

Village of Shorewood

Organizational Analysis of the Department of Public Works

Final Report / June 2020



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June 19, 2020

Rebecca Ewald
Village Manager
Village of Shorewood
3930 North Murray Avenue
Shorewood, WI 53211

Dear Ms. Ewald:

We are pleased to present this Organizational Analysis for the Village of Shorewood Department of Public Works. This report contains a review of all Public Works functions and is designed to assess service delivery models, staffing levels, processes, and procedures.

The recommendations contained in this report are based on input and information provided by Village staff and officials, as well as industry standards and best practices that are appropriate for Shorewood. They are designed to maximize existing staff capacity, improve operations and internal communications, and ensure effective investment in the Village's critical infrastructure. We are confident these recommendations can serve as a framework for enhancing organizational efficiency.

Thank you for the opportunity to work with the Village of Shorewood.

Sincerely,

Michelle Ferguson
Senior Manager - Organizational Assessment

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Table of Contents

| | |
|---|-----------|
| EXECUTIVE SUMMARY | 1 |
| BACKGROUND AND METHODOLOGY | 5 |
| About the Village of Shorewood..... | 5 |
| About the Department of Public Works | 6 |
| Core Services Matrix | 10 |
| Staffing | 11 |
| Budget..... | 11 |
| Benchmarking | 13 |
| ANALYSIS AND RECOMMENDATIONS | 17 |
| Staffing | 17 |
| Asset Management | 23 |
| Service Standards | 27 |
| Alternative Service Delivery | 30 |
| Operational Issues | 36 |
| Facility and Equipment..... | 40 |
| Future Considerations | 46 |
| CONCLUSION | 53 |
| ATTACHMENT A: PROPOSED MODIFICATIONS TO JOB DESCRIPTIONS..... | 55 |
| ATTACHMENT B: SAMPLE PREVENTIVE MAINTENANCE WORK SCHEDULE..... | 59 |

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Executive Summary

The Village of Shorewood offers its residents and visitors a unique blend of urban amenities and small-town feel. It is a relatively small community, with a population of approximately 13,224,¹ but, at less than two square miles, it is also one of the densest communities in Wisconsin. Because of this density, residents can easily walk or bike to local shops or restaurants. Furthermore, the Village is bordered by the Milwaukee River and Lake Michigan, which provide recreational amenities, as well as the City of Milwaukee, which allows residents convenient access to the City's employers, shops, and attractions. The Village is also historic; it was originally established in 1900 as the Village of East Milwaukee before changing its name to Shorewood in 1917.² This unique blend of attributes helps to make Shorewood a desirable and distinctive place.

The very qualities that make Shorewood an attractive place to live also create some challenges for the efficient delivery of public works services. The Department of Public Works (DPW) is tasked with maintaining Village infrastructure, including its streets, water and sewer systems, urban forest, facilities, and other physical assets. This can be a difficult and expensive undertaking in an older community with aging systems. The dense nature of the community and its narrow streets and alleys with limited off-street parking and maneuverability present special problems in maintaining these systems as well as additional challenges in providing essential services such as waste collection and snow and ice control.

The unique nature of the community can also make it difficult to develop meaningful comparisons with other nearby communities. Communities with similar populations may provide the same services as Shorewood but lack the same infrastructure characteristics and constraints on service delivery. For example, while the neighboring Village of Whitefish Bay has a similar population size, it is much less dense.³ Whitefish Bay also has a modern public works facility, unlike the historic structures supporting public works services in Shorewood.

Other specific issues faced by the Shorewood DPW that may not be faced by other communities include the workload required to maintain the large and established urban forest of more than 6,500 trees, the narrow streets and alleyways that pose a challenge for waste collection, extensive on-street parking that limits DPW workers' access in certain areas, as well as the high service expectations of the community. DPW also has aging facilities, some of which were constructed in the 1930s, that were not designed to support modern equipment and operations.

For these reasons, the Village's DPW must be evaluated on its own merits. This Organizational Analysis compared the Department's budget, staffing, and services to those of peer communities. However, given the Village's unique circumstances, benchmarking with other communities provides limited value. Instead, it is important to consider the specific needs of the Shorewood community and to evaluate the appropriate DPW resources required to meet those needs.

An analysis of DPW operations indicates that the Department is performing well, given its resource constraints. The Village is to be commended for embracing alternative service delivery strategies; it contracts for more than 30 services and shares equipment with neighboring communities. These strategies help by balancing workloads, providing specialty skills, limiting the need to buy expensive equipment, and generally increasing cost-effectiveness. However, even with these measures in place, the Village is unable

¹ United States Census Bureau's 2018 Population Estimates Program.

² Village of Shorewood. Why Shorewood? <http://www.villageofshorewood.org/669/Why-Shorewood>

³ The Village of Shorewood has a population density of 8,317 people per square mile, according to the United States Census Bureau's 2018 Population Estimates Program, while the Village of Whitefish Bay has 6,510 people per square mile.

to meet all its public works responsibilities. In particular, preventive maintenance (PM) efforts are falling short. As documented in a recent Davey Resource Group report, management of the Emerald Ash borer infestation does not meet the levels identified in the Emerald Ash Borer (EAB) Readiness Plan (2009) for a two-year cycle or the revised approach employing a three-year application cycle. Sewer cleaning and inspection goals agreed to in the Village's Wisconsin Department of Natural Resources (WDNR) approved Capacity, Management, Operation, and Maintenance (CMOM) Program plan are not being met. Staff are dedicated and hardworking, but between ongoing responsibilities like solid waste management and required attention to immediate issues, they have limited time to focus on PM. Foregoing PM is a concern because an effective PM program is essential to reducing the life-cycle costs of physical assets. Deferring or ignoring PM puts the Village at risk of extraordinary and unnecessary future costs and disruption of critical services. For example, the Department does not currently perform regular roof inspection of Village-owned buildings, increasing the likelihood of eventual and preventable failures.

It is important for the Department to commit the resources necessary to respond to reactive needs while also maintaining the Village's existing infrastructure. As such, this report does not recommend any reduction in staffing levels in the near term and instead recommends an additional position to help the Department oversee asset management and support implementation of capital projects. This position should be at least partially funded through the Village's capital improvement program.

The Village faces resource constraints exacerbated by the financial uncertainties created by the COVID-19 pandemic. While this report does not recommend any staffing reductions in the near term, it does provide a roadmap for evaluating opportunities for future efficiencies through contracting or shared services.

As part of evaluating and prioritizing service levels and service provision alternatives, it is important for the Department to have a comprehensive understanding of its current needs. The first step is to complete an inventory and condition assessment of all Department assets to quantify both maintenance and capital needs. The Village has made some strides in this area through the development of its Pavement Management Program and has undertaken several other studies to help in this process. This analysis will form the basis for the development of an asset management plan focused on maintaining assets and minimizing life cycle costs. Understanding asset needs and the potential consequences of deferred action will allow the Village to establish priorities and allocate its limited financial resources. This will further assist the Department in the development of its annual work plan and the Village in preparing its Long-Range Financial Plan.

After priorities are established, the Department can evaluate the resources required to carry out the plan, including in-house and contracted staff and equipment, and consider if there are any opportunities or a need to reduce service levels or to seek alternative service delivery methodologies.

The report recommends establishing specific response timelines for reactive services to help ensure that projects are prioritized effectively and that scheduled work can be managed efficiently. It also recommends reevaluating several shared services agreements. The Village is to be commended for embracing contracting and shared services to reduce costs; there may be opportunities to build on this foundation to maximize efficiency.

The report also discusses other opportunities to standardize operations and to maximize operational efficiency. One barrier to efficiency is the DPW lot. The Village has studied this multiple times with the conclusion that the existing facilities are inadequate. This analysis shares these concerns. The main office facility is nearly a century old, built in the days when waste was brought into the facility for incineration. Minimal renovation has been done since then, leading to an energy-inefficient facility with virtually no space for meetings or collaboration. Furthermore, while there are several outbuildings on the property, they are inadequate to store the Department's vehicles and equipment. Because of a lack of vehicle storage space, staff must spend between 30 minutes and an hour each day accessing their vehicles in the morning and parking them at night. This translates to more than 3,500 staff hours per year spent accessing and

parking vehicles, an estimated \$145,000 of staff time that provides no direct service to the community. The Mechanic’s Bay also cannot fit larger pieces of equipment, requiring Mechanics to perform maintenance repairs outdoors, even in adverse weather conditions. While a new or updated facility would be a significant investment, it would also markedly improve operational efficiency and safety.

Finally, the report considers the Village’s on-street parking approach and the impacts this presents for DPW operations. As the Village discusses adjustments to its on-street parking management, the Village should consider the impacts to DPW operations in snow & ice control and leaf removal to positively impact both community services and the Department’s allocation of resources.

Some of the recommendations in this report will require additional research and analysis to implement, along with potential investment in asset management and facility upgrades. These investments will help ensure that DPW remains a financially sustainable department that is an effective tool to preserve Shorewood’s unique amenities and heritage.

The following table lists the recommendations detailed in this report.

Table 1: List of Report Recommendations

| Number | Recommendation |
|-------------------------------------|--|
| Staffing | |
| 1 | Retain all current staff positions while considering appropriate service levels and alternative service delivery options. |
| 2 | Create an Engineering Inspector/Technician position to provide additional in-house project management capacity. |
| 3 | Route all customer inquiries to Customer Service staff in the Clerk/Customer Service Department. |
| 4 | Update DPW job descriptions to ensure that the qualifications and responsibilities are appropriate. |
| Asset Management | |
| 5 | Develop a comprehensive Village capital asset management plan. |
| 6 | Use the Village capital asset management plan to refine and prioritize annual work plans for maintenance, repair, and replacement of Village capital assets. |
| 7 | Implement the recommendations detailed in the 2019 Emerald Ash Borer Plan Assessment prepared for the Village by the Davey Resource Group. |
| Service Standards | |
| 8 | Develop specific timeline guides for DPW response to reactive service requests. |
| 9 | Develop approved workload and performance data metrics and regularly report these to the Village Board. |
| Alternative Service Delivery | |
| 10 | Review transfer station operations to ensure appropriate allocation of costs and to maximize cost efficiency. |
| 11 | Evaluate the option of contracting out recycling and refuse collection services. |
| 12 | Evaluate the option of contracting out street lighting and traffic device maintenance services. |
| 13 | Renegotiate the existing televising truck shared services agreement and increase the number of feet of sewer televised per year to meet CMOM requirements. |
| 14 | Evaluate joint contracting of street sweeping services. |
| 15 | Investigate other opportunities for alternative service delivery with neighboring communities, including the City of Milwaukee. |
| Operational Issues | |

| Number | Recommendation |
|-------------------------------|---|
| 16 | Develop written Standard Operating Procedures as part of a plan for institutional knowledge retention. |
| 17 | Create DPW staff development plans and provide budget and other resources to support the effort. |
| 18 | Use an RFQ process for the selection of professional engineering services. |
| 19 | Control public access to the DPW site by limiting it to designated times or by appointment. |
| Facility and Equipment | |
| 20 | Relocate the waste transfer station. |
| 21 | Develop a plan for replacing the existing DPW facility to improve efficiency and safety. |
| 22 | Review desired service level provisions and determine appropriate equipment. |
| Future Considerations | |
| 23 | Work with the Shorewood Business Improvement District to encourage their contribution to the cost of horticulture and other maintenance in the Downtown area. |
| 24 | Consider seasonal demands for snow and ice control as well as leaf removal when adapting future on-street parking strategies and operating approaches. |

Background and Methodology

In January 2020, the Village of Shorewood engaged The Novak Consulting Group, a part of Raftelis, to conduct an assessment of the Village's DPW. The purpose of this assessment was to evaluate the Department's structure, operations, service levels, staffing, processes, and procedures and to make recommendations designed to improve organizational efficiency and effectiveness.

To accomplish this work, the project team conducted individual interviews and employee focus groups to learn about the Department's operations and understand employee perceptions. In total, these interviews and focus groups involved contacts with more than 30 individuals, including DPW staff and members of Village Administration, as well as the Village Board of Trustees.

The project team also requested and received information about the Department's budget, workload, assets, and operations. Specifically, the project team analyzed the job descriptions for all Department positions, reviewed the Department's equipment and fleet and evaluated how effectively they support Department service, assessed the financial impact of changes to service levels, researched industry standards and best practices, and reviewed results of community surveys and other customer feedback. Department budgets, staffing, and service levels were also reviewed in neighboring communities, such as the Village of Whitefish Bay and the City of Glendale, to understand how Shorewood compares to its peers. This information, along with data analysis, best practices research, and benchmarking conducted as part of this assessment, informed the recommendations included in this report.

About the Village of Shorewood

The Village of Shorewood is in Milwaukee County, Wisconsin, just outside of the City of Milwaukee, and spans 1.59 square miles. It is governed by a seven-member elected Village Board consisting of a President and six Trustees. A Village Manager, appointed by the Board, is responsible for overseeing day-to-day operations, including operations of the Village's DPW. The Village's Fiscal Year (FY) 2020 General Fund budget is \$12,160,126.

The Village has a total of 13,224 residents, as of the United States Census Bureau's 2018 Population Estimates Program (PEP). Its median age is 35.6 years, and its median annual household income is \$68,306, according to the Census Bureau's 2017 American Community Survey. The Village's population has remained largely stable since the year 2000, as illustrated in the following figure.

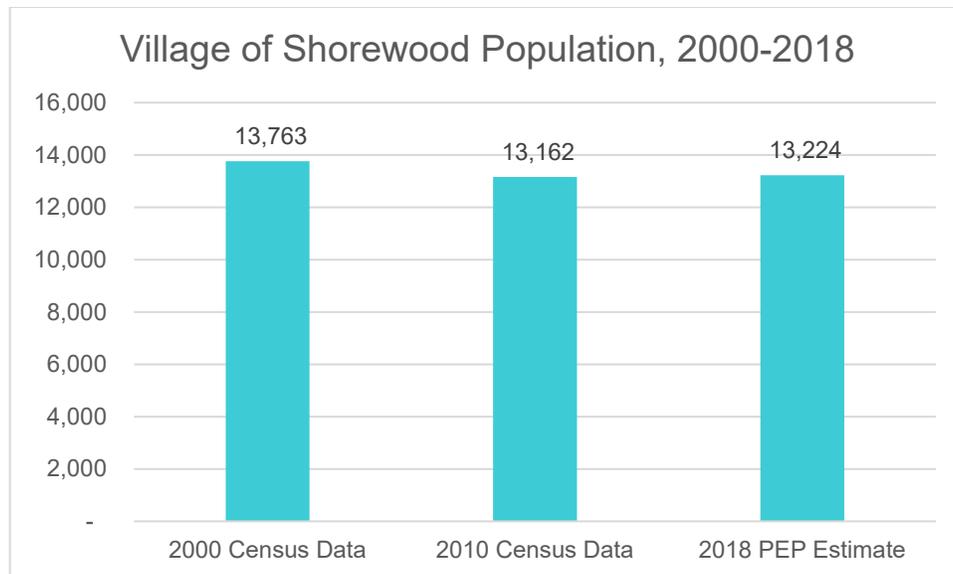


Figure 1: Village of Shorewood Population, 2000-2018⁴

About the Department of Public Works

The Village of Shorewood DPW provides facilities management, street maintenance, snow removal, waste removal, forestry, park maintenance, fleet maintenance, sanitary and storm sewer maintenance, and water system maintenance for the Village of Shorewood. Its stated mission is “to provide the highest level of public service possible to Shorewood residents and to keep all Village property, pertinent infrastructure, and vehicles in proper maintenance and repair.”⁵

The Department has a total of 22 staff members (21 full-time positions and 1 part-time position) allocated across three Divisions, based on information provided by the Village. These positions are supplemented by temporary employees to address seasonal peak workloads; total seasonal hours vary from year to year. The Department is overseen by the Director of Public Works with support from the Assistant Director of Public Works, as illustrated in the following organizational chart.

⁴ Source: United States Census.

⁵ Village of Shorewood. 2020 Budget.

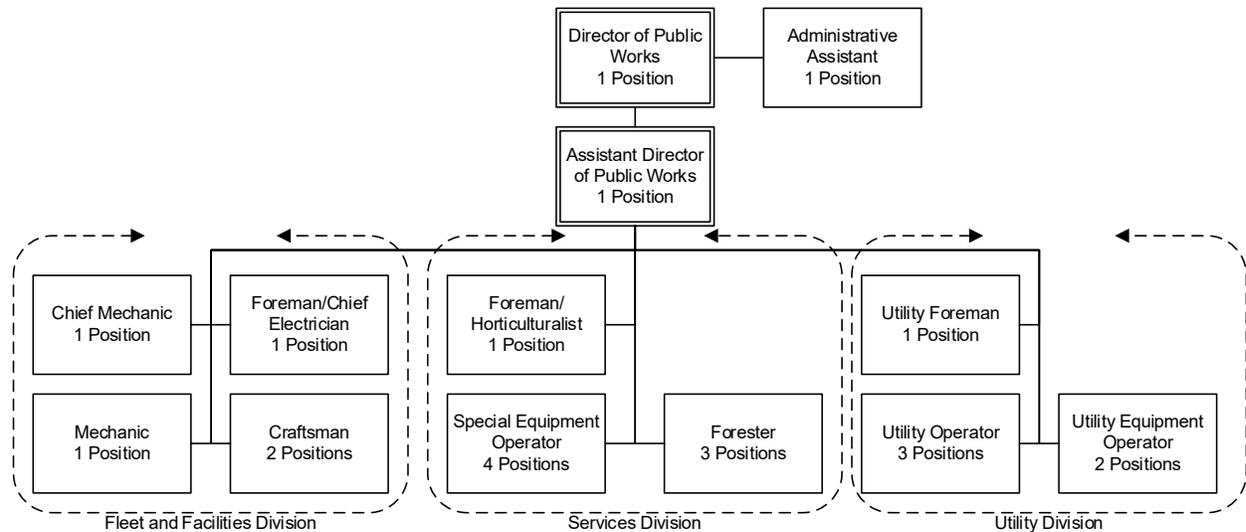


Figure 2: Village of Shorewood DPW Organizational Chart, FY2020

The Department is managed by the Director of Public Works, who is responsible for providing high-level oversight for the Department, developing the recommended Department budget and capital plan, tracking and reporting data, and ensuring that the direction of the Village Manager and Village Board is carried out. The position has two direct reports: The Administrative Assistant and the Assistant Director.

The Administrative Assistant provides general administrative support for the Department, including processing payroll and accounts payable as well as invoicing and report generation. The Administrative Assistant is the first point of contact for the Department, answering phone calls and emails on behalf of the Department and assisting any visitors to the DPW facility. In 2019, the Department received a total of 8,473 calls, or approximately 30 calls per day. The Department does not track the total number of visitors, but Department management estimates that the office receives only occasional visitors each weekday.

The Assistant Director is responsible for planning and supervising Department operations. The position directly supervises all 19 front-line staff positions. Front-line staff are organized into three Divisions: Fleet and Facilities; Services; and Utility. Each Division is headed by a working Foreman. Foremen work with the Assistant Director to make daily assignments and oversee work completed by the crews but do not have traditional management authority over staff. As currently organized, a DPW Foreman functions more like a “lead person,” acting as a resource for other staff members and providing task guidance but lacks the formal supervisory authority typically delegated to a Foreman position.

