

City of Bonner Springs  
Organizational Efficiency and Staffing  
Analysis  
Public Works & Utilities Department

*Final Report*

January 5, 2017



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January 5, 2017

Mr. Sean Pederson  
City Manager  
City of Bonner Springs  
205 E. Second St.  
Bonner Springs, Kansas 66012

Dear Mr. Pederson:

We are pleased to provide you with our report regarding the City of Bonner Springs Public Works & Utilities Department. This report includes recommendations designed to improve the overall effectiveness and efficiency of the Public Works operations in light of the Department's recent efforts to consolidate utilities, stormwater, and streets functions.

The recommendations contained in this report are based on the input and information provided by City staff as well as identified industry standards and best practices that are appropriate for Bonner Springs. The City's Public Works employees are motivated, experienced, hardworking, and strive to provide excellent services to the community. We are confident that these recommendations can serve as a framework for improving operational performance while continuing to blend operations and functions in the department. Implementation of the recommendations will require careful coordination and attention from the City's leadership team as well as Public Works' staff.

Thank you for the opportunity to work with the City of Bonner Springs.

Sincerely,

Julia D. Novak  
President

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## Executive Summary

The Bonner Springs Public Works & Utilities Department is the product of an effort to consolidate similar functions and services formerly provided by two distinct departments. The consolidation of these departments represents an opportunity to realign staffing and procedures in order to more effectively allocate workload and create process efficiencies in the organization.

All reorganizations pose institutional and personnel challenges involving structural changes, process improvements, and cultural shifts. In the case of Bonner Springs, the Public Works division and the Utilities division have operated independently over the last 15 years. The relative independence of each division to date, coupled with unique processes and procedures, has created barriers to true integration in the new Department of Public Works & Utilities. Successfully creating a unified, streamlined organization will require specific attention and sensitivity to each of these areas as the Department continues to evolve and change.

Determining an appropriate structure for the Department involves creating sufficient administrative capacity to coordinate strategic as well as operational decisions, while simultaneously ensuring that the City's work crews are adequately staffed to carry out assigned work. At the same time, it is important to implement policies, procedures, and articulate expectations that uniformly address the work processes of the whole Department. This ensures staff have a clear understanding of their role and serves as a tool for unifying performance standards and expectations. These changes, coupled with steady leadership which remains sensitive and attuned to the organization's cultural concerns, will lay a solid foundation for a strong and effective Public Works & Utilities Department.

This organizational efficiency and staffing analysis has identified several specific steps the City can take to construct a robust, well-organized Public Works & Utilities Department. The recommendations in this report touch on the nature and role of essential staff positions, as well as workload tasks and process improvements that can more effectively utilize existing personnel. Some of these recommendations can be implemented quickly; others will take more time and particular attention to internal communications with the Department's staff.

By implementing these recommendations and continually engaging staff in the process of consolidation, the Department will enhance its operations while including employees in this transformational process. While these recommendations will benefit the Department and its ability to provide services to City residents, they cannot be successfully employed without a leadership team that is committed to change and dedicated to supporting staff throughout the process.

## Summary of Recommendations

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

**Table 1: Overview of Recommendations**

Number	Recommendation
1	Issue an RFP to contract for mowing services.
2	Issue an RFP to contract for vehicle maintenance services.
3	Fill the vacant Assistant Public Works Director position and reassign supervisory responsibilities for all Public Works divisions to this position.
4	Integrate cemetery-related and streets-related functional responsibilities.
5	Create three Chief Operator positions to oversee water and wastewater treatment plants in the Utilities Division.
6	Create a Utilities Distribution and Collections Crew and provide cross-training to the crew's staff.
7	Create a dedicated GIS Coordinator position and assign stormwater project management activities to the Project Manager.
8	Create an asset management and condition assessment inventory for all infrastructure managed by Public Works.
9	Develop annual work plans for the Department and individual staff members.
10	Continue implementing time tracking procedures for Public Works division staff.
11	Assign stormwater maintenance work to the Streets Maintenance crew.

## **Background and Methodology**

In September 2016, the City of Bonner Springs engaged The Novak Consulting Group to conduct an organizational management and staffing analysis of the Bonner Springs Public Works & Utilities Department. This Department is a recent consolidation of two former departments: the Public Works Department and the Utility Department. The purpose of the study is to evaluate the structure, staffing, and supervision of staff in the Public Works Department, as well as to identify process efficiencies and best practices which will improve the Department's efficiency and effectiveness.

To accomplish this, The Novak Consulting Group conducted individual interviews with the Department's managers and staff, as well as two focus groups targeting Public Works and Utilities maintenance crews. Additionally, The Novak Consulting Group requested and received data from the Department related to its structure, operations, practices, procedures, and workload. This information was analyzed to determine the Department's strengths as well as opportunities for creating additional staff capacity and increasing operational efficiency.

The dedication and commitment of Public Works employees for delivering high-quality services to the residents of Bonner Springs cannot be overstated. The City is fortunate to work with employees who are proud of their work and operate with a passion for completing tasks well. The following analysis and recommendations are designed to augment the Department's efforts to fully integrate and provide more robust services to the community.

## About the Public Works & Utilities Department

The mission of the Public Works Department is to provide quality services to the residents and businesses of Bonner Springs and to other departments within the City. The Department provides these services in two primary functional divisions: Utilities and Public Works. Across all functions, the Department’s authorized strength is approximately 24.5 full-time equivalents (FTEs) for FY2016. The following organizational chart illustrates the Department’s structure at the time of its initial consolidation.

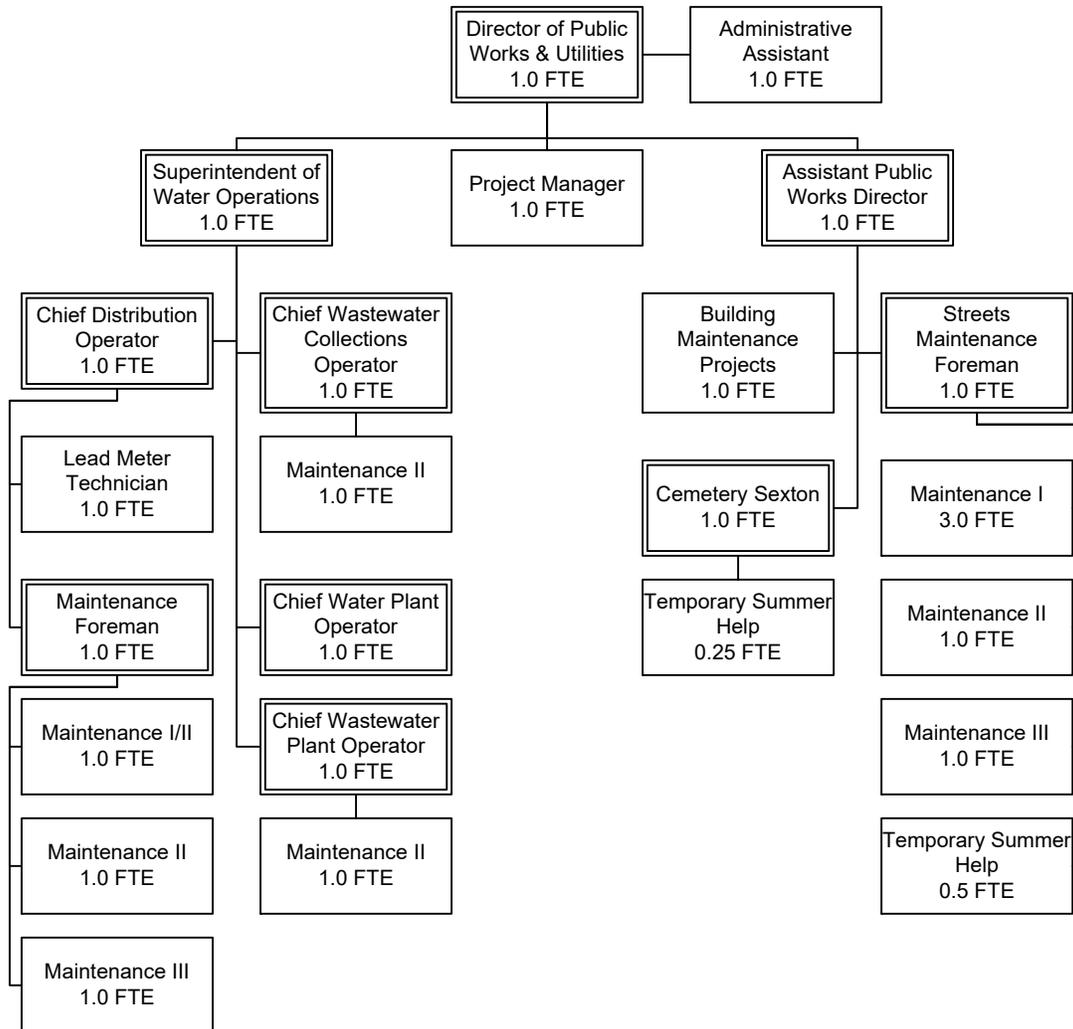


Figure 1: Public Works Department Organizational Structure, 2016

In October 2016, the Assistant Public Works Director retired and the position is currently vacant. As a consequence, positions formerly reporting to the Assistant Public Works Director now report directly to the Public Works Director until a determination is made regarding the Assistant Public Works Director position.

