



## Department of Public Works

# 2016 Annual Report of Operations

### *DPW Vision:*

*Provide a professional Public Works organization that will offer quality infrastructure and services, in a sustainable way that will contribute to making Sheboygan a desirable place to work, live and play*

### *DPW Mission:*

*Improve the quality of life by effectively developing, maintaining and improving the infrastructure, natural resources and community services*

*David H. Biebel, Director of Public Works*

# DPW CONTACT LIST AFTER HOUR RESPONSE

EFFECTIVE DATE: Feb-17



<b><i>STREETS AND SANITATION DIVISION</i></b>					
<b><i>EMERGENCY CALL LIST</i></b>					
SUPERINTENDENT	HOME #	CELL #	WORK CELL #	OFFICE #	
Jason Blasiola	414-259-9913	414-732-9356	920-207-0226	920-459-3447	
<b>Sewer Backups / Sewer Repairs / Sewer Problems</b>					
NAME	HOME #	CELL #	WORK CELL #	OFFICE #	
1 Clark Kleinhans	920-893-2084	920-207-2537	920-980-4301	920-459-0223	
2 Dave Groves	-	920-627-1451	920-207-4379	920-459-3456	
3 Scotty Buboltz	920-565-4491	920-946-6971	920-946-6290	920-459-4096	
<b>Street Cave-Ins / Holes / Street Problems</b>					
NAME	HOME #	CELL #	WORK CELL #	OFFICE #	
1 Dave Groves	-	920-627-1451	920-207-4379	920-459-3456	
2 Clark Kleinhans	920-893-2084	920-207-2537	920-980-4301	920-459-0223	
3 Scotty Buboltz	920-565-4491	920-946-6971	920-946-6290	920-459-4096	
<b>Barricade Requests / Traffic Control / Traffic Signage</b>					
NAME	HOME #	CELL #	WORK CELL #	OFFICE #	
1 Bruce Matzdorf	-	920-918-2341	920-207-4378	920-459-0224	
2 Dave Groves	-	920-627-1451	920-207-4379	920-459-3456	
<b>Garbage/Recycling Collection</b>					
NAME	HOME #	CELL #	WORK CELL #	OFFICE #	
1 Bruce Matzdorf	-	920-918-2341	920-207-4378	920-459-0224	
<b>Water Leaks of Any Kind</b>					
Water Utility	-	-	-	920-459-3800	
After Business Hours	-	-	-	920-459-3811	

<b><i>ENGINEERING DIVISION</i></b>					
<b><i>EMERGENCY CALL LIST</i></b>					
<b>Engineering Related Items</b>					
CITY ENGINEER	HOME #	CELL #	WORK CELL #	OFFICE #	
Ryan Sazama	-	920-207-6566	920-946-1882	920-459-3485	
<p>*** If unable to make contact with individuals listed above, call Dave Biebel on his cell phone at 920-946-2906 or home phone at 920-458-0947</p>					

# DPW CONTACT LIST AFTER HOUR RESPONSE

EFFECTIVE DATE: Feb-17



<b><i>PARK/FORESTRY/CEMETERY EMERGENCY CALL LIST</i></b>				
SUPERINTENDENT	HOME #	CELL #	WORK CELL #	OFFICE #
Joe Kerlin	-	920-889-8940	920-980-2733	920-459-3459
<b>Parks</b>				
NAME	HOME #	CELL #	WORK CELL #	OFFICE #
1 Brian Meulbroek	-	-	920-980-8290	920-459-3446
2 John Klemme	-	920-912-2630	-	920-459-3445
3 Dan Billman	920-564-6121	920-946-5805	-	920-459-3445
<b>Trees</b>				
NAME	HOME #	CELL #	WORK CELL #	OFFICE #
1 Kenneth Meinnert	-	920-207-7449	920-946-1881	-
2 Brian Meulbroek	-	-	920-980-8290	920-459-3446
<b>Cemetery</b>				
NAME	HOME #	CELL #	WORK CELL #	OFFICE #
1 Jim Lavey	-	920-917-8059	-	-
2 Linda McCabe	920-459-8237	920-889-0347	-	920-459-3442
3 Joe Kerlin	-	920-889-8940	920-980-2733	920-459-3459

<b><i>WASTEWATER TREATMENT FACILITY EMERGENCY CALL LIST</i></b>				
SUPERINTENDENT	HOME #	CELL #	WORK CELL #	OFFICE #
Sharon Thieszen	-	262-705-9018	-	920-459-3464
<b>Accidental Discharges to the Sanitary Sewer</b>				
NAME	HOME #	CELL #	WORK CELL #	OFFICE #
1 Mark Wittstock	-	920-207-1754	-	-
2 Sharon Thieszen	-	262-705-9018	-	920-459-3464
3 Robert Butcher	920-452-6096	920-917-3014	-	-
<p>*** If unable to make contact with individuals listed above, call David Biebel on his cell phone at 920-946-2906 or home phone at 920-458-0947</p>				

# DPW CONTACT LIST AFTER HOUR RESPONSE

EFFECTIVE DATE: Feb-17



<b><i>FACILITIES &amp; TRAFFIC EMERGENCY CALL LIST</i></b>					
SUPERINTENDENT	HOME #	CELL #	WORK CELL #	OFFICE #	
Mike Willmas	-	920-980-5270	920-207-9742	920-459-3444	
<b>Buildings &amp; Grounds, City Buildings - Excluding Park Buildings</b>					
NAME	HOME #	CELL #	WORK CELL #	OFFICE #	
1 Bernard Knutson	920-528-7752	920-980-4858	920-207-9741	-	
2 Al Keitel	-	920-698-2004	-	-	
<b>Traffic Division (Electrical)</b>					
NAME	HOME #	CELL #	WORK CELL #	OFFICE #	
1 Bob Hayon	920-946-1970	920-980-3280	920-980-6416	920-459-3452	
2 Al Fleisner	-	920-377-1202	920-946-9747	920-459-3452	
3 Al Keitel	-	920-698-2004	-	-	
4 Bernard Knutson	920-528-7752	920-980-4858	920-207-9741	-	
<b>8th Street Bridge</b>					
NAME	HOME #	CELL #	WORK CELL #	OFFICE #	
1 Bob Hayon	920-946-1970	920-980-3280	920-980-6416	920-459-3452	
2 Al Fleisner	-	920-377-1202	920-946-9747	920-459-3452	
*** If unable to make contact with individuals listed above, call David Biebel on his cell phone at 920-946-2906 or home phone at 920-458-0947					

<b><i>MOTOR VEHICLE/STOCKROOM EMERGENCY CALL LIST</i></b>					
SUPERVISOR	HOME #	CELL #	WORK CELL #	OFFICE #	
Rick Ney	920-452-6335	-	920-980-3676	920-459-0248	
<b>Motor Vehicle</b>					
NAME	HOME #	CELL #	WORK CELL #	OFFICE #	
1 Mark Strains	920-565-2050	920-889-5052	-	920-459-3454	
<b>Stockroom</b>					
NAME	HOME #	CELL #	WORK CELL #	OFFICE #	
1 Rick Ney	920-452-6335	-	920-980-3676	920-459-0248	
*** If unable to make contact with individuals listed above, call David Biebel on his cell phone at 920-946-2906 or home phone at 920-458-0947					

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## Executive Summary

The Department of Public Works is pleased to present this Annual Report for the calendar year 2016. Consistent with the department's mission – improving the quality of life by effectively developing, maintaining, and improving the infrastructure, natural resources and providing community services – the department will use this annual report to communicate the progress and state of the City through the activities accomplished by the Department of Public Works.

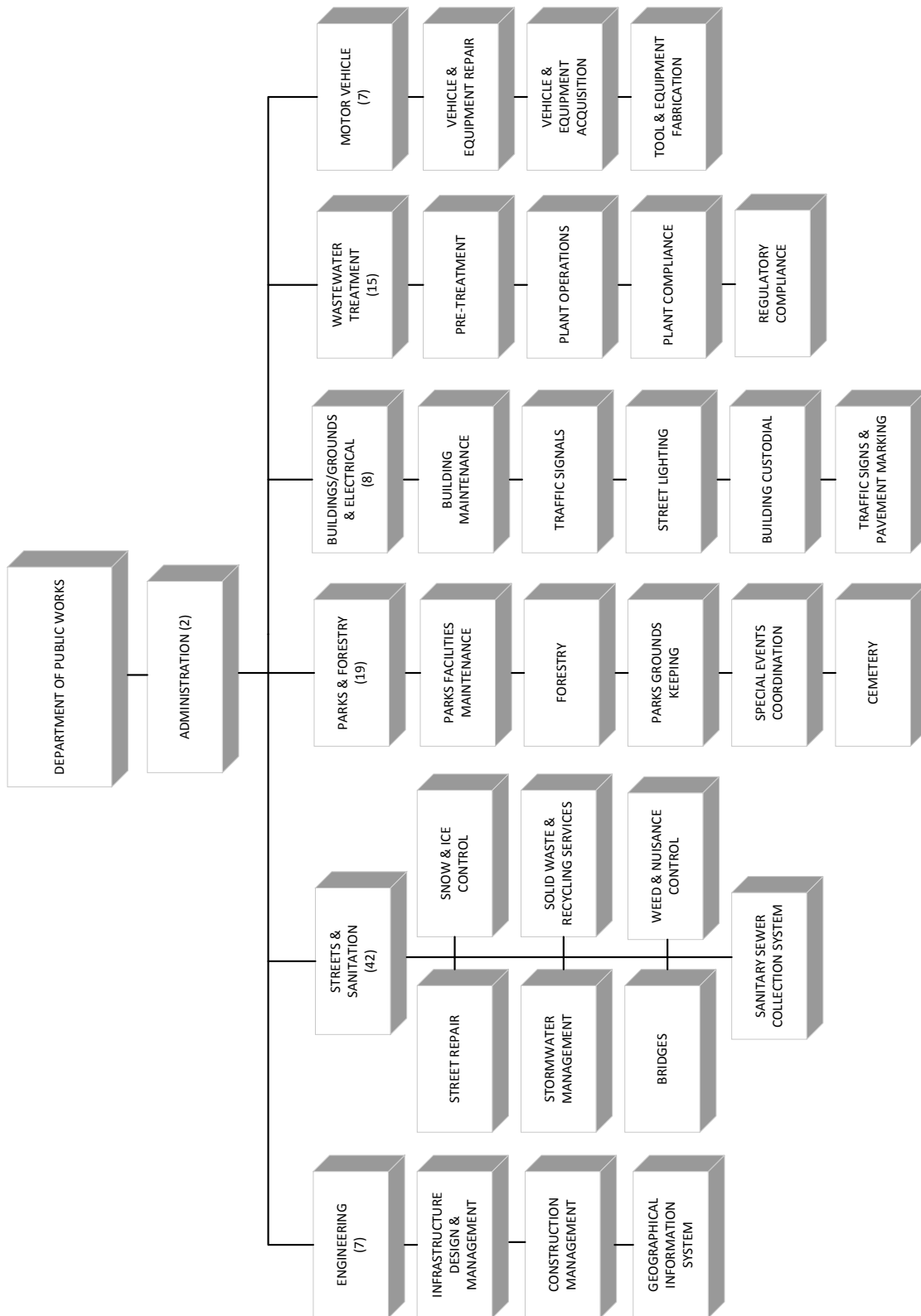
The department has 100 dedicated individuals facilitating the services necessary to accomplish the department goals and objectives and to meet the community's needs. Since 1970, the Department of Public Works has improved the efficiencies of its workforce through the addition of skilled workers and implementing technologies and equipment that provide a comparative advantage.

Although, the City's population has grown six percent since 1970, the area of the City has expanded by 50 percent, from a total area of 9.64 square miles in 1970 to 14.46 square miles today. Furthermore, the total miles of city streets has grown 39 percent over this same period from a total of 143.5 miles of City streets to 200 miles of City streets. Lastly, park acreage has nearly doubled to approximately 675 acres from 347 in 1970. All of these additions occurred while the Department's work force was being reduced by 53.7 percent from 216 full-time employees in 1970 to today's 100 full-time employees.

This annual report will demonstrate the Department of Public Works commitment to improving the quality of life within Sheboygan. It details the amount of services provided and where the Department is allocating its resources. It highlights the competing forces within the Department and how the Department responds and adjusts while meeting the objectives set forth in the budget and by the Common Council.

For this purpose, the Department of Public Works is proud to present the 2016 Annual Report to the Common Council. It is our goal to provide accurate information to help the Council answer questions from the citizens about public works issues. The Department of Public Works is committed to constant improvement, quality service and the betterment of Sheboygan.

## Table of Organization



**2016 Common Council**

Mayor Mike Vandersteen  
City Administrator Darrell Hofland  
City Clerk, Susan Richards  
City Attorney, Chuck Adams  
President, Mary Lynne Donohue  
Vice-President, Todd Wolf

1<sup>st</sup> Alderperson District  
Todd Wolf .....John Belanger

2<sup>nd</sup> Alderperson District  
Roman Draughon .....Tammy Rabe

3<sup>rd</sup> Alderperson District  
Rosemarie Trester .....Mike Damrow

4<sup>th</sup> Alderperson District  
Job Hou-seye .....Mary Lynne Donohue

5<sup>th</sup> Alderperson District  
Billy Thiel .....Scott Lewandoske

6<sup>th</sup> Alderperson District  
Mark Hermann .....Bryan Bitters

7<sup>th</sup> Alderperson District  
Andrew Schneider .....Susan Holzschuh

8<sup>th</sup> Alderperson District  
Joseph Heidemann .....Jim Bohren



**2016 Public Works Committee Members**

Chairperson .....John Belanger



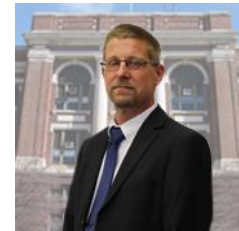
Vice Chairperson ..... Billy Thiel



Member .....Jim Bohren



Member ..... Bryan Bitters



Member .....Tammy Rabe



## 2016 Public Works Department – Mission and Goals

### DPW Goals:

- *Provide quality infrastructure that conveys safe, efficient delivery of essential goods and services*
- *Provide clean and beautiful public spaces that maximize the natural environment to enhance the overall quality of life*
- *Deliver professional quality public service with a friendly and welcoming atmosphere*

### DPW Objectives:

#### ***Provide quality infrastructure that conveys safe, efficient delivery of essential goods and services***

- Construct, repair and maintain city streets, sewers and other critical infrastructure to ensure public safety
- Maximize agency relationships with other entities to coordinate expansion, maintenance and reconstruction of infrastructure in an equitable manner
- Develop public right of ways with designs that encourage accessibility and efficient movements
- Meet with key stakeholders early in the planning stage to gain understanding and informed consent
- Provide complete streets and use best practices to create clean and beautiful public spaces
- Continue to maintain environmental compliance below regulatory requirements
- Continue to operate the wastewater/storm water collection and treatment system in a fiscally sound manner for the benefit of our customers
- Evaluate all infrastructure for areas of insufficiency and develop an action plan to correct areas of concern
- Develop a five-year capital improvements program identifying and prioritizing the major infrastructure projects needed to meet the community's needs

#### ***Provide clean and beautiful public spaces that maximize the natural environment to enhance the overall quality of life***

- Collect and properly dispose, garbage, litter, debris, graffiti from public spaces creating a clean livable community
- Lead sustainability practices preserving natural resources and reducing energy consumption

- Preserve and maintain all facilities in a manner that provides a safe environment for the facilities' functions and occupants
- Maintain an adequate amount of active and passive recreational lands to meet current and future recreation needs
- Ensure that open space, recreation facilities and programs are designed to meet the special needs of all residents, especially senior citizens and the handicapped
- Coordinate subdivision review with all Divisions responsible for providing or maintaining adequate park facilities
- Continue to replace old and deteriorating recreation equipment at all City parks
- Continue to monitor and maintain existing park equipment to ensure its longevity and safety

***Deliver professional quality public service with a friendly and welcoming atmosphere***

- Retain, develop, and recruit individuals with self-motivation and personal responsibility while embracing diversity and overall understanding of our mission
- Provide training and acquire skills to allow individuals to succeed and grow
- Provide a safe, healthy, and supportive work environment valuing employee contributions to the community
- Improve the effectiveness, efficiency, and quality of DPW service delivery through employee development, technology and equipment
- Leverage the use of volunteers and public/private contractors to supplement the core levels of service needed
- Establish quality customer service mentality (treat others as you would want to be treated)
- Develop time management principals, scheduling – prioritization of activities through communication within the organization

**2016 Public Works Department – Vital Statistics**

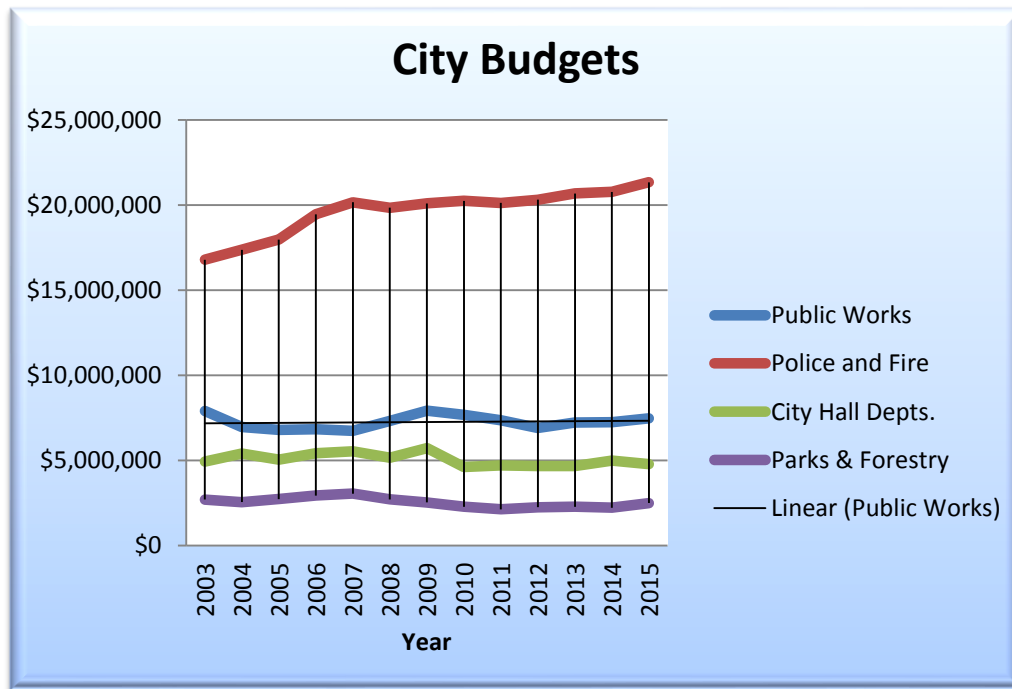
Area, Square Miles .....	14,814
Miles of Streets.....	199.7
Miles of Sanitary Sewers.....	171
Miles of Storm Sewers.....	102
Number of Bridges.....	19
Square Feet of Bridge Decks .....	185,212
Sewage Treated Daily – Millions of Gallons .....	11
Signalized Intersections.....	39
Parks .....	36
Park Acreage .....	705.45
Population .....	50,792
Trees.....	27,500
Signs.....	30,000
Lights.....	4,505

## Public Works Department Administration

David H. Biebel ..... Director of Public Works  
 Wendy Gorges ..... Confidential Administrative Assistant  
 Linda McCabe ..... Cemetery Supervisor

The City of Sheboygan's Department of Public Works main purpose is to improve the quality of life by effectively developing, maintaining and improving the infrastructure, natural resources and community services. The administration is charged with the responsibility of developing strategy and ensuring the effectiveness of the department's activities in meeting the needs of the citizens of Sheboygan. This is accomplished through the effective planning, organizing, leading and controlling of all available resources within the department.

