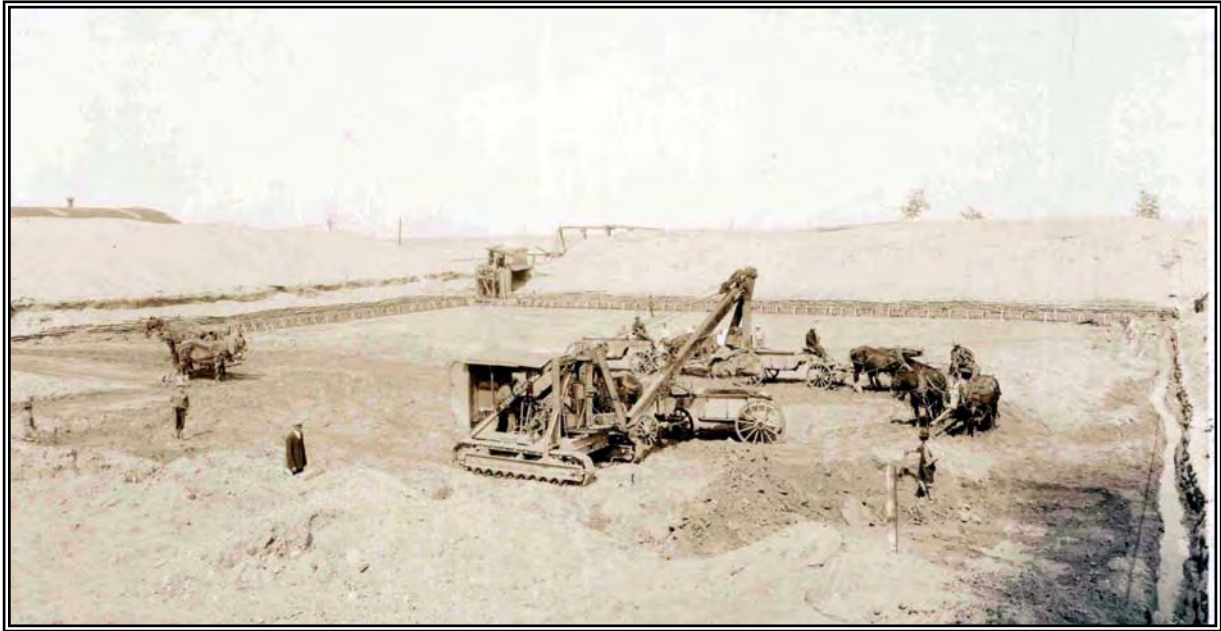


Kenosha Water Utility

2013 Annual Report



Then . . .



. . . and Now

“Providing and Protecting Kenosha’s Greatest Natural Resource”

2013
ANNUAL REPORT
of the
KENOSHA WATER UTILITY
Kenosha, Wisconsin



BOARD OF WATER COMMISSIONERS

Jan Michalski, Chairman

Scott N. Gordon

Eric Haugaard, Vice Chairman

Patrick Juliana

Steve Bostrom

G. John Ruffolo

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

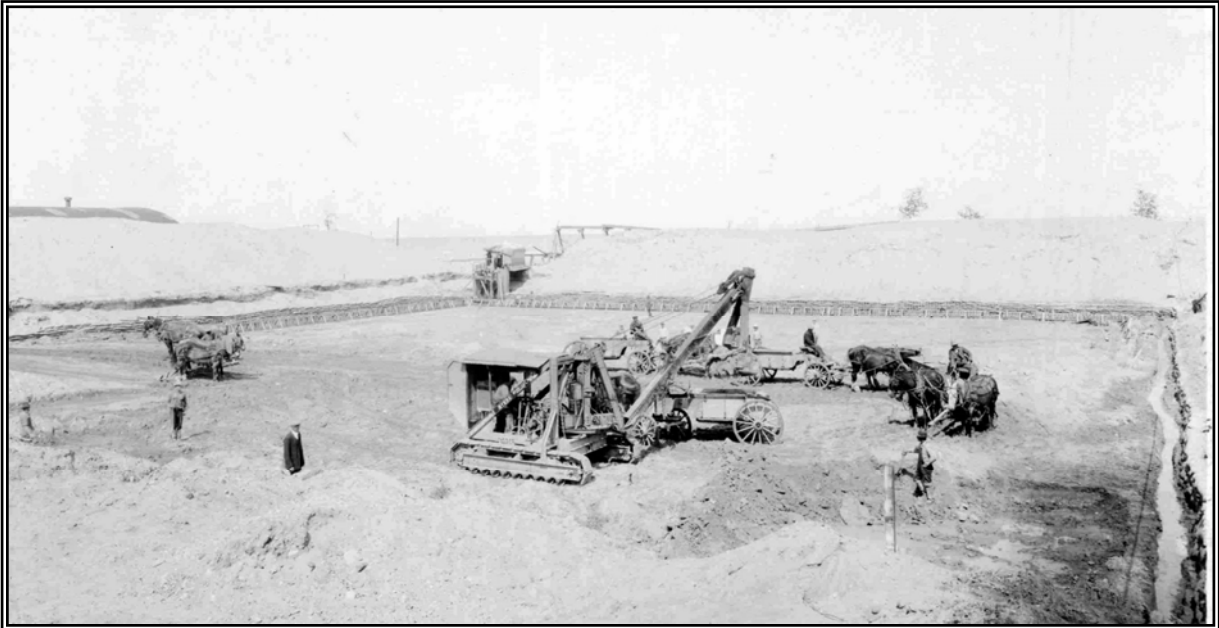
Roger Field, Director of Water Production

Sue Hill, Director of Personnel & Administration

Katrina Karow, Director of Wastewater Treatment

John Rasch, Director of Water Distribution & Sanitary Sewer Collection

About the Cover



Construction equipment used in 1926 to excavate the floor of the 2.5 million gallon reservoir of the Water Production Plant.



Construction equipment currently used by the Water Distribution and Sewer Collection Division.

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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) 653-4320

"Providing and Protecting Kenosha's Greatest Natural Resource . . . Water"

May 2014

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

Gentlemen,

SUBJECT: 2013 Annual Report

I respectfully submit the year 2013 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 2013.

The Utility was extremely busy this year with a brutal winter and major issues with the Energy Optimized Resource Recovery Project, along with other items 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 requirement, 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."**

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

Board of Water Commissioners

Jan Michalski, Chairman
Eric Haugaard, Vice Chairman
Steve Bostrom
Scott N. Gordon
Patrick Juliana
G. John Ruffolo



David J. Lewis
Assistant General Manager

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

May 2014

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

Subject: 2013 Annual Report

Dear Mr. St. Peter,

In July of 2013, I was promoted to Assistant General Manager of the Kenosha Water Utility. While I did spend the last six months of 2013 working with the Directors at the Water and Wastewater plants, I also took time to expand my focus on areas within the Utility with which I am not as familiar. What I have found in all departments is dedication to the Kenosha Water Utility and professionalism in the way employees conduct their job duties.

In 2013, there were a number of director reassignments. Melissa Arnot is now the Director of Operations and Katie Karow is the Director of Wastewater Treatment. Curt Czarnecki is the Director of Infrastructure Services and John Rasch is the Director of Water Distribution and Sewer Collection. All of these Directors are doing an outstanding job in their respective positions. We are fortunate to have such an outstanding group of young people taking over leadership roles within the Utility.

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. Some major maintenance projects that were completed at the Water and Wastewater Divisions include:

- the replacement of membrane modules at the water treatment plant due to the fact that the old modules did not meet the specifications in our membrane warranty agreement
- the installation of four new influent gates in aeration tanks 1 through 4 at the Wastewater Treatment Plant
- digester cleaning at the Wastewater Treatment Plant in preparation of the SH&E project
- major improvements to the Wastewater Treatment Plants’s Scan Control and Data Acquisition system

I thank you, Mr. St. Peter and all the KWU Directors for your support during my transition to my new role as Assistant General Manager of the Kenosha Water Utility. I would also like to thank all of the Board of Water Commissioners for their support throughout 2013. None of the projects that were undertaken would be possible without their input and approval.

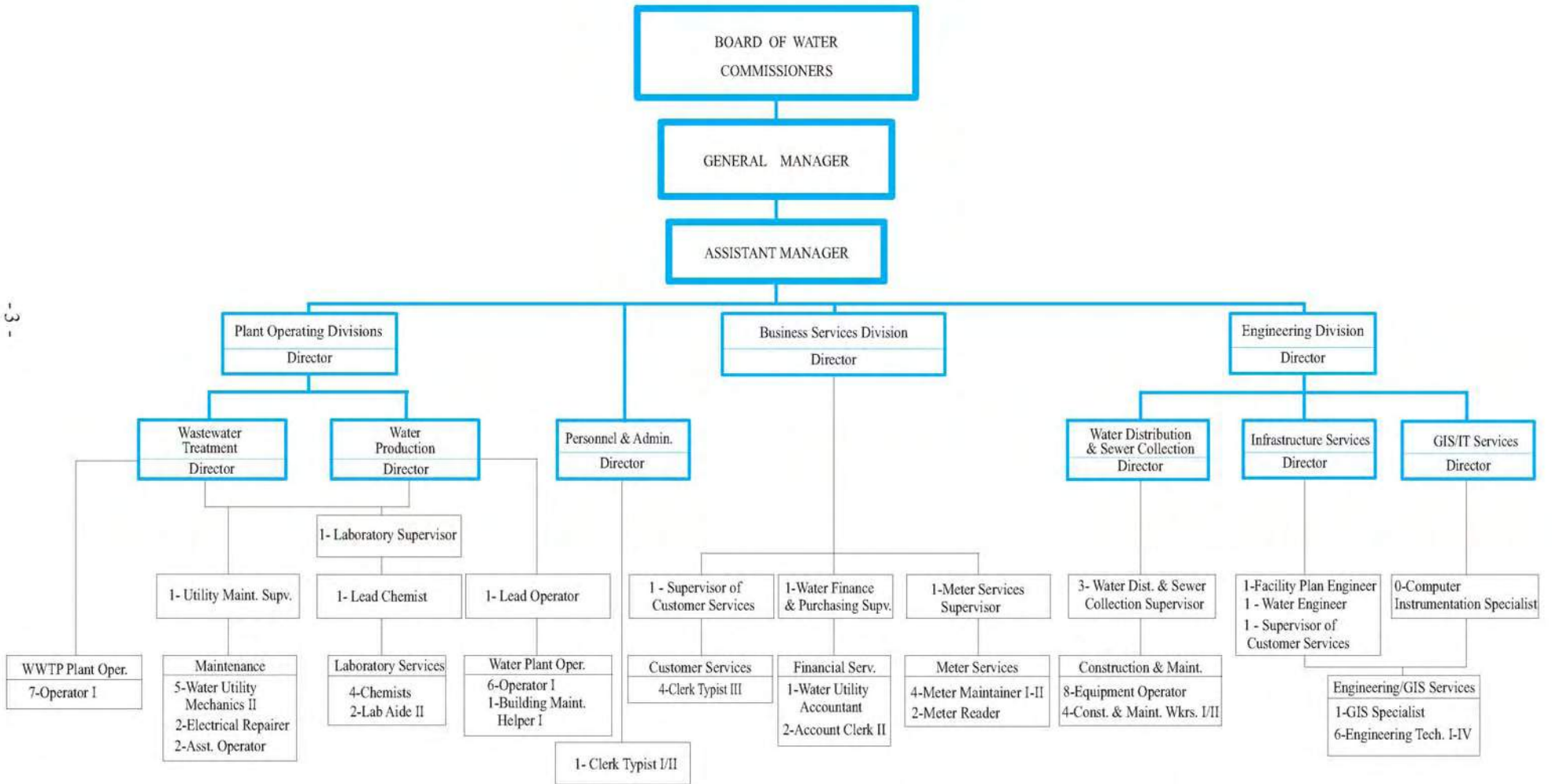
Sincerely,

A handwritten signature in black ink that reads "David J. Lewis".

David J. Lewis
Assistant General Manager



2014 Organizational Chart



- 3 -

General Statistics

	<u>2013</u>	<u>2012</u>
1. Population of Kenosha, Pleasant Prairie, Somers & Bristol	134,003	133,897
Population of current service area (estimated)	118,795	118,741
Population of City of Kenosha	99,700	99,660
2. Total gallons pumped	4,931,038,000	5,328,644,000
3. Total gallons low lift water used in plant	418,972,000	434,164,000
4. Total gallons water pumped – high lift use	4,512,066,000	4,894,480,000
5. Total gallons high lift water accounted for, not metered	140,450,000	117,795,000
6. Total gallons water pumped to distribution system	4,371,616,000	4,776,685,000
7. Increase (decrease) from previous year	(8.48%)	4.58%
8. Total gallons passed through customers' meters	3,874,900,000	4,273,731,000
9. Percent of water accounted for	86%	87%
10. Consumption:		
Minimum gallons pumped in any one day	9,291,000	9,120,000
	June 3, 2013	Dec. 26, 2012
Maximum gallons pumped in any one day	24,879,000	27,400,000
	July 20, 2013	July 4, 2012
11. Total daily consumption – Average	10,616,164	11,708,852
Average daily consumption per capita – gallons per day	89.37	98.61
12. Total number of services	29,641	29,632
Active accounts (total meters less in stock and deduct meters)	30,998	30,970
Number of services added (net)	9	16
Per mile of pipe	83.12	83.09
Persons per service (City of Kenosha)	3.36	3.36
13. Pipe in distribution system (in miles)	356.60	356.64
Size range in diameter	1" - 36"	1" - 36"
Pressure range – pounds per square inch	40 – 80	40 – 80
Population per mile (City of Kenosha)	279.58	279.44
14. Valves for distribution system (except hydrant valves)	5,699	5,695
Total installed for year	17	6
15. Hydrants for distribution system	3,234	3,230
Total installed for year (32 new - 28 retired = 4 additional)	4	3
Per mile of pipe	9.07	9.06
16. Utility operating revenue	\$ 12,386,263	\$ 12,350,753
Net Operating Income	\$ 1,062,155	\$ 1,844,339
Net Income (all expense and revenue)	\$ 279,752	\$ 1,009,124

	<u>2013</u>	<u>2012</u>
17. Operating and maintenance expenses	\$ 6,094,207	\$ 5,755,629
Per mile of pipe to expense	\$ 17,096.47	\$ 16,146.63
Per million gallons to distribution system	\$ 1,334.24	\$ 1,260.11
18. Tax Equivalent – Water	\$ 2,487,434	\$ 2,339,274
Increase (decrease) from previous year	6.3%	8.6%
Percent of operating revenue	20.9%	19.7%
19. Depreciation	\$ 2,742,467	\$ 2,411,511
Percent of operating revenue	22.1%	19.5%
20. Production Cost Analysis of Energy Used		
Total electrical costs (high and low lift)	\$ 591,804	\$ 606,737
Cost for pumping (per million gallons)	\$ 120.02	\$ 113.86
Total electrical costs (booster system)	\$ 170,902	\$ 186,048
Cost of re-pumping for booster system (per million gallons)	\$ 76.42	\$ 70.93
Total electrical energy consumed at plant	\$ 591,804	\$ 606,738
Total natural gas energy consumed at plant	\$ 50,586	\$ 41,698
21. Production Cost Analysis of Chemicals Used		
Sand Filters		
Potassium Permanganate – total pounds	–	–
Sulfate of Aluminum – total tons	286.4	306.7
Chlorine – total tons	20.3	19.8
Hydrofluosilicic acid – total tons (liquid weight)	21.5	52.5
Polyphosphate – total tons (liquid weight)	10.1	9.7
Total cost per million gallons of filtered water	\$40.33	\$50.08
Membrane Filters		
Chlorine – total tons	15.5	14.4
Hydrofluosilicic acid – total tons (liquid weight)	24.6	48.3
Polyphosphate – total tons (liquid weight)	4.7	9.4
Total cost per million gallons of filtered water	\$24.45	\$37.40
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)	2,236	2,623
24. Average number of General Customers by class		
Residential	27,410	27,365
Multifamily Residential (new category in 2013)	1,130	n/a
Commercial	3,306	3,315
Industrial	60	63
Private Fire Services	467	464
Public Authorities	183	185
Irrigation	3	3
Sales for Resale		
Village of Pleasant Prairie	7	7
Town of Somers	8	8
Town of Bristol	2	2

Water Utility Vehicles – 2013

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
2420	1998 IHC Tandem Axle Dump Truck
2434	1999 GMC 1 Ton Dump Truck
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
3070	2010 Ford Crew Cab w/ Utility Service Body

Water Production

2842	2006 GMC Pickup
2961	2008 GMC Pickup
3004	2008 Dodge Grand Caravan
3105	2011 GMC Pickup

Engineering Services

2148	1993 GMC Pickup
2219	1994 Ford Pickup
2474	1999 Ford Utility Van
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
2715	2003 GMC Van
2737	2004 GMC Van
2747	2004 GMC Pickup
2883	2006 GMC Pickup
2960	2008 GMC Pickup
2962	2008 Jeep Liberty
3024	2009 Jeep Grand Cherokee
3124	2011 GMC Pickup
3253	2013 Chevrolet Suburban

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
2367	1997 Ford Rodder Truck
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

Meter Shop

2428	1998 Ford Pickup
2682	2003 GMC Van
2849	2006 GMC Van w/ Utility Service Body
2862	2006 GMC Van
3127	2011 GMC Van
3248	2014 GMC Van

Administration/Customer Service

2265	1995 GMC Safari Minivan
3073	2010 Ford Escape Hybrid

Wastewater Treatment

2063	1991 Ford w/ Galbraith Container System
2217	1994 GMC Pickup
2266	1995 GMC Pickup with Crane
2427	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
3106	2011 GMC Pickup

Water Utility Major Equipment – 2012

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

4401 Green Bay Road
Kenosha WI 53144

Phone (262) 653-4315
Fax (262) 653-4303



"Providing and Protecting Kenosha's Greatest Natural Resource"

May 2014

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

Dear Mr. St. Peter,

Subject: 2013 Annual Report – Engineering Services Division

I respectfully submit the annual report for the Engineering Services Division for the year 2013.

