

Kenosha Water Utility

2014 Annual Report



6" main break floods 10th Avenue



Blow-off from a 16" water main on 47th Avenue



Even a small drip can become a mass of ice



211 frozen water service laterals were thawed

"Providing and Protecting Kenosha's Greatest Natural Resource"

2014
ANNUAL REPORT
of the
KENOSHA WATER UTILITY
Kenosha, Wisconsin



BOARD OF WATER COMMISSIONERS (Jan - March)

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Scott N. Gordon

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Edward St. Peter, General Manager

Dave Lewis, Assistant General Manager

DIVISIONS

John Andersen, Director of GIS / IT

Melissa Arnot, Director of Operations

Cathy Brnak, Director of Business Services

Robert Carlson, Director of Engineering

Curt Czarnecki, Director of Infrastructure Services

Roger Field, Director of Water Production

Sue Hill, Director of Personnel & Administration

Katrina Karow, Director of Wastewater Treatment

John Rasch, Director of Water Distribution & Sanitary Sewer Collection

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Board of Water Commissioners

Jan Michalski, Chairman
Eric Haugaard, Vice Chairman
Steve Bostrom
Scott N. Gordon
Rhonda Jenkins
Patrick Juliana



Edward St. Peter
General Manager
4401 Green Bay Road
Kenosha, WI 53144

Phone (262) 653-4300
Fax (262) 653-4303

“Providing and Protecting Kenosha’s Greatest Natural Resource. . .Water”

June 2015

Board of Water Commissioners
Kenosha Water Utility
4401 Green Bay Road
Kenosha, WI 53144

Dear Board Members,

SUBJECT: 2014 Annual Report

I respectfully submit the year 2014 Annual Report of the Kenosha Water Utility. The annual report documents the statistics of the operations, capital improvements and financial activity of our three enterprise systems, “Water System, Sewerage System, and Household Hazardous Waste Program.”

The Kenosha Water Utility continues to maintain a strong financial position. Revenues in the Water System, Sewerage System and Household Hazardous Waste exceeded expenses for the year 2014.

The Utility was extremely busy during the first quarter of this year with a brutal winter and major issues with the Energy Optimized Resource Recovery Project, along with other item that will all be detailed in this report.

Each division has provided detailed descriptions of their activities over the past year. It is encouraging to review these accomplishments and realize that we have an outstanding group of directors, supervisors and staff that not only provide the highest quality water and sewerage service, meeting and exceeding all state and federal requirements, but also a team that works 24 hours/day, 7 days/week, 365 days/year tirelessly in their mission to **“Provide and Protect Kenosha’s Greatest Natural Resource ... Water.”** I would like to give special thanks to all of our employees (team members) who diligently work together to be the best that we can be.

Our customers are accustomed to turning on the faucet and the water is there, pure, cold and safe; having safe and flowing sewers; having customer service second to none; and having facilities that will meet their needs well into the future. I doubt our customers give it much thought each day and we at the Utility are committed to keeping it that way!

I thank the Board for their support and direction as we work together to serve our customers.

Sincerely,

A handwritten signature in black ink, appearing to read 'Edward St. Peter'.

Edward St. Peter, General Manager



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Board of Water Commissioners

Jan Michalski, Chairman
Eric Haugaard, Vice Chairman
Steve Bostrom
Scott N. Gordon
Rhonda Jenkins
Patrick Juliana



David J. Lewis
Assistant General Manager

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“Providing and Protecting Kenosha’s Greatest Natural Resource. . .Water”

June 2015

Mr. Edward St. Peter, General Manager
Kenosha Water Utility
4401 Green Bay Road
Kenosha, WI 53144

Subject: 2014 Annual Report

Dear Mr. St. Peter,

I respectfully submit my 2014 Annual Report. Each year, the Kenosha Water Utility continuously improves upon its efforts to reduce costs, improve performance, and increase efficiencies. These efforts are highlighted in this year’s Annual Report. Major activities and initiatives that I supported at the Water, Wastewater, and Distribution Divisions included:

- Cleaning of the wet well at the Water Production facility. This well is 50 feet deep, so it presented a number of logistical challenges. The project utilized staff from both Water and Wastewater divisions.
- Installation of stand-by generators at the 80th St. and 30th Avenue booster stations. These upgrades will allow us to pump water from these stations during a power outage.
- Switch gear upgrade for the incoming power at the Wastewater Treatment Facility. This upgrade utilizes the latest technology to switch power between two electrical sources.
- Purchase of new pumps and pump upgrades at several sewage lift stations. The purchase of these pumps will provide redundancy in our maintenance operations.
- Replacement of deteriorated gaskets on the aeration pipeline at the Wastewater Treatment Facility. We were able to complete this project in house through the diligent efforts of the Distribution Division.
- Participation in project planning with Centrisys and Donohue & Associates to implement changes to the Energy Optimization and Resource Recovery project.

When we began planning for the 2014 budget we did not know that the winter of 2014 would be one for the record books. With nearly five feet of frost in the ground, the Utility had 208 water main breaks, 225 frozen services at businesses and residences, and numerous other weather related issues. This overload stretched utility staffing, especially in the Distribution and Meter Departments. Ultimately, we came through the winter with satisfied customers and were able to optimize our operations to cover these extreme conditions.



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In my years at the Water Utility, I have always found dedication and professionalism in the way employees conduct their job duties. However, I have never been as impressed as I was when I witnessed the dedication and professionalism under conditions as extreme as the winter of 2014. It makes me proud to be a member of the “team”.

I thank you, Mr. St. Peter and all the KWU Directors and Supervisors for your support during 2014. I would also like to thank the Board of Water Commissioners for their support throughout 2014. None of the projects that were undertaken would be possible without your input and approval.

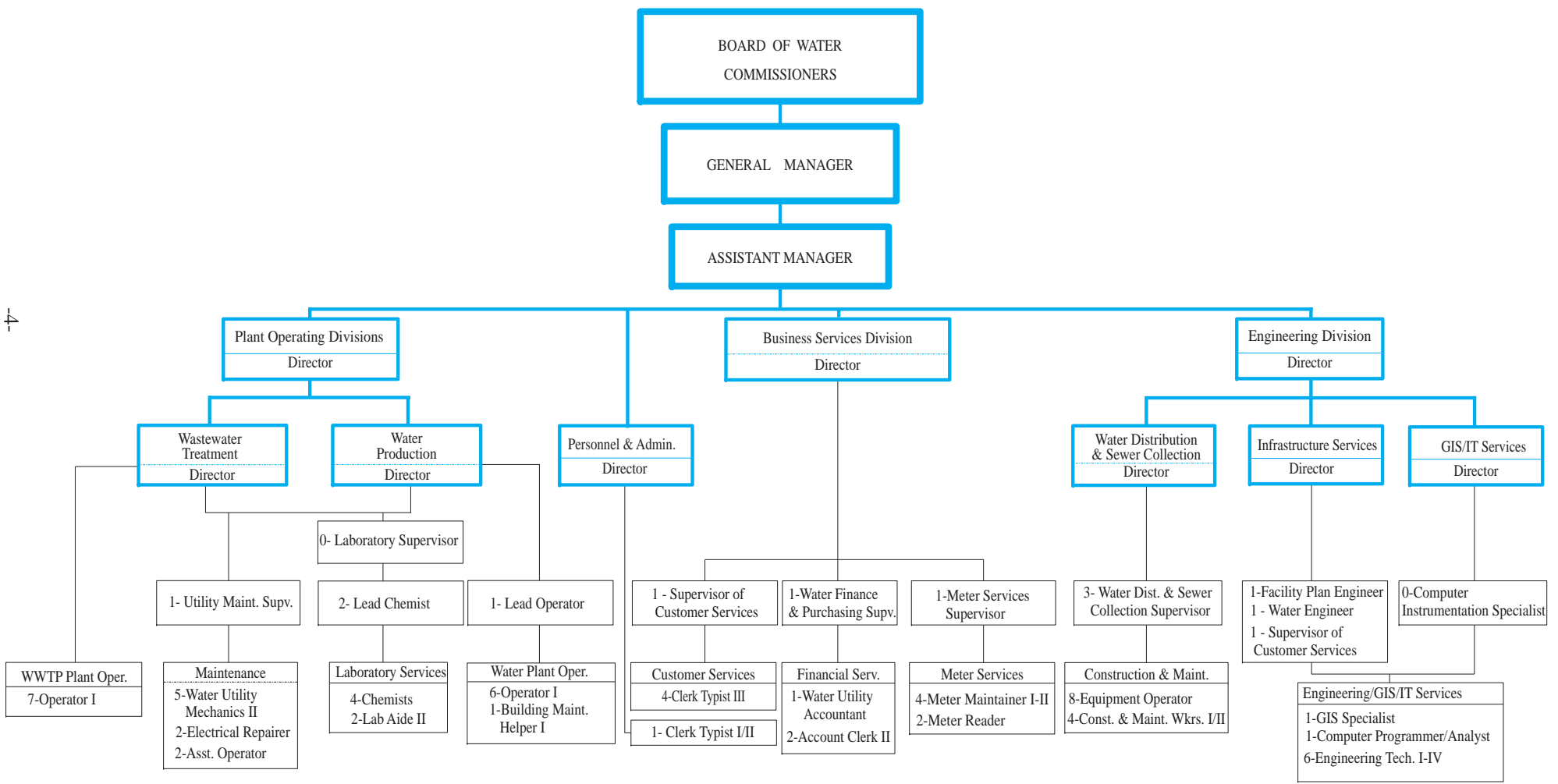
Sincerely,

A handwritten signature in cursive script that reads "David J. Lewis".

David J. Lewis
Assistant General Manager



2015 Organizational Chart



General Statistics

	<u>2014</u>	<u>2013</u>
1. Population of Kenosha, Pleasant Prairie, Somers & Bristol	134,301	134,003
Population of current service area (estimated)	118,802	118,795
Population of City of Kenosha	99,680	99,700
2. Total gallons pumped	5,226,854,000	4,931,038,000
3. Total gallons low lift water used in plant	694,603,000	418,972,000
4. Total gallons water pumped – high lift use	4,532,251,000	4,512,066,000
5. Total gallons high lift water accounted for, not metered	160,763,000	140,450,000
6. Total gallons water pumped to distribution system	4,371,488,000	4,371,616,000
7. Increase (decrease) from previous year	(0.003%)	(8.48%)
8. Total gallons passed through customers' meters	3,847,116,000	3,874,900,000
9. Percent of water accounted for	85%	86%
10. Consumption:		
Minimum gallons pumped in any one day	8,547,000	9,291,000
	May 16, 2014	June 3, 2013
Maximum gallons pumped in any one day	20,345,000	24,879,000
	March 16, 2014	July 20, 2013
11. Total daily consumption – Average	10,540,044	10,616,164
Average daily consumption per capita – gallons per day	88.72	89.37
12. Total number of services	29,642	29,641
Active accounts (total meters less in stock and deduct meters)	31,038	30,998
Number of services added (net)	1	9
Per mile of pipe	83.11	83.12
Persons per service (City of Kenosha)	3.36	3.36
13. Pipe in distribution system (in miles)	356.64	356.60
Size range in diameter	1" - 36"	1" - 36"
Pressure range – pounds per square inch	40 – 80	40 – 80
Population per mile (City of Kenosha)	279.5	279.58
14. Valves for distribution system (except hydrant valves)	5,764	5,699
Total installed for year	65	17
15. Hydrants for distribution system	3,234	3,234
Total installed for year (22 new - 22 retired = 0 additional)	0	4
Per mile of pipe	9.07	9.07
16. Utility operating revenue	\$ 13,187,719	\$ 12,386,263
Net Operating Income	\$ 1,176,608	\$ 1,062,155
Net Income (all expense and revenue)	\$ 480,663	\$ 279,752

	<u>2014</u>	<u>2013</u>
17. Operating and maintenance expenses	\$ 6,962,788	\$ 6,097,207
Per mile of pipe to expense	\$ 19,533.15	\$ 17,104.88
Per million gallons to distribution system	\$ 1,524.40	\$ 1,334.90
18. Tax Equivalent – Water	\$ 2,309,515	\$ 2,487,434
Increase (decrease) from previous year	-7.2%	6.3%
Percent of operating revenue	19.4%	20.9%
19. Depreciation	\$ 2,738,808	\$ 2,742,467
Percent of operating revenue	22.1%	22.1%
20. Production Cost Analysis of Energy Used		
Total electrical costs (high and low lift)	\$ 599,473	\$ 591,804
Cost for pumping (per million gallons)	\$ 114.69	\$ 120.02
Total electrical costs (booster system)	\$ 172,195	\$ 170,902
Cost of re-pumping for booster system (per million gallons)	\$ 74.44	\$ 76.42
Total electrical energy consumed at plant	\$ 599,473	\$ 591,804
Total natural gas energy consumed at plant	\$ 73,661	\$ 50,586
21. Production Cost Analysis of Chemicals Used		
Sand Filters		
Potassium Permanganate – total pounds	–	–
Sulfate of Aluminum – total tons	293.7	286.4
Chlorine – total tons	20.3	20.3
Hydrofluosilicic acid – total tons (liquid weight)	33.2	31.5
Polyphosphate – total tons (liquid weight)	10.8	10.1
Total cost per million gallons of filtered water	\$37.30	\$40.33
Membrane Filters		
Chlorine – total tons	16.5	15.5
Hydrofluosilicic acid – total tons (liquid weight)	27.8	24.6
Polyphosphate – total tons (liquid weight)	9.0	4.7
Total cost per million gallons of filtered water	\$18.38	\$24.45
22. Plant Capacities:		
Treatment plant	45.0 MGD	45.0 MGD
Low lift pumps	50.0 MGD	50.0 MGD
High lift pumps	48.0 MGD	48.0 MGD
Lake intake	102.0 MGD	102.0 MGD
Emergency intake	15.0 MGD	15.0 MGD
23. Water usage in booster service area (million gallons)	2,313	2,236
24. Average number of General Customers by class		
Residential	27,452	27,410
Multifamily Residential (new category in 2013)	1,115	1,130
Commercial	2,177	2,176
Industrial	61	60
Private Fire Services	477	467
Public Authorities	185	183
Irrigation	2	3
Sales for Resale		
Village of Pleasant Prairie	7	7
Town of Somers	8	8
Town of Bristol	2	2

Water Utility Vehicles – 2014

Distribution & Sewer Collection

Water Construction

Fleet #	Description
2091	1992 Ford Truck w/ Utility Service Body
2115	1993 IHC Tandem Axle Dump Truck
2151	1993 Chevrolet Pickup
2359	1996 GMC Pickup
2367	1997 Ford Hydro Vac Valve Turner Truck
2420	1998 IHC Tandem Axle Dump Truck
2434	1999 GMC 1 Ton Dump Truck
2474	1999 Ford Utility Van
2701	2003 GMC 1 Ton Dump Truck
2746	2004 GMC Pickup
2850	2006 GMC Pickup
2852	2006 GMC Pickup
2854	2006 GMC 1 Ton Dump Truck
2856	2006 GMC Crew Cab w/ Utility Service Body
2878	2006 Sterling Tandem Axle Dump Truck
2957	2008 Freightliner Tandem Axle Dump Truck
2959	2008 GMC Van
2960	2008 GMC Pickup
3070	2010 Ford Crew Cab w/ Utility Service Body
3281	2014 GMC Pickup
3299	2015 International Tandem Axle Dump Truck

Water Production

2842	2006 GMC Pickup
2961	2008 GMC Pickup
3004	2008 Dodge Grand Caravan
3283	2014 GMC Pickup

Engineering Services

2148	1993 GMC Pickup
2219	1994 Ford Pickup
2523	2000 Jeep Grand Cherokee
2535	2001 Ford Pickup
2553	2001 GMC Jimmy
2649	2003 GMC Pickup
2653	2003 GMC Pickup
2660	2003 Dodge Van
2682	2003 GMC Van
2715	2003 GMC Van
2737	2004 GMC Van
2747	2004 GMC Pickup
2883	2006 GMC Pickup
3024	2009 Jeep Grand Cherokee
3105	2011 GMC Pickup
3124	2011 GMC Pickup
3253	2013 Chevrolet Suburban
3279	2014 GMC Pickup
3280	2014 GMC Pickup

Sewer Repair/Inspection

Fleet #	Description
2089	1992 Ford Pickup Flatbed-Shoring Truck
2116	1993 GMC 1 Ton Dump Truck
2299	1996 IHC Tandem Axle Dump Truck
2364	1997 Chevrolet Van
2421	1998 IHC Tandem Axle Dump Truck
2472	1999 Sewer Flusher Vacuum
2554	2000 Vactor Sewer Cleaner
2851	2006 GMC Pickup
2884	2006 TV Truck – Ford Chassis
2930	2007 GMC Pickup
3043	2009 Ford F450 w/ Utility Service Body
3202	2012 Sewer Flusher Vacuum
3284	2015 GMC Tandem Axle Dump Truck

Meter Shop

2849	2006 GMC Van w/ Utility Service Body
2862	2006 GMC Van
3127	2011 GMC Van
3248	2014 GMC Van
3257	2014 GMC Van
3285	2014 GMC Van

Administration/Customer Service

2265	1995 GMC Safari Minivan
2962	2008 Jeep Liberty
3304	2014 Ford Edge

Wastewater Treatment

2063	1991 Ford w/ Galbraith Container System
2217	1994 GMC Pickup
2266	1995 GMC Pickup with Crane
2427	1998 Ford Pickup
2428	1998 Ford Pickup
2430	1998 GMC 1 Ton Dump Truck
2559	2001 Sterling Dump Truck
2652	2003 Ford Utility Truck with Crane
2700	2003 GMC Van
2714	2004 Ford Pickup
2771	2004 Jeep Liberty
2843	2006 GMC Pickup with Plow
2866	2006 GMC Pickup
2945	2008 Freightliner Quad Axle Dump Truck
2966	2008 GMC Van
3073	2010 Ford Escape Hybrid
3106	2011 GMC Pickup
3282	2014 GMC Pickup
3297	2014 Ram 4500 w/ Service Body and Crane

Water Utility Major Equipment – 2014

Distribution & Sewer Collection

Water Construction

Fleet #	Description
453-00	1958 Engresser Pipe Thawer
455-19	1986 Tapmate Tap Machine
1943	1989 Caterpillar Forklift
	1989 Wach Power Valve Turner
	1991 Dowel Drill Machine
	1992 Wach Power Valve Turner
2206	1994 Smith Air Compressor
2226	1994 Broderson Hydraulic Hammer
2366	1997 Case Wheel Loader
2837	2005 JCB Tractor Loader Backhoe
2958	2007 Airman Air Compressor
2968	2007 Case Tractor Loader Backhoe
2970	2008 Case Tractor Loader Backhoe

Water Production

	1998 Mitsubishi Fork Truck
	2005 Kubota Tractor
2890	2006 Kubota Mower

Sewer Repair

Fleet #	Description
2840	2005 JCB Tractor Loader Backhoe

Wastewater Treatment

	1980 6" Marlow Pump
1543	1985 Massey Ferguson Tractor Loader
2018	1990 John Deere Tractor w/ Snowblower
2236	1994 John Deere Mower
	1995 6" Marlow Pump
	1998 4" Barnes Submersible Pump
	1998 John Deere Mower
	1999 8" Thompson Pump
	2000 6" Gormann-Rupp Pump
	2000 8" Godwin Pump
2987	2003 New Holland Skid Loader
2819	2006 Nissan Forklift
2893	2007 JCB Wheel Loader

Water Service Centre

	1996 Kubota Tractor
--	---------------------

Engineering Services

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“Providing and Protecting Kenosha’s Greatest Natural Resource”

June 2015

Mr. Edward St. Peter, General Manager
Kenosha Water Utility
4401 Green Bay Road
Kenosha, WI 53144

Dear Mr. St. Peter,

Subject: 2014 Annual Report – Engineering Services Division

I respectfully submit the annual report for the Engineering Services Division for the year 2014.