### Budget

The Public Works & Utilities Department is supported by a variety of governmental funds, including the General Fund, three Enterprise Funds, and two Special Revenue Funds. The City’s

General Fund supports general government operations through the collection of property and sales taxes, fees, and other revenue sources. In contrast, Enterprise Funds account for operations which are supported through user fees intended to cover the entire cost of each fund's operations. Special Revenue Funds account for revenue sources which must be spent on specific projects, activities, and functions.

While the Department's activities are divided into three broad functional areas (utilities, stormwater, and public works), the City's budget includes seven separate funds and accounts which support the Public Works & Utilities Department. Historical expenditures in each of these funds and accounts are summarized in the following table, along with the percent change from FY2012 to FY2016.

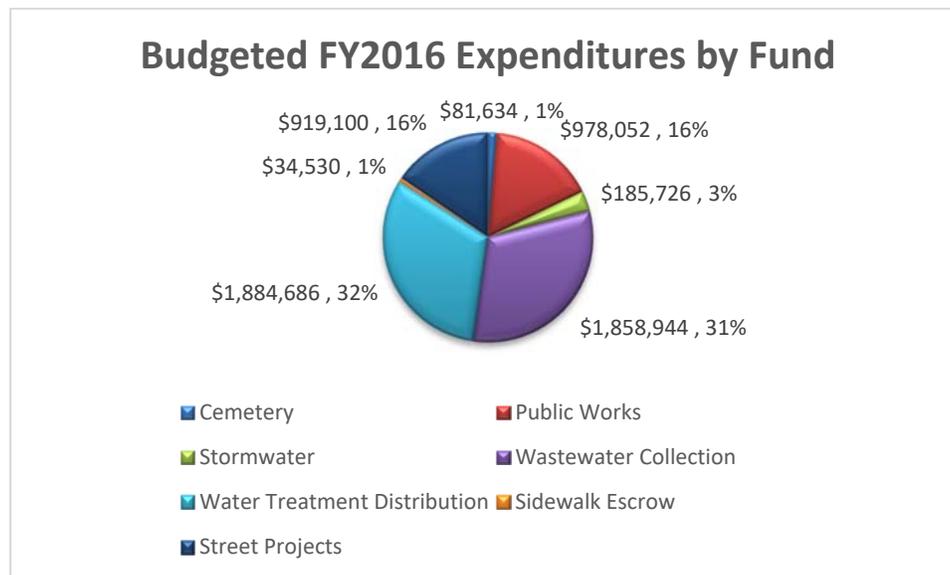
**Table 2: Historical Expenditures by Fund – Public Works & Utilities Department, FY2012-FY2016**

Fund/Account	FY2012	FY2013	FY2014	FY2015	FY2016	Percent Change
<b>General Fund</b>						
Cemetery	\$66,653	\$63,737	\$74,099	\$78,150	\$81,634	22%
Public Works	\$683,957	\$811,705	\$1,039,248	\$892,551	\$978,052	43%
<b>General Fund Total</b>	<b>\$750,610</b>	<b>\$875,442</b>	<b>\$1,113,347</b>	<b>\$970,701</b>	<b>\$1,059,686</b>	<b>41%</b>
<b>Enterprise Fund</b>						
Stormwater	\$48,382	\$97,827	\$56,102	\$185,651	\$185,726	284%
Wastewater Collection	\$1,525,646	\$1,466,133	\$1,646,578	\$1,656,304	\$1,858,944	22%
Water Treatment Distribution	\$1,775,682	\$1,983,073	\$1,752,485	\$2,402,409	\$1,884,686	6%
<b>Enterprise Funds Total</b>	<b>\$3,349,710</b>	<b>\$3,547,033</b>	<b>\$3,455,165</b>	<b>\$4,244,364</b>	<b>\$3,929,356</b>	<b>17%</b>
<b>Special Revenue</b>						
Sidewalk Escrow	\$0	\$0	\$0	\$0	\$34,530	-
Street Projects	\$606,637	\$490,802	\$862,782	\$914,100	\$919,100	52%
<b>Special Revenue Funds Total</b>	<b>\$606,637</b>	<b>\$490,802</b>	<b>\$862,782</b>	<b>\$914,100</b>	<b>\$953,630</b>	<b>57%</b>
<b>Public Works &amp; Utilities Total</b>	<b>\$4,706,957</b>	<b>\$4,913,277</b>	<b>\$5,431,294</b>	<b>\$6,129,165</b>	<b>\$5,942,672</b>	<b>26%</b>

While expenditures in each of these areas have increased since FY2012, the Wastewater Collection and Street Projects funds have experienced the largest nominal increases at \$333,300 and \$312,400, respectively. Wastewater Collection increases are attributable to increases in major capital items such as headworks screening upgrades, sewer main improvements, and clarifier replacement. Street Projects increases are attributable to over \$700,000 in additional funding allocated for contractual street repairs, which was partially offset by reductions in the "Recycle in Place" program and concrete repair activities.

Notably, stormwater expenditures have also increased by approximately \$137,000 over this period. This increase is primarily attributable to additional expenditures in contracted stormwater system maintenance, which amounted to \$11,830 in FY2012 and increased to \$145,000 in FY2016. Future stormwater expenditures are likely to include additional contractual system maintenance as well as personnel-related expenditures, which are not currently supported by the Stormwater Fund.

Enterprise funds account for over 65% of all expenditures for FY2016, as illustrated in the following figure.



**Figure 2: Budgeted Expenditures by Fund – Public Works & Utilities Department, FY2016**

It is important to note that the Special Revenue Funds indicated above (Sidewalk Escrow and Street Projects) do not support any personnel-related expenditures for the Department. The Sidewalk Escrow Fund accounts for fees collected from City residents to support sidewalk construction. No expenditures have been made from this fund since FY2012, and in FY2016 the City anticipates allocating the entirety of the fund to capital expenses related to sidewalks. This will result in an anticipated fund balance of \$0 on December 31<sup>st</sup>, 2016.

Secondly, the Street Projects Fund includes revenues from state and county highway taxes for street repair and maintenance. This fund supports contractual services, commodities, and transfers related to streets work, such as hiring contractors to conduct mill and overlay and street paving activities. Salaries, wages, and other personnel costs for Public Works & Utilities staff are not expensed from this fund.

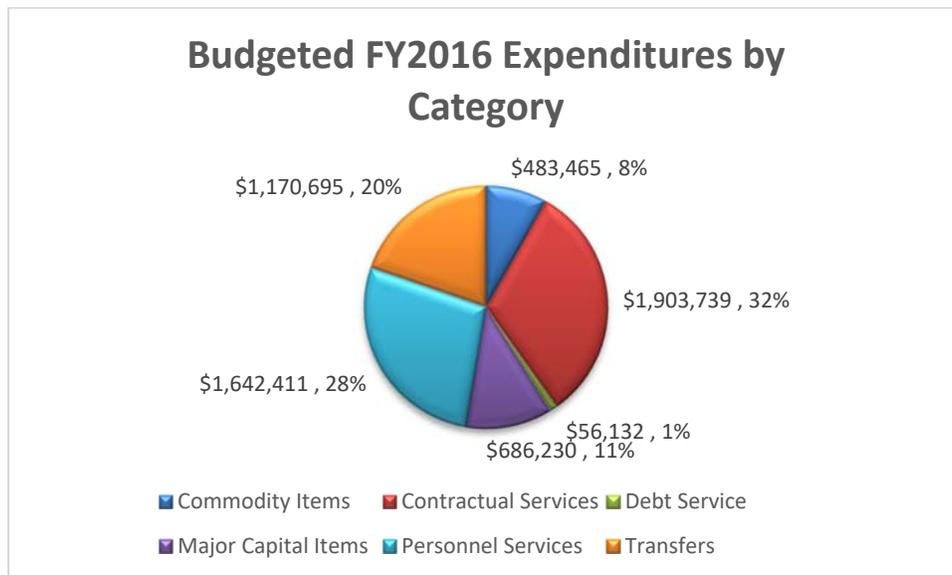
The expenditures summarized above include operations costs as well as capital expenses and transfers. It is also useful to examine the Department's overall expenditures in terms of these budget categories, as illustrated in the following table.

**Table 3: Historical Expenditures by Category – Public Works & Utilities Department, FY2012-FY2016**

Expenditures by Category	FY2012	FY2013	FY2014	FY2015	FY2016	Percent Change
<b>Commodity Items</b>	\$518,266	\$556,021	\$515,518	\$501,315	\$483,465	-7%
<b>Contractual Services</b>	\$1,509,034	\$1,391,419	\$1,677,686	\$1,899,265	\$1,903,739	26%
<b>Debt Service</b>	\$0	\$0	\$0	\$28,066	\$56,132	-
<b>Major Capital Items</b>	\$304,832	\$505,177	\$720,104	\$983,450	\$686,230	125%
<b>Personnel Services</b>	\$1,333,300	\$1,433,567	\$1,334,950	\$1,552,108	\$1,642,411	23%
<b>Transfers</b>	\$1,041,525	\$1,027,093	\$1,183,036	\$1,164,961	\$1,170,695	12%
<b>Public Works &amp; Utilities Total</b>	<b>\$4,706,957</b>	<b>\$4,913,277</b>	<b>\$5,431,294</b>	<b>\$6,129,165</b>	<b>\$5,942,672</b>	<b>26%</b>

Contractual services, major capital items, and personnel services expenses have led the way in overall expenditure growth over the last several fiscal periods. These areas grew by \$394,700, \$381,400, and \$309,100 respectively and include monies for Department projects as well as capital assets, expanded reliance on contractors for street maintenance services, as well as general personnel-related increases including salaries, wages, and benefits.