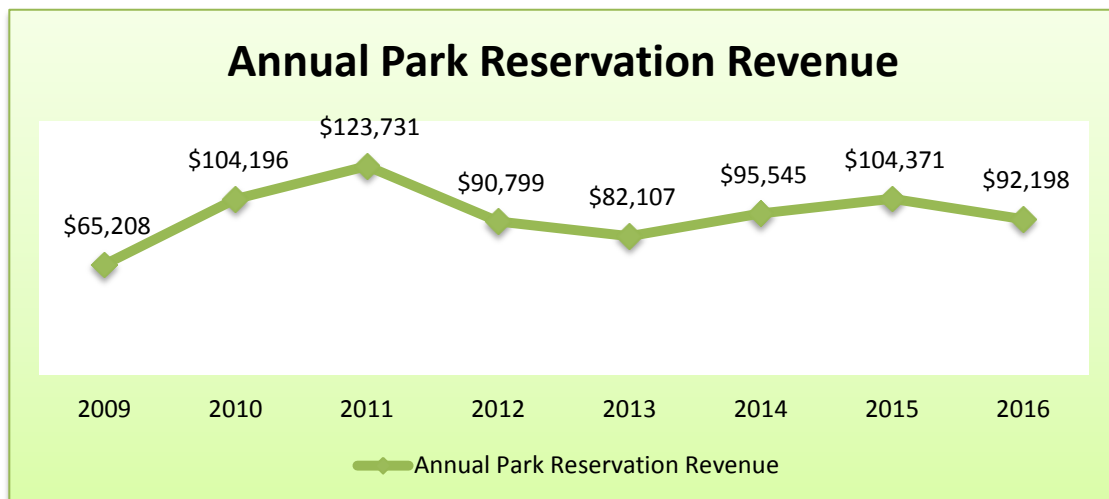
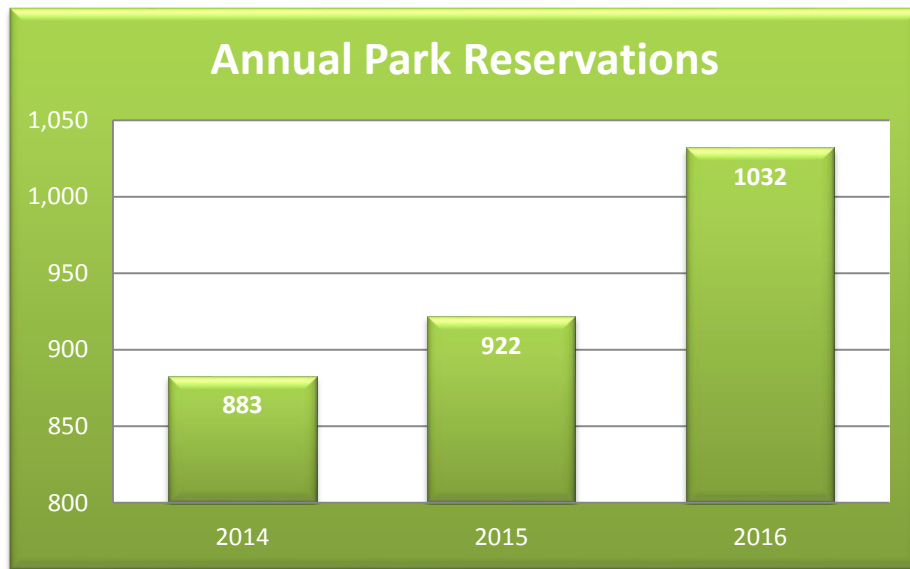
One of the most important functions of administration is preparing and controlling the department's budget. The current administration has been with the department since 1987, and has had the opportunity to participate in the development of the department's policies and budget. Overall, the Public Works and Parks budget has remained flat over the long term and well under the growth rates of other City departments as is shown in the chart below:



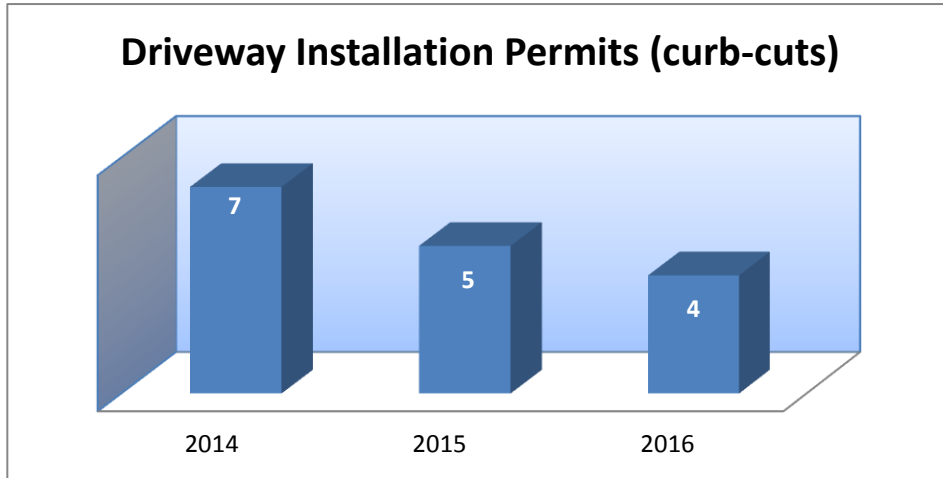
While the department's budget has remained relatively flat; the department's workload and demand for services is ever increasing. The operations of the department are not comparable to a commercial setting in which economic

demands determine the amount of labor and material needed. For example, the department does not have a fluctuation of orders for widgets, the garbage, streets and area of the City is always increasing. Furthermore, park usage is increasing and is one of the great assets of the community as shown on the annual parks reservation graph. Most importantly, a visitor's first impressions typically are the quality and cleanliness of our streets and parks.

The administration provides support services to all the divisions within the department by managing the budget, personnel transactions, customer requests and public information. The objectives of the administration are to support the necessary divisions in order for their personnel to effectively concentrate on accomplishing their objectives. In addition, the administration manages required reports for State and Federal agencies, grants, and the majority of permits and requests for service. Examples include: park permits, street right-of-way excavation permits, permits to occupy (dumpster permits), river boat slip leases.

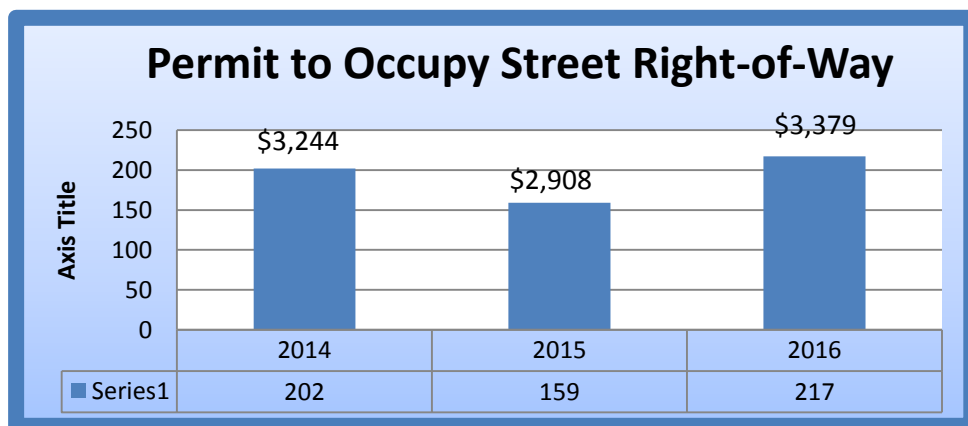


The Public Works office also handles all of the Municipal Driveway permits. Any resident wishing to cut an existing curb to install or expand a driveway must secure a permit through our offices. The purpose of this permit is to ensure proper placement of driveways so as not to cause problems. There is a small fee (\$25) for residential driveway permits. Also, a filing fee is charged for commercial driveways for recording at the Register of Deeds.



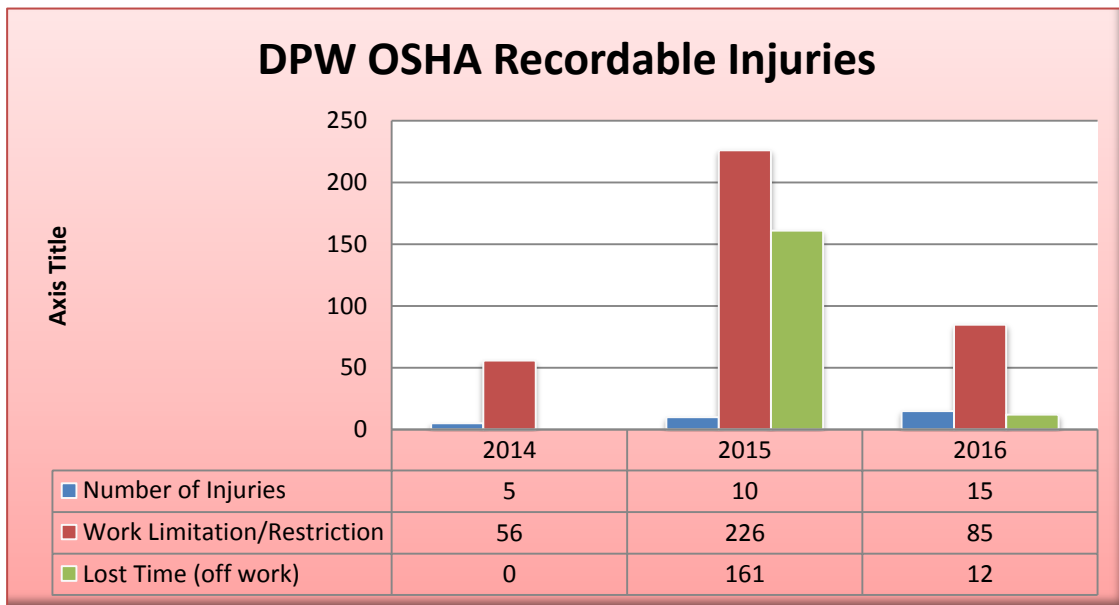
The department has seen a decrease in the number of driveway permits issued. There was an increase shortly after the adoption of the new winter parking rules which has been in effect for over a decade. Nevertheless the department encourages residents to develop and provide off-street parking. The permit issued the department allows for the proper placement of driveways to prevent issues. Off-street parking significantly helps the department in street sweeping, snow removal, garbage collections, tree trimming and other operations.

This is the same philosophy behind permits to occupy street right-of-way (ROW) or dumpster permits. This permit allows residents, businesses or contractors to occupy the street ROW, typically the parking lane, with equipment for extended periods of time. A fee is collected for this activity and is based on the length of time someone is occupying the street ROW. As a result, revenues are not directly proportionate to the number of permits.



Worker compensation claims can be a costly part of any business, especially in Public Works. The work that DPW needs to perform is especially dangerous. As a result, the administration is serious about protecting employees from injuries. Since 1991, the division had a full-time individual devoted to safety training and inspections. However, in 2010 the individual retired and the position has not been filled.

In late 2015, the department hired Mr. Jason Blasiola, Superintendent of Streets and Sanitation. Jason has a strong safety background with his previous employer, City of Milwaukee, and has made several safety improvements as indicated by the reduction in lost time in 2016 compared with 2015.



This year in an effort to engage employees and improvement work environments employees are ask to participate in discussions including safety and other topics to create a rewarding work environment. The division continues to strive for improving and providing a safe and enjoyable work environment for all employees as well as the public at our work zones.

Overall, the administration is opening the lines of communication with the citizens of Sheboygan. In 2016, the department enhanced its use of social media (Nextdoor, Facebook, Twitter and Website) by providing real-time updates on road closings, construction detours, snow removal operations, garbage collection schedule changes and other critical information. In addition, the administration gives public presentations to civic groups and schools on public works projects and programs.

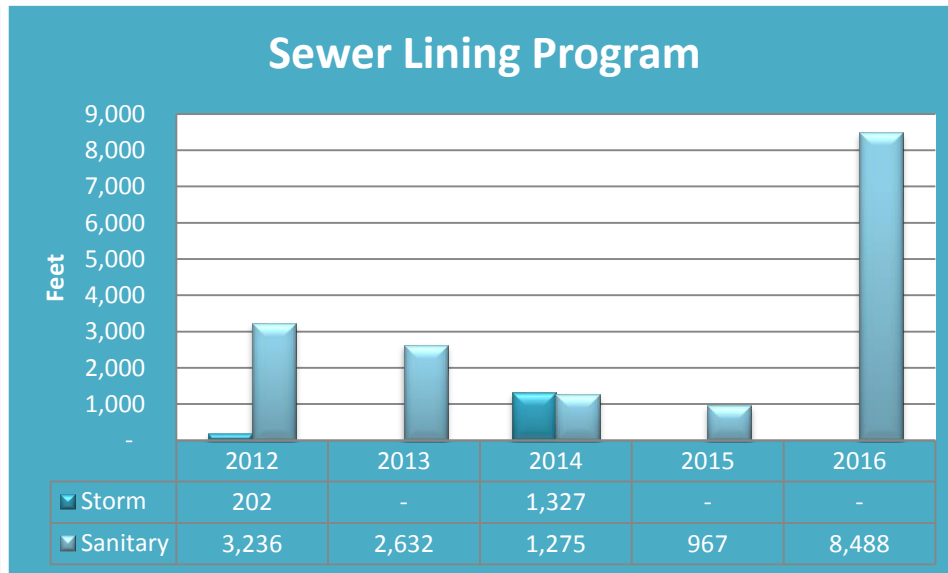


## Engineering Division

Ryan Sazama, P.E., A.I.A. ....City Engineer  
 Kevin Jump, P.E. ....Civil Engineer/Project Manager  
 Scott Isaacs, P.E..... Environmental Engineer  
 Mike Born, P.L.S. ....Assistant City Engineer/Surveyor  
 Vic Gatawakas ..... Senior Engineering Technician  
 Tom Horness .....Senior Engineering Aide/CAD Operator  
 Jordan Sucha .....Engineering Technician

The Engineering Division of the Department of Public Works is responsible for the design and inspection of the City's infrastructure. Engineering has five main areas of concentration: planning and design, construction management (including inspection), surveys, maps and records, engineering management and consultant oversight. Through its programs and services the Engineering Division seeks to improve the quality of life within the City by designing and ensuring the quality of infrastructure expansion and improvement projects. The Engineering Division has a total of seven full time employees.

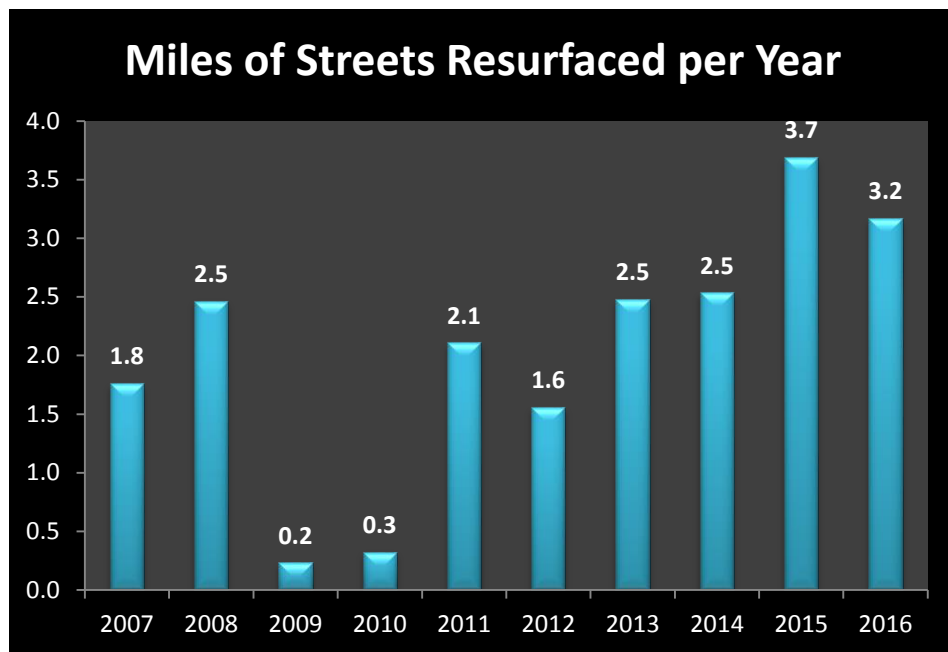
The main function of the Engineering Division is managing major infrastructure improvement projects (capital improvements program). Since 1995, the City of Sheboygan has invested over \$30 million in infrastructure improvements. The annual street resurfacing program provides the majority of street improvements. However, State and Federal funding for connecting highways provides for the major reconstruction projects. Furthermore, new subdivision development requires the expansion of streets and sewer systems.