The Engineering Division continues to provide a variety of engineering services for our various operating divisions, city departments, public agencies and developers. This year saw an increase in contracted work and developer installed infrastructure as the overall economy continues to improve. Three contracts totaling \$ 1,618,498.00 were awarded for major projects in 2014. A list of these contracts is included in this report.

Our most notable project, actually awarded in 2013, is the continuation of our Energy-Optimized Resource Recovery System taking place at our Wastewater Treatment Facility. This project has suffered a major delay caused by the unexpected financial failure of SH&E Corporation, which had been awarded the contract for the project. The contract has been re-assigned to Centrisys Corporation and is again underway and making progress.

Developer installed infrastructure projects included 5,018 feet of sanitary sewer and 4,743 feet of water main installed as part of the Amazon development along CTH N and I-94. With little activity over the last couple of years due to the economic slowdown, developer activity continues to pick up and we expect things to continue to improve. State of Wisconsin funded highway projects continue throughout our service area. The impact of these projects on our facilities resulted in another busy year for our field crews including sanitary sewer re-locations, water main re-locations and off sets, fire hydrant re-locations and manhole adjustments. This work is necessary to clear new highway facilities. Fortunately, most of our costs for this work is recoverable from the State at 90% to 100% funding depending on the category of work. We expect this level of activity to continue through 2015.

Work continues on our clear water reduction efforts within the sanitary sewer system, including wet weather flow monitoring, physical inspections, smoke testing and analysis of potential solutions for reducing clear water entry into the sanitary sewer system. Most notable is the final completion of the Forest Park Study completed jointly with the City of Kenosha Public Works Engineering Division. With the completion of this study we have moved into the implementation phase. The first phase, completed in December 2014, resulted in the replacement and upsizing sanitary sewers identified in the study as needing additional capacity to insure sufficient wet weather performance during storm events. These sewers are located in the Forest Park study Area on 61st Street and 65th Street.

On behalf of the staff of the Engineering Services Division, I would like to thank all Utility employees and our Board of Water Commissioners whose teamwork helped make 2014 a great and successful year.

Sincerely,

A handwritten signature in black ink that reads 'Robert D. Carlson'.

Robert D. Carlson, P.E.
Director of Engineering



www.kenoshawater.org

**Geographic Information Systems/
Information Technology**

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Kenosha WI 53144

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“Providing and Protecting Kenosha’s Greatest Natural Resource”

June 2015

Mr. Edward St. Peter, General Manager
Kenosha Water Utility
4401 Green Bay Road
Kenosha, WI 53144

Subject: 2014 Annual Report - Geographic Information System / Information Technology

Dear Mr. St. Peter,

The Geographic Information System (GIS) / Information Technology (IT) team had a very busy and productive year. The team not only worked on various new projects but made enhancements to the master digital map. Some of these legacy and various new projects are listed below:

- Started the process of converting the legacy GIS software to an open-source low cost solution. This will allow more users to access the GIS system for substantially lower cost. It also will increase storage, speed, reliability, scalability and will eliminate the yearly maintenance costs.
- Maintained and enhanced various Supervisory Control and Data Acquisition (SCADA) programs and alarms at the production and waste water plants.
- Enhanced the SCADA telemetry system that uses the County’s Public Safety wireless system.
- Designed, installed and implemented a wireless access system for the Water Production Plant
- Continued the GPS (Global Positioning System) Collector summer internship program for college students. These two students were trained to collect GPS geographic locations of manholes, valve boxes, curb stops, hydrants and many other water/waste water features. This collected information then provides us an extremely high accuracy of mapping data for our master map. This year these students were from Carthage College and the University of Wisconsin-Parkside.
- Enhanced and updated our website www.kenoshawater.org with valuable customer information.
- Provided many web based input forms, surveys, and informational web pages for our employees to receive and disseminate time critical data.
- Implemented updates and enhancements to both the Linux and Windows operating systems.
- Developed and implemented plans to enhance physical security at both plants.
- Implemented a mobile mapping solution for the meter maintainers using tablets and open source GIS software.

The GIS/IT team would like to thank you and the Board of Water Commissioners for their continued support. I would also like to thank the GIS/IT staff and all of the divisions within the Water Utility for their support and patience throughout the year.

Respectfully submitted,

A handwritten signature in black ink that reads 'John N. Andersen'.

John N. Andersen
Director of Geographic Information Systems/
Information Technology



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2014 Engineering Service Contracts Awarded

<u>Project</u>	<u>Contractor</u>	<u>Description</u>	<u>Awarded Cost</u>
2014-01-W	A.W. Oakes & Son, Inc.	Water Main Relay - Phase I - 39th Avenue- Washington Road to 43rd Street, 39th Avenue- 52nd Street to 500 feet north	\$ 464,498.00
2014-02-PROD	Pieper Electric, Inc.	80th Street Tank Standby Generator and 30th Avenue Tank Standby Generator	\$ 204,000.00
	A.W. Oakes & Son, Inc.	Project 14-1139 Forest Park Sanitary and Storm Enhancements (61st Street-46th Avenue to 50th Avenue, 65th Street-48th Avenue to 51st Avenue	\$ 950,000.00

**2014 Engineering Staff and G.I.S. Personnel
Recap of Significant Projects**

	<u>Hours</u>
<u>Water Production Engineering - Total Hours 565</u>	
Water Treatment Plant & Reservoir Maintenance	485
Standby Generators - 30th Ave & 80th St Tanks	80
<u>Sewerage System Engineering - Total Hours 5,993</u>	
Sanitary Sewer Locates (Digger's Hotline)	1,000
Sump Pump Inspection	2,718
Wastewater Treatment Plant Maintenance	366
Energy-Optimized Resource Recovery System	717
Sanitary Sewer System Flow Study/Inspection	376
Sewer Repair, Cleaning and Inspection	816
<u>Water Distribution System - Total Hours 4,264</u>	
Water System Locates (Digger's Hotline)	1,807
Maintenance of Mains, Services and Hydrants	2,341
Cross Connection Surveys	116
<u>Water Main Installed by Kenosha Water Utility Contract - Total Hours 1,352</u>	
Water Main Replacement - Various Locations	337
Forest Park Water Main Relay	590
39th Ave Water Main Relay	425
<u>Water Main Installed by Developers - Total Hours 192</u>	
Amazon	168
Meijer	24
<u>Sanitary Sewer Installed by Kenosha Water Utility Contract - Total Hours 629</u>	
Sanitary Sewer Relays - Various Locations	70
Forest Park Sanitary Sewer Relay	559
<u>Sanitary Sewer Installed by Developers - Total Hours 255</u>	
Amazon	244
Meijer	11
<u>New Development - Total Hours 335</u>	
Plan/Project Review	335
<u>GIS Infrastructure Mapping - Total Hours 859</u>	
Water Infrastructure	456
Sewer Infrastructure	403

Business Services

4401 Green Bay Road
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“Providing and Protecting Kenosha’s Greatest Natural Resource”

June 2015

Mr. Edward St. Peter, General Manager
Kenosha Water Utility
4401 Green Bay Road
Kenosha, WI 53144

Dear Mr. St. Peter,

SUBJECT: 2014 Annual Report – Business Services Division

I respectfully submit the Annual Report of the Kenosha Water Utility Business Services Division.

This division combines the talents and resources of personnel in the areas of customer service, meter reading, meter maintenance and accounting. This combined group strives to provide prompt and accurate service to both our internal and external customers. In addition to general questions about bills, Business Services attempts to be proactive in resolving matters before they become complaints.

The meter shop personnel have continued the meter testing program for meters larger than one-inch according to Public Service Commission guidelines. The meter shop continues to expand its range of duties by adding residential cross-connection inspections, sump pump inspections, meter inspections prior to the sale of foreclosed properties as well as continuing the twenty year change-out program for small meters.

The winter of 2014 was especially challenging with the depth of the frost averaging five feet; there were 257 homes with frozen service lines. Despite advising home owners to let their water run to prevent refreezing, some homes were thawed several times due to refreezing. Additional welding generators were purchased and, at times, three crews were thawing using staff from other departments. Several homes were hosed water from neighbors and had to wait for the spring thaw. Customers were instructed to run water until April 15.

Customer service staff did an outstanding job of handling customer calls. Customer billing was complicated for several months by frozen meter and thawing charges, running water and hosing credits. Adjustments amounted to 9.5 million gallons of water use being written off which amounted to \$49,354.

The finance division supports the entire Utility by providing payroll, accounting, accounts payable, budgeting, purchasing and other services. The rate of return for the water unit was 3.06% based on an average net rate base valued at \$52,031,804. The rate of return for the sewer unit was 3.96% based on an average net rate base valued at \$33,183,378.

I would like to thank you and the other members of the utility management for their continued guidance and support. Once again, I wish to thank my staff for their dedication and fine work attitude which are key to getting the job done. Business Services Division employees, together with other divisions, will work to insure that the Kenosha Water Utility continues to “Provide and Protect Kenosha’s Greatest Natural Resource.”

Sincerely,

A handwritten signature in black ink that reads 'Cathy Brnak'.

Cathy Brnak
Director of Business Services



www.kenoshawater.org

Water and Sewerage Service Charges – 2014

Water Rates

Water rates for municipally owned water utilities in Wisconsin must be approved and authorized by the Public Service Commission of Wisconsin. The Kenosha Water Utility has been allowed a water rate which would provide a 4.25% rate of return on the water utility net investment rate base. The Kenosha Water Utility policy is to maintain water rates that will provide 1.3 times coverage of maximum annual debt service by net income of the system.

Sewerage Service Rates

Sewer service rates for Kenosha are authorized by the Board of Water Commissioners. The Kenosha Water Utility policy is to maintain sewer rates that will provide 1.2 times coverage of maximum annual debt service by net income of the system.

Water Utility General Service Billing

The Kenosha Water Utility issues water and sewer service bills on a bi-monthly basis to residential, commercial and public customers. High consumption customers are billed monthly. The "Sale for Resale" category was added in 1990 and is billed monthly.

Water Rates Effective August 1, 2013 Public Fire Protection Rates Effective August 1, 2013

Meter Size	Public Fire Protection Bi-Monthly Charge	Meter Service Bi-Monthly Charge
5/8 Inch	\$6.00	\$9.80
3/4 Inch	6.00	9.80
1 Inch	8.00	18.40
1-1/2 Inch	12.00	32.00
2 Inch	18.00	44.00
3 Inch	24.00	76.00
4 Inch	30.00	114.00
6 Inch	36.00	200.00
8 Inch	42.00	298.00
10 Inch	48.00	420.00
12 Inch	54.00	544.00

Plus volume charges:

First 1,700 cubic feet used each month or
 3,400 cubic feet used each two months - \$ 1.94/100 cu. ft.
 Next 23,300 cubic feet used each month or
 46,600 cubic feet used each two months - \$ 1.80/100 cu. ft.
 Over 25,000 cubic feet used each month or
 50,000 cubic feet used each two months - \$ 1.46/100 cu. ft.

Sewerage Service Rates Effective December 31, 2008

\$2.41 monthly or \$4.82 bi-monthly - Plus \$1.93 / 100 cubic feet used

**CONSUMPTION CHARGES BY CUSTOMER CLASS
BASED ON BILLING DATE, NOT ACCRUAL BASIS**

RESIDENTIAL

Bill Mo.	Water		Public Fire Protection	HHW Charge	Sewerage		Spr. Cr.
	Cons.Ccf	Charge			Cons.Ccf	Charge	
Apr 2014	168,144	\$ 457,917.57	\$ 81,554.00	\$ 13,444.00	167,094	\$ 387,178.61	
May 2014	150,530	427,968.92	83,210.30	13,275.50	143,147	340,325.24	
June 2014	149,039	421,955.34	81,566.00	13,446.00	148,082	350,603.16	
July 2014	165,857	458,637.46	83,692.00	13,279.00	157,400	345,157.52	22,689.08
Aug 2014	167,445	453,293.66	81,572.00	13,448.00	165,427	350,134.16	33,954.49
Sept 2014	195,185	514,855.10	83,704.00	13,281.00	184,033	352,717.38	66,536.75
Oct 2014	187,486	494,951.44	81,601.00	13,451.50	186,023	357,609.51	66,251.11
Nov 2014	201,586	526,830.90	83,734.00	13,286.00	190,978	353,526.11	79,162.81
Dec 2014	159,469	441,717.90	81,625.00	13,455.50	158,477	331,015.06	39,696.24
Jan 2015	162,985	452,949.40	83,757.00	13,288.50	155,110	363,474.21	
Feb 2015	170,314	463,182.70	81,642.00	13,458.00	169,110	391,247.45	
Mar 2015	174,659	475,322.56	83,790.00	13,294.00	166,168	384,841.90	
Totals	2,052,699	\$ 5,589,582.95	\$ 991,447.30	\$ 160,407.00	1,991,049	\$ 4,307,830.31	\$ 308,290.48

COMMERCIAL

Bill Mo.	Water		Public Fire Protection	HHW Charge	Sewerage	
	Cons.Ccf	Charge			Cons.Ccf	Charge
Apr 2014	73,897	\$ 165,264.60	\$ 13,376.00	\$ 652.50	71,933	\$ 145,540.47
May 2014	105,071	231,699.78	15,701.00	449.50	103,146	203,034.86
June 2014	70,244	158,300.04	13,344.00	653.50	68,318	138,325.32
July 2014	112,080	244,425.69	15,753.00	449.50	105,174	207,726.18
Aug 2014	77,457	171,096.50	13,431.00	653.50	73,490	148,510.23
Sept 2014	132,310	278,407.57	15,775.00	448.50	114,168	225,397.35
Oct 2014	88,869	190,183.15	13,406.00	653.50	78,926	158,996.05
Nov 2014	146,508	304,445.30	15,858.00	449.00	119,958	236,470.27
Dec 2014	81,479	177,735.51	13,388.00	653.50	76,143	153,612.91
Jan 2015	111,387	244,601.54	15,908.00	447.00	105,201	208,218.44
Feb 2015	76,355	169,023.02	13,307.00	655.00	73,649	148,723.76
Mar 2015	112,983	246,822.12	15,939.00	445.50	110,996	219,024.00
Totals	1,188,640	\$ 2,582,004.82	\$ 175,186.00	\$ 6,610.50	1,101,102	\$ 2,193,579.84

SALE FOR RESALE

Billing Month	Cons.Ccf	Water Charge	PFP
Apr 2014	80,103	\$ 114,949.32	\$ 8,116.00
May 2014	79,194	113,936.06	8,116.00
June 2014	91,739	131,026.54	8,116.00
July 2014	88,454	126,348.90	8,116.00
Aug 2014	102,252	145,478.66	8,116.00
Sept 2014	112,333	159,757.20	8,116.00
Oct 2014	183,914	257,923.14	8,116.00
Nov 2014	109,492	155,775.82	8,116.00
Dec 2014	101,266	144,021.86	8,116.00
Jan 2015	76,488	109,447.58	8,116.00
Feb 2015	94,454	134,514.28	8,116.00
Mar 2015	97,026	137,829.64	8,116.00
Totals	1,216,715	\$ 1,731,009.00	\$ 97,392.00

**CONSUMPTION CHARGES BY CUSTOMER CLASS
BASED ON BILLING DATE, NOT ACCRUAL BASIS**

PUBLIC

Bill Mo.	Water		Public Fire Protection	Sewerage	
	Cons.Ccf	Charge		Cons.Ccf	Charge
Apr 2014	13,959	\$ 19,210.58	\$ 1,674.00	7,968	\$ 15,799.99
May 2014	16,630	19,868.80	1,189.00	9,129	17,761.89
June 2014	15,531	19,211.82	1,674.00	8,024	15,908.07
July 2014	18,985	20,323.20	1,204.00	8,783	17,093.49
Aug 2014	23,000	29,136.48	1,674.00	10,803	21,271.54
Sept 2014	19,857	22,669.40	1,204.00	8,003	15,642.23
Oct 2014	34,278	44,216.86	1,674.00	9,372	18,509.71
Nov 2014	22,431	26,710.48	1,204.00	8,742	17,038.58
Dec 2014	21,585	26,505.00	1,674.00	10,256	20,215.83
Jan 2015	14,368	20,060.30	1,204.00	7,744	15,102.63
Feb 2015	14,719	19,963.86	1,666.00	8,553	16,924.22
Mar 2015	13,221	17,531.38	1,204.00	7,553	14,735.46
Totals	228,564	\$ 285,408.16	\$ 17,245.00	104,930	\$ 206,003.64

INDUSTRIAL

Bill Mo.	Water		Public Fire Protection	Sewerage	
	Cons.Ccf	Charge		Cons.Ccf	Charge
Apr 2014	38,111	\$ 57,789.40	\$ 331.00	18,842	\$ 61,070.14
May 2014	44,595	68,223.64	547.00	20,447	79,866.14
June 2014	42,159	63,721.26	331.00	23,482	96,370.70
July 2014	35,729	55,351.04	547.00	19,997	70,514.79
Aug 2014	48,056	72,328.58	331.00	24,962	97,706.36
Sept 2014	46,712	71,658.64	547.00	22,707	73,833.48
Oct 2014	57,179	85,630.06	331.00	24,951	100,595.69
Nov 2014	52,545	163,247.50	547.00	23,543	95,202.72
Dec 2014	57,313	85,815.88	344.00	23,977	92,426.15
Jan 2015	50,860	77,423.04	547.00	20,983	64,031.11
Feb 2015	41,953	63,331.14	305.00	19,990	86,756.14
Mar 2015	46,278	70,822.82	547.00	20,555	80,932.15
Totals	561,490	\$ 935,343.00	\$ 5,255.00	264,436	\$ 999,305.57

IRRIGATION

Bill Mo.	Cons.Ccf	Water Charge	Public Fire Protection
Apr 2014	1	\$ 9.80	\$ 6.00
May 2014	1	44.00	18.00
June 2014	1	9.80	6.00
July 2014	244	487.96	18.00
Aug 2014	3	15.62	6.00
Sept 2014	1,057	1,761.98	18.00
Oct 2014	19	46.66	6.00
Nov 2014	821	1,417.42	18.00
Dec 2014	1	11.74	6.00
Jan 2015	181	374.56	18.00
Feb 2015	1	9.80	6.00
Mar 2015	1	44.00	18.00
Totals	2,331	\$ 4,233.34	\$ 144.00

Meter Services Report - 2014

<u>Meter Size</u>	<u>New Accounts</u>	<u>Tested/ Upgraded</u>	<u>Total Meters</u>
5/8" Meters	4	1,272	25,027
3/4" Meters	41	306	4,461
1" Meters	3	83	891
1-1/2" Meters	3	147	568
2" Meters	2	179	644
3" Meters	4	66	111
4" Meters	-	33	61
6" Meters	-	34	34
8" Meters	-	9	9
10" Meters	-	2	2
Total	57	2,131	31,808

