



# PUBLIC WORKS DEPARTMENT

## 2021 ANNUAL REPORT

# TABLE OF CONTENTS

## DEPARTMENT OVERVIEW

Message from the Director .....	1
Organizational Chart .....	3
Employee Overview & Highlights .....	3
City Strategic Plan .....	4
Department Operating Budget .....	4
Capital Improvement Project Budget .....	4

## DIVISION OVERVIEW

Administration Division .....	5
Forestry Division .....	6-8
Street Division .....	9-11
Sewer Division .....	12-14
Water Division .....	15-17
Fleet Division .....	18-20

## ADDITIONAL INFORMATION

2022 Goals .....	21-22
Sustainability Initiatives .....	23



# MESSAGE FROM THE DIRECTOR



I am pleased to submit the Department of Public Works' 2021 Annual Report. This annual report communicates the Department's organizational structure, core operations, and service levels by summarizing the organized efforts and diverse functions of the Department. As a Department, we strive to inform the public of all that we do to beautify, maintain, and enhance the functionality of the City.

Despite the Covid-19 pandemic extending through 2021, the Department was again able to adjust and adapt to the constantly changing safety and precautionary guidelines handed down by both the federal and state departments of public health, while maintaining full operational capacity for delivering essential services as well as responding to any unforeseen emergencies.

A few highlights of accomplishments for the 2021 Calendar Year include:

- The Water Division resumed their multi-year citywide meter replacement program by incorporating recommended Covid-19 guidelines to insure the safety of residents and field workers. The crews were able to replace 1,790 meters in 2021, which was 210 meters short of their annual goal, however, it is still anticipated that the program will be completed in 2022.
- Through the efforts of the Forestry Division, the City was named Tree City USA for the 35th consecutive year and exceeded their tree cycle pruning and young tree cycle pruning annual goals.
- In 2021, the City's snow and ice control operations responded to 14 snow events totaling 31.7 inches of snow and used 1,911 tons of road salt.
- The Sewer Division launched a new storm sewer and catch basin tracking program that prevents unnecessary cleaning redundancy, which resulted in more efficient and effective services, and allowed staff to attain 100% of their operational goals.

On behalf of the Department, we thank the community, elected officials, City Manager, and other City Departments and their staff for their support. The City of Wheaton Department of Public Works is truly dedicated to fulfilling our mission to "...practice integrity, tolerance, and respect to enhance the quality of life for the entire community by efficient management of infrastructure and resources through innovation and best practices."

Vincent-Jay G. Laoang, PE  
Public Works Director



## MISSION STATEMENT

The City of Wheaton Department of Public Works pledges to practice integrity, tolerance, and respect to enhance the quality of life for the entire community by efficient management of infrastructure and resources through innovation and best practices.

## VISION

To uphold and accomplish our mission with dignity, humility, and transparency so that the citizens of Wheaton and professional peers view our Department as a model for premier and industry-leading municipal service.

## CORE VALUES

### Teamwork

We value our workforce and strive to ensure that they are well trained and well informed, respect our customers and fellow workers, and display commitment and professionalism.

### Flexibility and Creativity

We seek innovative means to accomplish our mission, vision, and goals.

### Communication

We practice active listening and encourage diverse points of view.

### Accountability

We are dedicated to fiscal responsibility and transparency in the use of public funds and the delivery of municipal services.

# 1 TEAM

# 6 DIVISIONS



The City of Wheaton Public Works Department is responsible for providing public services to citizens in a variety of areas to ensure that Wheaton is a clean, safe, and enjoyable place to live.

To help maintain public safety during emergency situations, the Department also provides resources, heavy equipment, snowplows, barricades, pumps, generators, and personnel as needed.

The Department is divided into six divisions in order to efficiently deliver these services: the Administrative Division, the Street Division, the Forestry Division, the Sewer Division, the Water Division, and the Fleet Services Division.

# ORGANIZATIONAL CHART

## KEY PERSONNEL

**Vince Laoang**  
Public Works Director

**Position Available**  
Administrative Superintendent

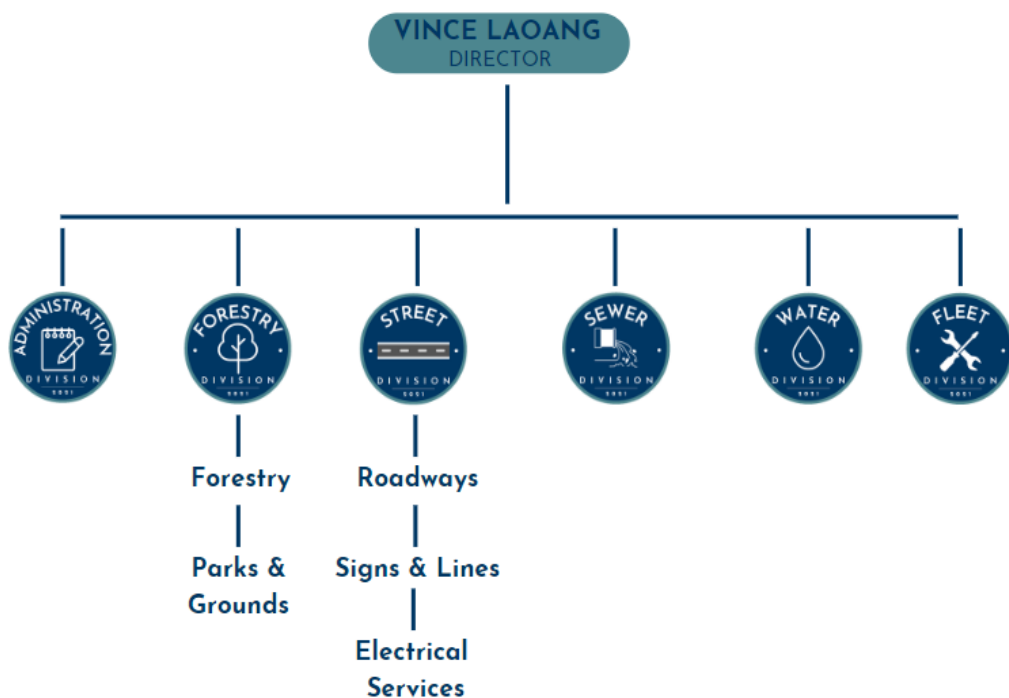
**Jason Ackerslund**  
Forestry Superintendent

**Sean Walsh**  
Superintendent of Sewers

**Nathan Plunkett**  
Streets Superintendent

**Al McMillen**  
Water Superintendent

**Sam Webb**  
Fleet Maintenance Superintendent



## EMPLOYEE OVERVIEW & HIGHLIGHTS



### ANNIVERSARIES

#### 15 Years of Service

Joel Brankin  
Michael Rogers

#### 20 Years of Service

Ray Catala  
William Minerly

#### 25 Years of Service

Korey Day

#### 30 Years of Service

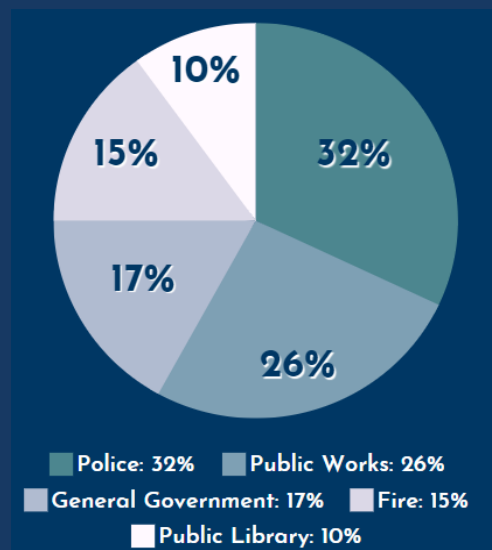
Maria E. Cruz-Marschitz

### NEW HIRES

Jason Ackerslund  
Nicolas Bershire  
Andrew Fahey  
Antonio Rivas

### RETIREMENTS

Kevin Maloney - 25 years of service  
Jon Hostetler - 21 years of service  
Susan Wallace - 8 years of service



# CITY OF WHEATON 2020-2025 STRATEGIC PLAN PRIORITIES

The City's Strategic Plan serves as a road map to guide decision-making by the City Council. It is comprised of priorities that reflect the desires of Wheaton residents and property owners and highlights the areas of focus that have been determined essential to preserving the City as a premier community in the region. Wheaton's plan for the future is based on the following five strategic priorities:

## Financial Stability

- Control expenditure increases over a five-year period
- Maintain structurally balanced budgets, striking balance between operating expenditures and infrastructure investment
- Effectively communicate information about City finances to the community
- Maintain fund balance reserves based on established policy targets

## Enhanced Infrastructure

- Decrease overland flooding into primary structures
- Decrease sanitary sewer backups
- Establish annual investment and operating targets to maintain City's infrastructure

## Responsive & Efficient Service

- Prioritize essential services for the City of Wheaton
- Identify key performance indicators to track service delivery levels for operating departments

## Community Safety

- Continue to prioritize the health, safety and welfare of the community
- Increase partnerships that focus on the health, welfare and safety of Wheaton residents
- Increase community outreach concerning safety and security issues

## Environmental Sustainability

- Develop policies and create programs that preserve the natural environment



## DEPARTMENT OPERATING BUDGET

The Public Works Department's operating budget for CY2021 totaled \$29,133,156 with capital improvement projects included. The City's General Fund finances the Administration, Street, and Forestry Divisions. The Water and Sewer Divisions are funded by revenue generated from metered water sales. Various departments fund the Fleet Services Division through vehicle usage fees.

