of performing crime analysis duties. The Department has access to rudimentary crime mapping through its participation in the "Crime Reports" web service, and the Lieutenant/Watch Commanders are in a position to facilitate information sharing and collaboration among their watches. The proposed Patrol Captain would be in a position to work with the Watch Commanders to coordinate the process, in collaboration with the Support Services Captain and under the oversight of the Deputy Chief.

It is important to note that implementation of a Compstat-based approach does not in any way diminish or alter the Department's extensive community outreach efforts or its transition to a community policing focus. In fact, just the opposite is true; a police department does not succeed in its effort to deter crime without the full partnership of the community it serves.

RECOMMENDATION 35: Pursue re-accreditation of the Department.
Accreditation – a process by which an outside agency evaluates and certifies an agency's compliance with specific operating standards – is a valuable tool for validating the proper operation of a police department. It can also serve to reduce an agency's insurance premiums and can assist in defending against liability in civil litigation. The accreditation process provides a framework to ensure that the Department is, and remains, in compliance with best practices in a series of standards that cover critical operational and administrative areas. Periodic reaccreditation assessments ensure ongoing maintenance of such standards.

The Department has been accredited, initially by the Commission on Accreditation of Law Enforcement Agencies (CALEA) and subsequently by the Illinois Law Enforcement Accreditation Program (ILEAP) sponsored by the Illinois Association of Chiefs of Police. Accreditation has lapsed for multiple reasons: professional disagreement with an insufficient level of flexibility in the accrediting agency's insistence on compliance with certain policies; the demands of the process on limited administrative staff; and the implementation of LexiPol, a commercial service that provides state-specific policy manuals that are regularly updated to reflect case law, legislative requirements, and emerging best practices in law enforcement. It also provides daily training bulletins and customizable, scenario-based training.

LexiPol clearly provides a valuable service in the challenging area of policy and training curriculum updates, and accreditation admittedly requires dedicated staff time. By the Department's estimate, CALEA accreditation required the services of 1.5 FTE; ILEAP accreditation required 1.0 FTE; and LexiPol will require 0.5 FTE. However, despite the considerable benefits of LexiPol, accreditation provides a service that LexiPol does not: routine assessment of the Department's compliance with best practice procedural standards by an independent entity. The two are not mutually exclusive; in addition to LexiPol, it is in the Department's best interest, if policy disagreements can be overcome and as administrative support becomes available, to seek and maintain re-accreditation. Given the additional workload associated with accreditation, it is recommended that the Department create an Accreditation Manager position. It is estimated that this position would cost approximately $60,000[28] annually.

RECOMMENDATION 36: Provide investigative training related to Detectives' assignments.
Carbondale Detectives are generalists, subject to assignment of all categories of investigations. However, each has developed an area of expertise, as reflected in their caseloads and the majority of cases to which they are assigned. Those areas of specialization have not been formally stated.

There is only one training requirement specific to investigative assignments; Detectives must attend a 32-hour Death/Homicide Investigation Course every four years to maintain their certification. Beyond that, it has been reported that specialized training has been limited.

The Department should ensure that investigative personnel are aware of any specialized responsibilities to which they are assigned and provided with an appropriate level of training in their specific areas.

RECOMMENDATION 37: Increase training opportunities for Patrol Officers.
Department personnel attended 4,505 hours of training in FY2015 and 3,374 hours in FY2016. Those figures represent a number of categories of training.

Specialized units, such as the Special Response Team, K9 Officer, and the Bomb Squad, have routine scheduled monthly or twice monthly training days. Field Training for newly hired officers upon completion of the Police Academy is a structured 14-week program with a Field Training Officer. Annual training conducted in-house for all officers includes firearms qualification; TASER recertification; cardiopulmonary resuscitation (CPR) and automated external defibrillator (AED) certification; blood borne pathogen and hazardous material updates; active shooter response; tactical medical response; and crowd control tactics. Roll call training materials are prepared by the Department's training officer and will be supplemented by material from the LexiPol system.

Additional training opportunities are provided by the State of Illinois Mobile Training Unit, which brings training classes to local departments.

The collective bargaining agreement references two types of training: mandatory training, which is required for an officer to maintain the basic skills required by his or her job, and "optional training," which is not required to maintain an officer's basic skills, but to learn additional skills that benefit the officer and the Department, or to re-train regarding previously acquired skills. The agreement provides for compensation for such training on an hour-for-hour straight time basis.

Officers' use of such training time varies, largely due to staffing concerns. Officers requesting optional training submit a request form with details of the course, tuition and travel expenses, and a narrative providing reasons why their attendance would be beneficial. The request is reviewed

[28] Assumes salary of $42,500 and benefits of 40%

at various levels of the chain of command, but many requests are denied due to staffing shortages. The perception within the Department is that while specialized training – SWAT, K9, Accident Reconstruction, Bomb Squad, etc. -- is prioritized, opportunities for Patrol Officers to attend training are limited because they cannot be spared from their assignments.

Training is important – particularly training beyond basic skill requirements – for staff development, motivation, and morale. The Department should make such training opportunities available whenever resources permit.

Technology

RECOMMENDATION 38: Upgrade cellular telephones/mobile technology issued to Detectives.

Detectives are issued Department cell phones. They are not "smart phones;" they are "flip phones" capable only of basic functions. Laptop computers assigned to investigators are primarily items that have been seized as proceeds of crimes.

Mobile technology has become an important tool for both patrol and investigative operations. It allows investigators to perform a number of useful tasks in the field, including sending and receiving suspect photographs and "BOLO" (Be On the Lookout) messages; viewing maps of sites when doing surveillance, serving warrants, or attempting to make apprehensions; recording or viewing video evidence, or showing photographic or video evidence to victims and witnesses; and looking up information in the field. The Department should upgrade these units to smart phone technology, and consider deployment of tablets or serviceable laptop computers with investigators in the field.

RECOMMENDATION 39: Install a desktop scanner at the Evidence Control workstation.

The Crime Scene Technician/Evidence Custodian does not have a scanner at their workstation. The Crime Scene Technician/Evidence Custodian must scan items using a scanner in the Records Unit and email the files to their computer. In light of the workload associated with evidence and property management, a dedicated scanner should be made available.

RECOMMENDATION 40: Provide additional cameras for investigative personnel.

The Crime Scene Technician/Evidence Custodian shares a camera with investigators and the Department's Accident Reconstruction Officer. Photography is an essential part of each of these functions, which rely upon evidence-quality photographs, and a camera is a critical piece of equipment. It is not unusual for all three user groups to need one at the same time. Additional cameras should be made available to appropriate personnel.

RECOMMENDATION 41: Ensure Department input into purchases of technology equipment – hardware and software.

Several deficiencies have been observed in the records management system to which the Department transitioned in October 2015. Data regarding investigative case closures is not readily retrievable. It does not permit for the closing upon intake of appropriate cases, such as traffic stops; they must be closed at the Detective Sergeant level. Its evidence and property management module does not meet the Department's needs, and it is not being used; a new system is being procured. As a result of the changeover, data regarding calls for service has not been accessible from the previous system.

The City's recently adopted time management software is not designed to meet the Police Department's requirements, such as accounting for full- versus part-time shifts and premium holiday pay. Both systems were purchased by the Finance Department, with limited input from the Police Department.

Police agencies have unique needs regarding information technology services. Unlike many municipal departments, they operate around the clock, 365 days per year, and require uninterrupted availability of their systems. They have unusual work schedules, time and leave regulations, and salary structures. They use multiple federal, state, and local databases that contain confidential and sensitive information, and often rely on mobile digital terminals for transmission of information. Dispatching and recording of calls for service relies on computers, and rapid retrieval of information is critical. Reliable and user-friendly systems are essential to police operations.

Ideally, the Police Department should have final approval of acquisition of its hardware and software. If that is not the case, the City should ensure that the Department has substantial input into all police-related technology purchases.

RECOMMENDATION 42: Install an automated telephone information system ("phone tree").

In addition to serving as the Public Safety Answering Point (PSAP) for all 911 emergency calls to the City of Carbondale and to the Southern Illinois University Police Department, the Communications Center receives many routine business calls directed to the Police Department. Most of these calls have to be transferred to the appropriate office; many require taking messages for Patrol Officers, who do not have access to voicemail.

A basic goal in operating an emergency communications center is to limit call volume (as much as possible) to emergency calls and other requests for police, fire, or medical service. It is especially important to limit non-essential calls when emergency operations are in progress so call-takers and dispatchers can focus on the incident.

The Department should install an automated telephone information system, commonly known as a "phone tree," with connectivity to staff voice mail. This would enable residents calling regarding routine matters to access the desired office or person, or leave a voicemail, without contact with the Communications Center.

Implementation of a phone tree improves the ability of members of the community to quickly identify and contact the department unit or person with whom they wish to speak. It improves customer service by reducing the number of times callers must be placed on hold while a Telecommunicator is handling multiple calls or coordinating an emergency response. Most importantly, it can significantly enhance the efficiency of the communications operation.

Fire Department

The Carbondale Fire Department's mission is to preserve life, promote fire safety, and protect property and the environment in the City of Carbondale. The Department provides comprehensive fire prevention, response, and rescue activities to residents and businesses in a total coverage area of approximately 40 square miles. This includes approximately 25 square miles covering the entirety of the SIU campus.

The Fire Department operates out of two stations. Fire Station 1 is located at 600 College Street on the east side of the City. This facility was constructed in 1973 and was most recently renovated in 2001. Fire Station 2 was constructed in 2014 at 401 N. Glenview on the City's west side. Because an active train line bisects the City from north to south, this station location arrangement allows the Department to quickly respond even if a train is obstructing traffic.[29] Prior to Station 2's construction, the Fire Chief, Administrative Secretary, and Fire Inspector were located at City Hall. Station 2 now houses all of the Department's administrative staff including these positions.

The Fire Chief is responsible for the Department's operations and directly supervises approximately six FTEs. The Department is comprised of 31.04 FTEs, as shown in the following figure.

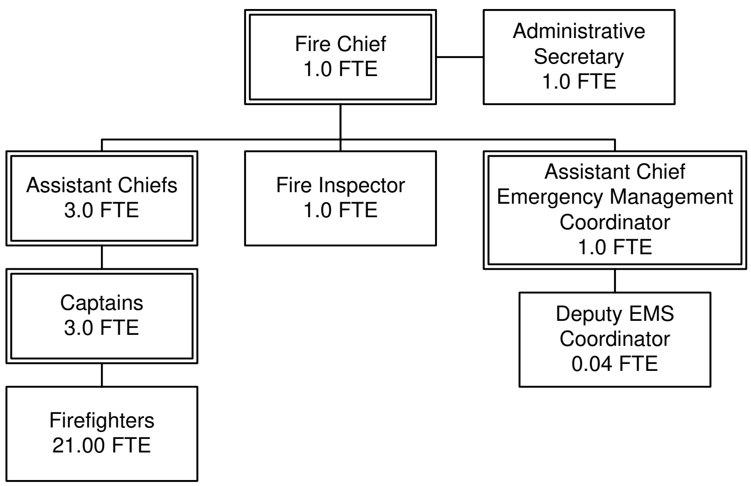

Figure 17: Fire Department Organizational Structure, FY2017

The Department is organized into two primary divisions: Fire Protection and Emergency Management.

The Fire Protection Division encompasses most of the Department's employees and functions, including three firefighter shifts as well as the Fire Inspector. Each fire shift is staffed by full-time career firefighters. Probationary Firefighters, Firefighters, and Firefighter Captains are all represented by the International Association of Firefighters, Local 1961. The current labor contract is effective through April 30, 2018. Assistant Chiefs and the Fire Chief are exempt management employees.
Each firefighter shift is led by a Captain and an Assistant Chief. Per Section 12.3 of the union labor contract, the Department deploys seven staff per shift, including two firefighters with a

[29] While the Department has access to an underpass in order to bypass the train line if it is active, utilizing the underpass can still contribute to extended response times depending on a call's location.

Captain at Station 1 and three firefighters with an Assistant Chief at Station 2. When a shift is fully staffed, Station 1 is assigned three firefighters plus a Captain, and Station 2 is assigned four firefighters plus the Assistant Chief. Shift change occurs at 6:00 PM each day, although Assistant Chiefs are expected to report for duty beginning at 5:00 PM. Shifts are rotated on a 24/48 basis (24 hours on-duty followed by 48 hours off-duty).

The Fire Inspector is a 40-hour position assigned to four 10-hour shifts per week. This position is primarily responsible for enforcing the International Fire Code and conducts liquor license, business, and multifamily property inspections. Approximately half of the Administrative Secretary's workload is devoted to assisting the Fire Inspector and firefighters with record-keeping, payroll, records management system (RMS) tracking, and other administrative activities. In total, this Division contains approximately 29.5 FTEs, including the Fire Chief.

The Emergency Management Division prepares and coordinates actions to minimize loss of life and property damage caused by disasters, including severe weather, terrorism, and weapons of mass destruction. This Division consists of one full-time employee, the Assistant Chief/Emergency Management Coordinator. Half of the Administrative Secretary's workload is also attributable to this Division. Additionally, the Division is supported by an on-call Deputy EMS Coordinator, who staffs the Department's Emergency Operations Center (EOC) during storm watches and other threatening weather events. This position's budgeted hours are minimal (0.04 FTE) to reflect the weather-dependent nature of this position.

The Division's workload consists of projects and procedures designed to safeguard and improve the City's ability to respond to disasters, such as reviewing the City's Emergency Operations plan, testing outdoor emergency sirens throughout the City, and fulfilling state requirements for EOC operations accreditation. Additionally, the Assistant Chief/Emergency Management Coordinator is responsible for scheduling and conducting training and professional development opportunities for Department staff.

Notably, the City of Carbondale does not provide Emergency Medical Services (EMS) to the community as a core functional service area. Rather, EMS services are provided by the Jackson County EMS Department, which is headquartered in a County facility located at 520 N. University Ave. in Carbondale and provides EMS services County-wide.

While the Carbondale Fire Department provides limited first aid at incident scenes, the Department recently applied for a grant through Southern Illinois Hospital to train Firefighters to provide expanded EMS first responder services. This will allow the Department to train firefighters to a higher standard for EMS service and enable staff to render more effective first aid until medical personnel arrive from the Jackson County EMS Department. While this training will not immediately impact the Department's workload, it should be noted that providing EMS training to firefighters will enable firefighters to respond to a wider variety of EMS-related calls. This could position the Department to begin providing EMS services on a regular basis in the future and should be evaluated in the context of the Department's strategic planning efforts. At the time of this review, the grant was denied and the Department was in the process of seeking alternate grant opportunities.

The City's Fire and Police Departments recently consolidated dispatching systems, and the Fire Department relies on the City's dispatching center for these services. However, because the Fire

Department does not provide EMS, the City's dispatch staff must notify the County dispatching center when emergency medical personnel are needed.

Fire Department Staffing

Total staffing in the Fire Department has consistently hovered around 31 FTEs over the last several fiscal periods, as shown in the following table.

Table 37: Fire Department Staffing Trends, FY2013-FY2017

Division Staff (FTEs)	Actual FY2013	Actual FY2014	Actual FY2015	Actual FY2016	Budgeted FY2017	Percent Change
Fire Protection	30.21	30.66	30.40	30.33	29.5	-2%
Office of Emergency Management	0.54	0.54	0.54	0.54	1.54	185%
TOTAL FTEs	**30.75**	**31.20**	**30.94**	**30.87**	**31.04**	**1%**

The largest staffing shift experienced by the Department during this period is the increase of one FTE in the Office of Emergency Management. This increase is the result of assigning duties for this Division to an Assistant Chief and expanding the role of the Assistant Secretary. Both of these changes occurred in FY2017.

Fire Department Expenditures

The following table illustrates trends in the Department's expenditures over the last five fiscal periods, along with the percentage change since FY2013.

Table 38: Fire Department Expenditures by Category, FY2013-FY2017

Fire Department Budget Category	Actual FY2013	Actual FY2014	Actual FY2015	Estimated FY2016	Budgeted FY2017	Percent Change
Personal Services	$3,336,147	$3,331,974	$3,458,936	$3,535,756	$3,636,048	9%
Direct Operating Charges & Services	$184,093	$122,072	$164,656	$135,953	$126,379	-31%
Services and Charges Transferred In	$26,163	$35,569	$40,979	$34,250	$25,750	-2%
Capital Outlay	$29,611	$677,421	$0	$0	$9,831	-67%
Debt Service	$57,999	$79,670	$111,706	$111,706	$111,705	93%
Contingencies	$0	$0	$0	$0	$5,000	-
Total Fire Department Expenditures	**$3,634,013**	**$4,246,706**	**$3,776,277**	**$3,817,665**	**$3,914,713**	**8%**

The majority of expenditure increases experienced by the Department are in Personal Services, which are approximately $300,000 higher in the FY2017 Budget than actual FY2013 expenditures. This increase is driven by budgeted increases in employee retirement, health insurance, and workers' compensation benefits.

Of the Department's Personal Services costs, approximately half are due to salaries and wages, whereas 27% are attributable to retirement benefits, such as pension contributions, as shown in the following figure.

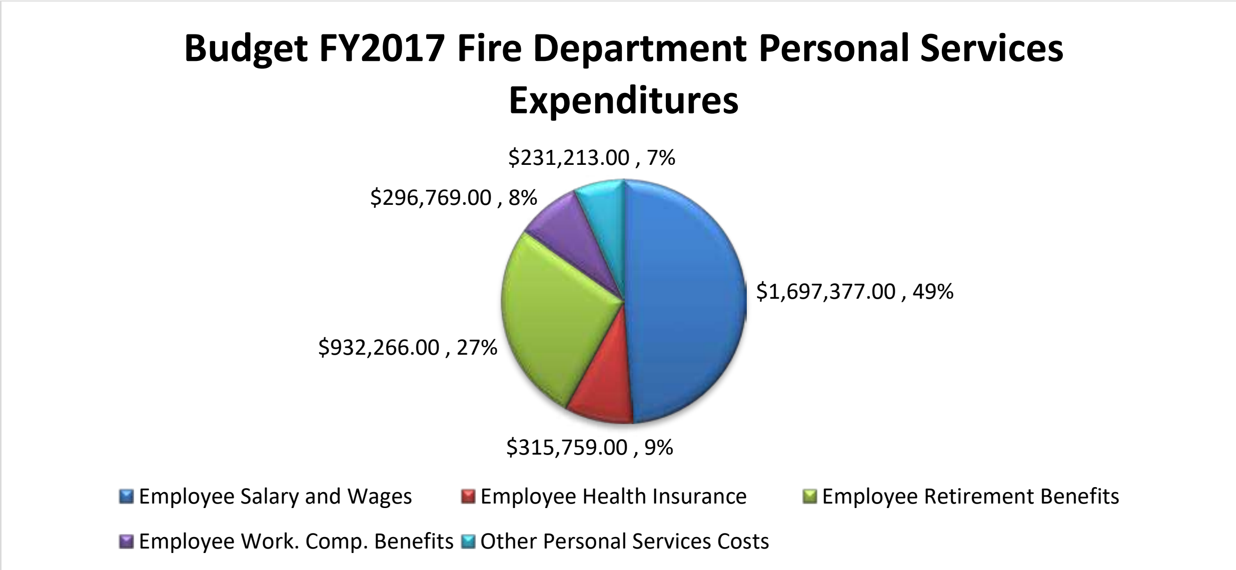

Figure 18: Budget FY2017 Fire Department Personal Services Expenditures, FY2017

Pension contributions are consequently a major cost driver for Fire Department operations and outweigh health insurance, workers' compensation, and other personal services costs (such as overtime, unemployment benefits, and contractual benefits) combined.

Fire Department Revenues

While the Fire Department is supported by the General Fund, it generates revenue through a variety of mechanisms, including gifts and contributions, special fire services, and false alarm fees. The following table illustrates the Department's revenue patterns over the last five fiscal periods, along with the percentage change since FY2013.

Table 39: Fire Department Revenue by Fund, FY2013-FY2017

Public Works Revenues	Actual FY2013	Actual FY2014	Actual FY2015	Estimated FY2016	Budgeted FY2017	Percent Change
Gifts and Contributions - Fire	$1,000	$2,155	$799	$1,000	$1,000	0%
Special Fire Services	$323,857	$329,357	$334,375	$339,618	$339,618	5%
False Alarm Fees	$12,900	$15,900	$14,400	$14,400	$14,400	12%
Total	**$337,757**	**$347,412**	**$349,574**	**$355,018**	**$355,018**	**5%**

Notably, the Department's budgeted false alarm fee revenues are 12% higher than FY2013 actuals. This reflects increasing false alarm activities as described in the Analysis and Recommendations section below.

Analysis and Recommendations

The current Fire Chief took command of the Department in January 2016 and immediately implemented a number of changes which have positively impacted the Department's staff. Foremost among these changes was the relocation of Fire administrative staff from City Hall offices to Fire Station 2. This adjustment puts Department leadership in direct contact with shift staff and shift commanders and is a commendable step toward fostering positive working relationships. Additionally, Department staff report increased ability to engage and interact with community members and indicate relationships between management and labor units are positive.

The Carbondale Fire Department utilizes Firehouse™ software as its central records management system (RMS) for recording incident and training-related information. The following analysis provides an overview of the Department's call volume and response times utilizing information gleaned from this system.

Incidents

Since FY2012, the Department has responded to approximately 948 calls per fiscal year on average. The following table illustrates the total number of calls for service over the last five fiscal years and includes all calls received by the Department, including calls within the City, at SIU, and mutual aid calls.

Table 40: Fire Department Incidents per Year, 2016

Fiscal Year[30]	Number of Incidents
FY2012	993
FY2013	936
FY2014	938
FY2015	865
FY2016	1,009
Total	**4,741**

From FY2012-FY2016, calls for service were allocated fairly evenly across the Department's three shifts, as shown in the following table. For a small number of incidents (25), the shift assigned to the incident was unrecorded in the Department's RMS. These incidents are reflected in the "Unrecorded Shift" row.

Table 41: Fire Department Incidents per Shift, FY2012-FY2016

Firefighter Shift	Incidents per Shift (FY12-FY16)	Proportion of Total Calls
Shift A	1,625	34%
Shift B	1,477	31%
Shift C	1,614	34%
Unrecorded Shift	25	1%
Total	**4,741**	**100%**

Examining call volume by time of day reveals that much of the Department's incident workload falls into a pattern typical of many fire departments, with most calls originating in the afternoon and evening hours. The following figure illustrates total call volume from FY2012-FY2016 by time of day.

[30] The City's fiscal year runs from May 1 to April 30.

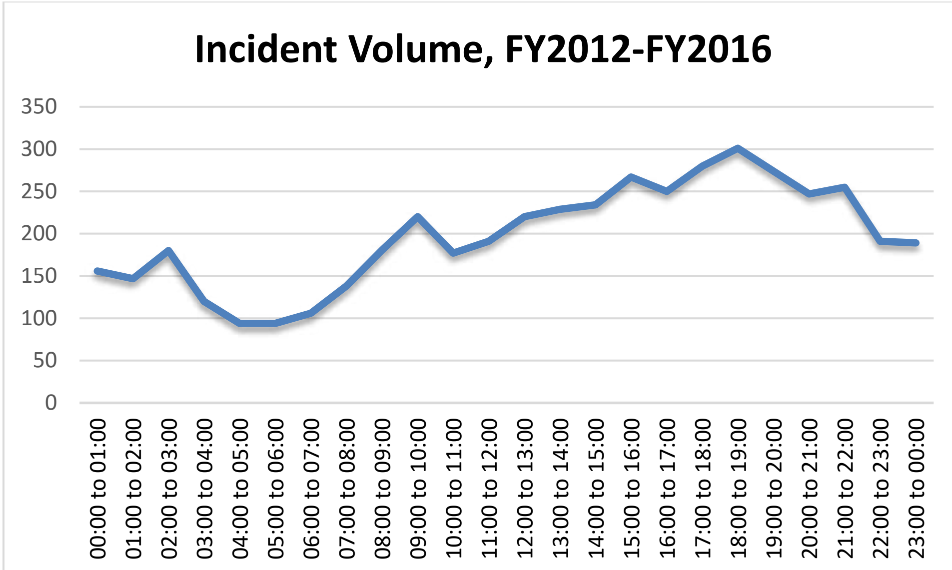

Figure 19: Fire Department Incidents per Time of Day, FY2012-FY2016

In addition to time of day, it is useful to examine the Department's call volume by type of call. The National Fire Incident Reporting System (NFIRS) has developed a code series used to identify emergency calls by type. This system relies on nine broad code categories, from Fire to Service Calls to Special Incidents. An analysis of the Department's call patterns by NFIRS incident type illustrates that a majority of the Department's calls (56%) are related to False Alarms and False Calls. This analysis is shown in the following table.

Table 42: Fire Department Incidents by Type by Fiscal Year, FY2012-FY2016

NFIRS Code Description	FY2012	FY2013	FY2014	FY2015	FY2016	Total	Percent of Total
Fire	153	167	130	100	93	**643**	14%
Overpressure Rupture, Explosion, Overheat (No Fire)	3	4	1	3	3	**14**	0%
Rescue and Emergency Medical Services (EMS) Incidents	30	39	42	62	73	**246**	5%
Hazardous Condition (No Fire)	65	65	76	37	107	**350**	7%
Service Call	84	77	58	49	46	**314**	7%
Good Intent Call	113	106	81	98	102	**500**	11%
False Alarm and False Call	540	477	549	513	584	**2,663**	56%
Severe Weather and Natural Disaster	2	1	1	3	0	**7**	0%
Special Incident Type	3	0	0	0	1	**4**	0%
Total	**993**	**936**	**938**	**865**	**1,009**	**4,741**	**100%**

Response Times

The Department's overall average response time for all calls is 4.6 minutes from alarm to arrival on scene, as illustrated in the following table.

Table 43: Fire Department Incidents per Year with Average Response Time, FY2012-FY2016

Fiscal Year	Average Response Time (Decimal Minutes)
FY2012	4.6
FY2013	4.7
FY2014	4.7
FY2015	4.7
FY2016	4.4
Total	**4.6**

While the Department responds to all calls in an average of 4.6 minutes, it is useful to examine the Department's fractile response rate. A fractile rate measures the Department's ability to respond to a certain percentage of calls within a given timeframe. Over the last several years, the Department has been able to respond to 90% of all calls within seven to eight minutes, which meets National Fire Protection Association (NFPA) response time standards for an organization of this size. The following table illustrates the Department's cumulative response times to all calls during the last five fiscal years. The 90% fractile mark is indicated in bold each year.

Table 44: Fire Department Top 10 Calls by Type, FY2012-FY2016

Minutes	FY2012	FY2013	FY2014	FY2015	FY2016
0 to 1	5%	4%	4%	4%	4%
1 to 2	10%	12%	12%	12%	15%
2 to 3	25%	26%	26%	25%	31%
3 to 4	47%	47%	47%	44%	50%
4 to 5	69%	65%	68%	65%	70%
5 to 6	81%	79%	81%	78%	84%
6 to 7	87%	86%	88%	86%	**90%**
7 to 8	**91%**	**91%**	**93%**	**92%**	94%
8 to 9	94%	95%	95%	95%	96%
9 to 10	96%	96%	96%	96%	96%
10 to 11	97%	97%	97%	97%	98%
11 to 12	97%	98%	98%	98%	98%
12 to 13	98%	98%	98%	98%	99%
13 to 14	98%	98%	99%	98%	99%
14 to 15	98%	98%	99%	99%	99%
15+	100%	100%	100%	100%	100%

These response times indicate the department is substantially meeting the NFPA standard for arrival of the first responding unit in four minutes and twenty seconds from the time the unit is dispatched.

Staffing

Determining appropriate Fire Department staffing is impacted by a variety of factors, including desired minimum staffing per shift, the department's call volume, the average response time expected by the community, and the type of staff hired by the department. While some of these decisions are policy-related, a staffing factor analysis can provide some insight into the appropriateness of the Department's existing staffing model.

A staffing factor represents the number of employees needed to cover each position on a shift, after accounting for leave (such as sick time, vacations, and scheduled days off). Because the Department utilizes three shifts to provide fire coverage throughout the year, each shift is responsible for covering approximately 2,920 hours on an annual basis. However, shift staff are provided with scheduled time off (Kelly Days[31]) in order to comply with Fair Labor Standards Act (FLSA) overtime provisions and existing contractual requirements.

According to the Department's current labor contract, shift staff are eligible for approximately 208 hours of scheduled time off each year. In addition to this, staff also utilize an average of 327 hours of other leave. The following table illustrates leave utilization per employee among Probationary Firefighters, Firefighters, Fire Captains, and Assistant Chiefs over the last five fiscal years.

Table 45: Average Annual Leave Usage Among Shift Employees, 2016

Average Leave Usage per Shift Employee	FY2012	FY2013	FY2014	FY2015	FY2016	Average
Birthday Pay	144	152	120	200	144	152
Funeral Leave	178	93	143	36	124	115
Injury Leave	8	349	2	204	288	170
Jury Duty	0	10	0	5	4	4
Leave Without Pay	0	121	0	0	96	43
Military Leave	0	0	312	750	384	289
Sick Pay	2,668	4,651	4,373	3,635	1,531	3,372
Vacation Pay	5,122	4,859	4,920	5,078	3,985	4,793
Total Hours	**8,120**	**10,235**	**9,870**	**9,907**	**6,556**	**8,938**
Actual Shift FTEs	27.21	27.66	27.40	27.33	27.00	27.00
Average Leave per FTE	**298**	**370**	**360**	**363**	**243**	**327**

Adding scheduled leave to other leave usage results in an annual average leave of 535 hours per shift person per year. Subtracting these hours from 2,920 total coverage hours results in an average of 2,385 hours worked by shift staff per year. In order to determine the total number of staff required after accounting for leave, total coverage hours are divided by the number of hours actually worked on average. This yields a staffing factor of 1.22: (2,920 / 2,385 = 1.22). This means that an additional 0.22 staff are required per shift position in order to adequately cover leave taken. This staffing factor can then be applied the Department's existing minimum staffing model in order to compute appropriate staffing levels, as shown in the following table.

[31] A Kelly Day is a period of scheduled leave given to firefighters in order to maintain compliance with the Fair Labor Standards Act (FLSA). The use of Kelly Days prevents shift staff from incurring overtime required by the FLSA for extended work periods.

Table 46: Fire Department Staffing Factor Calculation, 2016

7-Person Minimum Staffing	Minimum Shift Staffing Positions	Minimum Shift Positions Multiplied by Staffing Factor	Total Positions Needed for Adequate Shift Coverage	Total Positions Needed Across all Shifts
Station 1				
Fire Captain	1	1.22	1	3
Firefighter	2	2.45	3	9
Station 2				
Firefighter	3	3.67	4	12
Assistant Chief	1	1.22	1	3
Total	**7**		**9**	**27**

This analysis indicates that 27 shift staff are required in order to adequately achieve current minimum staffing across all three shifts, after accounting for leave usage and scheduled time off. This staffing level will allow the Department to staff each Station on a 24/7 basis according to the terms of its labor contract. The Department currently employs 27 shift positions and consequently does not need to supplement existing staff in order to meet these staffing goals. In short, applying this factor to the Department's existing minimum staffing levels indicates overall staffing is appropriate for the Department.

It is important to note that while the Department's current staffing model provides sufficient coverage for most calls, it is unable to meet existing NFPA standards for structure fire response (NFPA 1710) using only on-duty shift staff. In the event of a structure fire, the Department relies on callbacks to activate off-duty firefighters and send them to the incident scene. This practice is discussed in greater detail in the recommendation section that follows.

The NFPA authors a report detailing numbers, statistics, and characteristics of fire departments across the country called the "U.S. Fire Department Profile." According to the latest available copy of this report, the median number of career firefighters in communities with populations ranging from 25,000–49,900 was 1.21 firefighters per 1,000 population nationwide and 1.0 per 1,000 in the Midwest.[32] With a current estimated population of approximately 26,400 persons in the City, the Department's current staffing practice is consistent with these levels. However, because Carbondale's population is affected by the annual influx of SIU students, this ratio may shift from 1.0 firefighters per 1,000 population to 0.6 firefighters per 1,000 population each year as students return to the SIU campus.