In addition to operational responsibilities, the Assistant Director manages capital projects for the Department, working with consulting engineers and contractors to ensure projects are completed in a timely and cost-efficient manner. Furthermore, the Assistant Director manages all of the Department’s service contracts and reviews all applications for right-of-way permits, such as permits for curb cuts and street excavation.⁶

The **Fleet and Facilities Division** is responsible for maintaining all Village-owned vehicles and equipment, maintaining all Village-owned facilities, and for maintaining and programming Village streetlights and traffic lights. The Division is supported by a Foreman who also serves as Chief Electrician for the Department. The Chief Electrician is responsible for maintaining the Village’s street lighting and traffic lighting systems as well as for maintenance and repair of lighting and electrical wiring in Village facilities.

⁶ The permits are issued by the Village’s Planning and Development Department after DPW approval.

The Division includes a Chief Mechanic and a Mechanic responsible for the repair and maintenance of vehicles and other equipment for the Village. They currently maintain a fleet of 46 vehicles, including 11 Police Department vehicles, four garbage trucks, and two bucket trucks. They also maintain a street sweeper and the solid waste transfer station, both of which are shared with the Village of Whitefish Bay, a neighboring community. The Village of Whitefish Bay reimburses the Village of Shorewood for their portion of the cost of the labor and supplies used to maintain this shared equipment.

The Division also includes two Craftsmen responsible for maintaining nine Village facilities, including the Village Hall, Village Library, DPW facility, Police Department, and five buildings within Village parks and athletic fields. Responsibilities include maintenance and repairs of facility roofs, heating and cooling systems, and electrical systems, as well as repainting and other general upkeep.

The **Services Division** is responsible for maintaining all Village-owned trees and green spaces, as well as for collecting residential waste and maintaining Village-owned streets. The Division is supported by a Foreman who also serves as the Village's Horticulturalist. The Horticulturalist position is responsible for the maintenance of the Village's parks and other public greenspace, including seasonal planters in the Village's business district. Altogether, the Department maintains approximately 14 acres of parks and other grassy areas. The position also supervises seasonal staff and manages the Village's turf management contract for all mowing on Village grounds.

The Services Division includes three Foresters responsible for maintaining more than 6,500 Village-owned trees. Maintenance activities include tree planting, tree removal, pruning, and stump removal. The positions are also working to combat the Emerald Ash Borer, an invasive beetle species that can kill ash trees. Staff combat the beetle by injecting the Village's approximately 1,400 ash trees with a preventive agent.⁷ The injections are currently made on a three-year cycle, with approximately one-third of trees to be injected each year. In 2019, the Village commissioned a study by Davey Resource Group, Inc. to review the Village's current ash tree management practices and to recommend next steps to develop a comprehensive ash tree management plan; the report was released in December 2019 and has not yet been implemented. The Foresters also assist with leaf collection during autumn months and perform other DPW services as capacity allows.

Four Special Equipment Operators are responsible for residential waste collection as well as for streets maintenance. The Village collects residential waste weekly throughout the year, as well as yard waste weekly during the spring, summer, and fall. The Village collects residential waste on Mondays, Tuesdays, and Wednesdays. Thursdays and Fridays are devoted to other types of collections, such as seasonal yard waste and any furniture or other large items left on the curb. Residential recycling collection is provided biweekly by a contractor. DPW also offers recycling drop off at its lot during business hours (7:00 AM – 3:30 PM Monday – Friday) and opens its lot for recycling drop off one Saturday per month (December – March) and two Saturdays per month (April – November). The Special Equipment Operators are also responsible for road maintenance as capacity allows. The Village is responsible for maintaining 28.27 miles of public streets and approximately 60 miles of sidewalk. The Village staff fill potholes and perform other basic street maintenance; more complex projects are contracted out. Village staff are also responsible for street sweeping every two weeks. Three of the Special Equipment Operators are occupied with waste collections Monday through Thursday and assist with streets maintenance and other functions on Fridays. The fourth Special Equipment Operator serves as a backup for both waste collection and street maintenance as needed.

The **Utility Division** is responsible for maintaining the Village's water, wastewater, and stormwater infrastructure. The Division is supported by a Utility Foreman, as well as by three Utility Operators and two Utility Equipment Operators. Utility Operators are responsible for the labor associated with maintaining the Village's utility systems, while Utility Equipment Operators drive vehicles and run other

⁷ Excluding trees that are of poor quality or that are too small to be injected.

equipment associated with utility maintenance, such as the televising truck used to inspect the Village's sewer system. The Village has set a goal in its 2018 CMOM to inspect 22,629 feet of sewer per year using the televising truck.⁸

The Village does not supply its own water or treat its own wastewater; water services are provided by Milwaukee Water Works and sewer services are provided by the Milwaukee Metropolitan Sewage District (MMSD). The Division is responsible for maintaining the public water mains that deliver water to Shorewood customers, including performing PM, testing, and responding to any water main breaks. The Village maintains a total of approximately 23 miles of water main.

The Village plans annual system rehabilitation in concert with other planned work. As discussed in the Village's 2020 Budget,⁹ water relay projects can be identified as road and non-road projects. Road projects are completed during even calendar years, while non-road projects are completed during odd calendar years. The Village identifies main segments that need replacement based on condition and repair or break history.

Road projects occur near planned street reconstruction projects for the Village to efficiently complete all projects in that area at one time to minimize costs and traffic interference. The lists for upcoming projects between road and non-road projects are separate lists. The Village and the Public Service Commission establish a goal for the Village of Shorewood to replace approximately 1.5% to 2% of all Village water mains annually. Since 2012, the Village has replaced a total of 3.9% of its distribution system. Given the general age of Shorewood's distribution system, the Village has determined that it is most practical and economical to replace lead service lines (both municipal and private) in conjunction with main replacement. The Village Board's scheduled 2020 review of the current Lead Service Line Replacement Program may impact future funding and scheduling of water main relay projects.

Staff from the division are also responsible for collecting data from individual water meters for utility billing. Meter data is collected every three months.¹⁰ This process currently requires staff to physically visit each meter to gather the data, but the Village is in the process of moving to an Advanced Metering Infrastructure (AMI) system, which will allow the Village to gather data from most meters remotely and in real time. The current meters were last replaced in a phased replacement beginning in 1995, and the State requires them to be replaced every 20 years, meaning that they are due for replacement.¹¹ AMI implementation is estimated to cost approximately \$1.5 million, but it will fulfill this mandate and make the process of collecting meter data more efficient. Staff spent a total of 156.5 hours, or approximately 20 working days, reading meters in 2019, according to Department records; once AMI is implemented, a large percentage of the time spent on meter reading can be reallocated to other work.

Wastewater and stormwater sewers are combined geographically for approximately 60% of the Village; in the remaining areas, the systems are separate and only the sanitary sewers travel to MMSD for treatment. Staff are responsible for maintaining and cleaning the infrastructure, including clearing clogged storm drains and jet cleaning wastewater pipes. Altogether the Village maintains approximately 43 miles of wastewater and stormwater sewers. The Village also uses a televising truck to regularly inspect the sewer system; the truck is shared with two other communities, and the Village has use of it for two consecutive months twice per year.

⁸ Village of Shorewood. CMOM 2018 Annual Report.
[http://www.villageofshorewood.org/DocumentCenter/View/7317/2018?bidId=.](http://www.villageofshorewood.org/DocumentCenter/View/7317/2018?bidId=)

⁹ Village of Shorewood. 2020 Budget. Appendix B – Long-Range Financial Plan.

¹⁰ The billing itself is managed by the Village's Finance Department.

¹¹ Wisconsin Legislature. PSC 185.76. docs.legis.wisconsin.gov/code/admin_code/psc/185/VII/76.

As presented in the Village's most recent Long-Range Financial Plan,¹² the Village's 2011 Comprehensive Facility Plan outlined recommendations for significant improvements/additions to the combined sewer system, which serves approximately the eastern half of the Village. The recommended improvements for the north combined area were constructed in 2016 with the Northeast Area Combined Sewer Improvements project. To address both the regulatory feasibility and the environmental impacts of proposed improvements to the southeast area system, the Village commissioned a Combined Sewer Environmental Assessment that was completed in early 2017. The Southeast Area Combined Sewer Improvements project has begun with the initial phase designed, constructed, and funded by the Milwaukee Metropolitan Sewage District (MMSD), the entity formed to treat wastewater generated in the Milwaukee metro area. Shorewood's first construction phase is planned to begin in 2022.

Core Services Matrix

The following table provides an overview of Department core services and is not meant to be all-inclusive.

Table 2: Department Core Services

| Department Function/Division | Program Area | Activities and Service Levels |
|------------------------------|----------------------|---|
| Administration | Administration | <ul style="list-style-type: none"> Oversee Department operations Manage Department operating and capital budgets Respond to customer comments and questions Manage capital projects Review right-of-way permits |
| Fleet and Facilities | Fleet Management | <ul style="list-style-type: none"> Perform routine maintenance and repairs on a fleet of 46 vehicles |
| | Facility Maintenance | <ul style="list-style-type: none"> Maintain Village street lighting and traffic lighting systems Maintain nine Village buildings, including electrical systems, heating/cooling systems, and roofs Support events / block parties with barricades |
| Services | Horticulture | <ul style="list-style-type: none"> Maintain greenery in Village parks and open space Maintain Village planters |
| | Forestry | <ul style="list-style-type: none"> Maintain approximately 6,500 Village-owned trees, including pruning, planting, and removal Inject approximately 1,300 ash trees over a three-year period to prevent damage from Emerald Ash Borer;¹³ continue as annual program. Provide brush collection |
| | Waste and Recycling | <ul style="list-style-type: none"> Collect curbside residential waste weekly year-round Collect curbside residential recycling biweekly year-round Operate a recycling drop-off center during work hours and Saturdays (first and third April-November and first December-March) Collect residential yard waste weekly during spring, summer, and fall months Collect residential leaves weekly during fall months |
| | Street Maintenance | <ul style="list-style-type: none"> Maintain streets as needed, e.g., fill in potholes Sweep streets biweekly |
| | Winter Maintenance | <ul style="list-style-type: none"> Plow and salt streets in winter months following snow and ice events |
| | | |

¹² Village of Shorewood. 2020 Budget. Appendix B – Long-Range Financial Plan.

¹³ The Village has approximately 1,400 ash trees, but approximately 100 of these are a lower-quality variant that are being replaced rather than injected.

| Department Function/Division | Program Area | Activities and Service Levels |
|------------------------------|---------------------------|---|
| Utilities | Water | <ul style="list-style-type: none"> Maintain water mains and respond to breaks and other issues Maintain water meters Read water meters once every three months Exercise valves annually |
| | Wastewater and Stormwater | <ul style="list-style-type: none"> Maintain and repair wastewater and stormwater infrastructure Televise sewers every six months |

Staffing

The DPW staffing level has remained constant over the past five fiscal years, as illustrated in the following table.

Table 3: Department Staffing, FY2014 through FY2018

| Staffing (Positions) | FY2014 Actual | FY2015 Actual | FY2016 Actual | FY2017 Adopted | FY2018 Budget | Percentage Change FY2014 to FY2018 |
|----------------------|---------------|---------------|---------------|----------------|---------------|------------------------------------|
| Public Works | 22 | 22 | 22 | 22 | 22 | 0% |

Budget

DPW is funded through the General Fund, as well as the Water Utility Fund and the Sewer Utility Fund, which are financed through user fees. The DPW budget increased by approximately \$650,000, or 11%, over the last five fiscal years, as illustrated in the following table.

Table 4: Department Expenses – All Funds, FY2016 through FY2020

| Category | FY2016 Actual | FY2017 Actual | FY2018 Actual | FY2019 Adopted | FY2020 Adopted | Percentage Change FY2016 to FY2020 | Change Adjusted for Inflation (CPI-U Index) |
|--------------------|---------------|---------------|---------------|----------------|----------------|------------------------------------|---|
| General Fund | \$2,680,347 | \$2,644,017 | \$2,750,799 | \$2,707,590 | \$2,802,360 | 5% | -4% |
| Water Utility Fund | \$1,635,807 | \$1,690,447 | \$1,727,431 | \$1,884,252 | \$2,013,685 | 23% | 13% |
| Sewer Utility Fund | \$1,715,031 | \$1,697,382 | \$1,881,251 | \$1,752,176 | \$1,865,015 | 9% | 0% |
| Total | \$6,031,185 | \$6,031,846 | \$6,359,481 | \$6,344,018 | \$6,681,060 | 11% | 2% |

The cost of living has increased by approximately 9% over this period, according to the Consumer Price Index for Urban Consumers (CPI-U) published by the Bureau of Labor Statistics,¹⁴ meaning that General Fund budgeted salary expenditures are effectively 14% lower in FY2020 than the actual expenditures were in 2016. Adjusted for inflation, the total DPW 2020 General Fund expenditure budget reflects a 4% decline compared to actual expenditures in 2016. Real spending in the water utility funds increased by 13%, whereas sewer utility expenditures remained equivalent to 2016 spending.

The following table shows General Fund expenditures by type for the last five fiscal years.

¹⁴ Bureau of Labor Statistics. Consumer Price Index Historical Tables for U.S. City Average. www.bls.gov/regions/mid-atlantic/data/consumerpriceindexhistorical_us_table.htm.

Table 5: Department Expenses – General Fund, FY2016 through FY2020

| Category | FY2016 Actual | FY2017 Actual | FY2018 Actual | FY2019 Adopted | FY2020 Adopted | Percentage Change FY2016 to FY2020 | Change Adjusted for Inflation (CPI-U Index) |
|--------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------------------------|---|
| Salaries | \$1,011,142 | \$935,830 | \$957,268 | \$898,080 | \$949,901 | -6% | -14% |
| Fringe Expenditures | \$468,205 | \$461,584 | \$475,187 | \$478,334 | \$504,680 | 8% | -1% |
| Contractual Payments | \$617,346 | \$653,543 | \$679,547 | \$695,573 | \$707,341 | 15% | 5% |
| Office Supplies | \$10,611 | \$8,302 | \$8,467 | \$10,975 | \$11,095 | 5% | -4% |
| Maintenance Supplies | \$237,536 | \$253,765 | \$221,539 | \$227,872 | \$239,365 | 1% | -7% |
| Vehicle Supplies | \$171,530 | \$169,424 | \$205,581 | \$198,150 | \$210,900 | 23% | 13% |
| Utilities | \$155,258 | \$153,376 | \$166,374 | \$177,100 | \$172,680 | 11% | 2% |
| Insurance | \$82,924 | \$87,047 | \$108,052 | \$121,700 | \$103,708 | 25% | 15% |
| Interdepartmental Expenditures | -\$74,205 | -\$78,854 | -\$71,216 | -\$100,194 | -\$97,310 | 31% | 20% |
| Total | \$2,680,347 | \$2,644,017 | \$2,750,799 | \$2,707,590 | \$2,802,360 | 5% | -4% |

The biggest dollar increase in the General Fund budget was in Contractual Payments, which are budgeted to be approximately \$90,000 greater in FY2020 than FY2016. This is offset by a decrease of approximately \$60,000 in General Fund salary costs over this period.

The General Fund finances all Department programs except for Water and Sewer. The following table illustrates the FY2020 budget by program. The Village's Refuse and Recycling program, which includes residential waste collection, contracted residential recycling collection, and operation of a waste transfer station, represents the largest proportion of budgeted General Fund expenditures.

Table 6: Department Expenses by Program – General Fund, FY2020

| Program | FY2020 Budget | Percentage of FY2020 Budget |
|-------------------------------------|--------------------|-----------------------------|
| Administration | \$412,893 | 14.7% |
| Building Maintenance | \$227,830 | 8.1% |
| Fleet | \$371,985 | 13.3% |
| Streets | \$193,995 | 6.9% |
| Street Lighting and Traffic Devices | \$194,735 | 6.9% |
| Winter Maintenance | \$145,310 | 5.2% |
| Refuse and Recycling | \$650,841 | 23.2% |
| Yard Waste and Leaf Collection | \$147,864 | 5.3% |
| Forestry | \$253,112 | 9.0% |
| Horticulture | \$203,795 | 7.3% |
| Total | \$2,802,360 | 100.0% |

Benchmarking

The Village of Shorewood’s budget and staffing levels were compared to that of several peer communities, as illustrated in the following table. Staffing is shown as Full-Time Equivalent (FTE) positions.¹⁵ Benchmark communities were chosen because of their proximity to Shorewood and size, with populations under 25,000. Budget and staffing information is derived from the communities’ FY2020 budget documents.

Table 7: Benchmark Communities Public Works Total Operating Budget Comparison

| Budgeted FY2020 DPW Operating Expenditures | Village of Shorewood | Village of Bayside | City of Glendale | City of Mequon | Village of Sussex ¹⁶ | Village of Whitefish Bay |
|--|----------------------|--------------------|--------------------|---------------------|---------------------------------|--------------------------|
| General Fund | \$2,802,360 | \$870,908 | \$2,450,574 | \$3,311,085 | \$879,919 | \$2,955,310 |
| Water Utility Fund | \$2,013,685 | Not Applicable | \$2,506,950 | \$1,631,154 | \$2,700,594 | \$2,268,695 |
| Wastewater Utility Fund | \$1,865,015 | \$1,571,048 | \$2,050,873 | \$8,380,510 | \$2,323,810 | \$2,743,633 |
| Stormwater Utility Fund | Not Applicable | \$543,965 | \$1,114,893 | Not Applicable | \$171,601 | \$816,554 |
| Recycling Special Revenue Fund | Not Applicable | Not Applicable | \$25,000 | Not Applicable | Not Applicable | Not Applicable |
| Total Expenditures | \$6,681,060 | \$2,985,921 | \$8,148,290 | \$13,322,749 | \$6,075,924 | \$8,784,192 |
| Total Population (2018 PEP) | 13,224 | 4,529 | 12,846 | 24,385 | 10,849 | 13,866 |
| Total Expenditures per Capita | \$505 | \$659 | \$634 | \$546 | \$560 | \$634 |
| Budgeted FY2020 FTEs | 21.5 | 6.9 | 13.5 | 42 | 14.3 | 21.3 |
| FTEs per 1,000 Residents | 1.6 | 1.5 | 1.1 | 1.7 | 1.3 | 1.5 |

Based on this metric, Shorewood is spending approximately \$40 to \$150 less annually per capita for public works services than its peer communities. This is especially notable given that only two of the public works departments in peer communities, the City of Glendale and the Village of Whitefish Bay, offer a similar range of services to Shorewood. Both Glendale and Whitefish Bay each spend approximately 25% more per capita for public works services than Shorewood.

The following table compares salary and benefits benchmarks for the Village of Shorewood and four of the peer communities. Many of the benchmark communities have a “Public Works Technician” title for front-line staff or a similar generalist title. The Village of Shorewood uses more specific job titles than the peer group. To support comparison, the salaries for Public Works Technicians in the peer communities are compared against the salaries for Shorewood’s Utility Equipment Operator, Special Equipment Operator, and Craftsman positions.

¹⁵ Staffing for the Village of Shorewood and City of Mequon shown by position, not FTE.

¹⁶ The Village of Sussex is the only benchmark community that treats its own water and wastewater.