**FLEET: \$5,039,964**

**SEWER (STORM): \$1,738,661**

**SEWER (SANITARY): \$2,289,596**

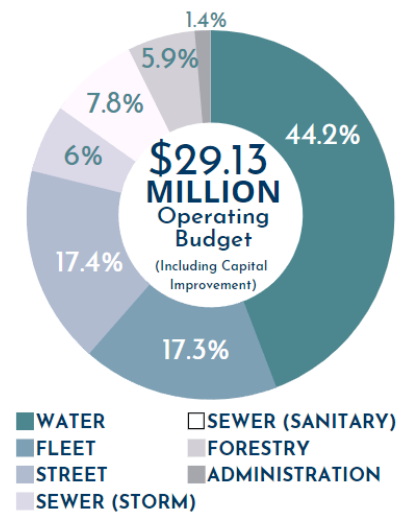
**WATER: \$12,868,129**

**ADMINISTRATION: \$403,889**

**STREET: \$5,059,468**

**FORESTRY: \$1,733,449**

**TOTAL: \$29,133,156**



## CAPITAL IMPROVEMENT PROJECT BUDGET

Capital Improvement projects include scheduled maintenance activities, design and implementation of upgrades and improvements for optimum infrastructure sustainability.

**WATER: \$2,044,000**

**SEWER (SANITARY): \$910,000**

**STREET: \$475,000**

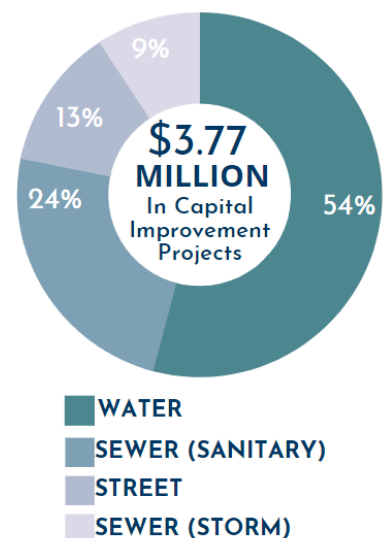
**SEWER (STORM): \$350,000**

**FLEET: \$0**

**ADMINISTRATION: \$0**

**FORESTRY: \$0**

**TOTAL: \$3,304,000**



## PUBLIC WORKS FACILITY



31

training sessions  
provided

12,089

invoices  
processed

3,940

service requests  
answered

The Administrative Division of Public Works oversees the administrative functions, long-range planning and resources allocation of the Public Works Department.

### 2021 ACCOMPLISHMENTS

**Goal:** Continually work on improving operations through identifying opportunities to enhance performance and reduce costs.

**Status:** Conducted a review and evaluation of Contractual Services. Bids, contracts, or purchases for projects authorized were completed within budgeted fiscal year.

**Goal:** Enhance department effectiveness through the development of personnel.

**Status:** Continue to monitor Tier II Employee development and cross training requirements.

### OTHER ACCOMPLISHMENTS

- Continued to manage Department Covid-19 response. Ensure safe work environment for employees and visitors



Dispatcher/  
Assistant

Administrative  
Superintendent

Administrative  
Assistant (Part-Time)

## ORGANIZATIONAL CHART





**19,800+**

Trees maintained  
in City's rights-of-  
way

**24**

acres of open spaces,  
& rights-of-way  
routinely mowed

**1,000+**

street furniture  
assets  
maintained

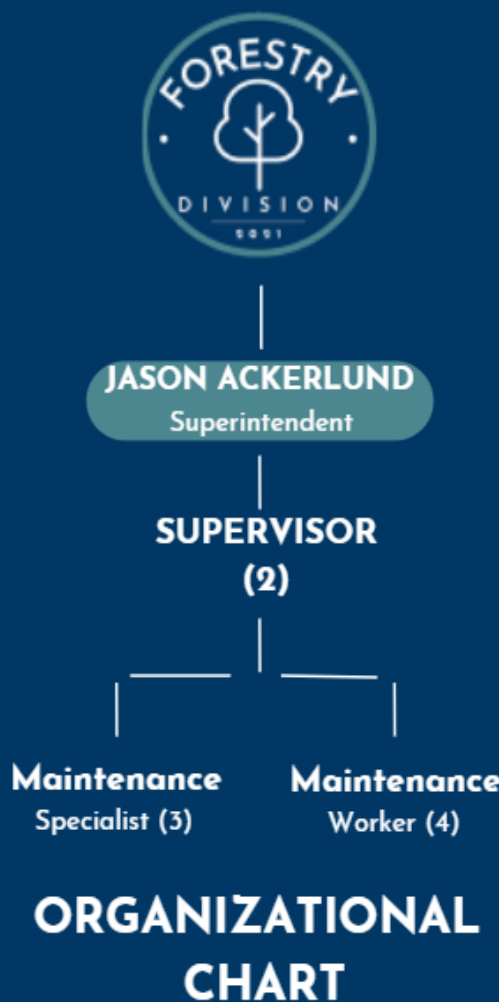
**250+**

seasonal flowerpots &  
beds maintained in  
downtown & gateways

The Forestry Division's staff of certified arborists (Forestry) and horticulturalists (Parks & Grounds) take pride in keeping Wheaton a safe and attractive place to live. Forestry crew maintains more than 19,800 trees in the City rights-of-ways and other public open spaces. They are responsible for planting, pruning, and scheduled removals of the urban tree canopy.

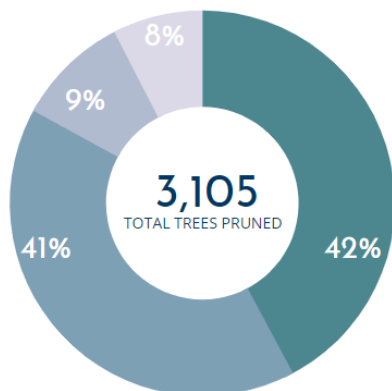
The Parks & Grounds crew cares for planting areas, flower pots, bushes, and turf in all city rights-of-way, public grounds and parking lots. Approximately 24 acres of landscaped areas require mowing, trimming, and planting. Many sites have landscape features to maintain. Adams Park is the only park owned and maintained by City crews.

Other areas maintained include the Central Business District amenities, street furniture, planters, seasonal holiday lightings and decorations. The Division crews respond to storm-damaged trees after inclement weather and support the city-wide snow removal operations.



## TREE PRUNING

A total of 3,105 trees were pruned in CY2021, including 529 trees were pruned by request, either by residents or other City Departments. 2,576 trees were addressed through a cyclical pruning cycle. It is the goal of the Forestry Division to inspect and prune all City-owned trees on a seven-year trim cycle. Routine pruning promotes proper growth habits and future development of the tree. Regular pruning ensures a healthier, safer urban forest.



EXCEEDED ANNUAL TREE PRUNING GOAL BY 20%

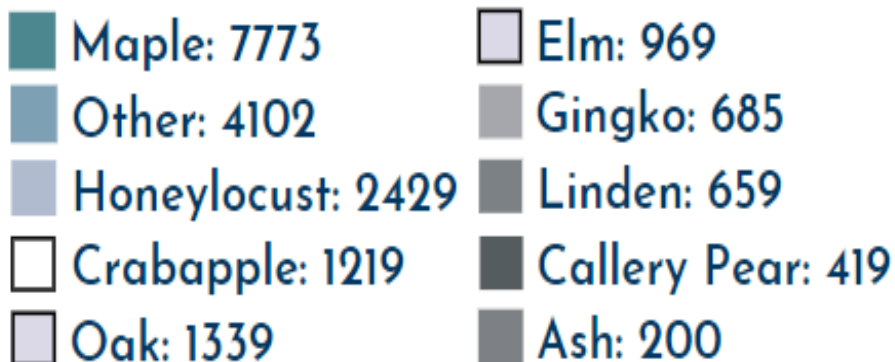
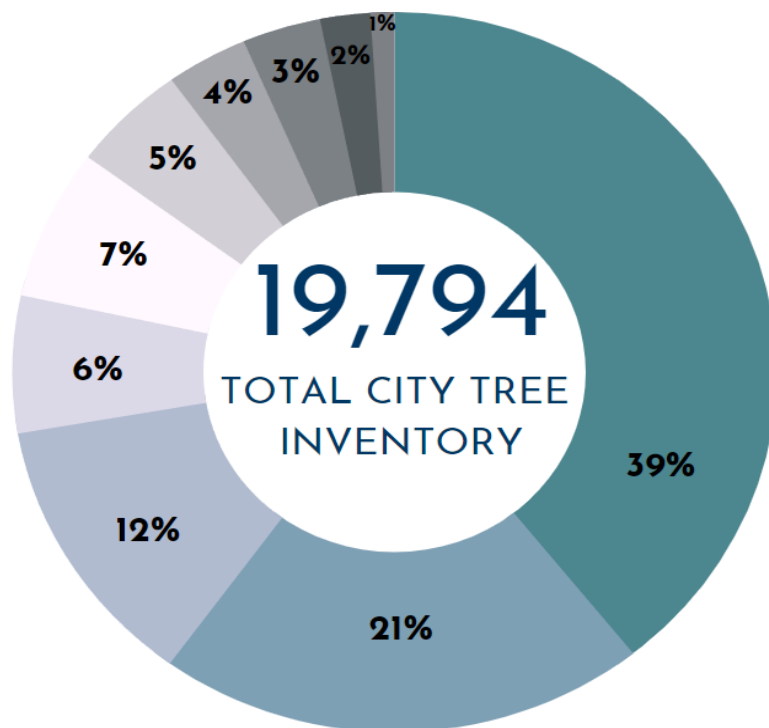
## TREE REMOVAL

Staff removed 454 trees in CY2021 that were either dead or diseased. A total of four infected Ash trees were removed through Public Works. The 200 remaining Ash trees may have been treated by the property owner or are considered healthy and will be monitored to determine if removal is warranted.