In FY2016, the Department’s top budgeted expenditures are attributable to contractual services, personnel services, and transfers, as illustrated in the following figure.



**Figure 3: Budgeted Expenditures by Category – Public Works & Utilities Department, FY2016**

These expenditures reflect a high priority on contracted work for maintenance items, such as street repair and facilities-related work, as well as the impact of personnel costs on the Department.

## Analysis and Recommendations

While the City of Bonner Springs has been able to accomplish many tasks related to public works and utilities functions over the years, the recent effort to create a single Public Works & Utilities Department presents the organization with a unique opportunity to reevaluate its existing staffing structure and workload. The core changes identified by this report include increasing staffing capacity through the effective use of outside contractors, clarifying the Department’s management structure, reallocating staff to meet the Department’s current operational needs, and implementing management best practices which will enable Department leaders to more effectively analyze and distribute workload in the future.

As a result of these recommendations, it is anticipated that the Department will engage in a number of reclassifications and create a new position which will result in the following organizational structure. The new position is illustrated in green.

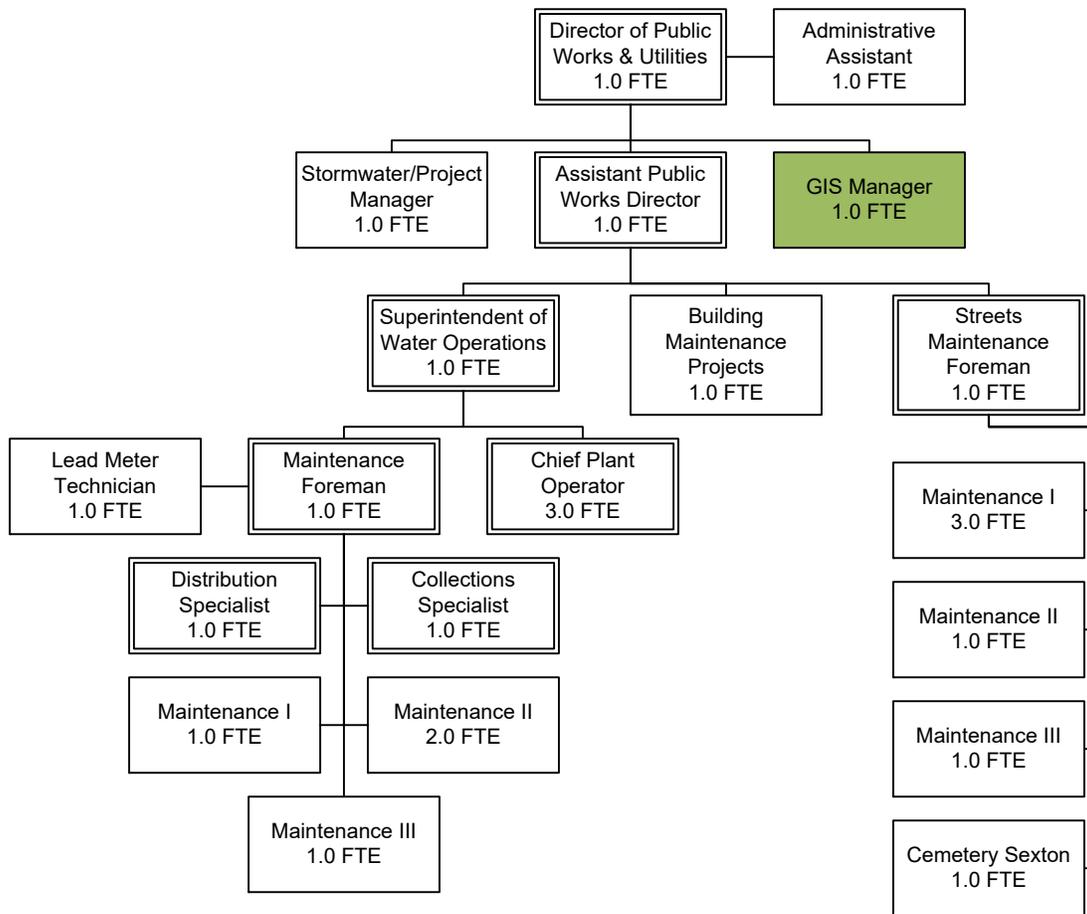


Figure 4: Proposed Public Works & Utilities Department Organizational Structure, 2016

### Contractual Services

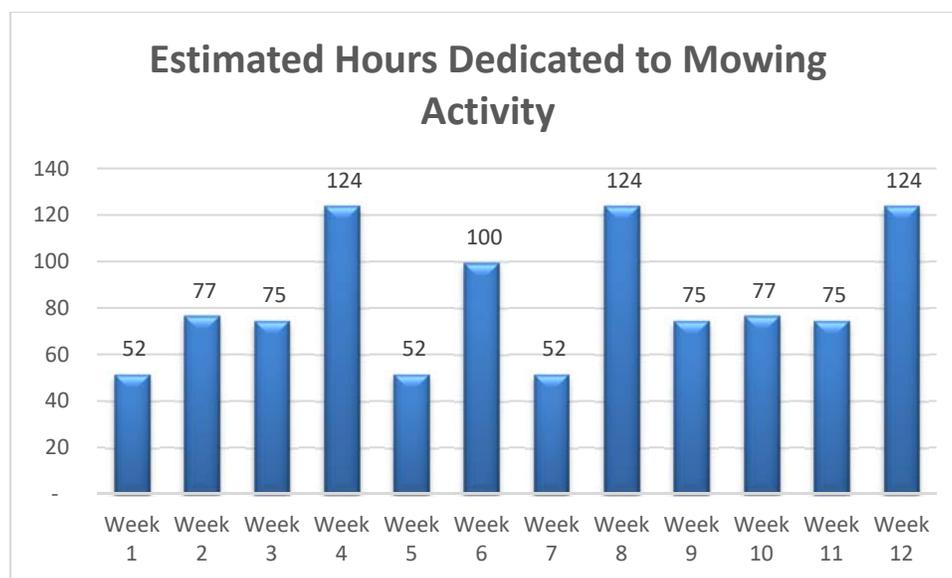
The following recommendations are intended to maximize the capacity of existing staff by identifying functions and tasks which can be effectively outsourced to external contractors.

**Recommendation 1: Issue an RFP to contract for mowing services.**

The Public Works & Utilities Department currently utilizes a private contractor to mow some specific City-owned sites, including the Wastewater Treatment Plant, sewage lift stations, the City’s Police station, and the City’s Fire station. These facilities are mowed on an as-needed basis at an estimated annual cost of \$4,500 per year, and were formerly the responsibility of Utility maintenance crews.

In contrast, the Streets Maintenance crew in the Public Works division is currently responsible for performing all right-of-way and related mowing, including 42 distinct sites across the City totaling over 73 acres. These properties include rights-of-way, City parking lots, and land bank properties. The Streets Maintenance crew is currently staffed by a Streets Maintenance Foreman, three Maintenance I Laborers, a Maintenance II Laborer, and a Maintenance III Laborer, for a total of six crew staff. Notably, the Maintenance III Laborer is not regularly assigned to mowing activities and is largely responsible for Public Works vehicle maintenance, as discussed in Recommendation 2 below. As a result, a total of five regular full-time staff are available to engage in mowing activities.

Although the Department has not historically tracked actual hours related to mowing activity, staff recently estimated the total man-hours necessary to mow each property over a 12-week period during the mowing season. The following figure illustrates the estimated mowing workload.



**Figure 5: Estimated Hours Dedicated to Mowing Activity – Public Works & Utilities Department, FY2016**

In order to determine the number of staff needed to complete this mowing activity, it is necessary to divide the estimated weekly hours by 40 working hours per week. This yields an unadjusted staffing estimate. For example, in Week 1, 52 mowing hours divided by 40 available staff hours per person yields an estimate of 1.29 staff needed to complete mowing for that week.

However, this estimate ignores vacation, sick, and other leave that may be taken during this period. When staff take leave, other personnel may be pulled into high-priority activities in order to ensure the activity is completed. To calculate the impact of leave on staffing, it is necessary to perform a staffing factor calculation. A staffing factor is a multiplier which represents the total

number of staff needed to cover a single position, including the average leave taken by staff. To compute the staffing factor, the total scheduled working hours each year (2,080 for a typical full-time employee) are divided by the number of hours staff are actually available.

Based on the latest available data from the City, Streets Maintenance personnel who regularly engage in mowing utilize an average of 176 leave hours each year. Subtracting this from 2,080 scheduled hours means that the average Streets Maintenance person will work approximately 1,904 hours each year, with the remainder spent on leave. Dividing 2,080 working hours by 1,904 hours actually worked yields a staffing factor of 1.09 FTEs needed to fully cover the employee's responsibilities while accounting for leave.

The staffing factor is then multiplied by the minimum number of employees scheduled to accomplish work tasks. The result of this calculation is the total number of personnel needed to provide appropriate coverage for the position, after accounting for leave.

The following table displays the total number of staff needed to accomplish mowing activities given these estimates while also accounting for leave usage. The "Estimated Staff Required to Complete Mowing" column indicates the total staff needed to engage in mowing activities, including the staffing factor. For example, in Week 1, 52 mowing hours divided by 40 available hours that week yields 1.29 staff. Applying the staffing factor to this figure (1.29 x 1.09) yields a total staffing requirement of 1.4 positions in order to accomplish mowing for that week.