New Private Fire Lines **8**

Meter Shop Activity

Set New Accounts	57
20 Year Meter Change Outs	847
Install Radio Read Units	31
Remove Meter (test and replace)	95
Check Readings (high/low consumption, etc.)	2,540
Shut Offs, Take Out Seasonals	261
Repair Outside Register/Touch Pad	852
Pressure Tests	23
Locate/Clean Curb Box	342
Service Break Checks/Trace Services	30
Shut off at Curb (non-payment & customer requests)	504
Meters Bench Tested/Rebuild & Retest	279
Frozen Services	211
Frozen Meters	102
Pool Fills	0
Large Meter-Field Testing	114
Total Service Calls	6,288

TEN YEAR COMPARISON OF CUSTOMER WATER CONSUMPTION

Average Number of Water Customers	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	% INCR (DECR) 2014 vs. 2013
Residential	26,009	26,411	26,775	27,034	27,183	27,278	27,334	27,365	27,410	27,452	0.15%
Commercial	3,141	3,195	3,251	3,290	3,306	3,313	3,317	3,315	3,306	3,292	(0.42%)
Industrial	70	71	70	69	69	67	66	63	60	61	1.67%
Public	172	181	186	192	192	192	192	185	183	185	1.09%
Irrigation	3	3	3	3	3	3	3	3	3	2	(33.33%)
Private Fire Lines	364	388	403	417	432	441	455	464	467	477	2.14%
Sale for Resale											
Pleasant Prairie	7	7	7	7	7	7	7	7	7	7	0.00%
Town of Somers	8	8	8	8	8	8	8	8	8	8	0.00%
Village of Bristol	2	2	2	2	2	2	2	2	2	2	0.00%
TOTAL	29,776	30,266	30,705	31,022	31,202	31,311	31,384	31,412	31,446	31,486	0.13%

Annual Consumption (1,000 Gallons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	% INCR (DECR) 2014 vs. 2013
Residential	2,006,058	1,815,629	1,813,520	1,764,393	1,717,591	1,710,396	1,704,587	1,838,553	1,638,280	1,535,419	(6.28%)
Commercial	1,107,778	1,016,854	990,851	979,048	931,833	1,054,683	953,963	977,711	926,546	889,103	(4.04%)
Industrial	284,664	281,308	305,239	291,145	324,720	306,136	396,382	287,364	336,628	419,995	24.77%
Public	248,790	104,412	104,303	117,992	90,212	107,094	117,950	183,924	170,517	170,966	0.26%
Irrigation	2,159	1,435	1,489	1,621	1,177	1,243	1,204	2,148	1,323	1,744	31.82%
Sale for Resale											
Pleasant Prairie	705,554	696,134	747,724	740,550	701,630	754,021	794,343	842,036	746,097	761,521	2.07%
Town of Somers	175,677	145,434	160,816	154,185	151,554	156,848	162,957	179,703	146,385	142,909	(2.37%)
Village of Bristol	10,805	5,654	5,693	5,574	4,952	5,424	5,464	5,025	4,563	5,673	24.33%
TOTAL	4,541,485	4,066,860	4,129,635	4,054,508	3,923,669	4,095,845	4,136,850	4,316,464	3,970,339	3,927,330	(1.08%)

Customer Class as a Percent of Total Consumption

Residential	49.33%	43.97%	44.73%	44.97%	41.93%	41.35%	41.20%	42.59%	41.26%	39.10%
Commercial	27.24%	24.62%	24.44%	24.95%	22.75%	25.49%	23.06%	22.65%	23.34%	22.64%
Industrial	7.00%	6.81%	7.53%	7.42%	7.93%	7.40%	9.58%	6.66%	8.48%	10.69%
Public	6.12%	2.53%	2.57%	3.01%	2.20%	2.59%	2.85%	4.26%	4.29%	4.35%
Irrigation	0.05%	0.03%	0.04%	0.04%	0.03%	0.03%	0.03%	0.05%	0.03%	0.04%
Sale for Resale										
Pleasant Prairie	17.35%	16.86%	18.44%	18.87%	17.13%	18.23%	19.20%	19.51%	18.79%	19.39%
Town of Somers	4.32%	3.52%	3.97%	3.93%	3.70%	3.79%	3.94%	4.16%	3.69%	3.64%
Village of Bristol	0.27%	0.14%	0.14%	0.14%	0.12%	0.13%	0.13%	0.12%	0.12%	0.15%
TOTAL	111.67%	98.48%	101.85%	103.33%	95.80%	99.01%	100.00%	100.00%	100.00%	100.00%

Water Production Plant

100 51st Place
Kenosha WI 53140

Phone (262) 653-4330
Fax (262) 653-4362



“Providing and Protecting Kenosha’s Greatest Natural Resource”

June 2015

Mr. Edward St. Peter, General Manager
Kenosha Water Utility
4401 Green Bay Road
Kenosha, WI 53144

Subject: 2014 Annual Report for the O. Fred Nelson Water Production Plant

Dear Mr. St. Peter,

The Annual Report for the O. Fred Nelson Water Production Plant is hereby respectfully submitted.

The Kenosha Water Utility’s Water Production Division continues to provide the highest quality drinking water to our customers. A total of 4.6 billion gallons was pumped into the distribution system in 2014. The average daily flow was 12.56 million gallons per day, with a maximum day of 20.35 million gallons on March 16th. (High consumption on this day may be attributed to main breaks and frozen services, due to extreme winter weather conditions). The average tap water turbidity was 0.031 NTU and the average chlorine residual was 1.2 mg/l. Some significant projects and activities in 2014 include:

- **CMF Module Replacement** – This project commenced in 2013. By March 2014, all filter modules had been replaced. Pressure decay tests remain below 0.30 psi/minute. Run time between clean-in-place is 500 hours, compared to 200-300 hours before the change out.
- **30th Avenue Tank** – Ongoing investigation of structural damage.
- **Switchgear** – Damaged cable from a transformer to the switchgear was replaced. Switching sequence difficulties during power interruption were diagnosed and repaired.
- **Wet Well Cleaning** – The intake wet well caisson was cleaned by Production Division employees. An innovative system for removing compacted silt from the bottom of the wet well was constructed by KWU Maintenance Division, with input from several employees. This pumping system received the Gimmicks & Gadgets Award from AWWA.
- **Slow-Mixers** – KWU staff designed, constructed and installed a new bearing system for the slow-mix shafts. The new system utilizes flat stock UHMW plastic, cut to fit existing base plates. This system could allow us to defer rebuilding the slow-mixers for several years.

Production Division thanks Engineering and Business Services Divisions for their support throughout the year. Thanks to the Distribution Division for assisting with the heavier maintenance tasks and to the Wastewater Division for electrical and mechanical upgrades and repairs. We would also like to thank you, Dave Lewis, and the Board of Water Commissioners for providing us the tools and equipment to ensure we continue providing the best drinking water to Kenosha, Pleasant Prairie, Bristol, and Somers.

Sincerely,

A handwritten signature in cursive script that reads 'R.E. Field'.

Roger E. Field, P.E.
Director of Water Production



www.kenoshawater.org

Kenosha Water Utility

Production Division

Main Plant Pumping

2014

Month	Pumpage X 1000 Gallons				Electricity	
	High Lift	Daily Average	Low Lift	Daily Average	Pumping	Cost/MG
January	392,422	12,659	440,248	14,202	\$ 51,291	\$ 116.50
February	388,231	13,865	434,784	15,528	58,160	133.77
March	352,927	11,385	471,287	15,203	49,695	105.45
April	337,521	11,251	399,656	13,322	49,566	124.02
May	361,945	11,676	412,289	13,300	46,478	112.73
June	389,248	12,975	432,943	14,431	49,486	114.30
July	436,119	14,068	481,053	15,518	47,533	98.81
August	470,859	15,189	529,214	17,071	55,698	105.25
September	387,540	12,918	431,682	14,389	49,391	114.42
October	384,455	12,402	429,914	13,868	45,620	106.11
November	341,129	11,371	384,089	12,803	53,668	139.73
December	339,603	10,955	379,705	12,249	42,887	112.95
Total	4,581,999		5,226,864		\$ 599,473	
Average	381,833	12,559	435,572	14,324	\$ 49,956	\$ 115.34

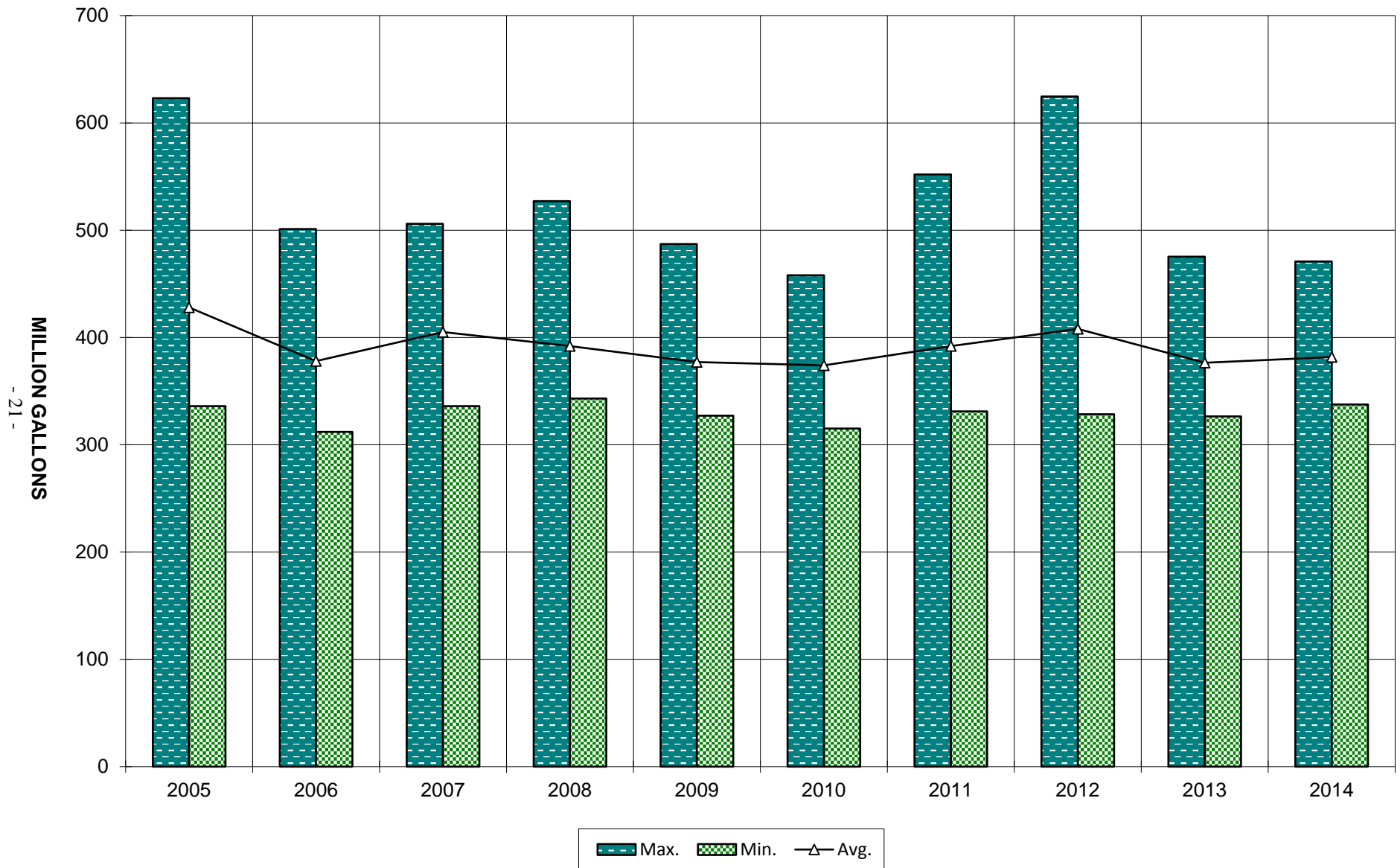
Booster System Pumping

2014

Month	Pumpage X 1000 gal	Total Power Cost	Pumping Power Cost	Total Cost/MG	Pumping Cost/MG
January	181,610	\$ 16,396	\$ 14,696	\$ 90.28	\$ 80.92
February	172,270	14,490	12,868	84.11	74.70
March	183,330	16,815	15,450	91.72	84.27
April	175,420	14,325	13,436	81.66	76.59
May	182,720	13,822	13,184	75.65	72.15
June	195,990	15,150	14,530	77.30	74.14
July	219,360	16,534	15,976	75.37	72.83
August	239,980	17,892	17,330	74.56	72.21
September	203,800	15,343	14,786	75.28	72.55
October	203,700	14,038	13,414	68.92	65.85
November	180,370	14,489	13,333	80.33	73.92
December	174,790	15,094	13,192	86.36	75.47
Total	2,313,340	\$ 184,388	\$ 172,195		
Average	192,778	\$ 15,366	\$ 14,350	\$ 80.13	\$ 74.63

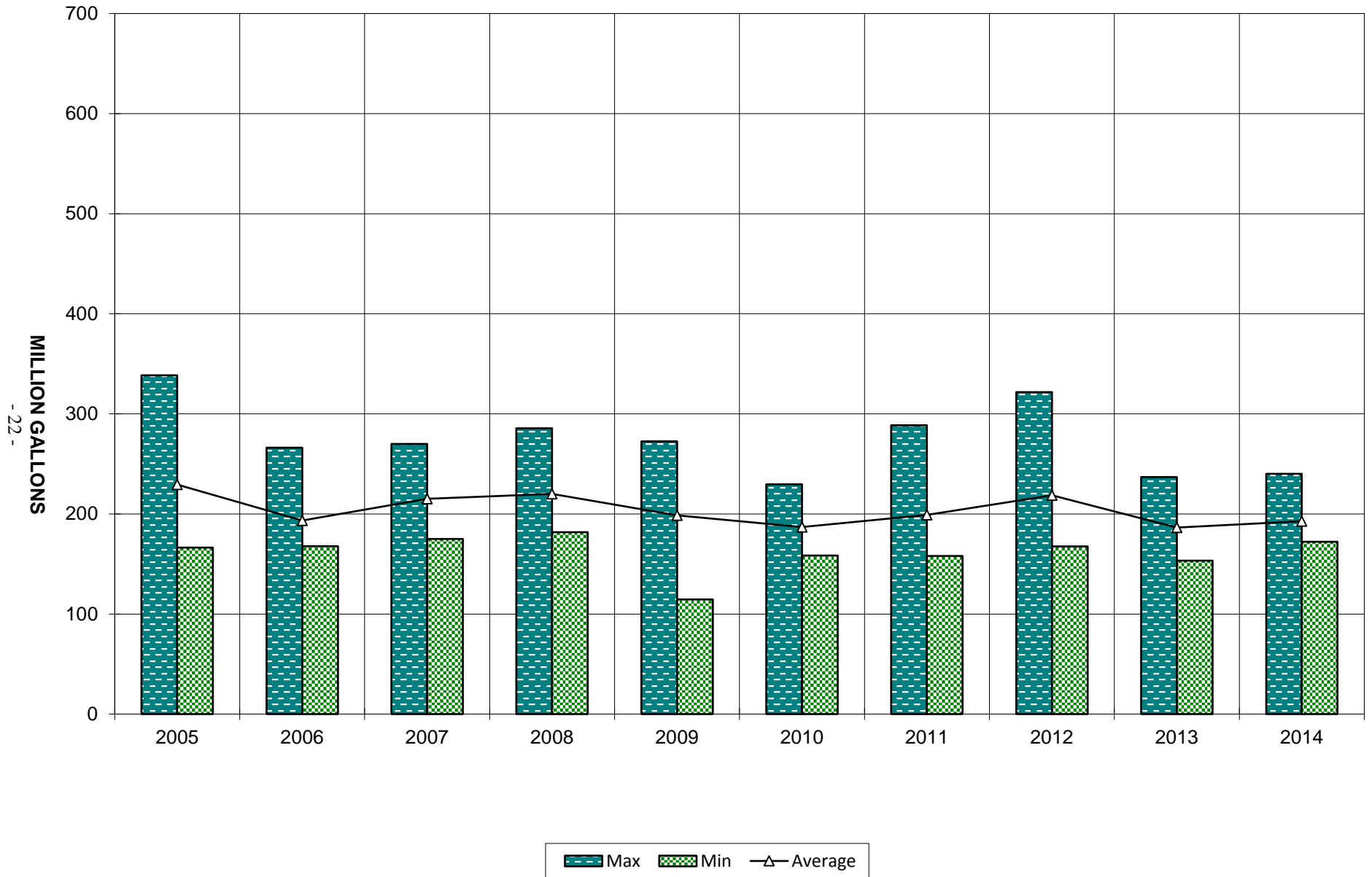
Main Plant Pumping Last Ten Years

Monthly Flow - Million Gallons



Booster Pumping Last Ten Years

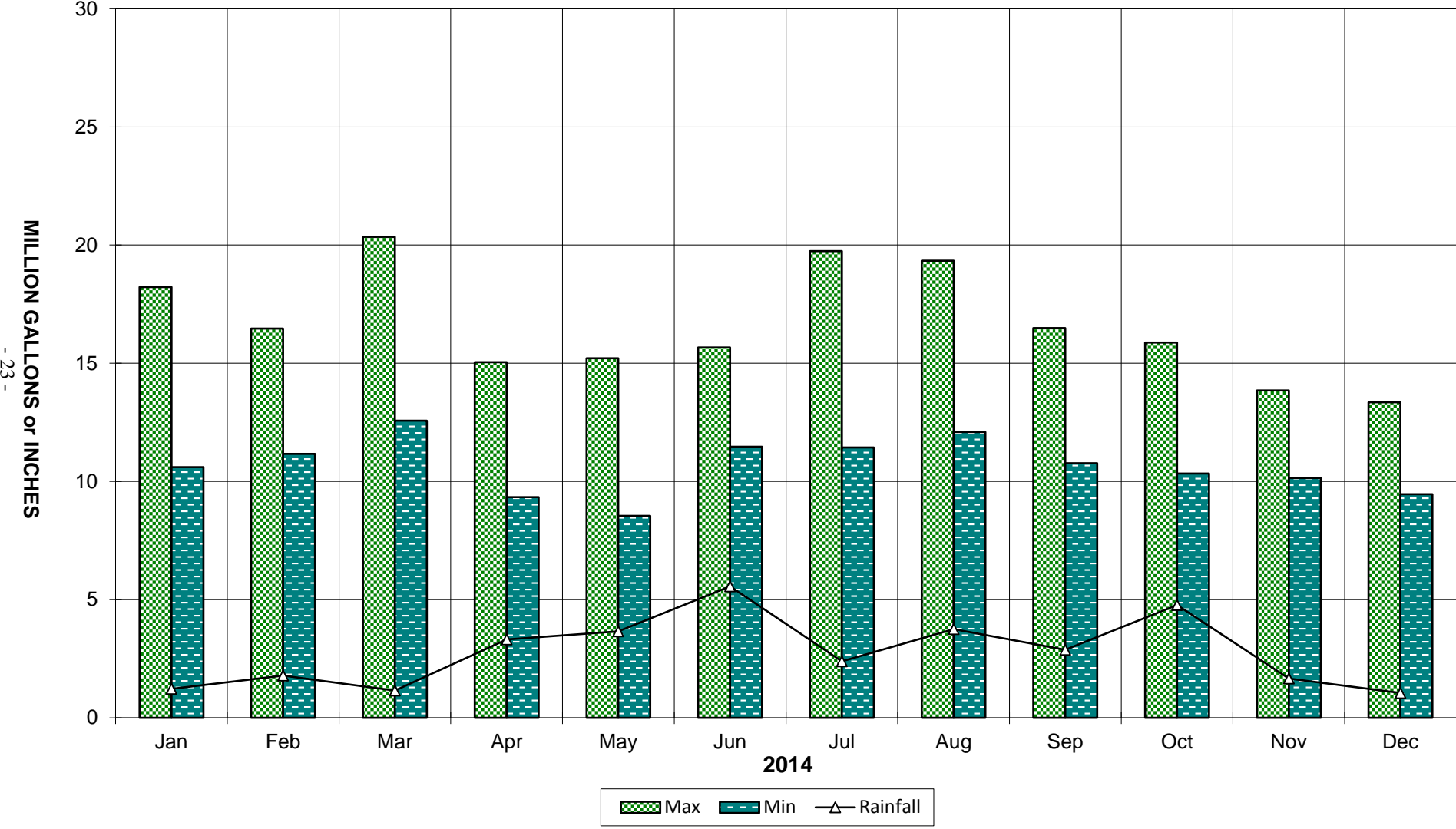
Monthly Flow - Million Gallons



-22-

Finished Water Per Month Compared to Rainfall

Daily Flow Min/Max (MG) - Total Precipitation (Inches)