## PARKS & GROUNDS

Staff maintains and enhances City owned properties to be both safe and aesthetically pleasing. In addition to the landscapes surrounding City parking lots, the division maintains 24.6 acres of open space and public rights-of-way. These areas include the Central Business District and Adams Park. Crews also provide the following services:

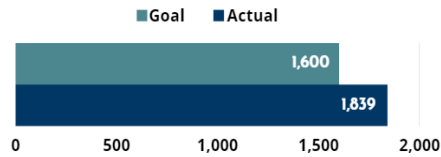
- Monitor and maintain the streetscape inventory of plants and trees
- Provide mulching
- Apply pesticide & herbicide at Adams Park, municipal owned parking lots, sewer lift stations and other areas
- Pickup trash and water plants in the CBD and citywide
- Mow lawns in Adams park, the CBD and City rights-of-ways



## 2021 ACCOMPLISHMENTS

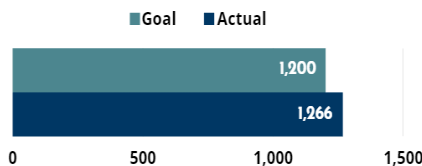
**Goal:** Tree Cycle Pruning Program established on a seven-year cycle for mature trees with an annual goal is to prune 1,600 trees.

**Status:** Pruned 1,839 trees, including both cycle and demand pruning programs. Contractor Services pruned 543 trees.



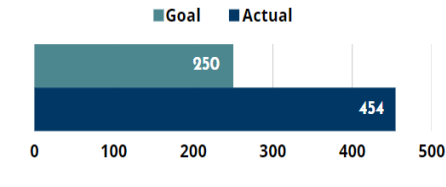
**Goal:** Young Tree Cycle Pruning established on a three-year cycle. Prune trees planted in 2015 through 2018 – estimate 1,200 trees.

**Status:** Young Tree Cycle Pruning reached 1,266 trees pruned.



**Goal:** Tree Removal Program to address dead, diseased, or hazardous trees from the City rights-of-way – estimate 250 trees to be removed.

**Status:** Removed 454 dead, diseased, or hazardous trees from City rights-of-way.



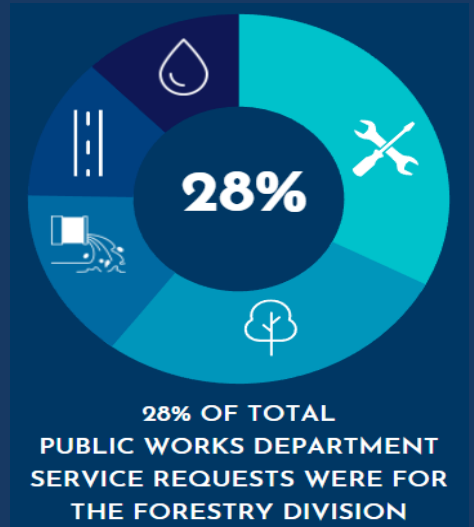
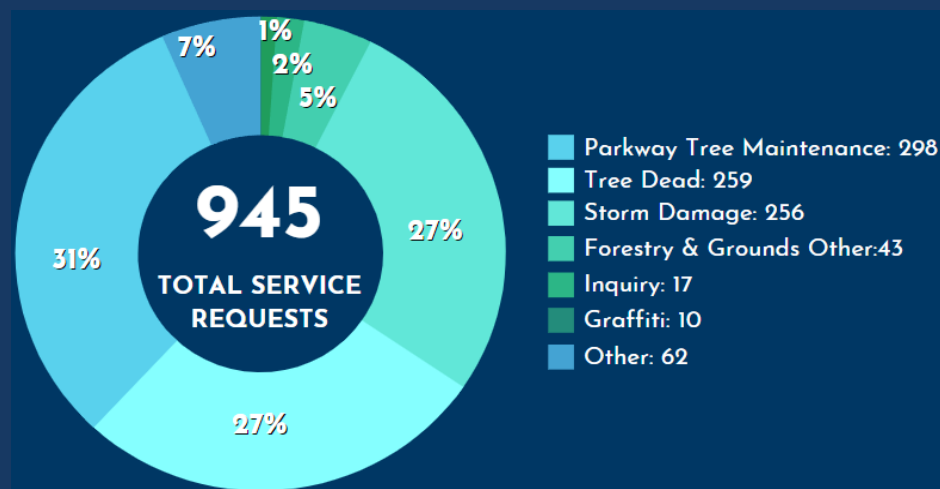
*The Forestry Division annually hauls approximately 2,200 yards of mulch and 700 yards of logs. Large storms in July and early August contributed greatly to the count.*

### OTHER ACCOMPLISHMENTS

- Planted 128 trees through Shared Cost Tree planting program.
- Address maintenance and restoration needs in public works facility, parking lots, lift stations, generator areas, and open spaces.
- Holiday Tree Lighting installation completed by city crews.
- Named Tree City USA for the 35th consecutive year.
- Continued Certification training for Certified Arborists on staff (4).
- 295 new trees were planted throughout the City.
- 103 new trees were planted during Phase 4 of the Central Business District Enhancement.



## FORESTRY DIVISION: SERVICE REQUESTS





**166.3**

centerline miles of  
roadways  
maintained

**10,000+**

miles of roadways  
swept annually

**4,000+**

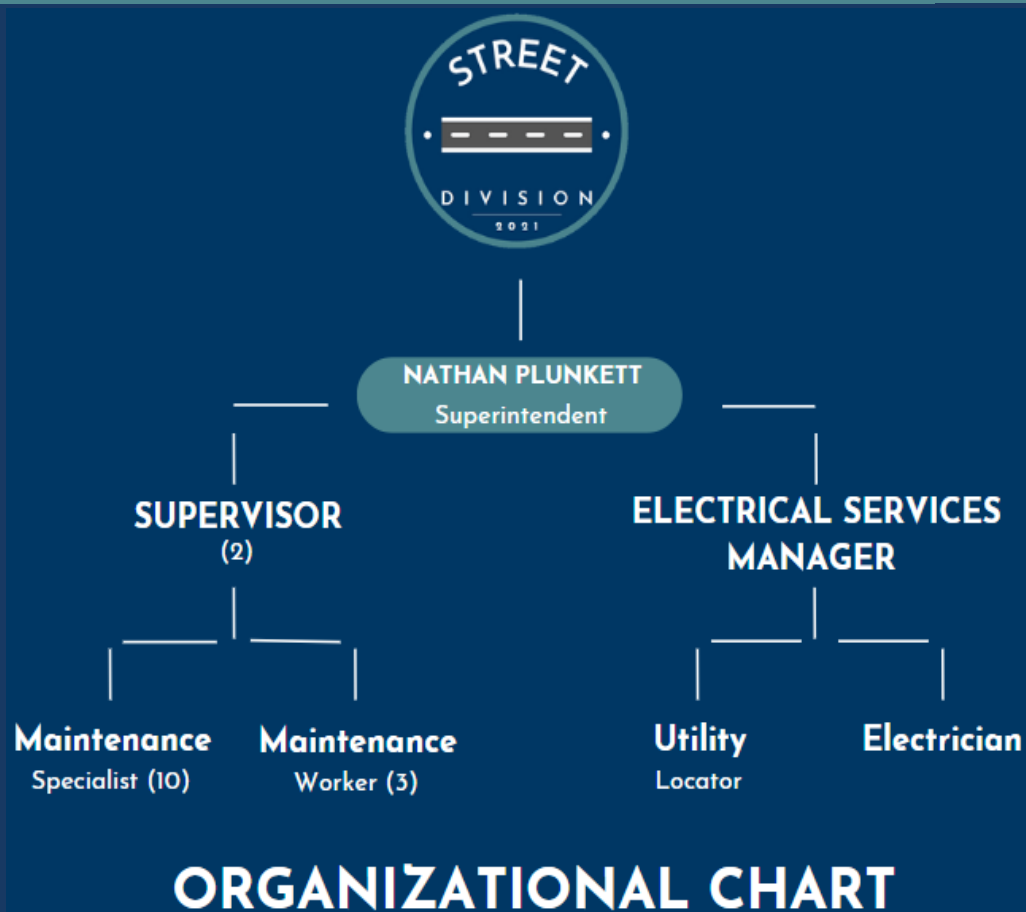
potholes  
repaired  
annually

**200+**

residential &  
commercial driveway  
inspections

The Street Division is responsible for many maintenance activities related to the City's streets, rights-of-way, and public facilities. The City of Wheaton has 166.3 centerline miles of roadways. The division also ensures compliance with federal, state and local regulations in all three of its sub-sections: Roadways, Signs and Lines, and Electrical.

The Roadways Section is charged with pavement maintenance, street sweeping, snow and ice control, alley maintenance, and miscellaneous waste disposal. The Signs and Lines Section installs and maintains all signs, pavement markings, and special event barricading. The Electrical Section maintains all pumps, generators, streetlights, civil defense sirens, and traffic signals. The Street Division also conducted inspections for 202 residential and commercial driveways in 2021,



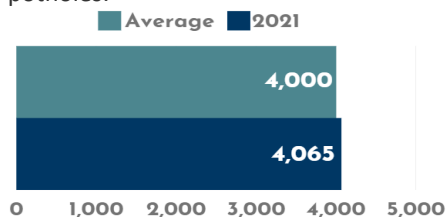
## ROADWAY MAINTENANCE

Roadway maintenance in the City of Wheaton is truly a collaborative effort between Public Works and the City's Engineering Department. The Engineering Department evaluates and monitors the condition of the City's infrastructure, including streets, to then plan construction and capital improvement projects. The City's in-house Roadways Maintenance Program aims to maintain or increase the overall condition of City streets. Staff implements the recommendations from the Engineering Department and sets them into action. This is done by developing and implementing project management tools and allocating in-house resources to complete projects.

### MAINTENANCE METHODS

Maintenance procedures are used to repair and prolong the life of the City's roadways.

**Cold Patches:** Potholes are filled in year-round both proactively and in response to resident reporting. The cold patch method is a temporary fix until a more extensive form of repair is scheduled for that portion of the street. An average of up to 4,000 potholes are repaired annually. In 2021, the Streets Division repaired 4,065 potholes.