**Table 4: Estimated Public Works Crew Utilization during Peak Mowing Season**

Mowing Week	Estimated Mowing Hours	Estimated Staff Required to Complete Mowing	Actual Staff Available on Streets Crew	Percent of Streets Crew Utilized
Week 1	52	1.4	5	28%
Week 2	77	2.1	5	42%
Week 3	75	2.0	5	41%
Week 4	124	3.4	5	68%
Week 5	52	1.4	5	28%
Week 6	100	2.7	5	54%
Week 7	52	1.4	5	28%
Week 8	124	3.4	5	68%
Week 9	75	2.0	5	41%
Week 10	77	2.1	5	42%
Week 11	75	2.0	5	41%
Week 12	124	3.4	5	68%

It should be noted that this analysis is based on a 12-week mowing season, when actual mowing activities in Kansas typically run for approximately 24 weeks from April through September. This effectively doubles the estimated mowing workload assigned to Streets Maintenance crews in a given year.

The major takeaway from this analysis is that mowing activities account for a significant portion of Streets Maintenance crew responsibilities and challenge the ability of Streets Maintenance personnel to accomplish other non-mowing work. For example, four of these weeks require greater than 50% mowing crew staff (3-4 personnel), while another five weeks require at least 40% of the crew (2 personnel). Because the mowing crew consists of five staff, this leaves only

one or two additional staff to perform other core tasks, such as crack sealing and street repairs. Additionally, while the City has utilized temporary summer workers to assist with mowing in the past, staff reported inconsistent hiring and reliability among temporary staff in recent years. This has required Streets Maintenance personnel to perform all mowing activities.

In addition to the mowing performed by Streets Maintenance, the Cemetery Sexton requires approximately 36 hours to mow the entire cemetery once. Trimming activities at the cemetery also take a significant amount of time due to the number of gravestones and the need to exercise appropriate care while trimming grass around graves. It is estimated that trimming activities alone require approximately 48 hours each time the cemetery is mowed. In short, the Department estimates that the Cemetery Sexton devotes most available time to mowing and trimming activities during the mowing season. While the City has historically employed a seasonal summer position to provide assistance for trimming activity, the overall mowing and trimming workload involves approximately 84 hours of work each mowing cycle. This arrangement constrains the Cemetery Sexton's ability to take leave and represents a significant portion of the Cemetery staff's available time.

While achieving quality mowing and trimming in public areas, rights-of-way, and at the cemetery is a laudable priority for the City, the current staffing model for mowing activities does not represent the highest and best use of Public Works staff. In order to create staff capacity for streets-related work, including pavement maintenance and repair, it is recommended that the City issue a request for proposals (RFP) to contract for mowing services, including mowing and trimming at the cemetery.

Over the 12-week period described in Table 4 above, mowing activities represent approximately 1,000 hours of staff time. Extrapolated over a 24-week regular mowing season, these activities represent 2,000 staff hours. Contracting for non-cemetery mowing alone will effectively add an additional staff person to the Streets Maintenance crew purely as a result of freeing up time currently dedicated to mowing. A similar situation exists with respect to cemetery mowing and trimming, where contracting for mowing will eliminate 84 hours of work for each mowing cycle, or an estimated 1,000 hours per year (assuming the cemetery is mowed 12 times in a given year). In addition to creating staff capacity, issuing an RFP for mowing services will eliminate the need to hire seasonal help purely for mowing assistance. This in turn will reduce seasonal personnel costs and save time recruiting, training, and supervising seasonal employees.

Lastly, this effort provides the City with an opportunity to create a single master contract for mowing services with one vendor. The proposed contract should include all of the properties currently mowed by Streets Maintenance and Cemetery staff, as well as all parcels currently mowed by third parties on an as-needed basis. This will provide a single point of contact responsible for all City-related mowing and create economies of scale for the City as well as the contractor.

As part of its negotiations with a third-party contractor, it is essential for the City to identify and clearly articulate expected service levels for each parcel to be mowed. At a minimum, the City should specify the area to be mowed, the frequency of mowing, the expected height of grass after mowing, and detailed trimming expectations (particularly regarding the cemetery). On large parcels, the City may benefit from specifying a service level which requires mowing only the first 10 to 15 feet of the parcel's perimeter. Interior areas could be mowed once or twice each year with a brush hog or other large mowing apparatus. This will result in a neatly trimmed border area with a controlled, natural-looking interior. Another option is to designate natural areas with wildflowers and native plantings which are exempt from regular mowing, or to implement

xeriscape landscaping which requires no water and little annual maintenance. Each of these service level options should be evaluated against the total cost of contracted mowing services.

In order to obtain the most competitive pricing possible, the City should circulate this RFP to its current mowing contractor as well as other interested and qualified contractors in the area, and select the lowest, most qualified bidder to provide these services.

**Recommendation 2: Issue an RFP for vehicle maintenance services.**

The Public Works & Utilities Division currently maintains a fleet of approximately 28 vehicles, including 11 assigned to the Public Works division and 17 assigned to the Utilities division. The following table illustrates the year, make, and model of these assets.

**Table 5: Public Works & Utilities Vehicles**

Public Works & Utilities Division	Vehicle Number	Vehicle Year	Make and Model
Public Works	501	2013	E250 Heavy Duty Cargo Van
	525	2009	International Dump Truck
	526	2014	International Dump Truck
	527	2000	Ford Windstar Van
	552	2015	Ford F350 Flat Bed Truck
	553	2015	International Dump Truck
	565	2016	Ford F350 4x4 Pickup Truck
	579	2007	1-Ton Flat Bed Truck
	585	2007	1-Ton Flat Bed Truck
	586	2008	Ford F350 1-Ton Pickup Truck
	589	2008	Ford F350 1-Ton Pickup Truck
Utilities	469	2013	Ford F150
	470	1999	Starlite Trailer
	478	2009	Ford F450 Side Dump
	479	2002	Ranger 4x4
	480	2008	E450 Ford Van
	481	2012	Chevy Colorado
	482	2015	Chevy Silverado 1500
	484	2015	Chevy Silverado 3500
	487	2011	Ford F150 4x4
	491	2005	Ford Ranger
	568	2009	Vactor Truck
	580	2007	Ford F750 Dump Truck
	581	1999	3/4 Ton Ford Pickup
	590	2007	Ford Dump Truck
	592	2008	Ford F150 Pickup
	593	2008	3/4 Ford 4x4 Heavy Duty
	5900	2007	Case 580M Backhoe

It is important to emphasize that the Department employs several best practices associated with vehicle and equipment maintenance. In particular, the Department has created inventory lists for all its vehicles and equipment in both Public Works and Utilities divisions. These inventories capture a robust set of data indicators, including parts quantities, initial purchase costs, date purchased, and vendor information. In recent years, the Department has begun tracking

engine/motor run time (hours), mileage, and other lifecycle indicators critical to assessing the condition of these assets.

The Department has also made a concerted effort to track itemized maintenance and repair costs associated with each vehicle, including the date maintenance was performed, the vehicle's mileage at the time of the repair, a description of the repair, the vendor providing parts or repair services, and the overall cost of the repair. This information provides valuable insights into the maintenance needs of each vehicle, and should be relied upon to help inform capital replacement decisions.

However, one critical indicator not historically tracked is the amount of labor hours associated with maintenance and repair activities. This makes calculating the City's labor costs for vehicle maintenance activities difficult. The Utilities division incurs no internal labor hours because it relies on outside contractors to perform regular maintenance and repairs on its vehicles, including routine oil changes as well as tire work and other major repairs. On the Public Works side, a Streets Maintenance III position is responsible for providing basic preventative maintenance and limited repair services, while other major repairs are contracted out.

Although detailed hours dedicated to these tasks are unavailable, the Streets Maintenance III position is currently scheduled to perform these functions on Monday, Tuesday, and Friday of each week according to the latest available Public Works operations schedule. Assuming this time is dedicated solely to vehicle and equipment maintenance, this represents approximately 24 hours per week or 1,248 hours per year.

The Department's current approach presents a challenge to vehicle maintenance operations in two primary ways. First, performing some vehicle maintenance services in-house for only one division represents an inefficient allocation of responsibilities given existing resources. In effect, the Department is paying to both contract and retain services in-house, when fully implementing one of these approaches would likely lead to increased efficiency and potential cost savings. Second, utilizing an existing Streets Maintenance crew position to provide these services reduces the available time this position has to devote to streets-related work.

In short, the Department is confronted with a central question about how vehicle maintenance services should be provided: Should the Department provide full-service vehicle maintenance in-house, or should these services be contracted? Given the number of vehicles and only one staff member currently available to perform these tasks, it is recommended that the City issue an RFP for vehicle maintenance services and utilize a third party to maintain all Public Works & Utilities vehicles.

Contracting for these services will not eliminate the need for the Streets Maintenance III position to provide equipment maintenance support, but it will reduce the number of staff hours necessary for vehicle maintenance and create additional capacity to participate in pavement-related work. At the same time, pursuing a contractual relationship with an outside vendor gives the City an opportunity to specify preventative maintenance service levels, schedules, and expectations with a reliable contractor and to negotiate how major repairs will be handled. By utilizing one contractor to maintain all City vehicles, the City will be able to provide a large amount of steady work and may be able to capitalize on volume or discount pricing.

Pursuing a contractual relationship for vehicle maintenance services will create a more streamlined approach to these activities and allow the Streets Maintenance crew to focus additional attention on other core services, such as pavement maintenance and repair.

Formalizing a contractual relationship with a third party contractor will also create a mechanism for other City departments to achieve similar service levels for vehicle maintenance, if they are not already using formal contracts.