The Engineering Division continues to provide a variety of engineering services for our various operating divisions, city departments, public agencies and developers. This year was another slow year for contracted work due to financial considerations and the uncertainty and lack of final acceptance of the Joint Forrest Park Study which has delayed potential sewer rehabilitation and replacement in this critical area. Three contracts totaling \$ 7,046,912 were awarded in 2013. This total includes the \$6,700,000 for our Energy-Optimized Resource Recovery project described below. A list of these contracts is included in this report.

Our most notable project for the year is the continuation of our Energy-Optimized Resource Recovery System taking place at our Wastewater Treatment Facility. This project will include greater bio gas production, electrical power generation utilizing the additional bio gas, and enhanced solids digestion and sludge dewatering improvements. An innovative Design/Build Contract has been executed with SH&E-U.S. Corp and, although behind our original schedule, is progressing.

Developer installed infrastructure projects resumed after no activity over the last couple of years due to the economic slowdown. Developer activity continues to pick up and we expect things to improve. State of Wisconsin funded highway projects continue throughout our service area. The impact of these projects on our facilities resulted in a very 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. Our multi-year project is examining areas within our sewer collection system that have experienced capacity problems during severe wet weather conditions. This effort will continue to help determine the most cost effective solutions to these wet weather capacity issues.

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 2013 a great and successful year.

Sincerely,

A handwritten signature in cursive script that reads "Robert D. Carlson".

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

**Geographic Information Systems /
Information Technology**

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“Providing and Protecting Kenosha’s Greatest Natural Resource”

May 2014

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

Subject: 2013 Annual Report - Geographic Information System / Information Technology

Dear Mr. St. Peter,

The Geographic Information System (GIS) / Information Technology (IT) team had a very active and successful year. The team worked on various new projects this year while maintaining and enhancing the master digital map. Some of these legacy and various new projects are listed below:

- Designed, installed and implemented a wireless access system for the main office.
- Replaced the existing network cabling with a fiber optic cable at the waste water treatment plant.
- Implemented a new database for GIS data that increased storage, speed, reliability, scalability and saved the utility money on upgrade and maintenance costs.
- Maintained and enhanced various Supervisory Control and Data Acquisition (SCADA) programs and alarms at the production and waste water plants.
- Designed, installed and developed a new SCADA telemetry system that uses the County’s Public Safety wireless system.
- Created, implemented a 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 higher accuracy of mapping data for our master map. This year these students were from Carthage College.
- Enhanced and updated our website www.kenoshawater.org with valuable customer information.
- Provided many web based input forms, 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.
- Enhancements continued to be made to the McAfee integrated security software program to improve protection and reduce the threats to our networks.
- Continued to update and enhance our mobile mapping program.

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 System / Information Technology

2013 Engineering Service Contracts Awarded

<u>Project</u>	<u>Contractor</u>	<u>Description</u>	<u>Awarded Cost</u>
2012-01-W	A.W. Oakes & Son, Inc.	8" Water Main Relay - 34th Avenue-86th Place to 88th Street & 12" Water Main Relay - 26th Avenue-33rd Street to 34th Street	\$ 247,487.00
2013-02-WWTP	S H+ E - U.S. Corp.	Energy-Optimized Resource Recovery System	\$ 6,700,000.00
2013-03-ADM	Triple E of Burlington, Inc.	Backup Generator - Water Service Centre	\$ 99,425.00

**2013 Engineering Staff and G.I.S. Personnel
Recap of Significant Projects**

	<u>Hours</u>
<u>Water Production Engineering - Total Hours 750</u>	
Water Treatment Plant & Reservoir Maintenance	750
<u>Sewerage System Engineering - Total Hours 6,519</u>	
Sanitary Sewer Locates (Digger's Hotline)	1,694
Sump Pump Inspection	2,766
Wastewater Treatment Plant Maintenance	868
Energy-Optimized Resource Recovery System	543
Sanitary Sewer System Flow Study/Inspection	419
Sewer Repair, Cleaning and Inspection	229
<u>Water Distribution System - Total Hours 2,912</u>	
Water System Locates (Digger's Hotline)	2,050
Maintenance of Mains, Services and Hydrants	645
Cross Connection Surveys	217
<u>Water Main Installed by Kenosha Water Utility Contract - Total Hours 1,091</u>	
Water Main Replacement - Various Locations	845
I94 & Hwy 50	246
<u>Sanitary Sewer Installed by Kenosha Water Utility Contract - Total Hours 175</u>	
Sanitary Sewer Relays - Various Locations	99
I94 & Hwy 50	76
<u>New Development - Total Hours 501</u>	
Plan/Project Review	501
<u>GIS Infrastructure Mapping - Total Hours 1,632</u>	
Water Infrastructure	888
Sewer Infrastructure	744

Business Services

4401 Green Bay Road
Kenosha WI 53144

Phone (262) 653-4300
Fax (262) 653-4320



“Providing and Protecting Kenosha’s Greatest Natural Resource”

May 2014

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

Dear Mr. St. Peter,

SUBJECT: 2013 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.

On August 1, 2013, new water rates were implemented. The rate case, originally filed on October 12, 2012, finally came to fruition. It resulted in an overall 16% increase while residential customers averaged an additional three dollars per month.

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 2.69% based on an average net rate base valued at \$54,619,300. The rate of return for the sewer unit was 4.24% based on an average net rate base valued at \$35,277,257.

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

Water and Sewerage Service Charges – 2013

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 1.4 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 2013	168,702	\$ 398,089.13	\$ 71,064.44	\$ 13,419.50	167,569	\$ 388,090.16	
May 2013	158,584	385,552.07	72,919.98	13,252.50	151,198	355,755.35	
June 2013	155,198	377,734.72	71,051.34	13,417.00	154,100	362,082.94	
July 2013	172,691	409,040.34	72,954.04	13,258.00	163,840	352,209.78	27,973.42
Aug 2013	181,670	181,498.04	71,048.72	13,416.00	180,396	364,453.47	48,373.52
Sept 2013	212,045	473,119.57	73,306.50	13,261.00	200,233	358,384.80	92,051.35
Oct 2013	202,698	488,623.02	76,089.11	13,445.00	201,293	365,126.91	88,166.26
Nov 2013	238,243	587,621.87	82,701.20	13,266.00	224,636	364,604.61	132,951.91
Dec 2013	175,286	472,498.46	81,545.00	13,442.00	173,966	345,788.79	54,756.03
Jan 2014	171,502	469,239.08	83,674.00	13,272.50	163,008	378,645.05	
Feb 2014	176,888	475,949.98	81,530.00	13,441.00	175,564	403,624.14	
Mar 2014	176,707	479,436.62	83,668.00	13,271.50	168,266	388,734.61	
Totals	2,190,214	\$ 5,198,402.90	\$ 921,552.33	\$ 160,162.00	2,124,069	\$ 4,427,500.61	\$ 444,272.49

COMMERCIAL

Bill Mo.	Water		Public Fire Protection	HHW Charge	Sewerage	
	Cons.Ccf	Charge			Cons.Ccf	Charge
Apr 2013	75,557	\$ 142,632.41	\$ 11,765.21	\$ 679.00	72,844	\$ 148,619.38
May 2013	103,468	194,563.44	13,624.05	452.00	101,398	201,443.70
June 2013	72,328	137,462.67	11,762.59	679.00	70,022	143,392.49
July 2013	117,521	214,194.20	13,625.93	452.00	108,839	216,425.06
Aug 2013	78,754	147,442.65	11,835.46	679.00	73,030	148,792.14
Sept 2013	138,816	245,454.43	13,677.34	452.00	114,947	227,580.18
Oct 2013	92,818	184,634.82	12,544.64	649.00	78,665	159,460.41
Nov 2013	168,746	337,938.74	15,542.59	451.50	126,046	249,584.24
Dec 2013	82,284	180,103.92	13,475.00	653.50	74,931	152,210.12
Jan 2014	115,172	251,454.14	15,737.00	452.00	105,715	209,858.52
Feb 2014	79,142	174,075.50	13,382.00	652.50	76,134	154,337.40
Mar 2014	114,092	248,014.00	15,725.00	450.50	111,529	219,459.70
Totals	1,238,698	\$ 2,457,970.92	\$ 162,696.81	\$ 6,702.00	1,114,100	\$ 2,231,163.34

SALE FOR RESALE

Billing Month	Cons.Ccf	Water Charge	PFP
Apr 2013	83,679	\$ 108,727.98	\$ 6,393.46
May 2013	75,615	98,539.74	6,393.46
June 2013	91,789	119,206.31	6,393.46
July 2013	92,773	120,497.15	6,393.46
Aug 2013	96,526	125,268.13	6,393.46
Sept 2013	141,913	183,110.69	8,116.00
Oct 2013	126,506	179,721.70	8,116.00
Nov 2013	129,996	184,566.54	8,116.00
Dec 2013	93,359	133,250.32	8,116.00
Jan 2014	79,659	113,890.38	8,116.00
Feb 2014	96,003	136,926.84	8,116.00
Mar 2014	91,440	130,458.12	8,116.00
Totals	1,199,258	\$ 1,634,163.90	\$ 88,779.30

**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 2013	14,394	\$ 17,360.23	\$ 1,429.83	8,702	\$ 17,211.79
May 2013	16,857	14,871.17	1,012.59	7,700	15,038.71
June 2013	25,122	20,603.11	1,429.83	9,160	18,095.73
July 2013	15,508	15,999.04	1,021.93	8,123	15,851.46
Aug 2013	20,322	23,474.60	1,429.83	9,444	18,643.85
Sept 2013	17,853	17,285.62	1,033.41	7,141	13,994.94
Oct 2013	30,843	38,212.28	1,558.31	9,479	18,716.22
Nov 2013	20,198	26,865.70	1,166.87	8,755	17,049.77
Dec 2013	22,360	32,236.84	1,674.00	10,501	20,688.68
Jan 2014	13,054	18,297.98	1,174.00	7,646	14,905.64
Feb 2014	16,494	20,253.34	1,674.00	8,686	17,185.73
Mar 2014	14,959	18,027.34	1,174.00	8,092	15,781.93
Totals	227,964	\$ 263,487.25	\$ 15,778.60	103,429	\$ 203,164.45

INDUSTRIAL

Bill Mo.	Water		Public Fire Protection	Sewerage	
	Cons.Ccf	Charge		Cons.Ccf	Charge
Apr 2013	29,017	\$ 36,128.75	\$ 281.25	16,582	\$ 61,087.82
May 2013	28,191	36,040.23	463.71	15,801	58,186.69
June 2013	34,168	42,155.26	278.63	20,361	80,871.86
July 2013	35,362	44,576.61	461.09	20,945	89,278.47
Aug 2013	37,278	45,886.88	278.63	23,276	83,974.46
Sept 2013	39,980	50,223.02	461.55	27,300	91,354.00
Oct 2013	38,951	58,707.60	309.00	30,569	94,487.23
Nov 2013	57,453	87,362.88	534.19	30,680	96,626.22
Dec 2013	31,670	48,310.04	322.00	26,120	93,066.73
Jan 2014	44,324	67,833.60	538.00	22,420	89,225.52
Feb 2014	37,198	56,391.00	322.00	21,604	111,678.97
Mar 2014	36,446	56,360.70	547.00	19,769	80,402.16
Totals	450,038	\$ 629,976.57	\$ 4,797.05	275,427	\$ 1,030,240.13

IRRIGATION

Bill Mo.	Cons.Ccf	Water Charge	Public Fire Protection
Apr 2013	—	\$ 9.64	\$ 5.24
May 2013	—	38.48	15.62
June 2013	—	9.64	5.24
July 2013	246	564.14	15.62
Aug 2013	—	9.64	5.24
Sept 2013	745	1,128.44	15.62
Oct 2013	67	123.83	5.59
Nov 2013	629	1,177.87	17.96
Dec 2013	—	23.38	6.00
Jan 2014	82	196.36	18.00
Feb 2014	—	9.80	6.00
Mar 2014	—	44.00	18.00
Totals	1,769	\$ 3,335.22	\$ 134.13

Meter Services Report - 2013

<u>Meter Size</u>	<u>New Accounts</u>	<u>Tested/ Upgraded</u>	<u>Total Meters</u>
5/8" Meters	5	1,515	25,080
3/4" Meters	35	304	4,283
1" Meters	3	97	900
1-1/2" Meters	-	187	597
2" Meters	1	210	647
3" Meters	-	58	108
4" Meters	-	35	59
6" Meters	-	33	34
8" Meters	-	9	9
10" Meters	-	2	2
Total	44	2,450	31,719

New Private Fire Lines **8**

Meter Shop Activity

Set New Accounts	48
20 Year Meter Change Outs	586
Install Radio Read Units	118
Remove Meter (test and replace)	234
Check Readings (high/low consumption, etc.)	2,615
Shut Offs, Take Out Seasonals	373
Repair Outside Register/Touch Pad	556
Pressure Tests	22
Locate/Clean Curb Box	322
Service Break Checks/Trace Services	15
Shut off at Curb (non-payment & customer requests)	556
Meters Bench Tested/Rebuild & Retest	99
Frozen Services	0
Frozen Meters	35
Pool Fills	0
Large Meter-Field Testing	97
Total Service Calls	5,676

TEN YEAR COMPARISON OF CUSTOMER WATER CONSUMPTION

Average Number of Water Customers	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	% INCR (DECR) 2013 vs. 2012
Residential	25,599	26,009	26,411	26,775	27,034	27,183	27,278	27,334	27,365	27,410	0.16%
Commercial	3,103	3,141	3,195	3,251	3,290	3,306	3,313	3,317	3,315	3,306	(0.27%)
Industrial	72	70	71	70	69	69	67	66	63	60	(4.76%)
Public	172	172	181	186	192	192	192	192	185	183	(1.08%)
Irrigation	3	3	3	3	3	3	3	3	3	3	0.00%
Private Fire Lines	352	364	388	403	417	432	441	455	464	467	0.65%
Sale for Resale											
Pleasant Prairie	10	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 Bristo	2	2	2	2	2	2	2	2	2	2	0.00%
TOTAL	29,321	29,776	30,266	30,705	31,022	31,202	31,311	31,384	31,412	31,446	0.11%