**Crack Fills:** Filling or sealing cracks is important to roadway maintenance because it reduces the ability of water and other incompressible materials to enter the pavement surface that would otherwise accelerate deterioration. The application of hot-applied crack fill can extend pavement life from six months to four years.

**Surface Sealing & Restoration:** Gilsonite sealer-binder (GSB) is a sealing agent applied to roadways after they are constructed or repaired. Treating a roadway with GSB extends the life of the

pavement by reintroducing oils and resins lost to UV Rays, oxidization, temperature swings, and precipitation. Crews initially treat pavement one year after installation, and ideally reapply every five years.

**Resurfacing/Overlay:** From early May until late fall, a major component of street maintenance includes resurfacing roads throughout the City, which includes milling (grinding) street segments and re-paving them. The following criteria are used to prioritize streets for resurfacing each year.

- Date of last major rehabilitation
- Trends and observations of past roads maintenance
- Location proximity to arterials, collectors, or school-adjacent streets
- PCI score
- Areas identified by staff and/or residents
- Conflicts with the Water Main Replacement Program

### PRO-ACTIVE PAVEMENT MANAGEMENT

Wheaton's roadways are assessed every three years to determine their, and the total street system's, pavement condition index (PCI). PCI scores provide an approximation of a street's physical condition and help to prioritize road maintenance. In 2021, the Streets Division performed 2.9 miles of asphalt overlays, and performed 1.52 miles of asphalt patching.



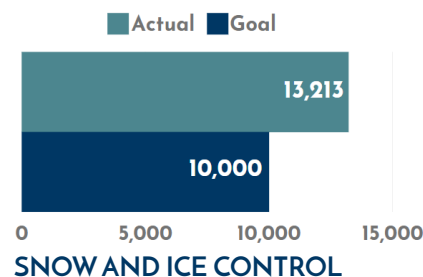
### STREET SWEEPING

All City streets are swept monthly between May and September to control litter, leaves, and any environmental contaminants found in the gutter line. Concentrated sweeping occurs during the leaf season to address falling leaves and early spring to remove any debris buildup caused by snow removal efforts.

Street sweeping serves three important functions:

- Removes leaves and tree debris that naturally fall into the public right-of-way.
- Improves water quality by reducing the pollutants that accumulate in the street and infiltrate storm water.
- Improves the appearance of streets and parking lots and contributes to the overall appearance of the City.

The City's two mechanical sweepers perform all regularly scheduled street sweeping, while the vacuum sweeper is used primarily to clear millings during pavement resurfacing and reconstruction. The division maintains an aggressive sweeping program to ensure a minimum of 10,000 miles is swept each year. In 2021, the Streets Division swept 13,213 miles of the City's streets.



### SNOW AND ICE CONTROL

The City of Wheaton maintains approximately 166 miles of streets along with 270 dead-end streets and cul-de-sacs divided into 16 specific snow plow routes as part of its snow removal operations.

In 2021 the Division responded to 14 snow events that produced a total of 31.7 inches of snow. A total of 1,911 tons of treated salt was used on the City's streets.

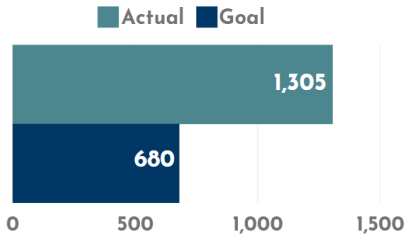


The Street Superintendent and five supervisors from the Street, Sewer, and Forestry divisions coordinate to ensure that snow is efficiently removed from roadways, parking lots, sidewalks, and facilities. If necessary, this may also be accomplished with assistance from private contractors.

Staff utilize several salt reduction practices and annually calibrate vehicle salt spreaders to distribute the compounds efficiently. These materials and practices allow staff to respond effectively to the variety of weather conditions winter brings and use less salt overall.

SIGNS

The City’s maintains a total of 10,659 signs include roughly 6,054 regulatory signs, 1,392 warning signs, 2,017 guide signs, and 1,196 other signs. Maintenance includes the design and fabrication; installation; assessment of condition and reflectivity; and sign removal. In response to FHWA regulations requiring all municipalities develop a sign maintenance plan that maintains the minimum requirements for sign retro reflectivity, staff have implemented a 15-year cycle sign replacement program that aims to replace 680 signs annually. In 2021, the Streets Division replaced 1,305 signs.



PAVEMENT MARKINGS & STRIPING

The City maintains approximately 78 miles of traffic lines, and more than 1,916 pavement markings. Pavement markings are currently contracted out by the

Department. Pavement markings include arrows, stop bars, crosswalks, handicap parking, and text that are applied to the roadway. Roadway striping is typically replaced on either an annual or two-year cycle. These markings include roadway edge lines, lane lines, parking spaces, turning lanes, and centerlines that use a water-based, retroreflective latex paint.

SIDEWALK REPLACEMENT PROGRAM

The City of Wheaton is responsible for the maintenance and replacement of public sidewalks. The City systematically surveys public sidewalks to identify defective and deteriorated sections that create a potential hazard. These surveys are conducted in a different geographic area of the City each year to determine which portions of sidewalk in each area will be addressed with the funds available each year.

ELECTRICAL SERVICES

Staff maintains 2,870 streetlights, 9 civil and defense and weather sirens, traffic signals at 14 intersections, 6 school zone warning flashers. Staff also inspect or maintain key electrical components of the City’s emergency generators, sewer lift stations, and transfer switches. Staff are also responsible for replacing faulty underground cable, repairing controller issues, repairing damaged or knocked down streetlights, conducting JULIE locates, and performing monthly testing

of the City’s generators, pumps, and civil defense sirens.

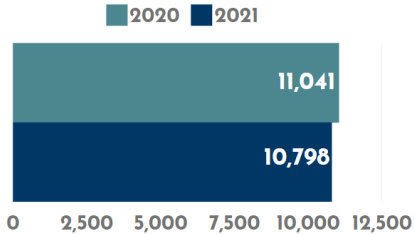
In 2021, Electrical Services re-lamped 98 streetlights, replaced 70 high pressure sodium (HPS) streetlight fixtures with energy efficient LED lights, and replaced 4 streetlight poles that were knocked down.



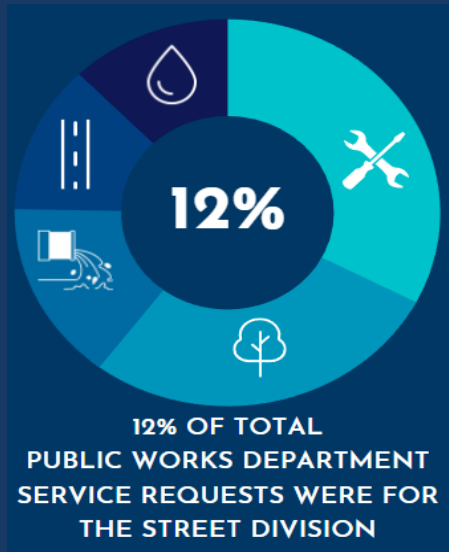
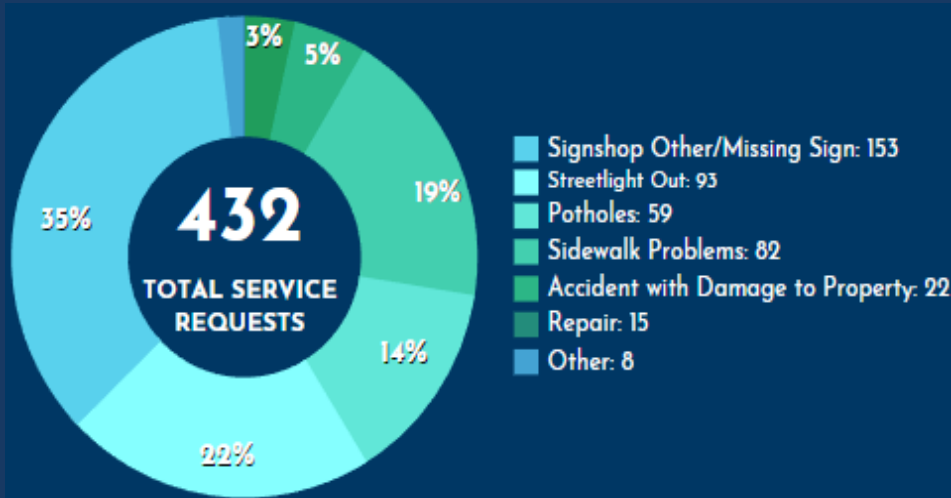
JULIE LOCATES

Performing JULIE (Joint Utility Locating Information for Excavators) locates is an essential customer service function. Locates are undertaken by Electrical with assistance from both Water and Sewer. When area residents or service providers plan to dig in Wheaton, they are required to call JULIE.

In 2021, staff responded to 10,798 JULIE requests by locating and marking underground City utilities in the right-of-way before excavation or other digging activities commence. The quantity of locates performed are dependent on annual construction and utility provider activity.