Table 8: Benchmark Communities Public Works Salary and Benefits Comparison

| Compensation Category | Village of Shorewood | Village of Bayside | City of Glendale | Village of Sussex | Village of Whitefish Bay | Average, Benchmark Communities |
|--|---|------------------------|------------------------|-------------------|--------------------------|--------------------------------|
| Public Works Operations Employee Average Yearly Compensation, FY2020¹⁷ | \$56,143 | \$55,931 | \$58,801 | \$55,971 | \$57,777 | \$57,120 |
| Public Works Foreman Average Yearly Compensation, FY2020¹⁸ | \$63,218 | No Equivalent Position | No Equivalent Position | \$67,315 | \$69,368 | \$68,342 |
| Annual Health Insurance Employer Contribution, 2020: Single¹⁹ | Co-Pay Plan: \$9,310 High Deductible Plan: \$8,456 | \$12,220 | \$9,503 | \$6,686 | \$9,184 | \$9,398 |
| Annual Health Insurance Employer Contribution: Family²⁰ | Co-Pay Plan: \$26,794 High Deductible Plan: \$24,334 | \$30,240 | \$23,448 | \$20,059 | \$20,489 | \$23,559 |

Generally, salaries for Public Works front-line staff and foremen are slightly higher in the peer communities than in the Village of Shorewood. However, this comparison may be impacted by varying duties for each position in the respective communities. In particular, the position of Foreman varies between the communities; in Shorewood, the Foreman position also has other duties and does not directly supervise employees, which likely contributes to the pay disparity between Shorewood's Foreman position and those of the peer communities. Health insurance costs vary significantly by individual community, but Shorewood's costs are largely equivalent to the average of the benchmark communities.

The responsibility for public works service provision can also vary. In the peer communities, some public works services are either the responsibility of other departments or are not offered, as illustrated in the following table. Information on services offered is derived from the FY2020 budget documents of peer communities, as well as from the communities' websites.

¹⁷ Average is based on the average between the minimum and maximum salaries for each position.

¹⁸ Average is based on the average between the minimum and maximum salaries for each position.

¹⁹ Assumes that staff are not participating in an employee wellness plan, if applicable. Contributions for the Village of Bayside and City of Glendale reflect FY2019 data, the most recent information available.

²⁰ Assumes that staff are not participating in an employee wellness plan, if applicable. Contributions for the Village of Bayside, City of Glendale, and Village of Whitefish Bay reflect FY2019 data, the most recent information available.

Table 9: Benchmark Communities Public Works Service Level Comparison

| Category of Service | Village of Shorewood | Village of Bayside | City of Glendale | City of Mequon | Village of Sussex ²¹ | Village of Whitefish Bay |
|--|----------------------|---------------------------------|------------------|---------------------------------|---|--------------------------|
| Engineering Services | DPW (Contracted) | DPW (Contracted) | DPW (Contracted) | DPW | DPW | DPW |
| Facility Maintenance | DPW | DPW | DPW | DPW | DPW | DPW |
| Fleet Maintenance | DPW | DPW | DPW | DPW | DPW | DPW |
| Forestry | DPW | DPW | DPW | DPW | Parks, Recreation, and Cultural Services Department | DPW |
| Horticulture/Parks Maintenance | DPW | Parks and Recreation Department | DPW | Community Enrichment Department | Parks, Recreation, and Cultural Services Department | DPW |
| Leaf/Yard Waste Collection | DPW | DPW | DPW (Contracted) | Not Offered ²² | Health and Sanitation Department | DPW |
| Sewer System | DPW | DPW | DPW | DPW | DPW | DPW |
| Snow and Ice Removal | DPW | DPW | DPW | DPW | DPW | DPW |
| Solid Waste/Recycling Collection | DPW | DPW | DPW (Contracted) | Not Offered ²³ | Health and Sanitation Department | DPW |
| Recycling Drop Off Center | DPW (Shared Service) | DPW | DPW | DPW | Health and Sanitation Department | DPW (Shared Service) |
| Stormwater Infrastructure Maintenance | DPW | DPW | DPW | DPW | DPW | DPW |
| Street Maintenance | DPW | DPW | DPW | DPW | DPW | DPW |
| Traffic and Street Lighting Maintenance | DPW | DPW | DPW (Contracted) | DPW | DPW | DPW |
| Water System Maintenance | DPW | Not Offered ²⁴ | DPW | DPW | DPW | DPW |

The relative value of this type of benchmark information is limited because of the unique circumstances of each community; each community has different attributes and challenges that may affect its service levels and expenditures. However, this review does suggest that the Village of Shorewood spends significantly less on public works services than peer communities. Part of the reason for this disparity may be due to the Village’s embrace of contracting and alternative service delivery models to reduce cost. Another consideration is whether Shorewood DPW has been allocated appropriate resources to effectively support existing service demands in the community. The rest of this report evaluates this consideration in greater depth.

²¹ The Village of Sussex is the only benchmark community that treats its own water and wastewater.

²² City maintains a yard waste drop off site for residents.

²³ Residents have the option to purchase private collection services.

²⁴ Residents either have private wells or purchase water from the City of Mequon.

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Analysis and Recommendations

The following recommendations address opportunities to improve the efficiency of the Department. Many do not reduce expenditures directly but help maximize cost savings over time. For example, a comprehensive asset management program helps extend the lifespan of valuable equipment and infrastructure and minimize costly repairs. Taken comprehensively, the recommendations in this report provide a road map for effective, sustainable operations that conserve resources while providing quality services expected by the Shorewood community.

Staffing

Staffing represents a considerable expenditure for virtually any Public Works department. It is important to carefully consider the appropriate staffing needs to ensure that limited resources are expended effectively, especially in light of the economic downturn caused by the COVID-19 pandemic. While conserving resources is an important consideration, it is also vital to ensure that the appropriate staff are in place to manage the Department and deliver services. The Village has already successfully contracted out many services to help maximize efficiency, as discussed in Recommendation 1 below, and the remaining staff are deployed effectively throughout the year. The existing front-line staff function as generalists; each has core duties, but in practice, they all assist with other necessary functions as their capacity allows. This complicates any potential plan to reduce staffing by contracting out additional services; if the Department contracts out one service and eliminates the associated staff positions, it will also lose staff capacity for other service areas. There are opportunities for further contracting, but they must be carefully analyzed before implementation for both their impact on service delivery and potential cost savings. Until this can be accomplished, the short-term priority should be to retain existing positions.

This section recommends the addition of one position in the Department: An Engineering Inspector/Technician, as discussed in Recommendation 2. The Department does not currently have any dedicated capacity to provide regular oversight of capital projects. The Assistant Director manages the projects but is also responsible for supervising all operations staff and managing all of the Department's service contracts. An additional staff position would provide day-to-day supervision of capital projects and assist with other asset management and project management responsibilities, as well as reduce some of the existing contracted inspection costs. While the creation of a new position is an investment, the Department's capital budget totals more than \$7 million in FY2020, and it is vital to invest in staff capacity to ensure that those investments are managed appropriately. A portion of the position's salary should be budgeted as part of each capital project to reflect the position's contributions to the project.

Recommendation 1: Retain current staff positions while considering appropriate service levels and alternative service delivery options.

The Village already contracts out many public works services, from turf mowing to street paving. Contractors can often provide services more efficiently than the Department because of their access to specialized knowledge and equipment, as well as economies of scale. Contracting out these services has helped the Department balance its workload and contain costs while still providing high-quality services. The Department's current contracted services include the following:

- Alarm and fire suppression system maintenance
- Capitol Drive landscape maintenance
- Wilson Drive landscape maintenance
- Carpet cleaning and floor stripping and waxing
- Coordinated stormwater education programming
- Curbside organics collection
- Curbside recycling collection
- Elevator maintenance and inspection
- General engineering services
- Infrastructure and construction inspections
- Infrastructure program engineering services
- Invasive species removal and bluff restoration
- Large area patching, crack filling, and pavement marking for Village streets
- Major electrical projects
- Major heating and cooling system projects
- Major plumbing projects
- Pest control
- Police squad car set up
- Recycling hauling from drop-off stations
- Sidewalk snow clean-up after citation
- Specialty tree removal
- Televised inspections of sewer pipes over 30"
- Traffic signal system maintenance and annual updates
- Transfer station hauling
- Transmission and engine rebuilds for the Village fleet
- Turf care and mowing
- Water main break repairs for mains over 12"
- Water main leak detection and surveying
- Water quality lab analysis
- Water service replacement
- Window and door replacements and major repairs

Many of the Department's core services are subject to significant seasonal fluctuations:

- Winter Maintenance (snow and ice control)
- Yard Waste/Leaf Collections
- Water, Sewer, Storm Maintenance (construction season)
- Street Maintenance and Signage (construction season)
- Forestry

The Shorewood DPW responds appropriately and balances competing and seasonal work demands effectively using its cross-trained and cross-utilized staff. The Department also utilizes temporary employees to assist with yard work and other seasonal labor; in 2019, temporary employees worked a total of 3,712 hours, approximately 9% of the total hours worked by the Department.

Work hour reports for the DPW staff were reviewed. Excluding the temporary employees used in the summer months for landscape work, Figure 3 below displays both the relatively constant total monthly effort from Department staff as well as the shifting composition of that effort to meet seasonal service demands. It illustrates work hours for year-round employees by program and by month for 2019,²⁵ as recorded by DPW staff.

²⁵ Excludes hours worked by temporary seasonal employees to highlight the workload fluctuations of year-round employees.

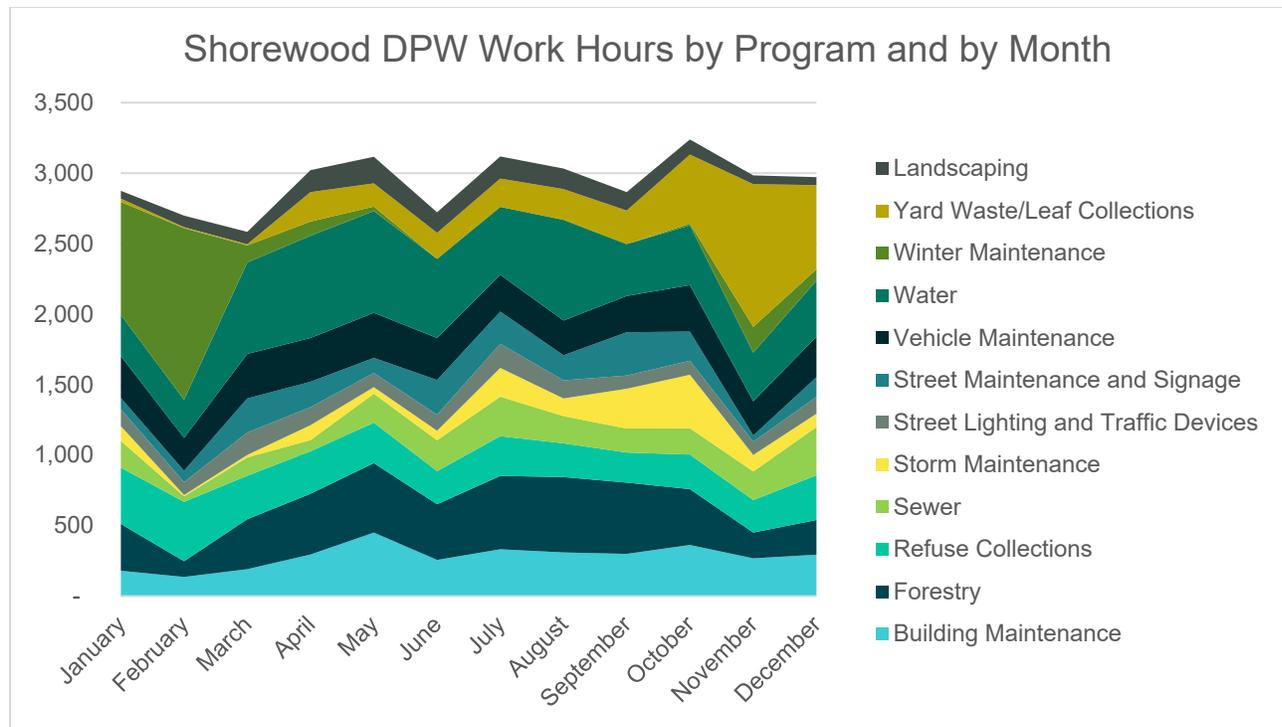


Figure 3: Work Hours by Program and by Month, 2019 (Year-Round Employees Only)

The workload of many programs fluctuates based on the season, as illustrated in Figure 3. When workload in one area decreases, employees assigned to that program devote any excess staff capacity to other Department initiatives. Although each staff position in the Department has core service responsibilities, in practice all line staff also function as generalists, assisting with other Department programs as capacity allows. All Department programs rely on these non-primary staff, as illustrated in the following table.

Table 10: Work Hours by Job Responsibility, 2019

| Type of Work | Total Hours Performed by Staff as Primary Job Responsibility | Total Hours Performed by Staff as Non-Primary Responsibility | Total Hours ²⁶ | Percentage of Hours from Non-Primary Staff |
|--|--|--|---------------------------|--|
| Building Maintenance | 3,338 | 44 | 3,382 | 1.3% |
| Forestry | 3,996 | 506 | 4,502 | 11.2% |
| Landscaping | 1,255 | 117 | 1,372 | 8.5% |
| Refuse Collections | 3,031 | 447 | 3,478 | 12.9% |
| Sewer | 2,161 | 73 | 2,234 | 3.3% |
| Storm Maintenance | 1,283 | 276 | 1,559 | 17.7% |
| Street Lighting and Traffic Devices | 1,282 | 138 | 1,419 | 9.7% |
| Street Maintenance and Signage | 1,266 | 770 | 2,036 | 37.8% |
| Vehicle Maintenance | 3,379 | 16 | 3,395 | 0.5% |

²⁶ Does not include hours worked by temporary employees.

| Type of Work | Total Hours Performed by Staff as Primary Job Responsibility | Total Hours Performed by Staff as Non-Primary Responsibility | Total Hours ²⁶ | Percentage of Hours from Non-Primary Staff |
|-----------------------------|--|--|---------------------------|--|
| Water | 5,741 | 212 | 5,953 | 3.6% |
| Winter Maintenance | 844 | 1,702 | 2,546 | 66.8% |
| Yard Waste/Leaf Collections | 2,806 | 548 | 3,353 | 16.3% |
| Total | 30,382 | 4,849 | 35,229 | 13.8% |

Nearly 14% of all staff time in 2019 was spent on tasks outside of each position's primary scope of responsibility. Snow removal, especially, relies on staff from all areas. There is a widely accepted perception that public works operations in northern communities are staffed almost entirely based on the need to meet snow and ice control requirements. While snow and ice control are a major responsibility, most departments productively balance workload year-round. All in all, the Village has done a remarkable job of managing seasonal workload variation with a small staff. The flexibility provided by allocating staff resources as needed is important and speaks highly of the Department's skilled staff. While employees have a primary responsibility, they possess a multitude of skills that allow the Department to respond effectively to seasonal variation in workload and cover for critical vacancies and absences.

Despite current contracting efforts and the best efforts of the Department, program and service demands already exceed in-house capabilities. The inability to meet sewer inspection and cleaning goals committed to in the Village's CMOM, as discussed in Recommendation 13, is a concern. The proposed tree management plan discussed in Recommendation 7 will put an additional burden on Forestry. Furthermore, the development of an asset management plan, as discussed in Recommendation 5, will almost certainly identify additional maintenance needs.

Therefore, it is not recommended that the Department reduce staffing levels in the near term. Contracting for services and reducing staff in one area would reduce staff capacity for many other programs, making it an ineffective strategy without also reducing service levels. For example, if the Village chose to contract out utilities management services, it would lose significant capacity for winter maintenance; Utility Division staff spent more than 1,000 hours plowing and salting streets in 2019. The Department should keep current positions while it considers appropriate service levels and alternative service delivery options. Possible alternatives are discussed in the Alternative Service Delivery section of this report.

Recommendation 2: Create an Engineering Inspector/Technician position to provide additional in-house project management capacity.

The Assistant Director is responsible for overseeing the Department's capital projects. Large capital projects require significant planning and oversight to ensure they remain on-time, on-budget, that the work is of appropriate quality, and that the project is meeting Village objectives. The Village's FY2020 capital plan includes 20 capital construction projects overseen by DPW, including lateral replacements in the sewer system, local road improvements, and rehabilitation of the heating and cooling system at Village Hall.

The Assistant Director oversees these projects but does not have the capacity to provide day-to-day management and oversight for capital projects while also managing other core duties. Instead, the Department generally contracts out site inspection responsibilities. This approach is concerning because, without close oversight, the Department has limited understanding of the quality of the project. The use of multiple contracts also limits the Department's ability to enforce consistent standards across all projects and prevents the Department from gaining firsthand knowledge of a project's progress.

Creating an in-house Engineering Inspector/Technician position responsible for regularly inspecting Department construction sites would help the Department safeguard the quality of its capital projects. The

position should also provide other project management and oversight assistance. Creating additional in-house project management capacity would allow the Assistant Director to spend less time on project management and allow the position to devote more time to staff planning and work management to help the team function as effectively and efficiently as possible.

This position would also provide additional project planning and management capacity for the Department. The position should also take over management of service contracts from the Assistant Director. The Department has more than 30 ongoing service contracts as of March 2020, and each of these contracts requires oversight to ensure quality of service and cost-effectiveness. It is beyond the capacity of a single position to effectively oversee these contracts while also providing engineering and construction oversight and management of 19 staff positions. This will increase the Assistant Director's capacity for other core duties, such as staff management, asset management, and work planning.

Finally, the position should assist with the development of the Department's asset management program, as discussed in Recommendation 5. The asset management program is an important step in determining the Department's service needs and in maximizing the useful life of Village investments, but it also requires staff time to collect and oversee data. The creation of the Engineering Inspector/Technician would add dedicated staff capacity for this purpose, helping to ensure that the asset management plan is an effective and continuing tool supporting DPW management.

The position should report to the DPW Director to allow him or her to allocate work appropriately between the Engineering Inspector/Technician and the Assistant Director. The position would have an estimated salary of \$45,000 to \$55,000 per year, plus approximately \$28,000 in benefits, for a total cost of \$73,000 to \$83,000 in the first year. While this is an investment, many of the core functions of this position, including program management and inspection services, are widely included within capital project budgets and capitalized as part of the overall project cost. In most cases, these costs can be, and are, included with project financing and paid for out of any project funding. To the extent that this position is assigned to eligible capital projects, it should be funded accordingly.

Recommendation 3: Route all customer inquiries to Customer Service staff in the Clerk/Customer Service Department.

The DPW Administrative Assistant is responsible for providing customer service for the Department. Along with administrative responsibilities, like processing payroll and tracking data, the position is responsible for responding to phone calls and emails from the public as well as assisting visitors to the DPW facility. The Department's records show that the Office received a total of 8,473 calls in 2019, which translates to approximately 30 calls per business day. The Department does not keep records of the number of visitors to the facility, but Department management estimates that the office receives less than five visitors per day. When the Administrative Assistant is out of the office, the DPW Director and Assistant Director are responsible for taking over these duties, as they are generally the only employees regularly working in the office rather than out in the field.

This is a concern because responding to public inquiries requires a significant amount of time and limits the Director and Assistant Director's capacity to perform their core duties. The Director and Assistant Director provide valuable high-level leadership and oversight to the Department. When their time is spent on administrative tasks, the Village is reducing the value of these positions. The Director and Assistant Director must assist between 35 and 40 customers per day, based on 2019 call data, as well as respond to emails sent to the Department. While responding to customer requests is of critical importance to the Department, this does not represent the highest and best use of these positions on a regular basis. This will be a more significant issue during the upcoming AMI implementation when many customers are likely to call or visit with questions or concerns.