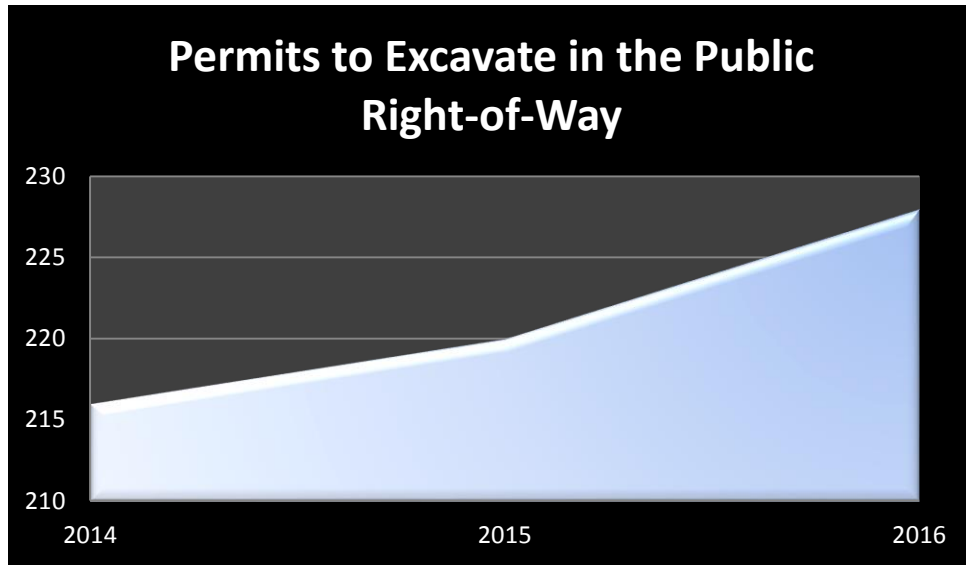
Since 2012, the Division has relined CIPP (curb-in-place-pipe) over three miles of sanitary sewer and approximately .25 miles of storm sewer. In addition to sewer construction, the Division reconstructed or resurfaced 20.4 miles of new City streets since 2012.



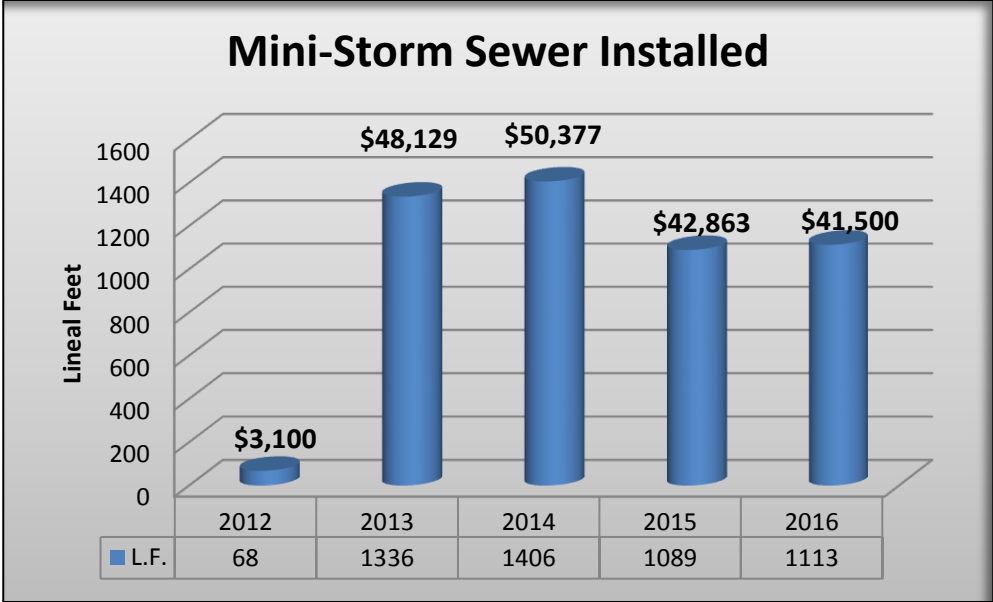
Liner Being Inserted Into Sewer Pipe



The engineering division also manages the utility cuts or excavations within the street right-of-way. This is an important program that ensures proper pavement restoration is performed. Poorly restored excavations in the street right-of-way lead to accelerated pavement deterioration.

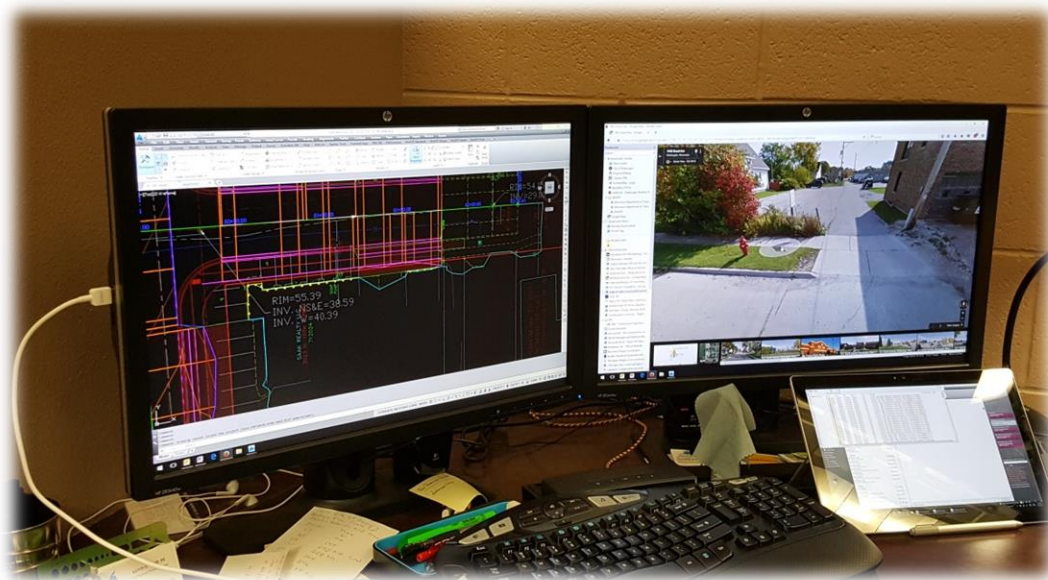


In addition and over the same time period, the Engineering division has designed and installed over \$185,000 of mini-storm sewers in the City. Since the flood of 1998, the division has taken an aggressive approach to solving clear water problems. This program continues to grow; however, the Engineering division now requires storm sewer laterals in any new construction to ensure sump pumps are not discharged into the sanitary sewers.



Mini Storm Sewer Installation - Backyard

Engineering also maintains all the mapping and data regarding the City's infrastructure. The City's base map is now digitally produced. It will be the foundation for all of the infrastructure and data to be captured geographically. The majority of city services, even those outside of public works, are geographic in location.



Computer Aided Design Station

Surveying data is also captured digitally and downloaded into the mapping and design software greatly enhancing the accuracy as well as speed to alter designs and review alternative layouts. Although the engineering division is technologically advanced, several of the staff has been with the Division many decades providing key historical references and information.

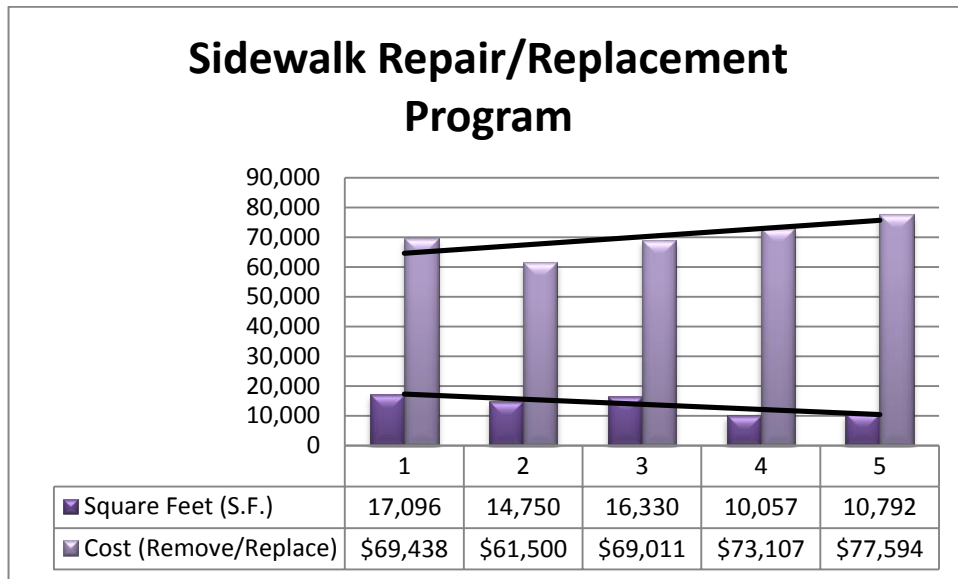


Computer Surveying/GPS Equipment

Engineering manages the City Sidewalk Program, which inspects defective sidewalk and orders their replacement. It is the City's responsibility to maintain a safe pedestrian walkway and failure to do so may result in future liability. Once notified of a defective sidewalk, the property owner has the option to do the work him or herself, hire their own contractor, or contract with the City's contractor for the sidewalk replacement. With approximately 350 miles of sidewalk, this program is ongoing.

### Sidewalk Repair/Replacement Program

	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Square Feet (S.F.)	17,096	14,750	16,330	10,057	10,792
Cost (Remove/Replace)	\$69,438	\$61,500	\$69,011	\$73,107	\$77,594
Cost per S.F (Install Only)	\$2.93	\$3.05	\$3.15	\$5.25	\$5.80



## Parks, Forestry & Cemetery Division

Joe Kerlin .....	Superintendent of Parks, Forestry & Cemetery
Ken Meinnert .....	Leadman
Brian Meulbroek .....	Leadman
John Klemme .....	Maintenance Worker IV
Dan Billmann.....	Maintenance Worker III
Tim Bull .....	Maintenance Worker III
Jason Harrison.....	Maintenance Worker III
Jim Lavey .....	Maintenance Worker III
Tom Perl .....	Maintenance Worker III
OPEN .....	Maintenance Worker III
Richard Beseler.....	Maintenance Worker II
John Burkard.....	Maintenance Worker II
Ryan Cyr.....	Maintenance Worker II
Dan Gilbertson.....	Maintenance Worker II
Mike Johnson .....	Maintenance Worker II
Chad Prisinger .....	Maintenance Worker II
Neil Sprangers.....	Maintenance Worker II
OPEN .....	Maintenance Worker II

The Parks, Forestry & Cemetery Division of the Department of Public Works main purpose through its facilities, programs, services and personnel, seeks to enhance the quality of life and environment; to acquire, conserve and protect natural resources; and to provide leisure opportunities for the benefit of its present and future citizens.

Parks, Forestry & Cemetery Goals include:

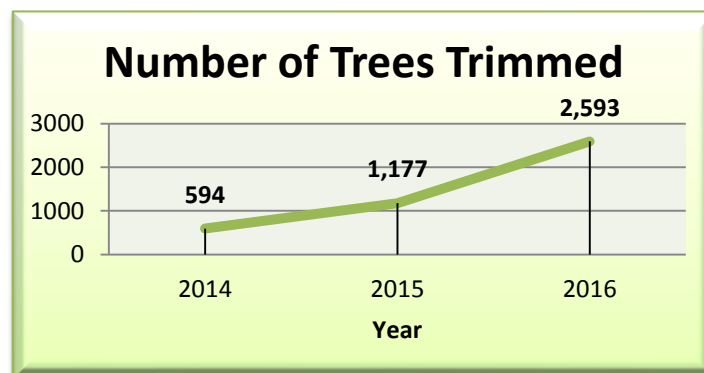
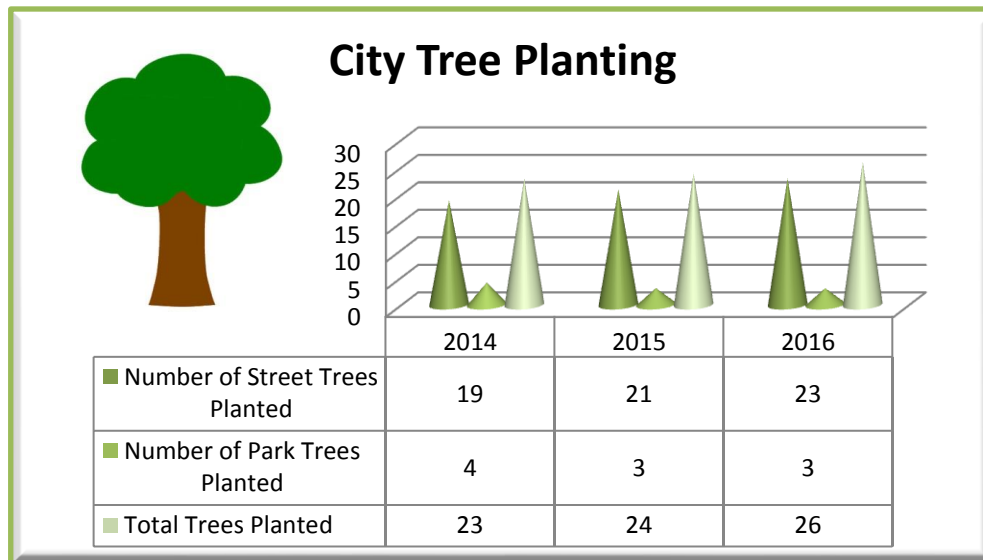
- ❑ Provide appropriate financial support for park, recreation and open space needs
- ❑ Develop an attractive diversified park system comprising of imaginatively designed indoor and outdoor areas and facilities to meet the varied interests of the residents
- ❑ Maintain the park system, in accordance with high standards, so as to contribute to the beauty, charm and quality of life of the City of Sheboygan
- ❑ Cooperate with and support the Sheboygan Area School District in the joint planning, design, development and operation of areas and community, recreation and education programs
- ❑ Utilize land and water resources in cooperation with both public and private agencies for the maximum development of recreation programs and services
- ❑ Maintain high standards in leadership, facilities and equipment consistent with the Department of Public Works and the City of Sheboygan's mission
- ❑ Provide for the planting, maintenance and preservation of all trees and flora on City owned properties

## Forestry

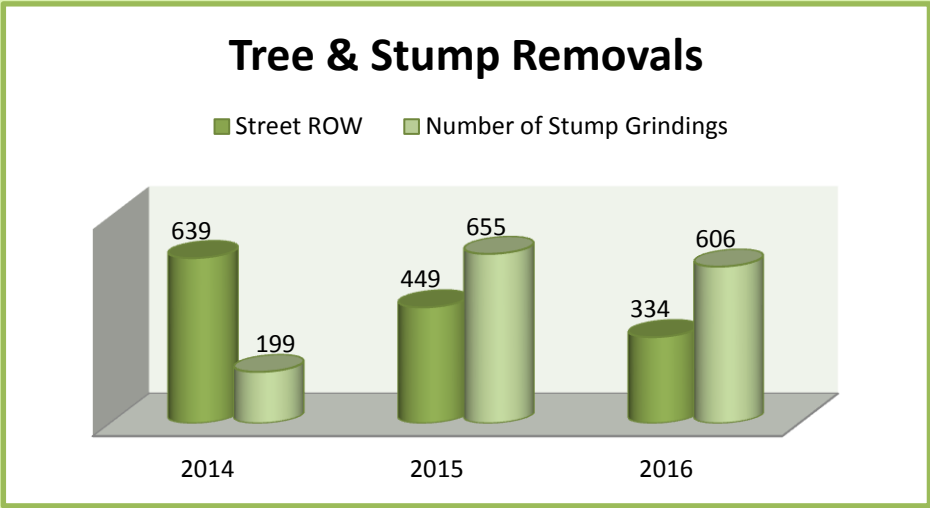
The City of Sheboygan has been named "Tree City USA" for the last 39 years, longest running in the State. The Department of Public Works Forestry Division is also part of the Parks Division. There are four full-time forestry employees that care for 23,000 street trees and the park trees. During the winter months, another three person crew aids in the trimming of the street trees.

In 2016, the City Council accepted its first Urban Forestry Management and EAB Plan. It also developed a planting plan, inventorying over 3,000 possible street planting sites. Tree planting and Ash Tree management will be a priority in 2017.

There is a direct correlation between the number of trees removed and the number of trees trimmed. The more trees that need to be removed, the less time for tree trimming. In 2014 and 2015 there was a high number of tree removals. In 2016, less trees were removed which resulted in more trees being trimmed. Department efficiencies and the ability to have a second tree crew longer because of a mild winter, also helped in the trimming of more trees.







With an increase in tree removals in 2013 and 2014, there was also an increase in stumps to be removed. It took the forestry crew several years to remove all stumps from the previous and current year's removal. This was finally completed in 2016.



City Tree Trimming (Elevating)

## Parks

The Parks section is responsible for maintaining and improving the City Park system. One activity is garbage collection. The last three years have been fairly stable in the amount collected. In 2016, the slight increase could be contributed to an early spring. Good weather and increase park rentals attribute to higher usage and increased park garbage.



Along with garbage collection, the Park's Maintenance crew performs a variety of functions to ensure a clean, safe and enjoyable park environment. Grass cutting, park buildings, park bathrooms and park maintenance dominate the summer season. The parks crew cares for 11 open shelters, 6 enclosed shelters, 1 band shell, 19 playgrounds, 2 splash pads, 1 archery range, 3 beaches, 36 parks and over 536 park acres. There are over 130 acres of parks to mow. The division is also responsible for mowing street boulevards.



Park Maintenance Crew



In addition to routine maintenance items, the Parks division is responsible for delivering park equipment to the major festivals and smaller gatherings within the park system. The division charges fees for the use and delivery for extra parks equipment at events. Other than equipment and park rental fees the majority of the parks are available at no charge to residents and non-residents. The division does have a higher fee for non-residents.