Annual Consumption (1,000 Gallons)	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	% INCR (DECR) 2013 vs. 2012
Residential	1,774,364	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	(10.89%)
Commercial	1,033,653	1,107,778	1,016,854	990,851	979,048	931,833	1,054,683	953,963	977,711	926,546	(5.23%)
Industrial	297,809	284,664	281,308	305,239	291,145	324,720	306,136	396,382	287,364	336,628	17.14%
Public	103,975	248,790	104,412	104,303	117,992	90,212	107,094	117,950	183,924	170,517	(7.29%)
Irrigation	1,549	2,159	1,435	1,489	1,621	1,177	1,243	1,204	2,148	1,323	(38.41%)
Sale for Resale											
Pleasant Prairie	659,787	705,554	696,134	747,724	740,550	701,630	754,021	794,343	842,036	746,097	(11.39%)
Town of Somers	141,071	175,677	145,434	160,816	154,185	151,554	156,848	162,957	179,703	146,385	(18.54%)
Village of Bristo	7,124	10,805	5,654	5,693	5,574	4,952	5,424	5,464	5,025	4,563	(9.19%)
TOTAL	4,019,332	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	(8.02%)

Customer Class as a Percent of Total Consumption

Residential	44.15%	44.17%	44.64%	43.91%	43.52%	43.78%	41.76%	41.20%	42.59%	41.26%
Commercial	25.72%	24.39%	25.00%	23.99%	24.15%	23.75%	25.75%	23.06%	22.65%	23.34%
Industrial	7.41%	6.27%	6.92%	7.39%	7.18%	8.28%	7.47%	9.58%	6.66%	8.48%
Public	2.59%	5.48%	2.57%	2.53%	2.91%	2.30%	2.61%	2.85%	4.26%	4.29%
Irrigation	0.04%	0.05%	0.04%	0.04%	0.04%	0.03%	0.03%	0.03%	0.05%	0.03%
Sale for Resale										
Pleasant Prairie	16.42%	15.54%	17.12%	18.11%	18.26%	17.88%	18.41%	19.20%	19.51%	18.79%
Town of Somers	3.51%	3.87%	3.58%	3.89%	3.80%	3.86%	3.83%	3.94%	4.16%	3.69%
Village of Bristo	0.18%	0.24%	0.14%	0.14%	0.14%	0.13%	0.13%	0.13%	0.12%	0.12%
TOTAL	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	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”

May 2014

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

Subject: 2013 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 once again provided the highest quality drinking water to our customers in 2013. A total of 4.5 billion gallons was pumped into the distribution system, with a maximum day of 24.9 million gallons on July 20th. The average daily flow was 12.37 million gallons per day. The average tap water turbidity was 0.030 NTU and the average chlorine residual was 1.2 mg/l. The projects completed by the Production Division in 2013 as part of the Capital Improvement Program include:

- **CMF Module Change Out** – In February, Siemens agreed to provide the needed modules to complete the change out for all three trains. By the end of 2013, seventeen of the 25 units were completed. All the refurbished units were operating with pressure decay tests below 0.20 psi/min. Run time between clean-in-place is 500 hours, compared to 200-300 hours before the change out.
- **Inspection of 30th Avenue Tank** – A drain-down and clean-out inspection was conducted on the 30th Avenue ground storage tank in October. Some damage and corrosion of the structural steel was found. A floating inspection is scheduled for 2014 to determine the full extent of the damage and to aid the engineers in planning and budgeting for the repairs.
- **Instruments** – Two of the plant’s four chlorine analyzers were replaced in 2013. A streaming current monitor was installed to help operators determine the correct aluminum sulfate dosage.
- **Slow-Mix Shaft Repairs** – Repair and replacement of shaft sections and roller bearings was completed, using in-house maintenance staff.
- **Pumps** – High lift pump 721 was rebuilt, low lift pump drive for 132 was replaced and the soft start for low lift pump 121 was replaced. Two pumps at the Gin Mill booster station were replaced.
- **Other work** – included mixer chain replacement, UPS battery replacement, pipe gallery stair replacement, new lab glassware washer, replace air handler V-belts with new cog belts and pulleys.

The Production Division would like to thank the 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 that we continue providing the best possible drinking water to the City of Kenosha, the Villages of Pleasant Prairie and Bristol, and the Town of Somers.

Sincerely,

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

Kenosha Water Utility

Production Division

Main Plant Pumping

2013

Month	Pumpage X 1000 Gallons				Electricity	
	High Lift	Daily Average	Low Lift	Daily Average	Pumping	Cost/MG
January	344,709	11,120	376,325	12,140	\$ 48,069	\$ 127.73
February	326,528	11,662	366,827	13,101	51,989	141.73
March	346,776	11,186	390,192	12,587	46,566	119.34
April	337,521	11,251	371,387	12,380	47,200	127.09
May	371,991	12,000	403,533	13,017	46,385	114.95
June	386,700	12,890	417,812	13,927	50,570	121.04
July	454,116	14,649	493,857	15,931	50,105	101.46
August	475,158	15,328	514,592	16,600	52,231	101.50
September	426,042	14,201	461,543	15,385	57,004	123.51
October	365,570	11,793	399,441	12,885	46,022	115.22
November	333,661	11,122	369,691	12,323	49,742	134.55
December	347,229	11,201	382,553	12,340	45,921	120.04
Total	4,516,001		4,947,753		\$ 591,804	
Average	376,333	12,367	412,313	13,551	\$ 49,317	\$ 120.68

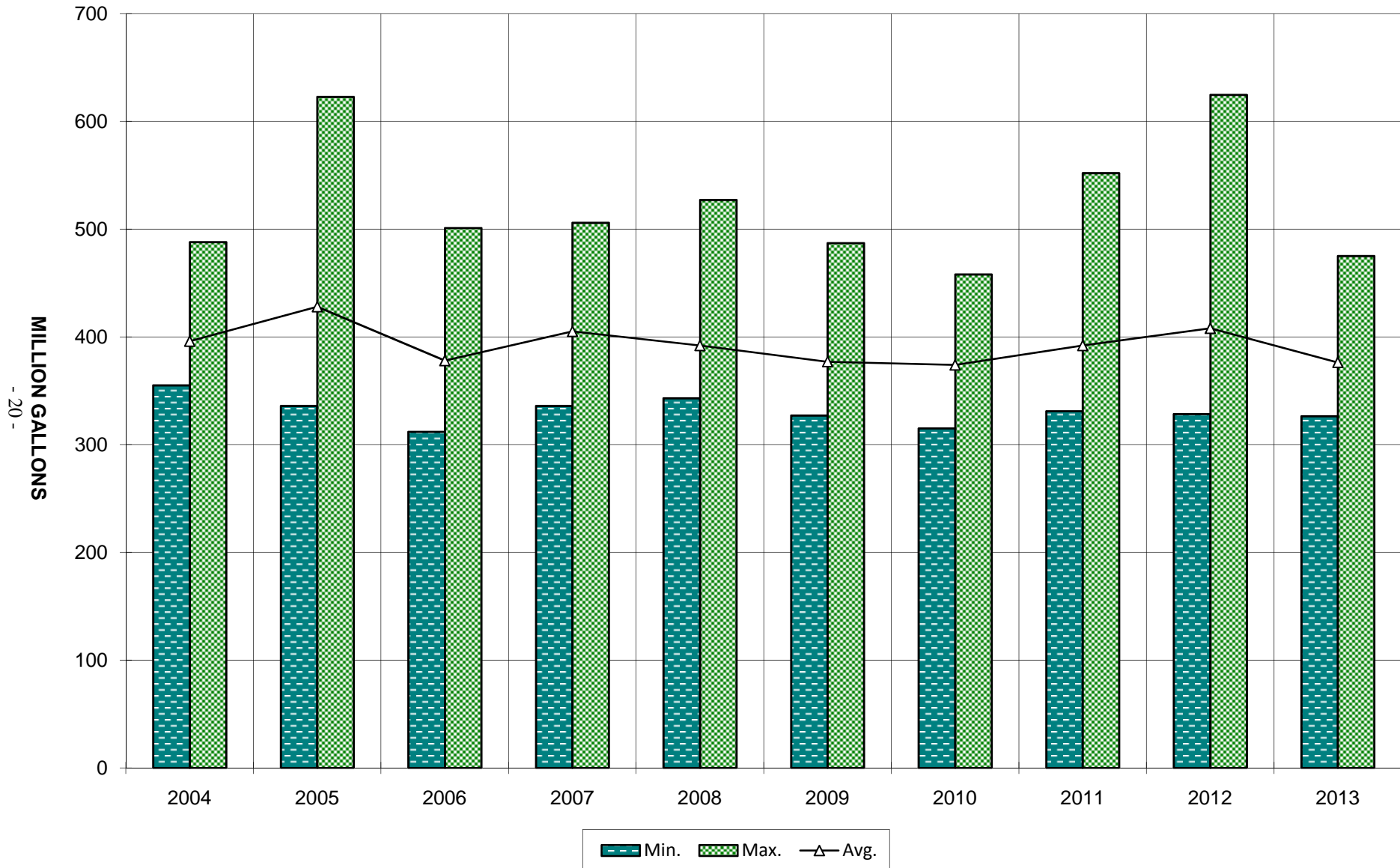
Booster System Pumping

2013

Month	Pumpage X 1000 gal	Total Power Cost	Pumping Power Cost	Total Cost/MG	Pumping Cost/MG
January	171,690	\$ 14,917	\$ 13,670	\$ 86.88	\$ 79.62
February	153,210	15,269	14,019	99.66	91.50
March	171,020	13,659	12,619	79.87	73.79
April	168,780	14,585	13,966	86.41	82.75
May	189,600	15,655	15,166	82.57	79.99
June	189,950	16,328	15,838	85.96	83.38
July	220,940	15,946	15,475	72.17	70.04
August	236,730	16,554	16,098	69.93	68.00
September	217,890	17,018	16,597	78.10	76.17
October	176,930	13,445	12,949	75.99	73.19
November	167,470	12,145	11,279	72.52	67.35
December	172,160	14,620	13,226	84.92	76.82
Total	2,236,370	\$ 180,141	\$ 170,902		
Average	186,364	\$ 15,012	\$ 14,242	\$ 81.25	\$ 76.88