Kenosha Water Utility

Production Division

Rapid Sand Plant Filtration Report

2014

Month	Pumpage (1000 gal.)			
	Total Water Treated	Max Day	Min Day	Avg Day
January	215,567	12,563	4,931	6,954
February	227,721	10,792	5,504	8,133
March	244,098	12,300	6,061	7,874
April	183,050	9,366	3,631	6,102
May	209,751	11,010	3,670	6,766
June	237,254	9,953	5,748	7,908
July	253,821	12,891	5,782	8,188
August	279,233	12,615	6,052	9,008
September	205,673	8,808	5,491	6,856
October	192,391	8,730	3,075	6,206
November	169,176	8,175	4,460	5,639
December	165,397	7,433	3,744	5,335
Total	2,583,132			
Average	215,261	10,386	4,846	7,081

Month	Washwater (1000 gal.)	% Rated Capacity	Filter Run Hours		
			Max	Min	Avg
January	5,090	35	80	14	67
February	4,160	41	80	12	60
March	2,531	39	80	9	57
April	1,460	31	80	21	67
May	1,740	34	80	47	68
June	2,730	40	71	6	54
July	2,780	41	78	22	48
August	2,620	45	72	36	55
September	1,690	34	80	54	68
October	1,980	31	80	29	65
November	1,410	28	80	77	79
December	1,190	27	80	62	79
Total	29,381				
Average	2,448	35	78	32	64

Kenosha Water Utility

Production Division

Membrane Plant Filtration Report

2014

Month	Pumpage (1000 gal.)			
	Total Water Treated	Max Day	Min Day	Avg Day
January	176,855	6,748	5,449	5,705
February	160,510	6,099	5,188	5,733
March	175,559	7,226	3,625	5,663
April	169,877	5,743	5,392	5,663
May	152,194	5,711	1,923	5,248
June	168,176	5,733	4,611	5,606
July	182,298	7,140	5,594	5,881
August	191,626	7,248	4,997	6,181
September	181,273	7,683	5,280	6,042
October	192,064	7,428	5,668	6,196
November	171,953	6,694	5,480	5,732
December	177,206	5,911	5,655	5,716
Total	2,099,591			
Average	174,966	6,614	4,905	5,781

Month	Washwater Raw (1000 gal.)	% Rated Capacity	CIP Run Hours		
			Max	Min	Avg
January	24,740	44	500	272	479
February	25,820	53	501	308	476
March	31,617	44	501	127	454
April	30,410	42	501	146	460
May	29,600	40	501	238	471
June	27,540	31	501	500	500
July	29,100	29	501	500	500
August	31,760	31	500	500	500
September	31,590	34	500	324	489
October	29,030	39	501	500	500
November	25,680	41	500	500	500
December	27,450	44	501	500	500
Total	344,337				
Average	28,695	39	501	368	486

CIP - Clean-in-Place

**Kenosha Water Utility
Production Division
Rapid Sand Plant Chemical Feed Report
2014**

Month	Alum		Chlorine		Fluoride	
	Pounds	lb/MG	Pounds	lb/MG	Pounds	lb/MG
January	48,993	227.28	2,835	13.15	5,486	25.45
February	47,003	206.41	3,393	14.90	5,756	25.28
March	49,113	201.20	3,375	13.83	5,492	22.50
April	40,764	222.69	2,775	15.16	4,622	25.25
May	47,362	225.80	3,157	15.05	5,385	25.67
June	46,448	195.77	3,565	15.03	6,296	26.54
July	50,975	200.83	4,155	16.37	6,754	26.61
August	57,291	205.17	4,975	17.82	7,098	25.42
September	45,723	222.31	3,592	17.46	5,548	26.97
October	51,873	269.62	3,178	16.52	5,006	26.02
November	54,409	321.61	2,919	17.25	4,571	27.02
December	47,528	287.36	2,622	15.85	4,409	26.66
Total	587,482		40,541		66,423	
Average	48,957	232.17	3,378	15.70	5,535	25.78

Month	Potassium Permanganate		Polyphosphate		Total Chemical Cost	
	Pounds	lb/MG	Pounds	lb/MG	Total \$	Cost/MG
January	0	0.00	1,496	6.94	\$ 7,515	\$ 34.86
February	0	0.00	1,597	7.01	7,593	33.34
March	0	0.00	1,663	6.81	7,885	32.30
April	0	0.00	1,569	8.57	6,502	35.52
May	0	0.00	1,654	7.89	7,595	36.21
June	0	0.00	1,767	7.45	7,827	32.99
July	0	0.00	1,960	7.72	8,949	35.26
August	0	0.00	2,120	7.59	10,172	36.43
September	0	0.00	2,119	10.30	8,164	39.69
October	0	0.00	1,941	10.09	8,296	43.12
November	0	0.00	1,831	10.82	8,374	49.50
December	0	0.00	1,929	11.66	7,475	45.19
Total	0		21,646		\$ 96,347	
Average	0	0.00	1,804	8.57	\$ 8,029	\$ 37.87

**Kenosha Water Utility
Production Division
Membrane Plant Chemical Feed Report
2014**

Cleaning Chemicals								
Month	Sodium Hydroxide		Hydrogen Peroxide		EDTA		Sulfuric Acid	
	Pounds	lb/MG	Pounds	lb/MG	Pounds	lb/MG	Pounds	lb/MG
January	3,828	21.64	1,062	6.00	758	4.29	488	2.76
February	5,220	32.52	1,448	9.02	1,033	6.44	665	4.14
March	6,612	37.66	1,835	10.45	1,309	7.46	843	4.80
April	3,132	18.44	869	5.12	620	3.65	399	2.35
May	3,132	20.58	869	5.71	620	4.07	399	2.62
June	4,176	24.83	1,159	6.89	826	4.91	532	3.16
July	4,176	22.91	1,159	6.36	826	4.53	532	2.92
August	4,524	23.61	1,255	6.55	895	4.67	577	3.01
September	5,568	30.72	1,545	8.52	1,102	6.08	710	3.92
October	4,872	25.37	1,352	7.04	964	5.02	621	3.23
November	4,176	24.29	1,159	6.74	826	4.80	532	3.09
December	6,612	37.31	1,835	10.36	1,309	7.39	843	4.76
Total	56,028		15,547		11,088		7,141	
Average	4,669	26.66	1,296	7.40	924	5.28	595	3.40

Process Chemicals								
Month	Chlorine		Fluoride		Polyphosphate		Total Cost *	
	Pounds	lb/MG	Pounds	lb/MG	Pounds	lb/MG	Total \$	\$/MG
January	2,571	14.54	4,500	25.44	1,357	7.67	\$ 2,766	15.64
February	2,581	16.08	4,057	25.28	1,214	7.56	3,126	19.48
March	3,142	17.90	5,275	30.05	1,548	8.82	4,238	24.14
April	2,745	16.16	4,484	26.40	1,552	9.14	2,724	16.04
May	2,424	15.93	3,906	25.66	1,270	8.34	2,301	15.12
June	2,667	15.86	4,461	26.53	1,322	7.86	2,850	16.95
July	2,783	15.27	4,851	26.61	1,313	7.20	2,866	15.72
August	3,099	16.17	4,872	25.42	1,320	6.89	3,013	15.72
September	2,679	14.78	4,889	26.97	1,580	8.72	3,627	20.01
October	2,908	15.14	4,998	26.02	1,776	9.25	3,560	18.54
November	2,795	16.25	4,645	27.01	1,753	10.19	3,229	18.78
December	2,635	14.87	4,723	26.65	1,938	10.94	4,290	24.21
Total	33,029		55,661		17,943		\$ 38,590	
Average	2,752	15.75	4,638	26.50	1,495	8.55	\$ 3,216	\$ 18.36

* Includes cleaning and process chemicals

MG - million gallons

**Kenosha Water Utility
Production Division
Laboratory Report
2014**

Month	Alkalinity Average mg/l		pH Average pH units		Conductivity µS/cm	
	Raw	Tap	Raw	Tap	Raw	Tap
January	112	111	8.30	7.70	319	322
February	123	118	8.40	7.80	329	333
March	116	111	8.40	7.80	288	301
April	113	107	8.30	7.70	363	367
May	112	106	8.39	7.70	306	307
June	110	105	8.50	7.70	282	290
July	109	103	8.40	7.70	258	262
August	108	103	8.40	7.60	279	283
September	109	104	8.30	7.70	269	274
October	108	103	8.30	7.60	314	319
November	112	103	8.30	7.60	315	324
December	110	104	8.40	7.70	299	307
Average	112	107	8.37	7.69	302	307

Month	Hardness mg/l		Temp Raw ° F		
	Raw	Tap	Max	Min	Avg
January	142	142	45	33	34
February	152	154	34	33	33
March	142	144	36	33	34
April	142	138	47	37	42
May	142	138	52	44	47
June	136	136	59	46	52
July	140	136	63	46	52
August	138	136	72	48	66
September	140	134	61	45	52
October	134	136	61	54	55
November	140	138	50	37	45
December	138	136	37	36	36
Average	141	139	51	41	46

mg/l - milligrams per Liter
µS/cm - microsiemens per centimeter

**Kenosha Water Utility
Production Division
Laboratory Report
2014**

Month	Turbidity NTU								
	Rapid Sand Raw			Membrane Raw			Tap		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
January	21.5	3.4	11.2	23.6	3.2	10.5	0.042	0.025	0.028
February	13.2	1.2	4.7	12.4	1.2	4.5	0.047	0.027	0.034
March	11.2	1.0	2.6	14.1	1.1	2.9	0.040	0.025	0.032
April	4.8	1.2	2.2	9.5	1.7	3.5	0.045	0.028	0.036
May	30.9	1.4	4.7	7.6	1.4	3.1	0.038	0.026	0.031
June	2.3	1.7	2.0	2.4	1.5	1.9	0.050	0.028	0.034
July	3.7	1.6	2.1	4.2	1.4	2.1	0.049	0.028	0.032
August	2.1	1.1	1.5	2.7	1.2	1.7	0.034	0.025	0.029
September	6.0	0.7	1.7	9.1	0.7	2.2	0.038	0.024	0.025
October	49.8	1.0	5.1	49.8	8.2	8.3	0.042	0.023	0.026
November	185.1	4.2	34.5	164.0	3.0	28.9	0.038	0.030	0.032
December	45.4	6.4	14.9	45.4	6.4	14.9	0.038	0.027	0.030
Average	31.3	2.1	7.3	28.7	2.6	7.0	0.042	0.026	0.031

Month	PO4 Average mg/l	Fluoride Composite Average mg/l	Chlorine Residual mg/l		
			Tap		
	Tap	Tap	Max	Min	Avg
January	0.17	0.71	1.3	1.1	1.2
February	0.17	0.74	1.3	1.1	1.1
March	0.17	0.73	1.2	1.0	1.1
April	0.16	0.72	1.2	1.1	1.2
May	0.16	0.71	1.2	1.0	1.2
June	0.16	0.74	1.2	1.1	1.2
July	0.15	0.74	1.2	1.1	1.2
August	0.14	0.71	1.2	1.1	1.2
September	0.17	0.76	1.2	1.1	1.2
October	0.16	0.75	1.2	1.1	1.2
November	0.17	0.78	1.2	1.1	1.2
December	0.18	0.76	1.2	1.1	1.2
Average	0.16	0.74	1.2	1.1	1.2

NTU - Nephelometric Turbidity Units
PO4 - Polyphosphate
mg/l - milligrams per liter

Synthetic Organic Chemicals

Parameters	Minimum Detection Level µg/L	Kenosha Results µg/L	Maximum Contaminant Level µg/L
Alachlor (Lasso)	0.033	ND	2
Aldicarb Total	0.37	ND	3
Aldicarb Sulfoxide	0.38	ND	4
Aldicarb Sulfone	0.39	ND	2
Aldrin	0.33	ND	na
Atrazine	0.033	ND	3
Benzo(a)pyrene	0.02	ND	0.2
Butachlor	0.033	ND	na
Carbaryl	0.44	ND	na
Carbofuran	0.43	ND	40
Chlordane	0.033	ND	2
2, 4-D	0.086	ND	70
Dalapon	0.81	ND	200
Dicamba	0.13	ND	na
Dieldrin	0.033	ND	na
Di (2-ethylhexyl) adipate	0.6	ND	400
Di (2-ethylhexyl) phthalate	0.006	ND	6
Dinoseb	0.12	ND	7
Diquat	0.37	ND	20
Endothall	0.51	ND	100
Endrin	0.006	ND	2.0
Glyphosate (Round-up)	4.7	ND	700
Heptachlor	0.015	ND	0.4
Heptachlorepoxyde	0.010	ND	0.2
Hexachlorobenzene	0.033	ND	1
Hexachlorocyclopentadiene	0.033	ND	50
3-Hydroxycarbofuran	0.43	ND	na
BHC Gamma (Lindane)	0.0070	ND	0.2
Methoxychlor	0.033	ND	40
Methomyl	0.42	ND	na
Dual (Metolachlor)	0.033	ND	na
Metribuzin (Sencor)	0.033	ND	na
Oxamyl (Vydate)	0.43	ND	200
PCB Total ****	0.1	ND	0.5
Pentachlorophenol	0.037	ND	1
Picloram (Tordan)	0.059	ND	500
Propachlor	0.033	ND	na
2,4,5-TP (Silvex)	0.11	ND	50
Simazine	0.033	ND	4
2,3,7,8-TCDD (Dioxin)	0.000005	ND	0.00003
Toxaphene	0.33	ND	3

na – not applicable

ND – not detected

µg/L – micrograms per Liter or parts per billion

**** PCB 1016 (0.030); PCB 1221 (0.042); PCB 1232 (0.091); PCB 1242 (0.11);
PCB 1248 (0.047); PCB 1254 (0.032); PCB 1260 (0.026)

Volatile Organic Chemicals

Parameters	Minimum Detection Level µg/L	Level Found Kenosha Results µg/L	Maximum Contaminant Level µg/L
Benzene	0.22	ND	5
Bromobenzene	0.17	ND	na
Bromodichloromethane	0.15	4.6	80
Bromoform	0.16	0.19	80
Bromomethane	0.26	ND	na
Carbon Tetrachloride	0.20	ND	5
Chloroethane	0.94	ND	na
Chloroform	0.19	3.5	80
Chloromethane	0.16	ND	na
1,2-Chlorotoluene (o-)	0.18	ND	na
1,4-Chlorotoluene (p-)	0.19	ND	na
Dibromochloromethane	0.15	2.8	80
Dibromomethane	0.22	ND	na
1,3-Dichlorobenzene (m-)	0.21	ND	na
1,2-Dichlorobenzene (o-)	0.17	ND	600
1,4-Dichlorobenzene (p-)	0.17	ND	75
1,1-Dichloroethane	0.20	ND	na
1,2-Dichloroethane	0.16	ND	5
1,1-Dichloroethylene	0.21	ND	7
1,2-Dichloroethylene, cis	0.19	ND	70
1,2-Dichloroethylene, trans	0.14	ND	100
Dichloromethane	0.19	ND	5
1,2-Dichloropropane	0.24	ND	5
1,3-Dichloropropane	0.19	ND	na
2,2-Dichloropropane	0.14	ND	na
1,1-Dichloropropene	0.10	ND	na
1,3-Dichloropropene	0.36	ND	na
Ethylbenzene	0.19	ND	700
Chlorobenzene	0.19	ND	100
Styrene	0.17	ND	100
1,1,1,2-Tetrachloroethane	0.18	ND	na
1,1,1,2,2-Tetrachloroethane	0.15	ND	na
Tetrachloroethylene	0.18	ND	5
Toluene	0.18	ND	1,000
1,2,4-Trichlorobenzene	0.19	ND	70
1,1,1-Trichloroethane	0.15	ND	200
1,1,2-Trichloroethane	0.20	ND	5
Trichloroethylene	0.11	ND	5
1,2,3-Trichloropropane	0.19	ND	na
Vinyl Chloride	0.18	ND	0.2
Xylene Total	0.53	ND	10,000

na – not applicable

ND – not detected

µg/L – micrograms per Liter or parts per billion

All parameters are sampled at the distribution system entry point every three years per WDNR regulations.

Inorganic Chemicals

Parameters	Minimum Detection Level mg/L	Level Found Kenosha Results mg/L	Maximum Contaminant Level mg/L	Sample Location
Alkalinity Total CaCO ₃	1.0	123 max	na	Entry point
Antimony Total	0.00013	ND	0.006	Entry point
Arsenic Total	0.0005	0.00065	0.01	Entry point
Barium Total	0.0001	0.022	2	Entry point
Beryllium Total	0.00013	ND	0.004	Entry point
Cadmium Total	0.0001	ND	0.005	Entry point
Chromium Total	0.0005	ND	0.1	Entry point
Copper	0.001	0.10	1.3 (AL)	Residential taps
Cyanide	0.005	0.0090	0.2	Entry point
Fluoride Total	0.05	0.70	4	Entry point
Haloacetic Acids	0.001	0.0120 avg	0.06	Maximum residence
Hardness Total CaCO ₃	1	154 max	500	Entry Point
Lead	0.0001	0.0062	0.015 (AL)	Residential taps
Mercury Total	0.00005	ND	0.002	Entry point
Nickel Total	0.0005	0.00086	0.1	Entry point
Nitrate as N	0.025	0.54	10	Entry point
Nitrite	0.0067	ND	1	Entry point
pH Lab	0.01pH	7.89 pH	na	Entry point
Selenium Total	0.002	ND	0.05	Entry point
Sodium Total	0.15	15	na	Entry point
Sulfate Total	2.5	28	na	Entry point
Thallium Total	0.0001	ND	0.002	Entry point
Total Trihalomethanes	0.00046	0.0338 avg	0.08	Maximum residence

ND – not detected

mg /L – milligrams per Liter or parts per million

AL – Action Level

na – not applicable

Entry Point – Where water enters the distribution system.

Maximum residence – A point of maximum residence time in the distribution system.