Park Equipment Used 2016

Event	Park	Straight 4' Bench	Straight Tables	Combo Bench Tables	Mobile Stage	Wood Stage	Old Stage	Grills	Snow Fence	Garbage Barrels	Trailer Chairs	Dance Floor	Bleachers	
Brat Days	Kiwanis		40	80	1		1		45 Rolls	80				
Graduation	Vollrath	200+			1					40	1	1		
Greeks	Deland	15	40	20	30	1				30				
Gus Macker	Deland		20		11			3ckn					3	
Ice Bowling	Blue Line		24	16		1						1		
July 4th	Lakefront		89	80	106	1		4	6 Rolls					
Lakeshore Wknd	Blue Harbor		90	32	70	1	1		8 Rolls	50	1	1		
Misc. Permits	All over town	118	152	116	303	2	4	39	136	210	4	3	6	
Totals		333	455	264	600	8	5	1	43	195	410	6	6	9
		9,800'												

Jaycee Park/Quarryview has become a destination park. The old quarry is spring fed and provides area residents with the opportunity for summer swimming activities. In 2013 the City partnered with a private company to provide a true destination Aquatic Park. The company leases the Quarryview Center and beach; provides beach activities, shallow swim area and an inflatable area where users must wear a lifejacket. Stand up surf board, kayaks and other water equipment can also be rented and used in the Quarry. An entry fee is required for Aquatic Park.

A long-rang plan needs to be completed for this area. Jaycee Park provides several recreational actives including the Quarryview Center and beach, disk golf course hiking and mountain bike trails. This park is also positioned along a beautiful stretch of the Pigeon River.



Sheboygan Quarry

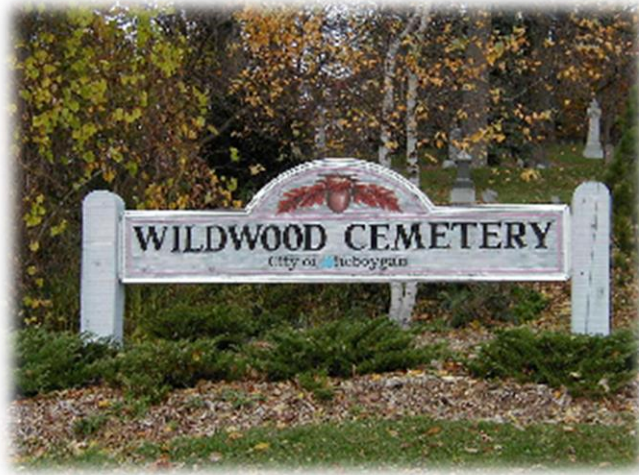
However, the facility is limited in future expansion. The long-range plan for the Division is to study the feasibility of establishing an outdoor pool and splash pad activity center. Given the success of the Quarry, this idea needs further inquiry.

The Division also issues dive permits for persons wishing to dive at the Quarry. Persons diving at the Quarry must be Professional Association of Diving Instructors (PADI) certified in order to receive an annual permit. There is no charge currently for this permit.

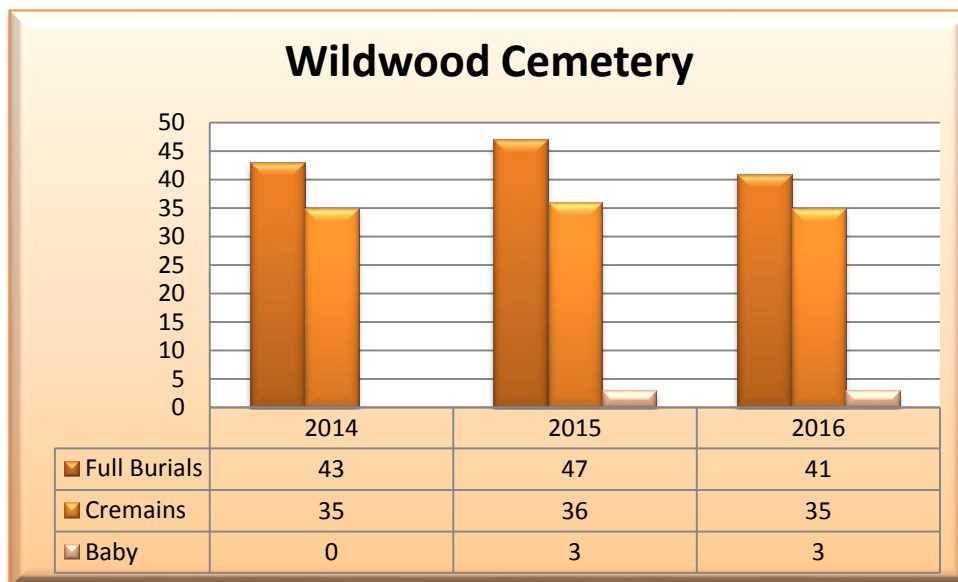
Another popular City park destination is the Elwood H. May Environmental Park. This facility is unique in that it remains in a natural state. Its primary focus is environmental education and stewardship. Over the past few years, there have been several staffing changes. Until 2012 the City provided a Director, Naturalist and a Caretaker. In 2012, the Director was given a new position as Superintendent of Parks and Forestry for the city, leaving Maywood without a Director on site. In 2015, the Maywood Trust worked with the City to provide a Director again in exchange for a Naturalist. The City provides the financial support for the Director but the position is

employed by the Maywood Trust. In 2016 a Management Plan was also completed for the Park.

### Wildwood Cemetery



The City of Sheboygan, Department of Public Works has owned and operated the Wildwood Cemetery since the 1850's. The cemetery is 62 acres and has over 25,000 graves with perpetual care, with approximately 20,000 burial lots remaining. Of the 62 acres, 40 acres are intensively maintained and the remaining 22 acres are reserved for future use. The cemetery has one dedicated full-time employee, and is supported by Park staff and seasonal employees to provide quality death-care services to families in their time of need.



## Streets & Sanitation Division

Jason Blasiola .....	Superintendent of Streets & Sanitation
David Groves .....	Supervisor of Operations
Scotty Buboltz .....	Leadman
Clark Kleinhans .....	Leadman
Bruce Matzdorf .....	Leadman
Brandon Munnik .....	Maintenance Worker III
Nick Binsfeld .....	Maintenance Worker IV
Ben Mohar.....	Maintenance Worker IV
Kevin Prisinger .....	Maintenance Worker IV
Mark Wilhelm .....	Maintenance Worker IV
Chris Anderson .....	Maintenance Worker III
Mark Kuhfuss .....	Maintenance Worker III
Jason Brill .....	Maintenance Worker III
Adam Gilson .....	Maintenance Worker III
Travis Hill.....	Maintenance Worker III
Gene Kunstman .....	Maintenance Worker III
James McKenzie .....	Maintenance Worker III
Maurice Vreeke.....	Maintenance Worker III
Matt Yancey .....	Maintenance Worker III
OPEN .....	Maintenance Worker III
Tim Allee .....	Maintenance Worker II
Mike Bender .....	Maintenance Worker II
John Bridges.....	Maintenance Worker II
Jim Brom.....	Maintenance Worker II
Chad Jones .....	Maintenance Worker II
Chad Kuehn .....	Maintenance Worker II
Travis Larson .....	Maintenance Worker II
Tyson Pitsch .....	Maintenance Worker II
Scott Plehn .....	Maintenance Worker II
Nate Schanno .....	Maintenance Worker II
Brian Schmitt .....	Maintenance Worker II
Tom Trumm.....	Maintenance Worker II
Rick Van Der Vaart .....	Maintenance Worker II
James Gilliam .....	Maintenance Worker I
Robert McNitt .....	Maintenance Worker I
Mark Polich .....	Maintenance Worker I
Dave Smith.....	Maintenance Worker I
OPEN .....	Maintenance Worker I

The Streets & Sanitation division is the largest division within the DPW. The division has 39 full-time employees. Street excavation repairs, tarring or crack filling, pothole repair, asphaltting and concrete work are some of the most common activities. In addition to street maintenance, sanitation handles the garbage and recycling program, drop-off site and sewer maintenance and construction. Street sweeping is

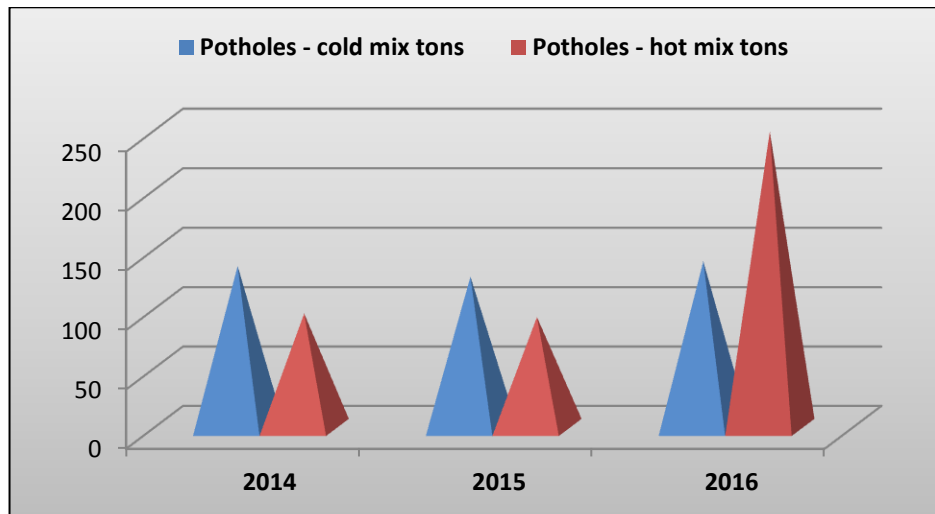
yet another function within this division; as well as snow and ice removal, barricading and celebrations.

## Street Maintenance

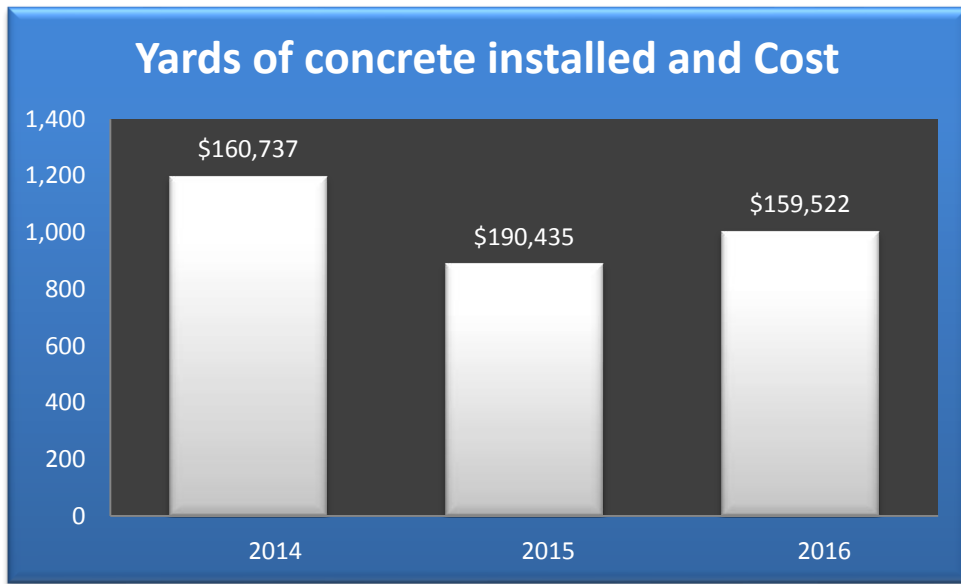
Street maintenance is one of the major functions within the division and most costly. In 2005 the budget for street maintenance was \$1.35 million. In 2016, the budget was \$1.41 million. The division performs street repairs as well as repairs from contractor's utility excavations within the street right-of-way.

The streets division has made a concerted effort to fill pot holes using hot mix asphalt during the construction 2016 season. By using hot mix it makes a better longer lasting repair. As shown in the graph below DPW placed 248 tons of asphalt in 2016 as compared to 93 tons in 2015.

During the winter month when hot mix is unavailable, cold mix asphalt is the only alternative. Cold mix asphalt does not adhere to road surface and will evenly come loose. DPW makes every effort to revisit these areas and install hot mix during the summer months.



According to the data provided below, the division has experienced a downward trend in the quantity of concrete used. This is due to a variety of reasons. The division is using more asphalt with an asphalt paver. The Water Utility and Wisconsin Public Service (gas) are performing their own street repairs as a result of their work. This work is inspected by the division to ensure quality and to prevent premature failures. Overall, the division is pleased with this arrangement because it allows our crews to concentrate on more important repairs and maximize the effectiveness on street repairs.

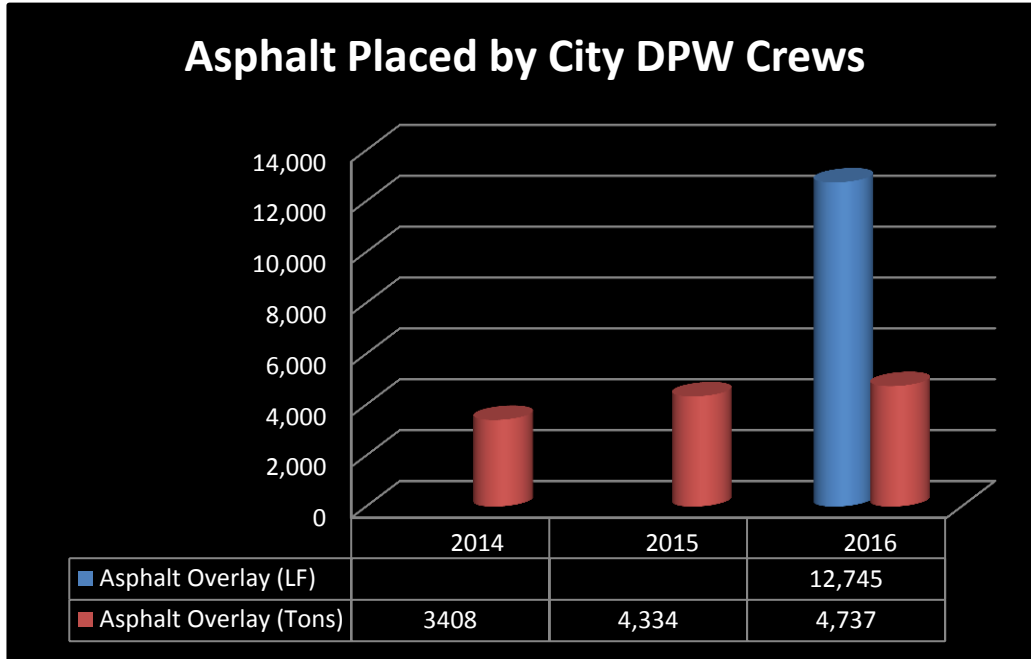


Concrete Crew

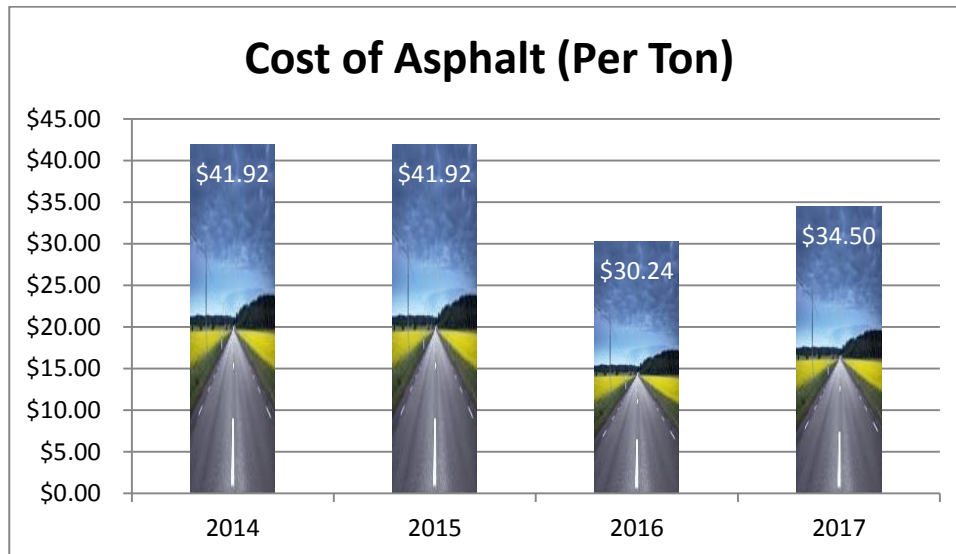
Asphalt is placed on streets with blacktop overlays. Furthermore, streets are resurfaced with asphalt when the pavement becomes deteriorated. The division purchased an asphalt paver in 2000, which allows the DPW to pave large areas that were not possible previously. In 2017 DPW will take delivery of new asphalt paver. As a result, the division has had large increase in the amount of tons used. For example,



the work on North Avenue, Sulk Trail, South Water Street, North 20<sup>th</sup> and Wilgus Ave was completed entirely with DPW forces. DPW placed 4,737 tons of Asphalt with the paver and overlaid 12,745 linear feet of asphalt in 2016.



DPW purchases the majority of the asphalt that we use from Sheboygan County Highway Department. The end result lowered our overall cost per ton.





Asphalt Paver

Street Right-of-Way (ROW) excavations (service holes) occur when contractors need to dig within the street ROW to repair, replace or install utilities. It is important to regulate this activity to ensure protection not only of the street but other underground utilities as well. Street excavations disrupt traffic and public services. Therefore, coordination of street ROW excavations is important to protect existing utilities and maintain the integrity of the street network.

In previous years, the Street Division would perform all the repairs. This activity would take a considerable amount of time and resources away from other street division projects. Therefore, the division has shifted this work back to the contractor's or utilities performing street ROW excavations. Although others are now performing the work, the division ensures the quality of the repair through the permit process and frequent inspections.

Overall, the division has witnessed an increase in the amount of utility service holes in city streets. Telecommunications deregulation has opened the competition and the result is more companies installing new communication wires. In addition, the gas utility has been systematically upgrading their infrastructure.