STREET DIVISION: SERVICE REQUESTS





168.3

miles of sanitary  
sewers maintained

175.4

miles of storm  
sewers maintained

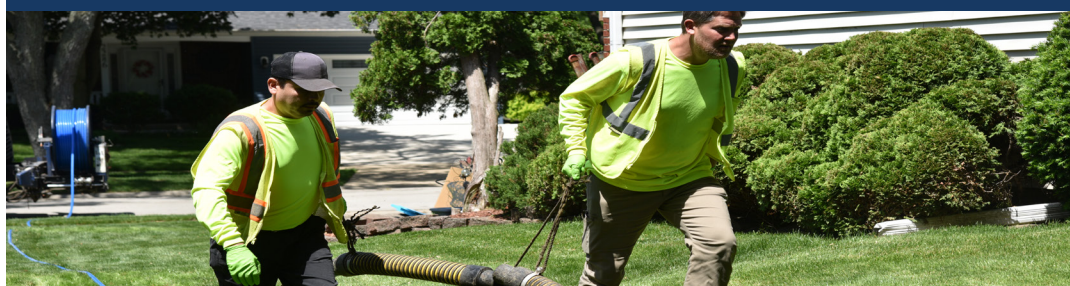
160+

retention ponds  
maintained

5,870

catch basins  
maintained

The Sewer Division is responsible for providing uninterrupted service to all residents served by the City's sanitary and storm sewer systems via proactive maintenance and repair programs. These services are maintained through investigation, inspection, evaluation, and analysis of the systems' long and short-term needs. The Division maintains 168.3 miles of sanitary sewer, 175.47 miles of storm sewer, more than 160 retention ponds, six sanitary lift stations, two storm lift stations and 5,870 catch basins, and over 7 miles of creek channel. The Division performs limited maintenance of the creek channels within the City limits. The City is only responsible for maintaining the creek sections within public right of ways and drainage easements. The Division responded to over 159 emergency locates called into J.U.L.I.E. during the calendar year. In conjunction with the Road Program, the Division also inspects, repairs, and replaces manholes. Sewer personnel assist with snow removal operations, storm events, and other cross-divisional functions as needed.

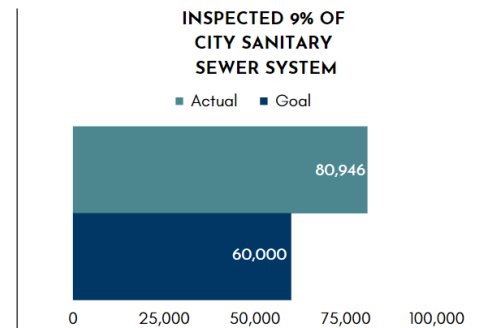
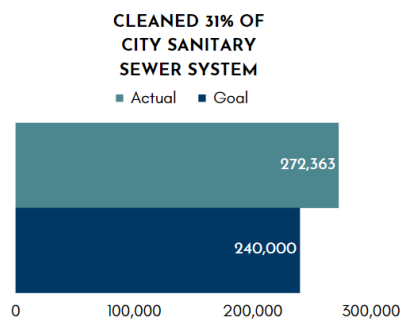


*The Sewer Division began replacing storm sewer main in 2021 as part of the 2021 Capital Improvement Project. Wheaton Public Works Sewer Division crews were able to replace over 1,200 feet of deteriorated sewer main in over 5 locations around the City in 2021. The storm sewer improvements were correlated with the City of Wheaton's strategic goal of enhancing our utility infrastructure and reducing overland flooding.*

## SEWER DIVISION: SANITARY

Wheaton's sanitary sewer system carries wastewater from bathrooms, sinks, kitchens, and other plumbing fixtures to a wastewater treatment plant, where it is treated and released. Staff provide proactive and emergency maintenance to the sanitary sewer system in pursuit of the following goals: maintaining the system's capacity, providing uninterrupted service, and reducing sanitary sewer overflows. These goals are outlined in the Division's EPA-mandated Capacity, Management, Operation, and Maintenance (CMOM) plan. Staff regularly clean the sewer pipes

to prevent buildup and inspects them for defects with closed circuit television equipment. The annual cleaning goal of sanitary sewers is 240,000 feet of pipe, or 27% of the total system. Staff exceeded this goal by cleaning 272,363 feet of sanitary sewer which is 31% of the total system. The annual televised inspection goal of sanitary sewer lines is 60,000 feet of pipe, or 6.7% of the total system. Staff surpassed this goal by conducting 80,946 feet of inspection which is 9% of the total system.



## SEWER DIVISION: STORM

Storm sewers carry rainfall runoff and drainage from storm drains to local streams, rivers, detention and retention ponds, and other bodies of water. Staff maintain the storm sewer system by regularly cleaning the pipes to prevent buildup and inspecting them for defects with closed circuit television equipment. The cleaning goal for the calendar year is 143,000 feet of pipe, which is 15.4% of the total system. Staff surpassed the goal by cleaning 167,280 feet of storm sewer pipe which is 18% of the total system. The annual televised inspection goal for the system is 65,000 feet of pipe, which is 7% of the total system. Staff exceeded their goal by conducting 74,022 feet of televised inspections which is 8% of the total system.

Catch basins are structures that drain water from streets and low-lying areas. They are designed to collect debris and sediment; preventing them from entering the storm sewer system where they could cause blockages or be carried to local receiving waters. Staff maintains approximately 4,566 catch basins through regular cleaning, repairing, and replacing when necessary. Staff's yearly cleaning goal of 1,800 catch basins assures that basins are cleaned on a four-year cleaning cycle. In CY2021, staff cleaned 1,983 basins, repaired 104 basins, and replaced 21 basins.

**74,022**  
feet of televised  
inspections performed

**167,280**  
feet of storm  
sewers cleaned

**1,983**  
catch basins  
cleaned

## 2021 ACCOMPLISHMENTS

**(Sanitary) Goal:** Reduce basement backups and Sanitary Sewer Overflows.

**Status:** Reimbursed approximately \$6,000 to homeowners (2) participating in the Overhead Sewer Private Property Protection Program and approximately \$10,000 to homeowners (5) participating in the Sanitary Sewer Service Line Reimbursement Program. Completed restorations in 5 locations which included street, sidewalk, curb repairs, and landscaping where necessary. Achieved 100% of our maintenance/cleaning goals.

**(Sanitary) Goal:** Maintain Quality Infrastructure.

**Status:** 7 sanitary manholes were replaced, and 69 sanitary manholes were repaired. Inspected over 941 sanitary structures and replaced 10 feet

of sewer pipe. Completed over 240,000 feet of sanitary sewer cleaning and over 60,000 feet of sanitary sewer televised inspections. Averaged a response to over 534 calls for service by residents and businesses in 2021.

**(Storm) Goal:** Maintain Quality Infrastructure.

**Status:** Replaced over 21 catch basins and repaired over 104. Completed 167,280 feet of storm sewer cleaning, 74,022 feet of storm sewer televised inspections and cleaned 1,983 catch basins. Responded to over 534 residential calls for service by residents in 2021.

**(Storm) Goal:** Efficient and Effective Services.

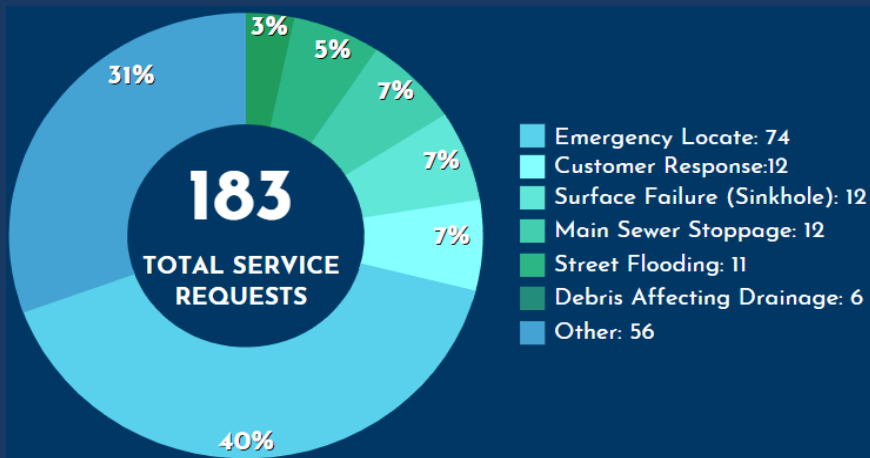
**Status:** Launched a program tracking storm sewer and catch basin cleaning to prevent unnecessary cleaning redundancy. Accomplished 100% of our target goals. Staff training workshops and seminars.

### OTHER ACCOMPLISHMENTS

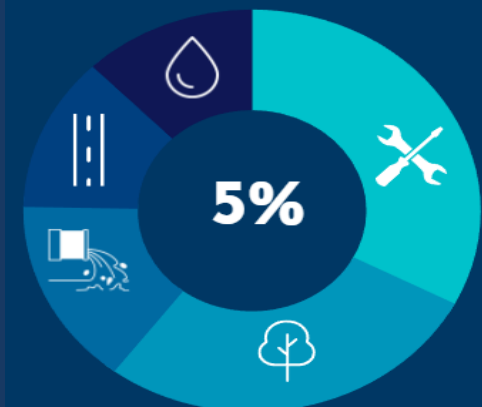
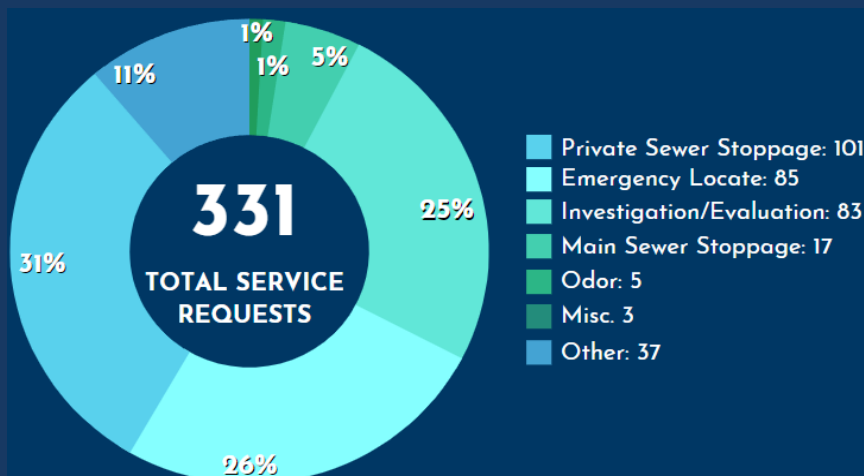
- Replaced over 1,200 feet of storm sewer pipe.
- Toolbox Talks with the crew educating them on new practices to gain efficiency in underground utilities
- Repaired over 70 feet of storm sewer pipe.