The Village has a central phone number for Village Hall; calls to the central number are answered by staff in the Clerk/Customer Service Department. Staff in this Department provide dedicated customer service

capacity for the Village, and one of their primary responsibilities is to answer calls and respond to inquiries from the public in a consistently professional and positive manner. DPW calls are not tracked by type, but staff report that customers frequently call the main Village number with DPW questions and are then routed to DPW to provide assistance. This is a concern because it requires the customers to be put on hold, and likely to have to explain their issue twice to two different staff, which is a frustrating customer service experience, and because it requires two staff to handle an issue that could have been resolved by one. This is not an efficient use of staff capacity.

The Village could address the issue of DPW leadership staffing phone lines as well as increase customer service efficiency by making the central Village Hall phone line the central customer service line for DPW as well. Customers could still be transferred to DPW when they have complex issues, but simple issues, such as a question about recycling hours or a request to fill a pothole, should be fielded by Clerk/Customer Service Department staff.

This change would also increase the level of administrative support available in DPW by reducing the amount of time the Administrative Assistant is responding to customer calls. This time can be devoted to supporting some of the initiatives recommended in this report, such as the asset management system discussed in Recommendation 5 and the performance and workload metric tracking discussed in Recommendation 9.

This change would first require a review of the existing staff capacity of the Clerk/Customer Service Department to determine if additional support would be necessary to manage the DPW call and email volume along with the existing service requests. The group would also require training in DPW functions; they should be able to answer basic questions about DPW, such as the hours of Saturday recycling collections, and should be able to submit basic requests for service, such as requests to fill a pothole. This transition will increase DPW's administrative support capacity, increase Department leadership's capacity for leadership tasks, and make customer service more efficient for both the community and the Village.

Recommendation 4: Update DPW job descriptions to ensure that the qualifications and responsibilities are appropriate.

Job descriptions serve as a reference for both an employee and a supervisor to define the employee's specific job duties. Supervisors can reference them when preparing performance evaluations or to help document performance issues that may require intervention. They are also the basis for class and compensation studies, which examine whether an employee's role and salary match official duties.

For these reasons, it is important for job descriptions to be as accurate as possible. However, a review of the Department's job descriptions identified several instances where a job's official duties do not align with actual practice, or where there is an opportunity to further refine a description to define a position's roles.

In particular, the Director of Public Works job description should be reviewed and updated. The position is responsible for managing a Department of more than 20 people doing high-risk, complex work, as well as for ensuring the Village's infrastructure remains safe and reliable. However, the only required qualifications for the position are either a four-year degree or one to two years of practical experience. An individual who only met these minimum qualifications would be challenged to apply the skills or knowledge to operate a complex department effectively. Furthermore, the position description focuses more on a list of programs that the Director must administer, rather than the high-level duties he or she must perform. For example, the description states that the Director should maintain and improve the Village's geographic information system (GIS) system, but it does not discuss the Director's role in setting operational policies and procedures for the Department. The Department should update the description to focus on the position's management expectations and to increase the minimum qualifications.

The Department should also revise other Department job descriptions as needed to ensure that they are accurate and that they will serve as effective tools to recruit candidates with the appropriate skill set.

Attachment A to this report outlines the core functions of each existing position and provides recommendations to amend the descriptions. It will be important for Department management to work with Village Administration and Human Resources personnel to review each job description and consider how closely the core duties match the employees' actual roles. The Department should also regularly review job descriptions to ensure that they remain accurate over time.

Asset Management

An effective asset management plan is a vital tool to help a Public Works department understand and prioritize workload and resource needs and to safeguard the effectiveness of a community's investments. An asset management plan is defined as a comprehensive inventory of capital assets that records each asset's current condition and projected useful life, along with a PM schedule to effectively maintain each asset. This plan not only helps a department understand the full scope of the assets for which it is currently responsible but helps them understand resource needs for maintenance, repair, and replacement. Furthermore, PM schedules help maximize the value of investments in capital assets by extending their useful life.

Recommendation 5: Develop a comprehensive Village capital asset management plan.

DPW responsibilities include day-to-day operations and services, emergency response, and asset management. Of these responsibilities, asset management is generally the first to suffer when budgets get tight. However, regular inspections and PM are important tools for maximizing the lifespan of Village assets and reducing the frequency of costly repairs. Ongoing PM is essential to prolonging the useful life of physical assets. To understand the scope and frequency of required PM, it is important for an organization to develop and maintain a comprehensive, up-to-date asset management plan. The development of asset management plans requires detailed knowledge of a community's infrastructure, including a reliable inventory of assets and an assessment of their condition.

The Department keeps some records of its current assets. It maintains spreadsheets listing equipment and vehicles, for example. Other data, including inventories of trees, sewer lines, and water lines, are maintained in GIS, although some information is still maintained in paper form. The Department also evaluates and reports pavement conditions biannually as part of a Wisconsin Department of Transportation requirement. This analysis is a key component of the Village's Pavement Management Program. Furthermore, the Village has commissioned several studies to assess the condition of assets and to guide asset management, including a facility master plan, completed by The Sigma Group and Achint-Architecture in 2014, and an Emerald Ash Borer Plan Assessment completed by the Davey Resource Group in 2019.

While the Department does inventory some of its assets, it collects only limited information on their condition. For example, the Department does not currently conduct any inspections of facility roofs due to a lack of staff capacity. Without regular inspections, the Department may not be aware of leaks or other issues. The longer that these issues go unaddressed, the more expensive the eventual repair. Furthermore, if roof damage is not caught and repaired early, it can lead to water damage or mold inside the facility, among other issues, and these larger issues can be costly to manage. Village staff did request funding for a facilities condition assessment study in the FY2020 budget, but the funding was not approved.²⁷

The lack of comprehensive condition assessments makes it difficult to prioritize work or to budget and plan for upcoming capital needs for repair and replacement of assets nearing the end of their useful lives. Regular condition assessments also inform proactive maintenance schedules; without assessments, the Department does not have the data required to understand what maintenance practices would most effectively safeguard Village investments.

²⁷ Village of Shorewood. 2020 Budget. Budget Transmittal.

The Village is also not currently meeting some of its asset repair and replacement goals. For example, in 2012, the Wisconsin Public Service Commission established a goal for the Village to replace between 1.5% and 2% of all Village water mains annually, which means that the Village would have replaced approximately 10.5% to 14% of its system between 2013 and 2019. As of FY2020, the Village has only replaced 3.9%, less than half of the goal. If water mains are not replaced in a timely manner, their risk of failure increases, leading to potentially expensive flooding and water loss. As another example, although the Village follows a Pavement Management Plan to maintain the quality of its streets, it may not be sufficient to maintain the streets to an appropriate quality. More than 36,000 feet of Village-owned streets have a pavement quality rating of five or less out of 10, according to the Village's 2019 pavement quality report. A rating of four or five is considered Fair, and anything below a four is Poor.²⁸ This is a concern because the poorer the quality of the streets, the more likely they are to develop potholes and other issues, and the more staff time and resources must be spent on reactive repairs. Lower quality streets also impact the attractiveness and accessibility of the community.

The following table illustrates the Village's pavement quality ratings as of 2019.

Table 11: Feet of Pavement by Rating, 2019

| Rating | Number of Feet | Percentage of Total Footage |
|-----------------------|----------------|-----------------------------|
| 2 (Poor) | 3,432 | 2.3% |
| 3 (Poor) | 11,986 | 8.0% |
| 4 (Fair) | 7,867 | 5.3% |
| 5 (Fair) | 12,836 | 8.6% |
| 6 (Good) | 17,057 | 11.4% |
| 7 (Good) | 30,203 | 20.2% |
| 8 (Very Good) | 48,168 | 32.3% |
| 9 (Excellent) | 8,236 | 5.5% |
| 10 (Excellent) | 9,441 | 6.3% |
| Total | 149,226 | 100.0% |

An effective asset management plan inventories all of a Village's capital assets, records the condition of each asset, prioritizes each asset by risk of failure, and uses that information to develop a PM plan to effectively preserve each asset. The creation of such a plan will help the Village ensure that it is effectively safeguarding its investment in capital assets.

The first step in creating a comprehensive asset management plan is the completion of an asset inventory and condition assessment. The inventory should categorize all assets by the likelihood of an asset's failure and the potential consequences of failure. The likelihood of failure can be evaluated by considering the asset's current condition and performance. When considering the potential consequences of failure, the Department should assess the potential safety impact of failure, the potential environmental impact of failure, and the potential impact of failure on the Department's ability to provide services.

Both risk of failure and likelihood of failure should be quantified with an overall number between one and 10, where one equals low risk/minimum consequences and 10 equals high risk/significant consequences.

²⁸ Transportation Information Center, University of Wisconsin-Madison. Pavement Surface Evaluation and Rating Asphalt Roads Manual. <http://www.apa-mi.org/docs/Asphalt-PASERManual.pdf>.

The two numbers can then be multiplied to produce the asset’s overall risk factor. For example, if an asset has a low risk of failure (three out of 10), but its failure would have a significant impact (eight out of 10), its overall risk factor would be three multiplied by eight, or 24. Assigning a risk factor to each asset will allow the Department to identify its highest priorities for maintenance and repair. The Department can also visualize its overall risk by plotting its assets in a matrix such as that shown below.

| | | Potential Severity of Consequences | | | | | | | | | |
|---------------|----|------------------------------------|--|--|--|--|---------------------------------------|--|--|--|--|
| | | 1 2 3 4 5 | | | | | 6 7 8 9 10 | | | | |
| Level of Risk | 10 | High Risk, Few Consequences | | | | | High Risk, Serious Consequences | | | | |
| | 9 | | | | | | | | | | |
| | 8 | | | | | | | | | | |
| | 7 | Low Risk, Few Consequences | | | | | Low Risk, Serious Consequences | | | | |
| | 6 | | | | | | | | | | |
| | 5 | | | | | | | | | | |
| | 4 | Low Risk, Few Consequences | | | | | Low Risk, Serious Consequences | | | | |
| | 3 | | | | | | | | | | |
| | 2 | | | | | | | | | | |
| | 1 | Low Risk, Few Consequences | | | | | Low Risk, Serious Consequences | | | | |
| 10 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |

Figure 4: Risk/Consequence Matrix

The second step should be to develop a PM schedule for each asset to maximize its useful life. The PM schedules should be based on the needs and concerns identified in the condition assessments, as well as on manufacturer recommendations and industry best practices. The Department should also evaluate the condition assessments to project repair and replacement needs in the near future.

After the Department has identified PM and replacement needs for its assets, it should consider the resources required to carry out these steps, including in-house and contracted labor and construction and equipment costs. The Department can then estimate the ongoing costs for maintenance, repair, and replacement of assets for budgeting. The asset management plan for the Town of Cary, North Carolina, provides a useful framework for the types of things the Village should consider when assessing the conditions of its assets.²⁹ The plan provides examples of the factors considered in the condition assessment of each asset and how future resource needs could be calculated.

It will also be important for the Department to regularly update its asset inventory. Staff should be instructed to track any changes to an asset’s status to ensure that the Department maintains an accurate record of its current conditions. Furthermore, the comprehensive inventory should be reviewed at least annually and updated as needed.

Recommendation 6: Use the Village capital asset management plan to refine and prioritize annual work plans for maintenance, repair, and replacement of Village capital assets.

A comprehensive asset management system is an essential component of effective stewardship of Village assets. It also helps to ensure that the Village realizes the full value of its investments in equipment and infrastructure. A list of all Department assets, along with an evaluation of their conditions, will help Department leadership prioritize and assign work effectively. It will also help the Department clarify its maintenance requirements and scope of services and allow the Department to better plan for future capital expenditures.

²⁹ Town of Cary. Buried Infrastructure Asset Management Plan, 2018.
www.townofcary.org/home/showdocument?id=21809

The Department does create and maintain an annual planning document that lists the planned projects for the year, the steps required to complete each project, and the projected month(s) in which each step will be carried out. As presented in the annual Village Budget, “The Long-Range Financial Management Plan is reviewed and updated annually and looks forward for the next ten years. The long-range plan focuses on significant capital needs, ongoing capital maintenance requirements, projects future annual operating budgets, potential equalized and assessed property values, tax levy needs, debt service levels, and future budget gaps. This is all done within the context of the current State of Wisconsin tax levy limits which establish the maximum allowable tax levies to support municipal activities and the potential fiscal impact to our residents through property tax rates and the municipal utility costs that will be necessary to achieve the goals and projects identified within the plan.”³⁰

This planning effort is an important tool for the Village. However, it views the issue from the perspective of available capital funding. Instead, the Village should first consider the Village’s comprehensive capital needs and associated requirements for sustainable operations and then assess the resources necessary to meet these needs. There is an opportunity to augment the existing effort to provide for a more comprehensive and impactful planning tool. For example, the current effort does not estimate staff hours required to complete each step of the project, making it difficult to project how much staff capacity the projects are likely to use in a given month. The plan also does not comprehensively consider the capital requirements of the ongoing services provided by the Village and their associated resource and staff capacity requirements.

The asset management plan discussed in Recommendation 5 should provide the basis for a comprehensive annual work plan for the Department. Creating an annual work plan will not only help ensure that the PM schedules are implemented but will also help the Department understand its staffing and resource needs for the coming year.

To develop the work plan, the Department should first map out each PM schedule onto a calendar, which will allow the Department to understand the proactive needs for the entire upcoming year. The calendar should also include all regular work commitments, such as the weekly residential collections schedule. The preventive maintenance plan for the City of Allentown, Pennsylvania, included as Attachment B, provides an example of how this schedule could be laid out.

The Assistant Director should work with the Foremen to estimate the number of work hours required for each task as well as the position or positions likely to be assigned to complete it. This will allow the Department to develop a comprehensive understanding of its proactive workload and help develop an estimate for the remaining staff capacity available for reactive work like responding to service requests.

The Department should track progress on the plan throughout the year to ensure PM needs are being carried out in a timely manner. If they are not, it may be a sign that resources should be increased or reallocated to effectively meet the Department’s proactive and reactive needs. Once the Department’s work plan is completed, it should review the scope of work and capacity for the year and evaluate whether any additional equipment would support the Department in achieving its goals.

Recommendation 7: Implement the recommendations detailed in the 2019 Emerald Ash Borer Plan Assessment prepared for the Village by the Davey Resource Group.

One important aspect of the Village’s asset management plan and its annual workplan should be the development and implementation of a comprehensive plan to manage Village-owned trees. The Village maintains an urban forest of more than 6,500 trees, approximately 1,400 of which are ash trees. Unfortunately, the Village has seen the encroachment of the Emerald Ash Borer, an invasive beetle species that eats into ash trees, eventually killing them. This process can be halted by regularly injecting chemicals into the ash trees to deter the beetles. The Village has started a program to inject all ash trees on a scheduled

³⁰ Village of Shorewood. 2020 Budget. Budget Transmittal.

rotation, except for trees that are too small for injection or are of poor quality. This is an accepted practice. However, the injections are not being conducted pursuant to the recommended two to three-year application program due to resource constraints. In addition, the Village has not incorporated this recommended approach as part of a more comprehensive ash tree management program. Adopting a comprehensive management plan would help the Village identify specific goals and expectations for the ash tree management program and would establish steps to gradually replace the ash trees with species less vulnerable to invasive species. Without establishing such a plan, the Village runs the risk of spending money on injections that would have been better spent on planting replacement trees or on other forestry functions.

The Department has taken steps to update its ash management plan. The Village contracted with the Davey Resource Group in 2019 to assess the Village's current Emerald Ash Borer mitigation efforts and to develop recommendations to improve the Village's response. The report was released in December of 2019. Recommendations include the following:

- Identify desired goals and service levels for the Emerald Ash Borer program
- Increase funding for the program to ensure that the Village can meet its desired level of service while also maintaining the rest of the Village's urban forest
- Continue the Ash Tree Replacement program
- Prioritize ash tree replacement in areas with combined sewers because of the effect that dead trees would have on the amount and quality of stormwater entering the system
- Review and update the program periodically based on research and best practices

The Village should review the updated plan elements to better understand the impacts and results of varying levels of action. This information would frame their understanding of the issue, their reasonable expectations from their efforts, as well as steps necessary over time to achieve the desired results. Establishing shared expectations through a formal service level, such as the number of trees to be replaced or injected per year, is vital to ensuring that the Village allocates enough resources to support the effort. The Village should engage the community in determining the appropriate service level to balance the importance of maintaining a robust urban forest with existing resource limitations.

The report's recommendations also help ensure that ash tree replacement is prioritized where the loss of trees would have the most impact. Implementing these recommendations will help the Village plan effectively to control the spread of Emerald Ash Borer and preserve an important component of the Village's urban forest.

Service Standards

Asset management plans can also support the development of detailed work plans. These work plans are not only an important tool for understanding the workload throughout the year and for prioritizing that work, but they can also help the Department define required service levels and provide a basis for considering the potential for service level changes.

Investment in the creation of an asset management plan and a comprehensive work plan will help the Department effectively prioritize resources as it manages the COVID-19 pandemic-related economic downturn. In the coming months, it will be vital to carefully assess service levels in DPW and to establish service and performance standards that effectively balance service delivery within financial constraints.

Recommendation 8: Develop specific timeline guides for DPW response to reactive service requests.

DPW's work falls broadly into two categories: proactive work, such as regular inspection and repairs of Village buildings and infrastructure, and reactive work, such as repairing a broken water main or responding to community service requests. Both types of work are vital, and it is important for the

Department to balance them effectively to ensure that both proactive work and reactive work are completed in a timely manner.

Much of the Department's reactive work comes via customer request. Village residents call, email, or visit the Department to request assistance. There is currently no formal expectation for response time to a service request from a member of the public, but staff report that the Department generally tries to respond to requests as quickly as possible, sometimes prioritizing timely response over other ongoing work.

High-quality customer service is important, as is a timely response to an urgent issue. However, prioritizing these reactive requests over ongoing work may lead to inefficiencies. For example, if a resident makes a request for the Department to fill in a pothole, current practice is to fill the pothole as quickly as possible; based on hazard size and location, the response will vary from one to 48 hours. It may be a more efficient use of time and resources to wait and to develop a plan to fill in several potholes on the same day.

Prioritizing requests over ongoing work also leads to an interruption in service. It is often more efficient to finish an ongoing project before moving to the next one, but rapid responses to requests can often mean that proactive projects are postponed in favor of reactive work.

The Department should establish formal service level expectations for non-emergency issues to ensure that work is prioritized effectively. The Department should develop reasonable and acceptable expectations for the total response time to resolve common service requests, based on knowledge of the complexity and time involved and should develop an accompanying policy on how staff will be assigned to fulfill the request. For example, health and safety concerns should be addressed as soon as possible, but the service expectation for non-urgent requests, such as filling in potholes, may be something longer, such as five business days.

When a resident submits a complaint or request, the Village should communicate the appropriate service-level expectations so that the complainant has a reasonable understanding of the time involved. As an example, the City of West Jordan, Utah, advises residents that the City will fill potholes within two working days of being notified, except for those that pose a safety hazard or impact traffic, in which case the City will respond immediately.³¹ DPW staff should also be made familiar with these expectations so that tasks can be appropriately incorporated into work planning. This approach will help manage expectations, both with the public and with Village staff, and will help the Department prioritize work more effectively.

It is important that these service expectations, and other customer service policies, receive support from the Board of Trustees and Village Administration. If the Board encourages staff to address an issue in an earlier timeframe than the set expectation, the timeliness expectation is no longer meaningful, and any efficiency gains from implementing the expectation are lost.

Recommendation 9: Develop approved workload and performance data metrics and regularly report these to the Village Board.