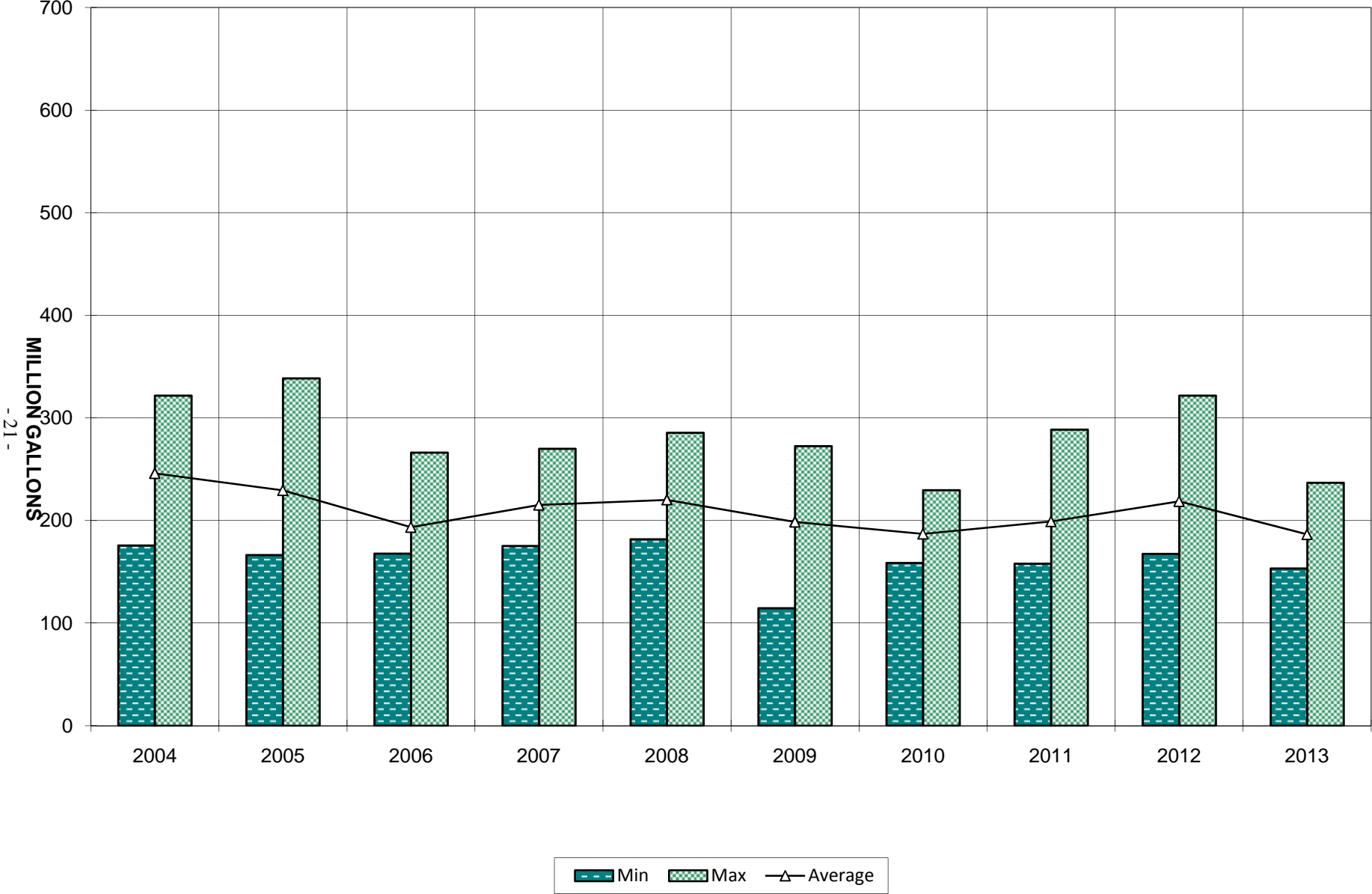
Main Plant Pumping Last Ten Years

Monthly Flow - Million Gallons



Booster Pumping Last Ten Years

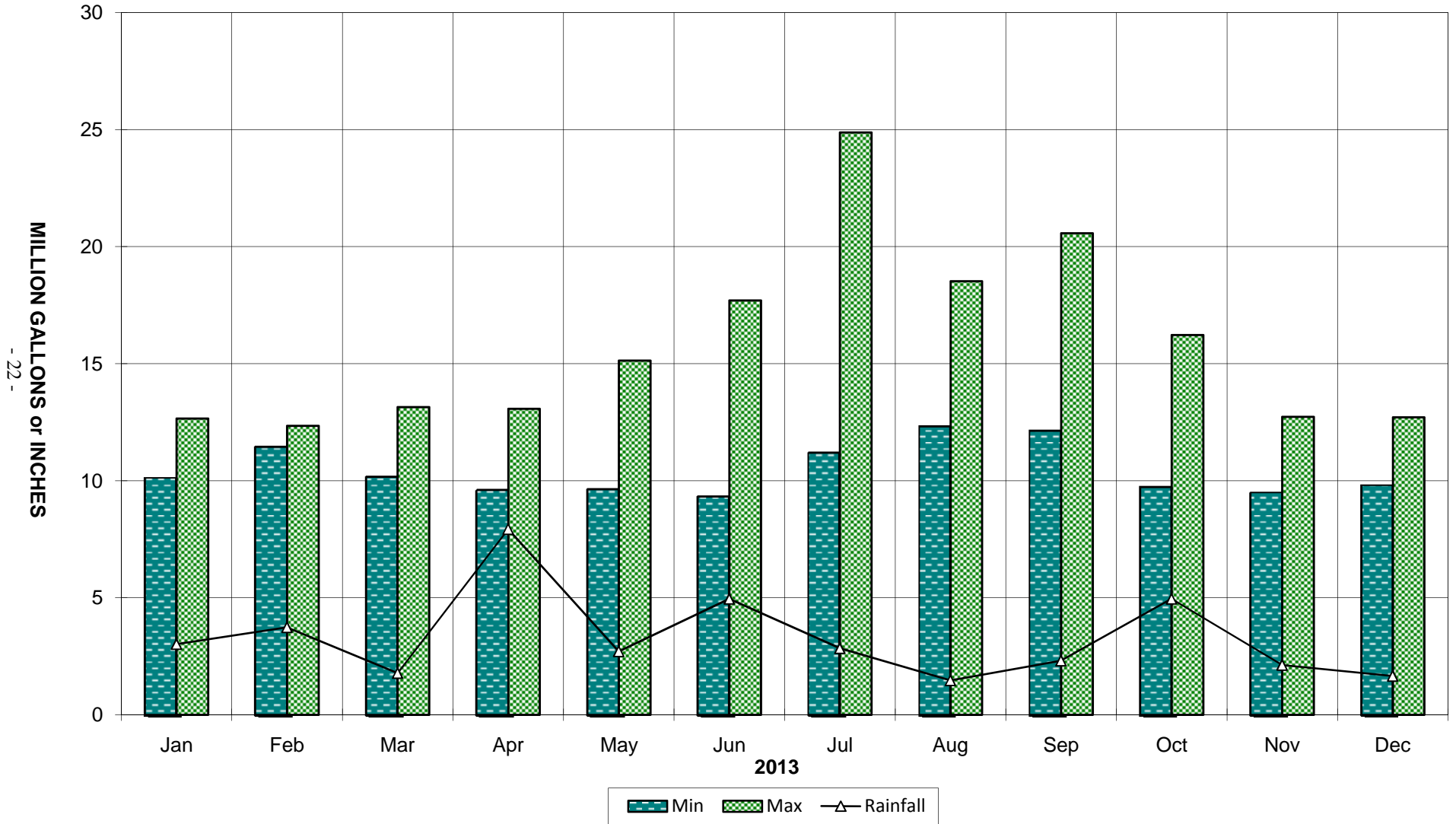
Monthly Flow - Million Gallons



-21-

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

2013

Month	Pumpage (1000 gal.)			
	Total Water Treated	Max Day	Min Day	Avg Day
January	171,311	6,200	4,332	5,526
February	177,495	8,202	5,699	6,339
March	185,283	8,115	4,782	5,977
April	171,749	7,813	4,744	5,725
May	203,107	8,963	5,074	6,552
June	223,321	12,083	5,522	7,444
July	283,407	18,915	5,701	9,142
August	310,491	13,256	7,154	10,016
September	267,232	15,543	6,732	8,663
October	199,596	10,856	4,488	6,439
November	175,683	7,531	4,201	5,856
December	180,307	8,363	4,389	5,816
Total	2,548,982			
Average	212,415	10,487	5,235	6,958

Month	Washwater (1000 gal.)	% Rated Capacity	Filter Run Hours		
			Max	Min	Avg
January	1,290	28	80	50	74
February	1,280	32	80	60	69
March	2,600	30	80	79	80
April	1,260	29	80	73	78
May	1,540	33	80	72	79
June	1,870	37	80	62	73
July	2,600	46	80	37	62
August	3,140	50	71	38	55
September	2,450	43	80	44	59
October	1,500	32	80	60	71
November	1,320	29	80	62	76
December	1,540	29	80	55	76
Total	22,390				
Average	1,866	35	79	58	71

Kenosha Water Utility

Production Division

Membrane Plant Filtration Report

2013

Month	Pumpage (1000 gal.)			
	Total Water Treated	Max Day	Min Day	Avg Day
January	204,993	7,822	6,313	6,613
February	189,310	7,273	5,522	6,761
March	204,909	7,684	6,224	6,610
April	199,637	7,909	5,762	6,655
May	199,881	8,410	4,190	6,448
June	194,491	6,951	4,529	6,483
July	210,447	8,866	6,329	6,789
August	204,101	7,789	6,213	6,584
September	194,311	6,724	6,330	6,477
October	199,845	7,421	6,011	6,447
November	194,008	6,926	5,781	6,467
December	202,244	7,218	6,328	6,524
Total	2,398,177			
Average	199,848	7,583	5,794	6,572

Month	Washwater Raw (1000 gal.)	% Rated Capacity	CIP Run Hours		
			Max	Min	Avg
January	25,790	51	500	97	312
February	27,430	52	506	134	334
March	28,360	51	501	181	319
April	26,980	42	500	154	364
May	26,690	40	501	143	382
June	26,110	36	501	194	431
July	29,080	34	504	116	346
August	24,940	33	501	216	344
September	18,880	36	503	182	351
October	19,550	40	500	169	352
November	21,700	47	502	123	369
December	24,620	51	501	179	446
Total	300,130				
Average	25,011	43	502	157	363

CIP - Clean-in-Place

**Kenosha Water Utility
Production Division
Rapid Sand Plant Chemical Feed Report
2013**

Month	Alum		Chlorine		Fluoride	
	Pounds	lb/MG	Pounds	lb/MG	Pounds	lb/MG
January	46,184	269.59	2,361	13.78	7,120	41.56
February	48,918	275.60	2,735	15.41	3,828	21.57
March	47,750	257.71	2,817	15.20	4,128	22.28
April	47,715	277.82	2,766	16.10	3,824	22.27
May	46,991	231.36	3,501	17.24	3,531	17.38
June	44,570	199.58	3,630	16.25	4,801	21.50
July	54,143	191.04	4,751	16.76	7,073	24.96
August	58,487	188.37	5,201	16.75	7,709	24.83
September	50,984	190.79	4,633	17.34	6,801	25.45
October	39,889	199.85	3,079	15.43	5,166	25.88
November	42,780	243.51	2,615	14.88	4,439	25.27
December	44,408	246.29	2,600	14.42	4,662	25.86
Total	572,819		40,689		63,082	
Average	47,735	230.96	3,391	15.80	5,257	24.90

Month	Potassium Permanganate		Polyphosphate		Total Chemical Cost	
	Pounds	lb/MG	Pounds	lb/MG	Total \$	Cost/MG
January	0	0.00	1,630	9.51	\$ 7,976	\$ 46.56
February	0	0.00	1,386	7.81	8,289	46.70
March	0	0.00	1,717	9.27	8,338	45.00
April	0	0.00	1,462	8.51	8,437	49.12
May	0	0.00	1,459	7.18	8,754	43.10
June	0	0.00	1,421	6.36	9,107	40.78
July	0	0.00	1,857	6.55	9,130	32.22
August	0	0.00	2,385	7.68	9,331	30.05
September	0	0.00	2,092	7.83	9,331	34.92
October	0	0.00	1,691	8.47	8,484	42.51
November	0	0.00	1,498	8.53	7,906	45.00
December	0	0.00	1,531	8.49	7,705	42.73
Total	0		20,129		\$ 102,788	
Average	0	0.00	1,677	8.02	\$ 8,566	\$ 41.56

**Kenosha Water Utility
Production Division
Membrane Plant Chemical Feed Report
2013**

Cleaning Chemicals								
Month	Sodium Hydroxide		Hydrogen Peroxide		EDTA		Sulfuric Acid	
	Pounds	lb/MG	Pounds	lb/MG	Pounds	lb/MG	Pounds	lb/MG
January	6,246	30.47	1,411	7.32	1,119	5.81	424	2.20
February	7,584	40.06	1,713	9.66	1,359	7.67	515	2.91
March	6,246	30.48	1,411	7.46	1,119	5.91	424	2.24
April	10,707	53.63	2,419	13.12	1,918	10.40	727	3.94
May	6,692	33.48	1,512	7.50	1,199	5.95	454	2.25
June	7,138	36.70	1,612	8.43	1,279	6.69	485	2.54
July	4,461	21.20	1,008	4.39	799	3.48	303	1.32
August	7,138	34.97	1,612	6.14	1,279	4.87	485	1.85
September	5,800	29.85	1,310	7.10	1,039	5.63	394	2.14
October	5,353	26.79	1,209	6.70	959	5.31	364	2.02
November	8,476	43.69	1,915	10.62	1,518	8.42	576	3.19
December	6,692	33.09	1,512	7.95	1,199	6.31	454	2.39
Total	82,533		18,644		14,786		5,605	
Average	6,878	34.53	1,554	8.03	1,232	6.37	467	2.42

Process Chemicals								
Month	Chlorine		Fluoride		Polyphosphate		Total Cost *	
	Pounds	lb/MG	Pounds	lb/MG	Pounds	lb/MG	Total \$	\$/MG
January	2,389	12.40	7,207	37.41	703	3.65	\$ 4,780	\$ 24.81
February	2,296	12.95	3,214	18.13	638	3.60	5,036	28.41
March	2,455	12.98	3,598	19.02	858	4.54	4,802	25.38
April	2,671	14.49	3,692	20.03	905	4.91	6,738	36.55
May	2,892	14.35	2,918	14.48	833	4.13	5,049	25.06
June	2,657	13.89	3,513	18.36	949	4.96	5,210	27.23
July	2,862	12.46	4,261	18.56	844	3.68	3,853	16.78
August	2,759	10.51	4,089	15.58	778	2.96	4,655	17.74
September	2,754	14.93	4,042	21.91	837	4.54	4,322	23.42
October	2,560	14.18	4,296	23.79	1,019	5.64	4,459	24.69
November	2,352	13.04	3,991	22.13	533	2.96	5,175	28.69
December	2,407	12.66	4,316	22.70	541	2.85	4,556	23.96
Total	31,054		49,137		9,438		\$ 58,635	
Average	2,588	13.24	4,095	21.01	787	4.04	\$ 4,886	\$ 25.23

* Includes cleaning and process chemicals

MG - million gallons

**Kenosha Water Utility
Production Division
Laboratory Report
2013**

Month	Alkalinity Average mg/l		pH Average pH units		Conductivity µS/cm	
	Raw	Tap	Raw	Tap	Raw	Tap
January	109	100	8.46	7.79	270	262
February	114	105	8.46	7.85	240	250
March	112	105	8.60	7.80	277	276
April	116	105	8.49	7.84	264	270
May	114	107	8.55	7.80	286	294
June	110	104	8.62	7.80	294	297
July	109	102	8.51	7.76	296	298
August	107	101	8.54	7.78	293	296
September	108	103	8.57	7.78	297	300
October	108	104	8.42	7.89	296	300
November	110	103	8.59	7.89	295	300
December	110	106	8.45	7.78	304	307
Average	111	104	8.52	7.81	284	288

Month	Hardness mg/l		Temp Raw ° F		
	Raw	Tap	Max	Min	Avg
January	138	134	37	33	35
February	140	138	34	33	33
March	136	134	37	33	34
April	144	144	45	37	41
May	134	138	52	46	48
June	138	136	61	46	53
July	128	132	66	48	61
August	134	132	69	49	61
September	138	132	71	49	65
October	132	132	52	45	48
November	132	130	47	37	43
December	130	126	37	33	34
Average	135	134	51	41	46

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

**Kenosha Water Utility
Production Division
Laboratory Report
2013**

Month	Turbidity NTU								
	Rapid Sand Raw			Membrane Raw			Tap		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
January	36.5	3.1	12.2	35.4	3.7	13.8	0.033	0.026	0.028
February	93.3	6.1	27.7	93.2	9.5	31.0	0.080	0.028	0.034
March	58.9	3.0	15.0	70.3	3.8	17.8	0.032	0.027	0.029
April	72.2	3.2	15.3	83.2	4.2	19.9	0.036	0.027	0.030
May	79.5	0.8	14.5	104.7	1.8	22.5	0.049	0.026	0.035
June	61.1	0.6	5.6	111.2	1.8	9.2	0.039	0.027	0.031
July	6.4	0.9	2.8	11.2	2.0	4.8	0.044	0.027	0.031
August	6.9	0.8	2.5	10.6	2.1	4.8	0.040	0.027	0.030
September	8.9	0.9	3.3	23.6	3.7	8.4	0.034	0.024	0.029
October	4.5	0.5	1.3	10.0	3.2	4.8	0.033	0.024	0.028
November	8.4	1.4	3.7	12.4	1.9	5.4	0.031	0.026	0.028
December	25.0	2.1	9.0	34.1	3.0	11.0	0.034	0.028	0.030
Average	38.5	2.0	9.4	50.0	3.4	12.8	0.040	0.026	0.030

Month	PO ₄ Average mg/l	Fluoride Composite Average mg/l	Chlorine Residual mg/l		
			Tap		
	Tap	Tap	Max	Min	Avg
January	0.17	1.09	1.3	1.1	1.2
February	0.16	0.64	1.2	1.1	1.1
March	0.18	0.63	1.2	1.0	1.1
April	0.17	0.62	1.2	1.0	1.1
May	0.15	0.61	1.2	1.0	1.1
June	0.16	0.63	1.2	1.0	1.1
July	0.15	0.72	1.3	1.1	1.2
August	0.17	0.73	1.3	1.1	1.2
September	0.17	0.75	1.3	1.2	1.3
October	0.17	0.59	1.3	1.2	1.3
November	0.17	0.73	1.3	1.1	1.2
December	0.18	0.59	1.3	1.1	1.2
Average	0.17	0.69	1.3	1.1	1.2

* - Fluoride dose was reduced to 0.6 - .08 ppm beginning in February (per WDNR)

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)	0.029	ND	2
Aldicarb Total	0.35	ND	3
Aldicarb Sulfoxide	0.32	ND	4
Aldicarb Sulfone	0.34	ND	2
Aldrin	0.47	ND	na
Atrazine	0.06	ND	3
Benzo(a)pyrene	0.02	ND	0.2
Butachlor	0.032	ND	na
Carbaryl	0.34	ND	na
Carbofuran	0.38	ND	40
Chlordane	0.033	ND	2
2, 4-D	0.058	ND	70
Dalapon	0.7	ND	200
Dicamba	0.23	ND	na
Dieldrin	0.067	ND	na
Di (2-ethylhexyl) adipate	0.6	ND	400
Di (2-ethylhexyl) phthalate	0.6	ND	6
Dinoseb	0.14	ND	7
Diquat	0.32	ND	20
Endothall	0.51	ND	100
Endrin	0.01	ND	2.0
Glyphosate (Round-up)	4.7	ND	700
Heptachlor	0.014	ND	0.4
Heptachlorepoxyde	0.02	ND	0.2
Hexachlorobenzene	0.038	ND	1
Hexachlorocyclopentadiene	0.027	ND	50
3-Hydroxycarbofuran	0.39	ND	na
BHC Gamma (Lindane)	0.02	ND	0.2
Methoxychlor	0.029	ND	40
Methomyl	0.36	ND	na
Dual (Metolachlor)	0.029	ND	na
Metribuzin (Sencor)	0.067	ND	na
Oxamyl (Vydate)	0.32	ND	200
PCB Total ****	0.1	ND	0.5
Pentachlorophenol	0.022	ND	1
Picloram (Tordan)	0.072	ND	500
Propachlor	0.036	ND	na
2,4,5-TP (Silvex)	0.16	ND	50
Simazine	0.067	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	0.12	ND	5
Bromobenzene	0.21	ND	na
Bromodichloromethane	0.21	6.9	80
Bromoform	0.33	ND	80
Bromomethane	0.26	ND	na
Carbon Tetrachloride	0.19	ND	5
Chloroethane	1	ND	na
Chloroform	0.11	16.7	80
Chloromethane	0.16	ND	na
1,2-Chlorotoluene (o-)	0.15	ND	na
1,4-Chlorotoluene (p-)	0.11	ND	na
Dibromochloromethane	0.27	3.3	80
Dibromomethane	0.24	ND	na
1,3-Dichlorobenzene (m-)	0.11	ND	na
1,2-Dichlorobenzene (o-)	0.17	ND	600
1,4-Dichlorobenzene 9 (p-)	0.12	ND	75
1,1-Dichloroethane	0.14	ND	na
1,2-Dichloroethane	0.16	ND	5
1,1-Dichloroethylene	0.11	ND	7
1,2-Dichloroethylene, cis	0.13	ND	70
1,2-Dichloroethylene, trans	0.11	ND	100
Dichloromethane	0.34	ND	5
1,2-Dichloropropane	0.16	ND	5
1,3-Dichloropropane	0.26	ND	na
2,2-Dichloropropane	0.13	ND	na
1,1-Dichloropropene	0.11	ND	na
1,3-Dichloropropene	0.4	ND	na
Ethylbenzene	0.11	ND	700
Chlorobenzene	0.13	ND	100
Styrene	0.14	ND	100
1,1,1,2-Tetrachloroethane	0.18	ND	na
1,1,1,2,2-Tetrachloroethane	0.33	ND	na
Tetrachloroethylene	0.1	ND	5
Toluene	0.11	ND	1,000
1,2,4-Trichlorobenzene	0.36	ND	70
1,1,1-Trichloroethane	0.12	ND	200
1,1,2-Trichloroethane	0.28	ND	5
Trichloroethylene	0.12	ND	5
1,2,3-Trichloropropane	0.46	ND	na
Vinyl Chloride	0.13	ND	0.2
Xylene Total	0.33	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	107 max	na	Entry point
Antimony Total	0.00013	0.00018	0.006	Entry point
Arsenic Total	0.0005	ND	0.01	Entry point
Barium Total	0.0001	0.021	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	0.0056	0.13	1.3 (AL)	Residential taps
Cyanide	0.005	0.007	0.2	Entry point
Fluoride Total	0.03	0.722 avg	4	Entry point
Haloacetic Acids	0.001	0.0125 avg	0.06	Maximum residence
Hardness Total CaCO ₃	1	144 max	500	Entry Point
Lead	0.0056	0.0063	0.015 (AL)	Residential taps
Mercury Total	0.000042	ND	0.002	Entry point
Nickel Total	0.0005	0.00098	0.1	Entry point
Nitrate as N	0.025	0.41	10	Entry point
Nitrite	0.0067	ND	1	Entry point
pH Lab	0.01pH	7.89 pH max	na	Entry point
Selenium Total	0.002	ND	0.05	Entry point
Sodium Total	0.15	8.5	na	Entry point
Sulfate Total	2.5	27	na	Entry point
Thallium Total	0.0001	ND	0.002	Entry point
Total Trihalomethanes	0.0005	0.025 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 – 2013