While this staffing ratio is a useful indicator of the Fire Department's size relative to the community, the staffing factor and incident volume analysis described above provide a more accurate basis for making firefighter staffing decisions. However, Fire Department staffing is also impacted by community expectations, response time preferences, and the Department's strategic goals and objectives. The following recommendations discuss specific actions the Department can take to more clearly define staffing expectations and refine its staffing approach.

[32] US Fire Department Profile 2014

Department Strategy and Services

RECOMMENDATION 43: Formalize Departmental service levels.

Although the Department is staffed to meet national standards for response time and its minimum contractual shift size, it is recommended that the Department articulate more formal service level standards. Staffing decisions should be made based on community service level expectations as well as safety concerns for personnel on the fireground.

The Occupational Safety and Health Administration (OSHA) establishes that minimum staffing should enable a two-in, two-out system to protect first responders fighting a structure fire. While this seems to suggest a four-person response crew, it is imperative that both a pump operator and an incident commander also be on-scene to effectively and safely begin interior operations at a structure fire. As a result, a baseline of six firefighters is necessary in order to conduct initial interior structural firefighting operations. The Department's current service level practices are sufficient to achieve this standard.

However, national best practice standards as articulated by NFPA set benchmarks for structure fire response and staffing. For a career fire department in communities such as Carbondale, the NFPA 1710 standard requires 14 or 15 firefighters on-site (depending on specific apparatus deployed) within nine minutes and twenty seconds during full-alarm situations, such as structure fires. These positions provide staffing for critical tasks including search and rescue, ventilation, water supply, and other fireground activities. While the response time target is identified within the NFPA standard, it is up to the Department and policy makers to identify the percentage of responses that should meet this standard. For non-career (volunteer) and combination fire departments, the NFPA 1720 standard identifies minimum staffing response levels and times based upon population density.

According to the Department's RMS incident data, Carbondale Fire responds to approximately 37 structure fires in a given year, on average. When a structure fire occurs, the Department relies on calling off-duty staff back to active duty in order to increase staffing. These staff may be called to the fireground or assigned to station coverage as circumstances warrant. However, the Department does not track response times associated with these callbacks, and it is difficult to determine how this practice impacts the Department's overall response times.

In order to evaluate the appropriateness of this practice, it is important for the City of Carbondale to clearly define expectations regarding fire service levels, including expected response times and minimum staffing, and to track callback responsiveness for structure fires.

Formalizing service level standards will also help the City define a policy approach that will guide the Department's staffing decisions. For example, if the City intends to fully staff structure fires according to NFPA standards, it may be beneficial to recruit a pool of paid on-call staff who respond only during structure fire incidents. This would prevent the need to hire additional full-time staff while creating additional firefighter capacity when it is needed most. However, because paid on-call staff are typically employed full-time in other occupations, it is difficult to retain these staff and the City may experience issues with the reliability of paid on-call firefighters.

To address these reliability concerns, some communities have initiated cross-training programs to create paid on-call firefighting units utilizing City staff in other departments. Center Line, Michigan; Cedar Falls, Iowa; Brisol, Wisconsin; and Woodbury, Minnesota are examples of communities who rely on non-Fire Department staff to respond to fires in an on-call capacity. Center Line and Bristol cross-train Public Works staff for on-call Fire services, while Cedar Falls and Woodbury provide Firefighter cross-training to Police Officers. While specific pay incentives vary across these communities, hourly staff typically receive a higher rate of pay when responding to fire incidents outside of their regular scheduled hours. Creating such a practice in the City of Carbondale would require several steps, including negotiations with union representatives, determining the appropriate number of staff to cross-train, providing equipment and training for paid on-call staff, defining when and how on-call staff will be utilized, and setting formal expectations for on-call staff.

Formalizing service level expectations will allow the Department to more clearly articulate how it expects to respond to fire incidents and what level of service the community should expect from the Department. These service level standards will create reliable benchmarks for gauging the effectiveness of current fire staffing levels, and provide the Department with clear goals for making future staffing decisions. This will allow the City and the Department to make staffing adjustments which better reflect community priorities and consider how alternative staffing models may impact the services it provides.

RECOMMENDATION 44: Create a Fire Department strategic plan.
Given recent leadership changes in the Fire Department as well as greater emphasis on strategic planning at the City level, it is appropriate and advisable for the Department to undertake a formal strategic planning process. For Fire Departments, strategic plans serve as guiding documents that inform decisions about staffing, responsiveness, station locations, services, training, and community outreach practices.

The strategic planning process should identify strengths, weaknesses, challenges, and opportunities facing the Department as well as goals, objectives, and strategies to guide the Department in achieving success. Notably, the City's annual budget process already incorporates some of these elements, particularly in terms of setting goals and objectives and tracking associated workload measures.

In addition to broad goals and objectives, the Department should specifically define its intended approach to staffing and services. As stated previously, the Department is adequately staffed given its contractual requirements and responds to service calls in an effective timeframe. The Department's major cost drivers are personnel-related, and pension funding requirements constitute a major component of these expenditures. There are several personnel alternatives that should be considered as part of the Department's strategic planning process, including reductions in staff and/or the use of volunteer/paid on-call staff. Alternatively, the Department should explore the possibility of increasing services in order to justify the present cost of its existing operations.

Simple reductions in firefighter staffing will reduce corresponding personnel costs: total compensation for an entry-level firefighter in FY2017 is estimated at $88,700, including benefits and pension. Reducing each shift by one firefighter would save an estimated $266,000 per year in personnel costs, an 8% reduction compared to current budgeted personnel expenditures. However, reducing staff correlates with increased response times and results in fewer personnel available to respond to major structure fires. Reducing staff also potentially compromises the safety of firefighters on the fireground, as fewer available bodies will impair the Department's ability to operate under a two-in, two-out system in compliance with OSHA standards as described above.

While volunteer and paid on-call staff are less expensive than career staff, there are several factors which policy makers should consider prior to determining whether staffing changes to the Fire Department are warranted. First, volunteer and paid on-call positions are typically harder to fill and result in greater turnover than career firefighter positions. According to the National Volunteer Fire Council (NVFC)'s latest Volunteer Fire Service Fact Sheet, the number of volunteer firefighters has declined 12% nationally since 1984.[33] The fire service continues to face dwindling numbers of volunteer firefighters due to increased time demands, rigorous training requirements, and the increase in two-income families across the country.

Additionally, many firefighters begin their career in a volunteer, part-time, or paid on-call capacity and then seek to gain full-time employment as a career firefighter. This practice, combined with the sociological and economic trends described above, creates turnover challenges for departments that use non-career staff. If the City elects to utilize volunteer and/or paid on-call staff, it should thoroughly track and analyze recruitment and retention data in order to determine whether these positions are cost-effective over the long term. Care should be taken to avoid a situation where the Department's annual costs have decreased, but where minimum service standards cannot be met due to high turnover, vacancies, and a lack of available personnel.

A second potential drawback to the use of volunteer and paid on-call personnel is a disparity in training requirements for these positions. For example, a Basic Operations Firefighter certification is required in order for an applicant to qualify for a position in the Carbondale Fire Department. This certification requires 180 hours of professional development training along with the completion of written and verbal exams. However, the Illinois State Fire Marshal does not specify minimum training requirements for volunteer firefighters, and many Illinois jurisdictions specify their own minimum training standards.

The logistics of training also present operational challenges to departments that utilize career staff in conjunction with volunteer/paid on-call staff. As a best practice, firefighters should train and work together in order to learn each other's skills and abilities, preferences, and to develop teamwork, camaraderie, and cohesive responses. Because career staff have limited training ability due to contract requirements and volunteer/paid on-call staff may not be available to attend training due to other careers, it is often difficult to schedule training events which can be attended by all staff. This challenges the department's technical skills as well as labor environment and could create a firefighter workforce with widely varying skills and abilities.

Finally, the use of on-call staff is particularly prevalent in communities which rely on mutual aid and are supported by comparable fire jurisdictions within close proximity. As described in the following recommendation, the City of Carbondale is the chief supplier of mutual aid within a reasonable distance and is surrounded by a number of non-career fire departments. While it is advantageous for the City to leverage mutual aid whenever possible, it is unlikely that the region's firefighting capacity is sufficient to support the City's Fire Department on a regular basis if on-call staff are utilized.

As an alternative to changing the Department's staffing model, it should consider offering additional services to increase the utilization of existing career staff while meeting its strategic goals. For example, the Department could explore providing expanded EMS services to the Carbondale community in addition to or in lieu of services provided by Jackson County EMS. This would require an in-depth study of the County's EMS call volume, deployment, staffing, and costs in order to determine potential impacts on the Carbondale Fire Department. Additionally, the Department would need to negotiate formal agreements and dispatching protocols with the

[33] 2016 Fire Service Fact Sheet. National Volunteer Fire Council. http://www.nvfc.org/wp-content/uploads/2016/02/2016-Fire-Service-Fact-Sheet.pdf

County EMS and develop clear standard operating procedures for providing EMS and interfacing with County EMS personnel.

All of the staffing and workload options described above will require policy direction from the City Council and close coordination with the City Manager, as well as renegotiating working conditions under the Department's existing union contract, which expires in 2018.

While evaluating these options and other strategic priorities, the Department's strategic plan should build on the City Manager's current strategic planning efforts with the City Council and the City's broader strategic objectives. The Fire Department's strategic plan should complement these efforts to more fully define an acceptable scope of operations and standards which constitute successful fire service delivery in the City of Carbondale.

RECOMMENDATION 45: Implement automatic aid agreements in lieu of mutual aid agreements where appropriate.

The Department currently renders and receives mutual aid through the Mutual Aid Box Alarm System (MABAS) and the Southern Illinois Coal Belt Fire Protection Association. MABAS is a statewide mutual aid system primarily devoted to disaster relief efforts, hazmat, and technical rescue services, whereas the Coal Belt Fire Protection Association is a regional not-for-profit which seeks to grow ties between fire departments in southern Illinois.

When assistance is automatically dispatched from one fire agency to another based on the fulfillment of certain criteria (such as a large fire), this is called automatic aid. Typically, automatic aid arrangements are specified in formal written agreements that outline specific criteria which trigger an automatic aid response. Mutual aid agreements are similar, except aid between fire jurisdictions is dispatched on an "as needed" basis and is not automatically triggered.

The following table illustrates the number of incidents from FY2012 to FY2016 which resulted in the Carbondale Fire Department rendering automatic or mutual aid to another department.

Table 47: Carbondale Fire Department – Automatic/Mutual Aid Rendered to Other Jurisdictions, FY2012-FY2016

Year	Incidents	Average Response Time (decimal minutes)	Average Personnel Sent	Average Apparatus Sent
FY2012	6	10.5	2.3	1.5
FY2013	4	10.9	4.0	1.5
FY2014	6	26.1	3.0	1.3
FY2015	6	17.6	4.0	1.8
FY2016	6	40.7	3.7	2.2
Annual Average	**5.6**	**21.2**	**3.4**	**1.7**

On average, the Carbondale Fire responds to 5.6 mutual aid incidents per year. The average response time from the time a unit is dispatched from Carbondale to arrival on scene in the mutual aid jurisdiction is approximately 21 minutes.

In addition to rendering aid, the Carbondale Fire Department also receives aid from other jurisdictions including Carbondale Township, Makanda Township, Murphysboro, and the Williamson County Fire Protection District. The following table indicates total automatic/mutual aid activities provided to the Department since FY2012.

Table 48: Carbondale Fire Department – Incidents of Automatic/Mutual Aid Provided to Carbondale, FY2012-FY2016

Year	Automatic Aid Provided to Carbondale (Incidents)	Mutual Aid Provided To Carbondale (Incidents)	Total
FY2012	0	1	1
FY2013	0	2	2
FY2014	0	0	0
FY2015	2	1	3
FY2016	0	2	2
Total	**2**	**6**	**8**

The average response time for automatic aid calls is approximately 9.4 minutes. Automatic aid typically results in partner jurisdictions sending 3.9 personnel and one apparatus. For mutual aid calls, neighboring departments are able to respond to Carbondale in approximately 40.8 minutes. These calls typically result in adjacent jurisdictions sending three personnel and at least one apparatus.

While the City of Carbondale gives more automatic/mutual aid than it receives, this is not unusual given the Department's geographic location and current amenities. As a career department with significant assets at its disposal, Carbondale Fire is able to provide a greater depth of support to its neighbors. However, while the overall amount of automatic/mutual aid given and received constitutes a small part of the Department's overall workload, the City would benefit from an increased use of automatic aid agreements in lieu of mutual aid agreements.

Increasing the use of automatic aid agreements will benefit the City in two primary ways. First, because automatic aid triggers more quickly, it will lay the groundwork for rapid backup if a large incident requires many staff in Carbondale at once. This is especially important if the Department is called to render mutual aid to another jurisdiction or in the event of large structure fires.

Second, automatic aid will help to ensure the City has adequate coverage if the Carbondale Fire Department is required to give extended mutual aid to another jurisdiction. While the City can and does initiate callbacks to its existing firefighter staff, this inherently increases response times as command staff must consult an overtime list and attempt to reach firefighters to offer them the callback according to their overtime eligibility. By implementing automatic aid with other departments, the Carbondale Fire Department will be reasonably certain of backup support arriving within a given timeframe, which will provide Carbondale staff with additional time to source backup staff.

Organizational Management

The following recommendations are intended to help Department staff maximize operational capacity, inform staffing decisions, and complement management communications efforts.

RECOMMENDATION 46: Develop specific performance metrics for response goals and outcome measures for Fire Department programs.

The Fire Department currently tracks some workload data as part of the City's annual budget process, such as the number of fires each year by type, malicious false alarms, and business inspections conducted. While the practice of tracking workload is commendable, there are opportunities for the Department to identify, track, and utilize measures which more effectively describe the Department's timeliness, effectiveness, and performance. In addition to formulating service standards, the Department should identify specific performance measures and response goals that can be routinely monitored by staff and periodically reported to the City Council and the community.

The use of performance measures is an excellent management tool to help assess the overall effectiveness of services and determine whether resources are being allocated efficiently. By establishing consistent performance measures and tracking this data, the Department will create an information repository that can provide invaluable insight into service quality, timeliness, and potential cost improvements. After tracking this data over several years, performance information can then inform the organization's regular dialogue about program goals, budget allocations, and general accomplishments. In short, enhancing the Fire Department's performance measurement program will augment and support the Department's strategic planning and evaluation practices.

The NFPA has published sample measures for each primary program area of a typical fire department. A 2009 NFPA report titled "Fire Service Performance Measures" provides detailed descriptions of each sample measure, considerations that should be utilized in conjunction with performance measurement, and other useful tips for collecting usable performance information. The following table illustrates a selection of performance measures as found in this report which would prove valuable for the Carbondale Fire Department.

Table 49: Sample Fire Department Performance Measures

Performance Category	Measure	Notes
Source of Call	Percent of calls from individuals	Stratify data by type of call - fire, medical, other, etc.
	Percent of calls from alarm monitoring companies	
	Percent of calls from some other source	
Fire Rate	Number of reported fires per 1,000 population	Stratify data by category - structure fire, vehicle fire, outside fire, etc.
	Number of reported fires per 1,000 buildings	
	Ratio of actual fire rates to expected fire rates	
Incident Response and Control Times	Turnout time	Stratify data by category - structure fire, vehicle fire, outside fire, etc. Set response time goals based on service level standards.
	Travel time	
	Total response time	
	Time of control of fire (the time from arrival to fire control)	
	Average response time per fire incident call	
	Percent of times that are less than X minutes	
	Percent of times that are more than X minutes	
Fire Spread	Percent of fires extinguished and not extinguished before department arrival	Tracking fires that were extinguished before and after arrival allows the Department to measure its effectiveness on-scene.
	Percent of fires responded to that spread beyond room of origin before fire department arrival	
	Percent of total fires responded to that spread beyond room of origin after fire department arrival	
Fire Incident Death and Injury Rate	Number of civilian deaths or injuries per 1,000 population and per 1,000 fires	Limit data collection to National Fire Incident Reporting System (NFIRS) 100 series incidents (fires).
Firefighter Death and Injury Rate	Number of firefighter deaths or injuries per 1,000 firefighters and per 1,000 fires	Limit data collection to NFIRS 100 series incidents (fires).
Human Saves and Rescues	Percent of fires in which a person or people were rescued from a building by firefighters	Limit data collection to NFIRS 100 series incidents (fires).
	Number of saves compared to number of casualties	

Performance Category	Measure	Notes
	Rate of saves per incident involving at least one save	Develop a consistent definition of what counts as a "save" and rigorous procedures for counting saves.
Property Saves	Total dollars saved in terms of structure and contents	Limit data collection to NFIRS series 100-129 incidents (structure fires) Set damage goals based on service level standards
	Average dollars saved per fire	
	Percent of fires in which monetary damage to the building was greater than $X	
	Percent of fires in which dollars saved was greater than $X	
Code Compliance	Structure fire rate (structure fires in inspectable properties / 1,000 inspectable properties)	
	Value per additional inspection (Fire loss per year) x (percentage loss preventable by inspection) / (number of occupancies)	
	Percent of fires with pending, uncorrected violations at the time of fire	
	Percent of properties not inspected	
	Percent of inspections not completed in target cycle	

These recommended measures provide a framework from which existing measures can be refined and additional measures can be established. For example, although the Department currently tracks overall response time information, refining this data to include turnout time and travel time will allow the Department to identify which components of the response process may, if any, need improvement.

The data collected by these performance measures represents a critical component of analyzing resource requirements and is necessary to identify the optimal location of fire stations, response units, staffing strategies, and to identify trends and issues that should be addressed by proactive prevention and education efforts. It is important to connect the Department's existing workload measures to performance trends across multiple years to enable more detailed analysis of the Department's performance and impact on the community.

RECOMMENDATION 47: Update existing Standard Operating Guidelines.
The Department's current Standard Operating Guidelines (SOGs) were standardized into a uniform format in 2013 and call for an annual review of all SOGs. However, senior staff report that many of the policies have not been substantially updated since 1998. A lack of up-to-date SOGs creates several difficulties for command staff as well as shift firefighters. For example, technologies that are readily available today, such as smartphones, were not widespread in 1998 and are not adequately addressed by the Department's current SOGs. The International Association of Fire Chiefs (IAFC) publishes sample SOGs which cover contemporary issues such as the use of social media accounts along with training and education standards, standards of coverage, and other core guidelines. These resources are available at the IAFC website and serve as a valuable reference for any fire department seeking to update its SOGs.[34]

[34] https://www.iafc.org/micrositeVCOSorg/Resources/SOPlist.cfm

In order to formalize operational best practices and communicate clear expectations about what is expected of Fire Department staff, it is important to update each of the Department's SOGs and clearly communicate these revisions to Department staff. In areas where updates to SOGs may require changes to the current bargaining contract, the City should ensure that its needs are adequately represented during labor negotiations.

While a thorough review of policies is advisable, there are some specific areas that could benefit from prioritization. These topics are listed below:

- Health and Safety
    - Respiratory Protection
    - Hazard Communication
    - Lockout/Tagout
    - Blood Borne Pathogens
    - Employee medical screening and assessment
    - Facility Safety
    - Employee Assistance Programs
    - Line of duty death procedures
- Prevention and Education
    - Release of information and open records
    - Use of social media
    - Public Relations
- Code Enforcement and Inspection
    - Authority and codes
    - Plan review standards and procedures
    - Inspection type and frequency
    - Record keeping and follow up
- Emergency Operations
    - Risk management practices for suppression, technical, and special incidents
    - Standardized company operations
    - Tactical and strategic guidelines
    - Communications
    - Special facilities and target hazard response
    - Post incident activities, reviews, analysis
    - Critical incident stress debriefing
    - Disaster response and management
- General Administration
    - SOP development
    - Performance evaluations
    - Harassment and discrimination

Some of these topic areas may be applicable to other City-wide policies and procedures, and should be incorporated by reference as appropriate.

After formally adopting updated SOGs, the Department should review and revise SOGs as necessary in order to ensure consistency with actual practice, rules and regulations articulated by the City and the Department, and compliance with applicable law and best practices.

Inspections and Prevention

As stated previously, the Fire Inspector is a non-union position which works approximately 40 hours a week. Much of the Inspector's time is devoted to conducting inspections at restaurants, clubs, bars, hotels, residential structures, public assembly spaces, service stations, hospitals, and schools. In addition to these activities, the Inspector conducts site plan reviews related to new construction and building remodeling.

The following table illustrates the total amount of inspections-related activity coordinated by the Fire Inspector from FY2012 to FY2016, including correction and violation activities.

Table 50: Fire Inspector Activities, FY2012-FY2016

Fire Inspector Activities	FY2012	FY2013	FY2014	FY2015	FY2016
Complaints Investigated	0	0	0	0	7
Private Homes Inspected	0	0	5	0	0
Talks and Demonstrations	38	29	42	36	42
Buildings Inspected	181	175	304	221	252
Violations Found	425	382	871	476	653
Violations Corrected	308	286	396	314	491
Recalls	133	102	147	125	181
Spot Checks	551	720	1,062	1,029	610
Pyrotechnic Displays Inspected	0	0	4	6	6
School Drills	2	7	0	1	1
Dormitory Drills	28	39	20	21	40
Other Drills	4	6	7	3	16
Citations Issued	3	5	0	2	6
Written Warnings Issued	0	0	0	0	3
Meetings (Hours)	26	12	13	42	50
Fire Lane Tickets Written	28	18	12	30	22
Site Plans Reviewed	18	19	17	7	18
Station Tours Conducted	16	19	18	19	23
Total Activities	**1,761**	**1,819**	**2,918**	**2,332**	**2,421**

These activities represent a sufficient workload for the Fire Inspector; however, inspection activities may be augmented by implementing a company inspection program.

RECOMMENDATION 48: Create a company inspections program to examine commercial properties at least annually.

In practice, the Fire Inspector conducts inspections at approximately 67 liquor license establishments once each year. These inspections are required by the City Code as part of the annual renewal process for liquor licenses. Section 1-10-8 of the City Code authorizes the Fire Department to conduct inspections of buildings in order to determine whether conditions liable to cause fires exist. However, there is no annual requirement for these inspections per the City Code, and in practice facilities and businesses are inspected approximately every three years as the Inspector is available. Because the workload burden for the Fire Inspector position is significant and involves other prevention activities besides inspections, it is difficult for the Inspector to routinely visit non-liquor establishments.

Fire inspections are a critical component of fire prevention activities. Inspections help to ensure that alarms, smoke detectors, and suppression systems are properly configured and maintained in order to minimize risks to life, health, safety, and property. This is particularly important in communities where false alarm and malfunctioning alarm activity is significant, as is the case in Carbondale. Regular inspections help the Fire Department and business owners diagnose false alarm issues and create solutions to reduce the likelihood of future false alarm activity.

In order to increase the frequency of commercial inspections and expand fire prevention activities in the community, it is recommended that the Department create a company inspection program to regularly identify and inspect commercial properties. A company inspection program consists of assigning shift staff to inspection duties and will enhance fire prevention services in several respects.

First, assigning company officers to inspection duties increases staff familiarity with commercial buildings, their locations, layouts, potential hazards, and special considerations that should be taken into account regarding each facility. This is particularly important if a structure fire occurs, because shift staff will have a greater degree of preparedness for dealing with the structure. Second, company inspections can be carried out by shift staff while they are on duty, which creates greater staff time efficiencies and reduces administrative workload for the Fire Inspector. This allows the City to accomplish its fire prevention goals while distributing the workload in a way that benefits the whole Department, from the Fire Inspector to Firefighter staff.

Implementing an effective company inspection program requires careful thought and consideration in order to ensure the Department's resources are deployed effectively. The first step is to identify a list of commercial properties which should be inspected by the City. Although the Department has a historical practice of conducting commercial inspections, no master property list exists which defines properties and businesses eligible for inspection. The second step is to assign properties to each shift for inspection, and to rotate inspection assignments among shifts each year in order to maximize firefighter exposure to various facilities. Third, the Department should ensure that shift staff are properly trained and equipped to conduct inspections and record inspection activities.

Implementing a company inspection program will not only increase the number of commercial inspections being conducted in the City, but improve firefighter knowledge, create opportunities for the Department to build relationships with property owners and tenants, and position Department staff to more effectively identify and remedy the causes of false alarm activity. Additional actions to remedy false alarms are discussed in the following recommendation.

RECOMMENDATION 49: Develop a comprehensive false alarm reduction program and fee structure for multiple false alarms.

As previously stated, the City experiences an unusually high number of unwanted false alarms generated by detection and alarm systems. Over the last five fiscal years, false alarm activity has accounted for 56% of the Department's incident calls, on average. A more detailed examination of frequent calls by type reveals that six of the 10 most frequent calls received by the Department involve false alarms and false calls. The following table illustrates the top 10 most frequent call types received by the Department since FY2012.

Table 51: Fire Department Top 10 Calls by Type, FY2012-FY2016

Alarm Type	Number of Incidents (FY2012-FY2016)	Percent of Total
Smoke detector activation, no fire - unintentional	1,096	23%
Alarm system sounded due to malfunction	387	8%
Smoke detector activation due to malfunction	250	5%
Central station, malicious false alarm	243	5%
Building fire	183	4%
Detector activation, no fire - unintentional	176	4%
Smoke scare, odor of smoke	165	3%
Dumpster or other outside trash receptacle fire	163	3%
Steam, vapor, fog or dust thought to be smoke	143	3%
Alarm system activation, no fire - unintentional	**126**	**3%**

This level of false alarm activity creates a number of challenges for the Department. False alarms result in the deployment of expensive equipment and staff, tying up limited emergency response personnel when a genuine emergency could occur elsewhere. In addition, repeated false alarms undermine the confidence of occupants in the reliability of the system and potentially reduces their response to the alarm.

While the City charges a fee of $100 for repeat false alarms after the fifth false alarm incident in a calendar year, it does not appear to have a comprehensive false alarm reduction program in place. Such programs typically incorporate education and management elements that seek to reduce the cost of dispatching costly apparatus and personnel to false alarm calls, increase the reliability and confidence in the systems and create a financial disincentive for multiple false alarms.

In order to proactively address the prevalence of false alarms in the community, the department should create a comprehensive false alarm reduction program. This program should be modeled on NFPA best practices associated with reducing unwanted alarms. A recent NFPA report titled "Development of a Risk-Based Decision Support Tool to Assist Fire Departments in Managing Unwanted Alarms" describes several strategies for reducing false alarms and case studies of other communities. A copy of this report is attached in the appendix.

In order to effectively address unwanted alarms, the Department should identify trends, patterns, and top offenders and create targeted efforts to combat unwanted alarm activity. One common approach is to establish an alarm system and installer registration ordinance in conjunction with a fee schedule for repeat false alarms. The registration process can be leveraged to educate alarm users regarding ways in which false alarms can be avoided. In engaging with alarm users, the Department should stress that the impact of a false alarm is not just negative for the Fire Department, but also for the occupant who suffers lost time and opportunity for revenue generation.

A second common approach is to modify the Department's response to commercial fire alarms when no additional information is provided that indicates an actual emergency is taking place. For example, the Department may send only one non-emergency response unit to investigate the alarm prior to calling for emergency crews. While this approach would increase response times in the event of an actual emergency, it will save time and mobilization costs each time an alarm turns out to be false or unwanted.

The Department may choose to implement one or both of these strategies in order to mitigate unwanted alarm activities. However, it is important to assess appropriate false alarm fees in addition to registering alarms and dispatching non-emergency units to alarms. The primary goal of assessing a false alarm fee is to encourage improved maintenance of systems and reduce unnecessary response from firefighters, thereby ensuring that response capacity is available for true emergencies. A secondary goal of false alarm fee assessment is the recovery of costs associated with repeatedly deploying resources to the same site unnecessarily.

At the time of this writing, the Department is considering adjusting false alarm fees from $100 to $500 after the fifth false alarm incident. Using the Federal Emergency Management Association's (FEMA) current equipment rate schedule information as well as the entry-level firefighter wage rate, the estimated cost for a typical Fire Department deployment to respond to an alarm call is approximately $560 per hour.

While setting false alarm fees is ultimately a policy decision, it should be noted that achieving full cost recovery on false alarm calls will require a fee of $280 (assuming that any given alarm call takes approximately 30 minutes to investigate and resolve). In addition, it is recommended that the City utilize an escalating fee schedule for multiple false alarms within a given period. An escalating fee rate allows the community to increase penalties for repeat offenders and is designed to maximize deterrence, minimize false alarms, and create a more reliable alarm reporting system. A model ordinance describing alarm supervisory and enforcement activities is attached in the appendix, which includes examples of a multi-tiered false alarm escalation fee.

Training and Safety

As discussed previously, the Department's training activities are currently coordinated by the Assistant Chief/Emergency Management Coordinator. This position schedules training at local and regional facilities for Carbondale Fire staff and coordinates training activities for the Department. While this position leads some training classes, the bulk of the Department's training is expected to be performed by Shift Captains for personnel on their shift. These training activities are recorded in the Department's Firehouse™ software.

Over the last several fiscal years, shift staff have averaged approximately 37 hours of training per person per year. The following table illustrates training hours for Fire Captains, Firefighters, and Probationary officers since FY2012 as documented in the City's records management system.

Table 52: Firefighter, Fire Captain, Probationary Officer Training, FY2012-FY2016

Year	Number of Staff Trained	Total Training Hours	Average Hours per Employee
FY2012	24	937.8	39.1
FY2013	24	919.8	38.3
FY2014	23	581.7	25.3
FY2015	26	867.5	33.4
FY2016	26	1,229.4	47.3
Average	**24.6**	**907.2**	**36.7**

While the Department offers training across a variety of categories, the majority of training opportunities are hands-on, as shown in the following table.

Table 53: Firefighter, Fire Captain, Probationary Officer Training by Type, FY2012-FY2016

Training Hours by Type	FY2012	FY2013	FY2014	FY2015	FY2016
Demonstration	0.0	0.0	0.0	0.0	14.0
Drill, Classroom	4.0	0.0	0.0	11.3	10.5
Fit Test	0.0	315.0	309.8	104.8	277.0
Guideline Training	0.0	0.0	0.0	20.0	0.0
Hands On	0.0	0.0	45.5	7.5	0.0
Lecture	907.0	554.3	171.6	613.0	836.4
Online	0.0	6.0	0.0	0.0	0.0
Run Critique	9.0	6.0	0.0	0.0	0.0
Test	0.0	0.0	26.5	72.5	7.0
Tour	0.0	3.0	0.0	0.0	0.0
Uncategorized	17.8	35.5	28.3	32.5	65.5
Video	0.0	0.0	0.0	6.0	19.0
Total	**937.8**	**919.8**	**581.7**	**867.6**	**1,229.4**

Drill and Classroom training is the second most common training type undertaken by the Department's shift staff. Other training opportunities are more sporadic and offered on an individual basis.

While Shifts A and B have received similar amounts of training over the last several fiscal periods, Shift C recorded additional hands-on training hours in FY2016 compared to Shifts A and B. The following table illustrates historical training opportunities among shifts.

Table 54: Firefighter, Fire Captain, Probationary Officer Training by Shift, FY2012-FY2016

Training by Shift	FY2012	FY2013	FY2014	FY2015	FY2016
Unspecified	126.0	0.0	0.0	0.0	32.0
A	82.8	283.8	89.6	180.5	267.7
B	77.0	207.5	81.8	207.3	305.3
C	176.3	173.0	32.5	202.0	524.5
D (All Shifts)	200.0	0.0	0.0	0.0	0.0
N (No Assigned Shift)	275.8	255.5	377.8	277.8	100.0
Total	**937.9**	**919.8**	**581.7**	**867.6**	**1,229.4**

In the table above, Unspecified training represents a training event for which no shift information was recorded in the Department's records management system. No Assigned Shift indicates training opportunities that were available for special groups, but do not fall across a single shift (such as HAZMAT training).