The elected members of the Shorewood Village Board of Trustees provide policy and financial leadership to the Village. They guide Village policy, determine the level and scope of services provided to residents, and serve as stewards of taxpayer dollars. One of their most important roles is to adopt the Village's annual budget, ensuring that funding is allocated as effectively as possible and balancing the cost of government and quality of life.³² Understanding how each Department operates day-to-day, including the challenges and constraints, helps give Trustees insight into potential opportunities for efficiencies as well as which areas have the greatest resource need. The Village indicates through the continuing implementation of the

³¹ City of West Jordan. Street Maintenance. <https://www.westjordan.utah.gov/street-maintenance>

³² 2017-2018 Wisconsin Statutes. Chapter 61 Villages. 61.34 Powers of Village Board.

Visioning Implementation Plan that developing better benchmarks to improve performance is a factor in remaining a financially responsible community.³³

As the Village evaluates the appropriate service levels for DPW, it will be especially important for the Village Board to have a knowledge of both current Department programs as well as associated unmet needs, such as those identified in the Department’s asset management program. Gaining a comprehensive understanding of DPW’s operations can be challenging because of the breadth and complexity of the services provided. The Board currently reviews the Department’s annual recommended budget, as well as an annual report detailing the status of major DPW initiatives. This information helps the Board understand the cost of operations in the Department and its annual priorities, but it does not convey the entire scope of work performed by the Department. Much of the Department’s work is routine and ongoing, such as weekly waste collection and regular maintenance of the urban forest. These tasks are not highlighted in the current reports received by the Board, but they represent the bulk of the staff’s workload. It is important for the Board to understand its full scope of responsibility and the role the Department plays in maintaining Shorewood’s quality of life.

Village Administration should facilitate a process with DPW leadership and the Board of Trustees to develop a workload and performance reporting structure that keeps the Board informed of the day-to-day realities of DPW’s workload. The facilitated process should identify which metrics are important to the Board as well as which metrics most accurately represent the Department’s workload and performance from the Department leadership’s point of view. The goal should be to present clear, appropriate, and accurate data that communicates the Department’s operations and allows the Board to understand how workload and performance are changing over time. These metrics should fall into three areas: workload measures, efficiency measures, and effectiveness measures. Workload measures illustrate how much the Department is doing, efficiency measures help evaluate the relative cost-effectiveness of different programs, and effectiveness measures illustrate the programs’ impact. Examples of each are provided in the following table.

Table 12: Examples of Workload, Efficiency, and Effectiveness Metrics

| Program | Sample Workload Measure | Sample Efficiency Measure | Sample Effectiveness Measure |
|-----------------------------|---|--|---|
| Building Maintenance | Number of energy efficiency upgrades installed | Average maintenance cost per square foot of facility space | Total energy used per square foot of facility space |
| Fleet Maintenance | Total number of repairs | Number of Mechanic FTEs per fleet vehicle | Average number of days per year a fleet vehicle is inoperable |
| Forestry | Number of trees planted | Annual Forestry cost per tree | Number of tree branches that fall per year |
| Street Maintenance | Number of potholes filled per year | Street maintenance cost per lane mile | Pavement quality rating |
| Waste and Recycling | Number of tons of waste and recycling collected | Collections FTEs per ton of residential waste collected | Recycling contamination rate |
| Utilities | Number of valves exercised | Number of Utilities FTEs per mile of water/sewer pipe | Number of water main breaks |

Based on this input, DPW leadership and Village Administration should develop a regular reporting strategy that informs the Board about the Department’s work and helps the Department effectively illustrate efforts and accomplishments on a day-to-day basis.

³³ Village of Shorewood. 2020 Budget. Vision Implementation Plan.

Staff should also consider other opportunities to effectively illustrate the realities of the Department's day-to-day work, both to the Trustees and to the public. For example, it should work with Village Administration to create social media posts highlighting the contributions of individual positions and explaining their important role in maintaining the Village's quality of life. The Department should also offer the Trustees regular opportunities to observe Department operations so that they can gain firsthand experience with the challenges encountered and solutions employed when delivering services to the community.

Alternative Service Delivery

When considering appropriate service levels, as discussed in the previous section, it is also important to consider opportunities for alternative service delivery models like contracted and shared services. The Village has already contracted out many services and developed strategic partnerships with neighboring communities for shared services. Recommendations in this section review the Department's current in-house services, contracted services, and shared services and recommend further steps to ensure that the Department is maximizing the opportunity for cost savings. There are also potential opportunities to expand shared services agreements, as discussed in Recommendation 15, that will require careful negotiation and cooperation with neighboring communities.

Recommendation 10: Review transfer station operations to ensure appropriate allocation of costs and to maximize cost efficiency.

Waste and recycling collected in the Village of Shorewood are brought to the DPW lot, where the materials are compacted and stored in receptacles until they can be taken to a landfill or recycling center. This compacting and storage equipment is collectively called a transfer station. The transfer station located on the DPW lot is jointly owned by the Village of Shorewood and the Village of Whitefish Bay.

Village of Shorewood staff maintain the transfer station, and Whitefish Bay reimburses the Village for half of the maintenance costs associated with operating the station, regardless of the actual percentage of waste delivered. Maintenance costs are not allocated based on the tonnage of waste deposited by each community, which is a concern because it creates the potential for inequitable cost distribution. The FY2020 estimate is that Whitefish Bay will account for a total of 4,115 tons of residential waste and 660 tons of yard waste, for an estimated total of 4,775 tons.³⁴ In contrast, the Village of Shorewood projects that it will have 2,500 tons of residential waste and 660 tons of yard waste, for a total of 3,610 tons. Under the current model, the Village of Whitefish Bay is paying for only half of the maintenance cost of the facility even though it accounts for approximately 57% of the overall waste.

It is important that the Village evaluate the shared services agreement to ensure that costs are allocated equitably between the two parties and that the agreement serves the best interests of the Village. It is also important for both communities to consider whether the service could be provided more effectively by an outside contractor. If the responsibility for owning and maintaining a transfer station was contracted out, the Village would no longer be required to devote staff time or resources to equipment maintenance and would have additional capacity for other programming. Furthermore, contracting out the service would allow for the relocation of the transfer station from the DPW lot to provide additional operational space, as discussed in Recommendation 20.

The two Villages should collaborate on a shared Request for Proposals (RFP) for transfer station services and evaluate the responses to understand the feasibility of contracting out the program. They should also begin to track the tonnage received by community to understand the appropriate cost allocation for transfer station services moving forward.

³⁴ Village of Shorewood. 2020 Budget. Department of Public Works detail.

Recommendation 11: Evaluate the option of contracting out recycling and refuse collection services.

DPW staff spent approximately 6,830 hours on refuse collection and management services in 2019, the equivalent of 3.3 FTEs. Refuse and recycling services include residential waste, yard waste, and leaf collection, operation of a recycling drop-off site at the DPW facility, maintenance of the four Village-owned garbage trucks, and maintenance of the transfer station, as discussed in Recommendation 10.

The Department's current refuse management services pose several challenges. One challenge is collection of refuse in alleyways. The Department collects residential waste weekly and has three routes for collection: two street routes and an alley route. Waste on the two street routes is collected by a side-loading truck in which a robotic arm takes the supplied tote and empties it into a receptacle. However, alleys are too narrow for these side-loading trucks to operate. The Department instead uses a rear-loading truck for which a DPW employee is required to physically move a receptacle to the appropriate spot behind the truck so that it can be lifted and emptied by a mechanical arm. This approach creates challenges when receptacles are unusually heavy or when rain, snow, or ice creates slippery or otherwise hazardous conditions.

A second challenge is contamination and safety risks posed by DPW's recycling drop-off site. DPW maintains a recycling receptacle on its lot accessible to the public during business hours. It also hosts a recycling drop off event on specified Saturdays throughout the year. The recycling receptacle is not staffed during the week and is not in a location where it can be easily monitored by DPW staff. Staff report that there is a high level of contamination in the current receptacle due to the public using it to dispose of non-recyclable items;³⁵ high levels of contamination can lead to entire loads being rejected by the recycling facility, negating the purpose of the recycling drop-off site. Hosting the drop-off site on the DPW lot also means that members of the public may cross paths with some of the heavy equipment operated by DPW staff, creating the risk of accident or injury.

Recommendation 10 discussed the potential for contracting out transfer station operations; it is appropriate for the Village to consider contracting out other refuse and recycling management services as well. Contracting out these services would eliminate the issues discussed above. Furthermore, there is an established market of waste management vendors in the Milwaukee area; indeed, the Village already contracts out its residential recycling collection. A contract provider in refuse collections can operate the necessary staff and fleet to provide coverage in the event of an individual staff vacancy or absence, as well as an equipment failure. This will support other Department operations by not requiring staff from other programs to cover absences in this program. Furthermore, contracting the service would allow the Village to dispose of its refuse collection equipment, reducing staff time and costs associated with maintenance on this equipment.

It is important for the Village to consider the impact of contracting these services on existing staffing levels. Contracting out these services may allow for a reduction in staff positions. However, before positions can be eliminated, it is important to consider whether the Department is staffed appropriately to meet existing service needs. For example, the Asset Management section of this report identifies important PM that is currently not being completed. Furthermore, the Department's current Refuse Collection staff also devote approximately one-third of their time to other responsibilities, including street maintenance. For these reasons, the Department must first understand the service levels appropriate for the Department and then consider whether contracting out waste and recycling management would allow for the Department to reduce staff without impacting these service levels.

After the Department has defined its service levels, it should work with Village Administration to develop proposals for contracted refuse and recycling management services. An RFP or Request for Qualifications (RFQ) process can be used based on the quality of service information the Village can develop. Taking this information to market is the fastest mechanism to determine the relative costs and feasibility of the

³⁵ Contamination levels are not formally tracked.

proposals. The Village should incorporate required performance reporting and remedies in the resulting service contracts to support Village management as well as resolution of resident service issues.

Recommendation 12: Evaluate the option of contracting out street lighting and traffic device maintenance services.

Another opportunity for outsourcing services currently performed in-house may be to contract out management of the Village's street lighting and traffic device maintenance services. The Village already contracts for some maintenance and updates to its traffic signal system, but routine maintenance and programming of the systems are currently performed in-house. Staff spent a total of 1,419 hours maintaining the systems in 2019.

Currently, there is only one position in the Department with expertise in traffic signals and street lighting; this lack of redundancy creates a risk of service interruption or institutional knowledge loss due to staff absence or turnover. A contract provider in Street Lighting and Traffic Devices can operate the necessary staff and fleet to provide coverage in the event of an individual staff vacancy or absence, as well as an equipment failure. Contracting out the management of these systems would eliminate this concern. Contracted staff members with specialized knowledge would also be better equipped to support changing technologies.

To assess the net impact of contracting out this service, the Village will need to determine the impact of the change on other Department services. The staff working in this area also reported spending more than 700 hours working on building maintenance and other tasks besides street lighting and traffic device maintenance. The Department would need to reallocate resources to support these other services as well as the capacity to complete other projects. To better understand the value of this approach, the Village should define appropriate service levels and determine the staffing required to meet those service levels.

After the Department has defined its service levels, it should work with Village Administration to develop an RFP or RFQ for street lighting and traffic device maintenance services. The Village can then evaluate the responses to determine the value of outsourcing the services versus continuing to provide them in-house.

Recommendation 13: Renegotiate the existing televising truck shared services agreement and increase the number of feet of sewer televised per year to meet CMOM requirements.

The State of Wisconsin requires all permitted sanitary sewer systems, such as the sewer system maintained by the Village of Shorewood, to adopt a CMOM plan to ensure that the system is properly maintained and that steps are taken to preserve the environment and public health.³⁶ The Village was introduced to this requirement through the Stipulation Agreement of the MMSD Consent Plan that the Village was subject to as a participant in the system. The Village is now required to have their own CMOM plan. One important component of managing a sewer system is regular inspection and maintenance. The Department uses a televising truck to inspect the condition of its sewer lines, as well as inspection through contracted sewer-lining services. This contracted service was responsible for approximately one-half of the televising accomplished during the three-year period. This is an important strategy for identifying blockages or leaks, as well as for planning for future repairs and replacements. However, sewer inspection lags significantly behind the Village's stated goals from the 2010 CMOM Plan.³⁷ The 2010 CMOM set a goal for the Village of inspecting 22,629 feet of sewer, or approximately 14% of the Village's 158,400-foot system, per year. However, the Village only inspected approximately 61% of its goal during the period 2017-2019, as illustrated in the following table.

³⁶ WDNR. Capacity, Management, Operation, and Maintenance (CMOM). dnr.wi.gov/topic/wastewater/cmom.html

³⁷ 2010 CMOM Plan established goals; 2018 is the most recent report available.

Table 13: Linear Feet of Sewer Inspected per Year

| Footage Televised | 2017 | 2018 | 2019 | Total |
|---|-------|--------|--------|--------|
| Linear Footage Televised | 9,670 | 12,313 | 19,767 | 41,750 |
| Percent of Total Footage Televised | 6.0% | 7.8% | 12.5% | 13.7% |
| Percent of CMOM Goal Met | 43% | 54% | 87% | 61% |

One reason the Department has not been able to meet its televising goals is the Village’s shared televising service agreement. The televising truck is jointly owned by the Village of Shorewood, the Village of Brown Deer, and the City of Mequon. The truck is housed and maintained by the City of Mequon, with the other communities contributing to its repair and upkeep. The truck rotates among each of the three communities every two months, meaning that the Village of Shorewood has access to it once every six months for a two-month period. One reason the Village has not met inspection goals is the condition of the truck upon receipt for use and the resulting mechanical failures. A second reason concerns staff availability to support the effort when the truck is available and operating. Televising can be a time-consuming process because before a section of sewer can be televised, it must first be cleaned to ensure an unobstructed view of the sewer’s condition. Because staff only have access to the truck for a limited time, they only have four months per year in which they can complete their annual televising goal; often these periods fall during peak workload times when staff do not have the capacity to both complete the televising and meet other service demands. As a result, the televised footage regularly falls short of CMOM goals.

The level of system inspection is a concern because it could put the status of the Village’s CMOM management framework in jeopardy, in which case WDNR has the authority to issue specific directives to the Village that may be included as conditions in a permit.³⁸ Furthermore, the less footage inspected per year, the lower the chances are of identifying a potential issue in a timely manner. If these issues are not detected, they could lead to costly repairs and impact the environment and public health. At the Village’s current rate of inspection, a section of sewer may only be examined once every 22 years. In comparison, if the Village met its CMOM requirements, each section of sewer would be inspected approximately every seven years. Without up-to-date condition assessment data, the Village cannot effectively incorporate the sewer system into its comprehensive asset management plan, as discussed in Recommendation 5.

A second concern caused by the limited number of feet of sewer televised is that it impacts the equity of the Village’s shared services agreement. Shared services can be a cost-effective strategy. However, in the case of the televising truck, the Village of Shorewood is paying an unequal share for the service in comparison to its neighbors. The three communities split the cost of purchasing the truck evenly. They also divide the cost of maintenance. Half of the annual maintenance expenses are divided evenly among the three communities, and the other half are prorated depending on the linear footage televised by each community that year. This means that each community is responsible for one-sixth of the vehicle’s maintenance cost per year, plus an additional contribution depending on the footage televised by that community.

The Village Shorewood uses the truck much less than its partners, as illustrated in the following table. Because the Village is responsible for the base maintenance cost, no matter how many feet it televises, the Village has been paying a cost per foot that is approximately four times higher than the other communities. This does not include consideration of the one-third of the capital cost the Village invested in this program, which increases the disparity even further.

³⁸ State of Wisconsin. NR 210.25(7). docs.legis.wisconsin.gov/code/admin_code/nr/200/210.pdf#page=7.

Table 14: Televising Truck Maintenance Costs by Community, 2017-2019

| Category | Village of Shorewood | Village of Brown Deer | City of Mequon | Total |
|---|----------------------|-----------------------|----------------|----------|
| 2017 | | | | |
| Linear Footage Televised | 9,500 | 41,612 | 62,716 | 113,828 |
| Maintenance Cost per Community | \$1,795 | \$3,009 | \$3,808 | \$8,612 |
| Maintenance Cost per Linear Foot Televised | \$0.19 | \$0.07 | \$0.06 | \$0.08 |
| 2018 | | | | |
| Linear Footage Televised | 8,000 | 33,411 | 71,085 | 112,496 |
| Maintenance Cost per Community | \$1,016 | \$1,584 | \$2,425 | \$5,025 |
| Maintenance Cost per Linear Foot Televised | \$0.13 | \$0.05 | \$0.03 | \$0.04 |
| 2019 | | | | |
| Linear Footage Televised | 4,224 | 19,335 | 64,986 | 88,545 |
| Maintenance Cost per Community | \$2,466 | \$3,571 | \$6,908 | \$12,945 |
| Maintenance Cost per Linear Foot Televised | \$0.58 | \$0.18 | \$0.11 | \$0.15 |
| Three Year Total | | | | |
| Linear Footage Televised | 21,724 | 94,358 | 198,787 | 314,869 |
| Percentage of Footage Televised per Community | 6.9% | 30.0% | 63.1% | 100% |
| Maintenance Cost per Community | \$5,277 | \$8,164 | \$13,140 | \$26,582 |
| Percentage of Cost per Community | 19.9% | 30.7% | 49.4% | 100% |
| Maintenance Cost per Linear Foot Televised | \$0.24 | \$0.09 | \$0.07 | \$0.08 |

Over the last three years, the Village has paid an average of 24 cents per foot of sewer televised, compared to less than 10 cents per foot for each of its partners. If, on the other hand, the Village had met its CMOM goal and televised 22,629 feet per year over the last three years, its average maintenance cost for the truck and equipment would have been approximately \$7,000 over three years, for a derived maintenance cost of 10 cents per foot televised. Even if the Village had met its CMOM goal over the past three years, it would still only be responsible for less than 19% of the total televising footage. However, the Village would have still been responsible for over 26% of the total maintenance cost. The Village would still be responsible for one-third of the capital cost of purchasing the truck. Therefore, the Village would, still be paying a proportionally higher cost than its peers.

Increasing the number of feet televised would make the televising process more cost-efficient, would help ensure that the Village's entire sewer system is inspected regularly, and would help identify damaged pipe sections, clogs, and leaks in a timely manner. There are two options for increasing the footage televised: increasing the staff time spent televising or contracting out the service to a third party.

As noted, one reason the Department has not been able to achieve its CMOM televising goals concerns the condition of the equipment and frequent mechanical failures. Another reason is lack of available staff to operate the televising truck; staff must balance televising responsibilities with other maintenance and repair tasks on the water and sewer systems. The Department likely could not increase the staffing available for televising without decreasing service levels in another area or hiring additional staff. Based on an analysis of work hours and staffing levels for other Department functions, there is no viable opportunity to reduce any existing service levels to devote additional capacity to televising.

The Village should investigate the potential of working with the Village of Brown Deer and the City of Mequon to develop and issue a joint RFP for televising services as an alternative to owning and maintaining their own equipment. It may prove beneficial to all three member communities. Issuing a joint RFP may attract a wider variety of responses and better bid prices due to economies of scale. The three communities should evaluate the responses to the RFP and use them as a basis for evaluating the current arrangement. Contracting out televising would allow the Department to meet its annual goal without concerns about adequate staff capacity or balancing competing work priorities. Furthermore, a contractor may be able to perform the task more efficiently than in-house staff. For example, if the shared televising truck breaks down neither Shorewood, nor Brown Deer, nor Mequon would be able to televise until the truck was up and running again. A contractor specializing in televising would be better prepared to provide reliable service. It is common for communities to contract out televising services. The Department already contracts out televising for sections of sewer greater than 30" in diameter, and other communities, such as the City of DePere, Wisconsin, contract out all televising.³⁹

If the partnering communities do not pursue a joint effort to contract the service, the Village should seek to achieve a more equitable allocation of costs or independently evaluate privatizing the service. It might be a more equitable approach to use each community's approved CMOM targeted inspection quantity as a base.