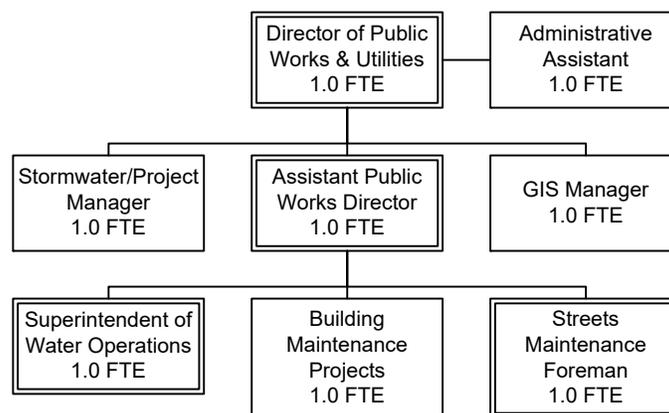
### Management Structure

The following recommendation is intended to help the City create a more centralized, unified Public Works & Utilities Department.

#### **Recommendation 3: Fill the vacant Assistant Public Works Director position and reassign supervisory responsibilities for all Public Works divisions to this position.**

In October 2016, the Assistant Public Works Director position became vacant. This position was historically responsible for a wide variety of tasks, including coordinating street maintenance activities, cemetery functions, sign replacements, mowing activities, and some elements of stormwater maintenance. Additionally, this position supervised three direct reports: the Building Maintenance Projects Manager, the Streets Maintenance Foreman, and the Cemetery Sexton. Since this position became vacant, these personnel have begun reporting directly to the Public Works Director. This has increased the Public Works Director's span of control to six FTEs.

The recent vacancy in this position presents the Department with a unique opportunity to more effectively align upper management responsibilities with practices typical of high-performing Public Works Departments. Given the recent consolidation of Public Works & Utilities and the Public Works Director's large number of direct reports, it is recommended that the City fill the Assistant Public Works Director position and reassign supervisory responsibilities for Utilities, Building Maintenance, and Public Works to this position. In effect, this will place all operating divisions under the supervisory control of the Assistant Public Works Director, as illustrated in the following figure.



**Figure 6: Public Works & Utilities Management Structure, 2016**

This structure presents two distinct advantages to the Department. First, it reduces the Public Works Director's span of control from six FTEs to four FTEs, which will provide the Director with additional capacity for long-term strategic planning, budget administration, and coordination with other City departments. This alleviates the need for the Director to engage in a substantial amount of day-to-day supervision and will allow the Director to focus on staff relationships which are more planning-related, such as stormwater and project management and GIS. In contrast, the Assistant Public Works Director will serve in a highly supervisory capacity to oversee day-to-day operations across all major Public Works functions, including utilities, building maintenance, and streets maintenance.

A second advantage is connected to the Department's culture and consolidation efforts. Utilizing an Assistant Public Works Director position in this capacity presents an opportunity to secure a candidate with knowledge of both utilities and general public works functions. A well-qualified applicant will be able to speak to both of these highly skilled and specialized operations. Finding an Assistant Director who is well-versed in these operations will help assure employees that their supervisor is knowledgeable, competent, and knows the issues and struggles they face on a daily basis. This in turn will allow the Assistant Director to build trust, confidence, and solid relationships among Public Works and Utilities staff, and provide a mechanism for increasing internal cooperation, breaking down silos, and leveraging staff from both sides of the Department to accomplish goals.

To accomplish these supervisory duties, the Assistant Public Works Director should be responsible for coordinating the workload assigned to each division, as well as setting annual goals, measuring staff performance, ensuring staff are appropriately trained to carry out their work, and tracking workload and performance data. This information will play a vital role in future analysis of the Department's performance and staffing levels, and the Assistant Public Works Director should coordinate closely with the Administrative Assistant to track this information and ensure it is accurately recorded.

Additionally, it should be the Assistant Public Works Director's responsibility to oversee and manage contractual relationships that impact the Department's operations, such as the mowing and vehicle maintenance contracts as described in Recommendations 1 and 2 above. These responsibilities should include creating, updating, and issuing RFPs; reviewing bids and contracts; and evaluating the performance, competence, and services provided by contractors.

Because the Assistant Public Works Director position will inherit a greater number of responsibilities, it is recommended that the position be reclassified in pay range 22, which is above that of the Superintendent of Utility Operations but below that of the Public Works Director. This will require a base annual salary of approximately \$71,600, or approximately \$96,700 including an estimated 35% additional cost for benefits.

When filling this position, it is important for the Department to seek qualified candidates who can bring operational expertise to the organization. Candidates with experience in organizational consolidations (such as the merger of two departments) should also be given strong consideration, as addressing the Department's cultural divide will be a high priority for this position.

### **Staffing Structure**

The following recommendations affect the overall structure and staffing of the Public Works & Utilities Department in order to maximize staff capacity and create more efficient reporting relationships.

#### **Recommendation 4: Integrate cemetery-related and streets-related functional responsibilities.**

Managing the City's cemetery involves several major functions including mowing, trimming, gravesite maintenance, and burials. Much of this work is periodic in nature and is performed by the Cemetery Sexton. Currently, the Cemetery Sexton's major responsibilities involve mowing, trimming, and burial activities.

According to estimates provided by the Department, approximately 84 staff hours are required to mow and trim the cemetery. During the growing season, this workload encompasses a significant portion of the Cemetery Sexton's time. In addition to mowing, the Cemetery Sexton digs graves and conducts internments for approximately 50 burials each year, on average. These burials occur throughout the year and require approximately 12 staff hours to open the grave, set up for the funeral service, inter the deceased, close the burial plot, and mark the grave. This results in a total estimated time commitment of approximately 600 hours per year. Additional maintenance tasks, such as hardscaping and pavement maintenance, follow a regular pattern similar to other Public Works maintenance.

It must be emphasized that these activities ensure that a high level of service is provided at the cemetery and foster a sense of pride in the Department and the community. The Cemetery Sexton and other Public Works crewmembers who work at the cemetery exercise great care regarding this work and feel a tremendous sense of ownership over the cemetery's appearance and maintenance. This level of commitment is commendable and stands as a testament to the caliber of the City's Public Works employees.

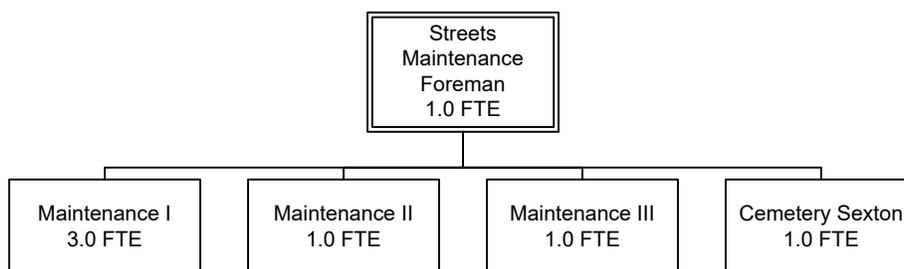
However, the current functional arrangement complicates the Department's ability to adequately address other core workload tasks, such as street maintenance activities. While the Cemetery Sexton is occasionally available to assist with street and equipment maintenance, cemetery-related functions including snow removal, mowing, burial, and headstone repair, prevent this assistance from occurring regularly. The Cemetery Sexton also relies on additional support from the Streets Maintenance crew in order to accomplish maintenance activities safely, such as digging graves, adjusting heavy grave stones, and completing trimming when seasonal help is not available. Occasionally, the Cemetery Sexton engages in these activities without additional staff support, which creates safety liabilities for the Sexton as well as the City.

Because the Cemetery Sexton performs cemetery functions on a year-round basis and occasionally borrows staff from the Streets Maintenance crew, cemetery maintenance currently presents a net drain on the Department's ability to accomplish street maintenance tasks. This diverts resources away from street maintenance and weakens the Department's overall ability to accomplish its core workload.

This imbalance illustrates a need to integrate regular cemetery functions with existing streets-related functions in a more cohesive manner. There are several approaches the Department can take to clarify and rebalance workload tasks, as described below.

The first option is to contract for mowing and trimming services at the cemetery. Contracting for these services will free approximately 84 hours each mowing cycle for the Cemetery Sexton to devote to other tasks. At the same time, the Cemetery Sexton should be reassigned to other high-priority cemetery and streets-related functions according to the Department's work plan, as described in Recommendation 9. It will be important for the Assistant Public Works Director to coordinate the Cemetery Sexton's workload to maximize availability to the Streets Maintenance crew, while also ensuring that the Cemetery Sexton has sufficient support to accomplish cemetery duties. Specifically, tasks such as grave digging, burials, hardscaping, and gravestone maintenance will still require at least two crewmembers to ensure compliance with safety best practices and Occupational Health and Safety Administration (OSHA) regulations.

This option effectively adds capacity to the existing Streets Maintenance crew without requiring additional full-time staff. In effect, the Cemetery Sexton will report to the Streets Maintenance Foreman for any streets-related assignments, as illustrated in the following figure.



**Figure 7: Proposed Streets Maintenance Crew Composition, 2016**

This staffing arrangement maximizes the availability of the Cemetery Sexton to assist with Public Works tasks while still providing expertise and insight regarding cemetery maintenance functions. As a consequence, this staffing adjustment will effectively add staff where it is most needed (in the Streets Maintenance crew) while still preserving the Department's ability to meet service-level expectations at the cemetery. Additionally, this option preserves the Cemetery Sexton's role as a cemetery operations expert. In situations where a periodic cemetery need arises, such as a burial, the Cemetery Sexton should be assigned a lead role and coordinate the completion of the activity in conjunction with at least one other Streets Maintenance person. This option is also potentially cost-neutral to the City because it does not add additional full-time staff.