Differences between shift training are attributable to several factors, including the needs of individuals on each shift, the ability of Captains to provide training, and the lack of a formal training protocol. The following recommendations are intended to help the Department maximize training consistency and frequency, and to improve safety practices.

RECOMMENDATION 50: Develop formal training standards as part of a comprehensive training program.

The Department does not currently identify formal training standards and relies largely on past training expenditures when determining where to allocate future training funds. While the

Department will occasionally utilize grant funding to provide training opportunities, these trainings are often specialized and contingent upon grant awards. Additionally, Department staff report different expectations regarding training responsibilities. These issues result in a need to clearly articulate routine training requirements, utilize a regular schedule, clearly assign responsibilities, and verify that training is consistent in the organization.

In order to standardize training opportunities and bring greater clarity to the training process, the Department should develop formal training standards as part of a comprehensive training program. This program should consist of three parts: identification of training needs and opportunities, scheduling and performing training on a regular basis, and verifying training effectiveness through competency based evaluations and drills.

It is important to involve the Fire Chief and shift Captains in the process of prioritizing the Department's training needs. While training appears to be occurring on a regular basis across a wide variety of topic areas, it is important to consider what routine training should be continually reinforced and what specialized training should be offered to qualified individuals. Additionally, officers and other staff interested in advancement should receive some form of supervisory training and guidance on how to conduct personnel evaluations and handle personnel affairs. It is also advisable for training to specifically target activities and practices that result in increased injury risk in order to minimize workers' compensation claims.

The Insurance Services Office (ISO) recently completed a Public Protection Classification (PPC) survey related to the Carbondale Fire Department. This survey identified several opportunities for improvement regarding the Department's training practices. While ISO is not a fire service standard, it serves as a useful benchmark for establishing training standards when used in conjunction with state and national recommended best practices. Adopting ISO recommendations helps to ensure comprehensive training is provided to Department staff and potentially improves the community's overall ISO score. These benchmarks, when used in conjunction with state and national recommended practices and standards such as the NFPA 1400 series and materials developed by the International Fire Service Training Association, can assist in developing a comprehensive training program.

ISO's training categories for firefighter staff are illustrated in the following table, along with the amount of credit earned by the Fire Department compared to the total credit available.

Table 55: ISO Training Categories, 2016

ISO Category	ISO Recommended Minimum Annual Firefighter Training Hours	Department Credit Earned	ISO Credit Available
Facilities and Use	18	17.50	35.00
Company Training	192	6.52	25.00
Classes for Officers	12	12.00	12.00
New Driver and Operator Training	60	0.67	5.00
Existing Driver and Operator Training	12	1.25	5.00
Training on Hazardous Materials	6	0.67	1.00
Recruit Training	240 (during recruit's first year)	5.00	5.00
Pre-Fire Planning Inspections	Company Inspection Program	8.04	12.00
Total	**540**	**51.65**	**100.00**

Notably, ISO does not identify a minimum number of hours related to Pre-Fire Planning Inspections, but rather recommends that Department staff engage in a company inspection program and awards points based on the Department's inspections practices.

The scores in the table above point to the Department's strengths in providing training for officers and recruits. The Department received full credit in these categories according to ISO's scoring system. However, there are opportunities to increase company trainings, driver and operator trainings, and training related to facilities and inspections. Additional training in these areas should form key components of a robust training program.

Once all of the Department's core training needs have been identified, the Assistant Chief/Emergency Management Coordinator should schedule regular training using an annual training calendar. This calendar should describe the type of training, when the training should occur, who should be responsible for providing the training, and how training hours should be documented. In this way, the Assistant Chief/Emergency Management Coordinator will serve an important coordination role in the Department by scheduling and guiding the Department's training practices.

Wherever feasible, shift Captains should be responsible for providing training to their shift staff. However, because there are three shifts and three shift Captains, there is a need to verify the accuracy and consistency of training provided among all shifts. This prevents discrepancies in training and ensures all staff possess the same knowledge and skills, which minimizes confusion and injury during high-stress and dangerous situations.

To ensure all staff are trained to an acceptable standard, the Assistant Chief/Emergency Management Coordinator should conduct regular training audits by drilling and testing shift staff. In particular, training should be validated through competency-based assessments of firefighter skills throughout the year.

Developing a comprehensive training program presents several advantages to the Department. This program will increase clarity regarding training responsibilities and expectations, and help the Department ensure that training practices are consistent across each shift. Additionally, creating an annual training calendar will assist the Department with budgeting for training activities and provide Department leadership with a tool for articulating minimum training needs. Finally, a comprehensive program can work in concert with other training efforts designed to reduce worker injury, promote occupational safety, and create professional development capacity in the organization.

RECOMMENDATION 51: Create a Fire Department Safety Committee.
The Department does not regularly utilize an employee Safety Committee to provide input regarding safety concerns and address threats to employee safety and well-being. A Safety Committee is a core component of the NFPA 1500 standard, which specifies minimum requirements of occupational safety and health and provides departments with an administrative mechanism for creating occupational health and safety practices.

Safety Committees play a critical role in fire service by functioning as a sounding board for fire staff to identify safety concerns, research and develop recommendations designed to mitigate these safety concerns, and study and review safety issues relevant to the Department's staff. The scope of these issues is typically broad and can encompass all elements of fire service, from routine maintenance practices to deployment on the fire ground. Effective Safety Committees identify leading causes of workplace injuries and recommend strategies for minimizing workplace injury to the Fire Chief.

In order to facilitate a more proactive role for shift staff in the Department's safety practices and procedures, and to facilitate greater compliance with NFPA standard 1500, it is recommended that the Carbondale Fire Department create a Safety Committee consisting of an Assistant Chief as well as representatives of each shift and fire staff who serve at each station. This committee should be tasked with evaluating internal practices and identifying potential threats to employee safety and wellbeing. Its recommendations should be made directly to the Fire Chief.

Additionally, it is important for the Department Safety Committee to regularly interface with the City-wide Workplace Safety Committee described previously in this report.

RECOMMENDATION 52: Implement an annual medical evaluation/physical program.
The current firefighters' union contract in Carbondale contains a provision specifying that union employees may request a physical exam including an electrocardiogram (EKG), blood test, and chest x-ray. This exam must be performed by a Preferred Partner Organization (PPO), and employees are limited to one examination per year. However, wellness checks are not required under the existing union contract.

According to the IAFC, a significant portion of firefighter fatalities are caused by medical emergencies which could potentially be avoided through early detection of underlying conditions and participation in routine medical examinations.[35] To address this, the City should provide for regular, scheduled medical screenings performed by a third party occupational health specialist. The specialist should screen firefighters for physical fitness as well as conditions which could impact staff's ability to perform strenuous tasks involved in firefighting, such as cardiovascular disease, vascular disorders, endocrine and metabolic disorders, and other diseases and disorders which could impact a firefighter's ability to render effective service in an emergency. This evaluation screening should comply with NFPA Standard 1582, which is designed to reduce the risk of occupational morbidity and mortality of firefighters.

In addition, these screenings should include the typical surveillance required by OSHA for employees using respirators such as Self Contained Breathing Apparatus (SCBA). A qualified medical professional is required to review and certify employees as being medically qualified to wear a respirator. These screenings are currently coordinated by the Assistant Chief/Emergency Operations Coordinator but could easily be folded into a regular physical screening program.

While the creation and ongoing maintenance of a medical screening program will present the City with immediate costs, the goal of the program is to reduce employee exposure to injury and the City's costs associated with workers' compensation claims. Because detailed workers' compensation data was not readily available, it is difficult to estimate the potential cost savings a proactive screening program will have on the City's budget; however, as a best practice, proactive screenings will help the Department avoid assigning firefighters to strenuous activities which could result in medical emergencies. These wellness programs are key to ensuring that firefighter staff are physically capable of performing in high-pressure situations which require tremendous physical exertion in order to effectively fight fires and save lives.

[35] http://www.interagencyboard.org/system/files/resources/FD's%20Guide%20to%20Implementing%20NFPA%201582.pdf

Vehicles and Equipment

The Department currently operates a total 18 apparatus, vehicles, and trailers related to firefighting and fire prevention activity. Of these, six apparatus are used in primary and backup response roles, as illustrated in the following table.

Table 56: Fire Department Apparatus Fleet, 2016

Year Manufactured	Description	Assigned To	Role
1985	Grumman Aerial Platform	Station 1	Backup Ladder
1994	Quality Pumper	Station 2	Backup Response
1996	Quality Pumper	Station 1	Backup Response
2001	Pierce Quint	Station 2	Primary Response
2014	Toyne Pumper	Station 1	Primary Response
2015	Freightliner M2 Rescue Truck	Station 2	Primary Response

The median age of the Department's large response apparatus is 17.5 years. The NFPA 1911 standard provides requirements for inspecting, maintaining, and testing in-service fire apparatus, including guidelines for retiring these vehicles. This standard recommends apparatus remain in front-line service for 15 years and then in auxiliary/backup service for an additional five to 10 years, for a total service lifespan of 25 years. According to this standard, the Pierce Quint is eligible for immediate transition into a backup service role, which would require replacement with a new apparatus. Additionally, the Grumman Aerial Platform is 31 years old and exceeds the NFPA total lifespan standard, and both Quality Pumper apparatus will exceed the recommended 25-year lifespan within the next three to four years.

The following recommendations are intended to help the Department maximize the efficiency and effectiveness of future vehicle and apparatus procurement.

RECOMMENDATION 53: Budget for capital vehicle replacement using the regular CIP process.

The Carbondale Fire Department, like other City departments, does not proactively budget for capital vehicle replacement. In recent years, apparatus replacements have been secured in large part with the use of grant funds. While this practice shows dedication to conservative financial management, it is not reasonable to expect that the Department will be able to continually replace fleet assets by utilizing external funding.

In order to maximize available funding for replacement apparatus in the future, the Department should prioritize replacement utilizing the Capital Improvement Process as described in Recommendation 3. Replacement apparatus should effectively fulfill the Department's mission, goals, and objectives and incorporate employee input.

While the NFPA 1911 standard is useful for establishing broad guidelines about the useful lifespan of fire apparatus, age-related replacement schedules do not always reflect condition factors that affect when a vehicle needs to be replaced. To address this, the Department should utilize condition and scoring assessments as described in the Public Works section of this report. Due to the number of aging apparatus in the Department's fleet, it is likely that the first three items to be replaced will include the 1985 Grumman Aerial, the 1994 Quality Pumper, and the 1996 Quality Pumper. Replacing these assets will require a significant amount of capital investment. The following table illustrates the initial nominal cost of each of these vehicles, compared to 2016 inflation-adjusted dollars.[36]

Table 57: Aging Apparatus Costs, 2016

Vehicle Year	Description	Initial Cost (Nominal Dollars)	Inflation-Adjusted Cost (2016 Dollars)
1985	Grumman Aerial Platform	$403,430	$902,270
1994	Quality Pumper	$222,988	$362,088
1996	Quality Pumper	$232,338	$356,428
Total		**$858,756**	**$1,620,785**

While the ultimate cost of replacement apparatus will depend on what type of apparatus is purchased, the manufacturer, and how the apparatus is sourced, the table above demonstrates the effect of inflationary pressure on fire apparatus prices. As the Department moves forward with budgeting for apparatus replacement as part of the annual CIP process, it will be important to set aside sufficient funding to acquire the appropriate equipment. Where possible, the Department should continue to supplement apparatus replacement funds with grant awards and other proactive financing solutions.

RECOMMENDATION 54: Solicit input from employees regarding functionality and operability of vehicles and equipment.

Department staff have not historically been involved in the vehicle and equipment procurement process. In previous years, this process was the responsibility of the Fire Chief and decisions were made at the Chief's sole discretion. While the Fire Chief unmistakably plays a leadership role in recommending budgetary and procurement alternatives to the City Manager, it is recommended that future procurement decisions involve firefighter staff to a greater degree.

Specifically, the Fire Chief should solicit feedback from shift staff regarding their experience with the Department's equipment, including its overall reliability, ease of use, and whether the equipment has or lacks features that simplify firefighting tasks. This feedback provides the Chief with experiential information that is otherwise difficult to come by and can provide valuable guidance during the procurement process. As procurement decisions are made and various products are analyzed, the Chief will be able to determine whether new products offer the features, capabilities, and functions most needed by firefighters.

Additionally, providing firefighters with an opportunity to give feedback on their equipment creates opportunities for staff to participate in major departmental decisions. If staff identify with and appreciate the equipment they are issued, they are generally more disposed to properly care for and service that equipment, thereby extending its life. Consequently, soliciting feedback from and engaging staff in developing specifications regarding procurement decisions offers a low-risk, high-reward way of determining the organization's top needs and helping employees feel included in the procurement process.

[36] Conversion from nominal dollars to 2016 dollars was accomplished using the Bureau of Labor Statistics CPI Inflation Calculator, available at: http://data.bls.gov/cgi-bin/cpicalc.pl.

Public Works Department

The Carbondale Public Works Department performs many functions related to managing, maintaining, and improving the City's infrastructure and assets, including City buildings and facilities, cemeteries, fleet and equipment, trees, streets, stormwater conveyances, and water and wastewater utilities. Other priority functions include coordinating the City's CIP and providing solid waste collection, utility location, and engineering review services.

The Public Works Department consists of 20 budgeted divisions which encompass all of these functional responsibilities. Across all divisions, the FY2017 Public Works budget includes over 91 FTEs, approximately $14 million in operating expenditures, and approximately $10 million in capital improvement program expenditures. The following organizational chart illustrates current Public Works divisions as well as budgeted FTEs in each division for FY2017. Divisions in the following chart have been grouped by functional similarity using dotted lines.

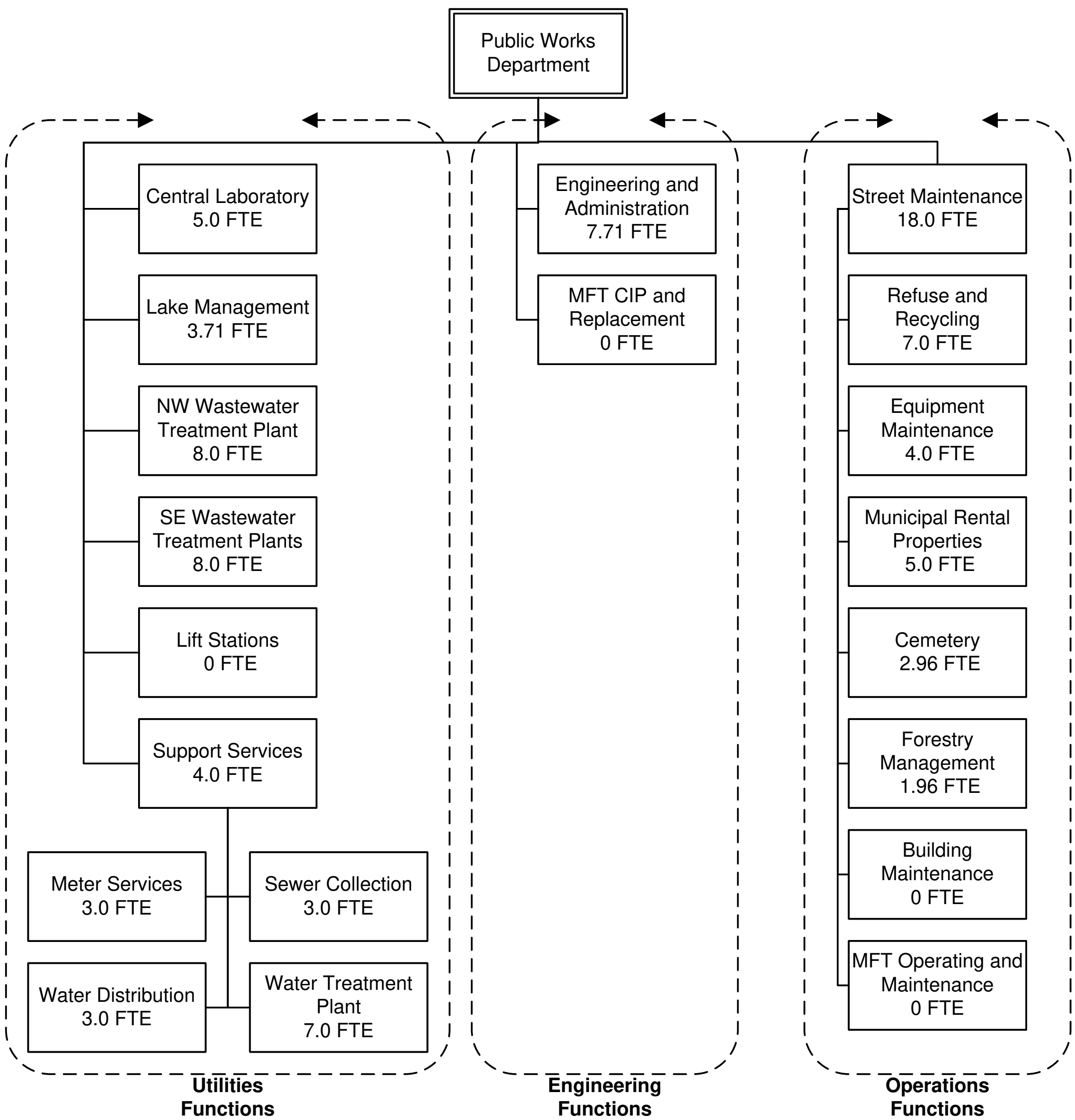

Figure 20: Public Works Department Division Structure, FY2017

It is important to note that these functional groups (Operations, Engineering, and Utilities) are not formal distinctions utilized by the Department. Rather, due to the number of divisions and the complexity of reporting relationships, these broad functional categories represent an effort to organize the Department's existing structures in a more coherent manner. The remainder of this section will discuss the divisions, staffing, and structure within each functional area in greater detail.

Operations Functions

Operations functions performed by the Department include traditional Public Works activities such as building and facilities maintenance, equipment maintenance, forestry, solid waste collection, and street maintenance. As illustrated in the previous figure, six divisions reasonably fall within this functional category, including Street Maintenance, Refuse and Recycling, Equipment Maintenance, Municipal Rental Properties, Cemetery, and Forestry. These divisions are staffed by a total of 37.92 FTEs. An additional two divisions, Building Maintenance and MFT Operating and Maintenance, provide funding for various operations but do not include authorized staff.

Personnel from each of these divisions are supervised by the Maintenance and Environmental Services (MES) Manager. This position is budgeted in the Streets Maintenance Division and supervises nine direct reports. The following organizational chart illustrates these staffing relationships. Staff in each budgeted division are grouped together using dotted lines.

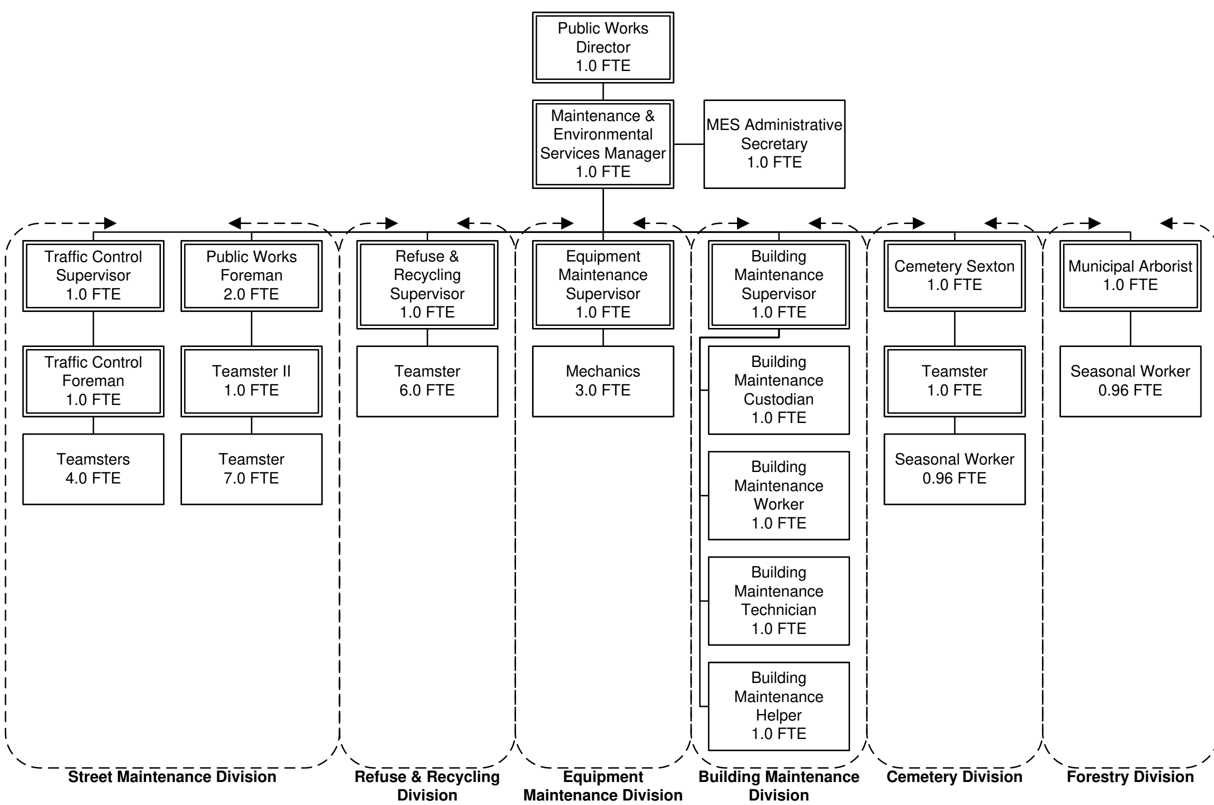

Figure 21: Operations Functions - Staffing Structure, FY2017

The MES Manager is responsible for coordinating workflow and overseeing personnel across each of these divisions. As illustrated above, one manager from the Municipal Rental Properties, Cemetery, Equipment Maintenance, Forestry, and Refuse and Recycling divisions reports to the

MES Manager. However, three personnel from the Street Maintenance Division report directly to the MES Manager, including the Traffic Control Supervisor and two Public Works Foremen. In addition to these supervisory duties, the MES Manager oversees the use of Motor Fuels Tax funds and coordinates contracts for pavement maintenance and materials.

The following sections describe each of these divisions in greater detail, including their primary activities and staffing levels.

Street Maintenance

The mission of the Street Maintenance Division is to maintain public streets, alleyways, sidewalks, stormwater drainage facilities, parking lots, and other public right-of-way infrastructure. The Division provides an array of services from concrete work to asphalt patching, repair of stormwater pipes and drainage ditches, street sweeping activities, and traffic control. Seasonal activities include snow plowing streets and parking lots.

Traffic control personnel are a component of the Street Maintenance Division and maintain the City's traffic signals, right-of-way signage, street sweeping, pavement markings, and perform parking meter maintenance. Traffic control services are also provided for City events and parades, such as the Keep Carbondale Beautiful Spring Cleanup and the Lights Fantastic Parade. These personnel utilize a bucket truck to maintain streetlights owned by the City and work closely with the Forestry Division to conduct trimming operations on large trees. In addition to maintaining City traffic infrastructure, Traffic Control staff provide fee-based maintenance services for signals owned by the State of Illinois.

Notably, the Street Maintenance Division serves as a labor reserve for other Public Works divisions that require labor assistance in the event of leave or other absence, such as the Refuse and Recycling Division, Cemeteries, and Forestry. Over the last five fiscal years, Street Maintenance personnel have provided an average of 3,120 hours per year to other divisions. When Street Maintenance crews assist enterprise fund divisions, such as Refuse and Recycling and Water Distribution, the corresponding enterprise fund reimburses the General Fund for these labor expenses. This reimbursement also occurs for enterprise-related activities conducted by the Streets Maintenance Division, such as regularly emptying public trash receptacles.

The Streets Division consists of 18 FTEs including the Maintenance and Environmental Services Manager and an Administrative Secretary. Six FTEs are dedicated to Traffic Control, including a Traffic Control Supervisor, Traffic Control Foreman, and four Teamsters, while the remaining employees serve on streets crews led by two Public Works Foremen. Importantly, the Traffic Control Supervisor provides backup support for the Maintenance and Environmental Services Director and coordinates operational activities in the MES Director's absence.

Refuse and Recycling

The Refuse and Recycling Division provides solid waste collection services to residential customers in the City of Carbondale. Collection is provided on a weekly basis and includes household solid waste disposal, bulk item pickup, and recycling collection services. The Division also operates three drop-off recycling centers for Carbondale residents. Collection services are provided to approximately 4,000 stops across the City using four weekly routes, which occur Monday through Thursday. Collection is accomplished manually using two rear-loading garbage trucks and a split-body recycling truck.

In addition to these regular collections, residents may schedule collection of special items such as landscape debris and yard waste. These items are collected on Wednesdays and Fridays and require the purchase of special trash stickers available at local retailers and City Hall. The stickers are available for $1.00 each and each extra bag/bundle must be stickered. Stickers are also applied to other special collection items, such as appliances (requires 10 stickers for non-refrigerated appliances and 20 stickers for refrigerators and freezers) and automobile tires (requires 4 stickers for tires without rims and 6 stickers for tires on rims). The Refuse and Recycling Division also provides curbside leaf collection services for $25 per leaf pile during November and December and $35 per leaf pile during other months.

The City provides limited commercial refuse collection to City-owned facilities and dumpsters located in enclosures in downtown parking lots. In total, this program serves 44 commercial customers. Approximately 80% of these customers consist of City-owned facilities and other public organizations such as the Library and Park District, while the other 20% consists of churches and not-for-profit businesses. In 2011, the City ceased providing commercial refuse to new non-governmental customers, but continues to serve existing commercial customers. All other commercial refuse customers in the City are required to utilize private haulers for solid waste services.

This Division is led by the Refuse and Recycling Supervisor, who oversees a staff of six Teamsters and coordinates collection activities.

Equipment Maintenance

The Equipment Maintenance Division conducts repair and maintenance activities on all City-owned vehicle and equipment assets, including automobiles and firefighting apparatus, garbage and utility trucks, mowing equipment, lift station equipment, and generators. In total, this represents approximately 299 assets across all departments. Maintenance activities include routine preventative maintenance checks, fabrication and rebuilding, custom configuration for Police vehicles, and other major repairs. This Division also performs fee-based maintenance on an additional 12 trucks and apparatus owned by outside agencies, including the Makanda Township and Murphysboro Fire Departments. The Equipment Maintenance Division also runs and maintains the City's fuel island.

The Division is staffed by an Equipment Maintenance Supervisor who oversees three full-time Technicians. All Technicians are Automotive Service Excellence (ASE) certified for automotive and heavy duty truck work.

Municipal Rental Properties

The Municipal Rental Properties Division is responsible for maintaining and operating City-owned buildings and facilities, including those available for rental by the public. The Division engages in regular facilities maintenance and repair activities, including preventative maintenance; replacing overhead lamps and ballasts; Heating, Ventilation, and Air Conditioning (HVAC) service; plumbing and electrical installation and repair; painting; and general carpentry work. Other responsibilities include ordering consumables such as lightbulbs and paper products, monitoring electric and gas utility consumption across City facilities, and coordinating service contracts related to annual inspections and repairs that exceed staff capabilities.

This Division also provides custodial support at the Police station and orders custodial supplies for the Police Department. Personnel at other City facilities accomplish custodial tasks using existing staff; for example, firefighters are assigned custodial work at fire stations and water/wastewater shift staff perform custodial work at water and wastewater facilities. Additionally, the City Hall/Civic Center has its own dedicated custodial crew, which is described in greater detail in the Administrative Services section of this report.

The Municipal Rental Properties Division consists of five FTEs and is led by the Building Maintenance Supervisor. This position historically reported to the Public Works Director, but was transferred to the MES Manager during the current fiscal year. This transfer occurred in part because the Public Works Director oversees a large number of direct reports and could not effectively supervise this Division. Additionally, the transfer groups Municipal Rental Properties with other maintenance-related divisions supervised by the MES Manager.

Cemetery

The Cemetery Division provides care and maintenance for the City's two cemeteries: Woodlawn Cemetery and Oakland Cemetery. Woodlawn Cemetery is registered with the National Register of Historic places and is recognized as the site of the first Memorial Day service in 1866. This cemetery no longer accepts burials, and activity is limited to regular grounds maintenance and landscaping over 2.6 acres. Oakland Cemetery is an active cemetery and was recently augmented with an additional 45.8 acres of land in FY2016, bringing the total size of the cemetery to approximately 98.7 acres. Public Works responsibilities at this cemetery include selling burial plots, conducting internments, landscaping, and grounds maintenance.

The Cemetery Division is led by a Cemetery Sexton, who is licensed as a Cemetery Manager by the Illinois Department of Financial and Professional Regulation. This position is responsible for coordinating cemetery activities, recordkeeping, and overseeing staff including a full-time Teamster and two seasonal employees. These staff assist with burial and internment activities as well as grounds maintenance and landscaping.

Notably, the Carbondale Public Works maintains a working relationship with the Jackson County Probation Department to utilize work crews for mowing and trimming activities at the City's cemeteries. However, this work does not occur on a regular basis and is dependent on the availability of workers who choose to engage in community service at the City's cemeteries. As such, the Department does not rely on the availability of these workers for operational support.

Forestry Management

The Forestry Management Division is tasked with the preservation and enhancement of the City's trees, as well as maintaining vegetation and landscaping in the City's rights-of-way and other public spaces. This includes trimming low-hanging and obstructing limbs, planting new trees, mowing and planting in municipal parking lots and beautification areas, monitoring trees for Emerald Ash Borer and other infestations, and assisting with tree removal efforts. The Division also runs the City's Christmas tree recycling program.

The Division is staffed by one full-time Municipal Arborist and two seasonal employees.

Engineering Functions

Engineering functions performed by the Department include coordinating the City's five-year CIP, providing engineering design work for City-related construction projects, maintaining records of utility locations and other plans, locating and acquiring rights-of-way, and working with outside consultants and contractors on capital projects. Additionally, Engineering staff conduct reviews of site plans and subdivisions and draw annexation plats. These functions are carried out by the Engineering and Administration Division, which consists of 7.71 budgeted FTEs as shown in the following organizational chart.

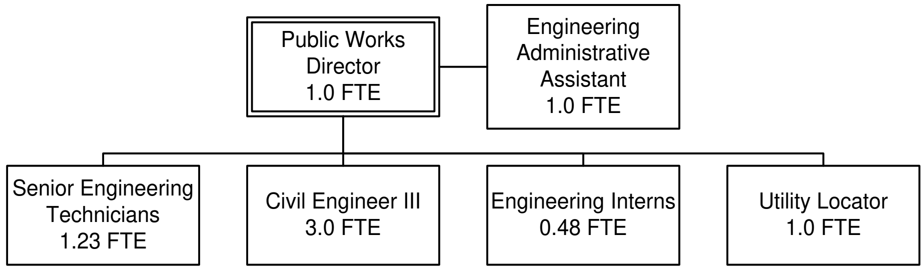

Figure 22: Engineering Functions - Staffing Structure, FY2017

The Public Works Director position is budgeted out of the Engineering and Administration Division. The remaining 6.71 FTEs in this Division report directly to the Public Works Director.

The Public Works Director is responsible for overseeing all of the Department's divisions and coordinating the Department's annual budget process, as well as guiding the development of the CIP. Due to a large number of direct reports, the Public Works Director frequently engages in day-to-day staff management activities.

The Engineering Administrative Assistant provides clerical support and maintains paper files related to engineering projects. In addition, three Civil Engineering III positions provide expertise in transportation projects (such as roads and bridges), water resources, and general engineering services. The Senior Engineering Technician serves primarily as a designer for engineering projects. The Division also includes an authorized Utility Locator position who provides support for locating City assets in rights-of-way.