Recommendation 14: Evaluate joint contracting of street sweeping services.

The Village sweeps public streets every two weeks. Its sweeper is co-owned with the Village of Whitefish Bay. The sweeper is housed in the Shorewood DPW lot when not in use and is maintained by Shorewood staff mechanics, with half the cost of maintenance and staff time reimbursed by Whitefish Bay.

The two communities do not track the total miles of streets swept per year, so it is unclear whether the current division of sweeper costs is equitable. The Village of Shorewood has a total of 28.27 miles of municipal streets and the Village of Whitefish Bay has 38.46 miles.⁴⁰ Costs are divided evenly despite Whitefish Bay having 30% more road to sweep than Shorewood. This may not necessarily negate the value of the arrangement. The Villages should track an appropriate street sweeping activity metric for each community and consider revising the agreement if needed.

The Villages should jointly evaluate whether sweeping services are being provided as efficiently as possible; it may be that a private contractor or other unit of government is able to provide the service at a reduced cost compared to the cost of equipment and labor currently borne by the Villages.

The Village of Shorewood and the Village of Whitefish Bay should collaborate to seek alternative providers for street sweeping services either from negotiations with another community or through the issuance of a joint RFP for contracted street sweeping services. The communities can then evaluate the responses to understand the relative value of contracting the service versus providing it in-house. This review will help ensure that both communities continue to provide street sweeping services as cost-effectively as possible. If the service were contracted, the two Villages would no longer be responsible for the costs of maintaining, housing, and eventually replacing the sweeper. Contracting for the service would create additional staff capacity that could be devoted to implementing other critical needs identified in this report.

Recommendation 15: Investigate other opportunities for alternative service delivery with neighboring communities, including the City of Milwaukee.

Recommendations 10, 11, and 12 discussed some of the challenges associated with the Department's current shared services agreements. However, there may be other opportunities to identify alternative forms of service delivery that would be financially beneficial for the Village. Alternative service delivery could

³⁹ City of DePere. Project 20-15 Sewer Televising, January 2020.
https://www.deperewi.gov/egov/documents/1578498428_67665.pdf

⁴⁰ Wisconsin Department of Transportation. Wisconsin Information System for Local Roads, January 1, 2020.

involve shared services with another community or contracting with another entity to provide the service. Examples of additional service areas to assess could include the following:

- Shared turf mowing contracts
- Shared forestry maintenance
- Shared maintenance of water and/or sewer mains
- Shared maintenance of planters in business districts
- Shared street and/or sidewalk maintenance

Sharing these services or contracting together can create the potential for efficiencies due to economies of scale. It also provides an advantage in contracting for the service; a contract to maintain 500 lane miles of street, for example, may be more attractive to contractors than a lower-dollar contract to maintain 50 lane miles. A larger value RFP may prove more attractive and draw a larger pool of competitive bidders, allowing the communities to select the most advantageous option. The neighboring City of Milwaukee may be able to provide some services more efficiently due to its larger size. It is common for larger organizations to provide shared services to smaller organizations in the same area; for example, Steuben County, New York, works with communities on a diverse set of shared services like street maintenance and erosion control.⁴¹

The feasibility of different communities working together through shared services or contracting will depend on many factors, including relative service levels in the different communities, each community's willingness to share the service, and each community's capacity to offer or finance the service. A formal shared service or contracting evaluation would need to examine each of these factors in detail. The level of required review and analysis is beyond the scope of this report. However, the investment by the Village would have the potential of identifying significant cost savings opportunities and help improve the efficiency of DPW service delivery.

Operational Issues

The previous sections of this report have discussed the appropriate staffing, resources, and service levels to improve Department activities and results. Another important consideration is whether Department operations are supported appropriately to meet service delivery demands. This section of the report addresses opportunities to standardize practices, build institutional knowledge, and safeguard staff and the public. Implementing these recommendations will help improve the value provided by the Department from existing resources by ensuring that the Department operates as effectively as possible.

Recommendation 16: Develop written Standard Operating Procedures as part of a plan for institutional knowledge retention.

As a best practice, the Department maintains written records for many of its processes. For example, its "Standard Operating Procedure for Winter Operations" details specific procedures for snow plowing and salting operations. This is an important and helpful tool that provides staff with clear direction for the delivery of this critical service. However, in other areas, the Department has relied on staff experience rather than documented procedures. For example, there are no written procedures for administrative functions such as processing payroll within the Department or operational procedures such maintenance of electrical signals and streetlights. This puts the Department at significant risk of service interruption due to staff absence or turnover.

To address this issue, the Department should ensure that there are written Standard Operating Procedures (SOPs) for all key Department operations. SOPs not only help preserve institutional knowledge when

⁴¹ Steuben County. Steuben County DPW Shared Services. <https://www.steubencony.org/pages.asp?PID=84>

positions turn over but also serve as references for current employees and as an important training tool for new employees.

The Assistant Director should oversee the process of reviewing and updating SOPs as part of his or her operations management responsibilities. To develop SOPs, the Department should first inventory its current procedures and determine where gaps in its written record exist. Based on these gaps, the Department should develop a list of outstanding SOPs that need to be written or updated. The American Public Works Association's (APWA) Public Works Management Practices Manual provides guidance on developing standards for all elements of public works, including administrative functions such as HR and finance, emergency management, safety, planning and development, engineering, project management right-of-way management, facilities and fleet, parks, and solid waste.⁴²

After the Department has developed a list of SOPs to be written or updated, the Department should rank the list in order of priority; high-priority SOPs should include processes with significant safety or liability concerns and processes where there is a risk of institutional knowledge loss in the near future. The Department should also develop a standard format for SOPs. There are numerous methods for developing SOPs; they typically share the following common elements:

- A clear title articulating the topic of the SOP
- An introduction/objectives statement describing the purpose of the SOP
- A detailed description of the work to be performed, including step-by-step instructions
- Discussion of additional considerations that should accompany the work
- Additional documentation and/or references to other SOPs that may apply to the work
- Safety protocols, such as minimum safety guidelines for each task

Finally, the Department should identify the position or positions that should have the primary responsibility for writing each SOP as well as a development schedule, starting with the highest-priority areas.

SOPs are an important tool for preserving institutional knowledge, but they should be supplemented with succession plans for key positions to ensure that the Department is adequately prepared to continue operations upon turnover in those positions. The Department should make specific plans for positions that uniquely hold specialized knowledge. This is currently a particular concern for the Chief Electrician position; there are no other Electricians employed by the Department, and no one else has the specialized knowledge to operate the Village's essential streetlight and traffic light systems.

The Department should identify individuals in key positions at risk of turnover within the next five years and develop an individualized succession plan for each position. Depending on the position, one option is to develop a training plan to help existing employees gain the knowledge and experience to step into the role upon an individual's retirement. If the appropriate experience cannot be developed in-house, a second option would be to temporarily add a position to train under the retiring individual. While this would be an investment in additional salary in the short term, it would minimize the service impact of the transition and help ensure that the Department can continue to meet service demands in critical areas.

⁴² American Public Works Association. Public works Management Practices Manual, Ninth Edition.
<https://www.apwa.net/store/detail.aspx?id=PB.APWMw>

Recommendation 17: Create DPW staff development plans and provide budget and other resources to support the effort.

The Department is currently allocated \$2,000 per year for professional education. While this is a reduction from previous years, the Department has not historically expended its entire allocation, as illustrated in the following table.

Table 15: Training Allocations and Expenditures, 2016-2020

| Training Funds | FY2016 | FY2017 | FY2018 | FY2019 | FY2020 | Average |
|--|----------------|----------------|----------------|-----------------------|-----------------------|----------------|
| Total Training Funds Allocated, General Fund | \$3,000 | \$3,000 | \$3,000 | \$2,000 | \$2,000 | \$2,600 |
| Total Training Funds Allocated, Utility Funds | \$6,000 | \$6,000 | \$6,000 | \$6,000 | \$5,000 | \$5,800 |
| Total Training Funds Allocated, All Funds | \$9,000 | \$9,000 | \$9,000 | \$8,000 | \$7,000 | \$8,400 |
| Total Training Funds Expended, General Fund | \$1,595 | \$1,245 | \$1,604 | Not Available | Not Available | \$1,481 |
| Total Training Funds Expended, Utility Funds | \$917 | \$1,786 | \$2,100 | Not Available | Not Available | \$1,601 |
| Total Training Funds Expended, All Funds | \$2,512 | \$3,031 | \$3,704 | Not Available | Not Available | \$3,082 |
| Percent of Allocated Funds Expended, General Fund | 53% | 42% | 53% | Not Applicable | Not Applicable | 49% |
| Percent of Allocated Funds Expended, Utility Funds | 15% | 30% | 35% | Not Applicable | Not Applicable | 27% |
| Percent of Allocated Training Funds Expended, All Funds | 28% | 34% | 41% | Not Applicable | Not Applicable | 34% |

Between FY2016 and FY2018, the year with the most recently available data, the Department spent an average of \$3,082 per year on training, or less than half of its allocated funding. The Assistant Director is responsible for determining the training to offer in a given year. There is no official training plan prepared throughout the year, but all staff certification requirements are met. For example, Utility Operators are required to maintain a WDNR Grade 1-GD Water Operator License; the Department's training budget funds classes associated with achieving and maintaining that certification. The Assistant Director also tries to offer additional training as staff capacity and funding allows, but additional training opportunities are limited due to restrictions in available staff capacity.

Although time spent in training reduces staff capacity available for operations, it is also an important tool for building skills and retaining staff. One reason for a robust training program is to promote employee retention. The Society for Human Resources Management recommends training as a key retention strategy, because "If employees are not given opportunities to continually update their skills, they are more inclined to leave."⁴³ If employees have the chance to grow and develop within an organization, they are incentivized to remain with the organization. Limiting turnover is vital to maximizing the Department's efficiency; each employee that leaves represents a loss of institutional knowledge and a reduction in staff capacity, as well as future training costs with a replacement employee.

Training also prepares employees to advance into higher-level roles in the organization. This not only helps retain employees by providing them with a path for advancement but also ensures that the Department is prepared with talent ready to step into more advanced roles as vacancies allow.

Finally, training helps improve staff effectiveness. It helps ensure that all employees are up-to-date on best practices and that their skills and knowledge are regularly refreshed. This helps maximize the value of the

⁴³ SHRM. Managing for Employee Retention. www.shrm.org/resourcesandtools/tools-and-samples/toolkits/pages/managingforemployeeeetention.aspx

Village's investment in its employees and helps them provide the highest-quality, most efficient services to the residents of Shorewood.

There is an opportunity to take advantage of these benefits by expanding the amount and variety of training available to Department staff. There are areas in which staff would benefit from additional training. For example, Foremen are expected to direct the actions of teams of staff but have not received recent specialized training in leadership or staff management during the update to the APWA supervisory academy. As another example, the upcoming AMI implementation will require staff to have the technical knowledge to use it effectively; it will be important for the Department to ensure that all relevant staff are appropriately trained on the use of the system to maximize the value of the Village's investment. Finally, as the Department reviews and updates its SOPs, as discussed in Recommendation 16, staff should receive training on the updated SOPs to ensure that everyone understands the appropriate procedures to do their work safely and effectively.

To ensure that the Department is providing the appropriate level of training every year and that training opportunities are available to all staff, the Department should incorporate individual training plans into the performance review process. Supervisors should talk with their direct reports during their annual performance reviews about their goals and priorities and how training can support their professional development. Based on these individual development goals, the Department can develop an annual training plan based on available resources. For each potential training, the Department should consider which staff would be attending and develop estimates for the cost of the training and the estimated staff hours that would be spent attending the training. The Department should also rank the importance of each potential training, with training to maintain certifications the highest priority, followed by training needed to maintain operations and, finally, other elective training, such as leadership or customer service training.

Ranking training topics by priority will help the Department understand the resources required to complete required training throughout the year, as well as the Department's capacity to offer elective, but still valuable, training. Estimating staff hours will also allow the Department to schedule training appropriately throughout the year to minimize impacts on operations.

The Department should implement the training plan and track training hours by individual and by type throughout the year. Department leadership should regularly evaluate these training reports to ensure that every individual has the opportunity for training.

Recommendation 18: Use an RFQ process for the selection of professional engineering services.

Like many other smaller communities, the Village does not currently have in-house engineering capacity. Engineering services are important to ensure the structural integrity of Village capital projects and to review the feasibility of private development plans, but the workload is not sufficient to support a full-time Engineer position. Instead, the Village contracts with a private firm to provide services such as engineering plan review, engineering for small projects, or other specialized engineering support. This contract provides adequate engineering support for ongoing projects. When additional engineering capacity is required, such as for the construction or renovation of a new facility, the Village solicits bids for additional engineering support. For larger projects, however, the Department contracts with more specialized engineering firms.

The Village currently uses an RFP process in the selection of professional engineering services. An RFP asks potential contractors to submit their plans for how they would provide a specific service, along with the proposed cost. Village staff review the RFP responses and consider which firm could most effectively and efficiently deliver the requested service. DPW's general practice has been to select the lowest-cost proposal that still fulfills the RFP requirements, although there is no formal requirement to select the lowest bidder.

This practice generally helps ensure that Department projects are as cost-effective as possible. However, the cost of engineering services usually represents a small fraction of the overall cost of a capital project;

the bulk of the project cost is construction and materials. The role of the Engineer is vital in ensuring the project's success. Engineers are responsible for ensuring that a new piece of infrastructure is safe, durable, and designed to be produced as efficiently as possible. Therefore, it is important that engineering services be as high-quality as possible to ensure that the Village receives the full value of its capital investment.

To ensure that the Department retains the best-qualified engineers possible for each capital project, it should switch to an RFQ process, rather than an RFP process, to solicit engineering services. An RFQ asks firms to submit their qualifications to be considered for a project. The requesting organization then reviews the qualifications of the firms and selects the firm with the best qualifications for the desired service. The organization can then negotiate with that firm on a price for the services. Alternatively, an organization can use the RFQ process to narrow down a list of the highest-qualified contractors and then request detailed project proposals from that elite group. The advantage of the RFQ process is that it removes cost as an immediate factor for consideration, instead emphasizing the importance of finding the contractor or contractors in the best possible position to provide high-quality services, helping ensure that the work meets all of the Village's needs.

Recommendation 19: Control public access to the DPW site by limiting it to designated times or by appointment.

Visitors are currently allowed to come and go from the DPW lot at any time during DPW's business hours, including morning and afternoon hours, when many large vehicles are either entering or leaving a lot. Members of the public visit the lot to make inquiries, meet with DPW staff, or drop off recycling. A receptacle for commingled recyclables is located in the DPW parking lot and is accessible by the public during DPW business hours from 7:00 am to 3:30 pm, Monday through Friday. The lot is open on weekends (first and third Saturday from April-November and first Saturday from December-March) , staffed by a DPW employee. On Saturdays, the DPW accepts special items, such as electronics and tires, for recycling, along with commingled recyclables.

The weekday visits pose a safety issue. The location of the main office provides limited views of the DPW lot, meaning visitors are largely unsupervised when on the premises. DPW staff operate several pieces of heavy equipment, and these vehicles are entering or leaving the lot throughout the day. It is a best practice to limit pedestrian traffic in an area with heavy equipment in operation.

To reduce the risk of accidents, the Department should limit visitors to the lot to designated times when the lot can be appropriately monitored. Members of the public should be welcomed only when they have previously made an appointment, or at designated times when staff are available to monitor the lot.

This change will require the support of Village Administration and the Board of Trustees. Effective communication with the public concerning the change in site access will also be important. The Department should invest in clear signage at the entrance to the lot and should leave the entrance gate closed as a general practice, helping ensure that only staff and authorized visitors have access. The change will require careful messaging, but ultimately it will not limit the public's access to DPW; they will still be free to contact the Department over the phone or by email or to speak in person if they make an appointment. The policy will instead improve the safety of both the public and DPW staff during Department operations.

Facility and Equipment

Recommendations in this section address the impact of the Department's facility and equipment on operations. One important barrier to the Department's efficiency and effectiveness that has not yet been addressed is its campus. The DPW's main office facility is nearly 100 years old, and many of the other buildings on the lot are of a similar age. The lot is not optimized to support modern DPW operations, and it significantly limits staff's ability to effectively serve the public.

The following page contains an overhead image of the lot, prepared as part of The Sigma Group's 2014 report. The total site is approximately 3.1 acres bounded by walking paths and the Milwaukee River on one side and single-family homes on the other. The lot includes five buildings:

- The Main Office/Mechanical Garage, which houses Village Administration, the Building Maintenance Shop, the Vehicle Maintenance Shop, and employee areas such as locker rooms and the lunchroom
- The Upper Garage, which largely functions as overnight storage for DPW vehicles and equipment
- The Depot Warehouse, which is used as cold storage for equipment and supplies
- The Annex Building, which is used as cold storage for equipment and supplies
- The Salt Shed, which stores salt for winter road de-icing

Figure 5 labels these facilities, as well as the transfer station and other infrastructure and equipment on the lot.

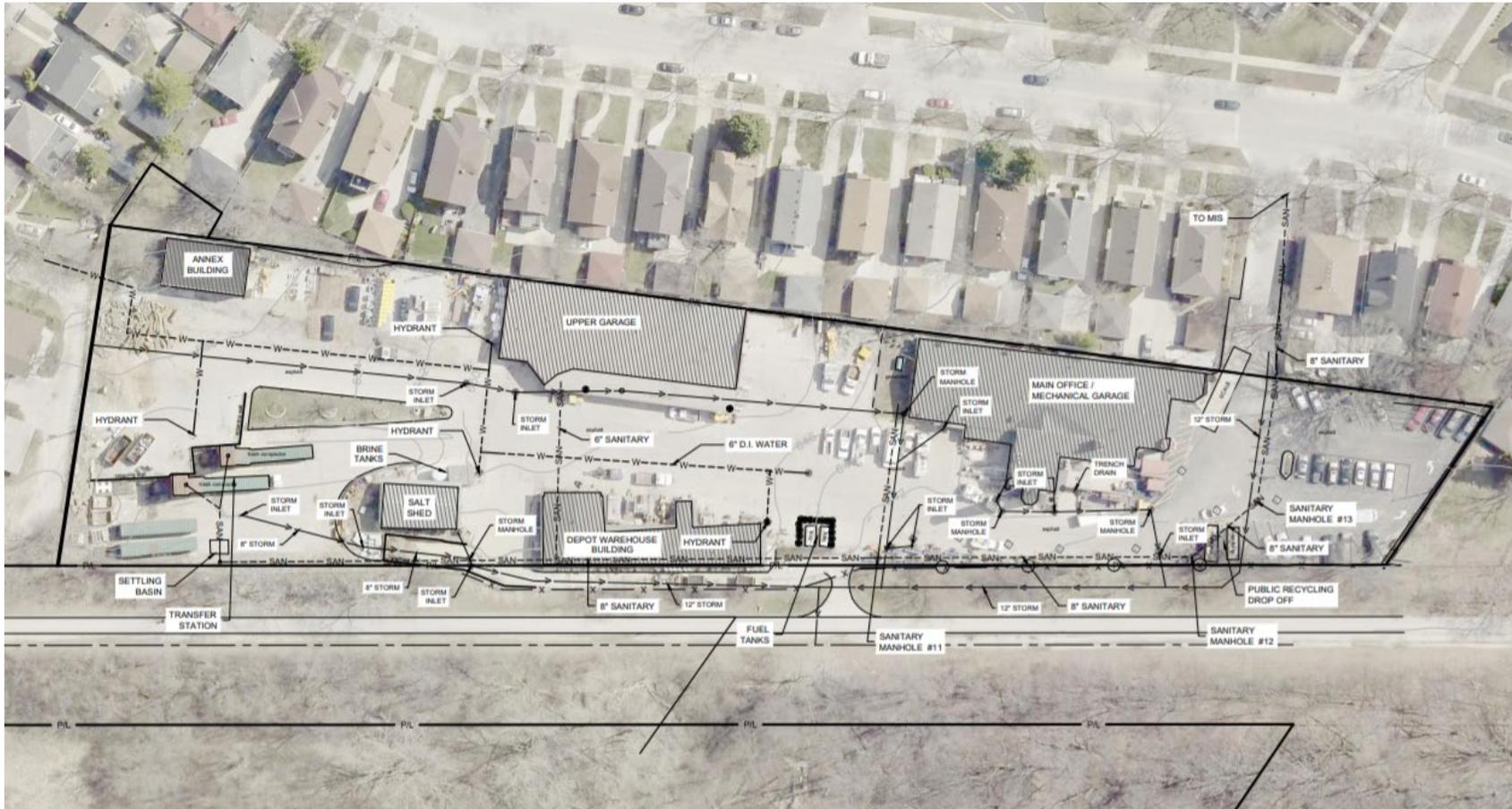


Figure 5: Overhead Image of the DPW Lot⁴⁴

⁴⁴ The Sigma Group. Shorewood Public Works Building Report, 2014. <http://www.villageofshorewood.org/DocumentCenter/View/2841/14792-Existing-Site-Plan-C100-Site-Plan?bidId=>.