A second option is to hire an additional full-time person to assist with cemetery and/or Streets Maintenance crew functions. This option should be pursued in the event that contracting for mowing services is not feasible or cost-effective. Hiring an additional full-time staff member will enable the Department to provide reliable, high-quality services at the Cemetery more safely and reliably while still using City staff. This position should be assigned a regular work plan and assist with streets-related functions whenever possible, at the direction of the Assistant Public Works Director.

The central benefit of adding staff to the Department rather than contracting for services is twofold: it provides the City with greater control over the service level associated with cemetery functions, and creates an additional authorized employee who can relieve or eliminate the need for the Cemetery Sexton to borrow staff from Streets Maintenance. In short, this option presents an alternative strategy which will add staff capacity and allow the Department to re-balance workload in order to more effectively respond to core tasks.

Regardless of the option chosen by the City, it will be incumbent upon the Assistant Public Works Director to ensure that cemetery needs, including burial activity, have minimal impact on streets functions in order to maximize staff capacity and appropriately prioritize the Department's workload.

**Recommendation 5: Create three Chief Operator positions to oversee water and wastewater treatment plants in the Utilities Division.**

The Utilities Division currently relies on several staff members to coordinate water and wastewater treatment plant operations. During the week, the Chief Water Plant Operator supervises the water treatment plant, and the Chief Wastewater Plant Operator supervises the wastewater treatment plant. On the weekends, supervision of both water and wastewater treatment plants is performed by one of four staff: the Chief Wastewater Plant Operator, the Chief Water Plant Operator, the Chief Distribution Operator, and Chief Wastewater Collections Operator. These positions currently rotate weekend supervisory duties every four weeks and on holidays.

It is unusual for staff involved in distribution and collections activities to also be responsible for managing aspects of water and wastewater treatment. While these functions are related, the work associated with distribution and collections is necessarily spread across the City's network of water mains and sewer pipes, while the work associated with treatment is concentrated at individual treatment plants. It is also unusual for distribution and collections personnel to be referred to as "operators;" in a traditional utilities environment, an "operator" refers to a position primarily dedicated to operating a plant rather than a position primarily involved in field work.

This reliance on the Chief Distribution Operator and the Chief Wastewater Collections Operator to supervise treatment plants also challenges supervision of Utilities maintenance crews. The Chief Distribution and Wastewater Collections Operators do not collect overtime and take 8-16 hours of comp time whenever they are responsible for supervising treatment plants on weekends. As a consequence, they are unavailable to supervise maintenance personnel and field work on days when they take comp time.

In order to distinguish plant operation functions from collections and distribution functions, and to increase the efficiency of staffing the water and wastewater treatment plants, it is recommended that the Department create three Chief Operator positions. These positions should be responsible for supervising both the water and wastewater treatment plants during the week, on the weekends and over holidays. When a weekend rotation is required, these staff should receive comp time during the week.

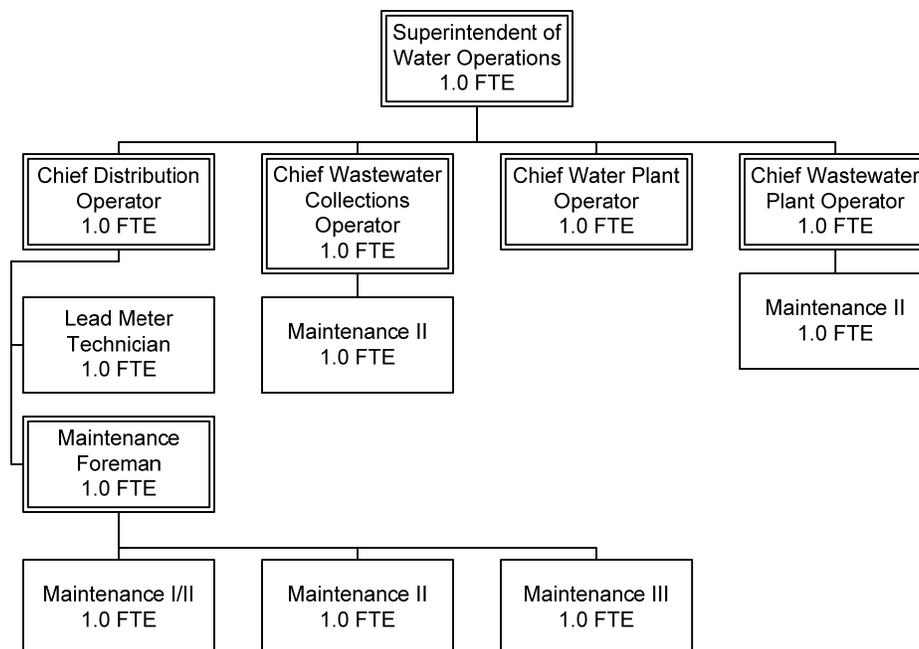
This arrangement will provide sufficient staffing coverage to monitor plant activities during the week and ensure staff will be available and on-call over the weekends. Additionally, it eliminates the need to rely on distribution and collections staff to oversee plant operations, and creates three peer positions who share equal responsibility for both the water and wastewater treatment plants.

These positions should be classified at the current pay range of the Chief Water Operator and Chief Wastewater Operator (pay range 20). If these positions are reclassified to Chief Operator, no additional costs will be incurred by the City. The additional cost of filling the third Chief Operator position will depend on who the City selects to fill the position, and could range up to approximately \$66,000 including benefits for a new hire.

**Recommendation 6: Create a Utilities Distribution and Collections crew and provide cross-training to the crew's staff.**

Utilities maintenance operations are currently supervised by the Chief Distribution Operator and Chief Wastewater Collections Operator. The Chief Distribution Operator oversees a Lead Meter Technician, as well as a Maintenance Foreman who supervises three maintenance staff. These staff are primarily devoted to distribution activities, such as replacing and installing water mains and meters.

The Chief Wastewater Collections Operator oversees one maintenance position and is responsible for collections maintenance, such as cleaning sewage lift stations, as well as stormwater infrastructure activities. The current Utilities maintenance structure is illustrated in the following figure.



**Figure 8: Current Utilities Division Staffing, 2016**

In practice, this structural arrangement contributes to two primary organizational challenges. First, it places most emphasis on maintenance related to water distribution, such as utility and meter locates, meter reading, and water main repairs. This leaves relatively few staff dedicated to sewer collection maintenance. Secondly, there is a lack of clear management responsibility regarding distribution and collections maintenance tasks. Three staff currently share responsibilities for various aspects of this maintenance: The Chief Distribution Operator is responsible for utility locates and inspections for new construction, the Maintenance Foreman is responsible for other utility locates and repair work, and the Chief Wastewater Collections Operator is responsible for line cleaning and collections maintenance, but also assists with water repairs during major main breaks.

In order to more cohesively address the division’s management needs and increase staff capacity, it is recommended that the Department restructure several utilities maintenance positions into a single Utilities Distribution and Collections crew. While specific maintenance tasks in distribution and collections vary widely, consolidating these responsibilities in a single crew and investing in cross-training efforts will result in a work unit that can capably adapt to most maintenance needs.

Specifically, the Utilities Distribution and Collections crew should be composed of a Maintenance Foreman who reports directly to the Superintendent of Water Operations. The Maintenance Foreman should be a working supervisor with responsibilities for creating and assigning work plans, assisting staff with field maintenance activities, ensuring maintenance is properly performed and recorded, and prioritizing projects and activities. Maintenance workers should all report to the Maintenance Foreman and will constitute a pool of four staff who will be available to work on tasks as assigned by the Foreman.

The Chief Distribution Operator and Chief Wastewater Collections Operator positions should be reclassified as Distribution Specialist and Collections Specialist positions, respectively. These positions should report to the Maintenance Foreman and take a lead role in supervising any maintenance projects or tasks which fall under their particular area of specialization. For example,

if a given day's activities involve a meter replacement and cleaning collections pipes, the Maintenance Foreman should assign a subcrew to the Distribution Specialist to replace the meter, and a subcrew to the Collections Specialist to clean pipes.

Given the specialized knowledge associated with distribution and collections maintenance tasks, these positions should obtain professional certifications corresponding to their area of expertise. These certifications will ensure that Specialists are qualified to perform technical maintenance tasks and appropriately supervise and train other Maintenance Workers.

The proposed organizational structure of the Utilities Division is illustrated in the following figure.