In addition to these full-time staff, the City employs three temporary Engineering Interns to assist with various projects, such as creating a streetlight inventory and providing support to other Engineering staff.

Utilities Functions

The Department's utilities functions are concentrated in two general areas: water treatment and distribution and wastewater treatment and collection. Water treatment and distribution functions include activities which provide clean drinking water for Carbondale residents, such as maintaining the Cedar Lake Reservoir, conveying water to the water treatment plant, treating raw water, and distributing water through mains to customers throughout the City. Conversely, wastewater collection includes the transportation of used water and sewage waste to the City's wastewater treatment plants for proper treatment and processing. These functions necessarily involve constructing and maintaining large infrastructure networks dedicated to transporting water and sewage reliably and safely.

Utilities functions are carried out by ten divisions, including Central Laboratory, Lake Management, Meter Services, Sewer Collection, Support Services, Northwest Wastewater Treatment Plant, Southeast Wastewater Treatment Plant, Water Distribution, Water Treatment Plant, and Lift Stations. Of these, the Lift Stations Division does not include authorized staff but provides funding for lift station maintenance and operations. In total, these divisions are staffed by 44.71 FTEs. Five of these FTEs report to the Public Works Director. The current staffing structure of utilities-related divisions is illustrated in the following figure.

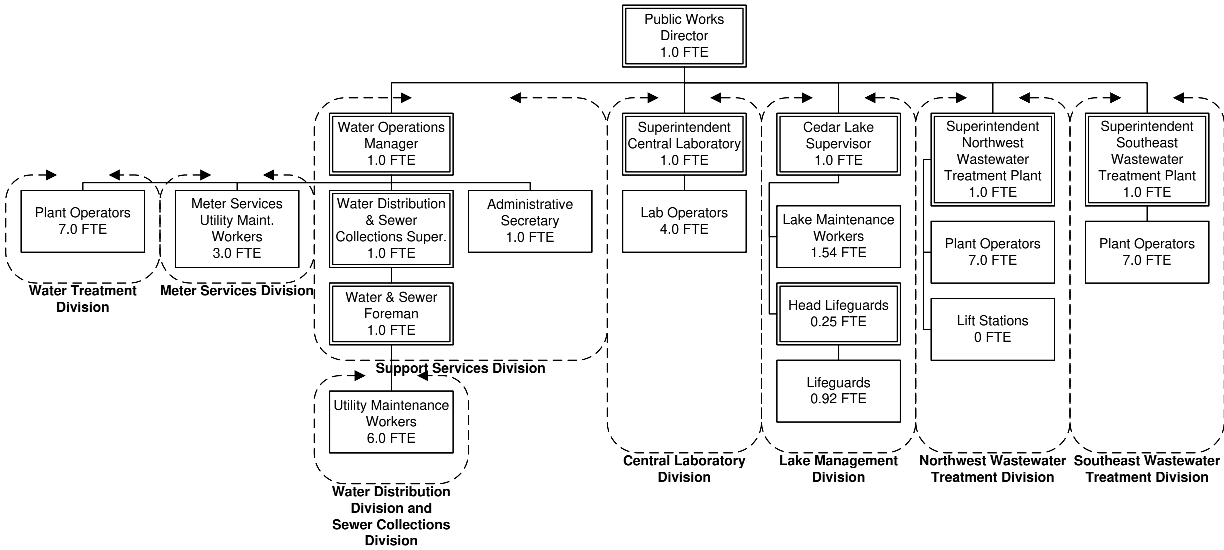

Figure 23: Utilities Functions - Staffing Structure, FY2017

The following sections provide more detailed information on the various utilities-related divisions in Public Works.

Central Laboratory

The Central Laboratory Division provides diagnostic laboratory services for water and wastewater activities as well as other outside agencies, including cities and towns within 100 miles of Carbondale. The Division works closely with the Water Treatment Plant and Wastewater Treatment Plants to perform a wide array of tests mandated by the EPA. Drinking water tests include total organic carbon, lead, copper, fluoride, nitrates, nitrites, sulfate, chloride, and phosphorus testing. Tests performed on wastewater discharge include total nitrogen and phosphorus, oxygen reduction potential, and zinc testing. The lab also conducts lead and copper tests as needed and performs on-site testing when main breaks occur to determine whether boil orders should be issued to the community.

Central Laboratory also provides these tests on a fee basis to local agencies. In FY2016, approximately 12,500 tests were performed for third parties which generated over $172,000 in fee revenue.

Staff at Central Laboratory are led by the Superintendent of Central Laboratory, who supervises four Lab Operator positions. These staff are divided into two teams: the first engages in routine analysis of water and wastewater quality, and the second performs more rigorous analytical tests using advanced equipment, such as the Division's mass spectrometer.

Lake Management

The Lake Management Division is responsible for preserving and protecting the Cedar Lake Reservoir and supervising recreational use of the Cedar Lake watershed. Cedar Lake is a 1,750 acre, man-made reservoir which was built in 1974 as a result of damming the Cedar Creek. The reservoir serves as a primary source of fresh water for Carbondale residents and is bordered by a State park on its south side and approximately 1,500 acres of City-owned land on its north side. Cedar Lake features a number of recreational amenities, including 14 miles of hiking trails, fishing opportunities, seasonal bow hunting, and limited boating opportunities. In addition, the City owns and operates Poplar Camp Beach on the shores of Cedar Lake from Memorial Day to Labor Day each year.

This Division is led by the Cedar Lake Supervisor, who is responsible for protecting the watershed and the City's water intake and pumping station, performing regular dam inspections, supervising public use of the reservoir, managing the City's boat launch, and performing maintenance on restrooms and picnic tables located on-site.

The Cedar Lake Supervisor supervises approximately four seasonal maintenance workers to perform mowing, painting, and other routine maintenance tasks. These workers are employed from May to October to coincide with the reservoir's active season. In addition to maintenance workers, the Cedar Lake Supervisor oversees approximately 12 lifeguards to supervise recreational swimming opportunities at Poplar Beach. These lifeguards are employed from May to September each year.

Meter Services

The Meter Services Division conducts monthly meter reading activities on all water meters in the City of Carbondale. Division staff also inspect and repair water meters and meter pits in need of maintenance services.

This Division is staffed by three full-time Utility Maintenance Workers who report to the Water Operations Manager.

Sewer Collection

The Sewer Collection Division is responsible for maintaining the integrity of the City's sanitary sewer system and wastewater collections. This includes repair and maintenance activities on approximately 130 miles of sewer mains, installing new sewer service, clearing sewer main stoppages, locating sewer infrastructure for excavators, jet cleaning sewers, repairing damaged mains and manholes, and installing new sewer service. Additionally, the Division inspects an average of 4,470 lineal feet of sewer lines using televised camera systems each year.

This Division is staffed by three full-time Utility Maintenance Workers who report to the Water & Sewer Foreman.

Support Services

The Support Services Division is overseen by the Water Operations Manager and is responsible for providing administrative supervision and support to the Water Treatment Plant, Water Distribution, Meter Services, and Sewer Collection divisions.

This Division is staffed by four FTEs including the Water Operations Manager and includes the Water Distribution & Sewer Collections Superintendent, the Water & Sewer Foreman, and the Administrative Secretary.

Northwest Wastewater Treatment Plant

The Northwest Wastewater Treatment Plant is responsible for treating wastewater from the west side of Carbondale, including industrial waste from Bicentennial Industrial Park and Carbondale Industrial Park. The plant includes an industrial pre-treatment facility which discharges into the domestic treatment facility. The Northwest Treatment Plant treats approximately 1.7 million gallons of sewage each day and discharges effluent into the Big Muddy River.

The plant is supervised by the Northwest Wastewater Treatment Plant Superintendent and is staffed by seven full-time Plant Operators. These operators monitor plant activities on a 24-hour basis seven days per week.

Southeast Wastewater Treatment Plant

The Southeast Wastewater Treatment Plant is responsible for treating wastewater from Carbondale's central and eastern regions, including the Southern Illinois University-Carbondale campus. This plant treats approximately 3.4 million gallons of sewage each day and features an oxidation ditch for processing activated sludge as well as a 22-million-gallon overflow lagoon. The plant is situated on 260 acres of City-owned land and provides treated sludge to neighboring farm operations for land application as a soil conditioner. The plant was last renovated in 2006.

The plant is supervised by the Southeast Wastewater Treatment Plant Superintendent and is staffed by seven full-time Plant Operators. These operators monitor plant activities on a 24-hour basis seven days per week.

Water Distribution

Water Distribution staff are responsible for maintaining water-related infrastructure which transports treated water from the Water Treatment Plant to Carbondale residents. This includes approximately 130 miles of water mains, installing and removing water service, and replacing water meters. Other tasks include repairing main breaks, locating mains and water service for excavators, replacing hydrants and valves, and restoring water-related job sites after construction activity.

This Division is staffed by three full-time Utility Maintenance Workers who report to the Water & Sewer Foreman.

Water Treatment Plant

The Water Treatment Plant Division is tasked with providing clean drinking water for Carbondale residents. This Division includes approximately seven full-time Plant Operators consisting of four regular operators, two maintenance operators, and a staff person who fills in on swing shifts. These positions report directly to the Water Operations Manager.

Regular operators are primarily involved in monitoring the plant's systems and performing bench tests every two hours for water quality, including pH and chlorine tests. Maintenance operators are tasked with routine and preventative equipment maintenance in the Water Treatment Plant, Central Lab, and remote facilities including water towers and pumping stations. These staff rotate shifts and occupy the Water Treatment Plant on a 24-hour schedule as required by state regulations.

Public Works Staffing and Budget

Public Works Staffing

The following table illustrates the department's FTE staffing levels over the last five fiscal periods, along with the percentage change in staffing from FY2013 Actual positions to Budgeted FY2017 positions.

Table 58: Public Works Staffing Trends, FY2013-FY2017

Division	Actual FY2013	Actual FY2014	Actual FY2015	Estimated FY2016	Budgeted FY2017	Percent Change
Municipal Rental Properties	5.05	5	5	5	5	-1%
Cemetery	2.94	3.35	2.96	2.96	2.96	1%
Equipment Maintenance	4	4	4	4	4	0%
Forestry Management	1.8	1.46	1.96	1.96	1.96	9%
Refuse and Recycling Services	6.15	6.68	7	7	7	14%
Street Maintenance	17.73	18	18	18	18	2%
Operations Functions Total	***37.67***	***38.49***	***38.92***	***38.92***	***38.92***	***3%***
Engineering and Administration	5.04	4.9	6.17	6.23	7.71	53%
Engineering Functions Total	***5.04***	***4.9***	***6.17***	***6.23***	***7.71***	***53%***
Central Laboratory	4.56	4.68	4.68	4.6	5	10%
Lake Management	3.79	3.61	3.61	3.7	3.71	-2%
Meter Services	3.19	3.19	2.83	2.76	3	-6%
Sewer Collection	3	3	3	3	3	0%
Support Services	3	3	3	2.76	4	33%
Northwest Wastewater Treatment Plant	8.11	8.04	8	8	8	-1%
Southeast Wastewater Treatment Plant	8.13	8	8	8.13	8	-2%
Water Distribution	2.8	2.7	3	2.81	3	7%
Water Treatment Plant	7	6.9	7	7	7	0%
Utilities Functions Total	***43.58***	***43.12***	***43.12***	***42.76***	***44.71***	***3%***
Total Public Works Staffing	**86.29**	**86.51**	**88.21**	**87.91**	**91.34**	**6%**

Budgeted staffing levels across Public Works have grown modestly compared to FY2013 actuals, with most growth occurring in Engineering and Administration (2.67 FTE), Support Services (1.0 FTE), and Refuse and Recycling (0.85 FTE). Increases in Engineering staff are attributable to the creation of three positions: an additional Civil Engineer in FY2015 to provide staff support for water and sewer infrastructure design and construction, a Utility Locator position in FY2016 to perform utility locates, and the use of summer interns in FY2017. Recent staff increases in Support Services are due to the creation of a Water and Sewer Foreman position to oversee water distribution and sewer collections crews. The apparent staffing increase in Refuse and Recycling reflects a variance between budgeted an actual staffing levels; while the City has consistently budgeted 7.0 FTEs in this Division, actual staffing in previous years was lower due to absences and turnover.

Public Works Budget

The Public Works Department is supported by several funds, including the General Fund, Motor Fuel Tax Fund, Waterworks and Sewerage Fund, Solid Waste Management Fund, and Rental Properties Fund. The General Fund supports eight departments and 25 divisions primarily through municipal sales, service, and property taxes. Of the divisions supported by the General Fund, seven are located in the Public Works Department.

The Motor Fuel Tax (MFT) Fund is a special revenue fund which accounts for motor fuel allocations from the State of Illinois. These funds must be used for street maintenance, construction, and traffic infrastructure expenses. The City has created two budgetary divisions to control MFT Funds; these divisions do not support personal services costs but provide funding for street and traffic-related projects, supplies, and services. The MES Manager is responsible for expenses attributable to these funds.

The Waterworks and Sewerage Fund is an enterprise fund which accounts for water and sewer utility revenue and expenditures. Revenue sources include service charges and fees, such as monthly water and sewer rates, tap fees, reconnect fees, and late payment fees. This fund supports the operations of 10 Public Works divisions, and transfers from this fund help support capital improvements related to water and sewer infrastructure.

The Solid Waste Management Fund is administered by Public Works and accounts for revenues and expenditures associated with the City's refuse collection and recycling programs. Revenues are derived from customer service fees, landscape waste and excess garbage fees, and recycling assessment fees. This fund supports the Refuse and Recycling Division in Public Works.

The Rental Properties Fund accounts for rental income generated by City-owned properties. This fund supports the Municipal Rental Properties Division in public works, which operates in conjunction with the Building Maintenance Division (a General Fund Division) to maintain and repair City facilities.

The following table illustrates the relationship between these funds and the Public Works Department's divisions.

Table 59: Public Works Supporting Funds and Divisions, FY2017

Supporting Fund	Public Works Division
General Fund	Engineering and Administration
	Equipment Maintenance
	Building Maintenance
	Street Maintenance
	Cemetery
	Forestry Management
Motor Fuels Tax Fund	MFT Operating & Materials
	MFT CIP and Replacement
Waterworks and Sewerage Fund	Support Services
	Lake Management
	Central Laboratory
	Water Treatment Plant
	Water Distribution
	Meter Services

Supporting Fund	Public Works Division
	Sewer Collection
	Southeast Wastewater Treatment Plant
	Northwest Wastewater Treatment Plant
	Sewage Lift Stations
Solid Waste Management Fund	Refuse and Recycling Services
Municipal Rental Properties Fund	Municipal Rental Properties

Public Works Expenditures

Approximately 62% of the Department's budgeted expenditures are related to the Waterworks and Sewerage Fund, as illustrated in the following figure.

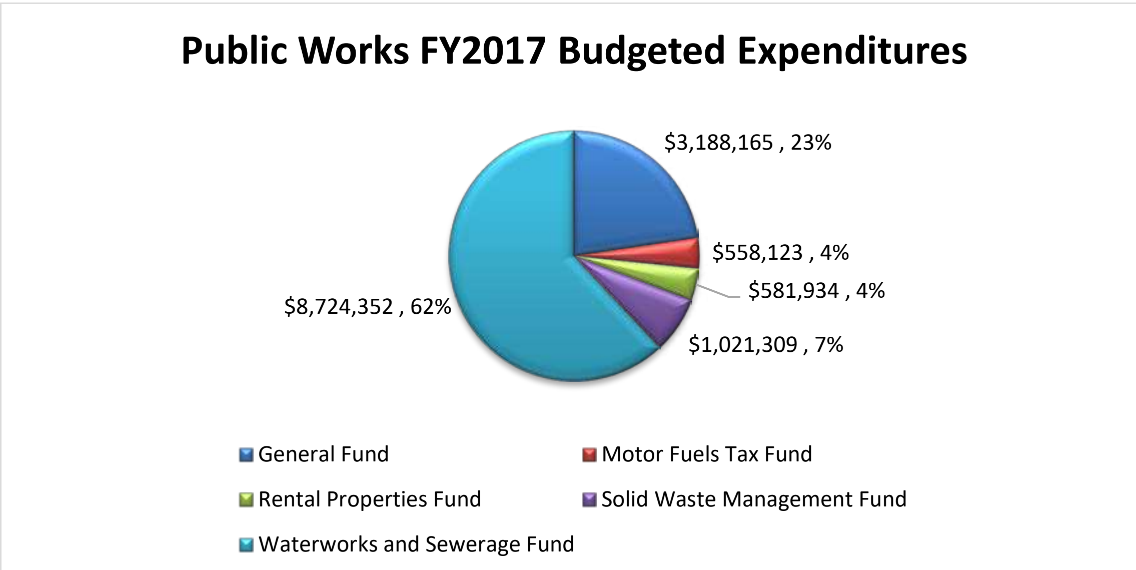

Figure 24: Public Works Budgeted Expenditures, FY2013-FY2017

Budgeted FY2017 Departmental expenditures are approximately 18% greater than FY2013 actual expenditures, as illustrated by the following table.

Table 60: Public Works Expenditures by Major Category, FY2013-FY2017

Public Works Budget Category	Actual FY2013	Actual FY2014	Actual FY2015	Estimated FY2016	Budgeted FY2017	Percent Change
Capital Outlay	$437,512	$326,598	$679,473	$832,042	$554,400	27%
Community Investment Program	$0	$0	$0	$1,028,480	$317,920	-
Contingencies	$0	$0	$0	$0	$26,907	-
Debt Service	$100,292	$132,012	$125,683	$98,701	$92,581	-8%
Depreciation Expense	$2,069,930	$2,123,990	$2,230,223	$2,123,921	$2,123,921	3%
Direct Operating Charges & Services	$3,094,813	$3,460,189	$3,863,902	$3,693,555	$4,106,436	33%
Expenditures Transferred Out	($636,681)	($918,127)	($1,188,699)	($1,030,607)	($1,255,711)	97%
Non-Operating Charges	$100,376	$69,238	$68,903	$44,972	$62,700	-38%

Public Works Budget Category	Actual FY2013	Actual FY2014	Actual FY2015	Estimated FY2016	Budgeted FY2017	Percent Change
Personal Services	$6,027,291	$6,114,004	$6,257,461	$6,350,903	$6,753,003	12%
Services and Charges Transferred In	$776,580	$945,071	$1,159,212	$1,060,659	$1,291,726	66%
Total Public Works Expenditures	**$11,970,113**	**$12,252,975**	**$13,196,158**	**$14,202,626**	**$14,073,883**	**18%**

The largest dollar increase among these categories has occurred in Direct Operating Charges & services, which includes utilities costs (such as electricity and gasoline) as well as supplies and outside services. While the budgeted amount for FY2017 is approximately $4.1 million, it should be noted that actuals for FY2013-FY2016 average approximately $3.5 million.

Public Works Revenues

The Public Works Department generates revenue from a variety of sources, such as the sale of cemetery plots, mechanical services provided to third-parties, and utility fees for water and sewer services. The following table illustrates revenue patterns in each of these major areas over the last several fiscal periods, along with the percentage change since FY2013. Importantly, the table below does not illustrate other revenues (such as taxes) which may be proportionally allocated to Public Works, but instead depicts revenues which Public Works directly generates.

Table 61: Public Works Revenue by Fund, FY2013-FY2017

Public Works Revenues	Actual FY2013	Actual FY2014	Actual FY2015	Estimated FY2016	Budgeted FY2017	Percent Change
Sale of Printed Material	$1,258	$1,175	$4,675	$3,975	$3,975	216%
Sale of Cemetery Lots	$22,500	$18,600	$29,826	$14,488	$18,000	-20%
Grave Openings - Operating	$27,581	$22,369	$21,938	$18,563	$23,000	-17%
Material & Labor Sales	$40,057	$14,658	$31,324	$10,844	$15,000	-63%
Utility Permit Fees	$0	$0	$34,304	$37,873	$34,304	-
Grave Openings - Perpetual Care	$9,194	$7,456	$7,313	$7,500	$7,500	-18%
General Fund Service Charges Total	***$100,590***	***$64,258***	***$129,380***	***$93,243***	***$101,779***	***1%***
Service Charges - Water	$4,699,208	$4,788,917	$4,884,526	$4,904,706	$4,806,612	2%
Service Charges - Sewer	$4,128,650	$4,604,863	$4,984,734	$5,355,629	$5,250,485	27%
Other Charges & Fees	$435,571	$416,977	$496,011	$517,129	$497,438	14%
Use of Money & Property	$78,277	$91,475	$106,770	$67,198	$66,873	-15%
Waterworks and Sewerage Fund Total Revenues	***$9,341,706***	***$9,902,232***	***$10,472,041***	***$10,844,662***	***$10,621,408***	***14%***
Use of Money & Property	$2,550	$687	$790	$564	$564	-78%

Public Works Revenues	Actual FY2013	Actual FY2014	Actual FY2015	Estimated FY2016	Budgeted FY2017	Percent Change
Contributions / Assessments (Recycling Fees)	$253,739	$273,665	$283,383	$293,377	$293,377	16%
Service Charges (Refuse/Landscape Waste Fees)	$602,126	$605,090	$622,630	$634,573	$634,573	5%
Solid Waste Management Fund Total	***$858,415***	***$879,442***	***$906,803***	***$928,514***	***$928,514***	***8%***
Use of Money & Property	$509,476	$346,331	$156,406	$77,421	$75,052	-85%
Rental Property Fund Total	***$509,476***	***$346,331***	***$156,406***	***$77,421***	***$75,052***	***-85%***
Total Department-Specific Revenues	**$10,810,187**	**$11,192,263**	**$11,664,630**	**$11,943,840**	**$11,726,753**	**8%**

In the categories listed above, the largest increase in budgeted revenues compared to FY2013 actuals involves Non-Operating revenue in the Waterworks and Sewerage Fund. These revenues include an estimated $1.1 million in intergovernmental grants budgeted in FY2017.

Overall fee revenue has largely increased with respect to water, sewer, recycling, and refuse fees. The greatest losses in revenue collected by the Department have occurred in the Rental Properties Fund. In this fund the “Use of Money & Property” category includes rent revenue generated by leasing City-owned buildings. In FY2013, the City ceased leasing the Administration and Arlington Buildings, and in FY2015, the City ceased leasing the Brentwood Building. Collectively, the elimination of these leases represents a reduction of approximately $434,000 in the FY2017 Budget.

Analysis and Recommendations

The Carbondale Public Works Department provides many valuable core services and utilizes several best practices which benefit the City and community. For example, the Department’s current fleet management and equipment maintenance program maintains excellent records and schedules to ensure preventative maintenance is performed on-time and according to manufacturer specifications. Additionally, the Department engages in proactive stormwater management efforts, including ditch and culvert maintenance and street sweeping activities. Finally, the Department’s water and wastewater utilities currently exceed federal treatment standards and provide excellent water and wastewater services for the City’s residents and businesses. These utility operations are professionally administered and verified with a high degree of scientific rigor through testing accomplished by the Department’s Central Laboratory Division.

While these achievements point to the professionalism and efficiency of Public Works staff, there are opportunities for organizational and management changes which can further improve service delivery. In particular, the Department’s current organizational structure and approach to asset management planning challenge strategic thinking and workload planning efforts. This in turn limits the Department’s ability to engage in effective staffing analysis. In addition to these comprehensive issues, there are opportunities for the Department to create greater efficiencies in enterprise operations and decrease injuries through the use of increased automation. This is particularly evident with respect to refuse, stormwater, and wastewater services.

The following sections provide detailed analysis and information regarding improvements in each of these areas.

Organizational Structure

Effective organizational and administrative structures are essential to ensure that employees are able to perform their job duties effectively and efficiently. Nowhere is this more critical than in the Department's administration. As presently organized, the Public Works Director manages all Engineering staff, as well as several utilities-related supervisors and the MES Manager. In total, this represents nearly 13 FTEs from seven divisions, as shown in the following figure.

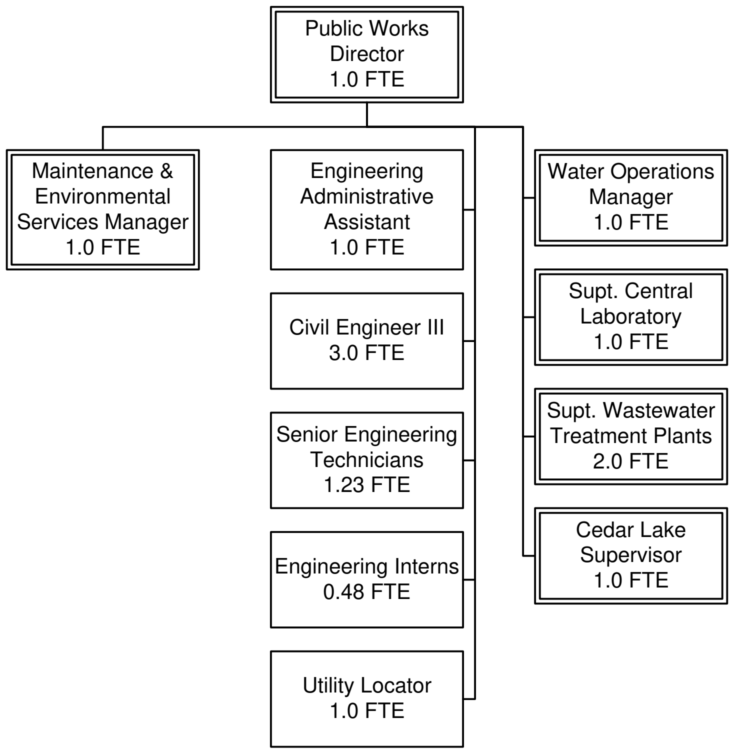

Figure 25: Public Works Director – Direct Reports, FY2017

In addition to these supervisory responsibilities, the Public Works Director is also responsible for capital improvement planning, asset management, and interdepartmental coordination. However, this staffing arrangement requires the Director to become heavily involved in daily operations, personnel needs, and other mid-level management work that is not appropriate for a director-level position. A span of control this wide prevents the Director from effectively leading the Department and focusing on strategic coordination with other City Departments, staff, and elected officials.

While it is possible to create a standalone Utilities Department to help address this span of control issue, maintaining these functions as part of a unified Public Works Department presents several distinct advantages. For example, Engineering staff currently play a central role in coordinating asset management activities, design work, and project management related to all Public Works projects, from streets to water mains to wastewater collection. This role allows Engineering staff to effectively prioritize and manage capital projects regardless of a project's funding source or who will carry out the work, and provides Engineering with greater ability to time projects in order to minimize disruption and maximize financial efficiency. Splitting these tasks across multiple departments reduces staff's ability to effectively balance workloads and potentially complicates project management activities.

Secondly, maintaining a single department creates opportunities for sharing services and equipment more effectively. Streets, stormwater, water distribution, and sewer collection activities share commonalities in terms of equipment utilized, skills needed to perform tasks successfully, and regular maintenance activities. Maintaining these functions in a single department reduces the amount of staff, equipment, and other resources necessary to accomplish work compared to maintaining separate departments. This results in fewer duplicate positions and equipment needs, and creates a larger labor pool for accomplishing work based on effective collaboration.

In order to alleviate the Public Works Director's daily management responsibilities, create management capacity for strategic leadership and decision-making, and more effectively organize the Department's workload, it is recommended that the Department create more formal functional division structures and provide upper management staffing to oversee these operations.

RECOMMENDATION 55: Create three formal functional divisions in Public Works: Utilities, Engineering, and Operations.

The first step in reorganizing the Department's upper management structure is to create three formal functional divisions based on the Department's primary functional areas: Utilities, Engineering, and Operations. In this context, a functional division represents a new upper management unit which controls smaller budgeted divisions that share functional similarities. The following chart illustrates the proposed division structure, along with the locations of budgeted divisions within the proposed structure.

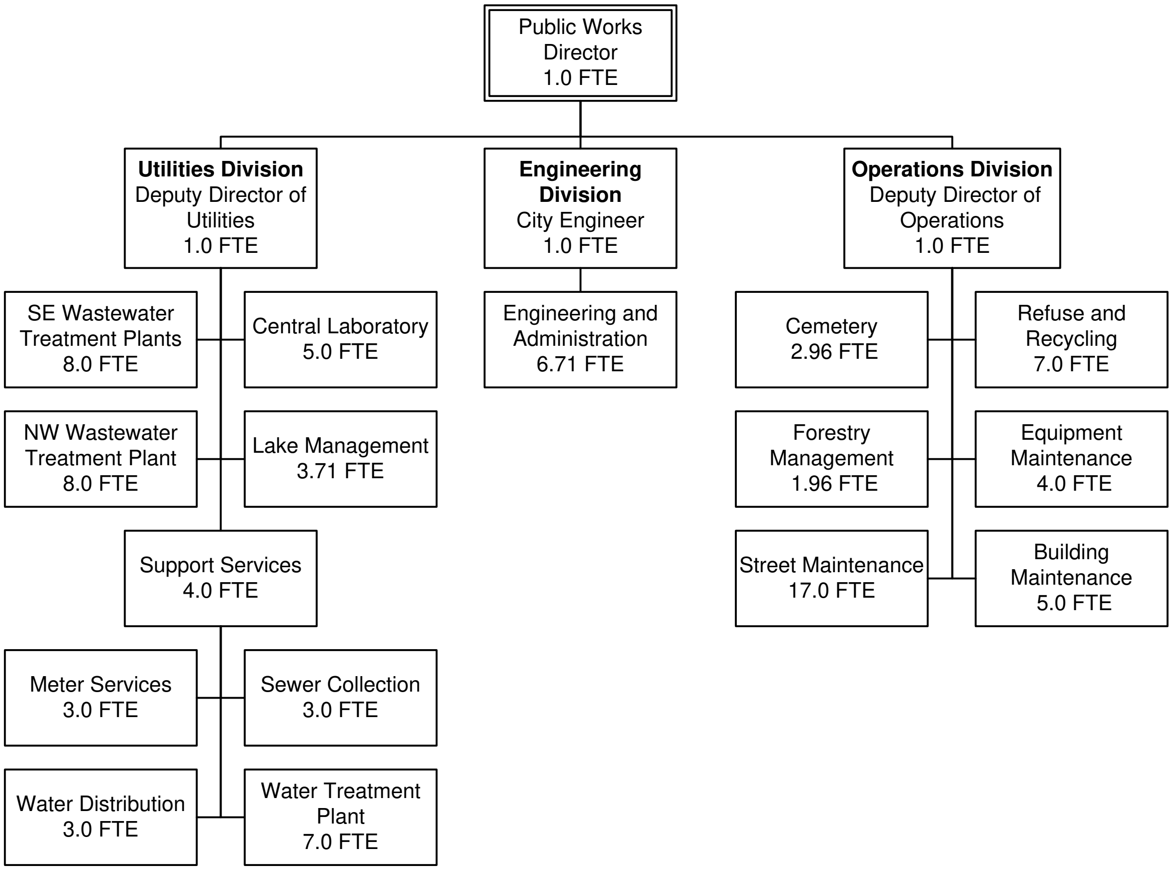

Figure 26: Proposed Public Works Organizational Structure, 2016

This reorganization reduces the Director's span of control from 13 FTEs to 3.0 FTEs and provides greater management capacity for coordinating the Department's strategy, goals, funding, and CIP efforts without also having to directly supervise daily operations. Additionally, narrowing the Director's span of control will allow the Director to delegate responsibilities for asset management and work planning and devote additional time to leadership, teambuilding, and staff development activities more appropriate to a strategic upper management role.

The following recommendations describe staffing requirements necessary in order to accomplish this reorganization effort.

RECOMMENDATION 56: Create a Deputy Director of Utilities position to oversee the Utilities Division.

As indicated in Figure 25 above, water and wastewater operations involve 44.71 budgeted FTEs, or approximately 49% of the Public Works Department's total staffing. In addition, water and wastewater operations are budgeted at approximately $8.6 million in FY2017, or approximately 61% of total budgeted Public Works expenditures. These figures indicate that utilities operations constitute a significant component of the Public Works Department.