Sales of Water

Unmetered Sales to General Customers	\$ 6,158.38
Residential Water Sales	5,406,992.22
Commercial Water Sales	2,471,778.36
Industrial Water Sales	619,872.84
Private Fire Protection	148,217.76
Public Fire Protection	1,195,278.29
Sales to Public Authorities	262,385.41
Sales for Resale	1,601,123.72
Sales to Irrigation Customers	<u>3,332.93</u>

Total Sales of Water

11,715,139.91

Other Operating Revenues

Penalties	144,985.60
Other Water Revenue	71,563.79
Allocated Services	136,437.37
Miscellaneous Service Revenues	<u>318,136.44</u>

Total Other Operating Revenues

671,123.20

Total Operating Revenues

12,386,263.11

Operating Expenses

Production Plant	2,211,922.31
Distribution System	1,836,506.10
Customer Accounting & Collection	404,474.64
Administration	1,641,304.12
Depreciation	2,742,466.77
Taxes	<u>2,487,433.65</u>

Total Operating Expenses

11,324,107.59

Utility Operating Income

1,062,155.52

Other Income

Interest Income	20,571.01
Other Non-operating Income	<u>3,734.11</u>

Total Other Income

24,305.12

Non-operating Expenses

Interest on Long-term Debt	895,359.52
Amortization of Debt Expense	<u>(88,651.15)</u>

Total Non-operating Expenses

273,657.81

806,708.37

Net Income before Capital Contributions

279,752.27

Capital Contributions

394,967.72

Net Income

\$ 674,719.99

**Water System
Statement of Net Position
December 31, 2013**

Assets		
Utility Plant		
Utility Plant in Service	\$ 110,412,930.93	
Work in Progress - Water Plant	714.67	
Work in Progress - Water System	316,347.50	
Accumulated Depreciation	<u>(35,035,664.49)</u>	
Net Plant in Service		75,694,328.61
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	2,358,685.60	
Restricted Cash and Cash Equivalents	-	
Customer Accounts Receivable	1,477,540.43	
Receivable from Municipality	685,986.68	
Unbilled Revenues	1,520,742.76	
Other Accounts Receivable	21,326.03	
Materials and Supplies	434,851.15	
Accrued Interest Receivable	222.25	
Other Current Assets	<u>83,162.39</u>	
Total Current Assets		6,582,517.29
Other Assets		
Restricted Investments	8,360,000.00	
Deferred Charges	3,064,884.06	
Assessments Receivable	<u>49,293.52</u>	
Total Other Assets		11,474,177.58
Total Assets		<u>93,769,023.48</u>
Liabilities		
Current Liabilities		
Current Portion of Water Revenue Bonds	2,080,000.00	
Accrued Taxes	2,543,832.00	
Accounts Payable	102,606.71	
Accrued Interest Payable	51,408.33	
Current Portion of Advance from Municipality	35,574.89	
Current Portion of Accrued Compensated Absences Payable to Municipality	278,104.22	
Deferred Credits	<u>259,053.67</u>	
Total Current Liabilities		5,367,738.33
Non-current Liabilities		
Long-term Debt		
Water Revenue Bonds - Series 2008 (net of unamortized premium in the amount of \$267,711.51)	11,757,711.51	
Advance from Municipality	205,543.81	
Advance from Sewerage Unit	<u>5,000,000.00</u>	
Total Long-term Debt		16,963,255.32
Accrued Compensated Absences		307,631.75
Worker's Compensation Accrued Liability		67,040.00
Other Postemployment Benefits		<u>649,368.00</u>
Total Non-current Liabilities		17,987,295.07
Total Liabilities		<u>23,355,033.40</u>
Net Position		
Invested in Capital Assets, net of related debt	64,402,328.61	
Restricted for Debt Service	6,048,591.67	
Unrestricted	<u>(36,930.20)</u>	
Total Net Position		<u>\$ 70,413,990.08</u>

Water System
Comparative Operating and Maintenance Expenses

	2013	2012	2011
Source of Supply Expenses			
Maintenance of Lake Intakes	26.28	-	\$ 1,655.00
Miscellaneous	\$ 9,625.00	\$ 9,625.00	125.00
	<u>9,651.28</u>	<u>9,625.00</u>	<u>1,780.00</u>
Pumping Expenses			
<u>Operation</u>			
Supervision and Engineering	122,751.32	103,218.69	126,427.81
Fuel - Electricity and Gas	822,932.22	858,006.70	863,655.22
Labor	112,874.17	108,110.16	107,958.57
Miscellaneous Expense	5,237.88	4,406.95	7,538.40
	<u>1,063,795.59</u>	<u>1,073,742.50</u>	<u>1,105,580.00</u>
<u>Maintenance</u>			
Structures and Improvements	21,362.39	14,312.17	38,043.87
Power Production Equipment	38.45	1,000.50	3,390.61
Pumping Equipment	69,879.87	59,107.99	82,360.20
	<u>91,280.71</u>	<u>74,420.66</u>	<u>123,794.68</u>
Water Treatment Expenses			
<u>Operation</u>			
Supervision and Engineering	53,852.46	53,497.53	58,933.78
Lead Testing Program	-	622.05	3,049.20
Chemicals	143,973.14	189,715.39	160,825.45
Labor	258,257.74	243,161.55	260,740.40
Miscellaneous Expense	21,248.31	21,721.69	21,232.31
	<u>477,331.65</u>	<u>508,718.21</u>	<u>504,781.14</u>
<u>Maintenance</u>			
Structures and Improvements	63,678.71	74,424.79	38,057.07
Water Treatment Expense	506,184.37	444,085.91	462,864.74
	<u>569,863.08</u>	<u>518,510.70</u>	<u>500,921.81</u>
	<u>2,211,922.31</u>	<u>2,185,017.07</u>	<u>2,236,857.63</u>
Transmission and Distribution Expenses			
<u>Operation</u>			
Supervision and Engineering	126,882.90	140,678.82	114,923.24
Transmission and Distribution Lines	24,249.88	36,782.27	26,281.41
Meter Expense	62,744.49	71,337.13	70,498.88
Customer Installation Expense	71,860.65	15,920.92	2,258.69
Miscellaneous Expense	485,763.94	487,665.26	527,403.12
	<u>771,501.86</u>	<u>752,384.40</u>	<u>741,365.34</u>
<u>Maintenance</u>			
Supervision and Engineering	29,853.62	26,497.59	31,163.84
Maintenance of Standpipes/Reservoirs	32,371.35	25,074.36	54,293.98
Transmission Mains	736,312.45	757,585.23	699,612.40
Services	176,690.84	136,840.24	241,502.89
Meters	44,365.21	54,936.38	47,896.14
Hydrants	45,410.77	32,915.28	51,976.01
	<u>1,065,004.24</u>	<u>1,033,849.08</u>	<u>1,126,445.26</u>
	<u>1,836,506.10</u>	<u>1,786,233.48</u>	<u>1,867,810.60</u>
Customer Account Expenses			
Customer Accounting and Collector	337,536.89	350,786.04	347,448.62
Meter Reading	66,937.75	58,402.53	67,637.78
	<u>404,474.64</u>	<u>409,188.57</u>	<u>415,086.40</u>
Administrative and General Expenses			
Administrative and General Salaries	166,001.42	163,363.42	178,701.45
Office Supplies and Expense	30,517.33	61,117.74	34,886.64
Outside Services Employed	162,601.02	137,946.71	114,206.87
Property Insurance	65,432.63	54,234.47	56,610.26
Employee Benefits and Pensions	996,047.69	908,870.33	1,146,188.53
Regulatory Commission Expense	195,947.82	22,123.15	14,123.53
Miscellaneous Expense	24,756.21	27,533.94	35,003.24
	<u>1,641,304.12</u>	<u>1,375,189.76</u>	<u>1,579,720.52</u>
Total Operation and Maintenance Expenses			
Utility Taxes	2,487,433.65	2,339,273.95	2,153,880.06
Depreciation	2,742,466.77	2,411,511.43	2,408,724.76
Total Operating Expenses	<u><u>\$ 11,324,107.59</u></u>	<u><u>\$ 10,506,414.26</u></u>	<u><u>\$ 10,662,079.97</u></u>

**Water System
Comparative Income Statement**

	2013	2012	2011
Sales of Water			
Total Unmetered Sales to General Public	\$ 6,158.38	\$ 6,554.93	\$ 5,970.70
Residential Water Sales	5,406,992.22	5,476,061.62	5,200,624.06
Commercial Water Sales	2,471,778.36	2,393,156.92	2,307,728.38
Industrial Water Sales	619,872.84	484,689.25	515,691.38
Private Fire Protection	148,217.76	153,011.00	151,235.00
Public Fire Protection	1,195,278.29	1,117,126.11	1,118,682.03
Sales to Public Authorities	262,385.41	258,544.35	257,462.39
Sales for Resale	1,601,123.72	1,786,272.90	1,667,237.49
Sales to Irrigation Customers	3,332.93	4,722.06	2,843.37
Total Sales of Water	<u>11,715,139.91</u>	<u>11,680,139.14</u>	<u>11,227,474.80</u>
Other Operating Revenues			
Penalties	144,985.60	148,055.06	156,315.30
Other Water Revenue	71,563.79	105,048.27	106,863.69
Allocated Services	136,437.37	121,362.24	120,537.48
Miscellaneous Service Revenues	318,136.44	296,148.62	263,362.45
Total Other Operating Revenues	<u>671,123.20</u>	<u>670,614.19</u>	<u>647,078.92</u>
Total Operating Revenues	<u>12,386,263.11</u>	<u>12,350,753.33</u>	<u>11,874,553.72</u>
Operating Expenses			
Source of Supply	9,651.28	9,625.00	1,780.00
Power and Pumping Expense	1,155,076.30	1,148,163.16	1,229,374.68
Water Treatment Expense	1,047,194.73	1,027,228.91	1,005,702.95
Transmission and Distribution Expense	1,836,506.10	1,786,233.48	1,867,810.60
Customer Accounting and Collection Expense	404,474.64	409,188.57	415,086.40
Administrative and General Expense	1,641,304.12	1,375,189.76	1,579,720.52
Depreciation	2,742,466.77	2,411,511.43	2,408,724.76
Taxes	2,487,433.65	2,339,273.95	2,153,880.06
Total Operating Expenses	<u>11,324,107.59</u>	<u>10,506,414.26</u>	<u>10,662,079.97</u>
Utility Operating Income	<u>1,062,155.52</u>	<u>1,844,339.07</u>	<u>1,212,473.75</u>
Other Income			
Interest Earned	20,571.01	41,044.50	44,813.15
Miscellaneous Non-operating Income	3,734.11	5,845.10	10,613.83
Total Other Income	<u>24,305.12</u>	<u>46,889.60</u>	<u>55,426.98</u>
Operating and Other Income	<u>1,086,460.64</u>	<u>1,891,228.67</u>	<u>1,267,900.73</u>
Non-operating Expenses			
Interest on Long-term Debt	895,359.52	974,571.31	1,041,391.10
Amortization of Debt Expense	(88,651.15)	(92,466.68)	(100,201.03)
Total Non-operating Expenses	<u>806,708.37</u>	<u>882,104.63</u>	<u>941,190.07</u>
Net Income	<u><u>\$ 279,752.27</u></u>	<u><u>\$ 1,009,124.04</u></u>	<u><u>\$ 326,710.66</u></u>
Rate of Return on Average Investment (based on operating income & expense)	2.69%	3.79%	2.64%

**Water System
Utility Plant in Service
For the year ended December 31, 2013**

	Depr. Rate %	Cost of Plant 1/1/2013	2013 Additions	2013 Retirements	Adjustments Incr/(Decr)	Cost of Plant 12/31/2013
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	19,328.45			(671.20)	18,657.25
Structures and Improvements	2.00	3,834,131.43		2,193.70	671.20	3,832,608.93
Other Power Prod Equipment	4.00	577,490.71				577,490.71
Electric Pumping Equipment	3.33	3,879,914.10				3,879,914.10
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	8,446,885.52		3,095.83		8,443,789.69
Water Treatment Equipment	3.24	1,290,927.95	24,500.24			1,315,428.19
Membrane Filtration Equipment	5.56	13,830,205.12	6,422.65			13,836,627.77
Transmission and Distribution						
Land	N/A	314,896.39		29.00		314,867.39
Reservoirs and Standpipes	1.86	6,195,422.40				6,195,422.40
Mains	0.93	47,893,461.72	263,831.40	7,869.49		48,149,423.63
Services	2.09	7,309,674.27	133,733.17	6,364.14	(2,032.65)	7,435,010.65
Meters	5.00	4,647,562.77	140,215.81	64,129.22		4,723,649.36
Hydrants	1.59	4,705,658.87	129,319.97	18,003.05	2,032.65	4,819,008.44
General Plant						
Furniture and Equipment	5.88	54,200.76		3,385.10		50,815.66
Computer Equipment	6.67-14.29	257,974.33	16,747.26	16,967.13	4,369.00	262,123.46
Transportation Equipment	12.86	993,117.70	27,627.50	19,974.19	982.91	1,001,753.92
Stores Equipment	5.88	1,497.75				1,497.75
Tools and Shop Equipment	5.88	243,881.66	10,284.97	667.50		253,499.13
Lab Equipment	5.88	102,102.42	7,561.41	5,973.81		103,690.02
Work (Power) Equipment	9.00	471,190.12				471,190.12
Communication Equipment	9.09	-				-
Telephone Equipment	20.00	41,180.70				41,180.70
SCADA System Equipment	10.00	561,153.82				561,153.82
Miscellaneous Equipment	5.88	163,156.47				163,156.47
Total		<u>\$ 109,795,986.80</u>	<u>\$ 760,244.38</u>	<u>\$ 148,652.16</u>	<u>\$ 5,351.91</u>	<u>\$ 110,412,930.93</u>