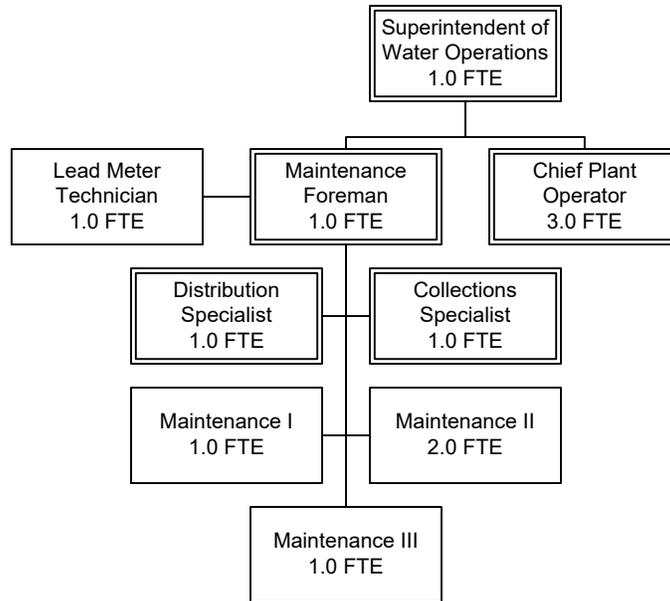


Figure 9: Proposed Utilities Division Staffing, 2016

This proposed reorganization creates a pool of six field maintenance staff who report directly to the Maintenance Foreman. With appropriate cross-training and supervision from field Specialists, this crew will be able to accomplish most distribution or collections-related work required by the City. This increases the depth of staff knowledge and facilitates a more straightforward approach to assigning workload tasks.

This reorganization is anticipated to be cost-neutral to the City because it preserves the overall number of FTEs assigned to the division. Currently, the Maintenance Foreman, Chief Distribution Operator, and Chief Wastewater Collections Operator positions are all classified in range 18 of the City's pay plan. It is recommended that these pay classifications be preserved during the proposed restructuring in recognition of the significant management, professional, and technical responsibilities assigned to the Maintenance Foreman, Distribution Specialist, and Collections Specialist in the proposed model.

**Recommendation 7: Create a dedicated GIS Coordinator position and assign stormwater project management activities to the Project Manager.**

Geographic Information Systems (GIS) functions in Public Works are currently performed by the Project Manager. This position coordinates the use of four tablet computers utilized by field staff to locate assets in the field and is responsible for making corrections to the City's GIS layers.

However, the project management responsibilities assigned to this position are significant and include design work, authoring and issuing RFPs, and coordinating projects with contractors. These projects are largely related to utilities work but also involve other City departments, such as the Parks and Recreation Department's walking trail system.

Assigning both GIS and project management functions to this position is inefficient and challenges the City's ability to utilize GIS to its fullest potential. The Project Manager currently allocates approximately one day each week to GIS tasks. However, the workload involved in developing, implementing, and maintaining a proactive GIS function requires significantly more time and dedicated staff attention. In order to create sufficient staff capacity to address these needs, it is recommended the City create a dedicated GIS Coordinator position and transfer GIS responsibilities from the Project Manager to this position.

The primary responsibility of the GIS Coordinator is to create and maintain data layers which can be utilized by City staff and the residents of Bonner Springs. Some of these layers already exist; for example, the Department has geolocation information related to streets, sanitary sewers, manholes, and fire hydrants. Geolocation of other assets, such as water meters and valves, is currently in progress. However, there is a need to develop and create additional data layers for other Public Works assets, including signs, streetlights, stormwater infrastructure, buildings, facilities, and underground infrastructure. Each of these assets should be properly geolocated and described in the GIS system with appropriate information, such as its age, condition, composition (e.g., type of pipe or sign), and maintenance history.

Where appropriate, the GIS Coordinator should work with third party consultants to procure asset information and incorporate it into the City's GIS system. For example, if the Department hires a third party consultant to inspect streets and assign a Pavement Condition Index (PCI) score to each street, the consultant should provide this information in a GIS-compatible format so that it can be incorporated with existing streets data.

A second major responsibility for the GIS Coordinator involves creating a data management system which facilitates interactions with field staff. The Department currently utilizes several tablet computers to allow Utilities maintenance workers to access and update GIS layers in the field. These practices are commendable, and oversight of all data collection and updating should become a core component of the GIS Coordinator's responsibilities. However, additional opportunities exist to leverage these technologies for Streets Maintenance crews, and the GIS Coordinator should evaluate the feasibility of expanding accessibility to GIS information in the field.

A robust GIS implementation provides field staff with the ability to access asset records in the field, as well as the ability to update records as necessary with corrections, additional pertinent information, or more accurate geolocation information. To create a truly interactive GIS environment, the GIS Coordinator will be responsible for training staff on the use of GIS field instruments (such as tablets and geolocation devices). The GIS Coordinator will then be responsible for reviewing and approving data corrections and additions that are generated by field staff, and will serve as a gatekeeper to ensure that all information about the City's assets is up-to-date and as accurate as possible.

These responsibilities place the GIS Coordinator at the center of the City's efforts to more fully utilize and leverage GIS. The GIS Coordinator will play a critical role in all aspects of GIS data management, from creating initial datasets to updating information and publishing it online for staff and public consumers. The GIS Coordinator will be intimately involved in updating data, and

will ensure Public Works staff have the tools and training needed to make accurate updates and modifications in the field. These functions require a dedicated position with significant knowledge of GIS best practices, technologies, and data management procedures.

If classified at the same pay range as the Project Manager position, it is estimated that creating a GIS Coordinator position will cost approximately \$60,500 per year in salary and wages. Applying an estimated 35% benefits rate to this salary figure results in an estimated total annual cost of \$81,675 per year.

In addition to creating and supporting a dedicated GIS operation, transferring GIS responsibilities to the GIS Coordinator will create additional capacity for the Project Manager. This capacity should be utilized to focus on the City's current stormwater infrastructure needs and assist staff with prioritizing stormwater projects.

### **Management Practices**

The following recommendations discuss specific management practices which the Department should employ in order to facilitate efficient operations and make informed staffing decisions.

#### **Recommendation 8: Create an asset management and condition assessment inventory for all infrastructure managed by Public Works.**

Asset management is a core focus of high performing Public Works organizations. Asset management involves the knowledge of what physical 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 in order to extend the asset's operational life. Obtaining this knowledge allows the Department to assign regular maintenance tasks to work crews as part of a comprehensive work planning process. Over the long term, asset management practices and maintenance activities work in concert to extend the life of infrastructure managed by public works organizations. Asset management allows managers to make optimal decisions regarding what to maintain, when to maintain it, and how to maintain it. In other words, it allows managers to do the right things at the right time at the right location.

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. As previously mentioned, the City of Bonner Springs has made some progress on creating asset inventories through the use of GIS systems, particularly with respect to streets, manholes, fire hydrants, and other infrastructure. However, other major asset systems have not been inventoried or digitized, including street signs and underground distribution, collections, and stormwater infrastructure.

While Department's staff continue to locate, correct, and record condition information regarding the City's streets and stormwater infrastructure, it is recommended that the Department expand these initiatives to create asset management and condition assessment inventories for all infrastructure managed by Public Works & Utilities. This information should be collected in the field and forwarded to the GIS Coordinator for entry into the City's GIS system, which will provide reliable data layers for Public Works & Utilities staff as well as members of the public.

Asset inventories are the cornerstone of asset management planning. A robust inventory provides essential information about each asset, including an identifying number, the asset's location, its age, when the asset was acquired/installed, and its initial cost. In addition to this information, the asset's condition should also be included in the GIS database. Performing formal condition assessments provides a quantitative baseline for rating the qualitative aspects of an asset, such

as its overall functionality, wear and tear, the likelihood of failure, and the consequences of failure. Where possible, the Department should rely on industry standard assessment tools, such as the PCI for rating streets, in order to minimize subjective condition ratings.

Asset inventories and 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 capital improvement planning 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.

There are several methods for obtaining asset inventory and condition assessment data, some of which are currently being used or evaluated by the City. One way to obtain this information is to equip staff with the tools and training necessary to perform proper locations and condition assessments in the field. The Department already has access to several tablet computers and would need to more procure precise geolocation equipment in order to facilitate accurate inventories of existing assets. Procuring this equipment, training staff in its use, and evaluating the resulting data should be the responsibility of the GIS Coordinator.

A second option is to hire an outside contractor to perform an asset management inventory. For example, the Department recently discussed such an inventory with respect to streets maintenance which would include PCI scores for each street segment. A reputable, professional contractor will be able to provide the City with all the information needed to create accurate GIS layers, including locations, the type of street construction, and pavement condition. Some firms may be able to generate this information in GIS format and supply the relevant GIS files to the City.

The choice to perform inventories in-house or to contract them out is largely dependent on the volume of assets to be inventoried, the rigor of the condition assessment process, and the City's need to have immediate access to this data. While it is important for the Department to build these inventories as swiftly as possible in order to inform work plans and staff scheduling, the costs of contracting out for all of these services may be prohibitive. Contracting for asset management and condition assessments may prove more valuable to the Department in situations where comparatively little is known about existing assets, such as in stormwater infrastructure. In either case, it is vital to include systems that will keep the data current. For example, as a street or water line is maintained or improved, the database must reflect that action so the underlying information does not become dated. For the same reason, deterioration estimates should also be included in such a system.

**Recommendation 9: Develop annual work plans for the Department and individual staff members.**

After the Department achieves a good understanding of the assets under its control and the condition of these assets, it is important to develop a comprehensive annual work plan to address asset maintenance needs. 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, and it allows the Department to effectively prioritize complex, time-intensive projects.

Creating an annual Department work plan should be the responsibility of the Public Works Director and Assistant Public Works Director, with appropriate input from the various crews. To create the work plan, it is necessary to determine when regular maintenance activities for each asset should occur in order to preserve the asset's functionality and minimize the risk of 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.

It should be noted that many of the Department's staff already operate according to general weekly work plans which describe core tasks that should be performed by staff each day of a given week. For example, the Streets Maintenance crew currently performs mowing tasks on Mondays and Tuesdays during the growing season and performs pavement maintenance on Wednesdays and Thursdays, while Fridays are reserved to catch up on unfinished activities. Likewise, staff in the Utilities division are assigned annual goals which inform daily and weekly tasks to be performed by maintenance crews and plant operators.