Although the staff and budget for water and wastewater operations is significant, this in and of itself does not warrant reorganizing the functions into a separate department. With the proper administrative structure, these functions can be appropriately managed by a dedicated utilities supervisor responsible for coordinating all aspects of utility operations in the City of Carbondale.

This includes water, wastewater, and stormwater activities, staff associated with each of these operations, relevant funds and budgets, strategic planning initiatives, asset management and work planning functions, and managing day-to-day operations.

Consequently, it is recommended that the City continue to operate utilities-related functions out of the Public Works Department through a specific Utilities Division. This Division should be led by a Deputy Director of Utilities, who will report directly to the Public Works Director. The Deputy Director will be responsible for overseeing existing utilities staff who currently report to the Public Works Director, including the Water Operations Manager, the Superintendent of Central Laboratory, the Wastewater Treatment Plant Superintendents, and the Cedar Lake Supervisor.

The following figure illustrates the proposed Deputy Director of Utilities position and its direct reports.

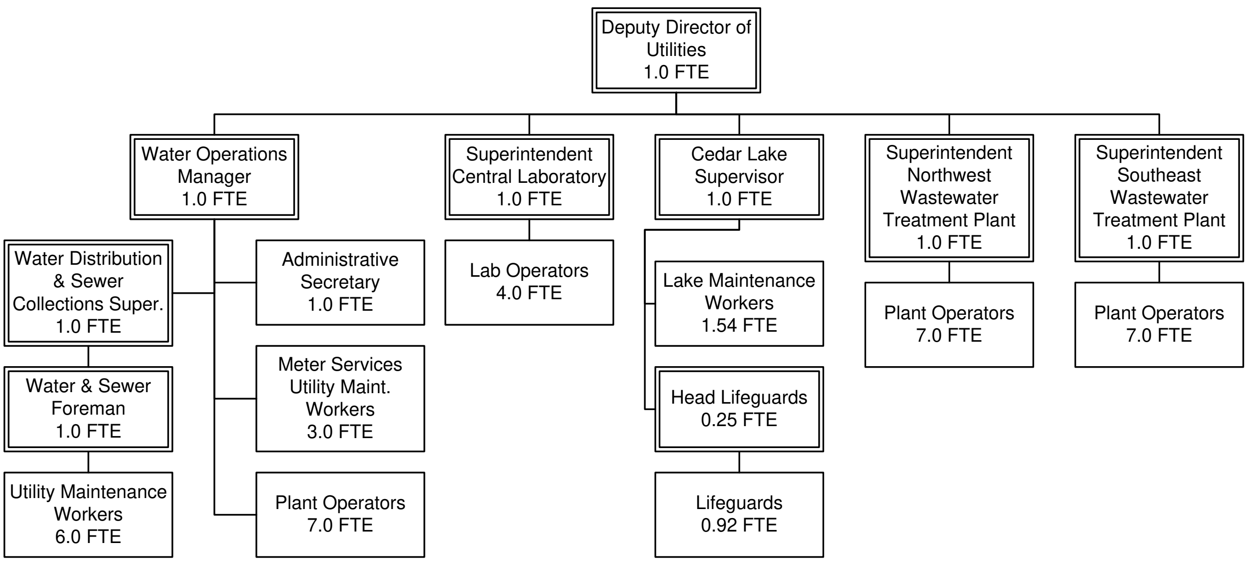

Figure 27: Proposed Public Works Utilities Division Organizational Structure, 2016

The Deputy Director of Utilities will play an important role in the Carbondale Public Works department by lending specialized utilities expertise to the Utilities Division's operations. This position will serve as a contact point between utilities staff and the Public Works Director and facilitate collaboration between Utilities staff and staff throughout the City organization. By creating this position, the City will reduce the Public Work Director's span of control by 4.0 FTEs and create administrative and leadership capacity for utilities operations.

In particular, the Deputy Director of Utilities will play an important role in coordinating stormwater activities and managing the stormwater utility fee as described below. While much of the Department's existing stormwater work is assigned to Street Maintenance staff, it will be the Deputy Director of Utilities' responsibility to determine whether existing Utilities staff have sufficient capacity to undertake stormwater maintenance efforts. This will require the Deputy Director of Utilities to proactively engage in asset management and work planning efforts as described in the Asset Management and Work Planning section below in order to determine the full extent of utilities-related maintenance tasks.

Based on an hourly rate of $40/hr and a benefits burden of 50%, the estimated cost of funding this position is approximately $124,800 annually. As part of its recruitment process, the City should seek qualified candidates with experience in managing municipal utilities, including the creation and administration of stormwater utilities.

Should the City choose to split the Utilities Division away from Public Works at some point in the future, this supervisory structure will help support a seamless transition by providing for upper management leadership with sufficient knowledge of the City's utilities operations and staff.

RECOMMENDATION 57: Create a City Engineer position to oversee the Engineering Division.

As stated previously, 6.71 Engineering Division FTEs currently report directly to the Public Works Director. This presents significant management challenges because these FTEs require daily oversight, which prevents the Director from devoting sufficient time and attention to Department-wide issues and priorities.

It is recommended that the City create a City Engineer position to oversee the proposed Engineering Division. This position should report to the Public Works Director and coordinate staffing, workload, and budget activities for all Engineering employees. Creating this position will reduce the Director's span of control and provide dedicated leadership for Engineering staff.

The City Engineer will add value to the Engineering Division in several ways. In particular, the Engineer will serve as a single contact point regarding the City's engineering initiatives and projects. This reduces confusion about who is ultimately responsible for Engineering projects and concentrates managerial authority for Engineering in a single, dedicated position.

The City Engineer should also be tasked with ensuring the Engineering Division effectively analyzes and prioritizes capital projects during the regular CIP process. While the bulk of this work is currently performed by various Engineering staff in conjunction with the Public Works Director, the City Engineer should ultimately be responsible for shepherding the annual CIP process. It is important to emphasize that the City is in the midst of making major investments in capital projects and infrastructure assets. These investments are backed by the recent increases to the motor fuel tax and the passage of food, beverage, and liquor taxes. Revenues generated by these taxes are anticipated to fund many of the projects on the City's existing CIP. In order to ensure the City is maximizing its fiduciary responsibility to taxpayers and making sound capital improvement decisions, the City Engineer will be responsible for prioritizing and timing projects to maximize efficiency, managing projects, and ensuring that projects are completed on-time and according to the City's specifications.

These responsibilities will require the City Engineer to devote considerable attention to the asset management process, as described in the Asset Management and Work Planning section below. The City Engineer should guide the creation of asset maps and inventories, maintain asset-related data, conduct regular condition assessments, and utilize this information to inform the CIP process. As part of the asset management process, the City Engineer should ensure that the Public Works Department effectively utilizes Geographic Information Systems (GIS) in order to effectively inventory assets and record important information about each asset, such as its condition, maintenance history, and other relevant factors. This will require close coordination with Development Services staff as described later in this report in order to ensure that GIS is utilized as an effective tool for asset management planning and condition assessment.

These activities position the Engineering Division as a resource for internal staff and help create consistency in the Division's deliverables and services. The following figure illustrates the proposed structure of the Engineering Division.

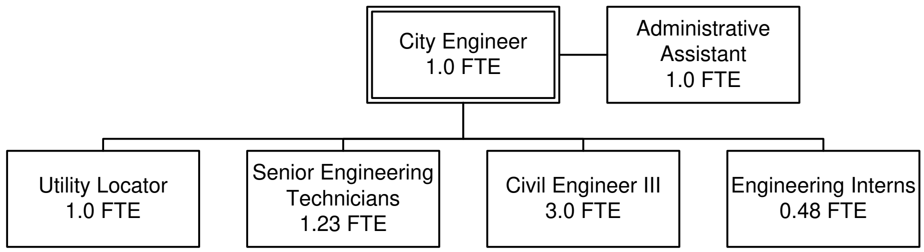

Figure 28: Proposed Public Works Engineering Division Organizational Structure, 2016

Based on an hourly rate of $40/hr and a benefits burden of 50%, the estimated cost of funding this position is approximately $124,800 annually. During the recruitment process, the City should seek qualified applicants with significant experience in asset management and GIS technology.

RECOMMENDATION 58: Reclassify the Maintenance and Environmental Services Manager position as a Deputy Director of Operations position to oversee the Operations Division. Currently, the MES Manager oversees the bulk of Public Works operational divisions, from Municipal Rental Properties to Streets to Refuse and Recycling. Collectively, these operations involve approximately 39 FTEs and over $4.8 million in budgeted FY2017 expenditures. This represents approximately 43% of the Department's budgeted staff and 34% of its total budgeted expenditures, which is a significant portion of the Department's staffing and budget.

This supervisory workload is significant and involves coordinating staff and projects supported by several funds, including the General Fund, Solid Waste Management Fund, and the Rental Properties Fund. The breadth and depth of these operations justifies a more senior-level position to oversee staff currently assigned to MES-related divisions. To accomplish this, the Department should formally create a Division of Operations and reclassify the MES Manager position as a Deputy Director of Operations. This position will inherit the responsibilities of the current MES Manager, including strategically coordinating the workload of all MES divisions, developing appropriate administrative policies, procedures, and practices, and serving as a staff liaison from MES employees to the Public Works Director.

This position must also develop a close working relationship with the Engineering Division in order to properly engage in asset management and work planning activities. This is particularly important due to the different types of assets and management practices under the control of Operations' divisions. Properly accounting for, maintaining, and replacing these assets should be a primary strategic responsibility for the Deputy Director of Operations and will necessarily involve close collaboration and input with other Public Works divisions and the CIP process.

After implementing the following recommendation to consolidate the Cemetery and Forestry divisions, the Deputy Director of Operations will be responsible for eight direct reports. The following figure is a proposed organizational chart showing the structure of the Operations Division.

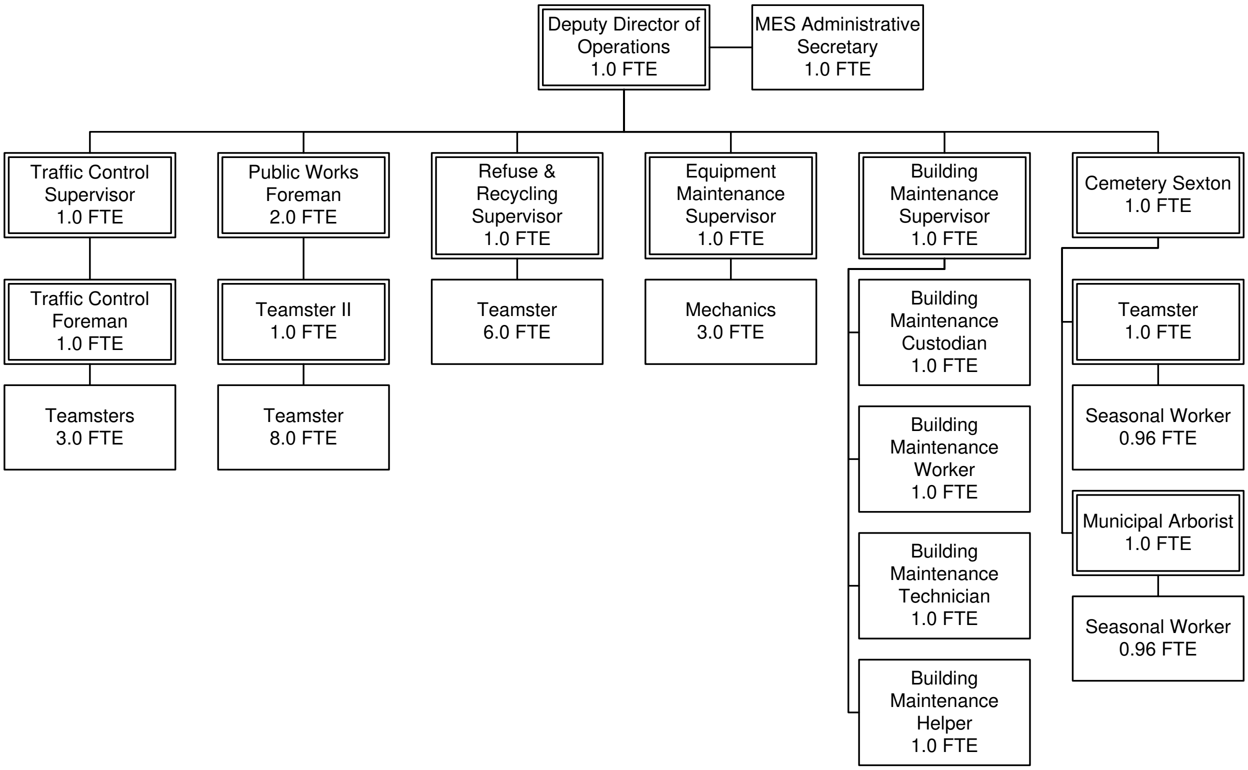

Figure 29: Proposed Public Works Operations Division Organizational Structure, 2016

Based on an hourly rate of $40/hr and a benefits burden of 50%, the estimated cost of funding the Deputy Director of Operations position is approximately $124,800 annually. However, the MES Manager position's total compensation is approximately $110,000 per year. After reclassifying this position, the annual net cost to the City is an estimated $15,000 per year including fringe benefits.

RECOMMENDATION 59: Combine the Cemetery and Forestry divisions to achieve greater operational efficiencies.

The Cemetery and Forestry divisions in Public Works currently share a number of operational similarities. Both divisions experience greater workload during the growing season and rely on seasonal labor when mowing and tree trimming activities peak. Staff in these divisions also assist each other with regular work efforts and maintain knowledge about each division's operations. For example, the Municipal Arborist provides backup support to the Cemetery Sexton in the event he or she is on leave or away from work. Additionally, these divisions also assist other Public Works divisions with workload needs. In particular, Cemetery staff assist the Streets and Municipal Rental Properties divisions with snow removal on an as-needed basis, and backfill the Refuse and Recycling Division when staffing shortages arise.

Due to the extent of shared functional responsibilities, the Department should combine these positions into a single Cemetery and Forestry Division, led by the Cemetery Sexton. This division will be responsible for achieving the combined functional responsibilities of both predecessor divisions, including selling burial plots, conducting internments, maintaining cemetery grounds, and maintaining City trees. A proposed organizational chart for the combined Division is illustrated in the following figure.

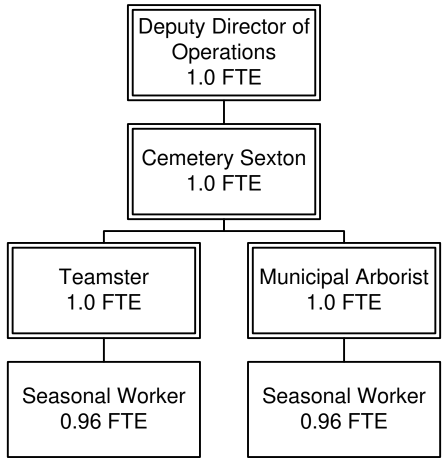

Figure 30: Proposed Cemetery and Forestry Division Structure, 2016

This reorganization reduces the number of direct reports to the MES Manager by 1.0 FTE and formalizes the collaborative relationship between these divisions. Combining these functions into a single division provides opportunities for even greater economies of scale, such as by sharing tools and equipment, utilizing seasonal workers for both mowing and tree trimming work, and creating a broader labor pool for accomplishing cemetery and forestry-related tasks.

RECOMMENDATION 60: Negotiate flexible workload assignment terms with Public Works unions.

Labor employees in operations-related divisions, including Teamster I and Teamster II positions, are represented by the Teamsters Local Union No. 50. The current labor contract covering these positions is effective through April 30, 2019. Laborers in utilities-related divisions are represented by the United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry Local 160. This union agreement excludes contract employees, superintendents, probationary and temporary employees, and office employees. The agreement is effective through April 30, 2017.

This arrangement complicates Public Works staffing in two ways. First, it is difficult to reallocate available labor from utilities functions to other operations (and vice versa) due to each union's control over staffing in these areas. Second, adopting a stormwater utility fee as described in later in this report will result in Teamster staff performing utility-related work, because Teamsters are currently assigned stormwater maintenance functions as part of the Street Maintenance Division's responsibilities. This creates a situation where utilities-related work involves laborers represented by two separate unions, which further complicates staffing decisions. It is more beneficial for workers and the City to ensure utilities-related tasks are performed by laborers from a single union in order to simplify contract negotiations, accounting, and workload assignments.

In short, the current union arrangement creates labor pool shortages by limiting where laborers can work. To address this, the City should address labor pool issues as part of its regular negotiations with each labor union. At minimum, the City should transfer responsibility for stormwater tasks to the Pipefitters union and, if possible, the City should negotiate provisions which allow it to utilize available union workers regardless of representation.

If feasible and practicable, consolidating unions could present significant advantages to both the City and unionized employees. This would result in a single union to represent all eligible Public

Works laborers and would allow the Department to more efficiently allocate laborers based on existing skillsets and daily availability. In effect, this would deepen the pool of available employees who could provide coverage in the event of leave or other absence and allow the Department to respond more quickly to unanticipated and/or seasonal workload needs. Unionized employees would benefit from more uniform pay, promotional, training, and coverage standards, as well as additional options for bidding on available positions in other divisions.

All of these options will require extensive negotiations with the current Public Works unions and should be explored with careful consideration and due attention to the concerns of employees and management.

Asset Management and Work Planning

Asset management and work planning are critical components of high-functioning Public Works organizations. These elements provide a framework identifying the scope of the Department's responsibilities and the work that must be accomplished to fulfill those responsibilities. The following recommendations are intended to lay an appropriate foundation for effective asset management and work planning in the Department.

RECOMMENDATION 61: Create a comprehensive asset management plan for all Department-related assets.

Asset management is the knowledge of what assets (such as infrastructure, buildings, and vehicles) are under the Department's control, where they are located, what condition they are in, and what regular maintenance needs to occur on each asset in order to extend its operational life. This knowledge directly informs the work planning process, which involves assigning regular asset maintenance tasks to crews as efficiently as possible to maximize asset life.

As a best practice, the American Public Works Association (APWA) Public Works Management Practices manual recommends that public works organizations conduct asset inventories and condition assessments as part of an asset management program. However, Carbondale Public Works' divisions have adopted this best practice with varying consistency, and the Department lacks a comprehensive approach to asset management planning. It is therefore recommended that the Department create a comprehensive management plan which covers the full scope of the Department and operations. This comprehensive asset management plan should include all assets in major functional areas, such as equipment maintenance, facility and building maintenance, forestry management, stormwater, streets, wastewater, and water treatment.

Although the assets maintained in each of these categories vary widely and involve unique maintenance procedures, asset management plans across these functions should share the same common elements: an asset inventory, a condition assessment, and a preventative maintenance work plan.

Asset inventories are the cornerstone of asset management planning. The inventory provides basic information about each asset, including an identifying number, the asset's location, its age, when the asset was acquired/installed, and its initial cost. Where possible, the Department should utilize software to track asset inventory data in a consistent manner. While it is possible to organize this information using paper records, the use of electronic databases and asset management software can greatly expedite the process of creating, updating, and searching asset records. These systems also provide interoperability with other software packages, such as GIS, to provide expansive locating and records management capabilities.

After completing an asset inventory, the Department will have a clear list of all assets under its control, from infrastructure to vehicles to facilities and trees. The next step in asset management planning is to determine the overall condition of each asset. This involves the use of condition assessments. A condition assessment provides a quantitative baseline for rating the qualitative aspects of an asset, such as its overall functionality, wear and tear, and likelihood of failure. Where possible, the Department should rely on industry standard assessment tools, such as the Pavement Condition Index (PCI) for rating streets, in order to minimize subjective condition ratings.

Condition assessments are important for two reasons. First, they highlight assets which are nearing failure or expected end of life, which in turn informs the CIP and asset replacement process. Second, they provide guidance for the Department's work planning schedule by identifying City assets that are in most need of immediate attention. This helps upper management prioritize when work should occur in order to maximize staff efficiency and ensure maintenance funding is utilized effectively.

Having obtained a picture of all assets under the Department's control and determined the condition of each asset, the Department should create an annual work plan. A work plan describes the regular maintenance activities that must occur on each asset in order to extend its useful life. The purpose of a Department-wide work plan is threefold: it serves as a master schedule of preventative maintenance tasks, it provides a tool for scheduling projects that involve multiple divisions, and it allows Department management to prioritize complex, time-intensive projects effectively.

To create the work plan, the Department should determine when regular maintenance activities for each asset should occur in order to preserve the asset's functionality and minimize the risk of asset failure. This will generate a list of tasks that should occur at regular intervals, which should then be scheduled on an annual basis. The resulting work plan will effectively serve as a calendar of required maintenance tasks which addresses each asset under the Department's control. As divisions assume responsibilities for their portion of the comprehensive work plan, managers and supervisors will be able to create individual work plans for their staff. This in turn enables each division to show how it is achieving the goals of the comprehensive work plan each year, and provides a useful performance benchmark for gauging employee performance.

Without an effective work plan, Department staff will be more frequently pulled into reactive maintenance tasks without knowing what preventative maintenance has been missed or delayed. This creates deferred maintenance on assets and decreases their useful life, which ultimately increases the City's costs by requiring asset replacement on a faster schedule.

The following recommendations briefly address unique needs that should be addressed as part of the comprehensive asset management planning process.

RECOMMENDATION 62: Utilize existing Equipment Maintenance asset information to inform a regular vehicle and equipment replacement process.

The Equipment Maintenance Division currently engages in a high level of asset management planning, and should be commended for maintaining an equipment inventory, tracking purchase and maintenance costs on a regular basis, scheduling and performing regular preventative maintenance, and tracking vehicle and equipment usage, such as mileage. This information provides a comprehensive overview of the Division's responsibilities and positions it to engage in robust work planning efforts.

For example, the Division currently tracks vehicles and equipment by department and assigns each asset a unique identifier. Information about the asset is also recorded, including the year it was acquired, a brief description of the asset, other identifying numbers, its purchase cost, and its mileage (if applicable). The following table illustrates a sample of this data as collected by the existing asset management system.

Table 62: Sample Data from Equipment Maintenance Asset Inventory, 2016

#	Year	Description	License/ Model #	VIN/Serial #	Asset #	Purchase Cost	Mileage
Department 40101 – Police Protection							
5	2010	Ford Crown Victoria	MP6353	2FABP7BV0AX134795	10480	$22,400	13,978
7	2010	Ford Crown Victoria	MP6351	2FABP7BV4AX134797	10482	$22,400	22,120
8	2010	Mercedes Benz Sprinter 350 Van	MP7068	WD3PF4CC2A5495553	None	$66,654	45,950
10	1996	Solar Mobile Traffic Monitor	M87608	163	8551	$10,182	79
12	2001	Ford Crown Victoria	M167968	2FAFP71W91X168570	10071	$21,779	109,174
13	2011	Haulmark Trailer TS7X12DT2	M098577	16HPB1223BH185234	None	$6,000	109,174
14	2011	GMC 4500 Van	MP9214	1GD675BG9B1108705	10488	$113,934	4,410
19	2001	GMC 1500 Pickup	M114374	1GTEC14V91Z232229	10022	$18,069	158,685

All of the inventory data currently collected by this Division should become a part of the Department's comprehensive asset management plan. Where applicable, other divisions may refer to the Equipment Maintenance asset inventory to gain a better understanding of information that should be tracked and how it should be organized.

The next step is to expand the use of condition assessments and to utilize this information to inform a regular vehicle and equipment replacement program. While the Division currently identifies vehicles and equipment in need of replacement, this process occurs informally. In order to provide more robust asset management services, the Division should utilize a numeric scoring system to determine whether vehicles and equipment are in need of replacement.

Numeric scoring systems can take many forms, but operate using weighted scores to determine equipment/vehicle viability when considering a broad array of factors. For example, the City of Appleton, Wisconsin assigns points based on a vehicle's age, type of use, maintenance cost, and vehicle availability. These points and factors vary based on the type of equipment being rated and are available as an appendix to this report. By computing the sum of all points assigned to a vehicle, the Department can determine which vehicles should be scheduled for replacement and which should remain in service. The following table summarizes Appleton's evaluation rating key.

Table 63: City of Appleton, Wisconsin Fleet Replacement Evaluation Key

Points	Condition	Action
0-17	Excellent	Do not replace
18-22	Good	Reevaluate in one year
23-27	Satisfactory	Qualifies for replacement if budget permits
28+	Poor	Needs priority replacement

The Equipment Maintenance Division should utilize such a system to determine which vehicles are in need of priority replacement and communicate this information to Department Directors as part of the annual budgeting process. This will help to ensure that the information necessary to justify equipment and vehicle replacement is readily available.

RECOMMENDATION 63: Expand the existing facility and building inventory and conduct Facility Condition Assessments.

Like the Equipment Maintenance Division, Municipal Rental Properties staff also maintain an inventory of facilities they are responsible for maintaining. The current facilities inventory assigns a number to each facility, describes the facility, and indicates major systems and amenities which require regular maintenance. In total, this Division oversees approximately 37 facilities and public areas in the City. The following table illustrates the number of major systems and activities across all facilities which are tracked by the Division's existing inventory.

Table 64: Sample Data from Building Asset Inventory, 2016

Facility/Building Asset	Quantity
HVAC	112
Restrooms	80
Garage Doors	60
Heaters	28
Kitchens	25
Shower House	22
Fire Extinguishers and Inspections	20
Insect Control	18
Backflow Preventers and Inspections	13
Boilers	12
Alarm Monitoring and Inspections	11
HVAC Rooftop Units	10
Boiler Inspections	9
Exhaust system	5
Elevator and Inspections	4
Sprinkler and Inspections	3
Range Hood Inspections	2

While this information provides a helpful view into the Division's core workload and maintenance responsibilities, adjustments to its existing asset management approach will increase its capabilities and help inform the Department's wider asset management efforts. Specifically, the inventory should be expanded to include location information for each facility (such as an address), as well as each facility's overall square footage.

The next step in creating a more robust asset management system for facilities is to determine the condition of assets inside each facility. As indicated in the table above, the Municipal Rental Properties Division schedules third-party inspections of fire extinguishers and sprinklers, range hoods, elevators, backflow preventers, alarms, and boilers. These inspections are usually conducted annually between May and June. However, some major building systems, such as roofs, are inspected less frequently or not at all.

Although these inspections provide the Division with information about the condition of some facility assets, it is critical to achieve a clearer view of each facility's overall condition. This should be accomplished using Facility Condition Assessments (FCAs). According to the International Facilities Management Association (IFMA), performing an FCA typically involves an assessment team composed of an architect, a mechanical engineer, and an electrical engineer.[37] This team is tasked with conducting a walkthrough of each facility and systematically assessing the components of each major system. For example, the FCA would include information on existing compressors, chillers, heaters, and ductwork related to each facility's HVAC system, provide information on the type of equipment installed, its age, and apparent condition, and identify immediate maintenance issues that need to be addressed.

FCAs play a key role in asset management planning by enabling the Division to more accurately determine what each facility's lifecycle requirements and costs will be. This in turn will directly inform work planning, preventative maintenance efforts, and capital project timing.

Given the time and professional requirements needed to thoroughly complete FCAs, the City may choose to issue an RFP to assess whether a third party consultant can provide these services more cost-effectively than utilizing existing City staff. Additionally, a third-party consultant may be able to recommend a facilities management software solution which meets the needs of Public Works staff.

RECOMMENDATION 64: Create a tree inventory and Urban Forest Management Plan.
The City does not currently utilize a tracking or inventory system for its urban trees, but should create a tree inventory in order to better understand its urban forest. According to the American Public Works Association (APWA), effective tree inventories describe each publicly-managed tree's location, species, diameter, condition, maintenance needs and priority, and proximity to utilities and traffic infrastructure.[38] Additionally, the inventory should indicate whether the tree has caused damage to sidewalks or other hardscapes, whether the tree suffers from insect infestation or other disease, and whether appropriate planting sites for additional trees exist.

APWA recommends that tree inventories be conducted by a Certified Arborist. Information should be recorded digitally using urban forestry management software in order to provide robust reporting and mapping capabilities, including GIS layers and maps, work histories and costs for each tree, citizen service and information requests, work order tracking, available planting sites, and the approximate valuation of each tree.

Collecting this information will allow the Department to develop a comprehensive maintenance plan for City trees. Typical maintenance activities include tree removal, pruning, stump grinding, green waste disposal, fertilization, insect and disease treatment, grate and guard repair, mulching, and watering. High-priority maintenance activities such as removal and pruning should occur when trees pose a risk to persons in the right-of-way, public property, or private property at the time of the inventory. Other maintenance activities should be undertaken on a regular basis in order to maximize the health and longevity of the City's urban forest.

Over the long term, the tree inventory, condition assessment, and work plan will form key components of an Urban Forest Management Plan. As recommended by APWA, the Urban Forest Management Plan should include an overview and analysis of the existing tree inventory (including a condition assessment and maintenance needs), a discussion about software solutions used to track forestry-related data, a tree risk reduction/emergency storm management plan, the development of a tree board or advisory council, public relations and education strategies, and an urban forest cost/benefit analysis.

[37] http://www.ifma.org/docs/default-source/knowledge-base/asset_lifecyle_model.pdf?sfvrsn=2
[38] https://www2.apwa.net/Documents/About/CoopAgreements/UrbanForestry/UrbanForestry-4.pdf

RECOMMENDATION 65: Develop electronic street, sign, streetlight, and signal inventories and condition assessments.

Although the Department has performed inventory-related work on street infrastructure and related assets in the past (such as traffic signs and signals), much of this work is currently incomplete or in hardcopy format. It is essential to digitize this data and complete any missing information in order to account for streets-related infrastructure in the comprehensive asset management plan.

The City should accomplish this process in several steps. First, it should expedite the current effort to inventory streetlights using seasonal interns in the Engineering Division. At minimum, this inventory should indicate the location of each streetlight, the characteristics of each fixture, whether the streetlight is City-owned, and the date the streetlight was last serviced (if known). The second step is to augment this inventory with similar information regarding other assets in the right-of-way, including traffic signs and signals. The defining characteristics of these assets should be captured in the inventory along with the asset's physical location.

The next step is to create a digital asset inventory of street infrastructure in the City. The Department is currently using pavement management software (PAVER) to evaluate the pavement condition of its streets. This is a commendable step toward creating a usable inventory and should be expedited in order to enable the Department to properly prioritize and budget for streets-related capital improvements in the coming years.

All of these assets should be located and tracked in a GIS system which accurately displays the location of each asset along with its condition and other relevant data. By developing these inventories and their associated condition assessments, the Department will be able to more effectively quantify anticipated infrastructure costs and appropriately prioritize future projects on the City's CIP. In addition, this work will help the City to determine what work is appropriate for Streets crews to undertake compared to the costs of contracting out for roadway improvements.

RECOMMENDATION 66: Update and digitize existing Stormwater, Water, and Wastewater maps and asset inventories.

The Department has made some progress related to creating readily-accessible digital inventories of stormwater, water, and wastewater assets. In addition to paper atlases for each of these systems, the Department maintains digitized GIS layers scanned from paper copies using a "best fit" method. This method allows the relative locations of each asset to be shown, but does not provide reliable accuracy compared to geolocation using GPS coordinates.

Aside from these atlases, there are few concise, easily-accessible records of particular assets which comprise the stormwater, water, and wastewater systems. The Department is currently updating wastewater asset records through a third party inflow and infiltration study, and expects to have an updated wastewater asset inventory by the fourth quarter of 2017. Additionally, the Department has an updated inventory of fire hydrants by address with accurate GIS locations. However, the remainder of the Department's asset information related to stormwater, water, and wastewater infrastructure resides in paper records, some of which are significantly outdated. For example, information related to storm sewers has not been updated since the 1970s.