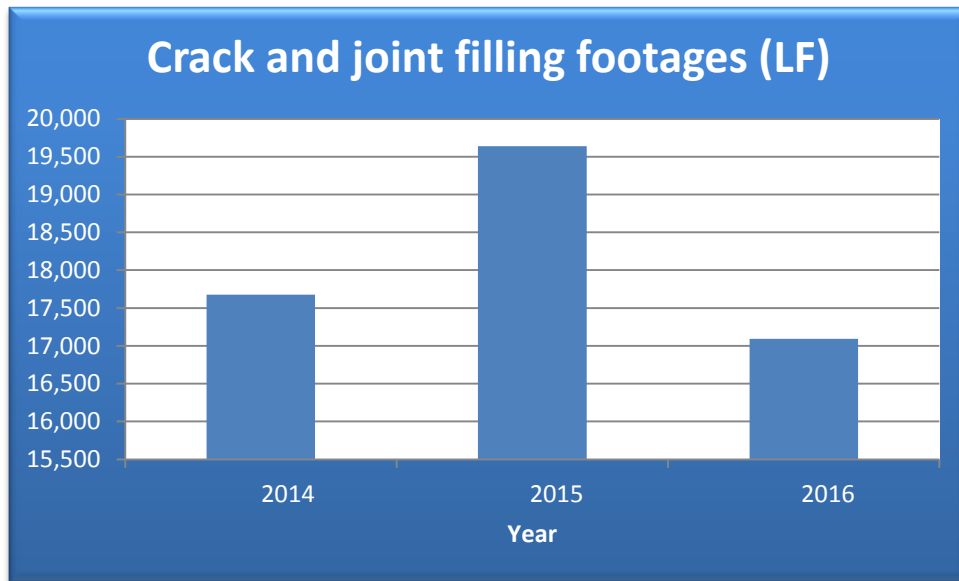


Street Excavation Patch

Crack filling is performed on a two-year, five-year and ten-year cycle, in that streets with asphalt overlays or new streets have cracks filled during these time periods. It is very important to fill cracks to prevent water from penetrating into the pavement, which will cause further deterioration. This program started in 1985 and has been very successful.



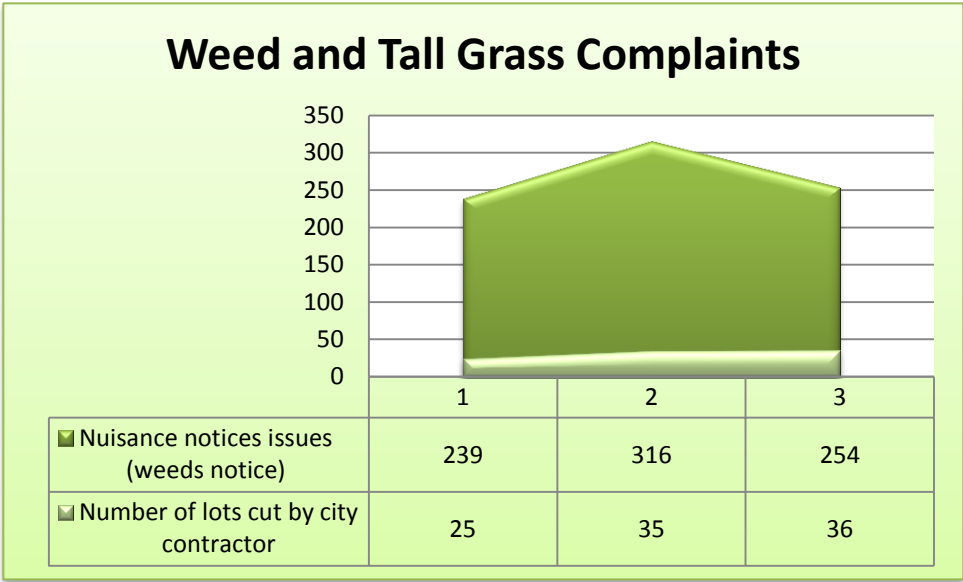
Crack Filling on Asphalt Overlay



Another function the streets division is responsible for is the response and control of noxious weeds and tall grass complaints. The division takes calls on a complaint basis and will respond to verify if there is a problem. The supervisor notifies the property owner when a violation is discovered and gives 48 hours' notice to cut the weeds or grass.



A follow-up inspection is then necessary to see if the problem has been rectified. If not, the supervisor will then notify the City's contractor to proceed with cutting the weeds or grass. As one can imagine, this process is time consuming. However, it is a necessary program that helps maintain the high quality of life within our community.



### Bridge Maintenance

Bridge maintenance is another major function under the Street and Sanitation division. The City has 16 bridges with over 153,000 square feet of bridge decking. The 8<sup>th</sup> Street bridge over the Sheboygan River is the most expensive bridge in terms of maintenance and operation. The bridge has a lift span that must be opened for maritime traffic. From May 1 through October 31 the bridge is staffed with tenders that open and close the bridge for boaters.

There has been a significant drop in the number of bridge lifts for boaters. This is mainly attributed to the low lake and river levels; nevertheless, boating west of the 8<sup>th</sup> Street Bridge has declined from previous years.

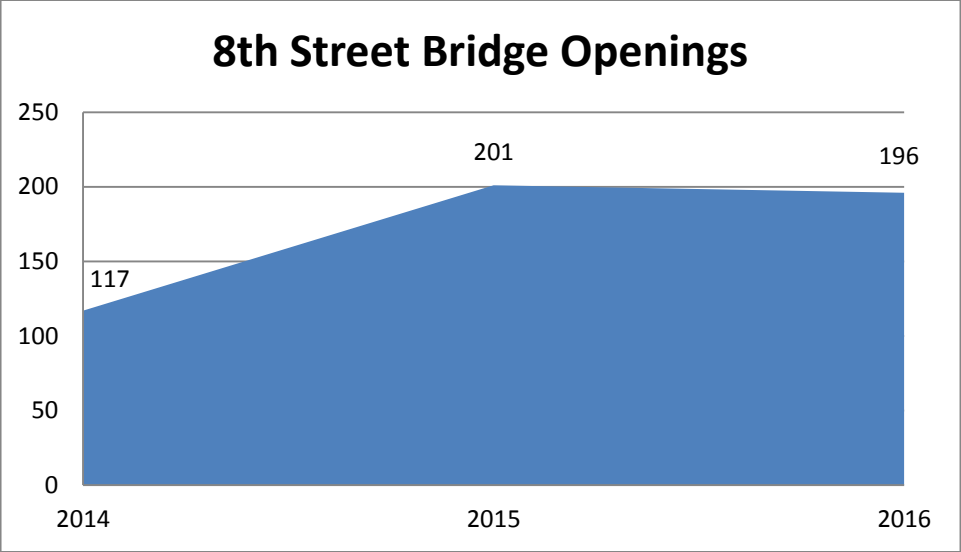
The bridges are inspected biannually under State and Federal regulations. The division contracts with the County, whom has a certified bridge inspector, to perform the inspections (except for the 8<sup>th</sup> Street bridge). The 8<sup>th</sup> Street Bridge is not included because of its complexity. In addition to inspections, the division seal coats half of the bridges every year. Recently, the division has also resurfaced two bridge decks (Pennsylvania Avenue and North 14 Street) to prolong the life of the decks.



8<sup>th</sup> Street Bridge being inspected



8<sup>th</sup> Street Bridge deck being seal coated (County Highway Shared Service)



Eighth Street Bridge Controls

## Snow & Ice Control

Snow and ice control is one of the most important and visible activities the division performs. The division takes a proactive approach through advance planning, work crew training, equipment readiness, deicing agents, monitoring weather forecasts, dispatching crews and public notification.



Road Treated With Salt Brine





Salt Brine Production Equipment

In early 2016 the division purchased brine making equipment. The direct application of brine, also known as anti-icing, can be applied to road surfaces up to three days prior to a snow event. Applying the brine to the roadways will prevent the snow and ice from forming a bond with the road surface. By preventing the bond it becomes easier to remove the snow from the roadway.

DPW started to pre-treat the main arteries prior to snow events in 2016. The brine has prevented the buildup of snow on these roads and has made cleanup efforts more effective.

In addition to anti-icing, DPW salt and plow trucks have the capability to apply brine to the salt as it is applied to the road surfaces. Applying brine to road salt is called pre-wetting. According to recent studies, pre-wetting salt can reduce salt usage by 30%. By pre-wetting the salt with brine prior to being applied to street, it is activated and starts working when it comes in contact with road. Whereas dry salt needs to come into contact with precipitation before it will to start work. When dry salt is applied to roadways researchers have found that up to 30% of the salt bounces and scatters into the curb lines. Pre-wetted salt does not bounce as much and stays in the roadways.

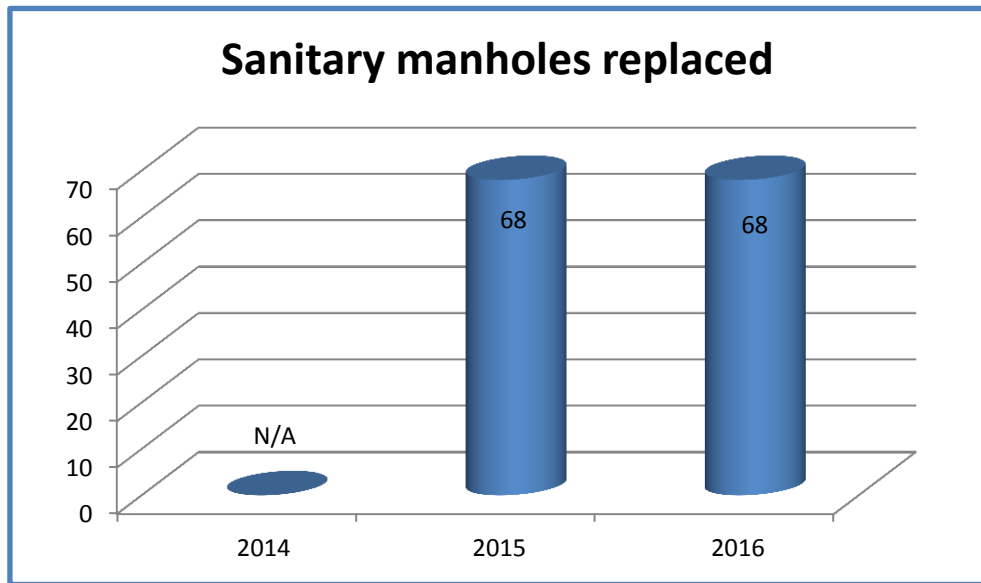




Over the past four winter seasons, the City of Sheboygan as experienced an average of 24 snow events a year that required the DPW to respond. The four average snow fall totals is 49 inches and salt tonnage used is 4,133.

#### Winter Snow Operations

Year	EVENT #	EVENT DURATION (HRS)	EVENT PRECIPITATION (INCHES)	TOTAL MAN HOURS	LABOR COST (AVG)	SALT (TONS)	SALT COST (TONS)
2012-2013	24	319.25	61.50	4,004	\$ 126,126	5,012	\$ 297,574
2013-2014	32	248.00	69.25	4,680	\$ 147,428	4,667	\$ 283,777
2014-2015	19	124.50	29.00	1,960	\$ 61,740	2,302	\$ 162,055
2015-2016	22	332.25	39.70	3,115	\$ 98,107	4,552	\$ 320,433



Preparing to Install a New Sanitary Manhole



Precast Manhole with Rubber Boot

In 2016 the Street Maintenance Division worked closely with the Engineering Division. DPW crews worked ahead and performed the majority of underground repairs prior to the Engineering Division's contractor preformed road repairs. On South 17 Street between Indiana Avenue and Union Avenue, DPW crews fixed multiple sanitary manholes before the street was repaired.

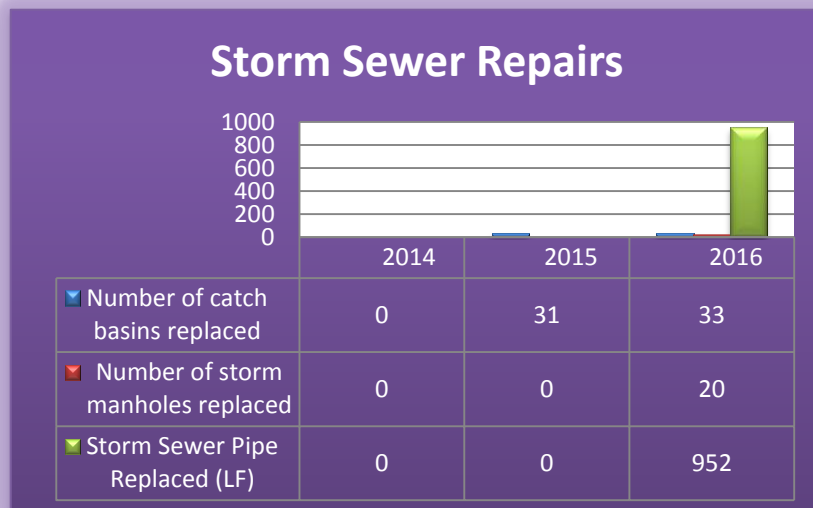
In addition to the South 17 Street project, DPW crews repaired other sanitary manhole throughout the city based on their condition and their location.

Over the last two years, DPW has replaced 68 sanitary manholes. The division uses precast concrete manholes (pictured above) as replacements. Often times, they are replacing cream city brick manholes that were built by hand in the late 1800s. Using precast structures makes for faster and easier repairs, limiting the amount of time that our employees are working in an excavation. Precast structures also limit the amount of infiltration from ground and surface water.



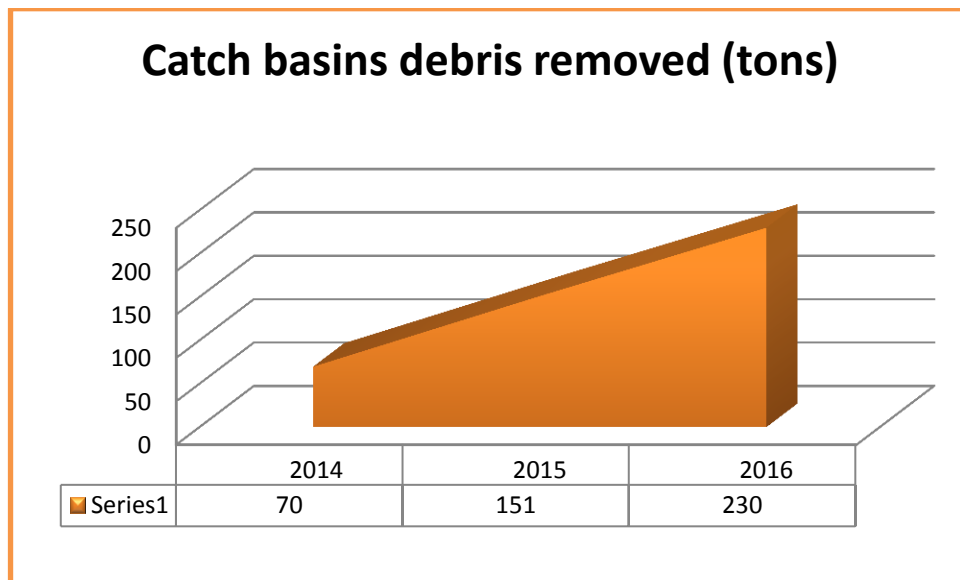
Storm Drain (Catch Basin) Installation

Along with replacing sanitary manholes on South 17 Street, crews also replaced catch basins and storm water manholes. Replacing the entire manhole is more time consuming, but it is more effective over the long term because the manholes are precast concrete and allow little opportunity for groundwater infiltration compared with older manholes constructed with block, brick or a combination thereof. Whenever possible, crews try to increase the size of the pipe when replacing catch basin leads. Unfortunately, this is not always possible due to the fact that other buried utilities may be in conflict with the storm sewer pipe. In 2016 DPW replaced 33 catch basins, 20 storm manholes and over 900 linear feet of storm sewer pipe.



## Stormwater Management

In addition to flooding concerns, the State of Wisconsin now requires the City to permit its storm sewer system through the Wisconsin Department of Natural Resources (WDNR). The permit requires “best management practices” (BMP's) to ensure water quality. Two major BMP's are street sweeping and catch basin cleaning. In 2000, the sanitation division started to systematically clean catch basins. Prior to this period, the division cleaned basins only on a complaint basis. Therefore, the first year experienced a large amount of tonnage collected due to the infrequent cleaning in the past. In 2016 DPW removed over 230 tons of debris from the catch basins.



Sewer Whirlwind Catch Basin Cleaning Truck



Catch Basin Before Cleaning

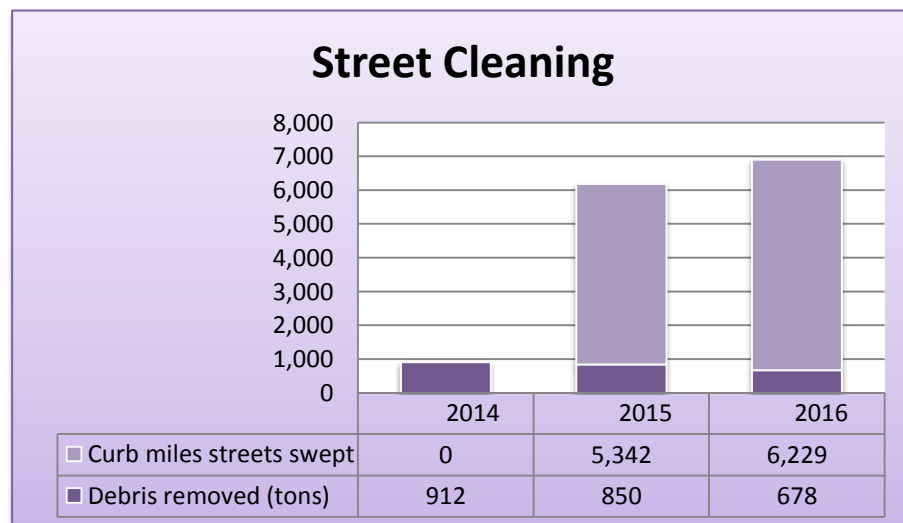


Catch Basin After Cleaning

## Street Sweeping

Beginning in 2000, the division rerouted some of the street sweeping routes to comply with the WDNR's storm water permit requirements. Overall, the amount of tonnages collected, as part of the street-sweeping program has been fairly consistent with a slight trend downward. One change that has significantly affected the program was the requirement to dispose of the street sweeping debris in a landfill. Previously the material was used in backfill or composted.

The DPW has three sweepers that are regenerative air/vacuum sweepers and one mechanical sweeper. During early spring DPW will dispatch all four sweepers for heavy sweeping. After, the City has been completely swept one time; two sweepers are kept on through the rest of the year as weather permits. In 2015 the sweepers swept 5,342 miles of streets and 6,229 miles of streets in 2016.