## SEWER DIVISION: SERVICE REQUESTS

SEWER DIVISION: STORM



SEWER DIVISION: SANITARY



5% OF TOTAL  
PUBLIC WORKS DEPARTMENT  
SERVICE REQUESTS WERE FOR  
THE SEWER DIVISION (STORM)



10% OF TOTAL  
PUBLIC WORKS DEPARTMENT  
SERVICE REQUESTS WERE FOR  
THE SEWER DIVISION (SANITARY)



230

miles of water lines  
maintained

4.5

million gallons of  
water supplied per day

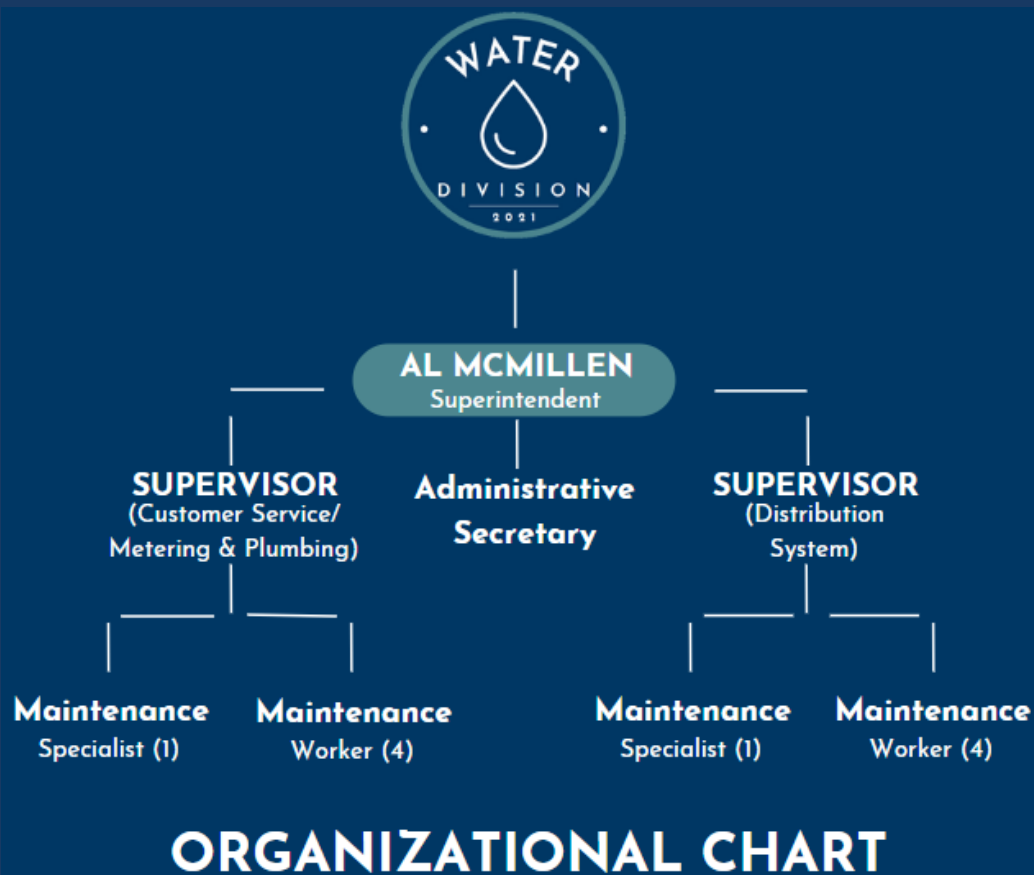
53,000+

residents, businesses,  
and visitors

168

hours (24/7) of staff  
availability per week for  
emergencies

The Water Division ensures the reliable operation of the City's waterworks system and provides a high-quality supply of drinking water at sufficient pressure and affordable prices. This is done by balancing cost-effective services with sound environmental responsibility. The Water Division is responsible for the operation, maintenance, and repair of City-owned waterworks infrastructure, including 230 miles of water line, and the supply, treatment, storage, distribution, and testing of the drinking water. The City supplies an average of 4.5 million gallons of water per day to more than 53,000 residents, businesses, and visitors. The Water Division staff is available 24 hours a day, 7 days a week for emergency response to water main breaks, emergency utility locates, and any other water-related emergencies.



## WATER QUALITY

The Water Division must meet specific guidelines for drinking water quality as established by the United States and Illinois Environmental Protection Agencies (EPA) and the Safe Drinking Water Act (SDWA). In 2021, the Division collected the following samples:

### DISTRIBUTION SYSTEM SAMPLES

- 16 Stage II Disinfectant By-Product Rule
- 40 Distribution Water Quality
- 720 Coliform
- 78 Entry Point Water Quality
- 10 Sets Sequential Lead

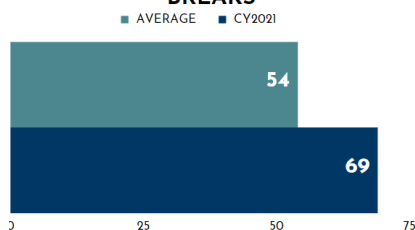
### EMERGENCY BACK-UP WELL SAMPLES

- 71 Coliform
- 1 Set Radionuclide
- 3 Sets Volatile Organic Compound
- 2 Sets Synthetic Organic Compound
- 2 Sets Nitrate and Nitrite
- 1 Set Inorganic Compound

## WATER MAIN BREAKS

The City experienced an average of 54 water main breaks annually from CY2012 to CY2019. In CY2021, crews repaired 69 water main breaks.

### REPAIRED 69 WATER MAIN BREAKS



## WATER DISTRIBUTION

Staff are responsible for the maintenance and repair of the water distribution system. There are approximately 230 miles of water main, 2,600 fire hydrants, and 3,100 valves in the system.

**3,100**  
valves in  
water system

**2,600**  
fire hydrants  
in water system

In CY2021, the Division

- inspected 1,401 valves
- repaired 15 valves
- replaced 14 valves
- inspected 1,135 fire hydrants
- flushed 2,636 fire hydrants
- replaced 2 fire hydrants
- painted 473 hydrants.

In addition to the mechanical maintenance of valves and hydrants, staff is also responsible for B Box locates and checks, water inspections, and replacing curb stops.

## PUMPING & STORAGE

Staff are responsible for the operation and maintenance of the pumping and storage system. Staff maintains two elevated tanks that hold three million gallons of water, five ground storage reservoirs that hold 4.27 million gallons, three pump stations with 21 high-service pumps, six emergency backup wells, and three standby electrical generators. Staff also performs monthly testing, preventative maintenance, and repairs on this equipment. In CY2021, a total of 1,654,841,000 gallons of metered water was pumped through the system. In 2019, the Illinois Department of Natural Resources reduced the allowable non-revenue water from 12% to 10%. In 2021, Wheaton was at 10.2% non-revenue water.

*"In CY2021, 22 leaks in the water system were found through leak detection or during hydrant flushing and were repaired, potentially saving 6,570,000 gallons of water per year."*

**Al McMillen**  
Water Superintendent



## 2021 ACCOMPLISHMENTS

### Maintain water quality and comply with regulatory agency requirements

**Goal:** Continue to improve upon leak detection programs to comply with the IDNR' Lake Michigan water allocation requirement of maintaining non-revenue water below 10%.

**Status:** Through in-house leak detection survey of 2,570 fire hydrants, 22 leaks were found and repaired. Non-revenue water loss for 2021 was 10.2%.

**Goal:** To protect water consumers through the Cross-Connection Control Program, check for cross-connections in an effective manner.

**Status:** Maintained records for over 1,200 back flow prevention device tests completed in 2021.

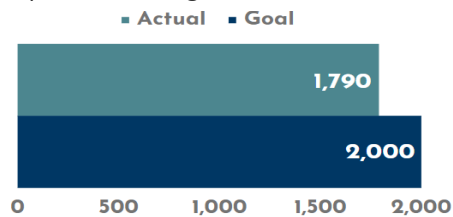
### Ensure fairness, accuracy, and consistency of billing for water use

**Goal:** Field test and calibrate 100% of 2-inch and larger non-disc meters according to an annual schedule. Field test and calibrate 50% of 2-inch and larger non-disc meters according to a 2-year schedule.

**Status:** Field testing was completed on 36 large meters. 97% of meters on an annual schedule were tested. 52% of meters on a 2-year schedule were tested.

**Goal:** Replace 2,000 water meters as part of a multi-year program.

**Status:** Replaced 1,790 meters, substantially completing the Water Meter Replacement Program.



### Maintain Quality Infrastructure

**Goal:** Continue on-going program of fire hydrant inspection, pressure-testing, and replacement to ensure adequate availability of water for firefighting purposes.

**Status:** Inspected and pressure-tested over 1,135 fire hydrants and repaired 85 fire hydrants and replaced 2 fire hydrants.

**Goal:** Replace water mains in accordance with the recommended replacement schedule of the 2013 Water Distribution System Hydraulic Analysis.

**Status:** Replaced 4,200 feet of deteriorating water main with ductile iron pipe and replaced 18 lead services.



### Efficient and Effective Services

**Goal:** Continue to collect GPS information and develop GIS maps to improve efficiency of water distribution system maintenance activities.