In order to accurately determine where infrastructure is, what condition it is in, and how to maximize asset life, it is critical to compile digital inventories and condition assessments of these infrastructure systems. These inventories should include the location of each pipe segment, outfall, storm drain, manhole, basin, or other infrastructure, the type of infrastructure installed, the date it was installed (if known), and any other pertinent information about the asset. If possible, assets should also be geolocated with a GPS device at the time they are inventoried; this information will allow the City to display all assets accurately on a GIS map and provide reliable location information to employees and contractors.

This inventory effort should be coordinated by the City Engineer. Because creating these inventories and condition assessments is a significant task, it is appropriate for the City to utilize outside contractors in order to conduct field work activities and create initial datasets. Once created, these inventories should be regularly updated and maintained by Engineering staff.

RECOMMENDATION 67: Create consistent time-tracking practices across all Public Works' divisions.

Divisions across Public Works do not uniformly track task times associated with major work activities. For example, the Municipal Rental Properties Division tracks time spent performing overall maintenance at each facility, but not the amount of time performing discrete work tasks. In a similar way, the Streets Division completes paper daily and monthly forms indicating what work was accomplished, but there is no centralized, electronic reporting system to enable an audit of how staff spend their time.

Likewise, the manner in which staff record time is not consistent across divisions. Most MES staff use the electronic TimeTrax system which requires swiping an ID card to clock in and out; however, the Municipal Rental Properties and Equipment Maintenance divisions do not utilize this system and record time on paper timesheets. Hardcopy timesheets are also used for utilities and engineering operations.

In order to effectively measure task times, it is recommended that the Department create uniform timekeeping practices and begin tracking labor hours associated with core service tasks. Task-time data is an invaluable tool which informs effective asset management planning and helps the Department determine appropriate staffing levels. This directly informs the work planning process and creates opportunities to assign an optimal number of staff to each task.

It is not necessary to track every employee's activity in minute detail. Rather, task time information should be collected for major activities which support each division's goals and objectives. Examples of key time indicators which are not currently tracked are shown in the following table.

Table 65: Example Key Time Indicators, 2016

Division	Current Workload Measure/Activity	Time to Track
Municipal Rental Properties	Third-party inspections	Hours per inspection
	Major repairs (e.g. HVAC repair)	Hours per repair
	Major project efforts (e.g. construction/demolition)	Days per project
Cemeteries and Forestry	Mowing	Hours to mow all acreage
	Tree Trimming	Hours per tree
	Herbicide Spraying	Hours per route
Refuse and Recycling	Vacuum Leaf Collection	Total annual hours
	Refuse Collected and Disposed	Hours per route
Street Maintenance	Lane Line Marking/Painting	Hours per lane mile
	Street Sweeping/Flushing	Hours per route
	Crack Sealing Streets	Total annual hours
	Seal Coating Streets	Total annual hours
Central Laboratories	Water Quality/Wastewater Testing	Hours per test; overall turnaround time

Division	Current Workload Measure/Activity	Time to Track
Meter Services	Meters Read	Hours per meter route
	Meters Replaced	Hours per replacement
Sewer Collection	Sewers Flushed	Total annual hours
	Sewers Televised	Total annual hours
Water Treatment Plant	Water Quality Testing	Hours per test
Water Distribution	Main Repairs	Hours per repair
	New Service/Meter Installs	Hours per install
	Valves Inspected	Hours per inspection

This information should be updated regularly and compiled electronically in a central repository. In order to effectively manage the volume of data collected, the City may choose to purchase a software package to assist supervisors with tracking labor hours and calculating hours associated with each task time.

Successfully implementing this recommendation will require changing the current employee culture in many divisions. It is important for the Department's upper management to convey to staff how this information will be used to streamline workloads and make projects easier to schedule. As the dataset associated with task times becomes larger, the Department will be able to analyze staff time associated with providing services more easily. This will allow Department management to more effectively communicate the impacts of service level changes and adjustments to the Department's workforce.

RECOMMENDATION 68: Utilize the existing SeeClickFix™ system to track work order requests Department-wide.

While creating a comprehensive asset management plan will enable the Department to create annual, monthly, weekly, and daily work plans for each division and staff member, reactive maintenance situations will inevitably arise. These could result as a consequence of inclement weather, unexpected asset failure, or through third-party complaints. The Department currently utilizes a public reporting system called SeeClickFix™ to respond to maintenance requests generated by the public. While this system is an important public reporting tool, it is also capable of tracking work order requests generated internally.

Although the Department will be scheduling operations based on comprehensive work plans, it is important to collect information on how scheduled and unscheduled work is assigned to staff. This should be accomplished by utilizing work order functions in the SeeClickFix™ system to schedule and assign tasks, evaluate task times, and interface with GIS systems for as many Public Works activities as possible, including internally generated tasks.

By relying on SeeClickFix™ as an internal work order system, the Department will provide managers with valuable insights into how much workload is scheduled compared to reactive. This information can help the Department better plan for effectively addressing reactive maintenance concerns. This could involve dedicating crews to address reactive issues at a specific time of day or within a certain timeframe, which will allow staff to also address regularly scheduled maintenance tasks.

As the Department continues to utilize SeeClickFix™, it should identify any areas where the software does not meet its current needs. If these needs prove critical to the Department's ability to organize and track its workload data and cannot be addressed by the vendor, it is appropriate for the Department to issue an RFP for work order software which can be utilized by all Public

Works' divisions. If it is necessary to procure additional software, the Department should ensure that it can interface with the City's existing software systems (such as SeeClickFix™) and provide management with detailed reports on the number of tasks completed, the type of tasks, who completed the task, the time associated with completing each task, and the time between when a work order was issued and when it was completed.

Utilizing SeeClickFix™ as a work order system will provide the Public Works Department with a core administrative tool which will shed light on the Department's activities and enable management to more effectively utilize staff.

Refuse and Recycling

The Carbondale Public Works Department provides comprehensive solid waste services to approximately 4,000 residential stops and regularly collects household waste, recycling, bulk items, and yard waste. The following recommendations are intended to streamline existing solid waste operations and safeguard the City's workers from injury.

RECOMMENDATION 69: Implement a standardized trash container program and install tippers on existing garbage trucks.

According to the City's solid waste guidelines, residents may place refuse at the curb in plastic bags with capacities between 20-35 gallons, weighing no more than 25 pounds when full. If using garbage containers, residents are required to select containers with 20-35 gallon capacity weighing no more than 50 pounds when full. Larger containers (up to 95 gallons) may be used if trash is bagged in the container. The City currently uses garbage trucks staffed with two personnel. Operators load the trucks by driving to a stop, approaching the receptacle or bags, manually lifting and emptying items into the truck, replacing receptacles, and moving to the next stop.

The City currently owns automated tipper attachments that can be added to its existing garbage truck fleet. These attachments consist of a hydraulic arm fitted to the garbage truck which is designed to hook onto a special handle embedded in the front of a trash cart. After securing the handle, the hydraulic arm lifts the cart off the ground and empties the contents into the garbage truck before returning the cart to the ground. It is important to note that these tippers require standardized carts with tipper-compatible handles in order to safely lift containers and empty the contents. The City's existing tippers have not been installed due to a lack of standardized trash carts in the community.

The Department's current approach to refuse disposal creates significant opportunities for workers to injure themselves. Although the City's guidelines indicate that bags and containers should not weigh more than 25-50 pounds, staff report these weight limits are rarely enforced. Many crews will take bags and receptacles left at the curb regardless of weight in order to provide maximum service to customers. While this inclination towards responsive customer service is commendable, it poses significant health risks for refuse collectors.

The number of injury hours paid in recent years sheds some light on injury issues in the Department. The following table illustrates annual leave hours taken due to injuries in the Refuse and Recycling Division since FY2012. Because the Department frequently utilizes Street Maintenance employees to backfill for refuse collection operations, the table also includes injury hours generated by Street Maintenance staff.

Table 66: Refuse and Recycling and Street Maintenance Staff - Annual Injury Hours, FY2012-FY2016

Fiscal Year	Injury Hours	Injury Payroll	Affected Employees	Average Injury Hours per Affected Employee	Average Injury Pay per Affected Employee
FY2012	919.8	$16,911.60	3	306.6	$5,637.20
FY2013	703.5	$13,688.75	6	117.3	$2,281.46
FY2014	525.4	$10,141.61	4	131.4	$2,535.40
FY2015	534.9	$10,786.58	4	133.7	$2,696.65
FY2016	1735.0	$35,445.68	6	289.2	$5,907.61
Average	**883.7**	**$17,394.84**	**4.6**	**195.6**	**$3,811.66**

This represents an average of 110 working days each year lost due to workplace injuries, which creates a significant burden on the Department and exposes the City to liability risks. Additionally, the City is paying over $17,000 each year on average in injury payroll, meaning these hours were paid while an employee was out with an injury as opposed to on the job. This payroll amount does not include other costs paid by the City related to workers' compensation and other claims due to a lack of available data.

In order to minimize the likelihood that workers will harm themselves, it is recommended that the City expedite the process of implementing a standardized trash container program. Such a program would require the City to procure trash carts for all of its residential customers. Standardized carts conform to modular specifications which allow them to be lifted off the ground by an automated trash truck or a lift assist device, such as a trash tipper.

There are many benefits to standardizing trash receptacles for municipal solid waste programs. First and foremost, standardizing carts allows the City to utilize tipping equipment it already owns, thus minimizing employee exposure to heavy lifting, strains, and other occupational hazards associated with manually handling trash bags and containers. Decreases in worker injury will result in lower workers' compensation claims, less time away from work, and a healthier workforce.

Second, a standardized program creates a clear visual distinction for refuse workers and customers regarding trash collection limits. Customers should be limited to the amount of trash that fits in their cart each week, and should purchase stickers for any extra trash placed at the curb. Trash placed outside the container without a sticker should not be collected by any refuse worker. Additionally, customers served by private haulers will not receive standardized trash carts from the City and should not be served by City refuse crews.

Third, by standardizing trash carts and reducing associated injuries, the Refuse and Recycling Division will decrease its reliance on the Streets Maintenance Division for additional labor support. Of the 3,120 hours Streets Maintenance provides to other Public Works' divisions on average each year, 2,130 hours (68%) are associated with Refuse and Recycling functions. Reducing injuries will increase the amount of available time for Streets Maintenance workers to dedicate to street work and generate increased efficiency in that Division as well.

The largest obstacle to standardizing trash receptacles is cost. Depending on the type and quantity of container selected and local market forces, it is not unusual for unit prices to range from $50-$100 per container. Given approximately 4,000 residential customers in the City, a conservative cost estimate of $400,000 is reasonable. In order to maximize cost savings, the City should prepare an RFP outlining the proposed cart program and its requirements for standardized carts (such as compatibility with the City's existing tipping equipment) and compare quoted bids received.

Implementing this recommendation will also require changing the Carbondale City Code. Currently, Title 10, Chapter 1, Section 9 of the Code requires property owners to supply their own refuse containers. Section 10 of the same chapter describes acceptable containers. These sections should be amended as part of the standardization process. Additionally, the City should ensure that it collects standardized bins from customers who cease to use the City's refuse services.

RECOMMENDATION 70: Conduct a feasibility study to determine the appropriateness of automated refuse collection in the community.

After having acquired standardized carts and installed tippers on existing refuse trucks, the City will have taken necessary steps to reduce worker injury and maximize efficiencies with current equipment. However, these elements also lay the groundwork for more advanced refuse collection services, particularly regarding automated refuse collection.

Automated refuse collection relies on the use of refuse trucks equipped with remotely operated lifting arms. These trucks are typically staffed by one operator who drives the truck to each stop and utilizes the lifting arm to pick containers up from the ground and empty them into the truck. This reduces the crew required to operate a refuse route and potentially decreases the time spent at each stop. In short, automated refuse programs create opportunities for safer, swifter, and more consistent trash collection services.

In order to determine whether automated refuse collection is appropriate for a community, it is important to compare current service performance to automated performance across a variety of factors. This includes capital costs associated with refuse trucks, the estimated time needed to complete collection at each stop (as well as each route), and staffing changes required by automation. While the Equipment Maintenance Division maintains detailed records on the existing Refuse and Recycling fleet, other workload data is not reliably measured. In particular, the lack of task time information as discussed previously results in an inability to estimate the amount of time spent at each collection stop, which makes accurate comparisons between the current system and automation difficult.

In order to determine whether to implement an automated refuse collection system in Carbondale, the City should conduct a feasibility study to determine whether automated collection can be performed cost-effectively in the City. This study should answer three primary questions: how much will automation cost, how many staff will be needed to operate an automated program, and can the City achieve time savings or consolidate routes by moving to an automated system. Data required to answer these questions includes a comparison of capital cost requirements for each program, an analysis of staffing requirements and associated costs under the current model compared to an automated model, and a comparison of task time efficiencies.

One of the challenges to automated refuse collection in Carbondale is the prevalence of one-way streets and on-street parking. The proposed feasibility study should also include an overview of areas on each route which would prove challenging for an automated truck. In addition, the study should contemplate possible solutions for mitigating these challenges, such as the implementation of rolling "No Parking" zones, limiting parking during collection days, identifying ideal places for trash carts to be set out, and developing a proposed route and collection schedule that minimizes overall impact to the community.

Implementing an automated refuse collection system will require time in order to collect enough data about the Department's current activities. These activities will change when a standardized cart system is implemented. It is important for the Department to have a sufficient dataset available regarding its own collection activities under the new system prior to commissioning a feasibility study.

Because an automated system will necessarily impact the Carbondale community, it is appropriate for the City to issue an RFP for a third party consultant to perform the analytical work as well as conduct community meetings and gather feedback from residents.

RECOMMENDATION 71: Implement a City-led single hauler system for residential solid waste services.

The City currently permits private refuse haulers to service residential customers. These haulers are governed by Title 10, Chapter 1, Section 12 of the City Code and are required to provide proof that all vehicles used for collection activities are properly inspected and licensed as required by State law. In addition, private collectors are charged a license fee of $25.00 - $75.00 per year depending on the number of vehicles to be used for collection activity.

This arrangement presents several challenges to residential refuse collection efforts by the City. First, private haulers are not required to submit lists of their existing customers to the City, which hampers the City's ability to audit its customer base. This also limits the City's ability to determine its overall market share regarding refuse collection services. While City staff estimate the City collects 95% of all residential refuse customers in the City (with private haulers collecting the remaining 5%), the City cannot readily verify this without also knowing which customers are served by private haulers. There is also no readily available mechanism for Refuse & Recycling crews to verify whether a particular customer is paying the City for refuse collection services. As a consequence, the City is at risk of losing revenue by collecting refuse from customers who are theoretically contracting with private haulers.

A second challenge involves standardized trash carts. The most efficient way to deploy standardized trash carts is to issue them to every eligible residential unit in the City simultaneously. Continuing to permit private residential hauling will require the City to issue trash carts to residents whenever they become City customers and collect trash carts if they decide to utilize a private hauler. This will increase the administrative workload associated with refuse collection and require Refuse and Recycling crews to collect and distribute trash carts in addition to actual solid waste.

In order to create the most efficient refuse and recycling operation possible, it is necessary for the City to directly service all residential refuse customers. This allows the City to realize economies of scale, streamlines the customer auditing process, and provides the City with an opportunity to generate additional revenue by adding customers who are not currently served by City refuse crews.

It should be noted that many communities across the country allow private haulers to service commercial customers while simultaneously preventing these haulers from serving residential customers. This represents a reasonable compromise which gives private haulers limited market access in the City rather than closing them out of the market entirely.

The recommendations above require standardizing trash carts in order to streamline existing services and increase employee safety protections. The process of standardizing cart systems presents an opportune time for implementing a single-hauler policy. These changes should be undertaken simultaneously, if possible.

Stormwater

Effective stormwater management is an important component of Public Works activities in Carbondale. Currently, stormwater functions are largely performed by the Streets Division and funded by the General Fund. The following recommendation is intended to provide additional funding capacity for stormwater-related functions and improve stormwater services.

RECOMMENDATION 72: Create a stormwater utility fee to provide funding for stormwater infrastructure and maintenance efforts.

The City of Carbondale is responsible for a wide variety of stormwater-related assets, including culverts, catch basins, drainage ditches, and other conveyances. It is necessary to identify an appropriate funding source for maintaining stormwater infrastructure.

Currently, stormwater-related maintenance is provided using General Fund monies, which reduces the amount of support the General Fund can provide to other functions. In order to create a more robust and reliable revenue stream for stormwater maintenance and improvement, the City should adopt a stormwater utility fee.

Stormwater utility fees operate similar to other utilities, such as water or wastewater. Property owners pay a regular fee based on the amount of stormwater runoff their properties contribute to the stormwater system. This is typically computed by calculating the amount of impervious surface area on a given property parcel. Impervious surface area prevents stormwater from being absorbed into the ground. This creates stormwater runoff, which increases the amount of water the stormwater system must convey away from the community. Parcels with large impervious surface areas generate more runoff, and thus pay a higher amount in stormwater utility fees.

A common approach for determining fee structure is to determine the average impervious surface area on a typical residential lot, otherwise known as an Equivalent Residential Unit (ERU) or Impervious Area Unit (IAU). The amount of impervious area on each parcel in the community is then computed in terms of ERUs, and a flat fee is assessed per ERU. Revenue is deposited into a separate enterprise fund (a Stormwater Fund) and can be utilized for stormwater operations as well as debt-funded improvements to stormwater infrastructure.

In recent years stormwater utility fees have become increasingly prevalent in Illinois. The following table provides information on several Illinois communities that currently utilize stormwater utility fees, including the year the fee was implemented and the latest available rates.

Table 67: Stormwater Utility Fee Rates in Sample Illinois Communities, 2016

Community	Estimated Population	Year Established	Sqft per ERU	Base Monthly Fee	Monthly Fee per ERU	Monthly Single-Family Residential Fee
Bloomington	78,902	2004	1,000	$0.00	$1.45	$2.90 - $7.25
Champaign	83,424	2012	1,000	$0.00	$1.51	$4.94 - $13.64
Decatur	74,710	2014	4,500	$3.00	$0.67	1 ERU
Downers Grove	49,670	2013	3,300	$0.00	$9.72	$7.29 - $14.58
Highland Park	29,902	2008	2,765	$8.00	$8.00	1 ERU
Morton	16,525	2006	3,300	$0.00	$5.33	1 ERU
Normal	54,664	2005	3,200	$0.00	$4.60	1 ERU

Community	Estimated Population	Year Established	Sqft per ERU	Base Monthly Fee	Monthly Fee per ERU	Monthly Single-Family Residential Fee
Rock Island	38,877	2002	2,800	$0.00	$1.32	$2.96 - $4.94
Wheeling	38,015	2016	3,000	$0.00	$2.00	1 ERU

Approximately half of the communities in the table above assess detached single family homes 1 ERU per month regardless of the home's square footage. Other communities, such as Bloomington, Champaign, Downers Grove, and Rock Island, have developed a tiered rate system for detached single-family structures. The rates shown in the above table reflect minimum and maximum monthly charges assessed to these homes; the actual fee is dependent on the home's square footage.

It should be noted that implementing a stormwater utility fee is a complex, time-intensive process. To maximize success, municipalities frequently commission rate studies and engage in community outreach, secure support from elected officials and citizen groups, and conduct public information campaigns about stormwater management and how the stormwater utility fees will be utilized. It is not uncommon for communities to contract with a third party consultant for some or all of these services.

Whether the City chooses to utilize a consultant or calculate rates in-house, the fee should be sufficient to cover the expense of regular stormwater asset maintenance and capital replacement. The Department's comprehensive asset management plan will play a prominent role in helping the City determine the total cost of maintaining its existing stormwater systems. This cost can then be used to calculate an appropriate stormwater utility revenue goal, which will then inform an ERU fee calculation.

Determining the amount of impervious surface area per parcel is more readily accomplished through the use of GIS programs to measure rooftops, pavement, and other areas that cause runoff. Because the City currently lacks the capability to perform these measurements using existing resources, it may choose to contract for these services as well.

Ultimately, a stormwater utility fee represents a transparent way of allocating stormwater-related costs to property parcels in the City. Funds generated by this fee may be applied to some work currently performed by Streets crews, such as catch basin cleaning, ditch and drainage maintenance, and street sweeping. The responsibility for overseeing the stormwater utility fee and related stormwater projects should rest with the Deputy Director of Utilities.

Wastewater

The City's Wastewater Treatment plants are highly efficient and provide quality services to the Carbondale community. Although investments in these operations have been made in recent years, continued proactive investment in modernizing technology will allow staff to engage in greater on-call operation and remote monitoring, as described in the following recommendation.

RECOMMENDATION 73: Invest in technology to permit greater automated operation and off-site monitoring of water and wastewater facilities.

The City's Wastewater Treatment Plants are constantly staffed on a 24-hour basis. Each facility is supervised by a Plant Supervisor and includes a staff of seven Teamsters. These Teamsters bid for one of four work shifts at each plant, as shown in the following table.

Table 68: Wastewater Treatment Plant Schedule, 2016

Wastewater Treatment Shift	Daily Hours	Minimum Staff Required	Core Responsibilities
First Shift	7:00am to 3:00pm Monday - Friday	3	• Monitor plant operations • Conduct regular maintenance activities
Second Shift	3:00pm to 11:00pm Wednesday - Sunday	1	• Monitor plant operations • Mow grounds • Custodial Work
Swing Shift	3:00pm to 11:00pm Monday – Tuesday 11:0pm to 7:00am Thursday 7:00am to 3:00pm Saturday – Sunday	1	• Monitor plant operations • Conduct regular maintenance activities • Custodial Work • Other duties as assigned
Third Shift	11:00pm to 7:00am Saturday - Wednesday	1	• Monitor plant operations • Custodial Work
Sick Leave Vacation	Normal work hours from 7:00am to 3:00pm Monday – Thursday and 11:00pm to 7:00am Friday. Also covers leave as needed.	1	• Perform duties as assigned

While it is appropriate to assign custodial and grounds duties to second and third shift employees, these activities do not necessarily represent the highest and best use of Wastewater staff. Because these shifts are staffed with only one individual, they do not engage in major facility work and can undertake only monitoring and light duty assignments. In order to simplify staffing arrangements and better allocate personnel, it is recommended that the Department invest in Supervisory Control and Data Acquisition (SCADA) system upgrades which would permit these facilities to be remotely monitored and controlled.

SCADA software permits staff to monitor and operate various components of each facility, such as pumps, gates, orbitals, and lifts, in order to control the flow of sewage through the facility. At the time of this writing, the Department is investing in generators for each lift station and connecting lift stations to SCADA systems at both the Northwest and Southeast Wastewater Treatment Plants. The SCADA system utilized by the Southeast Treatment plant is approximately three years old, whereas the system utilized by the Northwest Treatment plant was updated within the last two years. Neither SCADA system currently supports full plant automation and remote monitoring.

By procuring SCADA upgrades that enable remote operation, the Department will create an opportunity to convert the third shift to an on-call shift. This would allow for more effective assignment of housekeeping duties to the second shift and require the presence of a third shift employee only in the event of high flows during storms, emergencies, or alarms requiring staff attention. If the use of on-call shift schedules for the third shift proves successful, the City may choose to expand on-call shifts to include second shift activities on the weekends. This will eliminate the need to assign light-duty tasks to second shift workers and allow the City to contract for mowing services at each treatment facility.

In addition to technology investments, this transition will require the formation and clear articulation of policies regarding expectations for on-call workers. These policies and procedures should be documented as part of a Department-wide standard operating procedures manual, as described in the following recommendation.

Training and Safety

The following recommendations are intended to highlight training opportunities which will help staff accomplish their responsibilities in an efficient and safe manner.

RECOMMENDATION 74: Develop a Department-wide standard operating procedures (SOPs) Manual to create consistent practices across Public Works' divisions.
The development and adoption of standard operating procedures across the Public Works Department is not consistent across divisions. For example, the Water Treatment Division maintains documented procedures for several water operations procedures, such as conducting a manual backwash, how to respond to power outages, and how to perform hourly tests. However, these SOPs do not conform to a standardized format and do not appear to be collected in a single operations manual. However, other divisions do not maintain formal SOPs and rely on historical practices for guidance.

Additionally, work tasks that are undertaken by multiple divisions are not well-documented. For example, both Streets crews and Water Distribution crews may be required to excavate existing pavement, either to repair the pavement or to access water mains underneath the roadway. Although both crews are engaged in the same kinds of work, there are currently no formal, defined operating procedures for accomplishing these tasks, and the Department relies on the experience of crew leaders to determine how tasks should be accomplished.

A lack of SOPs exposes the Department to challenges in several ways. Crew leaders may develop their own, preferred methods of accomplishing a task which conflict with another crew leader's preferences. This can lead to confusion among crew members who move from one supervisor to another and create inconsistent work quality. In addition, the methodology preferred by a crew leader may or may not correspond with the latest industry best practices on how to accomplish a task. A lack of SOPs leaves staff with no clear reference on the Department's expectations regarding how a task should be performed.

It is also important for SOPs to describe how crews should communicate with other staff and the public about the work they are undertaking. During interviews, Public Works staff reported inconsistent internal communications regarding procedures that could interrupt public services, such as road closures. It is important to standardize notification procedures so that administrative support staff and the public are adequately informed about service interruptions.

In order to create clear, transparent understanding about the requirements of various work tasks and encourage consistency of work among crews, it is recommended that the Department formulate and adopt formal SOPs. A standard operating procedure describes and guides multiple iterations of the same procedure across a variety of places and times. While they can be organized in a variety of ways, SOPs usually involve seven key components: the subject, intent, responsible persons, timing, involved individuals, a description of the procedure, and a regular review of the SOP.

The APWA publishes a variety of information on SOPs and refers to a document prepared by the City of Albany, Oregon titled "Guidance for Preparing Standard Operating Procedures" as an example of how comprehensive SOPs should be created.[39] According to this document, SOPs should contain a brief description of the work or process, definitions of specialized or unusual terms, the sequence of procedures to follow, and any quality control activities that should be performed for the procedure. The document also provides templates and checklists for creating new SOPs and would serve as a useful resource as Carbondale begins this process.

RECOMMENDATION 75: Create a comprehensive training program.
Currently, the Carbondale Public Works Department does not provide regular training for employees. While limited operational training is provided when new equipment is purchased, opportunities for regular professional development, safety, and cross-training are rare. This lack of training prevents staff from building professional capacity, exposes staff to injury risk, and limits staff's ability to backfill in the event of vacancy. As a consequence, overall staff capacity and succession planning are diminished.

In order to protect employees and foster an organizational culture of continuous improvement, it is important for the Department to create a comprehensive training program. This program should consist of three primary elements: safety training, professional development, and internal mentoring/cross-training.

As a best practice, Public Works staff should have access to a regular, comprehensive training regimen. At minimum, training should include adequate equipment and safety instruction in order to protect the lives and well-being of staff. According to the APWA, it is a best practice to include safety training information which corresponds to Occupational Safety and Health Administration (OSHA) standards. This information typically consists of the following elements regarding equipment safety:[40]

- Specific content as required by regulation
- Manufacturer's recommendations (as applicable)
- Manufacturer's operations, service and maintenance manuals (as applicable)
- Overview of employer's written safety program, practices and policies
- Specific hazards related to a process, operation, vehicle, machinery, equipment, etc.
- Evaluation of employee's ability to understand and perform their assigned tasks
- Employee access to a qualified trainer to explain technical material and employer-specific requirements

In addition to these standards, the Department should evaluate causes of workplace injury which results in workers' compensation claims and create training opportunities to address safety needs in these areas.

Professional development training also plays a key role in keeping employees informed regarding trends in best practices and operations. In addition, supervisory and management training is often an invaluable tool for crew leaders, foremen, managers, and other Department leaders who supervise staff. These training opportunities not only broaden an employee's knowledge and skill set, but often teach "soft skills" and appropriate personnel management tactics designed to foster positive work environments. Professional development opportunities offered by reputable associations, such as APWA and the American Water Works Association (AWWA), often include

[39] http://www2.apwa.net/Documents/City%20of%20Albany,%20OR%20SOP.pdf
[40] Safety Training and the Art of Compliance. APWA Reporter. April 2006. https://www.apwa.net/Resources/Reporter/Articles/2006/4/Safety-training-and-the-art-of-compliance

credits toward credentialing or certification, which can be a valuable morale boost for employees and build useful professional capacity for the Department.

The final piece of the Department's comprehensive training program involves cross-training. The purpose of cross-training is to provide staff with an opportunity to learn how to competently perform another Departmental function in case a vacancy or absence threatens to interrupt service. By having staff trained in multiple roles, the Department will cultivate increased depth using current staffing levels and contribute to the professional growth of staff.

The standard operating procedures as discussed previously will constitute excellent training material for cross-training purposes. It is important for the Department to create cross-training opportunities using the new SOPs as training tools in order to ensure that professional knowledge is consistently disseminated throughout the department. In order to successfully implement the training program while complying with industry best practices and organizational policies, the Department should coordinate closely with the Human Resources Department to design and implement a training schedule.

It should be noted that training necessarily involves time and monetary expenses. By identifying training opportunities in each of these three areas, the Department will be able to quantify how many employees to train and how often to train them. It is appropriate to phase in a comprehensive training program over time, but it is more important to ensure that training occurs on a regular basis in order to keep employees up-to-date and well-informed.

RECOMMENDATION 76: Reconvene the Public Works Safety Committee to focus on occupational safety risks.

The Public Works Department currently utilizes a Safety Committee composed of representatives from various divisions. The original intent of the Committee was to meet quarterly to evaluate the Department's facilities and make recommendations for improving hazards found at each facility. However, staff report that the Safety Committee has not met on a regular basis over the last several quarters. While the existence of a Safety Committee is commendable, the Department would benefit from reconvening this Committee, reevaluating its membership, and expanding the Committee's scope of work to include occupational safety risks.

As previously discussed, an average of 4.6 employees in the Street Maintenance and Refuse and Recycling divisions are injured each year, resulting in an average of 884 hours each year lost to injury time. This represents over 22 weeks of annual injury-related leave in these divisions alone and is a significant drain on the Department's resources. In addition to addressing the root causes of injury through increased reliance on automated refuse collection and a comprehensive training program, a Department Safety Committee will create additional opportunities for staff to identify safety issues and take appropriate action to begin addressing these concerns.

The Safety Committee should consist of representatives from Operations, Engineering, and Utilities, with a particular emphasis on divisions involving high-risk workloads such as Refuse Collection, Street Maintenance, Water Distribution, Sewer Collection, and other manual labor activities. However, it is also important to provide representation for office workers who may face repetitive injury risks which commonly occur in office environments.

The Department Safety Committee should meet at least quarterly and make safety recommendations regarding facilities, workload, environment, and to the Public Works Director. Additionally, it is necessary to cultivate a close working relationship with the Citywide Workforce Safety Committee and HR staff responsible for risk management, workers' compensation, and training activities. Developing a working partnership with these staff will provide the Safety Committee with professional resources and expertise and help to inform HR staff about issues that could be affecting multiple departments. For this reason, HR staff should attend the Department's Safety Committee meetings or at least receive copies of the Committee's minutes and reports.

Safety Committees are an important mechanism for allowing employees to provide feedback about perceived life, health, and safety hazards they encounter during the course of their work, and create a space where Department staff can discuss options for mitigating these concerns. By expanding the existing Safety Committee's focus area, the Department will be able to collect valuable feedback about existing safety practices and share this information with Human Resources staff and City management.

Development Services Department

The Development Services Department is responsible for ensuring that development and construction in the City of Carbondale complies with existing zoning and building code regulations, and that exiting structures and properties are maintained in a manner that limits safety concerns and issues of public nuisance. The Department is organized into three divisions, including Development Services, Planning Services, and Building and Neighborhood Services. The FY2017 approved budget includes funding for 13.9 FTE. The following figure illustrates the Department's current organizational structure.