**Water System
Income Statement – 2014**

Sales of Water

Unmetered Sales to General Customers	\$ 10,992.42	
Residential Water Sales	5,588,166.47	
Commercial Water Sales	2,606,107.18	
Industrial Water Sales	836,946.98	
Private Fire Protection	149,898.00	
Public Fire Protection	1,293,946.74	
Sales to Public Authorities	285,806.84	
Sales for Resale	1,726,877.19	
Sales to Irrigation Customers	<u>4,233.34</u>	
Total Sales of Water		12,502,975.16

Other Operating Revenues

Penalties	172,874.70	
Other Water Revenue	69,041.06	
Allocated Services	142,968.37	
Miscellaneous Service Revenues	<u>299,859.68</u>	
Total Other Operating Revenues		<u>684,743.81</u>

Total Operating Revenues 13,187,718.97

Operating Expenses

Production Plant	2,434,402.67	
Distribution System	2,565,491.00	
Customer Accounting & Collection	403,203.27	
Administration	1,559,690.85	
Depreciation	2,738,808.47	
Taxes	<u>2,309,514.71</u>	
Total Operating Expenses		<u>12,011,110.97</u>

Utility Operating Income 1,176,608.00

Other Income

Interest Income	14,696.94	
Other Non-operating Income	<u>9,348.45</u>	
Total Other Income		24,045.39

Non-operating Expenses

Interest on Long-term Debt	796,428.83	
Amortization of Debt Expense	<u>(76,438.58)</u>	
Total Non-operating Expenses		<u>719,990.25</u>

Net Income before Capital Contributions 480,663.14

Capital Contributions 151,418.25

Net Income \$ 632,081.39

**Water System
Statement of Net Position
December 31, 2014**

Assets		
Utility Plant		
Utility Plant in Service	\$ 111,081,016.18	
Work in Progress - Water Plant	182,031.72	
Work in Progress - Water System	1,306,321.14	
Accumulated Depreciation	<u>(37,579,406.15)</u>	
Net Plant in Service		74,989,962.89
Nonutility Property		
Nonutility Property	20,370.78	
Accumulated Depreciation - Nonutility Property	<u>(2,370.78)</u>	
Net Nonutility Property		18,000.00
Current Assets		
Cash and Cash Equivalents	219,586.65	
Investments	2,000,000.00	
Restricted Cash and Cash Equivalents	-	
Customer Accounts Receivable	1,437,033.51	
Receivable from Municipality	786,083.14	
Unbilled Revenues	1,500,558.54	
Other Accounts Receivable	33,083.98	
Materials and Supplies	436,529.88	
Accrued Interest Receivable	7,275.79	
Other Current Assets	<u>99,886.99</u>	
Total Current Assets		6,520,038.48
Other Assets		
Restricted Investments	8,460,000.00	
Deferred Charges	3,041,002.86	
Assessments Receivable	<u>37,678.75</u>	
Total Other Assets		11,538,681.61
Total Assets		<u>93,066,682.98</u>
Liabilities		
Current Liabilities		
Current Portion of Water Revenue Bonds	2,165,000.00	
Accrued Taxes	2,362,495.00	
Accounts Payable	254,191.14	
Accrued Interest Payable	44,475.00	
Current Portion of Advance from Municipality	36,892.48	
Current Portion of Accrued Compensated Absences	25,173.10	
Payable to Municipality	997,277.53	
Deferred Credits	<u>425,120.45</u>	
Total Current Liabilities		6,310,624.70
Non-current Liabilities		
Long-term Debt		
Water Revenue Bonds - Series 2008 (net of unamortized premium in the amount of \$191,272.93)	9,516,272.93	
Advance from Municipality	168,651.33	
Advance from Sewerage Unit	<u>5,000,000.00</u>	
Total Long-term Debt		14,684,924.26
Accrued Compensated Absences		301,373.55
Worker's Compensation Accrued Liability		18,900.00
Other Postemployment Benefits		<u>704,789.00</u>
Total Non-current Liabilities		15,709,986.81
Total Liabilities		<u>22,020,611.51</u>
Net Position		
Invested in Capital Assets, net of related debt	65,777,962.89	
Restricted for Debt Service	6,155,525.00	
Unrestricted	<u>(887,416.42)</u>	
Total Net Position		<u>\$ 71,046,071.47</u>

Water System
Comparative Operating and Maintenance Expenses

	2014	2013	2012
Source of Supply Expenses			
Maintenance of Lake Intakes	331.15	26.28	—
Miscellaneous	\$ 30,874.53	\$ 9,625.00	\$ 9,625.00
	<u>31,205.68</u>	<u>9,651.28</u>	<u>9,625.00</u>
Pumping Expenses			
<u>Operation</u>			
Supervision and Engineering	109,814.44	122,751.32	103,218.69
Fuel - Electricity and Gas	863,868.49	822,932.22	858,006.70
Labor	116,583.53	112,874.17	108,110.16
Miscellaneous Expense	8,280.72	5,237.88	4,406.95
	<u>1,098,547.18</u>	<u>1,063,795.59</u>	<u>1,073,742.50</u>
<u>Maintenance</u>			
Structures and Improvements	34,417.59	21,362.39	14,312.17
Power Production Equipment	67,127.87	38.45	1,000.50
Pumping Equipment	81,396.95	69,879.87	59,107.99
	<u>182,942.41</u>	<u>91,280.71</u>	<u>74,420.66</u>
Water Treatment Expenses			
<u>Operation</u>			
Supervision and Engineering	53,017.57	53,852.46	53,497.53
Lead Testing Program	1,888.74	—	622.05
Chemicals	149,216.71	143,973.14	189,715.39
Labor	258,935.67	258,257.74	243,161.55
Miscellaneous Expense	49,054.94	21,248.31	21,721.69
	<u>512,113.63</u>	<u>477,331.65</u>	<u>508,718.21</u>
<u>Maintenance</u>			
Structures and Improvements	86,739.09	63,678.71	74,424.79
Water Treatment Expense	522,854.68	506,184.37	444,085.91
	<u>609,593.77</u>	<u>569,863.08</u>	<u>518,510.70</u>
	<u>2,434,402.67</u>	<u>2,211,922.31</u>	<u>2,185,017.07</u>
Transmission and Distribution Expenses			
<u>Operation</u>			
Supervision and Engineering	143,954.62	126,882.90	140,678.82
Transmission and Distribution Lines	57,573.90	24,249.88	36,782.27
Meter Expense	69,794.84	62,744.49	71,337.13
Customer Installation Expense	38,392.54	71,860.65	15,920.92
Miscellaneous Expense	488,431.00	485,763.94	487,665.26
	<u>798,146.90</u>	<u>771,501.86</u>	<u>752,384.40</u>
<u>Maintenance</u>			
Supervision and Engineering	23,249.93	29,853.62	26,497.59
Maintenance of Standpipes/Reservoirs	35,875.76	32,371.35	25,074.36
Transmission Mains	1,294,150.93	736,312.45	757,585.23
Services	326,184.35	176,690.84	136,840.24
Meters	45,284.81	44,365.21	54,936.38
Hydrants	42,598.32	45,410.77	32,915.28
	<u>1,767,344.10</u>	<u>1,065,004.24</u>	<u>1,033,849.08</u>
	<u>2,565,491.00</u>	<u>1,836,506.10</u>	<u>1,786,233.48</u>
Customer Account Expenses			
Customer Accounting and Collection	331,434.80	337,536.89	350,786.04
Meter Reading	71,768.47	66,937.75	58,402.53
	<u>403,203.27</u>	<u>404,474.64</u>	<u>409,188.57</u>
Administrative and General Expenses			
Administrative and General Salaries	172,465.81	166,001.42	163,363.42
Office Supplies and Expense	24,487.97	30,517.33	61,117.74
Outside Services Employed	185,104.02	162,601.02	137,946.71
Property Insurance	73,364.90	65,432.63	54,234.47
Employee Benefits and Pensions	1,064,991.47	996,047.69	908,870.33
Regulatory Commission Expense	12,019.14	195,947.82	22,123.15
Miscellaneous Expense	27,257.54	24,756.21	27,533.94
	<u>1,559,690.85</u>	<u>1,641,304.12</u>	<u>1,375,189.76</u>
Total Operation and Maintenance Expenses			
Utility Taxes	2,309,514.71	2,487,433.65	2,339,273.95
Depreciation	2,738,808.47	2,742,466.77	2,411,511.43
Total Operating Expenses	<u><u>\$ 12,011,110.97</u></u>	<u><u>\$ 11,324,107.59</u></u>	<u><u>\$ 10,506,414.26</u></u>

**Water System
Comparative Income Statement**

	2014	2013	2012
Sales of Water			
Total Unmetered Sales to General Public	\$ 10,992.42	\$ 6,158.38	\$ 6,554.93
Residential Water Sales	5,588,166.47	5,406,992.22	5,476,061.62
Commercial Water Sales	2,606,107.18	2,471,778.36	2,393,156.92
Industrial Water Sales	836,946.98	619,872.84	484,689.25
Private Fire Protection	149,898.00	148,217.76	153,011.00
Public Fire Protection	1,293,946.74	1,195,278.29	1,117,126.11
Sales to Public Authorities	285,806.84	262,385.41	258,544.35
Sales for Resale	1,726,877.19	1,601,123.72	1,786,272.90
Sales to Irrigation Customers	4,233.34	3,332.93	4,722.06
Total Sales of Water	<u>12,502,975.16</u>	<u>11,715,139.91</u>	<u>11,680,139.14</u>
Other Operating Revenues			
Penalties	172,874.70	144,985.60	148,055.06
Other Water Revenue	69,041.06	71,563.79	105,048.27
Allocated Services	142,968.37	136,437.37	121,362.24
Miscellaneous Service Revenues	299,859.68	318,136.44	296,148.62
Total Other Operating Revenues	<u>684,743.81</u>	<u>671,123.20</u>	<u>670,614.19</u>
Total Operating Revenues	13,187,718.97	12,386,263.11	12,350,753.33
Operating Expenses			
Source of Supply	31,205.68	9,651.28	9,625.00
Power and Pumping Expense	1,281,489.59	1,155,076.30	1,148,163.16
Water Treatment Expense	1,121,707.40	1,047,194.73	1,027,228.91
Transmission and Distribution Expense	2,565,491.00	1,836,506.10	1,786,233.48
Customer Accounting and Collection Expense	403,203.27	407,474.64	409,188.57
Administrative and General Expense	1,559,690.85	1,641,304.12	1,375,189.76
Depreciation	2,738,808.47	2,742,466.77	2,411,511.43
Taxes	2,309,514.71	2,487,433.65	2,339,273.95
Total Operating Expenses	<u>12,011,110.97</u>	<u>11,327,107.59</u>	<u>10,506,414.26</u>
Utility Operating Income	1,176,608.00	1,059,155.52	1,844,339.07
Other Income			
Interest Earned	14,696.94	20,571.01	41,044.50
Miscellaneous Non-operating Income	9,348.45	3,734.11	5,845.10
Total Other Income	<u>24,045.39</u>	<u>24,305.12</u>	<u>46,889.60</u>
Operating and Other Income	1,200,653.39	1,083,460.64	1,891,228.67
Non-operating Expenses			
Interest on Long-term Debt	796,428.83	895,359.52	974,571.31
Amortization of Debt Expense	(76,438.58)	(88,651.15)	(92,466.68)
Total Non-operating Expenses	<u>719,990.25</u>	<u>806,708.37</u>	<u>882,104.63</u>
Net Income	<u><u>\$ 480,663.14</u></u>	<u><u>\$ 276,752.27</u></u>	<u><u>\$ 1,009,124.04</u></u>
Rate of Return on Average Investment (based on operating income & expense)	3.06%	2.69%	3.79%

**Water System
Utility Plant in Service
For the year ended December 31, 2014**

	Depr. Rate %	Cost of Plant 1/1/2014	2014 Additions	2014 Retirements	Adjustments Incr/(Decr)	Cost of Plant 12/31/2014
Source of Supply						
Structures and Improvements	2.00	\$ 1,136,362.88				\$ 1,136,362.88
Collect and Impound Reservoirs	1.67	268,710.96				268,710.96
Lake Intakes	1.67	1,567,121.31				1,567,121.31
Supply Mains	1.33	453,081.81				453,081.81
Pumping Plant						
Land	N/A	18,657.25				18,657.25
Structures and Improvements	2.00	3,832,608.93			(57,198.48)	3,775,410.45
Other Power Prod Equipment	4.00	577,490.71				577,490.71
Electric Pumping Equipment	3.33	3,879,914.10		1,516.45		3,878,397.65
Other Pumping Equipment	4.00	8,646.81				8,646.81
Water Treatment						
Land	N/A	527,047.60				527,047.60
Structures and Improvements	2.00	8,443,789.69	6,242.30			8,450,031.99
Water Treatment Equipment	3.24	1,315,428.19				1,315,428.19
Membrane Filtration Equipment	5.56	13,836,627.77				13,836,627.77
Transmission and Distribution						
Land	N/A	314,867.39				314,867.39
Reservoirs and Standpipes	1.86	6,195,422.40				6,195,422.40
Mains	0.93	48,149,423.63		29,753.74		48,119,669.89
Services	2.09	7,435,010.65	123,284.03	7,162.67		7,551,132.01
Meters	5.00	4,723,649.36	182,314.47	131,545.58		4,774,418.25
Hydrants	1.59	4,819,008.44	61,435.98	10,513.61		4,869,930.81
General Plant						
Furniture and Equipment	5.88	50,815.66		1,126.78		49,688.88
Computer Equipment	6.67-14.29	262,123.46	6,445.81	21,572.46		246,996.81
Transportation Equipment	12.86	1,001,753.92	296,513.29		(22,019.82)	1,276,247.39
Stores Equipment	5.88	1,497.75				1,497.75
Tools and Shop Equipment	5.88	253,499.13	72,497.05	17,033.47		308,962.71
Lab Equipment	5.88	103,690.02				103,690.02
Work (Power) Equipment	9.00	471,190.12	83,222.83			554,412.95
Communication Equipment	9.09	-				-
Telephone Equipment	20.00	41,180.70				41,180.70
SCADA System Equipment	10.00	561,153.82	131,353.07			692,506.89
Miscellaneous Equipment	5.88	163,156.47	4,219.48			167,375.95
Total		<u>\$ 110,412,930.93</u>	<u>\$ 967,528.31</u>	<u>\$ 220,224.76</u>	<u>(\$ 79,218.30)</u>	<u>\$ 111,081,016.18</u>

**Water System
Accumulated Depreciation
For the year ended December 31, 2014**

	Balance 1/1/2014	2014 Depreciation	Less Cost of Retirements	Add Cash Received	Adjustments Incr./Decr.	Balance 12/31/2014
Source of Supply						
Structures and Improvements	\$ 340,908.90	\$ 22,727.26				\$ 363,636.16
Collect and Impound Reservoirs	162,399.45	4,568.09				166,967.54
Lake Intakes	834,566.79	26,641.06				861,207.85
Supply Mains	92,519.33	8,155.47				100,674.80
Pumping Plant						
Land	—					—
Structures and Improvements	983,486.75	76,080.20			(29,444.74)	1,030,122.21
Other Power Prod Equipment	299,116.52	25,409.59				324,526.11
Electric Pumping Equipment	1,586,717.94	170,682.86	1,516.45			1,755,884.35
Other Pumping Equipment	6,858.25	380.46				7,238.71
Water Treatment						
Land	—					—
Structures and Improvements	3,120,140.26	168,938.21				3,289,078.47
Water Treatment Equipment	1,315,428.19					1,315,428.19
Membrane Filtration Equipment	8,445,867.87	830,197.67				9,276,065.54
Transmission and Distribution						
Land	—					—
Reservoirs and Standpipes	2,469,595.68	119,953.19				2,589,548.87
Mains	7,246,409.57	574,032.81	29,753.74			7,790,688.64
Services	3,284,005.82	156,605.20	7,162.67			3,433,448.35
Meters	1,413,652.26	261,174.17	131,545.58	23,570.58		1,566,851.43
Hydrants	1,306,030.42	106,819.96	10,513.61	10,969.41		1,413,306.18
General Plant						
Furniture and Equipment	33,989.67	2,914.63	1,126.78			35,777.52
Computer Equipment	102,519.23	38,015.98	21,572.46			118,962.75
Transportation Equipment	791,804.64	60,398.40			20,062.70	872,265.74
Stores Equipment	(54,285.25)					(54,285.25)
Tools and Shop Equipment	216,963.15	16,311.39	17,033.47			216,241.07
Lab Equipment	62,818.69	6,014.02				68,832.71
Work (Power) Equipment	327,964.95	21,253.03				349,217.98
Communications Equipment	(8,513.49)					(8,513.49)
Telephone Equipment	14,689.60	8,236.14				22,925.74
SCADA System Equipment	575,290.71	23,713.24				599,003.95
Miscellaneous Equipment	64,718.59	9,585.44				74,304.03
Total	<u>\$ 35,035,664.49</u>	<u>\$ 2,738,808.47</u>	<u>\$ 220,224.76</u>	<u>\$ 34,539.99</u>	<u>(\$ 9,382.04)</u>	<u>\$ 37,579,406.15</u>

Water System
Water System Revenue Refunding Bonds - Series 2008
Debt Service Schedule
December 31, 2014

Year	Interest Rate %	Principal	Interest		Total
		December 1	June 1	December 1	
2015	4.00%	\$ 2,165,000.00	\$ 266,850.00	\$ 266,850.00	\$ 2,698,700.00
2016	4.00% - 5.00%	2,250,000.00	223,550.00	223,550.00	2,697,100.00
2017	5.00%	2,350,000.00	176,875.00	176,875.00	2,703,750.00
2018	5.00%	4,725,000.00	118,125.00	118,125.00	4,961,250.00
Totals		\$11,490,000.00	\$ 785,400.00	\$ 785,400.00	\$13,060,800.00

**Water System
Advance from Municipality
Debt Repayment Schedule
December 31, 2014**

Year	Interest Rate %	Principal	Interest		Total
		April 1	April 1	October 1	
2015	5.390%	\$ 36,892.48	\$ 5,542.11	\$ 4,712.04	\$ 47,146.63
2016	5.590%	38,210.07	4,712.04	3,756.78	46,678.89
2017	5.760%	40,845.24	3,756.78	2,633.53	47,235.55
2018	5.880%	43,480.42	2,633.53	1,383.47	47,497.42
2019	6.000%	46,115.60	1,383.47	—	47,499.07
Totals		\$205,543.81	\$ 18,027.93	\$ 12,485.82	\$236,057.56

**Water System
Total Debt Repayment Schedule
December 31, 2014**

Year	Principal	Interest	Total
2015	\$ 2,201,892.48	\$ 543,954.15	\$ 2,745,846.63
2016	2,288,210.07	455,568.82	2,743,778.89
2017	2,390,845.24	360,140.31	2,750,985.55
2018	4,768,480.42	240,267.00	5,008,747.42
2019	46,115.60	1,383.47	47,499.07
Totals	<u>\$11,695,543.81</u>	<u>\$ 1,601,313.75</u>	<u>\$13,296,857.56</u>

Distribution Division

4401 Green Bay Road
Kenosha WI 53144-1716

Phone (262) 653-4306

Fax (262) 653-4303



“Providing and Protecting Kenosha’s Greatest Natural Resource”

June 2015

Edward St. Peter, General Manager
Kenosha Water Utility
4401 Green Bay Road
Kenosha, WI 53144

Subject: 2014 Annual Report for the Water Distribution & Sewer Collection Division

Dear Mr. St. Peter,

I respectfully submit the annual report for the Water Distribution and Sewer Collection Division for the year 2014.