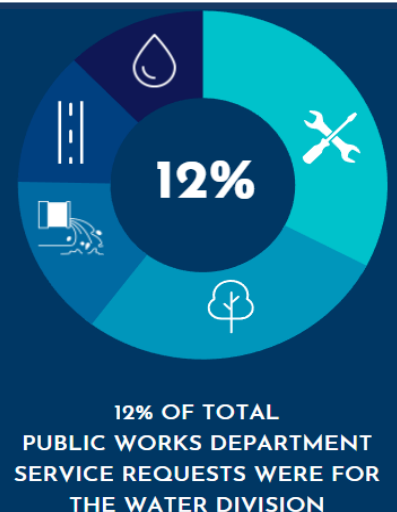
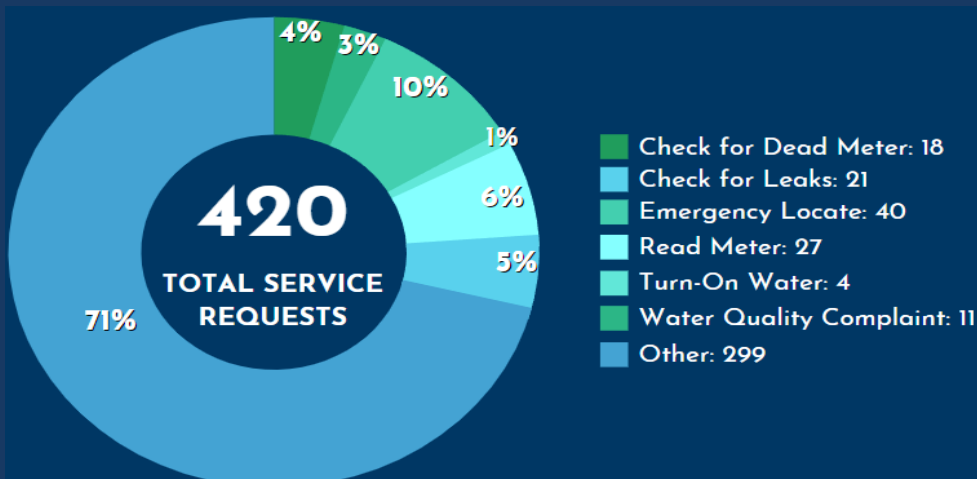
**Status:** Collected 225 GPS points on existing B-boxes and new water main, valves, fire hydrants and services.

**Goal:** Continue staff education at training courses, conferences, and seminars.

**Status:** Conferences and seminars continued to be canceled due to Covid-19, but some staff education has been completed using webinars and online training.



## WATER DIVISION: SERVICE REQUESTS





160

City-owned vehicles  
maintained

88

large pieces of primary  
& ancillary equipment  
maintained

17

stationary power  
generators  
maintained

141

smaller pieces of  
ancillary pieces of  
equipment maintained

The Fleet Services Division is charged with providing maintenance, repair, and fueling services to all City-owned vehicles and equipment. City-owned assets include 160 licensed vehicles, 88 large pieces of primary and ancillary equipment, including 17 stationary power generators, and 141 smaller pieces of equipment. Ancillary equipment includes salt spreaders, snowplows, de-icing and anti-icing equipment, mowers, asphalt pavers, and rollers among other items. The Fleet Division also specifies and acquires replacement vehicles and equipment; disposes of retired assets; administers a central parts and supplies inventory; ensures that National Fire Protection Agency (NFPA) and Public Works safety standards are met for various equipment.

Division personnel utilize Computerized Fleet Analysis (CFA) software to track and manage these assets. To stay up to date with best practices and safety standards, Division staff maintain the following specialty certifications:

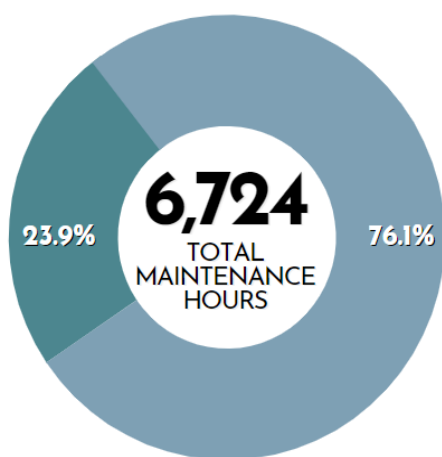
- Automotive Service Excellence (ASE)
- Emergency Vehicle Technician (EVT)
- Underground Storage Tank (UST)
- IL DOT Certified Safety Tester



## PREVENTATIVE & NON- PREVENTATIVE VEHICLE MAINTENANCE

To ensure the continued operation of City vehicles, staff perform both preventative and non-preventative maintenance on City vehicles and equipment.

Staff performed 5,116 hours of non-preventative maintenance and 1,608 hours on preventative maintenance in CY2021.



Preventative Maintenance:  
1,608 hours

Non-preventative maintenance:  
5,116 hours

Staff responded to 1,112 service requests for mechanical jobs in CY2021. Much of Fleet's mechanical jobs addressed Public Works equipment with the remaining addressing Police, Fire, and Other equipment in that order.

## VEHICLE REPLACEMENT PROGRAM

Fleet oversees the City's Vehicle Replacement Program, using equipment life expectancy data and internal usage statistics to plan for the acquisition, reassignment, and resale of City vehicles and large equipment. Staff also completed their first year of data collection of setup and up-fitting costs associated with vehicle acquisition and re-assignment. This information will be used to further refine the program's cost estimates and requisite funding levels. Vehicles sold by the Division in CY2021 created \$34,560 in revenue, and there was \$46,000 generated in vehicles traded in CY2021.

**\$46,730**

vehicles sold  
in 2021

**\$1,500**

vehicles traded  
in 2021

Vehicle and equipment replacements in CY2021 included a new fire pumper truck.

## FUEL CONSUMPTION

Wheaton implemented a Green Fleet policy in 2012 with the goal of reducing the carbon footprint of its vehicles over time. The City's 160 licensed vehicles used 119,320 gallons of fuel in CY2021, a .5% increase from CY2020. In CY2021, City vehicles logged 709,544 miles and 27,514 fleet engine hours.

## HYBRID VEHICLES

The City has acquired seven hybrid vehicles across all departments including one hybrid Patrol SUV that was put in service in 2020. Five additional hybrid Patrol SUVs were purchased in 2020 but, due to Covid-19, delivery date was in 2021.

- The non-hybrid Police SUV averaged 7.77 miles per gallon, and the hybrid Police SUV averages 14.74 miles per gallon.
- The City's other hybrids average 25.45 miles per gallon, with the lowest vehicle averaging 18.47 miles per gallon, and the highest being 38.24 miles per gallon.

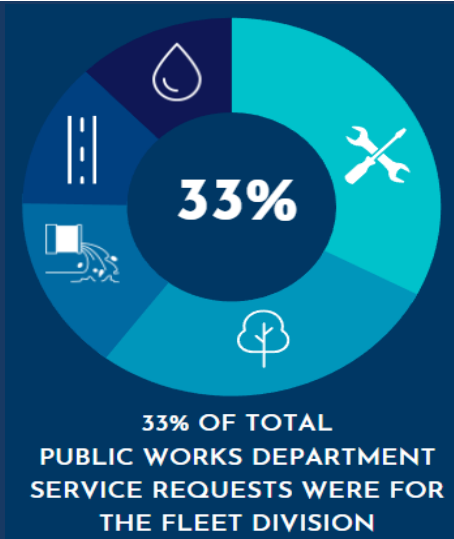
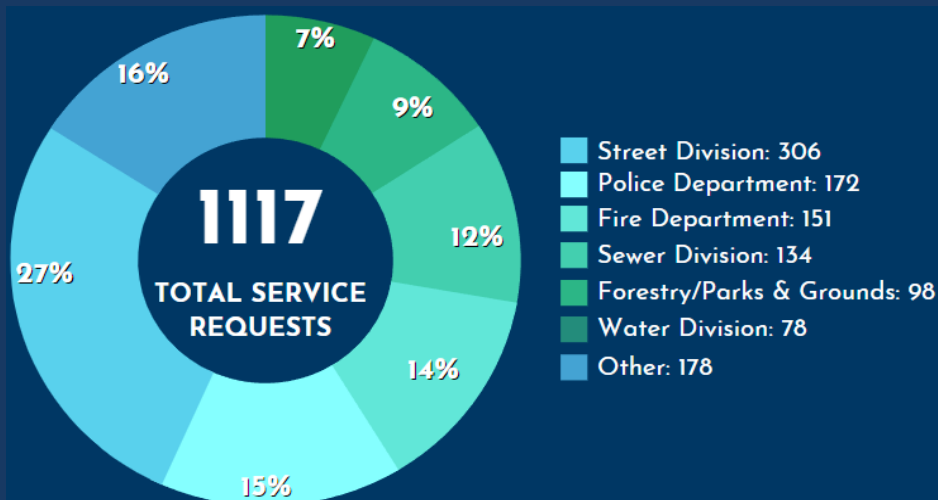
## AVERAGE MILES PER GALLON

■ Non-Hybrid ■ Hybrid

7.77 mpg

14.74 mpg

## FLEET DIVISION: SERVICE REQUESTS



# 2021 ACCOMPLISHMENTS

**Goal:** Provide a safe working environment for employees; reduce personal injury and vehicle accident incidents to zero.

**Status:** Through training and awareness, provided a safe working environment for employees; maintained zero lost time personal injury and vehicle accident incidents.

**Goal:** Provide safe, reliable, and efficient transportation and equipment for City personnel and operations.

**Status:** Through thorough preventative maintenance procedures, safety inspections, and developing new vehicle specifications, provided safe, reliable, and efficient transportation and equipment for City personnel and operations.

**Goal:** Purchase vehicles and equipment with increased emphasis on fuel savings and environmental impact.

**Status:** Added six gasoline-electric hybrid squad vehicles to the fleet and reduced the size and weight of two replacement ambulances for fuel savings.

**Goal:** Continue to develop the annual fully burdened hourly labor rate with the new chargeback calculation.

**Status:** Calculate and apply the newly calculated labor rate and chargeback calculations to develop 2022 chargeback rates for fleet repairs and other services.

**Goal:** Reduce costs where possible through extending the service life of vehicles and equipment.

**Status:** All vehicles that were requested for replacement during the 2021 had surpassed age and/or usage requirements.