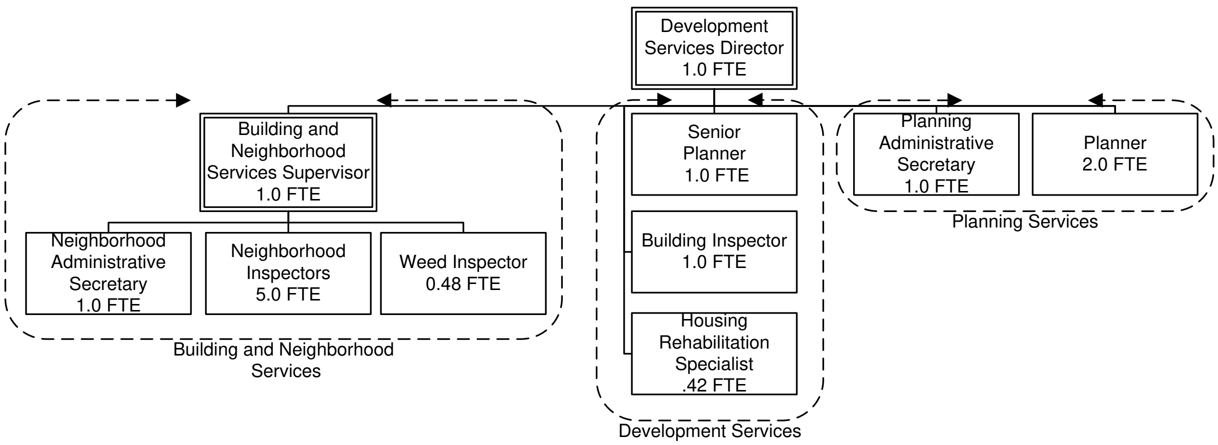

Figure 31: Development Services Department Organizational Chart, FY2017

Development Services Division

The Development Services Division is responsible for the departmental oversight, building plan reviews and inspections, and housing program management. In FY2017, the budgeted staffing for the Development Management Division is 3.42 FTEs including the Development Services Director, Building Inspector, Senior Planner and Housing Rehabilitation Specialist (0.42 FTE).

The Development Services Director is responsible for oversight and management of Department programs and personnel. The Director oversees the work of planning, building and neighborhood services staff and maintains final review and approval authority for development and building plans. The Director works closely with other Departments and City staff to promote economic development activity in the community and ensure that development plans meet both strategic community development goals and daily service delivery operating considerations.

The City's Building Inspector is responsible for reviewing building plans to ensure compliance with building codes, reviewing and issuing construction and demolition permits, and inspecting construction to ensure compliance with approved plans and permits. The Building Inspector often serves as the liaison between the contractor and developer.

The Housing Rehabilitation Specialist is responsible for administering the City's Housing Assistance Programs. Prior to 2016, the City utilized the Illinois housing grant program resources, in conjunction with regional and local programs and resources, to find its housing rehabilitation programs. As of the current fiscal year, the State eliminated its funding for Housing Assistance Programs. In response, the City allocated $70,000 in FY2017 to fund the City's established housing rehabilitation program, and to create three new housing assistance grant programs, including a Single Family Housing Conversion Program, Curb Appeal Assistance Program, and Down Payment Assistance Program.

The Senior Planner is responsible for general long-range planning and site plan review duties and the primary staff support for the Planning Commission. In addition, the Senior Planner oversees the City's housing assistance programs.

Planning Services Division

The Planning Services Division is staffed with three FTEs as of FY2017, including two Planners and an Administrative Secretary. The City's Planners review site plan applications, process subdivision and annexation requests, and assign addresses. This Division is also responsible for reviewing sign permits and zoning certificate applications. In addition, one Planner is tasked with maintaining the City's GIS. Division staff also provide intake service and staff the Department customer service counter.

Building and Neighborhood Services Division

As of FY2017, the Building and Neighborhood Services Division had 7.48 FTEs, including the Building and Neighborhood Services Supervisor, five Neighborhood Inspectors, an Administrative Secretary and a seasonal weed inspector position that equates to 0.48 FTE. The Division is responsible for enforcing environmental and building codes through proactive and complaint-driven inspection and administering the Mandatory Rental Housing Inspection Program. The Division also provides staff support to the Building Board of Appeals and the Energy and Environmental Advisory Commission.

The Department has seen a slight decrease in staffing from FY2013 to FY2017. In FY2017, positions were eliminated in the Planning Services and Building and Neighborhood Services divisions. The decision to eliminate the position in Planning Services was due to workload, while the elimination of an FTE in Building and Neighborhood Services assisted in addressing larger organizational needs. The following table illustrates the department's FTE staffing levels over the last five fiscal periods, along with the percentage change in staffing since FY2013.

Table 69: Development Services Staffing Trends, FY2013-FY2017

Division Staff (FTEs)	Actual FY2013	Actual FY2014	Actual FY2015	Actual FY2016	Budgeted FY2017	Percent Change
Development Management	1.67	1.85	3	3	3.42	104.%
Planning Services	3.61	3.79	4	4	3	-16.89%
Building & Neighborhood Services	10.42	10.27	9.48	9.48	7.48	-28.21%
TOTAL FTEs	**15.7**	**15.91**	**16.48**	**16.48**	**13.9**	**-11.46%**

Development Services Budget

Total budgeted expenditures in the Development Services Department are $1,433,115 for FY2017, or 2.56% of City-wide budgeted expenditures. This Department is funded entirely by the General Fund and all revenues/fees collected by the Department are used to support General Fund operations.

The following table illustrates the Department's revenue patterns over the last five fiscal periods, along with the percentage change since FY2013.

Table 70: Development Services Revenue by Fund, FY2013-FY2016

Development Service Revenue	FY2013	FY2014	FY2015	FY2016	% Change
Sale of Printed Material	$8	$35	$64	$55	587.5%
Building Permits	$19,243	$40,509	$57,174	$11,042	-42.6%
Electrical Permits	$1,880	$1,876	$980	$1,290	-31.4%
Plumbing Permits	$2,166	$2,189	$1,247	$1,217	-43.8%
Sign Permits	$540	$698	$501	$671	24.2%
Zoning & Occupancy Fees	$885	$1,970	$1,455	$1,382	56.2%
Filing Fees/Public Hearings	$1,630	$2,250	$2,858	$2,061	26.4%
Site Plan Preparation Fees	$225	$150	$175	$75	-66.7%
Code Reinspection Fees	$1,100	$4,400	$1,560	$450	-59.1%
Rental Property Inspection Fees	$267,085	$271,110	$270,570	$280,149	4.9%
Land Clearing & Mowing	$19,534	$15,414	$12,303	$10,143	-48.1%
TOTAL	**$314,296**	**$340,601**	**$348,887**	**$308,535**	**-1.8%**

Major sources of revenue for the Department include fees collected for Building Permits and Rental Property Inspections. Overall, the Department has seen a slight decrease in fees collected, specifically in the permit areas and land clearing/mowing.

Major expenditures for the Development Services Department include Personal Services, Non-Operating Charges and Direct Operating Charges and Services. The following table illustrates trends in the Department's expenditures over the last five fiscal periods, along with the percentage change since FY2013.

Table 71: Development Services Expenditures by Category, FY2013-FY2017

Development Services Expenses	Actual FY2013	Actual FY2014	Actual FY2015	Actual FY2016	Budgeted FY2017	Percent Change
Personal Services	$1,048,427	$1,075,095	$1,113,541	$1,034,957	$986,855	-6%
Direct Operating Charges & Services	$110,342	$103,124	$99,969	$95,131	$104,060	-6%
Services & Charges Transferred In	$7,686	$5,973	$3,500	$4,550	$4,700	-39%
Non-Operating Charges	$273,552	$635,271	$224,864	$212,500	$337,500	23%
Capital Outlay	$15,131	$44,939	$0	$0	$0	-100%
TOTAL	**$1,455,138**	**$1,864,402**	**$1,441,874**	**$1,347,138**	**$1,433,115**	-2%

Development Services has seen a slight decrease in funding over the last five fiscal years, which can be attributed primarily to a reduction in staffing levels as previously noted.

Analysis and Recommendations

The Development Services Department is responsible for overseeing the development and building processes in the City, and for conducting proactive and complaint-driven inspections to maintain the quality of housing stock in the community. This assessment of the Development Services Department indicates that there are opportunities to improve the efficiency and effectiveness of Department programs and personnel by enhancing technology and reorganizing staff to better meet current workloads challenges. In addition, there is a need to clarify expectations regarding the Department's inspection programs. Recommendations relating to these opportunities are detailed below.

Fees & Cost Recovery

RECOMMENDATION 77: Establish cost recovery goals for Development Services Department fees.

The City's existing Development Services Fee structure has been in place since 2001 and the Department does not currently have a written policy outlining the rationale for computing development fees, or an established cost recovery goal. While discussions regarding updating the fees has taken place, no action has been taken.

When reviewing the fee structure, cost recovery is an important element to take into consideration. Cost recovery indicates if the City is recouping a portion (or all) of the costs associated with a particular service/activity through the fee being charged. To estimate cost recovery, it is first necessary to identify the personnel costs associated with a plan review activity (e.g., site plan reviews). Personnel cost estimates are developed by determining the average number of labor hours required to complete plan review and permitting activities (e.g., site plan reviews) and applying the average number of labor hours required per activity to the average hourly salary and benefit rate of those employees who participate in the review process. The Development Services Department currently utilizes a time keeping process that allows the Department to identify the average labor hours required to complete many, though not all, core plan and permit review duties. As a result, estimated cost recovery ratios were developed for some of the City development review and permitting processes.

The following table summarizes the Department's cost recovery ratios for those Development Services plan review and permitting processes where data was readily available.

Table 72: Cost Recovery Fee Analysis for Development Services, FY2017

Development Service Activity	Average Hours per Activity[41]	Fully Burdened Staff Rate	Total City Cost Per Activity	City Fee per Activity	Cost Recovery
Zoning Board of Appeals Case	35.17	$30.3	$1,068.01	$25.00	2%
Site Plan Application	20.17	$30.3	$612.46	$25.00	4%
Subdivision	9.67	$30.3	$293.58	$0.00	0%
Annexation Case	11.05	$30.3	$335.59	$0.00	0%

[41] Average Hours per Activity provided by Development Services staff

Development Service Activity	Average Hours per Activity[41]	Fully Burdened Staff Rate	Total City Cost Per Activity	City Fee per Activity	Cost Recovery
Vacation and encroachment permit	11.83	$30.3	$359.38	$0.00	0%
Rental Inspections (Initial)	.50	$31.2	$15.61	$35.00	224%
Building Permits	1	$42.1	$42.10	$88.00	209%

As summarized in the table above, the cost recovery experience for the City ranges from zero to 200%, based on labor hour data provided by the City. Some plan review and inspection processes, such as rental inspection and building permit reviews, fully recover labor costs associated with each plan review. Other plan review processes, such as site plan review, only recover approximately 4% of the labor cost associated with the review. The reality is that there are multiple cost recovery rationales available for consideration. Ultimately, it is the City's responsibility to determine what cost recovery goals are appropriate for the community.

However, it is a best practice to structure fees to avoid, where possible, the possibility of a free rider structure. A free rider fee structure is one that enables individuals or applicants to utilize a government funded program to serve private interests. Under the City's current fee structure, if a retail chain is seeking to construct a new brick and mortar facility in Carbondale, it submits plans for review through the City's site plan review process. The City utilizes staff hours to conduct the review and plan revision process so as to ensure that the project meets development and safety standards. Under the current fee structure, the fee that is paid by the retail chain for that plan review reimburses an average of 4% of the City's cost of that plan review. As a result, the private development is being subsidized with general government resources.

A City may intentionally choose to subsidize development as an economic development tool or to ensure that the City remain competitive with its municipal neighbors. This is a legitimate policy decision. However, that should be a deliberate decision based on a comprehensive planning and economic development strategy. It is therefore appropriate for the City to engage in a policy discussion regarding Development Services fee cost recovery targets and to adopt targets to guide the annual fee review and adjustment process.

RECOMMENDATION 78: Establish a practice of annually reviewing and adjusting the Development Services fee structure to meet cost recovery goals.

Once the City has developed and adopted cost recovery goals for Development Services, it will be appropriate to adjust the fee schedule to reflect the adopted policy. In addition, it will be important to engage in an annual review and fee adjustment process to ensure that fee revenue meets cost recovery goals.

According to GFOA, well-designed charges and fees not only reduce the need for additional revenue sources, but promote service efficiency. GFOA provides the following recommendations when considering government fees:

- Consider applicable laws and statutes before the implementation of specific fees and charges.
- Adopt formal policies regarding charges and fees. The policy should identify the factors (affordability, pricing history, inflation, service delivery alternatives, and available efficiencies) to be taken into account when pricing goods and services.

- Calculate the full cost of providing a service in order to provide a basis for setting the charge or fee.
- Review and update charges and fees periodically based on factors such as the impact of inflation, other cost increases, adequacy of cost recovery, use of services, and the competitiveness of current rates.
- Utilize long-term forecasting in ensuring that charges and fees anticipate future costs in providing the service.
- Provide information on charges and fees to the public.[42]

It is important to note that setting fees and identifying cost recovery goals are policy decisions. However, recognizing that Development Services Fees have not been adjusted in over 15 years, it may be appropriate for the City to implement a multi-year phased approach to fee structure increase, so as to mitigate the negative impact on applicants. Furthermore, it will be important to ensure that applicants receive adequate advance communication regarding fee changes so as to further mitigate the impact of fee increases.

Inspections

RECOMMENDATION 79: Clearly define the roles and expectations of the Neighborhood Inspectors.

The City's Building and Neighborhood Services Division has been tasked with protecting the public's health and safety by enhancing the quality of Carbondale's residential and commercial areas. One way the City has done this is through the Mandatory Rental Inspection Program, which was established in 1995. Under the rental inspection program, landlords are required to register single and multi-family residential rental properties. Upon registration, the Neighborhood Services Division inspects the property to ensure that there are no code or life safety issues. If there are compliance issues, inspectors work with the property owner to address the issues and conduct inspections as necessary until they are addressed. After the initial inspection, each property is scheduled for re-inspection every three years.

Though limited data was available regarding enforcement trends since the program was implemented, there is a widespread perception among staff and managers that the program has been effective at fundamentally increasing and maintaining the quality of rental housing stock in the community. Staff reports indicate that the severity of code violations has declined considerably, on average, since the program was implemented. For example, there are fewer fundamental life safety issues found during the inspection process.

When there are life safety issues, it is essential for inspectors to maintain an inflexible approach so as to ensure that the issue is addressed before occupancy is permitted. However, for items that do not pose a significant life safety issue, a more collaborative and flexible approach may be warranted. Given the evolution of the program, it is appropriate for the City to reevaluate the program's inspection philosophy and clearly communicate the philosophy to inspectors.

Once policy makers have settled on an inspection philosophy for the program, it will be appropriate to conduct training sessions and workshops with inspectors. These training opportunities should be used to discuss the implementation of the program's policies and clarify how it translates for inspectors when they are in the field working with landlords, property owners and tenants. Providing staff with clear direction and expectations and the appropriate resources will alleviate some of the natural conflict that arises in the enforcement role. Once the program

[42] Adapted from the Government Finance Officers Association, Best Practice on Establishing Government Charges and Fees, February 2014

goals are clarified and training provided, it is reasonable to expect a consistent approach to inspections from both inspectors and also from managers when working to resolve the inevitable conflicts that arise between inspectors and property owners.

The role of Neighborhood Inspector can be very challenging and demanding. In order to continue successfully operating the Mandatory Rental Inspection Program, it is essential that staff has a clear understanding of the City Council and City Manager's expectations and goals for the program. This direction guides and assists staff when they are in the field, reduces conflicts, and limits inconsistencies in enforcement which can be frustrating or confusing to the public.

RECOMMENDATION 80: Revise the Rental Inspection Program to include enforcement and violation mechanisms.
As previously discussed, all rental residential housing units are inspected at least once every three years and additional inspections may occur in response to complaints. The program aims to address the structural integrity, health and life safety violations of rental dwelling units. In January 2009, the City began requiring owners of all rental residential dwelling units to register their property at an annual cost of $35 per unit.

As noted previously, limited data was available regarding enforcement trends since the program was implemented. There is however, a widespread perception among staff and managers that the program has been effective at improving the quality of rental housing stock and that the severity of code violations has declined considerably, on average, since the program was implemented. However, the existing program does not provide staff with an enforcement or violation mechanism. Currently, a property owner who is not in compliance or is required to make improvements to the rental property has an unlimited time period to complete the work. Multiple extensions can be granted, which can take staff and the owner into the next inspection period. In addition, staff does not have the ability to fine a property owner or withdraw a license if a property owner fails to make the appropriate improvements.

It is recommended that the City revise the Mandatory Rental Inspection Program to include enforcement and violation mechanisms. The following should be incorporated into the Program:

- **Licensing** – Require rental residential housing units to be licensed.
- **Withdrawal of Rental License** – Staff does not have the ability to withdraw a property owner's rental license. It is important that staff has the appropriate policies and tools in place to do their jobs effectively. By not having appropriate consequences for non-compliance, extensions are granted indefinitely.
- **Extensions** – Currently there is no guideline or parameter on the number of extensions that can be granted to a property owner.
- **Violation Structure** – The City should develop a violation structure that holds property owners and landlords responsible for correcting violations in a timely manner.

Eliminating unlimited extensions and creating stronger violations and/or consequences for non-compliant property owners will ensure staff has the appropriate tools to continue operating and enforcing the Mandatory Rental Inspection Program.

GIS Support

RECOMMENDATION 81: Convert a Planner position to a GIS Specialist.
The Department currently has three planner positions (Senior Planner and two Planners) that are responsible for completing land development and planning activities for the Department. The

Planners all share in the Department's general "planning duties," which include handling cases for the Planning Commission and Zoning Board of Appeals, reviewing site plan applications, as well as processing subdivision and annexation requests. Staff members also work the customer service counter, process sign permits and zoning certificates, respond to Freedom of Information Act requests and answer questions from the public (phone calls and walk-ins).

In early 2016, the City's GIS specialist position became vacant. As a result, a planner absorbed all of the City's GIS management responsibilities, in addition to existing planning functions. This was thought to be an appropriate assignment of duties for two valid reasons. First, Development Services is one of the major users of the GIS. Second, most planners, including those in Carbondale, maintain some competency in GIS utilization and management. However, the current arrangement leaves some gaps in GIS support for the organization.

Though the Planner currently assigned GIS responsibilities is competent in GIS, the position is also responsible for other general planning duties. Moreover, though the Planner is competent in GIS, there is no specialization. This limits the amount of time that can be dedicated to GIS system development. This is noteworthy because GIS is not just a planning and development related information system, but also has the capability to serve as a valuable asset management and work planning tool in the Public Works, Water, Sewer, Stormwater Management, and Fire Service program areas. However, the existing GIS function is underutilized in these areas due to limited access to system development resources.

Based on these considerations, there is a need for enhanced GIS capabilities in the organization. Though there are multiple organizational models and philosophes regarding where GIS system management should be housed in an organization, the more important consideration is that the GIS system management exists. As a result, there is no compelling reason to remove GIS from the Development Services Department. However, it is important to analyze whether the Development Services Department has sufficient capacity to provide enhanced GIS development and management.

It is important for the Department Director to review staff responsibilities and workload data regularly. This ensures that staff is focused and dedicated in the appropriate areas as well as help identify if there are Department or organizational needs not being met and if there is capacity for staff to take on additional responsibilities.

As previously referenced, the Development Services Department was able to provide data regarding the number of labor hours required for various types of plan review activities. Analysis of this data indicates that the plan review workload requires approximately 2,132 labor hours per year. The following table summarizes average annual plan review workload and associated labor hour commitments from 2011 through 2016.

Table 73: Average Number of Annual Planning Activities & Associated Hours; FY2011-FY2016

Annual Planning Activities	Average Hours Per Activity	Average Number of Annual Activities	Average Total Hours
Planning Commission Case	49.38	12.17	600.83
Zoning Board of Appeals Case	35.17	2.17	76.19
Site Plan Applications	20.17	11.83	238.64
Subdivision Applications	9.67	1.50	14.50

Annual Planning Activities	Average Hours Per Activity	Average Number of Annual Activities	Average Total Hours
Chicken Coop Licenses	17.50	17.50	306.25
Annexation Case	11.05	4.83	53.41
Vacation and Encroachment Permit	11.83	2.83	33.53
Hours in support of the Preservation Commission	213.83	-	213.83
Hours in support of Carbondale Main Street	18.83	-	18.83
Hours in support of the Comp. Plan and Zoning Code	241.50	-	241.50
Hours spent in support of Bicycle Planning	126.50	-	126.50
Hours spend in support of other development activity	208.33	-	208.33
TOTAL	**963.77**	**52.83**	**2,132.34**

Development Services planners are also responsible for a number of additional ancillary activities that are not captured in the Department's timekeeping processes. For example, Planners are responsible for intake/customer service for the department, and spend a portion of their workday answering questions from the public or providing guidance that does not necessarily correlate with the plan review workload summarized above.

In addition, planners are responsible for managing the City's housing programs. In this role, planners manage the application and selection process. In addition, they manage grant reporting processes associated with the receipt of state and federal grant funds to support the programs. This requires, at minimum, a quarterly data gathering, vetting and reporting process which requires dedicated staff attention. Though labor hour estimate data was unavailable for these tasks, a qualitative review of the workload associated with these tasks, viewed in tandem with core plan review responsibilities, indicates that these core functions can be managed with a staffing level of two Planners.

The Department is currently budgeted for three planning positions. Given the workload assessment detailed above, and considering the GIS development needs in the Department and in the organization, it is recommended that the City convert a Planner position into a GIS Specialist position. This position will not only serve the Development Services Department, but serve as an internal service resource to the Public Works and Fire Departments, helping to add GIS capacity in these program areas.

Software Upgrades

RECOMMENDATION 82: Upgrade development review and inspections software.

Since 2007, the Development Services Department has been utilizing a development review and inspection software system called Land Management (LAMA). LAMA was primarily designed to manage the City's permit and code enforcement functions, including the Mandatory Rental Inspection Program. However, the program's limited capacity within the inspections area, and broader development services areas, impacts the system's utility. The issues are exacerbated by system reliability issues.

The Neighborhood Inspectors utilize Microsoft Surfaces while in the field; these devices also serve as personal desktop computers when staff is in the office. The LAMA software is installed on the Surfaces and staff has the ability to enter code violations, rental inspection information and collect/store photos. However, staff has encountered issues and difficulty with running LAMA in the field. Due to its unreliability, staff often resorts to conducting inspections and gathering information manually, which then requires staff to re-enter inspection report data in LAMA at a later time, resulting in duplicative data entry.

The LAMA software system is not cloud or web based. While the LAMA software is installed on the Surfaces it is not able to communicate or connect to the associated database. As a result, information/data entered in the field is not automatically updated or shared with the central LAMA database. Staff must come into the office and sync the information from their Surfaces to the central LAMA database. If this information is not updated regularly, the information in the main LAMA database is outdated. This can cause issues and confusion if staff is trying to access the most current information and it is not available.

Due to these technological difficulties and the limited capability of the existing software, LAMA is not currently utilized for building inspections. The Building Inspector is collecting data by hand and then entering the information into the system when he returns to the office. This duplication of work becomes time and labor intensive for staff and creates a higher possibility of errors.

Lastly, LAMA does not provide a module for the development review process, which means land development information, projects and data that is captured and processed by Planning staff cannot be shared electronically throughout the Department. The development review process is complex and requires input and collaboration from a number of departments. The Department currently utilizes an entirely paper/manual development review process. Currently, an applicant is required to submit numerous paper copies of their plans to Development Services. As applications or plans are received, the Director then assigns the project to the appropriate staff member and manually maintains a log of activity/assignments for each Planner.

Physical plans are then routed to the appropriate staff for review, including the Building Inspector, Engineering, Public Works, Fire and Police. Planning staff will then wait to receive comments back via memo, letter, or email. Planning staff often has to follow-up with staff in order to meet the Department's 10-day turnaround timeline. This is a cumbersome and time intensive process.

Not having a software system that accepts electronic/digital plans or that allows for comments creates a labor intensive development review process and additional work for staff. It's also difficult to see where in the process an application may be without going directly to the assigned Planner. There are times when the Director, Building Inspector and Neighborhood Inspectors would benefit from having access to project information. In addition, it limits the level of information and data that can be readily accessed to evaluate the development review process.

It is recommended that the Development Services Department upgrade its existing development services software to better meet the needs of the entire Department. An upgraded development services software system will provide a number of benefits including:

- Improved record keeping and archiving
- Improved communication with applicants, departments and other staff members
- Improved efficiency and reduced duplication of work
- Concurrent review of applications and/or site plans by appropriate staff, which may serve to reduce and streamline development review and permitting time
- Capability to submit plans and pay appropriate fees electronically

As the City compares development services software, they should identify systems that are flexible and allow for customization. This will ensure the system can be tailored to Carbondale's development process and needs. The system must be user friendly to ensure that all staff members use it and training should be completed regularly.

The cost for development services software can vary and is dependent on a number of factors. The size of the organization, location, desired capabilities and application needs can all impact price. The City should issue a Request for Proposal when considering and comparing new development services software.

Conclusion

This Operations and Management Review was undertaken to identify opportunities for efficiency and improved service to the Carbondale community. The recommendations were developed to build on the City's foundation of service.

Carbondale is very fortunate to be staffed with employees who care deeply about the community and are passionate about providing timely, quality customer service.

There are many areas across the City where Carbondale performs well. The fact that the City decided to undertake this study represents a strong commitment to learning and improving. Using this report as a guide, Carbondale can now further improve its operations and services.

Implementation of these recommendations will take time and hard work to be successful. The challenge to the City is to make the decision to implement needed changes and to complete implementation. Given the City's resource constraints, prioritization of these recommendations and thoughtful, planned implementation are needed to ensure resources are expended prudently.

Appendix A – Core Services Inventory

General Government

Division	Program Area	Activities and Service Level
City Manager's Office	Oversee Operations of the City	• Supervises and directs staff • Responsible for day to day operations of the City
	Business & Economic Development Activities	• Recruits new business development to the City • Works with existing business owners to help retain and expand operations • Oversees the administration of the Enterprise Zone, TIF areas and the Revolving and Facade loan programs • Promotes and manages property the City has available for development
	Implement Council Policies	• Works with staff to ensure Council goals and priorities are being met
City Clerk's Office	Records Management	• Maintains all City records in compliance with the State Law
	City Council Agenda Process	• Oversees the City Council agenda process and ensures the agenda is distributed and minutes are drafted for each meeting
	Process Permits & Licenses	• Ensures the City Clerk's Office is issuing the appropriate permits and licenses
	Voter Registration	• Processes voter registration forms
	Requests for Records	• Manages and coordinates the response of all FOIA requests, and coordinates the gathering of data/ information
City Attorney's Office	Legal Advisor for the City	• Provides legal guidance to City staff and the Council as needed
	Ordinance & Resolution Preparation	• Drafts resolutions and ordinances as requested
	City Court Prosecution	• Represents the City in all legal matters
	City Code	• Updates the City Code as needed
	Files & Defends Lawsuits	• Is responsible for filing lawsuits for the City and/or working with outside Council representing the City
	Labor Negotiations	• Provides legal guidance and/or assistance as needed during the labor negotiation process

Administrative Services Department

Division	Program Area	Activities and Service Level
Human Resources	Personnel Management	• Manage all personnel files • Respond to needs of supervisors • Respond to the needs of employees
	Recruitment Process	• Work with departments on revising job descriptions • Post and recruit for positions • Screens applicants • Assist staff with interview and selection process
	Employee Benefits & Health Insurance	• Manage the City's Employee Benefits and Health Insurance program
	Switchboard/Receptionist	• Answer phone calls and direct the public to the appropriate individual

Division	Program Area	Activities and Service Level
Civic Center	Public Rentals for Civic Center	• Market the Civic Center • Reserve the Civic Center for use
	Public Rentals for Downtown Pavilion	• Handle all reservations for the Downtown Pavilion
	Maintenance of City Hall	• Provide custodial and grounds keeping services to City Hall on a daily/regular basis • Refer large scale maintenance issues to Public Works for repair

Finance Department

Division	Program Area	Activities and Service Level
Financial Management	City Financial Management	• Responsible for the management of City finances • Prepares the annual budget • Executes the annual budget • Manages the City's assets
	Budgeting & Reporting	• Provides City Manager and staff with ongoing budget and reporting services
	Purchasing	• Assists staff and manages the procurement process
	Billing & Collection	• Issues invoices/bills for water, sewer, refuse, landscape waste, parking permits and weed mowing • Collects payments for water, sewer, refuse, landscape waste, parking permits and weed mowing
	Parking Meters & Permits	• Manages parking program • Collects money from parking meters • Issues parking permits
	Payroll	• Process payroll and issues payroll checks bi-weekly
Information Systems	Internal City Information Systems	• Manages and maintains the City's Information Technology Infrastructure • Maintains and provides hardware and software support • Maintains and provides network support • Implement, install and maintain data technologies
	Technical Support	• Assists with trouble shooting of computers • Responsible for computer replacement program • Repair and replace computer systems
	Help Desk	• Manages Information Systems Help Desk • Answers questions and assists staff with issues related to their personal computers • Assists staff and provides support for software and hardware issues

Police Department

Division	Program Area	Activities and Service Level
Administration	Administration	• Establish and update Department policies and procedures • Oversee disciplinary process • Personnel management • Equipment management • Provide budget and financial management • Provide administrative support for the Department • Approve and process expenditure of funds • Maintain time and attendance records

Division	Program Area	Activities and Service Level
		• Maintain personnel records • Coordinate accreditation certification • Recruit personnel • Coordinate examination and hiring process • Ensure adequate training for all personnel • Liaison with City Manager, other departments, City Council, and outside agencies • Assign investigation of misconduct complaints to Lieutenants as appropriate • Administer grant funding
	Training	• Conduct field training of newly hired officers • Coordinate in-service training • Prepare roll call training material • Ensure that required training and certifications are completed • Authorize optional training
Support Services	Records	• Process reports • Maintain files • Prepare documents in response to Freedom of Information requests • Prepare and distribute public copies of reports • Respond to public inquiries at lobby window • Scan documents into records management system • Review reports submitted by Patrol Officers for accuracy and completeness
	Communications	• Dispatch police and fire calls • Field administrative calls
	Community Outreach	• D.A.R.E. Program • School Resource Officers • Sex Offender Registration • Crime Victim Advocacy Program • Special events • Coordinate Neighborhood Watch program • Coordinate dissemination of public information and response to media inquiries
	Animal Control	• License pets • Enforce City ordinances and state laws pertaining to animals
	Towing	• Oversee contract tow agencies
Patrol	Patrol	• Respond to calls for service • Maintain high visibility patrol within the City • Conduct quality of life enforcement • Coordinate training of personnel • Maintain tactical proficiency • Coordinate planning of special events • Oversee scheduling of personnel • Plan and conduct tactical/emergency preparedness exercises (i.e., Active Shooter)
	Traffic Enforcement	• Enforce traffic regulations through random and directed patrol • DWI enforcement • Speed enforcement

Division	Program Area	Activities and Service Level
		• Respond to citizen complaints re: traffic/safety conditions
	Vehicle and Radio Maintenance	• Ensure maintenance of patrol vehicles and equipment • Identify equipment needs • Evaluate new equipment
	SWAT	• Maintain high level of training with participating members from regional partners • Respond to callouts as necessary • Maintain vehicles and equipment
	K-9	• Support patrol personnel • Conduct required K9 training and care • Respond to SWAT callouts
Investigations	Investigations	• Investigate crimes in the past • Maintain liaison with other agencies to share criminal intelligence information • Develop and maintain confidential informants • Conduct background investigations of prospective employees • Process felony charges • Prepare cases for presentation in court • Share information on crime trends and wanted persons with patrol personnel • Respond to crime scenes as necessary
	Street Crimes	• Investigate crimes in the past • Conduct narcotics investigations and buy and bust operations • Develop and maintain confidential informants • Address identified crime conditions through high visibility or plainclothes patrol and surveillance
	Evidence Collection	• Collect evidence from crime scenes • Maintain security of evidence and found property