2014 was a particularly eventful year for the KWU as severe winter weather, including arctic temperatures, gripped the region during the first three months of the year. While this phenomenon impacted all operations throughout the utility, the Distribution Division was particularly hard hit. Our employees and their equipment were put to the test as frost depths approached the five foot mark by mid-February. These conditions not only created the ideal environment for the near record amount of water main breaks that occurred, but also complicated the repair process as crews dealt with rock hard soil and hazardous conditions. Through it all, however, Distribution employees banded together and in their usual fashion, did whatever it took to get the job done. This exceptional attitude was displayed over and over throughout the year as the division recovered from the unprecedented workload we encountered in the first quarter. It should not be forgotten that for every water and sewer repair that occurred, our crews returned to restore the roadways with concrete and/or prep for asphalt. A feat that I am proud to say was completed by years end.

Water Distribution System

The Distribution Division repaired 208 water main breaks in 2014, a 44% increase from 2013. It should be noted that 135 main breaks, or 65% of the yearly total, occurred before April 1st. A related number of valves, fifty-seven, were also repaired or replaced in 2014, an increase of 54% from 2013. Additionally, twenty-nine fire hydrants were repaired or replaced as well as seventy-eight water services (including twenty-three lead service replacements).

Sanitary Sewer Collection System

Sewer projects in 2014 included the cleaning of nearly 45.6 miles of sewer main, an increase of 19% from 2013. Significant gains were also made as we televised and inspected 6.25 miles of sewer mains, resulting in an 82% increase over 2013. Direct work on the system remained fairly steady, with the exception of lateral repairs, which saw an increase of 58% in 2014, to thirty-six total. We also performed nine sewer main repairs and ten manhole repairs.

Despite the difficulties experienced early on, I feel 2014 can be remembered as an extremely successful year for the Distribution Division, for several reasons. First, the level of dedication shown by the Distribution employees, who will work in any weather, at any hour, has never been more evident. I would be remiss if I failed to recognize



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not only our employees, but, perhaps more importantly, their families who sacrificed the same nights and weekends as these men who worked tirelessly to provide the best possible service for our customers. Equally impressive was the level of cooperation and assistance that we received at the height of the extreme weather crisis. I cannot overstate the importance of the staff support that was provided by the other KWU divisions. From the Wastewater employees driving dump trucks to the Customer Service accounting staff organizing data on spreadsheets, every division pitched in and every contribution was significant in allowing us to accomplish our goals. Most important, by far, was the overwhelming support provided by the Public Works – Streets Division. Beyond the salting and ice clearing when main breaks occur, a service which the Streets Division has always provided without question or complaint, was the incredible contribution of manpower and equipment as we grappled with the harsh conditions. Often working as a fourth crew, the efforts of the Streets Division were vital to our successful operation and must be acknowledged.

Finally, I would like to thank you, Ed, and the Board of Water Commissioners for providing us with the best tools and equipment to make our jobs safe and efficient. With your continued support, the Distribution Division will be able to maintain the high standards of excellence that you have set, and which define the Kenosha Water Utility.

Sincerely,

A handwritten signature in cursive script, appearing to read "John Rasch".

John Rasch
Director of Water Distribution
and Sewer Collection

Water Distribution Pipe System - 2014

<u>Size</u>	<u>Material</u>	<u>Footage</u>
48"	Cast/Ductile Iron Pipe	370
36"	Cast/Ductile Iron Pipe	12,550
30"	Cast/Ductile Iron Pipe	13,253
24"	Cast/Ductile Iron Pipe	60,803
24"	Concrete Pipe	7,892
24"	Plastic Pipe	4,636
20"	Cast/Ductile Iron Pipe	8,327
18"	Cast/Ductile Iron Pipe	2,576
16"	Cast/Ductile Iron Pipe	173,920
16"	Plastic Pipe	25,654
14"	Cast/Ductile Iron Pipe	8,311
12"	Cast/Ductile Iron Pipe	223,775
12"	Plastic Pipe	45,736
10"	Cast/Ductile Iron Pipe	16,265
8"	Cast/Ductile Iron Pipe	382,590
8"	Plastic Pipe	149,639
6"	Cast/Ductile Iron Pipe	708,490
6"	Plastic Pipe	4,896
4"	Cast/Ductile Iron Pipe	30,197
4"	Plastic Pipe	10
3"	Copper Pipe	150
2"	Copper Pipe	2,517
2"	Plastic Pipe	164
1.5"	Copper Pipe	272
1"	Copper Pipe	70
Total Feet of Pipe		1,883,063
Total Miles of Pipe		356.64

Water Services Added to System - 2014

<u>Number</u>	<u>Size</u>	<u>Material</u>	<u>Average Unit Cost</u>	<u>Total Cost</u>
29	1"	Copper Connections	3,274.58	94,962.94
1	1.5"	Copper Connections	1,359.25	1,359.25
2	2"	Copper Connections	4,310.73	8,621.45
1	4"	Ductile Cast Iron	2,949.11	2,949.11
1	6"	Ductile Cast Iron	2,901.66	2,901.66
1	6"	PVC	2,901.66	2,901.66
2	8"	PVC	4,793.98	9,587.96
<u>37</u>		Total		<u>\$ 123,284.03</u>

Fire Hydrants Added to System - 2014

<u>Number</u>	<u>Type</u>	<u>Average Unit Cost</u>	<u>Total Cost</u>
22	Steamer	\$ 2,792.54	\$ 61,435.98

2014 Water Main Installation Costs

Project	Size/ Type	Installer	Description	Footage	Total Costs	Cost per Foot
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None completed in 2014

Distribution Division - Water Operating & Maintenance Report - 2014

Maintenance Completed

System	Maintenance Type	Quantity
Water Main Breaks	Circumferential	94
	Blow Out	87
	Joint Leaks	3
	Longitudinal	17
	Old Sleeve	-
	Other	7
Total Main Break Repairs		208
Valves	Reset/Replace Box (only)	1
	Replaced	36
	Repaired	15
	New Installation	1
	Removed/VBO	4
Total Valve Repairs		57
Water Services	Reset/Replace Box (only)	11
	Replaced (Lead Svcs: 14)	27
	Repaired	28
	Flow Test	1
	Shut at Main	11
Total Water Service Repairs		78
Hydrants	Replaced	14
	Repaired	6
	Relocated	-
	Abandoned	-
	New Installation	-
Total Hydrant Repairs		20
New Connections & Taps	1"	29
	1 1/2"	1
	2"	2
	4"	1
	6"	2
	8"	2
Total New Connections Installed		37

Meter Shop Request for Assistance: 107
Valves Operated: 1,020

Customer Complaints

(During Normal Work Hours)

Complaint	Quantity
Main Breaks	91
Hydrant Hit/Damaged	13
Hydrant Leaking	25
Service Repairs	14
Signs/Barricades Needed	4
Curb/Valve Box Repair	21
Water Taste/odor/color	17
Low Pressure	7
No Water	14
Service Turn-On	6
Service Turn Off	5
Temporary Road Patch	27
Utility Locates	9
Miscellaneous	
Total	253

Customer Complaints

(After Normal Work Hours)

Complaint	Quantity
Main Breaks	117
Hydrant Hit/Damaged	7
Hydrant Leaking	7
Service Repairs	16
Signs/Barricades Needed	9
Curb box/Valve Box	7
Water Taste/odor/color	4
Low Pressure	6
No Water	26
Service Turn-On	5
Service Turn Off	29
Temporary Road Patch	4
Utility Locate	18
Miscellaneous	19
Total	274

Total Customer Complaints	527
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Wastewater Treatment Plant

7834 3rd Avenue
Kenosha WI 53143

Phone (262) 653-4335
Fax (262) 653-4340



“Providing and Protecting Kenosha’s Greatest Natural Resource”

June 2015

Mr. Edward St. Peter, General Manager
Kenosha Water Utility
4401 Green Bay Road
Kenosha, WI 53144

Subject: 2014 Annual Report – Wastewater Treatment Division

Dear Mr. St. Peter,

We respectfully submit the 2014 annual report for the Kenosha Water Utility Wastewater Treatment Plant. This past year, the wastewater treatment plant treated 7.78 billion gallons of effluent. The average daily flow for the plant was 21.3 million gallons per day (MGD). The final effluent biological oxygen demand (BOD) and total suspended solids (TSS) were well within the permitted discharge limits.

The staff at the wastewater treatment plant continues to amaze us with their skills and abilities to maintain and fix all of the equipment that we have at the plant and throughout the collection system. We did a lot of work at the Big Buck Lift station with pumps, drives and check valves. We made some improvements to the bar screen room with new grating, gates, and actuators. At the equalization basin, we made repairs to the gate stems and added remote control to an actuated valve. There is never a shortage of equipment to repair.

The DNR did an audit of our lab and gave the staff very high accolades for their knowledge and methods.

We are very proud of the entire staff at the wastewater treatment plant. It is their dedication and teamwork that make this place run smoothly.

We would like to thank Ed St. Peter and the Board of Water Commissioners for their continued support and guidance. The Wastewater Treatment Plant and collection system have a lot of potential for improvement projects, which is why it is such an exciting place to work.

Thank you for the opportunity to be a part of this team.

Sincerely,

Handwritten signature of Melissa Arnot in black ink.

Melissa Arnot
Director of Operations

Handwritten signature of Katrina Karow in black ink.

Katrina Karow
Director of Wastewater Treatment



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Treatment Data - 5 Year Comparison

<u>YEAR</u>	<u>MGD</u>	<u>Influent mg/L</u>	<u>Primary Effluent mg/L</u>	<u>Primary Efficiency %</u>	<u>Final Effluent mg/L</u>	<u>Overall Efficiency %</u>
Suspended Solids						
2014	21.303	176	51	71	7.5	96
2013	20.452	160	50	69	6.4	96
2012	17.885	188	59	69	6.7	96
2011	22.872	161	62	61	7.9	95
2010	20.837	172	62	64	7.5	96
Five-Day BOD						
2014	21.303	175	110	37	12.9	93
2013	20.452	162	109	33	11.2	93
2012	17.885	190	127	33	8.5	96
2011	22.872	171	108	37	11.7	93
2010	20.837	188	124	34	9	95
Phosphorus						
2014	21.303	2.95	–	–	0.48	84
2013	20.452	2.61	–	–	0.49	81
2012	17.885	3.08	–	–	0.54	82
2011	22.872	2.85	–	–	0.54	81
2010	20.837	3.1	–	–	0.57	82

Summary

	2013	2014
Total wastewater pumped and treated	7,453,875,000	7,780,247,000
Total sludge to digesters - gallons	35,438,289	34,882,529
Total dry solids to digesters - pounds	10,322,197	10,105,790
Total dry volatile solids to digesters - pounds	7,892,915	7,598,608

Digester Data

Total gallons digested sludge removed	27,772,093	27,461,368
Percent dry solids	2.52	2.68
Total pounds dry solids removed	5,712,008	5,966,421
Percent volatile matter	53.7	53.8
Total dry volatile solids removed	2,939,828	3,204,509
Volatile solids destroyed, percent	62.8	57.8
Total gallons removed as supernatant	11,193,600	10,369,248
Percent supernatant solids	0.25	0.27
Total pounds supernatant solids removed	220,661	211,144
Percent supernatant volatile matter	53.5	53.2
Total pounds volatile solids, supernatant	118,651	111,640

Treatment Plant Data and Chemical Usage

	<u>2013</u>	<u>2014</u>
<u>Chemical Data</u>		
<u>Chlorine</u>		
Total pounds	97,274	91,576
Average pounds per day	267	251
Average residual, µg/L	< 100 µg/L	< 100 µg/L
<u>Sulfur Dioxide</u>		
Total pounds	66,004	78,679
Average pounds per day	181	216
<u>Ferric Chloride, Phosphorus</u>		
Total gallons	196,898	208,028
Average gallons per day	539	570
Average pounds of Fe per day	711	751
<u>Polymer</u>		
Tons	87	97
Pounds per pound of dry solids	0.03	0.03

Aeration

Settleable Solids - mg/L	258	311
Mixed Liquor Suspended Solids - mg/L	2,764	3,098
Dissolved Oxygen - mg/L	2.0	2.1
BOD lbs. applied per day	17,361	18,244

Thickener

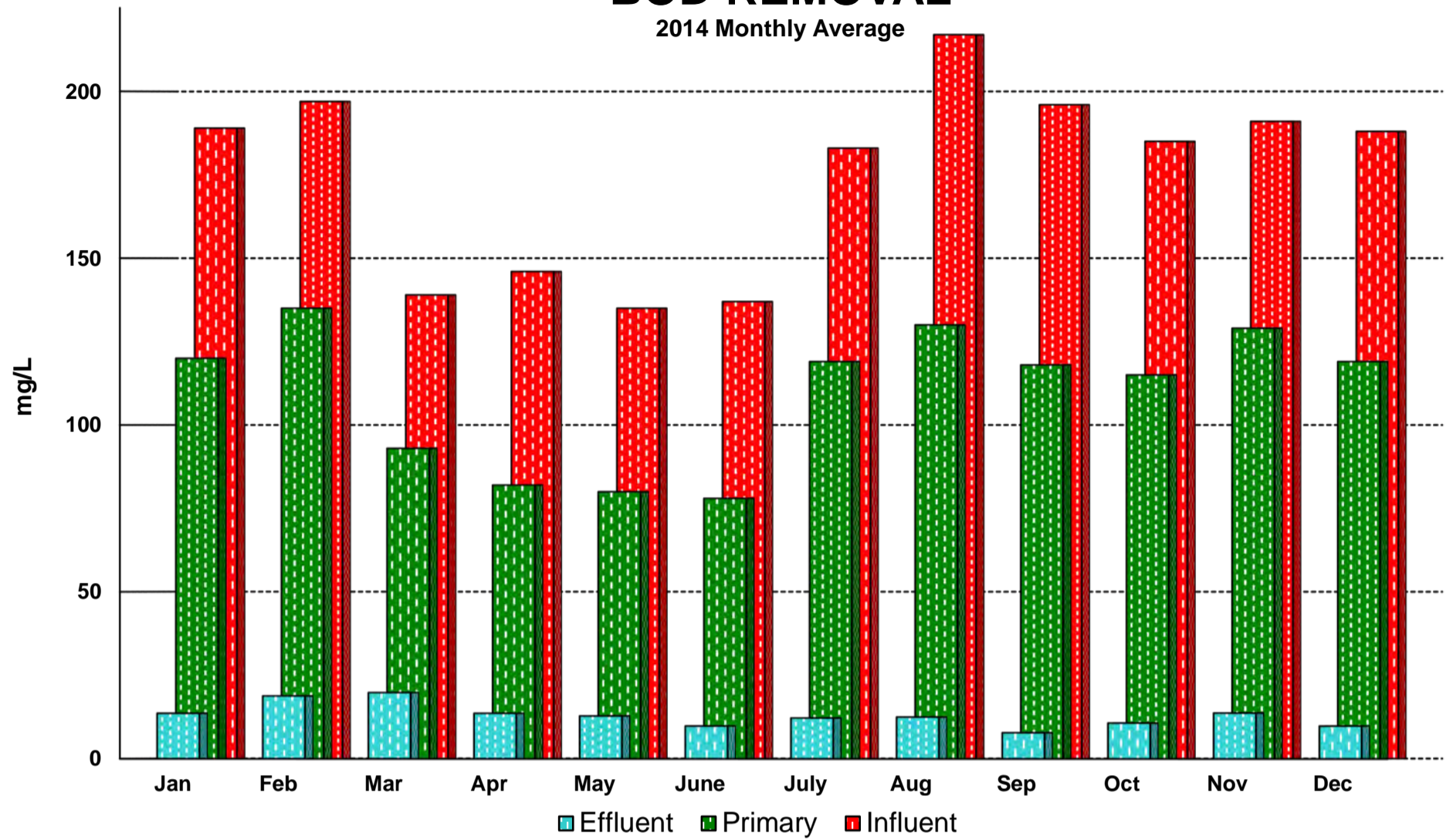
Waste Activated Sludge to Thickener, gallons/day	164,750	150,532
Waste Activated Sludge - % solids	0.9	0.96
Waste Activated Sludge - lbs/day	11,008	8,951
Thickened Sludge - % solids	4.2	4.1
Thickened Sludge - % volatile	74.3	72.3
Thickener Effluent - Suspended Solids - mg/L	494	553
Thickened Sludge - lbs dry solids/day	10,728	8,871
Thickened Sludge - gallons/day	30,619	24,766

mg/L - milligrams per Liter

µg/L - micrograms per Liter

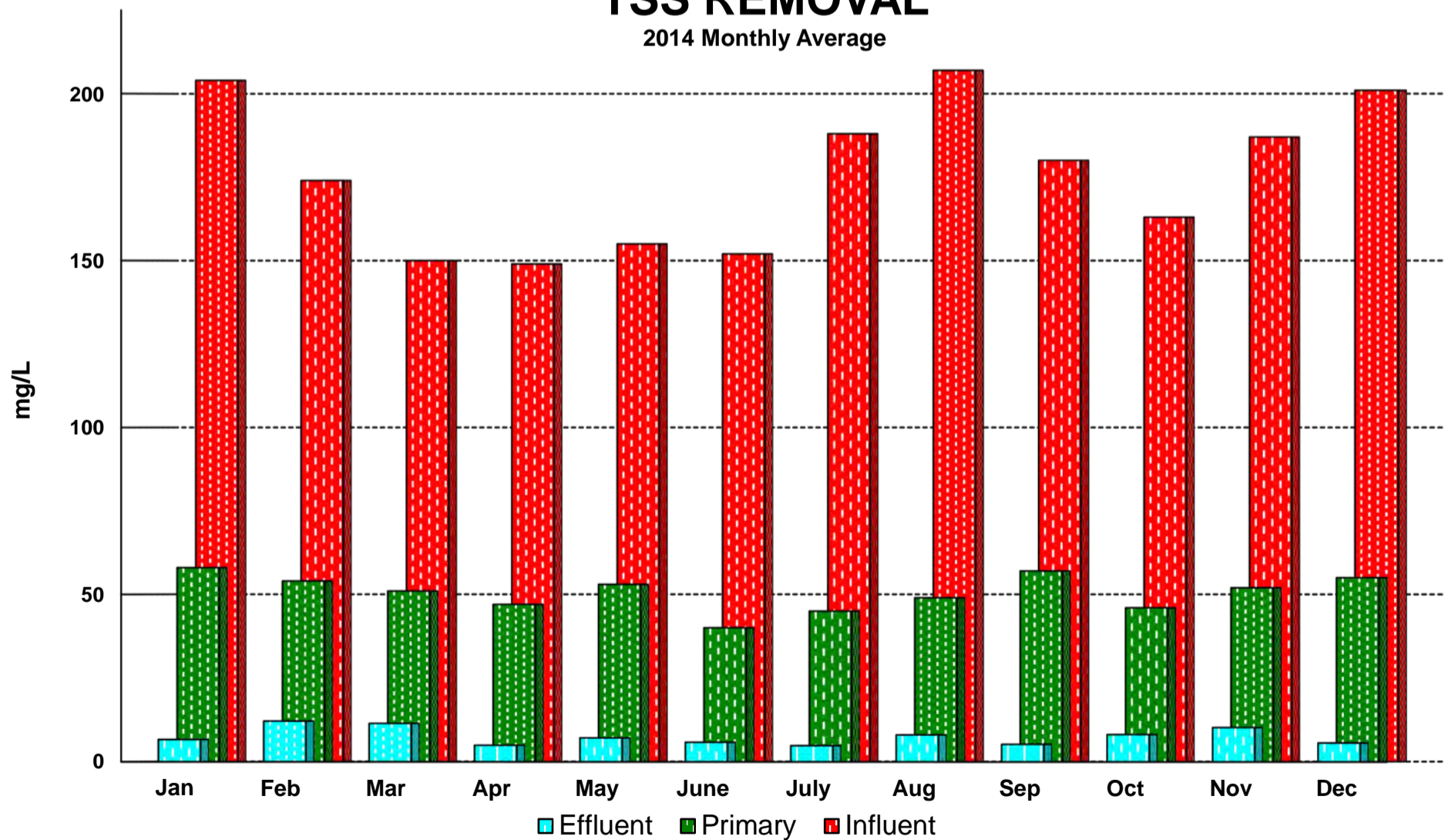
BOD REMOVAL

2014 Monthly Average



TSS REMOVAL

2014 Monthly Average



Wastewater Flow

Annual precipitation and average daily flow for the past five years

	<u>Precipitation, Inches</u>	<u>Average MGD</u>
2014	33.20	21.303
2013	39.50	20.452
2012	25.70	17.885
2011	37.73	22.872
2010	33.68	20.837