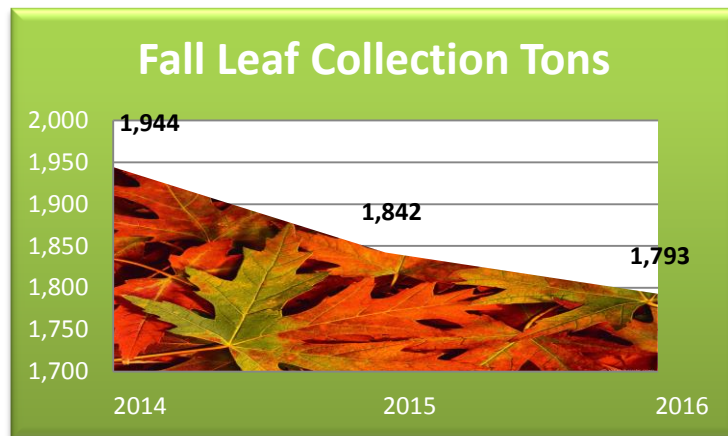




## Leaf Collection

The street's division coordinates the fall leaf collection program. Every fall, between the months of October and November the City allows residents to rake leaves into the parking lane of the street to facilitate efficient collection of leaves. Because the division is already performing street sweeping it is most effective to allow the residents to rake their additional leaves from their property into this designated area.

Some communities prefer to only allow leaves to be raked onto the grass terrace between the curb and sidewalk. This causes problems for the division because our equipment is set-up for street pick-up. Furthermore, winds tend to deposit the leaves into the street from street trees. As a result we need to sweep the street. Many Wisconsin public works departments prefer to pick-up leaves via this method.



In 2016, the Division purchased three leaf vacuum wagons (picture below). The new wagons allow for a DPW employee to ride on the wagon and control the vacuum unit that picks up the leaves off the street. There has been a slight downward trend in the amount of leaves picked up off the street over the last three years. In 2015, DPW collected 1,842 tons of leaves and 1,793 tons of leaves in 2016.

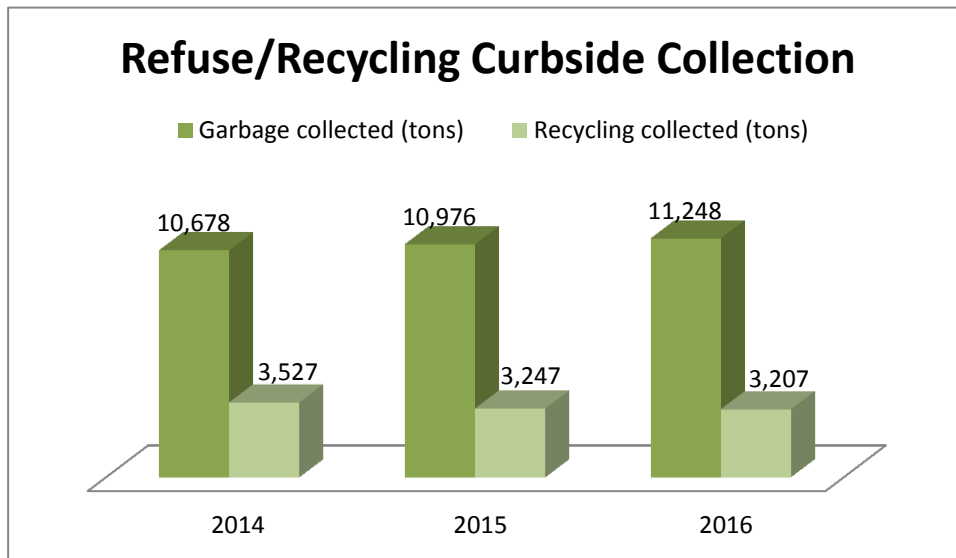


Fall Leaf Collection Special Vacuum Trailer

## Garbage & Recycling

The Sanitation Division provides curbside pick-up of garbage and recyclables for residential units of four or less. Every week the eight sanitation operators make approximately 16,000 stops or pick-ups. In 2016, DPW collected 11,248 tons of garbage up from 10,976 in 2015. Overall, the recyclables have remained relatively the same since 2015 hovering at approximately 3,200 tons.

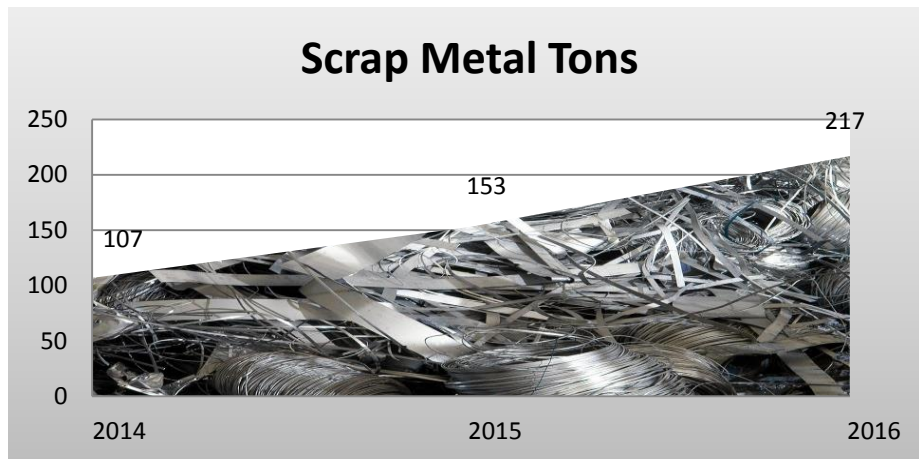
The division uses split rear packers for the collection of both garbage and recyclables without commingling the material. This allows the division to collect both materials with one vehicle.



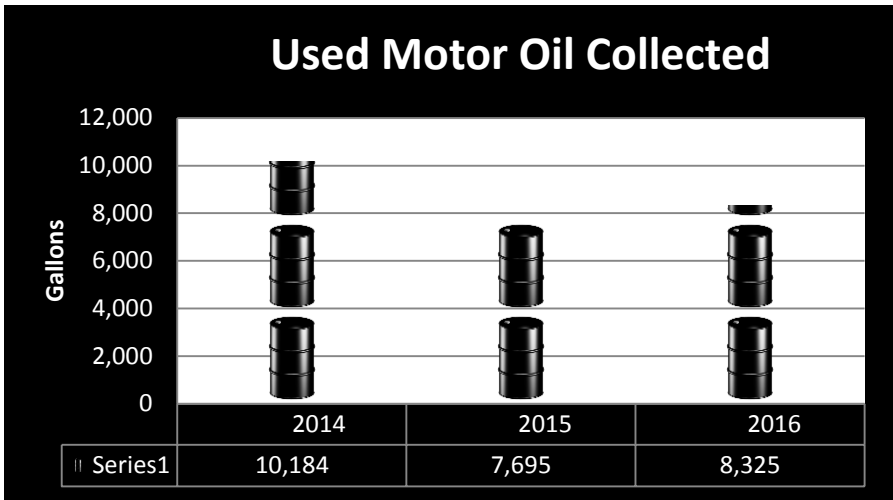
Sanitation Operator Collecting Residential Waste

## Drop-off Site

The Resident Drop-off Site provides residents with a place to dispose small metals, yard waste, waste oil and many other items not picked-up with curbside collection or items banned from landfills. Currently there is no charge. Below is a summary of the annual tonnages collected at the Residential Drop-off Site. The trend in yard wastes and garbage has steadily increased since the beginning. The increase in scrap metal collected is due to the market prices falling; as a result citizens are not cashing in their scrap metals and conveniently using the drop-off site.

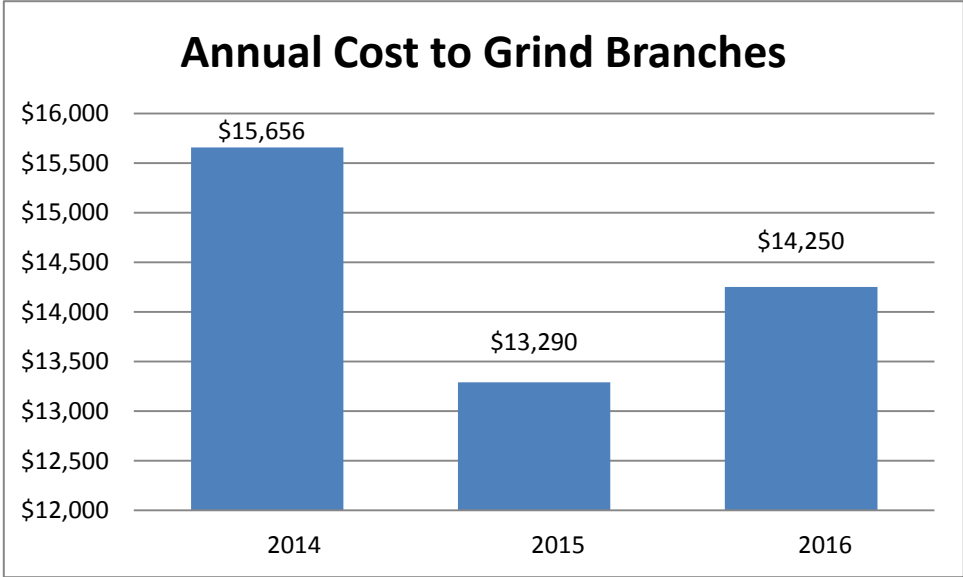


DPW Oil Collection Tanks



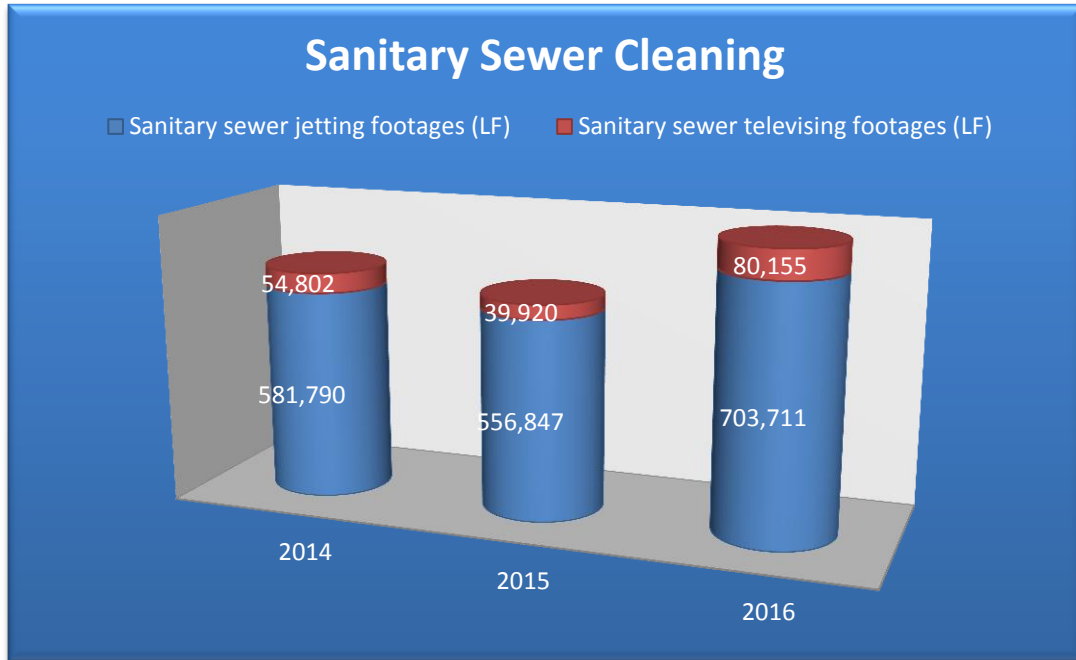


Residential Drop-Off Site



## Sanitary & Storm Sewer Maintenance

This division performs sanitary sewer repairs through an interdepartmental budget from the Wastewater Treatment Plant. These expenses are charged against the sewer rates. The repairs are prioritized with any street resurfacing or reconstruction.

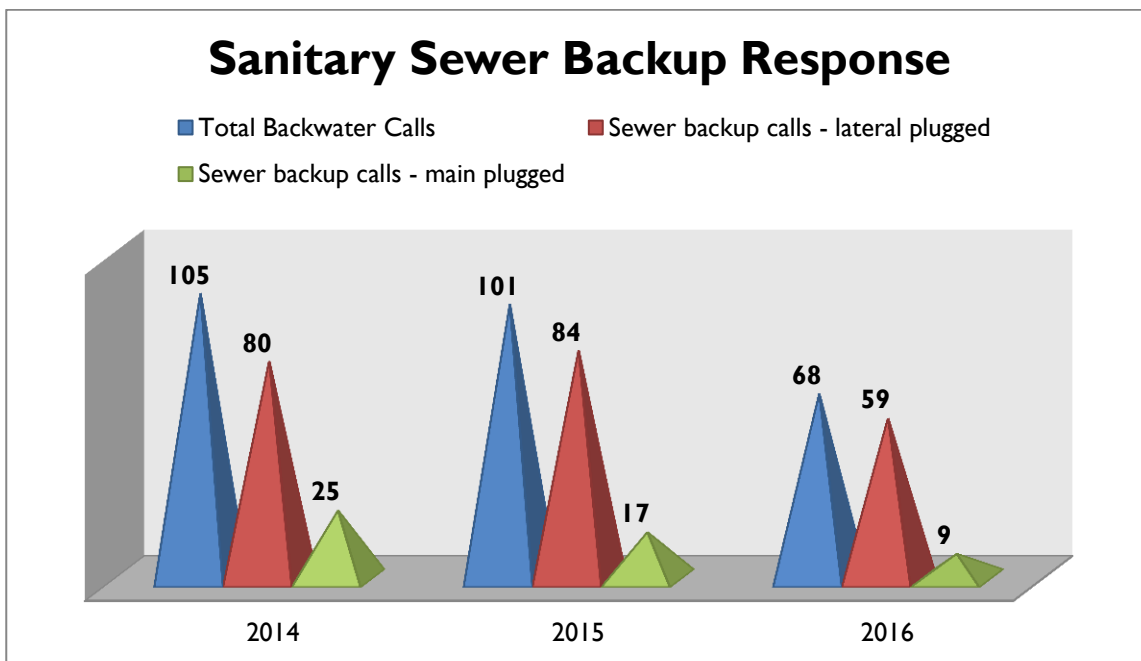


Sewer "Jetting" is performed with a high-pressure water hose and is jetted through the sewer pipe to clean the inside of the pipe. Sewers become restricted with debris build-up such as leaves, twigs and sand and gravel in storm sewers whereas, sanitary sewers have mineral deposits, grease and roots. This debris causes the sewer to become restricted or smaller; therefore, the sewer is not capable of handling the normal flow. As a result, backwaters may occur. Sanitary sewers are the division's main concern due to the health concerns of the potential of raw sewage backing up. This explains the large disparity between the numbers of feet of sanitary sewer jetted versus storm sewer.



Sewer TV Crew

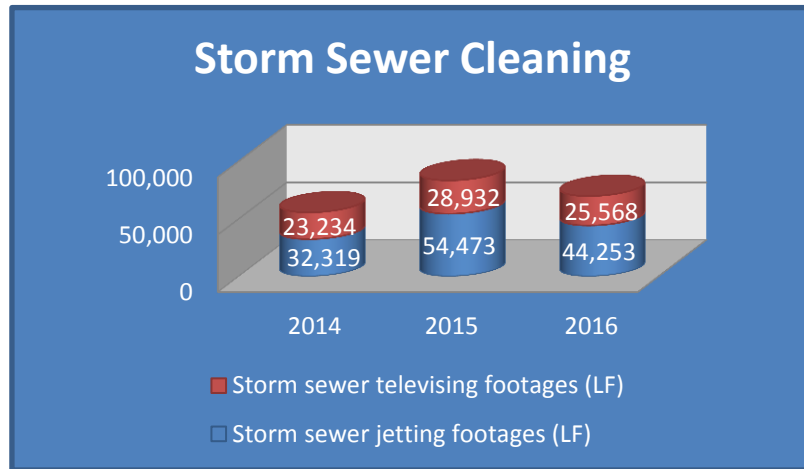
The Public Works Department owns and operates a sewer camera truck. This equipment allows the division to inspect the integrity of sewer pipe to determine its performance. As a rule prior to any street resurfacing or reconstruction, the sewers are inspected to determine whether or not they should be replaced, lined or remain. This practice has significantly reduced the need to excavate in newly paved streets, which is never popular or good for public relations. In addition, to keep contractors honest, new sewers are inspected to verify good construction practices.



Backwaters occur when sewage backs-up into a residence or business. There are numerous reasons why a backwater may occur. Unfortunately, the majority of backwaters are result of the property owner flushing or dumping inappropriate materials into the drains. The end result is a clogged sewer lateral, which is the property owner's responsibility. However, at times the sewer main is clogged and must be opened and cleared for the sewage to flow again. In 2016, nine backwaters were discovered in sewer mains, which is typically less than what we experience in a year. A result of the decrease in backwaters can be linked to the

increase linear footage of sewer cleaning and televising by city crews. Potential problems are removed before they can cause a backwater. In 2016, 703,711 linear feet of sewer pipe was jetted and 80,155 linear feet were televised.

In an effort to educate the public, the division has developed an informational handout for the public on "Coping With Sewer Back-ups." It is available on the division's web site and is personally delivered on backwater calls.



Manhole entries are performed during inspections, cleaning operations, installing monitoring equipment and installing the camera for TV inspections. Every entry must have a permit that documents confined space entry. Furthermore, two persons must be on-site during the entry for safety.

Manhole entries are very dangerous due to the potential of lethal gases and engulfment from flows. As a result, annual training is mandatory for employees required to enter confined space. The City of Sheboygan has 4,852 sanitary sewer manholes and approximately 3,202 storm sewer manholes.