Fire Department

Division	Program Area	Activities and Service Level
Fire Protection	Administration	• Maintain the Department's records management system (RMS) • Track incidents, inspections, and training activities • Process payroll and personnel issues
	Incident Response	• Respond to active fires, alarms, and calls for service • Participate in Mutual Aid Box Alarm System (MABAS) and provide specialized technical and hazmat support • Conduct preventative maintenance activities on firefighting apparatus and equipment • Conduct hydrant flow tests and maintenance (in conjunction with Public Works)
	Inspection Services	• Inspect all liquor license establishments on an annual basis • Inspect commercial properties as needed • Enforce false alarm ordinance • Enforce the adopted International Fire Code
	Prevention	• Provide prevention and awareness classes at schools and community events

Division	Program Area	Activities and Service Level
		• Coordinate regular press releases and public information campaigns • Review site plans for new construction and building remodeling
	Training	• Utilize the Illinois Fire Service Institute for training activities where appropriate • Provide hands-on training regarding ropes, knots, ladders, tools, hoses, pumps, and other essential firefighting equipment • Conduct command officer training regarding fire origin and investigation techniques • Provide training to firefighter staff on proper evidence retention techniques
	Wellness	• Encourage firefighter wellness and injury prevention • Conduct proper Self Contained Breathing Apparatus (SCBA) fit testing
Emergency Management	Disaster Mitigation	• Present mitigation strategies to community groups • Develop quarterly public education and hazard awareness campaigns • Review emergency and disaster hazards and the City's Emergency Operations Plan • Identify mitigation efforts for disasters that could impact the City • Coordinate with third party organizations, governments, and community institutions to foster greater disaster awareness and preparedness
	Emergency Response	• Support emergency authorities and management in times of disaster • Maintain, test, and update communications, warning, and inventory equipment

Public Works Department

Division	Program Area	Activities and Service Level
Municipal Rental Properties	Building Maintenance	• Repair damage to buildings and building systems • Contract for repairs and inspections as necessary • Purchase necessary supplies
	Custodial Services	• Provide custodial support for the Police Department
	Energy Monitoring	• Minimize electricity, natural gas, and water usage in City buildings • Monitor energy conservation efforts in City buildings through Building Automation Systems
Cemetery	Burial Plot Sales	• Market burial plots • Meet with prospective customers • Process plot payments and paperwork
	Internments	• Assist with internment activities • Maintain appropriate records
	Mowing and Landscaping	• Mow and trim cemetery grounds weekly • Repair toppled or leaning grave stones as necessary • Remove dead/blighted trees, shrubs, plants as necessary • Prepare for annual Memorial Day service

Division	Program Area	Activities and Service Level
Equipment Maintenance	Equipment Repair and Maintenance	• Operate according to established preventative maintenance practices • Ensure vehicles are serviced according to manufacturers' recommendations • Maintain digital parts inventory and records • Rebuild/fabricate parts as necessary • Provide specialty equipment for City mechanics
	Fuel Services	• Maintain City refueling facility
	Other Services	• Provide annual/new vehicle inspections for licensed taxi cab companies in the City
Forestry Management	Beautification	• Control weeds on City properties as necessary • Level and reseed City-owned areas disturbed by excavations as needed • Coordinate with Building and Neighborhood Services to facilitate contract mowing for rights-of-way and drainage areas
	Community Outreach	• Engage in public education and community awareness campaigns
	Tree Management	• Remove dead and disease trees in conjunction with Street Maintenance Division • Water, fertilize, and prune City trees • Supervise and coordinate tree plantings • Maintain the City's status as a Tree City USA community
Refuse and Recycling	Recycling Collection	• Maintain Community Recycling Drop Off Facilities • Collect curbside recycling from participating customers weekly
	Special Collection	• Collect non-refrigerated appliances and other white goods on a fee basis • Collect landscaping waste on a fee basis • Collect automobile tires on a fee basis
	Solid Waste Collection	• Collect household refuse weekly • Collect bulk items in conjunction regular refuse service • Divert yard waste from landfills
Street Maintenance	Maintain Streets and Rights of Way	• Respond to citizen calls for service • Prioritize maintenance needs and activities • Engage in crack sealing, chip sealing, and patching activities as necessary • Contract for street resurfacing as necessary
	Snow and Ice Removal	• Conduct seasonal preventative maintenance on snow and ice equipment • Engage in snow and ice removal activities during snow events
	Stormwater	• Conduct street sweeping activities • Maintain storm sewers, inlets, culverts, and drainage ditches • Conduct seasonal leaf collection
	Traffic Control	• Provide traffic control setup and assistance for City Departments and events • Repaint pavement markings and striping as needed • Replace traffic and street signs as needed

Division	Program Area	Activities and Service Level
		• Maintain and replace traffic lights and signals as needed
Engineering and Administration	Administration	• Supervise personnel within Public Works' divisions • Create Department policies and standard operating procedures
	Community Investment Program (CIP)	• Collaborate with City Manager and Finance staff • Forecast and prioritize CIP needs • Secure grant funding as appropriate • Design, supervise, and manage CIP projects
	Engineering Review	• Monitor and manage City infrastructure projects and staffing levels • Provide design, layout, and document preparation services to other City Departments • Perform private development reviews and approvals
	Maintain Infrastructure Records	• Update and maintain utility atlases • Provide as-built construction plans for infrastructure projects completed by the City • Provide base maps of City infrastructure
	Technical Support	• Provide location services related to utilities, rights-of-way, and other City assets and infrastructure • Prepare and review legal descriptions for zoning, right-of-way vacations, enterprise zones, special service areas, and purchase/sale of City property
Central Laboratory	Testing Services	• Perform water and wastewater quality tests • Provide routine water quality monitoring at various stages of the water and wastewater treatment process • Monitor waste streams for changes in waste characteristics • Monitor water quality during main break events • Provide laboratory testing services to third parties for competitive fees
Lake Management	Recreation	• Hire and supervise lifeguards for Poplar Beach • Conduct regular patrols to enforce ordinances • Prevent forest fires • Manage boat launch, recreational amenities, and public toilets
	Water Quality	• Minimize soil erosion • Monitor water quality for pollutants • Prevent contamination of reservoir water • Conduct regular dam inspections • Supervise mowing of dams
Meter Services	Meter Reading	• Read every water meter monthly • Repair or replace meters and meter pits as needed • Connect/disconnect meters as needed
Sewer Collection	Infrastructure Maintenance	• Clear sewer system blockages • Repair main and lateral breaks • Extend sewer mains • Replace mains as necessary • Inspect sewer system
Support Services	Administration	• Supervise Water Treatment Plant, Water Distribution, Meter Services, and Sewer Collection divisions and employees

Division	Program Area	Activities and Service Level
		• Create appropriate staffing schedules • Manage staff workload • Coordinate infrastructure improvement efforts • Ensure the City's water quality meets acceptable standards
Northwest Wastewater Treatment Plant	Wastewater Treatment	• Monitor plant operations and SCADA system • Maintain plant safety and staff certifications • Reduce infiltration • Treat effluent to high quality standards
Southeast Wastewater Treatment Plant	Wastewater Treatment	• Monitor plant operations and SCADA system • Maintain plant safety and staff certifications • Reduce infiltration • Treat effluent to high quality standards
Water Distribution	Infrastructure Maintenance	• Repair main breaks • Connect new customers to the water distribution system • Extend water mains • Replace mains as necessary • Maintain fire hydrants
Water Treatment Plant	Water Treatment	• Chemically treat reservoir water to current water quality standards • Maintain Water Treatment Plant equipment • Provide 24-hour customer service line • Perform continuous water quality tests

Development Services Department

Division	Program Area	Activities and Service Level
Development Management	Building Permits	• Inspect buildings • Issue appropriate building permits
	Affordable Housing Efforts	• Administer and manage the City's Housing Assistance Programs
	Grant Coordination	• Apply for grant funding • Monitor grant programs
Planning Services	Development Site Plan Review	• Review development plans • Coordinate comment review from appropriate departments • Work and communicate with applicants
	Zoning & Subdivision Administration	• Conduct zoning and subdivision changes
	Downtown Development	• Encourage downtown development • Implement the Downtown Master Plan • Promote downtown Carbondale as a viable place to conduct business • Provide support to Carbondale Main Street and other downtown organizations
	Annexation Coordination	• Process annexation requests • Expand the City's boundaries
	Geographic Information Systems	• Assist in the continued growth and development of the City's GIS database • Coordinate and encourage the use of GIS within the City

Division	Program Area	Activities and Service Level
		• Coordinate the exchange of GIS information with Jackson County an Jackson County 911
	Historical Preservation	• Manage the City's Historic Preservation Program • Establish additional historic districts and neighborhood preservation districts
	Street Name & Numbering	• Assign addresses to new development/properties
Building and Neighborhood Services	Code Enforcement – Environmental & Business Codes	• Inspect property for code violations • Issue litter and weed violations
	Rental Inspection Program	• Manage the City's Rental Inspection Program • Inspect properties • Issue violations as necessary

Appendix B – Sample Position Reclassification Policy

CITY OF ASHLAND

ADMINISTRATIVE POLICY

LAST MODIFICATION: May 22, 2012

Policy # 2012.05.22

ORIGINATING DEPARTMENT: City Administration

SUBJECT: Classification and Reclassification of positions

PURPOSE: To maintain a uniform system of position descriptions and a consistent basis for position classifications and reclassifications.

STATEMENT OF POLICY: It is the policy of the City of Ashland that all positions shall be classified according to job specifications and identified by title and that positions will be reclassified only when a permanent change in the duties assigned to and the job specifications of a position justifies such reclassification. Classification shall be developed and maintained so that all substantially similar jobs (with respect to duties, responsibilities, authority, educational requirements and character of work) are included in the same position description and pay grade.

All reclassification shall be done without favoritism, undue influence or consideration of the qualifications of an incumbent in a position.

The City will maintain a uniform system of position descriptions. Each position description shall contain a descriptive title for the job class and a general written description of the duties and responsibilities of the job class. Position descriptions will take into consideration the general requirements of the job and list essential functions of the positions. Position descriptions do not necessarily include all duties of the position or all work that may be assigned by the employee's supervisor or department head.

Position descriptions will be maintained in the Human Resources Office. Department heads are responsible for ensuring that the Human Resources Office has current and accurate information and may be asked to provide draft position descriptions for their respective departments, using a form prescribed by the Human Resources Office.

This policy applies to all city employees.

Definitions

The City may, at its discretion or per the terms of a collective bargaining agreement, review classifications for the purpose of:

- Determining whether the position description(s) accurately reflects actual job conditions; and/or

ADMINISTRATION
20 East Main Street
Ashland, Oregon 97520
www.ashland.or.us

Tel: 541-488-6002
Fax: 541-488-5311
TTY: 800-735-2900

- Assuring that positions are properly classified; and/or

- Recommending amendments and adjustments to the classification plan.

New Positions

A department head who wishes to create a new position description must make a request to create the position in writing to the City Administrator. The City Administrator will then direct the Human Resources Manager to study the request in accordance with this policy and make a recommendation for approval or denial of the request. No person shall be hired to fill a new position until the City Administrator approves the new position description and pay grade. Creation of a new position outside of the regular budget review and adoption process that increases the FTE in the department's adopted budget must be approved by the City Council.

Reclassification of Positions

A department head may request a review of an individual position or the classification of a group of positions within a department. Such requests shall be submitted in writing to the Human Resources Manager. In consultation with the department head, the Human Resources Manager shall review the duties of the position as well as the experience and training required for the position. Positions may be reclassified whenever the duties of the position change materially and the changes are expected to be permanent. Reclassification shall not be used as a means of rewarding long-tenured employees who are topped out in their pay range or as a means to reward an employee for taking on an increased workload or a when such work is consistent with the employee's existing classification or a short-term change in duties. Reclassification shall also not be used as a means of providing higher pay to an employee who is overqualified for the position they hold and who is therefore capable of doing higher-level work.

Reclassification requests should address the following factors:

- <u>Scope and complexity</u> –the breadth and difficulty of the assigned function, the complexity of problems to be solved and the variety and nature of the work performed. For management positions, this includes span of control.
- <u>Decision making/authority</u> – the decision-making responsibility and degree of authority, independence of latitude that is inherent in the position..
- <u>Impact</u> –the impact of the position on the organization, the budgetary resources controlled accountability for error and consequences of error.
- <u>Independent judgment</u> –the extent to which performance of work is controlled by supervision received from others or by rules, regulations, manuals, procedures, prescribed practices or other written instructions or methods.
- <u>Contact with others required by the job</u> – the extent of required interaction with members of the public; the level of and nature of supervision provided to others; and the degree of cooperation and collaboration with others necessary for success in this position.

- Knowledge, skills and abilities required –the minimum required training, education, experience, licenses, certificates, physical demands, mental exertion and other factors necessary to perform the assigned responsibilities.
- Working Conditions –the nature of the work environment, including any potentially hazardous, dangerous or otherwise adverse conditions.

Pay grade adjustment

All reclassifications shall be contingent on the availability of funds within the then-current budget. When a reclassification of salary review results in a position being moved to a new pay grade, the pay for incumbent employees in the position(s) shall be moved to the step in the new grade that is closest to but not lower than their step in the old pay grade. When a reclassification or salary review results in a position be moved to a lower pay grade and the pay of incumbent employees in the position(s) is higher than the top step of the new grade, the pay of the incumbents shall be frozen until cost of living increases bring the new pay grade up to the frozen level.

Pay grade adjustments shall be effective on the first of the month following the date they are approved by the City Administrator. There shall be no retroactive pay.

Decision of the City Administrator shall be final and binding.

Approved: Dave Kanner
Dave Kanner, City Administrator Date: 5/23/12

Reviewed as to form: David Lohman
David Lohman, City Attorney Date: 5/23/12

ADMINISTRATION
20 E Main Street
Ashland, Oregon 97520
www.ashland.or.us

Tel: 541-488-6002
Fax: 541-488-5311
TTY: 800-735-2900

POSITION RECLASSIFICATION REQUEST FORM

DATE:

TO: City of Ashland Human Resource Manager

FROM:

Current Job Class and/or Job Title:

Employee or employees impacted by this request:

NARRATIVE: *Use this space to explain what is materially different about the job—be sure to review the current job description and explain and justify your recommendation. Address the fiscal impact and how you will cover the additional costs in your budget if the request is approved. Use as much space as you need to support your request.*

COMPARISON: *Complete the matrix below.*

Job Classification Factors	Describe How The New Job Responsibilities Relate to each of the (8) Job Classification Factors (include % of time if applicable)
Scope and complexity – defines the breadth and difficulty of the assigned function, the complexity of problems to be solved and the variety and nature of the work performed. For management positions, this includes span of control.	
Decision making/authority – consists of: 1. The decision-making responsibility and degree of authority, independence of latitude that is inherent in the position; and 2. The impact of the decisions.	
Impact – defines the impact on the organization, the budgetary resources controlled, accountability for error and consequences of error.	

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Independent judgment – relates to the extent to which performance of work is controlled by rules, regulations, manuals, procedures, prescribed practices or other written instructions or methods.	
Contact with others required by the job – describes the level of supervision received from others and the nature of supervision provided to others, as well as the degree of independent action inherent in the position.	
Knowledge, skills and abilities required – defines the minimum training, education, experience, licenses, certificates, physical demands, mental exertion and other factors necessary to perform the assigned responsibilities.	
Working Conditions – identifies hazardous, dangerous or unpleasant work environment and notes any adverse conditions.	

☐ **REQUEST APPROVED** ☐ **REQUEST DENIED**

COMMENTS:

_______________________________________ _____________________

Human Resource Manager Date

_______________________________________ _____________________

City Administrator Date

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Fax: 541-488-5311
TTY: 800-735-2900

Appendix C – Sample False Alarm Ordinance

MODEL DRAFT

CITY/COUNTY OF ____________, STATE

POLICE ALARM ORDINANCE

WHEREAS, the purpose of this ordinance, finds that excessive false alarms unduly burden the ____________ Police Department's limited law enforcement resources. The purpose of this ordinance is to establish reasonable standards for users and to ensure that alarm users are held responsible for their use of alarm systems.

SECTION 1: DEFINITIONS

The following words, terms and phrases, when used in this ordinance, shall have the meanings ascribed to them, except where the context clearly indicates a different meaning:

Alarm Administrator means a person or persons designated by the City or County to administer the provisions of this ordinance.
Alarm company means a person, company, firm, or corporation which has the contractual agreement with the alarm user and is subject to the licensing requirements, and engaged in selling, leasing, installing, servicing or monitoring alarm systems; this entity shall be licensed in compliance with city, county and state laws.
Alarm permit means a permit issued to an alarm user by the City or County allowing the operation of an alarm system within the City or County.
Alarm signal means a detectable signal; audible or visual, generated by an alarm system, to which law enforcement is requested to respond.
Alarm system means any single device or assembly of equipment designed to signal the occurrence of an illegal or unauthorized entry or other activity to which law enforcement is requested to respond, but does not include motor vehicle or boat alarms, fire alarms, domestic violence alarms, or alarms designed to elicit a medical response.
Alarm user means any person, corporation, partnership, proprietorship, governmental or educational entity or any other entity owning, leasing, or operating an alarm system, or on whose premises an alarm system is maintained for the protection of such premises.
Alarm User Awareness Class means a class conducted for the purpose of educating alarm users about the responsible use, operation, and maintenance of alarm systems and the problems created by false alarms.
Cancellation means termination of response by the Police Department when the alarm company notifies the Police Department that there is not an existing situation at the alarm site requiring police response after an alarm dispatch request. If cancellation occurs prior to police arriving at the scene, this is not a false alarm for the purpose of civil penalty, and no penalty will be assessed.
City or County means the City or County of ______________ or its agent.
False alarm means the activation of an alarm system when, upon inspection by the Police Department, there is no evidence of unauthorized entry, robbery, or other such crime attempted in or on the premises which would have activated a properly functioning

alarm system. Notwithstanding the foregoing, a false alarm does not include an alarm which can reasonably be determined to have been caused or activated by unusually violent conditions of nature.

Local alarm means an alarm system that emits a signal at an alarm site that is audible or visible from the exterior of a structure and is not monitored by a remote monitoring facility, whether installed by an alarm company or user.

Permit year means a 12-month period beginning on the day and month on which an alarm permit is issued.

Runaway alarm means an alarm system that produces repeated alarm signals that do not appear to be caused by separate human action. The Police Department may in its discretion discontinue police responses to alarm signals from what appears to be a runaway alarm.

Compliance Standards means equipment and installation methods shall comply with all appropriate nationally recognized testing laboratories and American National Standards Institute (ANSI) requirements.

Confirmation means an attempt by the alarm system monitoring company to contact the alarm site and/or alarm user by telephone and/or other means, whether or not actual contact with a person is made, to determine whether an alarm signal is valid before requesting law enforcement response. A second call shall be made to an alternate number provided by the alarm user if the first attempt fails. EXCEPT in case of a fire, panic or robbery-in-progress alarm or in cases where a crime-in-progress has been verified as defined in ANSI/CSAA CS-V-01-2016(or current version).

SECTION 2: ALARM PERMIT

(a) ***Permit required***. No person shall use an alarm system without first obtaining a permit for such alarm system from the City or County. A fee may be required for the initial registration and annual renewals. Each alarm permit shall be assigned a unique permit number, and the user shall provide the permit number to the alarm company to facilitate law enforcement dispatch.

(b) ***Application***. The permit shall be requested on an application form provided by the City or County. An alarm user has the duty to obtain an application from the City or County.

(c) ***Transfer of possession***. When the possession of the premises at which an alarm system is maintained is transferred, the person (user) obtaining possession of the property shall file an application for an alarm permit within 30 days of obtaining possession of the property. Alarm permits are not transferable.

(d) ***Reporting updated information***. Whenever the information provided on the alarm permit application changes, the alarm user shall provide correct information to the City or County within 30 days of the change. In addition, each year after the issuance of the permit, permit holders will receive from the City or County a form requesting updated information. The permit holder shall complete and return this form to the City or County whether or not any of the requested information has changed; failure to comply will constitute a violation and may result in a civil penalty.

(e) ***Multiple alarm systems***. If an alarm user has one or more alarm systems protecting two or more separate structures having different addresses and/or tenants, a separate permit shall be required for each structure and/or tenant.

SECTION 3: DUTIES OF THE ALARM USER

(a) Maintain the premises and the alarm system in a method that will reduce or eliminate false alarms; and
(b) Provide the alarm company the permit number, (the number must be provided to the communications center by the alarm company to facilitate dispatch).
(c) Respond or cause a representative to respond to the alarm system's location within a reasonable amount of time when notified by the ____________ Police Department.
(d) Not manually activate an alarm for any reason other than an occurrence of an event that the alarm system was intended to report.
(e) An alarm user must obtain a new permit and pay any associated fees if there is a change in address or ownership of the location of the alarm-system.

SECTION 4: DUTIES OF THE ALARM COMPANY

(a) Any person engaged in the alarm business in the city/county shall comply with the following:

1) Obtain and maintain the required state, county and/or city license(s).
2) Provide name, address, and telephone numbers of the alarm company license holder or a designee who can be called in an emergency, 24 hours a day; and be able to respond to an alarm call, when notified, within a reasonable amount of time.
3) Be able to provide the most current contact information for the alarm user; and to contact a key holder for a response, if requested.

(b) Prior to activation of the alarm system, the alarm company must provide instructions explaining the proper operation of the alarm system to the alarm user.

(c) Provide written information of how to obtain service from the alarm company for the alarm system.

(d) An alarm company performing monitoring services shall:

1) Attempt to confirm, by calling the alarm site and/or alarm user by telephone, to determine whether an alarm signal is valid before requesting dispatch. Telephone confirmation shall require, as a minimum that a second call also known as Enhanced Call Confirmation (ECC), be made to a different number, if the first attempt fails to reach an alarm user who can properly identify themselves to attempt to determine whether an alarm signal is valid, EXCEPT in case of a fire, panic or robbery-in-progress alarm or in cases where a crime-in-progress has been verified as defined in ANSI/CSAA CS-V-01-2016(or current version).
2) Provide alarm user registration number to the communications center to facilitate dispatch and/or cancellations.
3) Communicate any available information about the location of the alarm.
4) Communicate a cancellation to the law enforcement communications center as soon as possible following a determination that response is unnecessary.

SECTION 5: PROHIBITED ACTS

(a) It shall be unlawful to activate an alarm system for the purpose of summoning law enforcement when no burglary, robbery, or other crime dangerous to life or property is being committed or attempted on the premises, or otherwise to cause a false alarm.
(b) It shall be unlawful to install, maintain, or use an audible alarm system which can sound continually for more than 15 minutes.

SECTION 6: ENFORCEMENT OF PROVISIONS

(a) ***Excessive false alarms/Failure to register***. It is hereby found and determined that three or more false alarms within a permit year is excessive, constitutes a public nuisance, and shall be unlawful. Civil penalties for false alarms within a permit year may be assessed against an alarm user as follows: (Examples)
Third, fourth and fifth false alarm . . . $50.00
Sixth and seventh false alarm . . ….. $100.00
Eighth and ninth false alarm . . . …...$250.00
Tenth and over false alarms . . . ……$500.00
Failure to Register…………………..$100.00
(b) ***Other Civil Penalty(ies)***. Violations will be enforced through the assessment of civil penalty(ies) in the amount of $100.00 per violation.

Note: Below are alternatives/options for (a) and (b) above:

> *(a)* ***Excessive false alarms/Failure to register****. It is hereby found and determined that three or more false alarms within a permit year is excessive, constitutes a public nuisance, and shall be unlawful. Civil penalties for false alarms within a permit year shall be assessed against an alarm user as per current fee schedule set by city council.*
> *(b)* ***Other Civil Penalty(ies)****. Violations will be enforced through the assessment of civil penalty(ies) set by city council.*

(c) ***Payment of Civil Penalty(ies)***. Civil penalty(ies) shall be paid within (30) days from the date of the invoice.
(d) ***Discontinuance of law enforcement response***. The failure of an alarm user to make payment of any civil penalty(ies) assessed under this ordinance within 30 days from the date of the invoice shall result in discontinuance of law enforcement response to alarm signals that may occur at the premises described in the alarm user's permit until payment is received.
(e) ***Civil Non criminal violation.*** A violation of any of the provisions of this ordinance shall be a civil violation and shall not constitute a misdemeanor or infraction.

SECTION 7: ALARM USER AWARENESS CLASS.

(a) ***Alarm User Awareness Class.*** The City or County may establish an Alarm User Awareness Class and may request the assistance of the area alarm companies to assist in developing and conducting the class. The class shall inform alarm users of the problems created by false alarms and instruct alarm users how to help reduce false alarms. The City or County may grant the option of attending a class in lieu of paying one assessed fine, not to exceed $100.

SECTION 8: APPEALS

(a) ***Appeals process***. Assessments of civil penalty(ies) and other enforcement decisions made under this ordinance may be appealed by filing a written notice of appeal with the ____________ Police Department within 10 days after the date of notification of the assessment of civil penalty(ies) or other enforcement decision. The failure to give notice of appeal within this time period shall constitute a waiver of the right to contest the assessment of penalty (ies) or other enforcement decision. Appeals shall be heard through an administrative process established by the City or County. The hearing officer's decision is subject to review in the district court by proceedings in the nature of certiorari.
(b) ***Appeal standard***. The hearing officer shall review an appeal from the assessment of civil penalty(ies) or other enforcement decisions using a preponderance of the evidence standard. Notwithstanding a determination that the preponderance of the evidence supports the assessment of civil penalty(ies) or other enforcement decision, the hearing officer shall have the discretion to dismiss or reduce civil penalty(ies) or reverse any other enforcement decision where warranted.

SECTION 9: CONFIDENTIALITY

In the interest of public safety, all information contained in and gathered through the alarm registration applications, no response records, applications for appeals and any other alarm records shall be held in confidence by all employees and/or representatives of the City or County.

SECTION 10: GOVERNMENT IMMUNITY

Alarm registration is not intended to, nor will it, create a contract, duty or obligation, either expressed or implied, of response. Any and all liability and consequential damage resulting from the failure to respond to a notification is hereby disclaimed and governmental immunity as provided by law is retained. By applying for an alarm registration, the alarm user acknowledges that the ____________ Police Department response may be influenced by factors such as: the availability of police units, priority of calls, weather conditions, traffic conditions, emergency conditions, staffing levels and prior response history.

SECTION 11: SEVERABILITY

The provisions of this ordinance are severable. If a court determines that a word, phrase, clause, sentence, paragraph, subsection, section, or other provision is invalid or that the application of any part of the provision to any person or circumstance is invalid, the remaining provisions and the application of those provisions to other persons or circumstances are not affected by that decision.

This ordinance shall take effect on __________ , 20_____

Revised 08/05/2016

Appendix D – Vehicle Equipment Rating Template

Vehicle Replacement Rating Template
(City of Appleton, Wisconsin)

Sedans and Light Trucks

Factor	Points	Description
Age	1	Each year of chronological age
Miles / Hours	1	For every 10,000 Miles of usage
	1	For every 250 Hours of usage
Type of Service	1	Standard duties as equipped from factory
	2	Standard duties when used with occasional off-road usage
	3	Any vehicle that pulls trailers frequently, hauls heavy loads and has frequent off-road usage
	4	Any vehicle involved in snow removal
	5	Police, fire and rescue vehicles
Reliability	1	In shop one time within three months' time period, no major breakdowns or road calls
	2	In shop one time within three months' time period, 1 major breakdown or road call in time period
	3	In shop more than once within three month time period, one breakdown or service call in time period
	4	In shop more than twice within one month time period, one or more breakdowns or service calls in time period
	5	In shop more than twice monthly with two or more breakdowns or service call in time period
M&R Costs	1	Maintenance costs are less or equal to 20% of replacement cost
	2	Maintenance costs are 21 - 40% of maintenance costs
	3	Maintenance costs are 41 - 60% of maintenance costs
	4	Maintenance costs are 61 - 80% of maintenance costs
	5	Maintenance costs are greater than 81 % of maintenance costs
Condition	1	Good condition, fully functional
	2	Fair condition, functional, minor imperfections to body and paint
	3	Minor damage to body and paint visible from 15' or more, minor damage to add on equipment, worn interior (one or more rip. Tear, or burn) and weak or noisy drive train
	4	Previous accident damage that was repaired, poor body condition, rust holes, bad interior, holes in set or broken down major damage to add on equipment or a bad drivetrain component
	5	Extreme damage, inoperable

Medium and Heavy Duty Trucks

Factor	Points	Description
Age	1	Each year of chronological age
	1	For every 5,000 Miles of usage
	1	For every 250 Hours of usage
Type of Service	1	Standard duties including basic job site duties as equipped from factory
	2	Standard duties when used with occasional off road usage, Standard load hauling and some towing
	3	Any Vehicle that pulls trailers frequently, hauls heavy loads, hauls leaves, long idle periods and has frequent off road usage
	4	Any vehicle involved in rating 3 work and is involved with snow removal
	5	Extreme service, Plowing, Heavy loads off road frequently, in landfills, refuse collection, and heavy trailer towing
Reliability	1	In shop one time within three months' time period, no major breakdowns or road calls
	2	In shop one time within three months' time period, 1 major breakdown or road call in time period
	3	In shop more than once within three month time period, one breakdown or service call in time period
	4	In shop more than twice within one month time period, one or more breakdowns or service calls in time period
	5	In shop more than twice monthly with two or more breakdowns or service call in time period
M&R Costs	1	Maintenance costs are less or equal to 20% of replacement cost
	2	Maintenance costs are 21 - 40% of maintenance costs
	3	Maintenance costs are 41 - 60% of maintenance costs
	4	Maintenance costs are 61 - 80% of maintenance costs
	5	Maintenance costs are greater than 81 % of maintenance costs
Condition	1	Good condition, fully functional, minor body imperfections
	2	Fair condition, functional, no interior rips or tears, minor imperfections and modifications to body and paint
	3	Noticeable damage to body and paint visible from 15' or more, minor damage to add on equipment, worn interior (one or more rip, tear, or burn) and weak or noisy drive train
	4	Previous accident damage that was repaired, Poor body condition, rust holes, bad interior, holes in set or broken down, major damage to add on equipment or a bad drivetrain component
	5	Extreme damage, inoperable systems or drive components and major rust and body cracking

Off-Road Equipment

Factor	Points	Description
Age	1	Each year of chronological age
Miles / Hours	1	For every 5,000 Miles of usage
	1	For every 250 Hours of usage
	1	For every year of life
Type of Service	1	Standard duties as equipped from factory
	2	Standard duties when used with Attachments (Sickle Bar, Backhoe, Brush hogs)
	3	Multiple duties based on seasons (Snow, Mowing, Leave Collection)
	4	Extreme Duty in harmful Conditions (Dust, Landfill, Salt Loading, Water)
	5	Heavy Construction including Snow Plowing and Removal
Reliability	1	In shop one time within three months' time period, no major breakdowns or road calls
	2	In shop one time within three months' time period, 1 major breakdown or road call in time period
	3	In shop more than once within three month time period, one breakdown or service call in time period
	4	In shop more than twice within one month time period, one or more breakdowns or service calls in time period
	5	In shop more than twice monthly with two or more breakdowns or service call in time period
M&R Costs	1	Maintenance costs are less or equal to 20% of replacement cost
	2	Maintenance costs are 21 - 40% of maintenance costs
	3	Maintenance costs are 41 - 60% of maintenance costs
	4	Maintenance costs are 61 - 80% of maintenance costs
	5	Maintenance costs are greater than 81 % of maintenance costs
Condition	1	Good condition, fully functional
	2	Fair condition, functional
	3	Minor damage, weak operating system
	4	Severe damage, component's) not functioning
	5	Extreme damage, inoperable