Recommendation 20: Relocate the waste transfer station.

The Village of Shorewood shares a transfer station with the Village of Whitefish Bay, as discussed in Recommendation 10. The transfer station is housed on the Shorewood DPW lot. The DPW lot is located in a residential area of the Village, adjacent to walking and biking trails, as illustrated in the site overview included in Figure 5. The location of the transfer station so close to neighborhood and recreation amenities is problematic for several reasons. One concern is the impact of the station on the neighboring residents. Storing waste close to housing and recreation areas creates odor concerns. The trucks hauling waste and recycling to and from the transfer station also have noise impacts and increase the wear on Village-owned roads.

Relocating the waste transfer station can provide additional space on the DPW lot for other purposes, such as vehicle storage. The DPW lot also lacks sufficient indoor storage space for vehicles and equipment. Indoor or even covered storage protects the Village's important and expensive assets from the weather and ensures that they are ready for use each day. However, the building where most vehicles are stored has extremely limited capacity. As a result, the vehicles must be parked very close to each other. Furthermore, there is only one door large enough to allow vehicles to enter or leave the building. To access a vehicle parked at the back of the building, staff must move all the other vehicles in front of it until a path can be cleared. This process is time-consuming, especially at the beginning and end of the day. Multiple staff reported that this process takes 30 minutes to an hour per day, plus additional time during the day if different vehicles are required. This is time when staff are being paid but are not offering any value to the community. The average hourly cost of a front-line DPW employee is \$40.21 for salary and benefits, according to FY2020 records. If each of the 19 front-line employees spends an average of 45 minutes a day accessing and returning vehicles, that represents a total cost of approximately \$145,000 per year, equivalent to 1.75 FTEs.

If the transfer station were relocated, the space could be used as a second indoor vehicle storage facility. Additional storage space would help the Department access and store vehicles and equipment faster, reallocating scarce time resources for staff to spend on their core duties.

The Villages of Shorewood and Whitefish Bay should work together to identify a transfer station location outside of the DPW lot. The new transfer station could either be operated by Village staff or an outside contractor. The advantage of an outside contractor is that the Villages would no longer be responsible for the staff time spent to maintain the facility or track tonnage, increasing staff capacity for other functions.

Recommendation 21: Develop a plan for replacing the existing DPW facility to improve efficiency and safety.

The DPW campus consists of a main office building, a central lot, and several outbuildings used to store supplies and equipment. The main office building was constructed in 1928, with an addition constructed in 1934, according to data available from the Wisconsin Historical Society.⁴⁵ The building was constructed nearly 100 years ago, at a time when horse-drawn carriages brought waste to be burned in the facility. Operations have changed significantly since then, but the building's layout remains fundamentally the same. It is not optimized to effectively support efficient, modern operations.

One of the primary concerns with the current lot is the lack of indoor storage space for vehicles and equipment, as discussed in Recommendation 20. Moving the transfer station would allow the Village to construct additional storage space that would help address this urgent issue. However, there are other areas of concern for the lot as well. The mechanic's bay is not tall enough to fit the largest Department vehicles, requiring Mechanics to complete repairs and maintenance on them in the outside lot. This impacts operational efficiency because it limits the Mechanic's access to the tools and equipment that would be

⁴⁵ Wisconsin Historical Society. 3801 N Morris Blvd.
<https://www.wisconsinhistory.org/Records/Property/HI79232>

available in the shop. It also poses a health and safety risk by forcing Mechanics to work on these vehicles outside in what might be very hot or very cold conditions.

Inside the main facility, there are further operational concerns. There is no general meeting space available aside from the lunchroom. While the lunchroom does offer adequate space, it has no computers available for staff to access, and the room is frequently in use, meaning that any meetings held there experience frequent interruptions. Without dedicated meeting rooms, the Department has no space for collaboration or training.

Furthermore, the facility is not energy efficient. For example, its windows are single pane, which allows heat and air conditioning to escape. This lack of efficiency makes the facility costly to operate. The Department has budgeted \$172,680 on utilities costs for FY2020. In comparison, the neighboring Village of Whitefish Bay, which has a similar population size but a much newer Public Works facility, budgets only \$40,000.⁴⁶

Previous analyses of DPW operations recognized these issues as well. The Village contracted with Springsted Incorporated in 2010 to conduct a Police and Public Works Service Prioritization Study, and one of their findings was that “The public works facility is obsolete and inadequate for the level of services the Village is currently providing.”⁴⁷ The report specifically discusses the lack of available space, both to store vehicles and equipment and to support efficient operations. The report recommended providing a modern space for the public works facility with adequate space to support Village services. A 2014 study of the facility completed by The Sigma Group and Achint-Architecture also found the facility to be lacking. The report states, “The primary site deficiency is a conflict of storing individual pieces of equipment within the Maintenance area, thereby reducing the daily efficiency of maintenance and repair operations. This conflict cascades into other storage and operations and displaces functions from their optimal locations....”⁴⁸

The Village should address these operational issues by developing a plan to provide a more appropriate facility for its DPW operations. A suitable facility should have a drive-through vehicle storage facility with openings at both ends and space to move vehicles. The drive lane should not be used for vehicle storage. It should also have mechanics' bays with the space to service even the largest equipment; at least three bays would be ideal and maximize the Department's efficiency by allowing them to work on several vehicles at once. Staff should also have access to at least one meeting room where a group can work uninterrupted and where they can have access to a computer and other technology. Finally, the buildings should be energy efficient to reduce operating costs.

There are several options for achieving this upgraded facility, including upgrading current facilities on the existing site in a phased process or relocating DPW operations to a new site.

One option would be to upgrade the current facilities on the existing site, as recommended in The Sigma Group's report. The Sigma Group recommended several improvements to the existing site at a cost of approximately \$4 million, including the construction of a new vehicle storage facility and the demolition and reconstruction of the main office building.⁴⁹ This renovation could be done in phases to allow continued use of the site. This phased approach would spread the cost out over a longer period, potentially making it easier for the Village to fund. It would also allow DPW to remain on its current site without

⁴⁶ Village of Whitefish Bay. 2020 Annual Village Budget.

<http://www.wfbvillage.org/DocumentCenter/View/989/2020-Adopted-Village-Budget>

⁴⁷ Springsted Incorporated. Police and Public Works Service Prioritization Study, June 2020. Page 27.

<http://www.villageofshorewood.org/DocumentCenter/View/5575/PW-Overview-sectionw>

⁴⁸ The Sigma Group. Shorewood Public Works Building Report, 2014. Page 2.

<http://www.villageofshorewood.org/DocumentCenter/View/2839/DPW-Yard-Master-Plan-Report?bidId=>

⁴⁹ The Sigma Group. Shorewood Public Works Building Report, 2014.

needing to find a temporary space to relocate. However, this process would likely be highly disruptive, both to DPW operations and to the nearby residents. It would also likely require demolition of many buildings on the site, which would mean the Village would lose properties of historical interest and visual character.

A second option would be to relocate to a new site and either build a new facility to the Village's specifications or remodel an existing facility. This would have the advantage of allowing the Village to design a facility to meet best practices standards, rather than being constrained by the layout of the existing site. Furthermore, it would allow the current facility to be re-purposed. This option would also allow the Village to preserve these historic buildings. Unfortunately, there is limited space available within the Village of Shorewood; relocating to a new facility would likely require moving the facility outside of the Shorewood Village limits. Finding a suitable site with reasonable travel times to the Village might be an issue.

Before pursuing either option, it is important for the Village to carefully review service levels and service delivery models and determine what the Department's operational needs will be now and into the future. The shared services agreements and contracted services discussed in this report would impact the Department's staffing and equipment levels and inform facility needs. In any case, the setup of the current site creates serious and continuing operational impacts. All options would likely mean an investment on the Village's part but would significantly increase the Department's effectiveness and reduce operating costs.

Recommendation 22: Review desired service level provision and determine appropriate equipment.

The development of an asset management plan and annual workplan, as discussed in Recommendations 5 and 6, provides an opportunity to review the Department's existing service levels and scope of services. As part of that review, it is also important to consider whether the Department has the appropriate equipment to maximize the effectiveness of operations. While the Department generally has high-quality, well-maintained equipment, there may be opportunities where additional or different equipment may improve efficiency. For example, it may be beneficial to purchase a collection vehicle better suited to working in alleyways, a knuckle boom truck for stump clearing, or a vacuum excavator for cleaning water valves.

A knuckle boom truck may be an appropriate investment for several reasons. DPW is responsible for managing an urban forest of more than 6,500 trees. One of the duties of the Department's three Foresters is to remove tree limbs or entire trees that have died or fallen. Currently, the most common piece of equipment used for this task is a skid loader with a clamshell bucket. This equipment has limited maneuverability and capacity to pick up large logs.

The existing skid loader is an important piece of equipment because of its versatility; it can be used to assist with a large number of projects. However, it is an imperfect tool for forestry work because it can only scoop things up, not vertically lift things. Foresters remove stumps of trees by grinding the stump down and then painstakingly remove the stump pieces from the hole. It is a difficult and labor-intensive process. A knuckle boom truck has an attached arm that allows items such as stumps to be lifted vertically and moved. It could also be used to collect dirt from a nearby dump truck and deposit it in the hole to fill it. In this application, the equipment would replace a labor-intensive and manual process with two supported steps. It could also be used for other tasks, such as lifting and moving bulky waste or cleaning up debris following a storm. It is a valuable piece of equipment to improve the efficiency of DPW operations. The cost of the knuckle boom truck would be approximately \$300,000, based on a review of market prices, but it would be an investment in more efficient operations and help ensure that DPW has the appropriate tools for its responsibilities.

Another potential equipment purchase would be a vacuum excavator. One of the most important PM tasks for Utilities staff is valve exercising, defined as the regular turning of valves in water mains to ensure that they can operate freely. This helps ensure that the valves operate and can cut off the water supply when

needed, such as in the case of a water main break. If the valves are not exercised regularly, the Village risks finding them non-operational in a crisis. If a water main breaks and the Village cannot cut off the water, it risks significant water loss, plus potential water damage to surrounding property.

To access the valves, Utilities staff must first clean out the boxes where the valves are housed. These often fill with leaves, dirt, and other debris that must be cleared. Staff currently must clean out this debris manually; although the Department does own a vacuum truck, the truck's hose is too large to fit into the valve boxes. Purchasing a vacuum excavator for the valve exercise program would significantly reduce the time spent cleaning out valve boxes and exercising valves, increasing staff capacity for other duties. The cost of a vacuum excavator would be approximately \$30,000, based on a review of market prices, but would allow the Department to function more efficiently and help ensure that all valves are regularly exercised so that they can perform effectively.

All three of these pieces of equipment have the capacity to improve the efficiency of operations, but all three also require a significant upfront investment, as well as an investment in continued maintenance. To understand the value of making these purchases, the Department should develop an estimate for the total amount of work hours saved by each piece of equipment per year, as well as the total estimated cost of the staff time that those work hours represent. It should also estimate the annual maintenance cost of each piece of equipment as well as its total useful life. This will allow the Department to calculate estimated net cost savings throughout the equipment's lifespan and compare these savings to the upfront cost of the equipment to determine the value of the investment. The Department should consider non-tangible costs as well; for example, the purchase of a front-loader truck for alley collection would decrease the physical demands of the job, potentially increasing an employee's capacity for work in other areas and decreasing the chances of injury or burnout.

The Department should review all of its service levels and consider what pieces of equipment may improve operational efficiency. For each piece of equipment, it should perform this analysis to understand the value of the potential purchase. This review will help ensure that the Department is investing effectively in equipment to support operations. The Department should also consider when it is appropriate for each piece of equipment to be replaced. The Village already considers the condition of an asset and its estimated useful life. It should also consider whether the equipment functions effectively, its estimated annual use, the cost of repair versus that of replacement, and its estimated trade-in value. These factors should be developed into formal replacement criteria.

Future Considerations

The COVID-19 pandemic has impacted both the Village's economic outlook as well as community interactions. The recommendations in this section discuss initiatives that may not be feasible in the near term but are important considerations to better support the DPW's operations in the future.

Recommendation 23: Work with the Shorewood Business Improvement District to encourage their contribution to the cost of horticulture and other maintenance in the Downtown area.

Small businesses are one of the cornerstones of a thriving community, and the Village of Shorewood boasts a welcoming, attractive Downtown district full of small businesses that lend the area a unique appeal. Unfortunately, the COVID-19 pandemic has already had a significant impact on the economy, and its full effects are not yet known. However, one of the sectors hardest hit by the pandemic has been small businesses.

It is not recommended that additional burdens be placed on small businesses in the near term. However, in the longer term, as the economy recovers, the Village should consider working with these businesses to help offset some of the costs of maintaining the Downtown business district at a higher standard than the rest of the community.

Residents appreciate the appearance of the Village; more than 85% of respondents to a 2019 community survey rated the Village's overall appearance as "Excellent" or "Good." Furthermore, 88% of respondents rated the Village's streetscaping on main streets as "Excellent" or "Good." Maintaining Village aesthetics is an important tool for cultivating a desirable, livable community. However, it can also be costly. The Village has budgeted \$203,795 for parks and beautification in FY2020, including more than \$15,000 for landscaping and plantings.

The Village established the Shorewood Business Improvement District (BID) in 1999. The BID encompasses the Village's commercial centers and is funded through a tax on property owners within the BID. It is governed by a Board of Directors consisting of representatives of businesses within the BID as well as Village government officials and Village residents. The revenue from the property tax funds several initiatives to promote the businesses in the district, including marketing the district and holding special events.⁵⁰

The Village's aesthetic appearance also serves as a marketing tool for local businesses by helping to make the Downtown area an attractive place to visit and shop. The businesses in the Village's Downtown area, where most of the beautification efforts are concentrated, receive the greatest benefit from these efforts. The current Downtown beautification efforts are funded out of the Village-wide budget. It is common for BIDs in other communities to fund beautification efforts in their districts. For example, the BID in the City of Sun Prairie, Wisconsin, budgets \$14,000 in FY2020 for beautification and maintenance, including planters, sidewalk maintenance, and snow removal.⁵¹

The Village should track expenditures on Downtown beautification, including staff hours, and determine the total cost of providing and maintaining planters within the BID. It should then consider reducing the level of service provided by the Village and, instead, work with the BID to fund contracted landscape maintenance. Asking the BID to fund these efforts would not only reduce Department operating costs but would also give the BID more flexibility to determine the level of service desired in the Downtown.

Recommendation 24: Consider seasonal demands for snow and ice control as well as leaf removal when adapting future on-street parking strategies and operating approaches.

On-street parking is a fundamental characteristic of life in the Village of Shorewood. On-street parking is also a fundamental constraint on service provision by DPW. Many DPW services are impacted by the presence of vehicles parked on the street and the limitations this creates for service access and vehicle maneuverability. This is especially true in the case of seasonal support for winter operations (snow and ice control) and leaf removal. As displayed in Figure 3, winter operations and leaf removal create significant demands on staff time and impact workload during those seasons as well as throughout the year. Policies and operating practices that could decrease those workload demands could positively impact the costs for these services.

The Village of Shorewood has approximately 2,500 on-street parking spaces available for residents and visitors.⁵² On-street parking is allowed during the day without a permit, subject to certain restrictions such as two-hour parking limits in some zones.⁵³ Residents and visitors are also permitted to request up to 20

⁵⁰ Shorewood BID. 2020 Operating Plan, November 6, 2019.

secureservercdn.net/166.62.108.22/cxz.43c.myftpupload.com/wp-content/uploads/2020-BID-Operating-Plan-FINAL.docx-1.pdf?time=1585336014

⁵¹ City of Sun Prairie. 2020 Operational Plan, Business Improvement District Downtown Sun Prairie, December 3, 2019. <https://cityofsunprairie.com/DocumentCenter/View/10070/2020-Operation-Plan-Final>

⁵² Village of Shorewood. Final Transportation and Parking Analysis, January 31 2020. Page 21. www.villageofshorewood.org/DocumentCenter/View/7794/Transportation-and-Parking-Analysis-1-31-20?bidId=

⁵³ Village of Shorewood. On-Street Daytime Parking. www.villageofshorewood.org/208/On-Street-Daytime-Parking

temporary overnight parking permits per year, which allow them to park on the street between 3:00 and 5:00 am in designated districts.⁵⁴ Residents may also apply for longer-term permits for on-street overnight parking if they meet certain criteria; for example, permits are available for residents of apartment buildings with limited off-street parking space. The Village currently limits parking to one side of the street at a time between 10:00 pm and 6:00 am. On Sundays, Tuesdays, and Thursdays, cars can only park on the side of the street with even house numbers, and on Mondays and Wednesdays, they can only park on the side with odd house numbers. There are no restrictions on Friday or Saturday nights.⁵⁵

The Village is in the process of evaluating whether this parking is adequate to meet community needs. In January 2020, the Village published the results of a Transportation and Parking Analysis completed by Walker Consultants and Eriksson Engineering. The report examined opportunities for improving the Village's parking policies and practices to "better support and serve the community."⁵⁶ The report's parking analysis focused primarily on improving accessibility and convenience of parking in the Village for residents and visitors. The consultants analyzed the current utilization of on-street parking and solicited feedback from the community on how the Village's parking could better meet their needs. The report makes several recommendations based on this analysis, including recommending that additional overnight parking be allowed in both residential and business areas.

Community accessibility and convenience are important considerations when evaluating parking policies, but they must be balanced with the impact that parking regulations have on Village operations. Many of DPW's operations, including snow removal and refuse, recycling, brush, and leaf collection, are impacted by on-street parking. Cars parked on the street limit maneuverability and access, making these services less efficient and increasing associated labor and costs. The Village should consider these operational impacts as it evaluates an appropriate parking strategy.