Sewer Vactor Truck



## Facilities and Traffic Division

Michael Willmas.....Superintendent of Facilities and Traffic Division  
Scott Tetschlag..... Leadman Sign and Paint  
Robert Hayon .....Maintenance Worker V/Journeyman Electrician  
Allen Fleisner .....Maintenance Worker V/Journeyman Electrician  
Bernard Knutson .....Maintenance Worker III/Craftsman  
Allen Keitel.....Maintenance Worker III/Craftsman  
Christopher Peterson .....Maintenance Worker III/Craftsman  
Patrick Dugan..... Maintenance Worker II/Sign Designer  
James Herschleb.....Maintenance Worker II/Sign Installer  
Ryan Schneider .....Maintenance Worker II/Sign Installer  
Travis Fintelmann ..... Maintenance Worker II/Custodial  
Juan Garcia..... Maintenance Worker II/Custodial  
Jeffery Bemis..... Maintenance Worker I/Custodial

## Facilities

This division consists of six full time employees, is responsible for maintaining the City's building infrastructure system. The staff is responsible for the overall preventative maintenance and repair of the heating and ventilating systems, plumbing system, electrical equipment, and also provides custodial services for City Hall and the Municipal Service Building. This staff is also instrumental in reducing City costs by performing numerous services for all City departments to include: City Hall, Municipal Service Building, Transit, Police Department, Senior Center and five Fire Departments.

- Notable project in 2016 saw the addition of the Accubrine System installed @ MSB along with the capacity to store 11,000 gallons of salt brine
- Added 1336 sq. ft. of office space to the Engineering wing (2015-2016)
- Renovate a section of City Hall 2nd floor which included three new office areas (2016)
- Fabricated/Installed a vandal proof stand and electrical for a vandal proof vending machine at the transfer station for Transit (2016)
- A new Salt Storage Outbuilding was constructed which more than doubled the salt storage capacity. Storage capacity of old shed was approximately 1,000 tons vs 2,400 tons in the new shed (2014)



## Traffic

The Traffic Division is responsible for the design, maintenance, and repair of all City-owned traffic control systems and devices. This division is divided into two divisions: Signs and Paint Division and Electrical Division.

The Signs and Paint Division, which consists of four full time employees, is responsible for all City street signs and painted traffic markings; such as, center lines, crosswalks, and turn arrows.

The City of Sheboygan has approximately 30,000 signs, ranging from stop signs, street name signs, speed limit and no parking signs, and custom signs. 100% of the signs are designed, fabricated, and installed in house using a computerized plotter and multi-color heat transfer printing system which can create custom indoor/outdoor signage. The City fabricates signs for many departments city-wide to include: Police and Fire Departments, Maywood, Parks, WWTP, and other outside agencies. The division also works closely with Transit in supplying them with signage along with installing and replacing parking meters.

The Paint Division maintains crosswalks at 405 different locations throughout the City and 195 traffic arrows at 72 different locations. The centerline painting is contracted with the County Highway Department with the help of city employees. In 2015 the division line stripped 26 miles of white paint and 48 miles of yellow paint which equates to 1,630 gallons of paint in the process. To get the reflectivity of the centerlines 11,480 pounds of glass beads were added in the painting procedure.

This division is also responsible for installing, removing, and maintaining all festive decorations throughout the City of Sheboygan.

## Signs and Paint

Notable projects for 2016 would be reconfiguring the lanes and grinding off the old pavement markings of Eighth Street and Indiana Avenue round-about. New signage and pavement markings were then added.

- Signs installed/removed: (2015) = 733 (2016) = 929
- Signs Constructed: (2015) = 1261 (2016) = 1325
- Specialized signage: (2015) = 180 (2016) = 24
- New signage installed on Pennsylvania Avenue from 5<sup>th</sup> -7<sup>th</sup> (2016)
- Painting the interior of the bathrooms at hardball (2016)
- Installed "Sheboygan Squared" signage and "Hanging Flower Baskets" on Eighth Street and Blue Harbor area for Planning and Development (2015)
- City Hall garage painted (2015)
- Painted 105 wooden sign posts on Broughton Drive to Riverfront Drive (2015)



The division is also responsible for all the city street signs and painting traffic markings; such as, centerlines, crosswalks and turn arrows. In addition, they perform work for other City departments such as: Police, Fire, Maywood, Transit, Mayor's Office, Senior Center and Motor Vehicle division. The division fabricates the majority of signs in-house. The signs are computerized and outputted to a sign plotter that cuts the sheets of material to be placed onto the aluminum sign blanks. The City of Sheboygan has approximately 30,000 signs, ranging from stop signs, street name signs, speed limit signs, no parking regulation signs and many more.



Street Centerline Painting (County Highway Shared Service)

This division maintains 156 traffic arrows at 62 different intersections. The centerline painting is contracted with the County Highway Department, which has the specialized equipment for this process. In addition, the division paints various City buildings such as, City Hall, Municipal Service Building, Fire Stations, Maywood and others.

## **Electrical**

The second part of this division is the Electrical Division which consists of two full time Journeyman Electricians. The electricians are responsible for the design, installation, maintenance, and repair of all City-owned electrical systems to include: City owned buildings, installation of data cabling, traffic signaling and coordination, street lighting, pathway lighting, parking lot lighting, and our park system which also includes ball diamond lighting.

This Division installs, repairs, and maintains 39 signalized intersections, seven red flashing signals, and two yellow flashing signals. In addition to the traffic signals, the City owns and maintains over 2,700 street lights, 505 pathway lights, parking lot lights, and an additional 1,380 lights in our Park system. The Division is also tasked with the design and layout of newly installed lighting throughout the City.

Adding to the service work, the Electricians also respond to knockdown situations both day and night. The severity and complexity of each incident varies from one incident to another. Damage from these incidents to City owned property has varied from \$1000.00 to over \$50,000.00 per incident. Almost 100% of the repairs are completed by the Department of Public Works.

## Street Lighting

- Notable projects for 2016 saw the conversion of 168 light poles to energy efficient LED's along the Kohler Memorial Drive, the Gateway to Sheboygan. This upgrade saves the City approximately \$7,212.00 in energy costs per year.
- An additional 34 poles were converted over to LED's on North Ave. from 7th Street to Bell Ave. (Total for 2016 = 202 poles)
- 2015 - Converted to LED's = 64
- 2014 – Converted to LED's = 50
- 2013 – Converted to LED's = 78
- Total energy savings per year for all LED conversions = \$15,880.00



## Traffic Signals

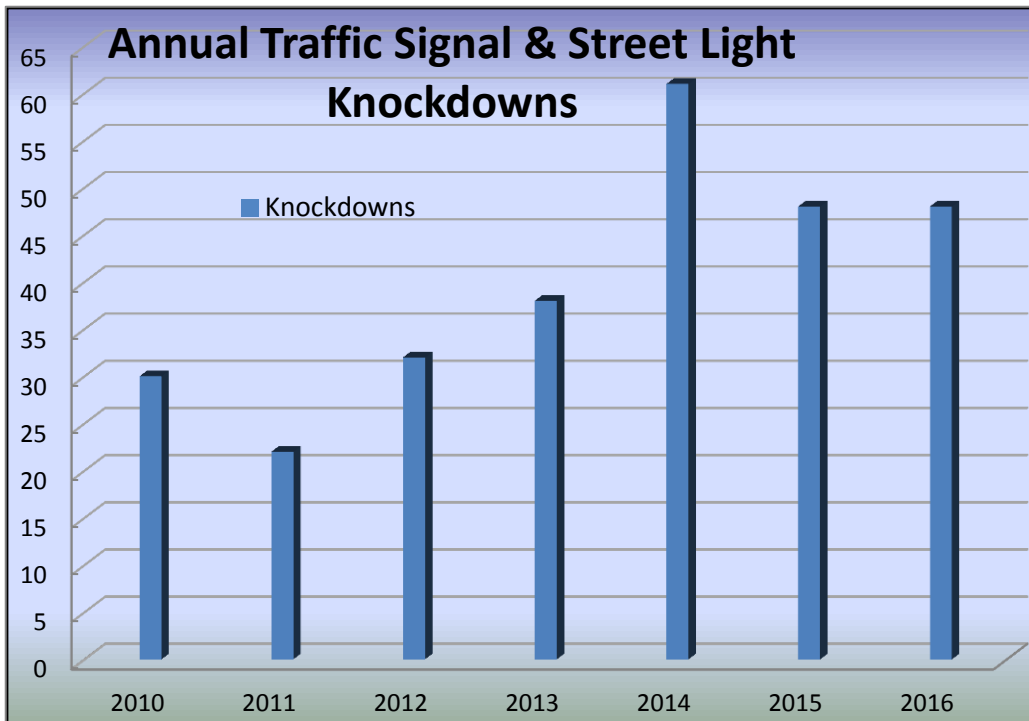
The year 2016 saw the most comprehensive preventive maintenance done in over 10 years on the 39 signalized intersections we are responsible for. Over \$30,000.00 in materials went into completing this job. The Electricians for example replaced 379 12" LED traffic lamps which costed approximately \$13,265.00; the majority of the new LED's are replacing incandescent lamps which consume nearly 10 times more power than the energy efficient LED's.

Annually, the Division tests all the traffic controllers, which contains the program for that individual intersection, and conflict monitors, which monitors for any faults in the system, to ensure they are operating correctly.



(Sheboygan Press Photo – Gary C. Klein)

Year	Knockdowns	Material Cost
2010	30	\$ 40,440.81
2011	22	\$ 33,175.45
2012	32	\$ 59,378.45
2013	38	\$103,342.17
2014	61	\$132,272.09
2015	48	\$ 99,967.80
2016	48	\$103,288.37



## Motor Vehicle Division

Mark Strains.....Master Certified Mechanic  
 Dennis Klumb.....Master Certified Mechanic  
 Joel Brunnbauer.....Certified Mechanic  
 Max Zschetzsche .....Certified Mechanic  
 Scott Hinz .....Service Mechanic

The Motor Vehicle Division is responsible for maintaining the Division's fleet of equipment. This division is established as an enterprise account within the City budget. The Motor Vehicle fund is used to account for the central automotive equipment operations, which includes the purchasing, dispatching, repair and maintenance of vehicles and motorized equipment used by the Division.



Year	2014	2015	2016
Total Pieces of Equipment	393	406	366
Gallons Diesel Fuel	95,200	94,500	92,500
Gallons Gasoline	23,766	23,859	25,348
Gallons Motor Oil	1297	924	1035
Gallons Hydraulic Oil	703	351	1189
Snow Plow Trucks	28	25	27
Snow Plow Blades	60	54	58
Repair Orders Processed	1398	1448	1384

## Wastewater Treatment Division

Sharon Thieszen .....	Superintendent of Wastewater Treatment
Mark Wittstock .....	Pretreatment Supervisor
Robert Butcher .....	Maintenance Supervisor
Barb Thieme .....	Administrative Assistant
Frederick Meifert .....	Process Systems & Operations Coordinator
Daniel Brady .....	Lead Operator
Willard Houseye .....	Operator
William Voss .....	Operator
Brian Willadsen .....	Operator
Tyler Hoffman .....	Operator
Josh Lampe .....	Master Electrician
Tony Gottschalk .....	Maintenance Technician
Jeffery Sargent .....	Maintenance Technician
Mark Oldenburg .....	Maintenance Technician
Dana LePage .....	Lab Technician

The Sheboygan Regional Wastewater Treatment Plant (WWTP) is owned and operated by the City of Sheboygan. It provides wastewater treatment for the City of Sheboygan, City of Sheboygan Falls, Village of Kohler, Town of Sheboygan and Town of Wilson.

Mission: To protect public health and the environment by providing reliable and cost efficient wastewater collection and treatment services through sustainable and fiscally responsible resource recovery practices.

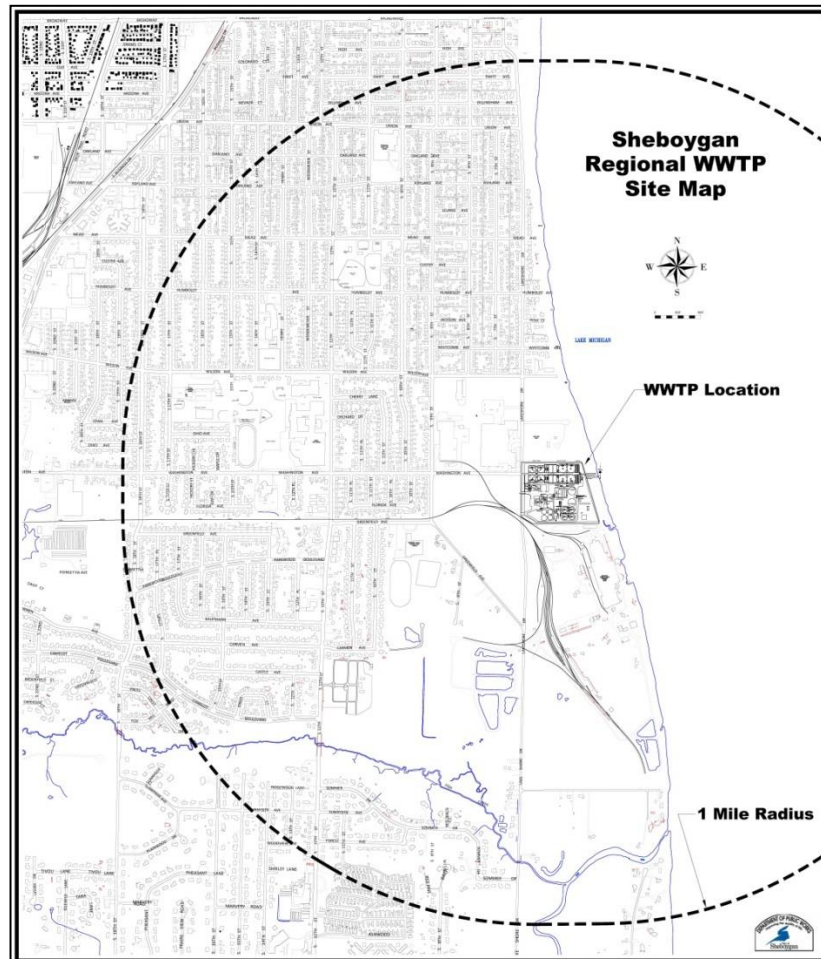
Goals: Maintain environmental compliance below regulatory requirements.

- Operate the wastewater system in a sustainable, fiscally responsible manner.
- Effectively use innovative engineering, conservation leadership, and recovery expertise to produce clean water.
- Evaluate wastewater infrastructure (collection system and treatment facilities) for areas of insufficiency and develop and action plan to correct and improve areas of concern.
- Develop and implement a 20 year facility plan and a five-year capital improvements plan to address the maintenance needs of the wastewater treatment facility and collection system and plan for future regulatory requirements.
- Achieve self-sufficiency for electric and heating needs.





The City of Sheboygan owns and operates the Sheboygan Regional Wastewater Treatment Plant (WWTP) which provides wastewater treatment to approximately 70,000 residents and 15 Significant Industrial Users. The service area includes the City of Sheboygan, City of Sheboygan Falls, Town of Sheboygan Falls, Village of Kohler, Town of Sheboygan, Town of Lima, and Town of Wilson.



The WWTP is an 18.4 MGD Design Average, 56.8 MGD Design Peak conventional activated sludge wastewater treatment facility with biological phosphorus removal and chemical (ferric chloride) backup. The final effluent is disinfected with sodium hypochlorite and dechlorinated with sodium bisulfite prior to discharge to Lake Michigan.

Waste activated sludge (WAS) produced in the aeration basins is returned to the primary clarifiers to co-settle with the primary sludge. The resultant combined primary sludge (PSD) and WAS is pumped to the anaerobic digesters for stabilization. Trucked-in High Strength Waste is co-digested with the PSD and WAS to enhance the biogas production. The anaerobically digested sludge is then thickened with a gravity belt. Approximately 50% of the thickened sludge is further processed and dewatered with a screw press and then dried to a Class A, Exceptional Equality (EQ)

biosolids. The liquid biosolids are land applied as Class B biosolids. Dewatered biosolids that are not dried are also land applied as Class B biosolids.

The WWTP also operates a Combined Heat & Power (CHP) System which utilizes the biogas produced in the anaerobic co-digestion process to produce electricity and heat. The CHP System has 700kWh of electrical generating capacity and over 2.4 MMBTU/hour of heat recovery.

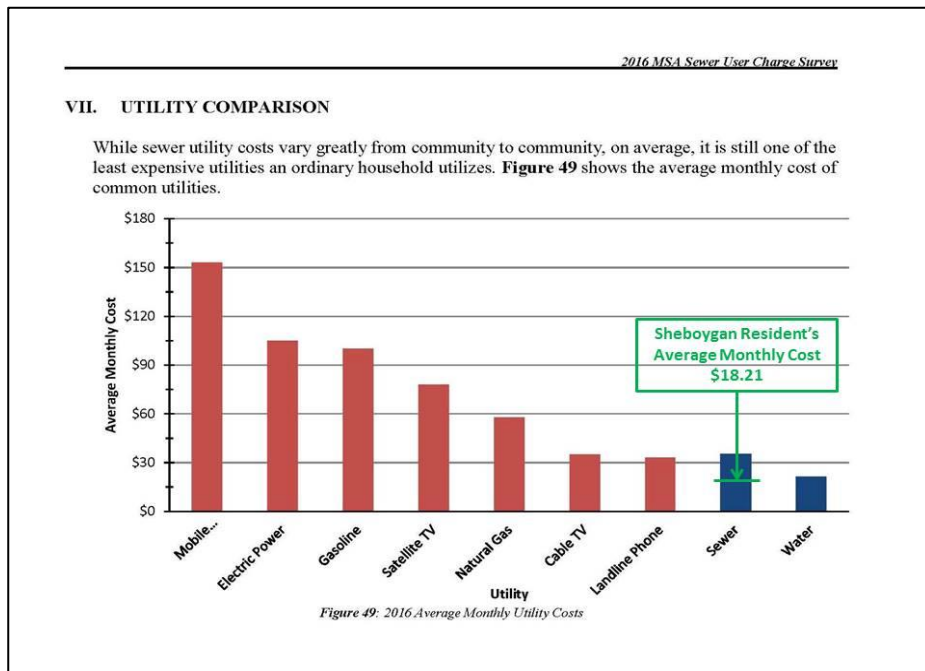
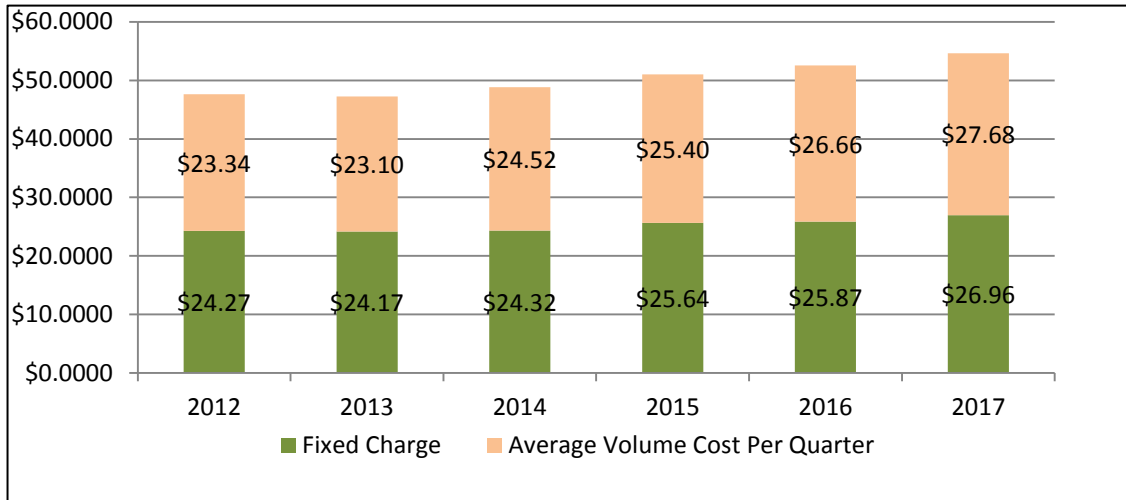


## USER RATES

The Sheboygan Regional WWTP is funded by user fees. The City of Sheboygan's Sanitary Sewer Rates are well within the Wisconsin average sewer rates. Even though the City's sanitary sewer collection system and treatment plant are aging and environmental regulations are increasing, the City has been able to maintain an annual rate increase approximately 3-4% as compared to the anticipated 2017 average rate increase across Wisconsin of 15%. The average sanitary sewer rate for the City of Sheboygan resident is less than \$20 per month. This is significantly less than monthly utility costs as shown in the Utility Comparison chart below. The City is proud to be able to provide efficient sanitary sewer service and clean water at such a low rate.