**Water System
Accumulated Depreciation
For the year ended December 31, 2013**

	Balance 1/1/2013	2013 Depreciation	Less Cost of Retirements	Add Cash Received	Adjustments Incr./Decr.	Balance 12/31/2013
Source of Supply						
Structures and Improvements	\$ 318,181.64	\$ 22,727.26				\$ 340,908.90
Collect and Impound Reservoirs	157,831.36	4,568.09				162,399.45
Lake Intakes	807,925.73	26,641.06				834,566.79
Supply Mains	84,363.86	8,155.47				92,519.33
Pumping Plant						
Land	-					-
Structures and Improvements	909,006.34	76,674.11	2,193.70			983,486.75
Other Power Prod Equipment	273,706.93	25,409.59				299,116.52
Electric Pumping Equipment	1,416,001.72	170,716.22				1,586,717.94
Other Pumping Equipment	6,477.79	380.46				6,858.25
Water Treatment						
Land	-					-
Structures and Improvements	2,954,329.34	168,906.75	3,095.83			3,120,140.26
Water Treatment Equipment	1,290,927.95	24,500.24				1,315,428.19
Membrane Filtration Equipment	7,615,862.88	830,004.99				8,445,867.87
Transmission and Distribution						
Land	-					-
Reservoirs and Standpipes	2,349,642.49	119,953.19				2,469,595.68
Mains	6,681,580.89	572,698.17	7,869.49			7,246,409.57
Services	3,136,309.24	154,060.72	6,364.14			3,284,005.82
Meters	1,203,387.75	257,708.33	64,129.22	16,685.40		1,413,652.26
Hydrants	1,206,156.77	105,035.33	18,003.05	12,841.37		1,306,030.42
General Plant						
Furniture and Equipment	34,329.30	3,045.47	3,385.10			33,989.67
Computer Equipment	77,989.66	37,127.70	16,967.13		4,369.00	102,519.23
Transportation Equipment	751,195.80	77,613.45	19,974.19	1,694.11	(18,724.53)	791,804.64
Stores Equipment	(54,285.25)	-				(54,285.25)
Tools and Shop Equipment	203,206.60	14,424.05	667.50			216,963.15
Lab Equipment	62,824.52	5,967.98	5,973.81			62,818.69
Work (Power) Equipment	309,516.03	18,448.92				327,964.95
Communications Equipment	(8,513.49)					(8,513.49)
Telephone Equipment	6,453.46	8,236.14				14,689.60
SCADA System Equipment	575,290.71					575,290.71
Miscellaneous Equipment	55,255.51	9,463.08				64,718.59
Total	<u>\$ 32,424,955.53</u>	<u>\$ 2,742,466.77</u>	<u>\$ 148,623.16</u>	<u>\$ 31,220.88</u>	<u>(\$ 14,355.53)</u>	<u>\$ 35,035,664.49</u>

Water System
Water System Revenue Refunding Bonds - Series 2008
Debt Service Schedule
December 31, 2013

Year	Interest Rate %	Principal	Interest		Total
		December 1	June 1	December 1	
2014	4.00%	\$ 2,080,000.00	\$ 308,450.00	\$ 308,450.00	\$ 2,696,900.00
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		<u>\$13,570,000.00</u>	<u>\$1,093,850.00</u>	<u>\$1,093,850.00</u>	<u>\$15,757,700.00</u>

**Water System
Advance from Municipality
Debt Repayment Schedule
December 31, 2013**

Year	Interest Rate %	<u>Principal</u>	<u>Interest</u>		<u>Total</u>
		<u>April 1</u>	<u>April 1</u>	<u>October 1</u>	
2014	5.220%	\$ 35,574.89	\$ 6,298.08	\$ 5,542.11	\$ 47,415.08
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		<u>\$241,118.70</u>	<u>\$ 24,326.01</u>	<u>\$ 18,027.93</u>	<u>\$283,472.64</u>

**Water System
Total Debt Repayment Schedule
December 31, 2013**

Year	Principal	Interest	Total
2014	\$ 2,115,574.89	\$ 628,740.19	\$ 2,744,315.08
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	\$13,811,118.70	\$ 2,230,053.94	\$16,041,172.64

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"

May 2014

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

Subject: 2013 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 2013.

In 2013 the Distribution Division continued to perform a wide variety of work related to the maintenance of the city's water and sanitary sewer infrastructure, as well as assisting the other KWU divisions with equipment and manpower whenever we were needed. Several special projects were also participated in, most notably was our work with the City of Kenosha Engineering Department at the former Chrysler engine plant. Following the recent trend, there never seems to be a shortage of work that needs to be done. Overall, the division completed 407 excavation projects, an increase of nearly 10% compared to 2012.

Water Distribution System

The Distribution Division repaired 144 water main breaks in 2013, a 5% decrease from 2012. In addition to water main break repairs, we repaired or replaced thirty-seven valves and thirty-two fire hydrants. The division also repaired or replaced eighty-four water services (including twenty-three lead service replacements) and installed forty-four new services. As part of our preventative maintenance and inspection program, all of the city fire hydrants north of 60th Street were operated and flushed.

Sanitary Sewer Collection System

Of our major sewer projects in 2013, the Distribution Division cleaned approximately thirty-eight miles of sanitary sewer. We also televised and inspected 3.5 miles of sanitary sewer. Direct work on the system consisted of seventy-nine repairs, including four sewer main repairs, fifty-seven lateral repairs and eighteen manhole repairs.

I would like to recognize all of the outstanding Distribution Division employees. I am constantly amazed at the level of dedication shown by these employees who will work in any weather at any hour to provide the best service to our customers. Of course, completing our work would be impossible without help from other KWU divisions. In particular, I would like to thank the Maintenance Division for keeping our equipment and vehicles in working order, Engineering Services for technical support and Business Services for communicating and coordinating with our customers. I would also like to acknowledge the City of Kenosha Streets Division for supporting our operations by salting roads and clearing storm sewer inlets when main breaks occur. I would be remiss if I did not take this opportunity to recognize the efforts of my predecessor, Curt Czarnecki. When I became the Director of Distribution in September, the

division was a model of productivity and efficiency. The division continues to follow many of the policies that were established under Curt's direction and he has become a valuable resource to me as I move forward.

Lastly, thank you, Ed, and the Board of Water Commissioners for providing us with the best equipment to make our jobs safe and productive. With your continued support the Distribution Division will be able to maintain the Kenosha Water Utilities high standards of excellence.

Sincerely,

A handwritten signature in black ink, appearing to read "John Rasch". The signature is written in a cursive, flowing style.

John Rasch
Director of Water Distribution
And Sewer Collection

Water Distribution Pipe System - 2013

<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	225,782
12"	Plastic Pipe	43,692
10"	Cast/Ductile Iron Pipe	16,265
8"	Cast/Ductile Iron Pipe	383,574
8"	Plastic Pipe	146,480
6"	Cast/Ductile Iron Pipe	710,500
6"	Plastic Pipe	4,858
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		1,882,823
Total Miles of Pipe		356.60

Water Services Added to System - 2013

<u>Number</u>	<u>Size</u>	<u>Material</u>	<u>Average Unit Cost</u>	<u>Total Cost</u>
1	0.75"	Copper Connections	\$ 3,641.82	\$ 3,641.82
33	1"	Copper Connections	2,776.84	91,635.72
5	1.5"	Copper Connections	4,126.55	20,632.77
3	2"	Copper Connections	2,205.22	6,615.65
2	6"	PVC Connections	5,603.61	11,207.21
<u>44</u>		Total		<u>\$ 133,733.17</u>

Fire Hydrants Added to System - 2013

<u>Number</u>	<u>Type</u>	<u>Average Unit Cost</u>	<u>Total Cost</u>
27	Steamer	\$ 4,789.63	\$ 129,319.97

2013 Water Main Installation Costs

Project	Size/ Type	Installer	Description	Footage	Total Costs	Cost per Foot
<u>By Job Number</u>						
Installed by Kenosha Water Utility						
574	12" PVC	A.W. Oakes and Son, Inc.	Water Main Relay, 26th Ave - 33rd St to 34th St	365.75	\$ 97,609.21	\$ 266.87
578	8" PVC	A.W. Oakes and Son, Inc.	Water Main Relay, 34th Ave - 86th Pl to 88th St	1,020.70	150,718.82	147.66
582	8" PVC	Kenosha Water Utility	Water Main Relay, 22nd Ave - 80th St to 81st St	162.00	15,503.37	95.70
Total				<u>1,548.45</u>	<u>\$ 97,609.21</u>	
<u>By Pipe Size</u>						
578	8" PVC	A.W. Oakes and Son, Inc.	Water Main Relay, 34th Ave - 86th Pl to 88th St	1,020.70	\$ 150,718.82	
582	8" PVC	Kenosha Water Utility	Water Main Relay, 22nd Ave - 80th St to 81st St	162.00	15,503.37	
				<u>1,182.70</u>	<u>\$ 166,222.19</u>	140.54
574	12" PVC	A.W. Oakes and Son, Inc.	Water Main Relay, 26th Ave - 33rd St to 34th St	365.75	\$ 97,609.21	266.87

**Distribution Division - Water
Operating & Maintenance Report - 2013**

Maintenance Completed

System	Maintenance Type	Quantity
Water Main Breaks	Circumferential	62
	Blow Out	50
	Joint Leaks	12
	Longitudinal	15
	Old Sleeve	3
	Other	2
	Total Main Break Repairs	
Valves	Reset/Replace Box (only)	7
	Replaced	13
	Repaired	11
	New Installation	4
	Removed/VBO	2
Total Valve Repairs		37
Water Services	Reset/Replace Box (only)	25
	Replaced (Lead Svcs: 23)	28
	Repaired	27
	Flow Test	1
	Shut at Main	3
Total Water Service Repairs		84
Hydrants	Replaced	22
	Repaired	7
	Relocated	—
	Abandoned	2
	New Installation	1
Total Hydrant Repairs		32
New Connections & Taps	1"	30
	1 1/2"	2
	2"	3
	4"	—
	6"	6
	8"	1
	12"	2
Total New Connections Installed		44

Customer Complaints

(During Normal Work Hours)

Complaint	Quantity
Main Breaks	64
Hydrant Hit/Damaged	8
Hydrant Leaking	13
Service Repairs	7
Signs/Barricades Needed	1
Curb/Valve Box Repair	19
Water Taste/odor/color	14
Low Pressure	2
No Water	8
Service Turn-On	—
Service Turn Off	1
Temporary Road Patch	9
Miscellaneous	23
Total	169

Customer Complaints

(After Normal Work Hours)

Complaint	Quantity
Main Breaks	98
Hydrant Hit/Damaged	10
Hydrant Leaking	5
Service Repairs	14
Signs/Barricades Needed	3
Curb box/Valve Box	5
Water Taste/odor/color	2
Low Pressure	1
No Water	12
Service Turn-On	4
Service Turn Off	28
Utility Locate	30
Total	212

Total Customer Complaints	381
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Meter Shop Request for Assistance: 133

Valves Operated: 534

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”

May 2014

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

Subject: 2013 Annual Report – Wastewater Treatment Division

Dear Mr. St. Peter,

I respectfully submit the 2013 annual report for the Kenosha Water Utility Wastewater Treatment Plant. This past year, the wastewater treatment plant treated 7.45 billion gallons of effluent. This total is up about 1 billion from last year, 2012 was a very dry year. The average daily flow for the plant was 20.45 million gallons per day (MGD) up from 17.9 MGD last year. The final effluent biological oxygen demand (BOD) and total suspended solids (TSS) were well within the permitted discharge limits.

One of the biggest projects at the wastewater treatment plant this year was the installation of four new influent gates to the aeration tanks 1 through 4. The installation could only be done one at a time because it required the tank to be out of service and cleaned. Each time a tank was taken out of service and a temporary gate was installed the plant had to be shut off for a couple of hours at a time. For the plant shut down to run smoothly, it required a lot of teamwork and coordination. The gates that were removed were rotted through in spots; the new gates will allow the employees to work in the tanks safely to clean and replace aeration disks as needed.

Tom Tetzlaff was hired as the Maintenance Supervisor this year and has been doing an excellent job of organizing projects and keeping the plant and lift stations maintained and operational. Dennis Brissette & Jeff Statema transferred to mechanic positions at the Utility and have been great assets with their skills and knowledge and positive attitudes!

We had an intense two day rain event in April of this year that caused many of us to work for over 24 hours. During that time the plant treated 90 MGD and 74 MGD in two days. It was a relief when the rain stopped and the flow subsided.

I would like to thank Ed St. Peter and the Board of Water Commissioners for their continued support and guidance. The Kenosha Water Utility is a great place to work and especially the Wastewater Treatment Plant which has many potential projects and areas for technological advancement in the future.

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

Sincerely,

A handwritten signature in cursive script that reads "Melissa Arnot".

Melissa Arnot
Director of Operations

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						
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
2009	24.612	150	56	63	9.5	94
Five-Day BOD						
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	9.0	95
2009	24.612	162	108	33	13.0	92
Phosphorus						
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
2009	24.612	2.86	–	–	0.45	84

Summary

	2012	2013
Total wastewater pumped and treated	6,547,802,000	7,453,875,000
Total sludge to digesters - gallons	37,750,377	35,438,289
Total dry solids to digesters - pounds	10,472,482	10,322,197
Total dry volatile solids to digesters - pounds	7,935,629	7,892,915

Digester Data

Total gallons digested sludge removed	26,970,710	27,772,093
Percent dry solids	2.62	2.52
Total pounds dry solids removed	5,797,216	5,712,008
Percent volatile matter	53.3	53.7
Total dry volatile solids removed	3,055,386	2,939,828
Volatile solids destroyed, percent	61.5	62.8
Total gallons removed as supernatant	13,324,800	11,193,600
Percent supernatant solids	0.23	0.25
Total pounds supernatant solids removed	235,392	220,661
Percent supernatant volatile matter	53.1	53.5
Total pounds volatile solids, supernatant	124,014	118,651

Treatment Plant Data and Chemical Usage

	2012	2013
<u>Chemical Data</u>		
<u>Chlorine</u>		
Total pounds	107,460	97,274
Average pounds per day	294	267
Average residual, µg/L	< 100 µg/L	< 100 µg/L
<u>Sulfur Dioxide</u>		
Total pounds	62,435	66,004
Average pounds per day	171	181
<u>Ferric Chloride, Phosphorus</u>		
Total gallons	197,601	196,898
Average gallons per day	541	539
Average pounds of Fe per day	714	711
<u>Polymer</u>		
Tons	84	87
Pounds per pound of dry solids	0.03	0.03

Aeration

Settleable Solids - mg/L	240	258
Mixed Liquor Suspended Solids - mg/L	2,921	2,764
Dissolved Oxygen - mg/L	2.7	2.0
BOD lbs. applied per day	18,242	17,361