Supernatant

Gallons per day	61,148
Percent Solids	0.27
Pounds supernatant solids per day	1,367
Percent volatile	53.2

Sludge to Centrifuge

Gallons per day	185,550
Percent solids	2.68
Pounds per day	41,473
Percent volatile	53.8

Sludge off Centrifuge

Total tons	9,373
Percent solids	27.3
Centrate TSS, mg/l	119.0
Centrate pH	7.6

Solids Disposal

Tons of sludge to landfill, dry tons	2,559
Tons of grit to landfill	1,066

Annual Energy Usage

		<u>2013</u>	<u>2014</u>
Electricity	Total On and Off Peak kWh	7,542,908	7,174,591
	Total Demand kW	15,917	13,235
	Total cost	\$ 621,960	\$ 571,444
Natural Gas	therms	53,261	63,481
	Total cost	\$ 30,834	\$ 51,307
Methane gas produced by digesters	therms	379,042	372,840
Value of methane gas	Total	\$ 219,436	\$ 301,340

**Sewerage System
Plant Operating Data - 2014**

Month	Precip. Inches	Total Flow Raw Sewage MG	Average Daily Flow MGD	Maximum Daily Flow MGD	Day of Month	Power Cost
January	1.22	543.763	17.541	26.631	11	\$ 47,787
February	1.79	505.286	18.046	36.876	20	46,172
March	1.15	773.604	24.955	35.273	11	40,456
April	3.31	777.324	25.911	47.265	14	43,952
May	3.66	839.279	27.074	47.747	13	43,098
June	5.56	847.183	28.239	54.062	11	49,573
July	2.39	642.214	20.717	37.926	13	52,190
August	3.75	547.166	17.651	23.398	26	59,424
September	2.88	560.771	18.692	27.899	10	50,901
October	4.77	662.609	21.374	37.448	15	51,208
November	1.66	521.913	17.397	27.210	24	45,650
December	1.05	559.135	18.037	24.006	23	41,033
Total	33.19	7,780.247				\$ 571,444
Average	2.77	648.354	21.303	35.478		\$ 47,620

Monthly Averages

Month	BOD		TSS (mg/L)		Phosphorus (mg/L)		Total lbs. Dry Solids from Digester
	Influent	Effluent	Influent	Effluent	Influent	Effluent	
January	189	13.6	204	6.6	2.54	0.46	400,134
February	197	18.8	174	12.1	3.06	0.51	599,974
March	139	19.8	150	11.4	2.34	0.37	447,920
April	146	13.6	149	4.9	2.00	0.23	523,888
May	135	12.8	155	7.1	2.36	0.25	615,411
June	137	9.8	152	5.8	2.83	0.54	584,267
July	183	12.2	188	4.8	3.01	0.72	451,319
August	217	12.5	207	8.0	3.90	0.76	363,267
September	196	7.8	180	5.2	3.35	0.60	414,007
October	185	10.7	163	8.1	3.12	0.52	619,128
November	191	13.7	187	10.2	3.52	0.50	392,029
December	188	9.8	207	5.6	3.33	0.34	555,078
Average	175	12.9	176	7.5	2.95	0.48	497,202

2014 Sewer Main Installation Costs

Project	Size/ Type	Installer	Description	Footage	Total Costs	Cost per Foot
Installed by Kenosha Water Utility						
<u>By Job Number</u>						
634	8" PVC	A.W. Oakes and Son, Inc.	Sanitary Sewer Relay - 27th St west of 43rd Ave	48.0	\$ 7,867.63	\$ 163.91
390	6" HDPE	R.J. Underground, Inc.	Sanitary Sewer Force Main Relay - Carthage Lift Station to 300; West	300.0	51,532.48	171.77
Total				<u>348.0</u>	<u>\$ 59,400.11</u>	

Distribution Division - Sanitary Sewer Operating & Maintenance Report - 2014

Maintenance Completed

System	Maintenance Type	Quantity
Sewer Main	Collapse	3
	Broken Pipe	3
	Joint Leaks	1
	Remove Flusher Nozzle	2
	Other	–
Total Sewer Main Repairs		9
Sewer Lateral	Collapse	17
	Broken Pipe	12
	Joint Leaks	1
	Broken at Wye	2
	Remove Parkway Trap	3
	Contractor Damage	–
	Other	1
Total Sewer Lateral Repairs		36
Manholes	Repaired	8
	Replace	2
	Remove/Abandon	–
Total Manhole Repairs		10

Total Sanitary Sewer Repairs	55
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Customer Complaints

(During Normal Work Hours)

Complaint	Quantity
Sewer back-up	135
Sink Hole	6
Sewer Odor	4
Storm Sewer Back-up	–
Televise Lateral	3
Manhole Problem	3
Miscellaneous	3
Total	154

Customer Complaints

(After Normal Work Hours)

Complaint	Quantity
Utility Locate	10
Sewer back-up	61
Sewer Odor	2
Storm Sewer Back-up	3
Manhole Problem	–
Miscellaneous	–
Total	76

Total Complaints	230
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Summary of Sewer Cleaning and Televising (feet)

Year	Sewer Cleaning	PM List	Televise	Grand Total
2014	184,187	56,549	32,991	273,727
2013	164,028	38,459	18,071	220,558
2012	265,050	27,459	20,064	312,573
2011	325,955	28,965	19,678	374,598
2010	392,879	30,026	32,203	455,108
2009	544,614	32,893	30,061	607,568

Sewage Collection Pipe System - 2014

<u>Size</u>	<u>Material</u>	<u>Footage</u>
99"	Concrete	3,318
96"	Concrete	75
84"	Concrete	9,774
78"	Concrete	4,899
72"	Concrete	4,242
66"	Concrete, Steel	3,151
60"	Concrete, Steel	24,556
54"	Concrete, Steel	3,465
48"	Concrete, Steel, Brick	13,309
42"	Concrete, Steel, Brick	20,527
36"	Concrete, Clay, Steel	39,054
33"	Concrete, Clay	699
30"	Concrete, Clay, Steel	48,329
27"	Concrete, Clay, Steel	9,567
24"	Clay, Concrete, Plastic, Steel	97,126
22"	Clay, Plastic, Steel	5,708
21"	Clay, Plastic	42,065
20"	Clay, Plastic, Steel	19,068
18"	Clay, Plastic, Steel	121,569
16"	Clay, Plastic	910
15"	Clay, Plastic, Steel	158,959
14"	Clay, Plastic	1,156
12"	Clay, Plastic, Steel	261,677
10"	Clay, Plastic, Steel	148,773
8"	Clay, Plastic, Steel	705,694
6"	Clay, Plastic	8,241
Total Feet of Pipe		1,755,911
Total Miles of Pipe		332.56

Sewerage System Income Statement – 2014

Sewerage Service Revenues

Residential Customers	\$ 4,298,136.36
Commercial Customers	2,177,288.49
Industrial Customers	1,001,044.04
Public Customers	205,673.00
Wastehaulers	278,933.49
Wholesale Customers	2,423,563.54
Industrial Monitoring	82,155.55

Total Sewerage Service Revenues

10,466,794.47

Other Operating Revenues

Engineering Services	1,471,849.43
Other Income	86,606.12
Penalties	138,870.97

Total Other Operating Revenues

1,697,326.52

Total Operating Revenues

12,164,120.99

Operating Expenses

Wastewater Treatment Operation and Maintenance	2,924,004.74
Collection System Operation and Maintenance	1,395,082.62
Laboratory Operations	274,756.41
Industrial Waste Monitoring	58,823.14
Engineering Services	1,430,656.06
Customer Accounting and Collection Expense	379,809.23
Administrative and General Expense	1,996,837.13
Loss on sale of equipment	211,185.00
Depreciation	2,126,883.86
Taxes	52,980.29

Total Operating Expenses

10,851,018.48

Utility Operating Income

1,313,102.51

Other Income

Interest Income	186,905.77
Performance bond recovery	4,444,574.00
Miscellaneous Income	5,248.64

Total Other Income

4,636,728.41

Non-operating Expenses

Interest on Long-term Debt	31,083.31
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Net Income before Capital Contributions

5,918,747.61

Capital Contributions

390,880.50

Net Income

\$ 6,309,628.11

**Sewerage System
Statement of Net Position
December 31, 2014**

Assets		
Utility Plant		
Utility Plant in Service	\$ 133,258,191.10	
Work in Progress - Sewer Plant	2,040,766.09	
Work in Progress - Sewerage System	752,965.55	
Accumulated Depreciation	<u>(61,272,499.84)</u>	
Net Plant in Service		74,779,422.90
Other Property		
Other Utility Plant & Equipment for Future Use	1,071,992.38	
Accumulated Depreciation	<u>(385.68)</u>	
Net Other Property		<u>1,071,606.70</u>
Total Net Utility Plant		75,851,029.60
Current Assets		
Cash and Cash Equivalents	4,868,858.51	
Investments	11,700,000.00	
Restricted cash equivalents	-	
Restricted cash - Storm Water Utility Collections	312,966.90	
Restricted Investments	2,810,000.00	
Customer Accounts Receivable	1,088,536.92	
Receivable from Municipality	658,106.89	
Unbilled Revenues	1,031,033.28	
Other Accounts Receivable	1,062,850.31	
Materials and Supplies	40,052.62	
Accrued Interest Receivable	4,030.17	
Other Current Assets	<u>(3,725.33)</u>	
Total Current and Accrued Assets		23,572,710.27
Noncurrent Assets		
Advance to Water Unit		5,000,000.00
Other Assets		
Assessments Receivable		31,957.23
Deferred Charges		<u>2,697,084.85</u>
Total Other Assets		2,729,042.08
Total Assets		<u>107,152,781.95</u>
Liabilities		
Current Liabilities		
Current Portion of Long Term Obligations	89,900.12	
Accounts Payable	302,893.01	
Accrued Interest Payable	3,084.41	
Current Portion of Advance from Municipality	37,517.52	
Current Portion of Accrued Compensated Absence	38,272.47	
Payable to Municipality	1,016,307.47	
Due to City of Kenosha - Storm Water Collections	312,966.90	
Deferred Credits	<u>467,069.90</u>	
Total Current and Accrued Liabilities		2,268,011.80
Non-current Liabilities		
Long-term Debt		
Advances from Municipality	171,508.67	
Clean Water Fund Loans	<u>494,083.77</u>	
Total Long-term Debt		665,592.44
Accrued Compensated Absences		216,614.95
Worker's Compensation Accrued Liability		16,100.00
Other Postemployment Benefits		<u>655,528.00</u>
Total Non-current Liabilities		1,553,835.39
Total Liabilities		<u>3,821,847.19</u>
Net Position		
Invested in Capital Assets, net of related debt	75,267,045.71	
Restricted for Debt Service	2,806,915.59	
Unrestricted	<u>25,256,973.46</u>	
Total Net Position		<u>\$ 103,330,934.76</u>

**Sewerage System
Comparative Operating and Maintenance Expenses**

	<u>2014</u>	<u>2013</u>	<u>2012</u>
Operating Expenses			
Supervision and Labor	\$ 394,733.68	\$ 414,977.33	\$ 396,167.73
Power for Pumping and Aeration	622,675.12	652,794.62	715,418.01
Disinfection Chemicals	56,244.00	50,030.00	53,247.00
Sludge Conditioning Chemicals	467,056.69	448,814.65	494,512.49
Other Chemicals for Sewage Treatment	5,663.59	4,437.85	10,548.62
Laboratory Operations	274,756.41	246,733.37	257,457.53
Industrial Waste Monitoring	58,823.14	67,574.11	68,700.63
Landfill Expense	439,716.85	440,507.50	431,862.16
Transportation Expense	88,615.42	76,960.78	68,404.55
	<u>2,408,284.90</u>	<u>2,402,830.21</u>	<u>2,496,318.72</u>
Maintenance Expenses			
Collection System Operation and Maintenance	1,395,082.62	1,243,234.27	1,034,661.61
Wastewater Treatment Maintenance	849,299.39	874,660.98	584,131.61
	<u>2,244,382.01</u>	<u>2,117,895.25</u>	<u>1,618,793.22</u>
Customer Account Expenses			
Customer Accounting and Collection	308,040.81	309,302.09	311,467.87
Meter Reading Expense	71,768.42	66,937.71	58,402.52
	<u>379,809.23</u>	<u>376,239.80</u>	<u>369,870.39</u>
Administrative and General Expenses			
Administrative and General Salaries	219,998.37	210,989.03	223,306.37
Engineering Services	1,430,656.06	1,217,003.89	988,817.84
Office Supplies and Expense	42,367.05	40,503.71	45,928.86
Outside Services Employed	294,209.84	322,545.63	323,053.21
Insurance Expense	130,719.33	190,965.62	104,765.66
Employee Benefits and Pensions	977,797.82	914,502.43	941,054.53
Meter Operations Expense	325,644.72	318,008.88	357,028.49
Loss on sale of equipment	211,185.00	-	-
Depreciation	2,126,883.86	2,186,740.58	2,535,038.24
Utility Taxes	52,980.29	56,398.35	53,695.05
Miscellaneous Expense	6,100.00	6,100.00	6,100.00
	<u>5,818,542.34</u>	<u>5,463,758.12</u>	<u>5,578,788.25</u>
Total Operating Expenses	<u>\$ 10,851,018.48</u>	<u>\$ 10,360,723.38</u>	<u>\$ 10,063,770.58</u>

Sewerage System Comparative Income Statement

	<u>2014</u>	<u>2013</u>	<u>2012</u>
Sewerage Service Revenue			
Residential Customers	\$ 4,298,136.36	\$ 4,417,094.78	\$ 4,473,989.96
Commercial Customers	2,177,288.49	2,219,844.66	2,276,772.95
Industrial Customers	1,001,044.04	1,058,155.79	1,026,084.18
Public Customers	205,673.00	202,736.15	224,496.30
Wastehaulers	278,933.49	204,993.62	226,102.34
Wholesale Customers	2,423,563.54	2,201,615.96	2,337,383.64
Industrial Monitoring	82,155.55	85,309.41	90,749.43
Total Sewerage Service Revenues	10,466,794.47	10,389,750.37	10,655,578.80
Other Operating Revenues			
Engineering Services	1,471,849.43	1,249,326.16	1,105,601.56
Other Income	86,606.12	86,082.52	81,381.31
Penalties	138,870.97	130,991.48	133,272.71
	1,697,326.52	1,466,400.16	1,320,255.58
Total Operating Revenues	12,164,120.99	11,856,150.53	11,975,834.38
Operating Expenses			
Wastewater Treatment Operation and Maintenance	2,924,004.74	2,963,183.71	2,754,292.17
Collection System Operation and Maintenance	1,395,082.62	1,243,234.27	1,034,661.61
Laboratory Operations	274,756.41	246,733.37	257,457.53
Industrial Waste Monitoring	58,823.14	67,574.11	68,700.63
Engineering Services	1,430,656.06	1,217,003.89	988,817.84
Customer Accounting/Meter Reading Expense	379,809.23	376,239.80	369,870.39
Administrative and General Expense	1,996,837.13	2,003,615.30	2,001,237.12
Loss on Sale of Equipment	211,185.00	-	-
Depreciation	2,126,883.86	2,186,740.58	2,535,038.24
Taxes	52,980.29	56,398.35	53,695.05
Total Operating Expenses	10,851,018.48	10,360,723.38	10,063,770.58
Net Operating Income	1,313,102.51	1,495,427.15	1,912,063.80
Non-operating Revenue			
Interest Income	186,905.77	187,157.97	194,357.70
Performance Bond Recovery	4,444,574.00	-	-
Miscellaneous Income	5,248.64	42,538.54	16,611.37
Total Non-operating Revenue	4,636,728.41	229,696.51	210,969.07
Operating Income and Other Revenue	5,949,830.92	1,725,123.66	2,123,032.87
Non-operating Expenses			
Interest on Long-term Debt	31,083.31	40,360.30	82,278.07
Amortization of Debt Expense	-	-	-
Total Non-operating Expenses	31,083.31	40,360.30	82,278.07
Net Income	\$ 5,918,747.61	\$ 1,684,763.36	\$ 2,040,754.80
Rate of Return on Average Investment (based on WWTP net operating income)	3.96%	5.15%	3.48%
Rate of Return on Average Investment (after debt service payment)	3.84%	4.93%	3.05%