While these work plans provide some prioritization and context to the Department's functions, it is necessary to connect these work plans to the specific maintenance needs of the Department's assets and account for seasonal and historical work activities. The Department has already laid extensive groundwork for a more robust work planning process, particularly in the Utilities division. Staff in this division have historically engaged in a commendable amount of data tracking related to workload and hours associated with core maintenance activities. While not all activities are tracked, staff have recorded monthly work hours associated with key tasks since 2007. The following table illustrates the average hours per month associated with each of these activities from 2011 to 2015 (the most recent years for which data reflected the whole year).

**Table 6: Average Hours Associated with Core Utilities Maintenance Tasks, 2011-2015**

Hours Per Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>General Maintenance</b>	27.8	29.8	71.0	80.0	68.0	53.0	43.7	53.8	50.0	27.0	24.6	40.5
<b>Inspections</b>	13.6	14.4	16.4	16.4	13.6	18.8	14.8	22.4	23.6	13.2	14.4	13.2
<b>Line Flushing</b>	0.2	2.8	2.4	30.8	45.0	21.2	13.2	0.8	0.8	5.8	1.6	1.4
<b>Locates</b>	37.6	24.8	37.8	42.7	43.2	44.8	47.1	52.2	58.2	30.0	28.4	24.4
<b>Meter Maintenance<sup>1</sup></b>	4.0	5.1	5.2	7.2	5.8	4.3	11.1	6.9	6.5	6.7	3.0	4.6
<b>Meter Replacement<sup>2</sup></b>	2.0	3.8	2.9	4.1	8.5	2.6	24.4	7.0	5.7	3.1	4.1	1.3
<b>Overtime</b>	17.2	8.8	23.7	2.2	7.7	19.4	13.2	10.5	7.6	28.5	21.3	6.8
<b>Quality Control</b>	3.4	1.8	2.0	2.2	2.4	1.2	4.0	1.8	1.4	3.0	1.8	1.4
<b>Repairs/Upgrades</b>	22.6	24.0	62.6	49.9	43.4	77.6	70.8	40.9	48.5	32.4	36.8	11.7
<b>Snow Removal</b>	17.8	58.0	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.8
<b>Training / School</b>	3.5	20.0	29.5	16.5	12.0	5.5	0.0	40.0	16.0	9.0	45.6	12.0
<b>Water Main Repair (including OT)</b>	99.2	82.8	23.2	26.4	36.2	51.4	69.9	45.2	53.0	71.1	79.6	42.1
<b>WW Maintenance</b>	18.3	27.2	71.0	61.8	44.4	54.0	34.0	33.6	54.0	26.2	24.5	29.2
<b>Total Hours</b>	<b>267.2</b>	<b>303.3</b>	<b>357.3</b>	<b>340.2</b>	<b>330.2</b>	<b>353.8</b>	<b>346.2</b>	<b>315.1</b>	<b>325.3</b>	<b>256.0</b>	<b>285.6</b>	<b>217.4</b>

This information is of tremendous value to the Department because it allows management to more accurately estimate the total number of hours needed to complete core work tasks. This in turn informs the work planning and staff scheduling process. For example, if water main repairs are a critical priority given the City's asset management and condition assessment, and the Department

<sup>1</sup> Estimated hours based on 30 minutes per maintenance activity

<sup>2</sup> Estimated hours based on 30 minutes per meter installation

knows the approximate number of hours needed to complete each water repair, it can more effectively schedule proactive repairs throughout the year.

This data also allows the Department to adjust for seasonality and focus staff efforts on high-priority, time-intensive tasks. For example, snow removal activities typically peak in December and February, and the Department may wish to set aside some time during those months in anticipation of extra snow removal duties. Likewise, time spent repairing water mains increases in late fall and winter months. Anticipating and adjusting to these patterns is a core component of proactive work planning.

Adjusting the work planning process to include the maintenance needs of the Department's existing assets will help Department management more effectively prioritize projects, tasks, and functions across all of the City's infrastructure assets. This prioritization, when informed by the Department's robust time estimates, will enable the Department to allocate staff to maintenance activities more efficiently throughout the year while also accounting for periods when reactive maintenance is high.

**Recommendation 10: Continue implementing time tracking procedures for Public Works division staff.**

The Public Works & Utilities Department engages in extensive time tracking procedures, particularly regarding the Utilities division and its staff. Historically, Public Works division staff have not kept track of major task times or workload indicators, and have relied on staff estimates to gauge the amount of work assigned to crews. At the beginning of 2016, the Public Works Director implemented new time tracking procedures for the Public Works division designed to bring timekeeping practices in line with those already utilized by Utilities staff.

The Department's efforts to closely track task times and workload indicators is a commendable best practice. This information will assist the Department's efforts to create targeted work plans and inform future staffing decisions. While this practice should be continued, there are several workload indicators which the Department should capture related to Public Works activities. These include special events and staff time involved in setting up and tearing down for special events, as well as the time associated with core workload tasks such as street maintenance activities.

The purpose of tracking staff hours should not amount to an onerous accounting of each minute of an employee's time, but should rather serve to inform management's understanding of how long critical tasks take to perform and how many staff are required to perform them. The Department's existing timekeeping practices in the Utilities division serve as an excellent template for tracking core metrics and activities, and should be replicated in the Public Works division to the greatest extent possible.

**Stormwater**

**Recommendation 11: Assign stormwater maintenance work to the Streets Maintenance crew.**

The City's current approach to stormwater maintenance is evolving. Stormwater maintenance activities consist largely of culvert cleaning, pipe inspections, drainage ditch maintenance, and locating stormwater assets. This work is performed by a Utilities maintenance position which reports to the Chief Wastewater Collections Operator, as well as a Maintenance II position currently assigned to the Streets Maintenance crew. In addition to these tasks, the Public Works Director has been involved in some stormwater runoff quality sampling activity.

The current staffing level does not provide the Department with sufficient staff capacity to implement a comprehensive stormwater maintenance program. Stormwater responsibilities are divided among several staff in the Department and are scheduled to occur once per week, on Wednesdays. As a result, there is a need to centralize stormwater functions in order to more effectively dedicate staff and create a comprehensive approach to stormwater management and maintenance. This need, coupled with the need to inventory and assess the condition of stormwater infrastructure, creates an opportunity to reallocate stormwater maintenance responsibilities in the organization.

Because Streets Maintenance staff currently perform many functions associated with stormwater infrastructure maintenance, it is appropriate to allocate routine maintenance functions to these staff. Much of the Department's stormwater maintenance activity is closely aligned with streets maintenance activity, and natural parallels exist between these two functions. It is anticipated that Streets Maintenance staff will be able to utilize capacity formerly dedicated to mowing to address stormwater maintenance needs as part of a regular work plan and annual maintenance schedule.

In the short term, allocating stormwater maintenance functions to the Streets Maintenance crew will result in several key benefits for the Department and the City. The first benefit is that this reorganization places clear functional responsibility for stormwater maintenance on Streets Maintenance staff, rather than relying on staff from various parts of the Department. Secondly, the number of staff available to attend to regular stormwater maintenance needs will expand from two FTEs to seven FTEs. This provides additional personnel to perform stormwater maintenance in the event that staff take leave or are reassigned to other important tasks.

Third, this allocation provides the City with a mechanism to offset some General Fund costs with stormwater utility fee revenue. The City does not currently utilize the Stormwater Utility Fund to pay for operations costs associated with stormwater maintenance, but rather utilizes these funds to pay for stormwater infrastructure. It is appropriate and advisable for the City to leverage stormwater utility fee revenue to offset the costs of paying personnel to perform stormwater maintenance. Accurately tracking stormwater operations costs and billing these costs to the Stormwater Utility Fund will help to subsidize the cost of Streets Maintenance crew staff and reduce the Department's reliance on the General Fund.

Over the long term, the Department expects to engage in additional specialized stormwater activities, including more robust water quality sampling, testing, and evaluation. As maintenance work proceeds and the Department's capacity to engage in additional complex analysis expands, it is appropriate to reevaluate how stormwater functions are assigned to Public Works staff.

Mature stormwater maintenance programs involve a wide array of functions and tasks that span traditional Public Works and utilities-related operations. Determining the appropriate mix of activities and functional assignments should be made with the assistance of a formal work plan and a thorough understanding of staff capabilities. Periodically evaluating how stormwater maintenance is accomplished will be a primary responsibility of the Assistant Public Works Director, and involves balancing existing skillsets in the Department with staff availability and the City's preferences for reimbursing stormwater functions from the General Fund.

## **Conclusion**

The Bonner Springs Public Works & Utilities Department is fortunate to have dedicated employees and a solid foundation at the source of its consolidation efforts. By contracting out mowing and vehicle maintenance tasks and reorganizing staffing arrangements to create more direct functional oversight, the Department will increase staff capacity to attend to core functions and more effectively allocate personnel. This will allow the Department to undertake the complex and significant tasks of comprehensive asset management and work planning, and facilitate the creation of a more cohesive, integrated, and adaptable Public Works & Utilities Department.

Implementing these recommendations will require commitment and focus from the Department's management and staff as well as support from City Administration. With time and attention, these recommendations will enable the Department to focus on its core workload and maximize the use of existing staff. In the future, the Department's additional data collection efforts and work plan priorities will enable management to regularly analyze workload distribution and the need to hire additional staff.