Thickener

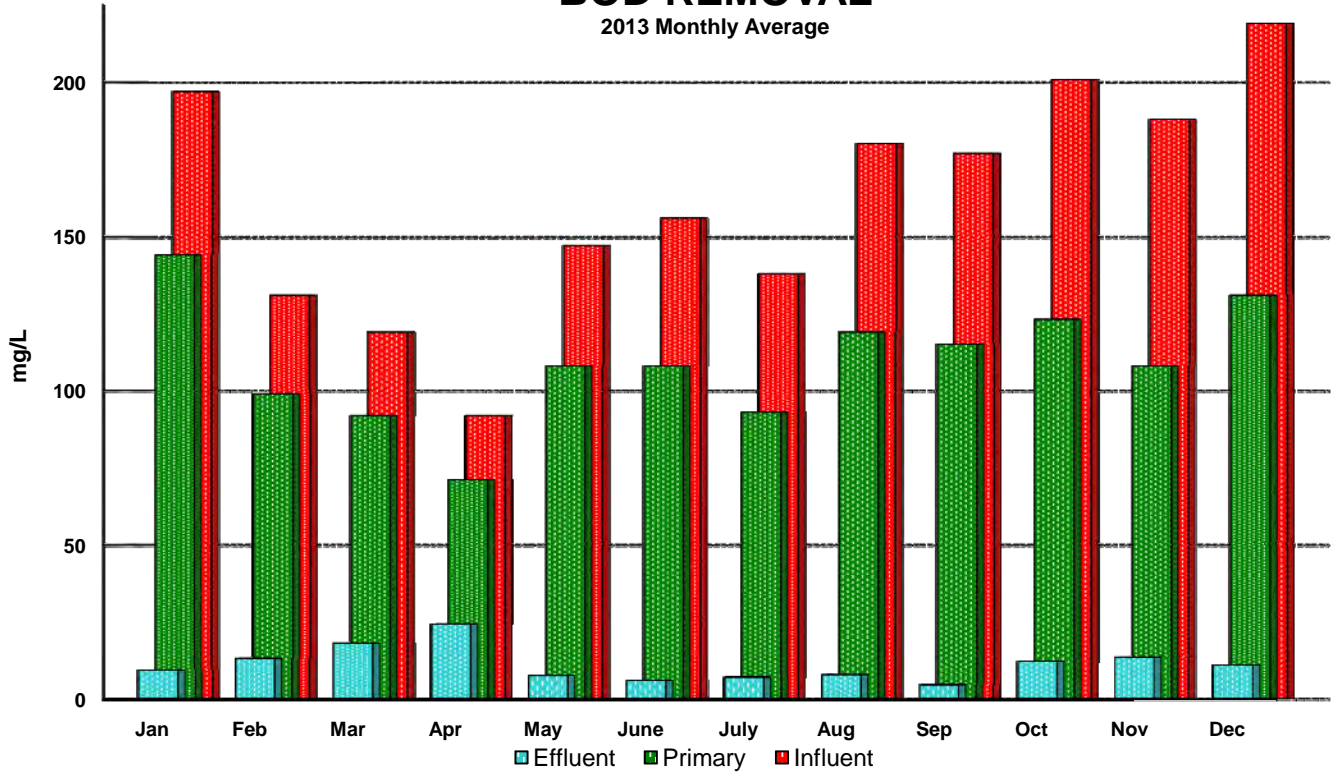
Waste Activated Sludge to Thickener, gallons/day	149,039	164,750
Waste Activated Sludge - % solids	0.98	0.9
Waste Activated Sludge - lbs/day	10,260	11,008
Thickened Sludge - % solids	3.9	4.2
Thickened Sludge - % volatile	72	74.3
Thickener Effluent - Suspended Solids - mg/L	418	494
Thickened Sludge - lbs dry solids/day	10,043	10,728
Thickened Sludge - gallons/day	30,028	30,619

mg/L - milligrams per Liter

µg/L - micrograms per Liter

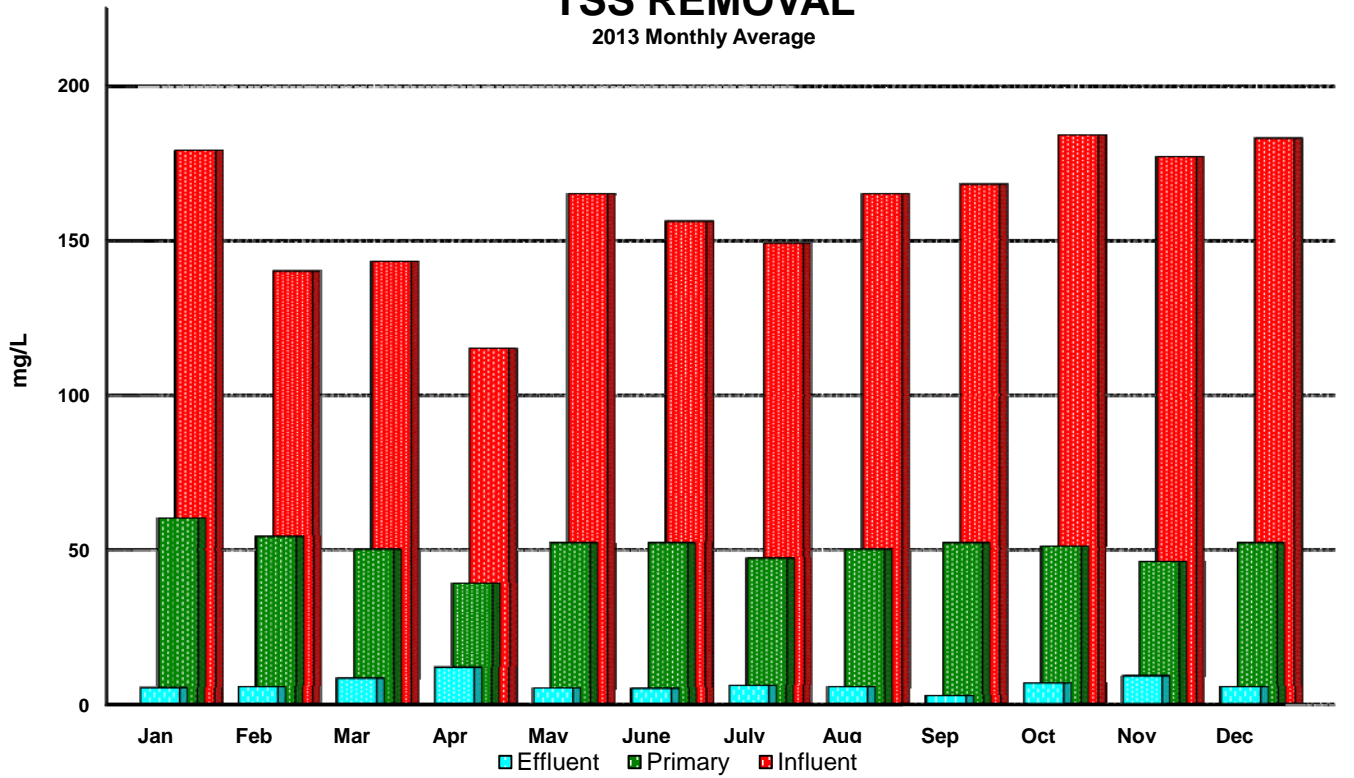
BOD REMOVAL

2013 Monthly Average



TSS REMOVAL

2013 Monthly Average



Wastewater Flow

Annual precipitation and average daily flow for the past five years

	<u>Precipitation, Inches</u>	<u>Average MGD</u>
2013	39.50	20.452
2012	25.70	17.885
2011	37.73	22.872
2010	33.68	20.837
2009	41.50	24.612

Supernatant

Gallons per day	66,458
Percent Solids	0.25
Pounds supernatant solids per day	1,386
Percent volatile	53.5

Sludge to Centrifuge

Gallons per day	205,719
Percent solids	2.52
Pounds per day	43,236
Percent volatile	53.7

Sludge off Centrifuge

Total tons	9,572
Percent solids	27.9
Centrate TSS, mg/l	141.0
Centrate pH	7.8

Solids Disposal

Tons of sludge to landfill, dry tons	2,671
Tons of grit to landfill	1,279

Annual Energy Usage

		<u>2012</u>	<u>2013</u>
Electricity	Total On and Off Peak kWh	9,306,549	7,542,908
	Total Demand kW	17,044	15,917
	Total cost	\$ 696,888	\$ 621,960
Natural Gas	therms	29,274	53,261
	Total cost	\$ 18,530	\$ 30,834
Methane gas produced by digesters	therms	363,876	379,042
Value of methane gas	Total	\$ 230,328	\$ 219,436

**Sewerage System
Plant Operating Data - 2013**

Month	Precip. Inches	Total Flow Raw Sewage MG	Average Daily Flow MGD	Maximum Daily Flow MGD	Day of Month	Power Cost
January	3.02	530.268	17.105	46.049	30	\$ 54,966
February	3.74	563.585	20.128	30.139	11	55,691
March	1.78	820.634	26.472	56.614	11	48,530
April	7.93	1,192.074	39.376	90.030	18	50,454
May	2.71	639.057	20.615	25.348	10	50,763
June	4.95	638.565	21.286	33.636	26	60,815
July	2.84	582.845	18.801	28.199	9	55,813
August	1.47	492.513	15.888	19.341	22	53,215
September	2.31	441.407	14.714	16.815	15	53,489
October	4.95	528.962	17.063	25.920	5	44,652
November	2.13	542.009	18.067	24.150	17	49,823
December	1.66	481.956	15.547	17.369	28	43,719
Total	39.49	7,453.875				\$ 621,930
Average	3.29	621.156	20.422	34.468		\$ 51,828

Monthly Averages

Month	BOD		TSS (mg/L)		Phosphorus (mg/L)		Total lbs. Dry Solids from Digester
	Influent	Effluent	Influent	Effluent	Influent	Effluent	
January	197	9.4	179	5.3	2.41	0.30	553,900
February	131	13.1	140	5.5	2.45	0.28	415,992
March	119	18.1	143	8.2	2.01	0.36	608,592
April	92	24.3	115	11.9	1.48	0.30	623,170
May	147	7.5	165	5.2	2.61	0.24	431,519
June	156	6.0	156	5.0	2.50	0.34	518,858
July	138	7.0	149	6.0	2.22	0.59	450,662
August	180	7.8	165	5.6	3.41	0.70	503,242
September	177	4.6	168	2.6	2.75	0.76	355,488
October	201	12.2	184	6.7	2.78	0.65	551,908
November	188	13.5	177	9.0	3.17	0.69	288,669
December	219	11.0	183	5.6	3.57	0.65	410,006
Average	162	11.2	160	6.4	2.61	0.49	476,001

2013 Sewer Main Installation Costs

Project	Size/ Type	Installer	Description	Footage	Total Costs	Cost per Foot
Installed by Kenosha Water Utility						
686	24" PVC	Reesman's Excavating & Grading, Inc.	Sanitary Sewer Relay - 60th St	<u>50.0</u>	<u>\$ 12,780.51</u>	\$ 255.61
			Total	<u><u>50.0</u></u>	<u><u>\$ 12,780.51</u></u>	

Distribution Division - Sanitary Sewer Operating & Maintenance Report - 2013

Maintenance Completed

System	Maintenance Type	Quantity
Sewer Main	Collapse	2
	Broken Pipe	–
	Joint Leaks	1
	Remove Flusher Nozzle	–
	Other	1
Total Sewer Main Repairs		4
Sewer Lateral	Collapse	31
	Broken Pipe	1
	Joint Leaks	6
	Broken at Wye	9
	Remove Parkway Trap	7
	Contractor Damage	–
	Other	3
Total Sewer Lateral Repairs		57
Manholes	Repaired	18
	Replace	–
	Remove/Abandon	–
Total Manhole Repairs		18

Total Sanitary Sewer Repairs	79
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Customer Complaints

(During Normal Work Hours)

Complaint	Quantity
Sewer back-up	193
Sink Hole	3
Sewer Odor	11
Storm Sewer Back-up	–
TV Lateral	1
Manhole Problem	3
Miscellaneous	4
Total	215

Customer Complaints

(After Normal Work Hours)

Complaint	Quantity
Utility Locate	30
Sewer back-up	88
Sewer Odor	5
Storm Sewer Back-up	2
Manhole Problem	1
Miscellaneous	3
Total	129

Total Complaints	344
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Summary of Sewer Cleaning and Televising (feet)

Year	Sewer Cleaning	PM List	Surcharge Cleaning	Televising	Grand Total
2013	164,028	38,459		18,071	220,558
2012	265,050	27,459	2,245	20,064	314,818
2011	325,955	28,965	2,625	19,678	377,223
2010	392,879	30,026	2,850	32,203	457,958
2009	544,614	32,893	2,205	30,061	609,773
2008	323,303	34,737	1,950	9,674	369,664

Sewage Collection Pipe System - 2013

<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	150,058
8"	Clay, Plastic, Steel	705,746
6"	Clay, Plastic	8,241
Total Feet of Pipe		1,757,248
Total Miles of Pipe		332.81

**Sewerage System
Income Statement – 2013**

Sewerage Service Revenues

Residential Customers	\$ 4,417,094.78
Commercial Customers	2,219,844.66
Industrial Customers	1,058,155.79
Public Customers	202,736.15
Wastehaulers	204,993.62
Wholesale Customers	2,201,615.96
Industrial Monitoring	85,309.41

Total Sewerage Service Revenues

10,389,750.37

Other Operating Revenues

Engineering Services	1,249,326.16
Other Income	86,082.52
Penalties	130,991.48

Total Other Operating Revenues

1,466,400.16

Total Operating Revenues

11,856,150.53

Operating Expenses

Wastewater Treatment Operation and Maintenance	2,963,183.71
Collection System Operation and Maintenance	1,243,234.27
Laboratory Operations	246,733.37
Industrial Waste Monitoring	67,574.11
Engineering Services	1,217,003.89
Customer Accounting and Collection Expense	376,239.80
Administrative and General Expense	2,003,615.30
Depreciation	2,186,740.58
Taxes	56,398.35

Total Operating Expenses

10,360,723.38

Utility Operating Income

1,495,427.15

Other Income

Interest Income	187,157.97
Miscellaneous Income	42,538.54

Total Other Income

229,696.51

Non-operating Expenses

Interest on Long-term Debt	40,360.30
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Net Income before Capital Contributions

1,684,763.36

Capital Contributions

996,605.50

Net Income

\$ 2,681,368.86

**Sewerage System
Statement of Net Position
December 31, 2013**

Assets		
Utility Plant		
Utility Plant in Service	\$ 132,342,310.78	
Work in Progress - Sewer Plant	3,081,811.42	
Work in Progress - Sewerage System	250,185.21	
Accumulated Depreciation	<u>(59,904,377.50)</u>	
Net Plant in Service		75,769,929.91
Other Property		
Other Utility Plant & Equipment for Future Use	1,483,907.38	
Accumulated Depreciation	<u>(132,115.68)</u>	
Net Other Property		<u>1,351,791.70</u>
Total Net Utility Plant		<u>77,121,721.61</u>
Current Assets		
Cash and Cash Equivalents	8,561,312.72	
Restricted cash equivalents	-	
Restricted cash - Storm Water Utility Collections	331,990.09	
Restricted Investments	2,710,000.00	
Customer Accounts Receivable	1,145,263.50	
Receivable from Municipality	650,856.44	
Unbilled Revenues	1,081,661.07	
Other Accounts Receivable	361,330.68	
Materials and Supplies	42,952.72	
Accrued Interest Receivable	88.24	
Other Current Assets	<u>(2,405.50)</u>	
Total Current and Accrued Assets		14,883,049.96
Noncurrent Assets		
Advance to Water Unit		5,000,000.00
Other Assets		
Assessments Receivable		42,929.41
Deferred Charges		<u>2,732,935.35</u>
Total Other Assets		2,775,864.76
Total Assets		<u>99,780,636.33</u>
Liabilities		
Current Liabilities		
Current Portion of Long Term Obligations	87,138.70	
Accounts Payable	127,305.14	
Accrued Interest Payable	6,747.02	
Current Portion of Advance from Municipality	36,177.61	
Current Portion of Accrued Compensated Absences	21,598.44	
Payable to Municipality	224,457.19	
Due to City of Kenosha - Storm Water Collections	331,990.09	
Deferred Credits	<u>265,000.00</u>	
Total Current and Accrued Liabilities		1,100,414.19
Non-current Liabilities		
Long-term Debt		
Advances from Municipality	209,026.19	
Clean Water Fund Loans	<u>583,983.89</u>	
Total Long-term Debt		793,010.08
Accrued Compensated Absences		202,836.41
Worker's Compensation Accrued Liability		55,519.00
Other Postemployment Benefits		<u>607,550.00</u>
Total Non-current Liabilities		1,658,915.49
Total Liabilities		<u>2,759,329.68</u>
Net Position		
Invested in Capital Assets, net of related debt	76,450,599.02	
Restricted for Debt Service	2,706,455.36	
Unrestricted	<u>17,864,252.27</u>	
Total Net Position		<u>\$ 97,021,306.65</u>