**Sewerage System
Utility Plant in Service
For the year ended December 31, 2014**

	Depr. Rate %	Cost of Plant 1/1/2014	2014 Additions	2014 Retirements	Adjustments Incr/(Decr)	Cost of Plant 12/31/2014
Collection System						
Land	N/A	\$ 124,713.31				\$ 124,713.31
Structures and Improvements	2.94	-				-
Service Connections	2.00	1,904,640.65				1,904,640.65
Collecting Mains	1.00	45,176,755.86	7,867.63	12,883.49		45,171,740.00
Interceptor Mains	1.00	27,142,083.25				27,142,083.25
Force Mains	1.00	1,285,208.01	51,532.48			1,336,740.49
Collection Equipment	4.00	1,361,057.21	2,701.00	8,975.60		1,354,782.61
Collection Pumping System						
Land	N/A	129,783.09				129,783.09
Structures and Improvements	2.50	5,930,997.79				5,930,997.79
Receiving Wells	2.50	5,523,470.40				5,523,470.40
Electric Pumping Equipment	5.33	8,816,257.95	26,721.00			8,842,978.95
Other Power Pumping Equip.	4.00	225,517.45				225,517.45
Miscellaneous Pumping Equip.	4.00	31,000.00				31,000.00
Treatment and Disposal						
Land	N/A	331,080.05				331,080.05
Structures and Improvements	2.50	8,329,204.88	5,936.38			8,335,141.26
Preliminary Equipment	3.80	523,370.16				523,370.16
Primary Treatment Equipment	2.97	4,149,161.12	25,827.63	10,330.94		4,164,657.81
Secondary Treatment Equip.	3.53	6,546,680.87	13,850.00			6,560,530.87
Advanced Treatment Equip.	2.86	208,830.61	14,400.67			223,231.28
Chlorination Equipment	4.41	1,243,141.30				1,243,141.30
Sludge Treatment & Disposal	4.17	5,466,124.18	977,300.94	390,920.38		6,052,504.74
Flow Metering and Monitoring	4.44	492,418.32		258,259.96		234,158.36
Outfall Sewer	2.31	1,179,759.13				1,179,759.13
Engineering Equipment						
Furniture and Equipment	5.88	41,021.15				41,021.15
Computer Equipment	6.67-14.29	166,681.80	4,128.06	24,831.23		145,978.63
Transportation Equipment	14.28	372,727.80	28,329.83		42,318.32	443,375.95
Engineering Equipment	5.88	23,243.32				23,243.32
Communication Equipment	9.09	(1,610.32)				(1,610.32)
Telephone Equipment	20.00	6,355.76				6,355.76
Miscellaneous Equipment	5.88	-				-
General Plant & Equipment						
Land	N/A	686,629.54				686,629.54
Structures and Improvements	2.50	2,033,171.69			57,198.48	2,090,370.17
Furniture and Equipment	5.88	102,717.48		549.99		102,167.49
Computer Equipment	6.67-14.29	57,780.11	17,590.00	9,499.77		65,870.34
Transportation Equipment	12.86	1,816,104.73	160,654.72	34,602.09	(20,298.50)	1,921,858.86
Work (Power) Equipment	9.00	349,798.34		3,605.25		346,193.09
Tools and Shop Equipment	5.88	259,385.80	18,689.55	15,319.90		262,755.45
Lab Equipment	5.88	151,412.84	8,529.94			159,942.78
Communication Equipment	9.09	7,298.00				7,298.00
SCADA System Equipment	9.20	-	206,432.13			206,432.13
Telephone Equipment	20.00	9,755.97				9,755.97
Miscellaneous Equipment	5.88	138,581.18	39,048.66	3,100.00		174,529.84
Total		\$ 132,342,310.78	\$ 1,609,540.62	\$ 772,878.60	\$ 79,218.30	\$ 133,258,191.10

**Sewerage System
Accumulated Depreciation
For the year ended December 31, 2014**

	Balance 1/1/2014	2014 Depreciation	Less Cost of Retirements	Add Cash Received	Adjustments Incr./Decr.	Balance 12/31/2014
Collection System						
Land	-					-
Structures and Improvements	\$ 0.00					\$ 0.00
Service Connections	754,338.36	38,092.81				792,431.17
Collecting Mains	11,293,714.97	457,949.12	12,883.49			11,738,780.60
Interceptor Mains	5,218,943.90	272,866.97				5,491,810.87
Force Mains	181,831.71	13,109.74				194,941.45
Collection Equipment	647,143.62	67,895.99	8,975.60			706,064.01
Collection System Pumping						
Land	-					-
Structures and Improvements	3,587,388.00	118,619.96				3,706,007.96
Receiving Wells	2,519,067.67	183,931.56				2,702,999.23
Electric Pumping Equipment	8,816,257.95	26,721.00				8,842,978.95
Other Power Pumping Equip.	133,738.42	11,275.87				145,014.29
Miscellaneous Pumping Equip.	8,774.97	1,550.00				10,324.97
Treatment and Disposal						
Land	-					-
Structures and Improvements	6,283,869.46	166,643.46				6,450,512.92
Preliminary Equipment	132,409.32	20,934.81				153,344.13
Primary Treatment Equipment	3,230,257.98	138,425.09	10,330.94			3,358,352.13
Secondary Treatment Equip.	6,546,680.87	13,850.00				6,560,530.87
Advanced Treatment Equip.	64,658.39	8,641.23				73,299.62
Chlorination Equipment	1,243,141.30					1,243,141.30
Sludge Treatment & Disposal	5,314,988.50	287,965.72	390,920.38			5,212,033.84
Flow Metering and Monitoring	385,187.30	24,231.33	258,259.96			151,158.67
Outfall Sewer	793,640.70	29,493.98				823,134.68
Engineering Equipment						
Furniture and Equipment	29,651.30	2,498.14				32,149.44
Computer Equipment	75,293.46	13,999.50	24,831.23			64,461.73
Transportation Equipment	280,770.58	20,542.88			10,791.76	312,105.22
Engineering Equipment	12,371.07	1,444.88				13,815.95
Communication Equipment	(1,610.32)					(1,610.32)
Telephone Equipment	-					-
Miscellaneous Equipment	(253.22)					(253.22)
General Plant & Equipment						
Land	-					-
Structures and Improvements	468,615.26	41,235.41			29,444.74	539,295.41
Furniture and Equipment	47,484.28	5,941.66	549.99			52,875.95
Computer Equipment	40,093.69	7,032.09	9,499.77			37,626.01
Transportation Equipment	1,337,986.08	89,347.39	34,602.09		(27,394.25)	1,365,337.13
Work (Power) Equipment	245,643.86	17,944.57	3,605.25			259,983.18
Tools and Shop Equipment	161,317.76	15,142.10	15,319.90			161,139.96
Lab Equipment	41,413.28	9,029.31		374.83		50,817.42
Communication Equipment	7,298.00					7,298.00
SCADA System Equipment	-	9,495.88				9,495.88
Telephone Equipment	6,829.17	1,951.19				8,780.36
Other Equipment	(4,560.14)	9,080.22	3,100.00	900.00		2,320.08
Total	\$ 59,904,377.50	\$ 2,126,883.86	\$ 772,878.60	\$ 1,274.83	\$ 12,842.25	\$ 61,272,499.84

**Clean Water Fund Project #4003-07
 Loan Payment Schedule
 Equalization Basin Modification
 December 31, 2014**

Year	Principal	Interest		Total
	May 1	May 1	November 1	
2015	\$ 89,900.12	\$ 9,253.23	\$ 7,828.76	\$ 106,982.11
2016	92,749.06	7,828.75	6,359.15	106,936.96
2017	95,688.28	6,359.15	4,842.97	106,890.40
2018	98,720.64	4,842.97	3,278.74	106,842.35
2019	101,849.10	3,278.74	1,664.94	106,792.78
2020	105,076.69	1,664.94	—	106,741.63
	<u>\$ 583,983.89</u>	<u>\$ 33,227.78</u>	<u>\$ 23,974.56</u>	<u>\$ 641,186.23</u>

Interest rate is 3.169%

**Sewerage System
Advance from Municipality
Debt Repayment Schedule
December 31, 2014**

<u>Year</u>	<u>Interest Rate %</u>	<u>Principal</u>	<u>Interest</u>		<u>Total</u>
		<u>April 1</u>	<u>April 1</u>	<u>October 1</u>	
2015	5.390%	\$ 37,517.52	\$ 5,636.00	\$ 4,791.84	\$ 47,945.36
2016	5.590%	38,857.43	4,791.84	3,820.42	47,469.69
2017	5.760%	41,537.26	3,820.42	2,678.15	48,035.83
2018	5.880%	44,217.08	2,678.15	1,406.91	48,302.14
2019	6.000%	46,896.90	1,406.91	—	48,303.81
Totals		<u>\$209,026.19</u>	<u>\$ 18,333.32</u>	<u>\$ 12,697.32</u>	<u>\$240,056.83</u>

**Sewerage System
Total Debt Repayment Schedule
December 31, 2014**

<u>Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2015	\$ 127,417.64	\$ 27,509.83	\$ 154,927.47
2016	131,606.49	22,800.16	154,406.65
2017	137,225.54	17,700.69	154,926.23
2018	142,937.72	12,206.77	155,144.49
2019	148,746.00	6,350.59	155,096.59
2020	105,076.69	1,664.94	106,741.63
Totals	<u>\$ 793,010.08</u>	<u>\$ 88,232.98</u>	<u>\$ 881,243.06</u>

Wastewater Treatment Plant

7834 3rd Avenue
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“Providing and Protecting Kenosha’s Greatest Natural Resource”

June 2015

Mr. Edward St. Peter
Kenosha Water Utility
4401 Green Bay Road
Kenosha, WI 53144

Subject: 2014 Industrial Pretreatment Program Annual Report

Dear Mr. St. Peter,

The Industrial Pretreatment Program is a requirement of the Clean Water Act and is regulated by the Wisconsin DNR through our wastewater treatment plant discharge permit. The DNR designates the Kenosha Water Utility as the Control Authority to carry out the required elements of the program. The program regulates and monitors local industries, waste haulers, and adjoining communities discharging to Kenosha’s wastewater collection system. The program is designed 1) to prevent the discharge of pollutants to the Wastewater Treatment Plant (WWTP) which could interfere with operations or disposal of biosolids; 2) to prevent the introduction of pollutants to the WWTP that may pass through to the lake; 3) to protect employee health and safety.

Significant dischargers are monitored at the regulated process and/or where their wastewaters enter the Kenosha sanitary sewer collection system. Haulers are monitored at the Wastewater Treatment Plant. The adjoining communities are monitored weekly for conventional parameters being discharged to the collection system. We receive wastewater from Bristol, Pleasant Prairie, and Somers.

In 2014, Industrial Wastewater Discharge Permits were issued to two new industries, Kenall Manufacturing and Niagara Bottling. Also, the Sewer Use Ordinance was revised to incorporate required federal and state changes to the Industrial Pretreatment Program called the “Streamlining Rule.” The intention of the rule is to allow control authorities flexibility to reduce the burden of technical and administrative requirements without undermining the environmental objectives of the Pretreatment Program.

The Wastewater Treatment Plant effluent and sludge continue to meet or exceed discharge limits. The wastewater sludge is locally landfilled and meets the state of Wisconsin’s requirements for a high-quality sludge.

While we must monitor and enforce local and federal sanitary sewer discharge limits, our goal is to work cooperatively with significant industrial users to achieve continued compliance.

Respectfully Submitted,

A handwritten signature in black ink that reads "Katrina Karow".

Katrina Karow
Director of Wastewater Treatment



www.kenoshawater.org

**SUMMARY OF INFLUENT METALS TO THE
KENOSHA WASTEWATER TREATMENT PLANT**

POTW Influent: pounds/day

Year	Cadmium	Chromium	Copper	Nickel	Lead	Zinc	Mercury
1996	0.20	1.8	10.5	2.3	2.5	24.4	
1997	< 0.06	0.49	5.6	2.0	1.2	16.1	
1998	< 0.08	0.52	9.2	3.0	2.9	22.0	
1999	0.15	1.3	7.7	1.3	2.0	19.9	
2000	0.35	7.4	7.7	9.1	2.1	18.3	
2001	< 0.20	1.8	11.0	1.4	1.4	25.9	
2002	< 0.18	1.9	9.7	1.6	1.6	27.4	0.015
2003	< 0.16	1.4	9.4	1.7	1.2	19.1	0.032
2004	< 0.38	1.1	23.0	1.1	1.1	34.3	0.012
2005	< 0.31	1.1	10.4	0.78	1.1	23.7	0.030
2006	< 0.34	0.85	7.8	1.0	0.85	16.5	0.016
2007	< 0.5	1.1	12.0	1.3	2.4	23.0	0.022
2008	< 0.7	0.9	8.4	0.9	< 0.7	18.3	0.031
2009	< 0.4	0.6	7.6	1.0	< 0.6	18.0	0.018
2010	0.075	1.4	9.7	0.63	0.88	23.4	0.006
2011	< 0.14	0.8	8.5	0.58	0.56	20.9	0.008
2012	< 0.13	0.85	8.5	0.73	0.68	28.8	0.010
2013	< 0.12	1.3	7.9	0.78	1.8*	32.3	0.011
2014	< 0.12	1.2	11.7	0.99	1.0	32.3	0.006

* Average may be biased high due to a few uncharacteristically elevated results.

**SUMMARY OF EFFLUENT METALS FROM THE
KENOSHA WASTEWATER TREATMENT PLANT**

POTW Effluent: pounds/day

Year	Cadmium	Chromium	Copper	Nickel	Lead	Zinc	Mercury
1996	0.08	0.29	2.3	1.4	0.32	4.5	
1997	< 0.06	< 0.11	0.9	1.4	0.11	4.3	
1998	< 0.06	< 0.1	1.0	1.4	0.17	4.8	
1999	< 0.08	< 0.2	0.80	0.76	< 0.64	4.3	
2000	< 0.16	< 0.33	0.82	0.86	< 0.66	4.1	
2001	< 0.20	< 0.41	< 1.2	0.97	< 0.71	7.6	
2002	< 0.18	0.30	< 1.2	0.97	0.71	7.6	0.0028
2003	< 0.16	0.18	< 1.1	1.43	0.64	4.8	0.0016
2004	< 0.38	< 0.38	1.5	0.75	< 0.94	5.3	0.0005
2005	< 0.31	< 0.31	0.94	0.62	< 0.47	5.1	0.0005
2006	< 0.34	< 0.34	1.0	0.51	0.51	6.3	0.0008
2007	< 0.5	< 0.5	1.6	0.8	0.8	8.2	0.0008
2008	< 0.7	< 0.7	1.0	< 0.7	< 0.7	5.2	0.0006
2009	< 0.4	< 0.6	< 1.0	0.8	< 0.6	4.6	0.0004
2010	< 0.03	0.37	1.3	< 0.22	0.47	5.8	0.0004
2011	< 0.14	< 0.27	0.8	< 0.36	< 0.17	5.4	0.0002
2012	< 0.05	< 0.16	1.0	< 0.44	< 0.14	6.2	0.0002
2013	< 0.11	< 0.22	1.8	< 0.47	< 0.25	4.9	0.0003
2014	< 0.06	< 0.21	1.6	< 0.55	< 0.15	8.2	0.0002

**SUMMARY OF DEWATERED SLUDGE METALS FROM THE
KENOSHA WASTEWATER TREATMENT PLANT**

POTW Anaerobic Digested Sludge (Dewatered): average mg/kg

Year	Arsenic	Cadmium	Chromium	Copper	Nickel	Lead	Zinc	Selenium	Molybdenum	Mercury
2011	7.8	2.3	72.3	415	23.8	55.4	996	4.2	13.7	0.332
2012	8.1	3.5		372	21.2	36.4	1,114	6.1	17.7	0.598
2013	7.5	2.1	64.1	402	25.2	55.8	1,117	3.6	17.9	0.603
2014	10.9	1.8	55.4	364	24.0	44.8	909	2.1	17.1	0.475
High Quality Limit	41	39	No established limits	1,500	420	300	2,800	100	No established limits	17

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“Providing and Protecting Kenosha’s Greatest Natural Resource”

June 2015

Mr. Edward St. Peter
Kenosha Water Utility
4401 Green Bay Road
Kenosha, WI 53144

Subject: 2014 Household Hazardous Waste Collection Program Annual Report

Dear Mr. St. Peter,

The Water Utility organizes and staffs a Residential Household Hazardous Waste (HHW) Program on the first Saturday of the month (January-April & December) and on the first and third Saturdays of the month (May-November). The goal of the program is to offer City of Kenosha residents a convenient disposal option for household hazardous wastes in an effort to minimize waste disposed to sanitary and storm sewers. Additionally, the Kenosha Water Utility carries out a Mercury Minimization Program as a requirement of our wastewater discharge permit. The HHW events are one way to keep mercury out of the environment. Along with household chemicals, we also accept mercury containing products such as thermometers and fluorescent light bulbs.

All events are staffed solely by Water Utility employees. There are at least five to six employees plus a chemist in charge for each event. The employees collect acceptable chemicals for disposal and offer educational materials to customers about where they can dispose of unacceptable chemicals (i.e. oil, antifreeze, medicine, needles). The collected chemicals are disposed through a contracted disposal company.

The Water Utility conducted nineteen collection events throughout the year. As in past years, it was well received. The number of residents disposing waste per event ranged from twenty-seven (January 4 and February 1) to 147 (June 7) with an average of ninety-two per event. The total number of participants in 2014 was 1,740.

Respectfully Submitted,

A handwritten signature in black ink that reads "Katrina Karow".

Katrina Karow
Director of Wastewater Treatment



www.kenoshawater.org

Kenosha Household Hazardous Waste Program Participation

2014 Collection Dates and Number of Participants

January 4	27 participants
February 1	27 participants
March 1	29 participants
April 5	106 participants
May 3	134 participants
May 17	78 participants
June 7	147 participants
June 21	82 participants
July 5	107 participants
July 19	81 participants
August 2	128 participants
August 16	90 participants
September 6	120 participants
September 20	91 participants
October 4	115 participants
October 18	91 participants
November 1	122 participants
November 15	70 participants
December 6	95 participants
Total Participants	1,740

The program averaged 92 participants per collection day.

Household Hazardous Waste Unit Comparative Income Statement

	<u>2014</u>	<u>2013</u>	<u>2012</u>
Operating Revenue			
Residential	\$ 167,326.67	\$ 167,377.55	\$ 167,168.87
Stormwater Administration	14,040.00	14,040.00	14,040.00
Penalties	4,340.19	4,030.14	4,127.45
Total Operating Revenue	185,706.86	185,447.69	185,336.32
Operating Expenses			
Labor and Supplies	43,111.00	41,922.28	42,324.37
Outside Disposal Service	37,548.88	33,968.20	34,246.63
Costs Allocated from Other Funds:			
Wages	67,297.35	66,239.18	64,455.41
Postage	7,501.70	8,292.62	7,718.16
Other	3,253.45	2,923.77	2,844.49
Depreciation	3,125.24	3,125.24	2,561.16
Total Operating Expenses	161,837.62	156,471.29	154,150.22
Operating Income	23,869.24	28,976.40	31,186.10
Other Income			
Interest Income	148.78	170.69	152.61
Net Income	\$ 24,018.02	\$ 29,147.09	\$ 31,338.71

**Household Hazardous Waste Unit
Statement of Net Position
December 31, 2014**

		Assets		
Utility Plant				
	Plant in Service	\$ 77,230.31		
	Accumulated Depreciation	<u>(18,263.71)</u>		
			58,966.60	
Current Assets				
	Cash	312,582.96		
	Accounts Receivable	26,931.27		
	Receivable from Municipality	20,298.90		
	Unbilled Revenues	<u>20,980.50</u>		
			380,793.63	
	Total Assets			<u><u>439,760.23</u></u>
Liabilities				
Current and Accrued Liabilities				
	Accounts Payable	8,647.37		
	Payable to Municipality	<u>1,926.81</u>		
			10,574.18	
	Total Liabilities			<u><u>10,574.18</u></u>
Net Position				
	Invested in Capital Assets	58,966.60		
	Unrestricted	<u>370,219.45</u>		
	Total Net Position			<u><u>\$ 429,186.05</u></u>

**Household Hazardous Waste Unit
Plant in Service and Accumulated Depreciation
For the year ended December 31, 2014**

	Depr. Rate %	Plant in Service				Cost of Plant 12/31/2014
		Cost of Plant 1/1/2014	2014 Additions	2014 Retirements	Adjustments Incr./(Decr)	
General Plant						
Structures and Improvements	4.00	\$ 76,398.31	-	-	-	\$ 76,398.31
Equipment	8.33	832.00	-	-	-	832.00
Total		<u>\$ 77,230.31</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>\$ 77,230.31</u>

	Accumulated Depreciation					Balance 12/31/2014
	Balance 1/1/2014	2014 Depreciation	Less Cost of Retirements	Add Cash Received	Adjustments Incr./Decr.	
General Plant						
Structures and Improvements	\$ 14,383.69	3,055.93	-	-	-	\$ 17,439.62
Equipment	754.78	69.31	-	-	-	824.09
Total	<u>\$ 15,138.47</u>	<u>3,125.24</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>\$ 18,263.71</u>