In addition to seeking grants, the WWTP also accepts trucked in waste to help offset the treatment plant costs. In 2016, there were a total of 17 million gallons of wastewater and 16 million gallons of high strength waste treated by the WWTP.

## Sheboygan Regional WWTP Average Quarterly Residential User Charge



### SHEBOYGAN REGIONAL WWTP WPDES PERMIT

The Wisconsin Department of Natural Resources (DNR) renewed the Sheboygan Regional WWTP's Wisconsin Pollution Discharge Elimination System (WPDES) permit, effective January 1, 2016. The permit contains water quality based effluent limitations that are necessary to ensure the water quality standards for Lake Michigan.

The WWTP requested and received reduced monitoring for Carbonaceous Biochemical Oxygen Demand (CBOD<sub>5</sub>) and Total Suspended Solids (TSS) parameters for both the influent and effluent monitoring locations. The

reduced monitoring requirements were granted due to the Sheboygan Regional WWTP's 100% compliance achievement of the monthly and weekly average discharge limits for both CBOD<sub>5</sub> and TSS since 2011.

Additional changes in the newly issued permit include the addition of a mercury effluent limit of 2.8 ng/L and lower phosphorus effluent limit of 0.9 mg/L. Additional reports and plans required in the new permit include a Phosphorus Optimization Plan, Land Application Plan, and the continued Mercury Pollutant Minimization Program.

#### SHEBOYGAN REGIONAL WWTP PERFORMANCE

The Sheboygan WWTP reclaimed over 4 billion gallons of water in 2016 and returned it to Lake Michigan. The WWTP treated over 3 million pounds of CBOD<sub>5</sub>, 7 million pounds of TSS, 116,000 pounds of ammonia, and 139,000 pounds of phosphorus in 2016. The treatment processes removed over 98% of the CBOD<sub>5</sub>, 99% of the TSS, 95% of the ammonia, and 86% of the phosphorus.

The WWTP achieved 100% compliance with all its WPDES Permit Effluent Limitations and Requirements. The effluent discharged to Lake Michigan is consistently well below the WPDES permit limits.



Untreated Influent – Final Treated Effluent – Drinking Water

#### BIOSOLIDS PRODUCTION

The Sheboygan WWTP recovered the nutrients (nitrogen and phosphorus) in the wastewater and generated 14 million gallons of digested, thickened liquid biosolids. Approximately 9 million gallons of the thickened liquid biosolids were utilized as a natural fertilizer on agricultural fields. The remaining liquid biosolids were further processed and dried to produce 1300 dry tons of Class A, Exceptional Quality biosolids. These biosolids were managed in accordance with the WWTP's approved

Land Management Plan and utilized and marketed by an independent contractor and as a fertilizer and soil amendment on City of Sheboygan's grounds.

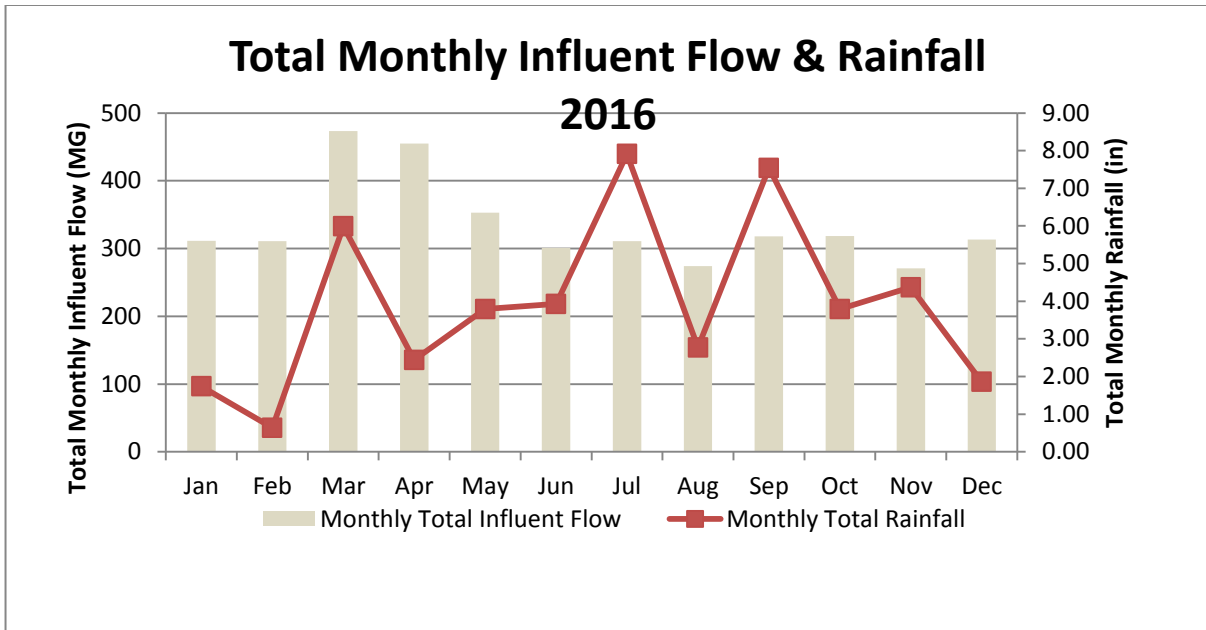
#### BIOSOLIDS PROCESS DESCRIPTION

In 2014, the Sheboygan Regional WWTP diversified its biosolids management plan and installed a screw press dewatering system and a medium temperature belt dryer. A portion of the thickened biosolids are now dewatered and dried to a moisture content of less than 10%. The dryer utilizes biogas produced in the anaerobic digestion process and the waste heat from the plant's microturbines to heat the dryer to approximately 204 degrees Fahrenheit. The design of the dryer is simple; slow moving belts, drive systems using standard market components, and all stainless steel components where moisture or wear may occur. The dryer utilizes indirect heat so there is no ignition source of any kind within the dryer; therefore, it provides a safe operating environment. There is very little dust produced by the drying operation due to the slow moving belt technology and no dry recycle of any kind. The dryer has a low electrical demand and utilizes a cascading air technology and state-of-the-art controls which provide optimal energy efficiency. The dryer's enclosed system maintains a negative pressure to ensure minimal odor emissions.

The final product is a pellet sized dry product that has a very high agronomic value and is safe to use on lawns, shrubs, trees, flowers, vegetables, and as a general soil amendment. The final product has virtually no salts, so it will not burn plants. The nitrogen and phosphorus are released slowly into the soil and plants which allows for even growth and better root development.

Sheboygan's dryer is designed to dry approximately half of the biosolids produced by the facility's treatment processes. By drying half of the liquid biosolids produced, the Sheboygan Regional WWTP is able to diversify the biosolids disposal and reuse options, while minimizing capital and construction cost. The liquid biosolids are land applied via injection into agricultural fields as a natural and beneficial fertilizer. Land application of the liquid biosolids is limited by season, weather conditions, and field availability. The dried biosolids are an Exceptional Quality, Class A product that can be used in residential and agricultural applications, as well as, landfilled if necessary.





#### PRETREATMENT PROGRAM

##### ACUTE/CHRONIC WET TESTING

The WWTP's Acute and Chronic WET Testing was completed July 24-29, 2016. Wet Testing is completed on an annual basis to determine if the WWTP's effluent discharge is non-toxic to aquatic life in Lake Michigan. The testing demonstrated no toxicity as the survival rate of the Fat Head Minnows and Ceriodaphnia dubias from the WWTP was 100%.

##### SEMI-ANNUAL AND ANNUAL PRETREATMENT WPDES PERMIT REPORTS

After completion of the wastewater sampling and laboratory analysis from each permitted industrial discharger, a semi-annual and annual Periodic Compliance Report (PCR) needs to be completed and forwarded to the Department of Natural Resources (DNR). The reports are due on March 31 and September 30 of each year.

##### SIGNIFICANT INDUSTRIAL USERS (SIU)

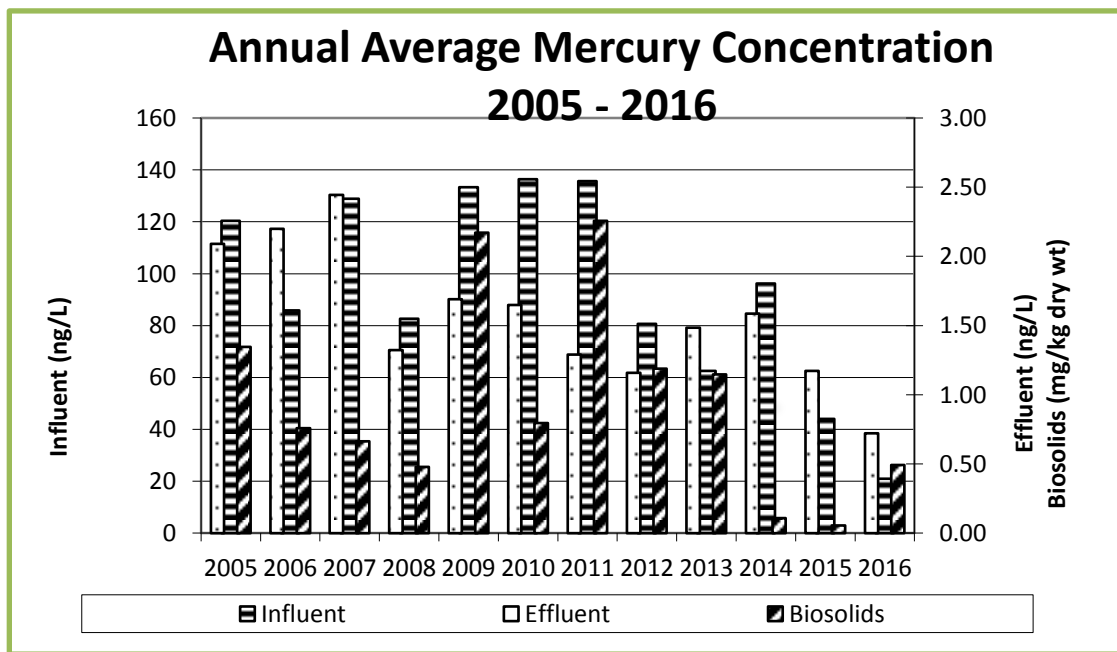
Each of the 15 permitted SIUs complete wastewater sampling and laboratory analysis for a specific list of parameters set by the Environmental Protection Agency (EPA) and the Sheboygan Regional WWTP semi-annually. Each Industry must meet their individual permit limits. In 2016, six industries received letters of Notice of Non-Compliance (NON). However, no industry was determined to be in Significant Non-compliance (SNC).

Each permitted industry received an Annual Site Inspection (ASI) during 2016. Three industries which were reissued Industrial Wastewater Permits in 2016: Curt Joa, Mayline Company and Kohler Company.

Starting mid-year 2016, each permitted industry at the time of their ASI received documentation regarding "Drug Drop" and "No Wipes down the Pipes" documentation and discussing the issues the wastewater communities are having with wipes being flushed down the toilets to the sanitary sewers. This will continue into 2017, until all permitted industries receive this documentation.

#### ANNUAL MERCURY POLLUTION MINIMIZATION PROGRAM (PMP)

Starting in 2011, a PMP was required by the WPDES Permit to be completed and reported on an annual basis. This program consists of working with the following organizations in the City of Sheboygan: School and Educational facilities, Dental Facilities, Medical Facilities and Industrial facilities. The WWTP's Annual PMP summary report is due on January 31 of each year. Since the start of this program mercury levels discharged into and leaving the treatment plant have gone down substantially, as seen on the bar graph below.



#### LABORATORY

The Sheboygan Regional WWTP Laboratory is operated primarily by one full time laboratory technician. Two operators and the lead operator assist the Laboratory Technician when needed and serve as a backup in the Laboratory Technician's absence. In 2016, the Laboratory Technician successfully trained the WWTP's newest operator as the primary back up in the laboratory.

The Sheboygan Regional WWTP Laboratory completes daily, weekly, and monthly sampling, and laboratory analyses in accordance with the WPDES permit and internal process control samples. The process control analyses are critical to determine the treatment plant efficiency and help detect and troubleshoot any

plant issues. The Sheboygan WWTP Laboratory is certified by the Wisconsin DNR and analyzes samples for BOD, TSS, pH, ammonia, residual chlorine, fecal chloroform, percent total solids, and percent volatile solids. The laboratory also performs microscopic examinations of the wastewater treatment plant's activated sludge processes. Approximately 8,000 samples were analyzed by the Sheboygan Regional WWTP Laboratory in 2016.

- Eight sludge samples a week are analyzed for percent volatile and total solids.
- One effluent sample per week is sampled and analyzed for fecal coliform bacteria.
- Once per day an effluent sample is sampled and analyzed for residual chlorine.
- Once per day an influent and effluent sample are analyzed for pH.
- Continuous sampling is done seven days per week for Influent, Primary, Effluent, Mixed Liquor Suspended Solids (MLSS), and Return Activated Sludge (RAS). From these samples, BOD is analyzed five days per week and TSS, Ammonia (NH<sub>3</sub>), and Total Phosphorus (TP) are analyzed seven days per week. Seven days per week a 30 minutes settleable test is performed on the MLSS and RAS samples, along with a TSS and pH to determine the wasting calculator for the aeration basins.
- Once per week a Gravity Belt Thickening (GBT) filtrate sample is analyzed for BOD, TSS, pH, TP, and NH<sub>3</sub>. These analyses help determine the loading sent back to the head of the plant.
- Microscopic examinations are performed once or twice a week on the MLSS. The examination includes: wet mount, India ink, gram staining, and oil immersion. The microscopic examination gives a detailed assessment of the health of the biological processes.
- Approximately 34 different types of waste are trucked in to the WWTP for treatment. Each waste type is analyzed eight times per year for BOD, TSS, TP, and pH. The analyses of these samples help determine the loadings to the WWTP and the rate charged for each waste type.
- Five municipalities sample their discharge to the WWTP once per month for four consecutive days. These samples are analyzed by the Sheboygan Regional WWTP for BOD, TSS, pH, and TP. The analyses of these samples help determine the loadings to the WWTP and the rate charged to each municipality.

#### ANNUAL QUALITY CONTROL

- The laboratory technician performed, completed, and passed the proficiency testing that is required to recertify the laboratory on an annual basis.
- All Standard Operating Procedures (SOPs), the Quality Control Manual, and Chemical Hygiene plans are reviewed and updated on an annual basis.
- All thermometers and pipettes are calibrated on an annual basis (pipettes are also checked on a quarterly basis).
- Limit of Detection (LOD) and Limit of Quantitation (LOQ) are generated for TP, NH<sub>3</sub>, and Residual Chlorine on an annual basis.
- An independent contractor tests the fume hoods, calibrates the balances, and conducts safety training on an annual basis.
- The Wisconsin DNR conducts a full laboratory audit every three years. The Sheboygan Regional WWTP Laboratory successfully passed the last audit in 2015.



## QUARTERLY/MONTHLY QUALITY CONTROL

The analytical instruments are calibrated and maintained by the Laboratory Technician as needed. The Laboratory Technician is also in charge of ordering all of supplies and making sure that all equipment and instruments are working properly.

- Bottle Blank checks are done once per quarter on the influent and effluent carboys to check for cross contamination and ensure the cleaning procedure is effective. These samples are analyzed for BOD, TSS, TP, and NH<sub>3</sub>.
- Monthly balance checks are done with certified weights to ensure the annual calibration is maintained.
- Monthly barometric checks are done on the BOD meter.
- The field BOD meter used by the operators is checked monthly against the laboratory BOD analyzer to ensure accuracy.

## AWARDS

- Wisconsin Department of Natural Resources
  - 2009 Large Laboratory of the Year
- Wisconsin Wastewater Operator Association (WWOA)
  - 2013 Bernauer Award – Dale Doerr
  - 2013 Newcomer of the Year Award – Brian Willadsen, Andy Resch
  - 2015 Bernauer Award – Dan Brady
  - 2015 Newcomer of the Year – Dana LePage
  - 2016 Newcomer of the Year – Tyler Hoffman
- American Council of Engineering Companies (ACEC)
  - 2013 Engineering Excellence Grand Award - Net Zero Energy 2016 WWOA Newcomer of the Year

## 2016 AWARDS

The WWOA recognized Tyler Hoffman as the Newcomer of the Year for his higher than average growth in operations knowledge, a willingness to learn, innovation on the job, and exceptional enthusiasm for his field at the 2016 WWOA Annual Conference in October.