The overall goal of the Village's winter operations is "to achieve bare pavement surfaces on the streets as expeditiously as practical following each storm occurrence."⁵⁷ The Village achieves this goal through a combination of salting and plowing. The DPW Director and Assistant Director are responsible for determining the appropriate strategy to respond to each weather event, based on snow depth and other factors. All plowing and salting are completed in-house by DPW staff. Arterial and collector streets are prioritized, followed by local streets, and finally cul-de-sacs, dead-ends, and municipal parking lots. Alleys are plowed only when snowfall totals three inches or greater.

In 2019, DPW staff spent more than 2,500 hours on plowing, salting, and other winter maintenance activities. If the Village chooses to allow more overnight parking, these hours will likely increase, both for the initial clean-up and the follow-up required as vehicle owners dig themselves out. Recognizing the Village's interest in addressing parking needs, several approaches can be considered to address winter operations:

- Declare Snow Emergencies as needed
- Reduce service expectations and standards
- Attempt to contract certain aspects of snow plowing

Many Wisconsin communities prohibit overnight on-street parking during winter months. Among the five benchmark communities studied as part of this report, only one, the Village of Whitefish Bay, allows on-street parking during wintertime, as illustrated in the following table.

⁵⁴ Village of Shorewood. Parking. <https://www.villageofshorewood.org/189/Parking>

⁵⁵ Village of Shorewood. Other On-Street Overnight Parking.

<https://www.villageofshorewood.org/681/Other-On-Street-Overnight-Parking>

⁵⁶ Village of Shorewood. Final Transportation and Parking Analysis, January 31 2020.

⁵⁷ Village of Shorewood. Standard Operating Procedure for Winter Operations, 2015 Update.

Table 16: Comparison of On-Street Parking Regulations

| | Village of Shorewood | Village of Bayside | City of Glendale | City of Mequon | Village of Sussex | Village of Whitefish Bay |
|--------------------------------------|--|---|--|---|--|--|
| Daytime Parking Regulations | Allowed, subject to regulation in specific zones | Not allowed except when approved by the Police Department | Allowed, subject to regulation in specific zones | Not allowed except when approved by the Police Department | Allowed, subject to regulation in specific zones | Allowed, subject to regulation in specific zones |
| Overnight Parking Regulations | 20 nights per year allowed for residents and visitors; additional parking allowed via permit | Not allowed except when approved by the Police Department | Allowed by permit Apr. 1-Nov. 30 No on-street parking allowed between 2:00 am and 6:00 am Dec. 1 through March 31 | Not allowed except when approved by the Police Department | Allowed in certain zones between Apr. 1 and Oct. 31 No parking between 2:00 am and 6:00 am Nov. 1 through Mar. 31 | 15 nights per year allowed for residents and visitors; additional parking allowed via permit |

Two communities, the Village of Bayside and City of Mequon, do not allow any on-street parking except under specific circumstances. Two other communities, the City of Glendale and the Village of Sussex, do not allow overnight parking during winter months to better allow plows and salters access to municipal streets. The Village of Whitefish Bay is the only benchmark community that, like Shorewood, allows overnight parking in the winter months. However, the Village of Whitefish Bay also has a snow emergency policy temporarily banning on-street parking,⁵⁸ and has enacted it in recent years in response to winter weather events.⁵⁹ While the Village of Shorewood does have a Snow Emergency policy in place, as of June 2020, the Village has not declared a Snow Emergency in more than 25 years.⁶⁰

It is not feasible for the Village of Shorewood to prohibit overnight on-street parking during winter months due to the lack of availability of off-street parking in many areas. The City should continue its practice of alternate-side-of-the-street parking, but parked cars, even only on one side of the street, impact accessibility and efficiency. The Village should consider declaring snow emergencies during major events to help ensure that DPW staff have the access they need to clear the streets as quickly as possible. The Village already has the regulations in place to declare such actions. Enforcing snow emergencies after so many years when they have not been used would require careful messaging and enforcement, but as residents become accustomed to the procedure, it would allow the Department to be more efficient in removing snow and ice from Village streets.

A second option is to reduce the level of service. For example, none of the benchmark communities has a bare pavement goal in place, and eliminating that goal would allow the Village flexibility to deploy its staff more efficiently. Staff would have to spend less time clearing each area, reducing staff hours spent on winter operations and allowing staff to clear Village roads more quickly. The disadvantage of this option is that it would reduce accessibility; vehicles would likely have to travel slower, impacting travel times, and accidents may increase. Reducing standards may also have an impact on emergency services such as police, fire, and ambulance, as well as other non-emergency services like refuse and recycling.

⁵⁸ Village of Whitefish Bay. Parking Permits. <https://www.wfbvillage.org/189/Parking-Permits>

⁵⁹ Anderson, Scott. Whitefish Bay Declares Snow Emergency, January 28 2019. *Patch.com*. <https://patch.com/wisconsin/whitefishbay/whitefish-bay-declares-snow-emergency>

⁶⁰ Village of Shorewood. Basic Reminders on Snow Emergencies and Plowing Operations, February 11 2019. <http://www.villageofshorewood.org/CivicAlerts.aspx?AID=310&ARC=635>

A third option would be to consider contracting some of the more time-consuming aspects of snow removal. All benchmark communities complete the bulk of snow removal in-house, as illustrated in the following table, but the City of Glendale contracts with a private vendor to plow alleyways.

Table 17: Comparison of Snow Removal Approach

| | Village of Shorewood | Village of Bayside | City of Glendale | City of Mequon | Village of Sussex | Village of Whitefish Bay |
|---|----------------------|--------------------|------------------|----------------|-------------------|--------------------------|
| Responsibility for Plowing Streets | In-House | In-House | In-House | In-House | In-House | In-House |
| Responsibility for Plowing Alleys | In-House | In-House | Via Contractor | No Alleys | No Alleys | In-House |

The Village of Shorewood already contracts for snow removal from sidewalks.⁶¹ Expanding contracting to include other time-consuming snow removal in less vital areas, such as parking lots and alleyways, would allow DPW staff to focus on providing rapid response to high-traffic areas. It is unlikely that the Village would have the option of contracting out snow removal entirely. The Village relies on timely snow and ice removal. Finding a contractor that would have the infrastructure in place to provide that response at the level of service required by the Village would be essential. Many communities that do contract for snow removal rely on other units of government, primarily counties, and generally not in urban areas.

Contracting for snow removal would be an additional expense, with the cost depending on the extent of the services provided and would likely increase the overall cost of winter operations. However, by making the overall process of snow clearance more efficient, the Department may be able to assign staff to other tasks. If the Village considers this option, it should evaluate the impact of contracting on winter workload and reprioritize and rebalance the Department's annual workload accordingly.

Another program impacted by on-street parking is leaf collection. The Village offers weekly residential leaf collection during peak leaf season, which generally begins the third Monday in October and continues through the last Friday in December (weather-dependent). Residents rake their leaves to the curb, and DPW staff collect the leaves via a vacuum.⁶² The Department has three vacuum vehicles, two of which suffered from breakdowns last leaf season.

Vacuumping is an accepted, although loud and dirty, method for collecting leaves. The Village's on-street parking impedes access to the leaves on the terrace and substantially reduces the efficiency and increases the cost of this methodology. Current practice requires crews to manually rake leaves to a spot where they can be accessed by the vacuums. It also may mean that more leaves are left on the street rather than being collected, which impacts the appearance of the community. Leaves also have the potential to clog storm drains, which could lead to flooding.

The Village has potential options for increasing the efficiency of leaf collection:

- Transitioning from vacuum collection to bag collection
- Expanding alternate side of the street parking to include days, rather than just nights
- Contracting out leaf collection
- Eliminating leaf collection

One option would be to transition from vacuums to bagging. Rather than raking leaves to the curb, homeowners would be required to rake the leaves into bags and then leave the bags on the curb to be collected by DPW staff. Switching from vacuuming to bagging would increase efficiency by eliminating

⁶¹ Residents are responsible for removing snow from residential sidewalks, but the Village contracts for removal when a resident fails to clear their sidewalks in a timely manner.

⁶² Village of Shorewood. Leaf Collection. www.villageofshorewood.org/543/Leaf-Collection

the need to try to navigate the vacuum around parked cars to collect all of the leaves. Vacuums are also prone to clogging and require two staff to operate to help direct the vacuum to the appropriate place. The Department also hires temporary staff to assist in raking where access is limited. Bagging, on the other hand, does not require any specialized equipment and can be collected by a single operator, although a multi-person crew may be more efficient, particularly during peak leaf season.

The Village has considered this option in the past. In 1993, the Village implemented a pilot leaf bagging program that illustrated the potential efficiency gains from this strategy. During the pilot program, the number of staff required to collect the leaves was able to be reduced from two to one because of the relative simplicity of the collection process, and the amount of leaves collected per eight-hour shift increased from an average of 5.7 tons to an average of 17.2 tons. Because of these efficiencies, the cost per ton collected was reduced from \$65.82 per ton to \$10.90 per ton, an 83% decrease.⁶³ This pilot was completed more than 25 years ago, and many things in the Village have changed since then, but the results suggest that bagging leaves would be an opportunity for significant cost reduction.

Implementing bag collection would require additional labor on behalf of the property owner. As stated previously, the use of leaf vacuums is common. It is used by the peer communities that choose to provide service; however, they do not share the same parking issue facing the Village. None of the Village’s benchmark municipalities currently require bagging, as illustrated in the following table.

Table 18: Comparison of Leaf Collection Approach

| | Village of Shorewood | Village of Bayside | City of Glendale | City of Mequon | Village of Sussex | Village of Whitefish Bay |
|-----------------------------------|----------------------|--------------------|------------------|----------------|-------------------|--------------------------|
| Leaf Collection Method | Vacuum | Vacuum | Vacuum | Not collected | Vacuum | Vacuum |
| Contracted Versus In-House | In-House | In-House | In-House | Not Applicable | In-House | In-House |

A second option may be to expand the Village’s current alternative side of the street parking regulations. These regulations require cars to be parked on only one side of the street at a time, but they are currently only in place at night. If the Village instituted alternate side of the street regulations during the day, when leaves are collected, the Village would have unobstructed access to one side of the curb. This would improve the efficiency of leaf vacuuming as well as other services like residential and yard waste collection. The change would likely initially increase enforcement action in the near term, but these would likely decrease as residents became accustomed to the new system.

A third option would be to contract out leaf collection. Although none of the peer communities contract for the service, other Wisconsin municipalities, such as the City of Elkhorn, contract with private haulers.⁶⁴ Contracting out this service would mean an additional direct cost but would create additional staff capacity for other services. The Village would also no longer be responsible for the cost of repair and replacing the leaf collection vacuum or for determining the logistics of how to collect leaves most efficiently. The Village should consider the potential for contracting out the collection of bagged leaves along with other waste collection services, as addressed in Recommendation 11. However, it is important to note that the contracted leaf collection would likely be via bags rather than vacuum. Contracted leaf vacuuming is uncommon due to prevailing industry practices and the cost of purchasing and maintaining vacuum equipment.

Finally, a fourth option would be to follow the example of the City of Mequon and eliminate leaf collection. While this would save the Village significant money and staff time, the service reduction would likely be unpopular with many residents. It would likely also lead to more leaves on the ground during fall months,

⁶³ Bartnicki, James F. Memorandum: Leaf Collection, April 24 1996.

⁶⁴ City of Elkhorn. Leaf Collection. www.cityofelkhorn.org/publicworks/page/leaf-collection

which could impact the aesthetics of the Village, clog storm drains, and create traffic hazards. Residents would either have to hire a private service or take leaves offsite for disposal. For these reasons, this option is not recommended.

The Village should evaluate these options as it is considering the recommendations made in the parking study. These initiatives would help maximize the efficiency of operations while still ensuring that adequate parking is in place for Village residents and visitors.

Conclusion

The recommendations in this report recognize the Village of Shorewood's unique characteristics that make the Village a special place. The recommendations also recognize the operational efforts required to maintain and sustain this built environment. The Village continues to manage a wide-ranging set of public works issues, from population density to a historic facility to Emerald Ash Borer to the challenge of meeting CMOM requirements. The appropriate strategy for balancing these competing concerns, along with the developing economic challenges of the COVID-19 pandemic, is to carefully consider the appropriate service levels for the Department as well as the appropriate methodologies for delivering those services. The asset management and work plans recommended in this report will provide an effective framework for making these decisions, and the service level and alternative service delivery recommendations offer the next steps for maximizing the efficiency of service delivery.

Achieving these changes will require coordination, collaboration, and communication through policy leadership, administrative oversight, and support from the community. Some of the changes will require an upfront investment, such as the recommendation to create an Engineering Inspector/Technician position. In the face of future economic uncertainty, the temptation may be to act quickly to reduce costs wherever possible. However, by taking time to carefully consider service levels and investing in the appropriate staffing and equipment, the Department will ultimately be in a better position to weather economic uncertainty both in the coming months and into the future.

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Attachment A: Proposed Modifications to Job Descriptions

The following table provides recommended modifications to the Department’s current job descriptions to better align responsibilities and ensure that the descriptions accurately reflect Department operations. Department leadership should also review all job descriptions for accuracy and to ensure that they reflect the Department’s priorities for each position. This table only reviews the descriptions for current positions, but the Department should review its other descriptions as well to determine if they are still necessary and whether they should be revised.

Table 19: Proposed Changes to Responsibilities and Tasks

| Position | Current Core Responsibilities | Proposed Changes |
|------------------------------------|---|---|
| Department Administration | | |
| Director | <ul style="list-style-type: none"> Develop and maintain DPW operating and capital budgets Coordinate personnel matters Work with Village Management on contract and workforce management Continue to develop and improve the GIS system Maintain progress and monitoring reports Maintain personnel records | <ul style="list-style-type: none"> Rework the job description to focus on high-level management responsibilities, rather than listing the specific programs the Director is expected to oversee Add that the Director is responsible for setting Department policy |
| Assistant Director | <ul style="list-style-type: none"> Work with Foremen to assign work to crews Coordinate snow and ice operations Administer all contracted services Assist the Director in the development and oversight of the Department | <ul style="list-style-type: none"> Reassign contracted services administration to the Capital Program Coordinator |
| Capital Program Coordinator | <ul style="list-style-type: none"> None (new position) | <ul style="list-style-type: none"> Administer service contracts on behalf of the Department Conduct regular inspections of ongoing construction projects Assist the Assistant Director with project management Oversee development of a comprehensive asset management plan |
| Administrative Assistant | <ul style="list-style-type: none"> Assist residents Scale and monitor refuse transfer weights Maintain files and records Track purchase orders and ensure timely payment of invoices Other administrative duties as assigned | <ul style="list-style-type: none"> None |

| Position | Current Core Responsibilities | Proposed Changes |
|--------------------------------------|--|---|
| Fleet and Facilities Division | | |
| Fleet and Facilities Foreman | <ul style="list-style-type: none"> Ensure safe working practices are followed Assist the Assistant Director in scheduling work assignments Assist in maintenance of fleet and facilities as needed Assist in winter storm operations as needed | <ul style="list-style-type: none"> Specifically state in the job description that this role may be performed in conjunction with other responsibilities |
| Chief Electrician | <ul style="list-style-type: none"> Maintain all street and traffic lights Keep warning, regulatory, and street signage in good repair Install and repair all lights, wiring, and electrical equipment Maintain and apply street line markings | <ul style="list-style-type: none"> Reassign non-electrical street maintenance responsibilities (i.e., sign maintenance, street marking) to the Services Division |
| Chief Mechanic/Mechanic | <ul style="list-style-type: none"> Perform PM on all Village equipment Repair fleet and equipment as needed Do body work and painting for Village fleet Repair shop equipment and tools | <ul style="list-style-type: none"> None |
| Craftsman | <ul style="list-style-type: none"> Assist the Chief Craftsman Maintain and repair buildings Maintain and repair heating and cooling systems Repair doors, windows, furniture, and other building-related items | <ul style="list-style-type: none"> No "Chief Craftsman" is currently employed; remove references to that position |
| Services Division | | |
| Services Foreman | <ul style="list-style-type: none"> Ensure safe working practices are followed Assist the Assistant Director in scheduling work assignments Assist in maintenance of forestry, parks, streets, or collections work as needed Assist in winter storm operations as needed Maintain an understanding of the Village's GIS system | <ul style="list-style-type: none"> Specifically state in the job description that this role may be performed in conjunction with other responsibilities |
| Horticulturalist | <ul style="list-style-type: none"> Plant and maintain plantings in parks and municipal areas Work with contractors to manage plantings in business districts Supervise and coordinate the seasonal workforce Design plantings and order stock Assist Forestry staff in tree pruning and removal Assist with snow removal | <ul style="list-style-type: none"> None |
| Forester | <ul style="list-style-type: none"> Plant and maintain plantings Assist with mowing, flower planting, and weed control Schedule and direct watering Plant and maintain trees Assist in making Dutch Elm Disease and other field surveys Assist with snow removal | <ul style="list-style-type: none"> Rework to focus on urban forest management; the current job description emphasizes general planting duties over more specialized forestry work Add language addressing the Village's Emerald Ash Borer program Add language addressing leaf collection, which is one of the Foresters' primary responsibilities |

| Position | Current Core Responsibilities | Proposed Changes |
|--|--|--|
| Route Collector/ Equipment Operator | <ul style="list-style-type: none"> Collect residential waste Operate recycling vehicle and collect recycling Operate equipment necessary to make special collections Assist with snow removal | <ul style="list-style-type: none"> Align position titles with the job descriptions; in practice, the title used by the Village is “Special Equipment Operator” for both Route Collectors and Equipment Operators Update to reflect that recycling collection is contracted out Include language about street maintenance responsibilities; no job descriptions in the Services Division specifically address street maintenance |
| Equipment Operator | <ul style="list-style-type: none"> Operate automotive and mechanical equipment Work with street, forestry, collections, sewer, water, or electrical crews as equipment operator Assist with snow removal | <ul style="list-style-type: none"> Align position titles with the job descriptions; in practice, the title used by the Village is “Special Equipment Operator” for both Route Collectors and Equipment Operators There is significant overlap between this job description and that of the Utility Equipment Operator; consider merging both into a general Equipment Operator job description |
| Utility Division | | |
| Utility Foreman | <ul style="list-style-type: none"> Ensure safe working practices are followed Develop and implement SOPs for Sewer and Water Operations and Maintenance Schedule daily work assignments for Operators Assist in the maintenance of water, sewer, and stormwater systems as needed Keep accurate and up-to-date records on meters, valves, hydrants, and other assets Assist in winter storm operations as needed | <ul style="list-style-type: none"> Specifically state in the job description that this role may be performed in conjunction with other responsibilities |
| Utility Operator | <ul style="list-style-type: none"> Maintain and repair sewer and water mains, valves, hydrants, meters, and other utility infrastructure Televiser sewer lines Clean sewers, manholes, and catch basins Install, remove, and read meters Exercise valves and perform other PM Assist in winter storm operations as needed | <ul style="list-style-type: none"> None |
| Utility Equipment Operator | <ul style="list-style-type: none"> Operate automotive and mechanical equipment Work with Utility as an equipment operator or other crews as assigned Assist with snow removal Know and follow the Department of Industry, Labor & Human Relations (DILHR) regulations, Public Service Commission rules, and WDNR Administrative Code. | <ul style="list-style-type: none"> Standardize language across descriptions; no other descriptions include a requirement to know DILHR regulations There is significant overlap between this job description and that of the Equipment Operator; consider merging into a general Equipment Operator job description |

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