**Goal:** Establish and apply inventory benchmarks for commonly used stock items. Continue to evaluate and overhaul the parts room inventory, remove obsolete parts for disposal, analyze part usage and adjust stock levels accordingly. This will be year two of a three-year goal to overhaul the parts room inventory which will be incrementally attained by the end of 2022.

**Status:** Continued to revamp the fleet parts inventory. Removed obsolete items and auctioned these items when practical.

**Goal:** Utilize productivity rate benchmarks to attain standardization and greater efficiency of preventative maintenance labor operations.

**Status:** Developed and applied productivity expectations based on previously established benchmarks.

**Goal:** Manage compliance with NFPA 1911-1914 standards for Fire Pumps. Comply with Illinois Department of Transportation safety inspection requirements, aerial equipment testing and certification, EPA emissions inspections and State Fire Marshal fuel

dispensing and storage requirements and regulations for two locations. Properly dispose of shop waste.

**Status:** Complied with all applicable regulations.

**Goal:** Manage the completion of the construction phase of the City Hall standby generator replacement project.

**Status:** The construction phase of the project is in progress but not completed due to a substantial change in the project scope. New completion date is June 30, 2022.

**Goal:** Prioritize and request future funding for the replacement of the facility generators evaluated in the generator assessment completed in 2020.

**Status:** Developed project descriptions and budget information for the Capital Improvement Program based on the assessment. Provided budget modifications for ancillary generator equipment in need of repair.

## OTHER ACCOMPLISHMENTS:

- Purchased vehicles and equipment considering operational needs, fuel savings, purchase price and environmental impacts. Continued to incorporate total vehicle capital costs in the budgeting and request for replacement processes.
- Reduced costs where possible through extending the service life of vehicles and equipment.





## ADMINISTRATIVE DIVISION

- Continually work on improving operations through identifying opportunities to enhance performance and reduce costs.
- Enhance department effectiveness through the development of personnel.

## FORESTRY DIVISION

- Continually work on improving operations through identifying opportunities to enhance performance and reduce costs.
- Enhance department effectiveness through the development of personnel.
- Tree Cycle Pruning Program established on a seven-year cycle for mature trees with an annual goal is to prune 1,600 trees.
- Young Tree Cycle Pruning established on a three-year cycle. Prune trees planted in 2016 and 2019 – estimate 1,200 trees.
- Tree Removal Program to address dead, diseased, or hazardous trees from the City rights-of-way – estimate 250 trees to be removed.
- Address maintenance and restoration needs in public works facility, parking lots, lift stations, generator areas, and open spaces.
- To reduce the City's carbon footprint.

- Address maintenance and restoration needs in public works facility, parking lots, lift stations, generator areas, and open spaces.

## SEWER DIVISION (SANITARY)

**Maintain sanitary sewer infrastructure to meet expected and appropriate level of service and comply with State and Federal EPA regulations**

- Continue to track participation in both the Overhead Sewer Private Property Protection Program and Sanitary Sewer Service Line Reimbursement Program to acquire data to understand the magnitude and locations of residential sewer backups in order to assess program effectiveness and provide supporting data for potential capital improvement projects. Maintain sanitary sewer system capacity, reduce infiltration and inflow.
- Continue to identify and quantify infiltration and inflow sources using structure inspection, dyed water flooding, lateral TV inspection with dye flooding, and flow monitoring to identify and develop strategies to remediate the private sector extraneous flows caused by illegal connections and their associated sewer back-up problems within the City and their associated costs and liabilities. Continue on-going inspections, evaluation, and repair of the public sector, City-owned sanitary

sewers.

- Continue efforts to comply with Federal EPA regulations regarding sanitary sewer overflows and NPDES Phase II Storm water requirements.

## Maintain Quality Infrastructure

- Maintain public infrastructure including ongoing cleaning, repairing, and inspecting sanitary sewers.
- Televis 60,000 feet of sanitary sewer.
- Clean 240,000 feet of sanitary sewers system annually.
- Continue to maintain and make structural improvements to sanitary sewer system, repair and replace manholes, laterals, and sewers where appropriate and necessary.
- Operate at peak efficiency employing state-of-the-art energy efficient technology, and sound mechanical practices to provide uninterrupted service.
- Continue to contract rehabilitate deep manholes with epoxy lining to restore structural and watertight integrity.
- Purchase new equipment and tools to increase our work quality and limit maintenance in future years.

## Efficient and Effective Services

- Conduct employee training in areas such as trench safety, IDOT Flagger

Training, and other industry specific topics that provide needed skills for safe effective operations. Attend locally sponsored workshops and seminars.

#### **Implement “Green Practices” when possible**

- Investigate environmentally neutral technologies for sewer system maintenance “Good Practices”, and Best Management Practices.

### **SEWER DIVISION (STORM)**

#### **Maintain Storm Sewer infrastructure to meet expected and appropriate level of service**

- Continue to ensure compliance with Stormwater National Pollutant Discharge Elimination System (NPDES) | US EPA NPDES permit requirements and periodic IEPA inspections.
- Maintain public infrastructure including cleaning, repair, and inspection of storm sewers.
- Continue efforts to comply with Federal EPA regulations regarding NPDES Phase II Storm water requirements.
- Televis 64,712 feet of storm sewer annually.
- Clean 10% of storm sewers system and catch basins on a 7-year cycle and 1,800 catch basins annually.
- Continue efforts to comply with Federal EPA regulations regarding MS4 Permit as directed by the City’s Storm Water Engineer.
- Identify structural issues within the system and tag them for lining or replacement.

- Identify obstructions and pipe failures in order to reduce flooding.

#### **Efficient and Effective Services**

- Maintain and report storm cleaning quantities, debris removed, and system repairs, maintaining and updating the database and the GIS system atlases.
- Continue to update inventory records to accurately establish supply and material quantities.
- Follow the cleaning plan to eliminate cleaning redundancy.

#### **Implement “Green Practices” when possible.**

- Investigate environmentally neutral technologies for sewer system maintenance “Good Practices”, and Best Management Practices.

### **FLEET DIVISION**

#### **Safe and Efficient Operations**

- Continue to provide a safe working environment for employees; maintain keeping personal injury and vehicle accident incidents to zero.
- Provide safe, reliable, and efficient transportation and equipment for City personnel and operations.
- Purchase vehicles and equipment with increased emphasis on fuel savings and environmental impact.
- Continue to develop the annual fully burdened hourly labor rate with the new charge back calculation.
- Reduce costs where possible through extending the service life of vehicles and equipment.

- Establish and apply inventory benchmarks for commonly used stock items. Continue to evaluate and overhaul the parts room inventory, remove obsolete parts for disposal, analyze part usage and adjust stock levels accordingly. This will be year two of a three-year goal to overhaul the parts room inventory which will be incrementally attained by the end of 2022.
- Utilize productivity rate benchmarks to attain standardization and greater efficiency of preventative maintenance labor operations.

#### **Compliance Management**

- Manage compliance with NFPA 1911-1914 standards for Fire Pumps. Comply with Illinois Department of Transportation safety inspection requirements, aerial equipment testing and certification, EPA emissions inspections and State Fire Marshal fuel dispensing and storage requirements and regulations for two locations. Properly dispose of shop waste.

#### **Capital Projects**

- Manage the completion of the construction phase of the City Hall standby generator replacement project.
- Prioritize and request future funding for the replacement of the facility generators evaluated in the generator assessment completed in 2020. Manage the development of engineering specifications for any facility generators identified as needing replacement in 2022.

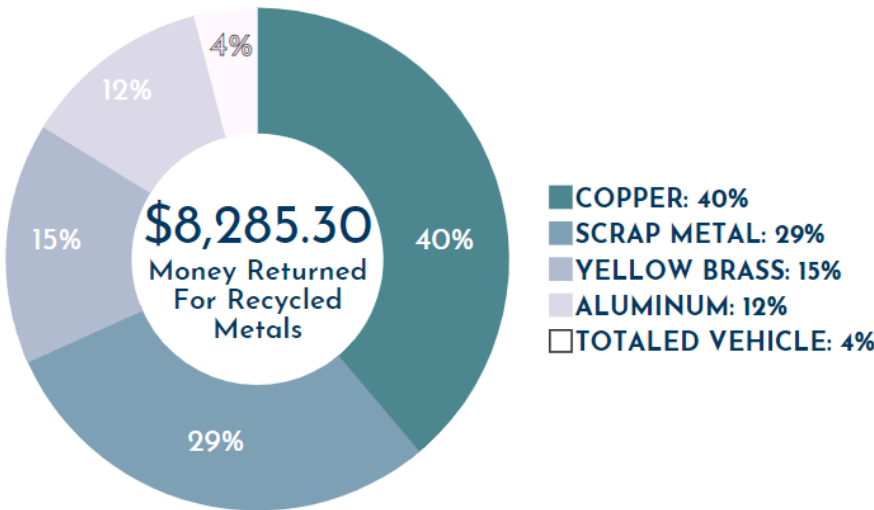




## SCRAP METALS RECYCLING

The Public Works Department tries to recycle any materials that are able to be recycled. In 2021, the Department was able to recycle \$2,883.50 worth of scrap metal, \$1,523.25 of yellow brass,

\$1,190.00 of aluminum, \$3,811.80 of copper and \$400.00 of a totaled vehicle. In total the Department was able to acquire \$8,285.30 in reimbursement funds.



## LED STREETLIGHT REPLACEMENT

In 2021, the Public Works Department was able to replace 70 LED streetlights. As part of a rebate program from ComEd, the Department applied for and received a rebate of \$4,802.



## OTHER RECYCLABLES

Apart from scrap metal, the Public Works Department also does its part to recycle other items that can be recycled including light bulbs, holiday lights, tires, and used vehicle oil. In 2021, the Department recycled 1,762lbs of crushed light bulbs, 2,637lbs of holiday lights, 190 tires, and 500 gallons of used vegetable oil.

1,762	2,637
Crushed Light bulbs	Holiday Lights
500	190
Gallons of Vegetable Oil	Vehicle Tires