**Sewerage System
Comparative Operating and Maintenance Expenses**

	<u>2013</u>	<u>2012</u>	<u>2011</u>
Operating Expenses			
Supervision and Labor	\$ 414,977.33	\$ 396,167.73	\$ 353,657.84
Power for Pumping and Aeration	652,794.62	715,418.01	760,072.35
Disinfection Chemicals	50,030.00	53,247.00	62,840.00
Sludge Conditioning Chemicals	448,814.65	494,512.49	402,624.72
Other Chemicals for Sewage Treatment	4,437.85	10,548.62	4,572.48
Laboratory Operations	246,733.37	257,457.53	270,447.24
Industrial Waste Monitoring	67,574.11	68,700.63	63,572.50
Landfill Expense	440,507.50	431,862.16	417,378.81
Transportation Expense	76,960.78	68,404.55	82,030.48
	<u>2,402,830.21</u>	<u>2,496,318.72</u>	<u>2,417,196.42</u>
Maintenance Expenses			
Collection System Operation and Maintenance	1,243,234.27	1,034,661.61	1,130,339.08
Wastewater Treatment Maintenance	874,660.98	584,131.61	617,441.31
	<u>2,117,895.25</u>	<u>1,618,793.22</u>	<u>1,747,780.39</u>
Customer Account Expenses			
Customer Accounting and Collection	309,302.09	311,467.87	309,558.52
Meter Reading Expense	66,937.71	58,402.52	67,637.75
	<u>376,239.80</u>	<u>369,870.39</u>	<u>377,196.27</u>
Administrative and General Expenses			
Administrative and General Salaries	210,989.03	223,306.37	259,252.40
Engineering Services	1,217,003.89	988,817.84	1,048,633.02
Office Supplies and Expense	40,503.71	45,928.86	41,706.19
Outside Services Employed	322,545.63	323,053.21	344,222.06
Insurance Expense	190,965.62	104,765.66	310,228.53
Employee Benefits and Pensions	914,502.43	941,054.53	1,200,841.21
Meter Operations Expense	318,008.88	357,028.49	351,116.91
Depreciation	2,186,740.58	2,535,038.24	2,431,758.81
Utility Taxes	56,398.35	53,695.05	49,545.94
Miscellaneous Expense	6,100.00	6,100.00	6,100.00
	<u>5,463,758.12</u>	<u>5,578,788.25</u>	<u>6,043,405.07</u>
Total Operating Expenses	<u><u>\$ 10,360,723.38</u></u>	<u><u>\$ 10,063,770.58</u></u>	<u><u>\$ 10,585,578.15</u></u>

Sewerage System Comparative Income Statement

	<u>2013</u>	<u>2012</u>	<u>2011</u>
Sewerage Service Revenue			
Residential Customers	\$ 4,417,094.78	\$ 4,473,989.96	\$ 4,442,397.68
Commercial Customers	2,219,844.66	2,276,772.95	2,251,874.04
Industrial Customers	1,058,155.79	1,026,084.18	1,002,689.14
Public Customers	202,736.15	224,496.30	235,535.87
Wastehaulers	204,993.62	226,102.34	184,137.09
Wholesale Customers	2,201,615.96	2,337,383.64	2,400,052.77
Industrial Monitoring	85,309.41	90,749.43	98,075.15
Total Sewerage Service Revenues	10,389,750.37	10,655,578.80	10,614,761.74
Other Operating Revenues			
Engineering Services	1,249,326.16	1,105,601.56	1,112,130.25
Other Income	86,082.52	81,381.31	72,746.40
Penalties	130,991.48	133,272.71	144,262.19
	1,466,400.16	1,320,255.58	1,329,138.84
Total Operating Revenues	11,856,150.53	11,975,834.38	11,943,900.58
Operating Expenses			
Wastewater Treatment Operation and Maintenance	2,963,183.71	2,754,292.17	2,700,617.99
Collection System Operation and Maintenance	1,243,234.27	1,034,661.61	1,130,339.08
Laboratory Operations	246,733.37	257,457.53	270,447.24
Industrial Waste Monitoring	67,574.11	68,700.63	63,572.50
Engineering Services	1,217,003.89	988,817.84	1,048,633.02
Customer Accounting/Meter Reading Expense	376,239.80	369,870.39	377,196.27
Administrative and General Expense	2,003,615.30	2,001,237.12	2,513,467.30
Depreciation	2,186,740.58	2,535,038.24	2,431,758.81
Taxes	56,398.35	53,695.05	49,545.94
Total Operating Expenses	10,360,723.38	10,063,770.58	10,585,578.15
Net Operating Income	1,495,427.15	1,912,063.80	1,358,322.43
Non-operating Revenue			
Interest Income	187,157.97	194,357.70	192,243.67
Miscellaneous Income	42,538.54	16,611.37	13,315.83
Total Non-operating Revenue	229,696.51	210,969.07	205,559.50
Operating Income and Other Revenue	1,725,123.66	2,123,032.87	1,563,881.93
Non-operating Expenses			
Interest on Long-term Debt	40,360.30	82,278.07	168,464.44
Amortization of Debt Expense	-	-	-
Total Non-operating Expenses	40,360.30	82,278.07	168,464.44
Net Income	\$ 1,684,763.36	\$ 2,040,754.80	\$ 1,395,417.49
Rate of Return on Average Investment (based on WWTP net operating income)	4.24%	5.15%	3.48%
Rate of Return on Average Investment (after debt service payment)	4.12%	4.93%	3.05%

**Sewerage System
Utility Plant in Service
For the year ended December 31, 2013**

	Depr. Rate %	Cost of Plant 1/1/2013	2013 Additions	2013 Retirements	Adjustments Incr/(Decr)	Cost of Plant 12/31/2013
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	45,173,776.40	12,780.51	9,801.05		45,176,755.86
Interceptor Mains	1.00	27,142,083.25				27,142,083.25
Force Mains	1.00	1,285,208.01				1,285,208.01
Collection Equipment	4.00	1,417,174.72			(56,117.51)	1,361,057.21
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	8,783,042.95	33,215.00			8,816,257.95
Other Power Pumping Equip.	4.00	225,517.45				225,517.45
Miscellaneous Pumping Equip.	4.00	37,656.16		6,656.16		31,000.00
Treatment and Disposal						
Land	N/A	331,080.05				331,080.05
Structures and Improvements	2.50	8,329,204.88				8,329,204.88
Preliminary Equipment	3.80	541,469.81			(18,099.65)	523,370.16
Primary Treatment Equipment	2.97	4,131,061.47			18,099.65	4,149,161.12
Secondary Treatment Equip.	3.53	6,527,748.80	46,876.54	27,944.47		6,546,680.87
Advanced Treatment Equip.	2.86	208,830.61				208,830.61
Chlorination Equipment	4.41	1,243,142.00			(0.70)	1,243,141.30
Sludge Treatment & Disposal	4.17	5,468,961.73		2,837.36	(0.19)	5,466,124.18
Flow Metering and Monitoring	4.44	502,736.39		10,318.07		492,418.32
Outfall Sewer	2.31	1,111,107.93	12,533.69		56,117.51	1,179,759.13
Engineering Equipment						
Furniture and Equipment	5.88	41,021.15				41,021.15
Computer Equipment	6.67-14.29	126,127.44	57,232.85	12,309.49	(4,369.00)	166,681.80
Transportation Equipment	14.28	321,339.77	45,911.94		5,476.09	372,727.80
Engineering Equipment	5.88	23,242.32			1.00	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	1,908,312.22	124,859.47			2,033,171.69
Furniture and Equipment	5.88	107,582.27		4,864.79		102,717.48
Computer Equipment	6.67-14.29	54,710.11	3,070.00			57,780.11
Transportation Equipment	12.86	1,965,771.73		143,208.00	(6,459.00)	1,816,104.73
Work (Power) Equipment	9.00	350,993.04		1,194.70		349,798.34
Tools and Shop Equipment	5.88	268,101.14	2,477.00	11,192.34		259,385.80
Lab Equipment	5.88	135,465.40	19,185.99	3,238.55		151,412.84
Communication Equipment	9.09	7,298.00				7,298.00
Telephone Equipment	20.00	9,755.97				9,755.97
Miscellaneous Equipment	5.88	142,493.05		3,911.87		138,581.18
Total		\$ 132,226,996.44	\$ 358,142.99	\$ 237,476.85	(\$ 5,351.80)	\$ 132,342,310.78

**Sewerage System
Accumulated Depreciation
For the year ended December 31, 2013**

	Balance 1/1/2013	2013 Depreciation	Less Cost of Retirements	Add Cash Received	Adjustments Incr./Decr.	Balance 12/31/2013
Collection System						
Land	-					-
Structures and Improvements	(\$ 10,416.96)				10,416.96	\$ 0.00
Service Connections	716,245.55	38,092.81				754,338.36
Collecting Mains	10,845,556.72	457,959.30	9,801.05			11,293,714.97
Interceptor Mains	4,946,076.93	272,866.97				5,218,943.90
Force Mains	168,979.63	12,852.08				181,831.71
Collection Equipment	579,090.76	68,052.86				647,143.62
Collection System Pumping						
Land	-					-
Structures and Improvements	3,479,185.00	118,619.96			(10,416.96)	3,587,388.00
Receiving Wells	2,335,136.11	183,931.56				2,519,067.67
Electric Pumping Equipment	8,729,150.21	87,107.74				8,816,257.95
Other Power Pumping Equip.	122,462.55	11,275.87				133,738.42
Miscellaneous Pumping Equip.	13,714.72	1,716.41	6,656.16			8,774.97
Treatment and Disposal						
Land	-					-
Structures and Improvements	6,117,285.36	166,584.10				6,283,869.46
Preliminary Equipment	111,474.51	20,934.81				132,409.32
Primary Treatment Equipment	3,092,090.91	138,167.07				3,230,257.98
Secondary Treatment Equip.	6,527,748.80	46,876.54	27,944.47			6,546,680.87
Advanced Treatment Equip.	56,305.17	8,353.22				64,658.39
Chlorination Equipment	1,243,142.00	(0.70)				1,243,141.30
Sludge Treatment & Disposal	5,044,449.41	273,377.15	2,837.36		(0.70)	5,314,988.50
Flow Metering and Monitoring	362,317.15	33,188.41	10,318.07		(0.19)	385,187.30
Outfall Sewer	764,303.39	29,337.31				793,640.70
Engineering Equipment						
Furniture and Equipment	27,153.16	2,498.14				29,651.30
Computer Equipment	77,985.58	13,986.37	12,309.49		(4,369.00)	75,293.46
Transportation Equipment	241,273.82	14,655.82			24,840.94	280,770.58
Engineering Equipment	10,925.19	1,444.88			1.00	12,371.07
Communication Equipment	(1,610.32)					(1,610.32)
Telephone Equipment	-					-
Miscellaneous Equipment	(253.22)					(253.22)
General Plant & Equipment						
Land	-					-
Structures and Improvements	429,200.43	39,414.83				468,615.26
Furniture and Equipment	46,250.38	6,098.69	4,864.79			47,484.28
Computer Equipment	34,723.63	5,370.06				40,093.69
Transportation Equipment	1,390,603.17	82,083.21	143,208.00	3,477.39	5,030.31	1,337,986.08
Work (Power) Equipment	228,662.40	18,176.16				245,643.86
Tools and Shop Equipment	157,212.97	15,297.13	11,192.34			161,317.76
Lab Equipment	36,332.36	8,319.47	3,238.55			41,413.28
Communication Equipment	7,298.00					7,298.00
Telephone Equipment	4,877.98	1,951.19				6,829.17
Other Equipment	(8,799.43)	8,151.16	3,911.87			(4,560.14)
Total	\$ 57,926,134.02	\$ 2,186,740.58	\$ 237,476.85	\$ 3,477.39	\$ 25,502.36	\$ 59,904,377.50

**Clean Water Fund Project #4003-07
 Loan Payment Schedule
 Equalization Basin Modification
 December 31, 2013**

<u>Year</u>	<u>Principal</u>	<u>Interest</u>		<u>Total</u>
	<u>May 1</u>	<u>May 1</u>	<u>November 1</u>	
2014	\$ 87,138.70	\$ 10,633.93	\$ 9,253.22	\$ 107,025.85
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>\$ 671,122.59</u>	<u>\$ 43,861.71</u>	<u>\$ 33,227.78</u>	<u>\$ 748,212.08</u>

Interest rate is 3.169%

**Sewerage System
Advance from Municipality
Debt Repayment Schedule
December 31, 2013**

<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>	
2014	5.220%	\$ 36,177.61	\$ 6,404.77	\$ 5,636.00	\$ 48,218.38
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>\$245,203.80</u>	<u>\$ 24,738.09</u>	<u>\$ 18,333.32</u>	<u>\$288,275.21</u>

**Sewerage System
Total Debt Repayment Schedule
December 31, 2013**

<u>Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2014	\$ 123,316.31	\$ 31,927.92	\$ 155,244.23
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>\$ 916,326.39</u>	<u>\$ 120,160.90</u>	<u>\$ 1,036,487.29</u>

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”

May 2014

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

Subject: 2013 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 Department of Natural Resources in our wastewater treatment plant discharge permit. 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 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 where their wastewaters enter the Kenosha sanitary sewer collection system. Haulers are monitored at the wastewater treatment plant. The adjoining communities are monitored weekly to validate the concentration of conventional parameters being discharged to the collection system. We receive wastewater from Bristol, Pleasant Prairie and Somers.

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

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

POTW Influent: pounds/day

Year	Cadmium	Chromium	Copper	Nickel	Lead	Zinc	Mercury
1995	0.14	4.7	16.2	1.7	2.6	20.0	
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

* 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
1995	< 0.07	< 0.24	3.3	1.6	< 0.28	3.8	
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

Wastewater Treatment Plant

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“Providing and Protecting Kenosha’s Greatest Natural Resource”

May 2014

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

Subject: 2013 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 38 (February 2) to 156 (May 4) with an average of 88 per event. The total number of participants in 2013 was 1,664.

Respectfully submitted,

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

Katrina Karow
Director of Wastewater Treatment

Kenosha Household Hazardous Waste Program Participation

2013 Collection Dates and Number of Participants

January 5	43 participants
February 2	38 participants
March 2	48 participants
April 6	110 participants
May 4	156 participants
May 18	84 participants
June 1	102 participants
June 15	54 participants
July 6	123 participants
July 20	70 participants
August 3	111 participants
August 17	67 participants
September 7	110 participants
September 21	89 participants
October 5	110 participants
October 19	67 participants
November 2	125 participants
November 16	78 participants
December 7	79 participants
Total Participants	1,664

The program averaged 88 participants per collection day.

Household Hazardous Waste Unit Comparative Income Statement

	<u>2013</u>	<u>2012</u>	<u>2011</u>
Operating Revenue			
Residential	\$ 167,377.55	\$ 167,168.87	\$ 167,072.27
Stormwater Administration	14,040.00	14,040.00	14,040.00
Penalties	4,030.14	4,127.45	4,310.15
Total Operating Revenue	<u>185,447.69</u>	<u>185,336.32</u>	<u>185,422.42</u>
Operating Expenses			
Labor and Supplies	41,922.28	42,324.37	41,105.73
Outside Disposal Service	33,968.20	34,246.63	25,113.58
Costs Allocated from Other Funds:			
Wages	66,239.18	64,455.41	64,600.72
Postage	8,292.62	7,718.16	7,222.14
Other	2,923.77	2,844.49	2,666.04
Depreciation	3,125.24	2,561.16	1,997.08
Total Operating Expenses	<u>156,471.29</u>	<u>154,150.22</u>	<u>142,705.29</u>
Operating Income	28,976.40	31,186.10	42,717.13
Other Income			
Interest Income	170.69	152.61	166.52
Net Income	<u>\$ 29,147.09</u>	<u>\$ 31,338.71</u>	<u>\$ 42,883.65</u>

**Household Hazardous Waste Unit
Plant in Service and Accumulated Depreciation
For the year ended December 31, 2013**

		Plant in Service				
	Depr. Rate %	Cost of Plant 1/1/2013	2013 Additions	2013 Retirements	Adjustments Incr/(Decr)	Cost of Plant 12/31/2013
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 1/1/2013	2013 Depreciation	Less Cost of Retirements	Add Cash Received	Adjustments Incr./Decr.	Balance 12/31/2013
General Plant						
Structures and Improvements	\$ 11,327.76	3,055.93	-	-	-	\$ 14,383.69
Equipment	685.47	69.31	-	-	-	754.78
Total	<u>\$ 12,013.23</u>	<u>3,125.24</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>\$ 15,138.47</u>