

## CITY OF OAK CREEK WATER & SEWER UTILITY

### OFFICIAL NOTICE

**PLEASE TAKE NOTICE** that the Water and Sewer Utility Commission will meet at the Oak Creek Water & Sewer Utility, 170 West Drexel Avenue, Oak Creek, Wisconsin, 53154 on Tuesday, December 13, 2016, at 9:00 am.

The purpose of this meeting will be to discuss the topics listed on the attached agenda.

It is possible that members of and possibly a quorum of members of our governmental bodies of the municipality may be in attendance at the above-stated meeting to gather information; no action will be taken by any governmental body at the above-stated meeting other than the governmental body specifically referred to above in this notice.

### **PUBLIC NOTICE**

**Please Note:** Upon reasonable notice, a good faith effort will be made to accommodate the needs of disabled individuals through sign language interpreters or other auxiliary aid at no cost to the individual to participate in public meetings. Due to the difficulty in finding interpreters, requests should be made as far in advance as possible, preferably a minimum of 48 hours. For additional information or to request this service, contact the Oak Creek City Clerk at 414-766-7023 or write to the ADA Coordinator at the Health Department, City Hall, 8040 South 6<sup>th</sup> Street, Oak Creek, Wisconsin, 53154.

**DATED**, at Oak Creek, Wisconsin, this the 8th day of December, 2016.

/s/ Michael J. Sullivan  
General Manager

**A G E N D A**  
**WATER AND SEWER UTILITY COMMISSIONERS**  
**CITY OF OAK CREEK**

<u>TIME</u>	<u>DATE</u>	<u>LOCATION</u>
9:00 am	Tuesday December 13, 2016	Headquarters Building 170 West Drexel Avenue

**1.0 OPENING OF MEETING**

- 1.1 Roll Call
- 1.2 Minutes Approval - Regular Meeting 11-08-16

**2.0 CLOSED SESSION**

- 2.1 Closed session in accordance with Section 19.85 (1) (g) of the Wisconsin State Statutes for the following purpose:
  - A. CT Tank Compliance Project
  - B. Waukesha Water Sales Agreement

**3.0 PROJECT APPROVALS**

- 3.1 Award 2016 Sanitary Sewer Rehabilitation Project

**4.0 MISCELLANEOUS MATTERS**

- 4.1 Chemical Bids
- 4.2 Amendment #3 to the Professional Services Agreement with CH2M

**5.0 FINANCIAL MATTERS**

- 5.1 Project Payment Approval
- 5.2 Voucher Approval
- 5.3 Utility Investments
- 5.4 Interfund Loan Interest Rate
- 5.5 2017 Capital Budget Approval

**6.0 ADMINISTRATIVE & OPERATIONS REPORTS**

- 6.1 Aldermanic Report
- 6.2 Administrative Operations Report
- 6.3 Engineering Operations Report
- 6.4 Distribution Operations Report
- 6.5 Plant Operations Report
- 6.6 Manager's Report

**7.0 ADJOURN**

## 2016 Sanitary Sewer Rehabilitation Project Contract Award

Project Nos.: 16107

Date: December 13, 2016

**RECOMMENDATION: That the Commission consider a motion to approve the 2016 Sanitary Sewer Rehabilitation Project and award a construction contract to the lowest responsive, responsible bidder, Advance Construction Inc., based on the bid amount of \$490,251.00.**

This project includes rehabilitation of the sanitary sewer system including full length lining, spot lining, spot repairs, full manhole-to-manhole sanitary sewer relays, and manhole rehabilitation.

The work was advertised, and the following bids were received:

<b>Contractor</b>	<b>Bid Amount</b>
<b>Advance Construction, Inc.</b>	<b>\$490,251.00</b>
Visu-Sewer, Inc.	\$502,434.00
Globe Contractors, Inc.	\$508,041.00
UPI LLC	\$528,767.00
Michel's Corporation	\$554,897.00
American Sewer Services, Inc.	\$560,272.07
Mid City Plumbing, Inc.	\$685,524.50

The capital budget for construction on this project is \$645,000.

# Memorandum

**To:** OCWSU Commissioners  
**CC:** OCWSU Staff  
**From:** Patrick Francis  
**Date:** 12/6/2016  
**Re:** Chemical Bids

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The chemical quotes for 2017 are as follows:

<b>Coagulant</b>	<b>H1050A</b>
<b>2017 Bid</b>	<b>\$0.1978/lb*</b>
<b>2016 Bid</b>	<b>\$0.2405/lb</b>
<b>Est. Usage</b>	<b>400,000 lbs</b>
<b>Est. Cost</b>	<b>\$79,120.00</b>
<b>Vendor</b>	<b>USALCO</b>

<b>Disinfectant</b>	<b>Sodium Hypochlorite</b>
<b>2017 Bid</b>	<b>\$0.06940/lb*</b>
<b>2016 Bid</b>	<b>\$0.06990/lb</b>
<b>Est. Usage</b>	<b>600,000 lbs</b>
<b>Est. Cost</b>	<b>\$41,640.00</b>
<b>Vendor</b>	<b>Alexander</b>

**Fluoride      Hydrofluosilicic Acid**

**2017 Bid      \$0.2130/lb\***

2015 Bid      \$0.2290/lb

Est. Usage      95,000 lbs

Est. Cost      \$20,235.00

Vendor      Alexander

**Potassium Permanganate      Carus Free Flowing**

**2017 Bid      \$3.55/lb**

2016 Bid      \$3.55/lb

Est. Usage      7,000 lbs

Est. Cost      \$24,850.00

Vendor      Hawkins Chemical

AIC low bid @ \$1.80/lb not recommended, product impurities

**Powdered Activated Carbon**

**2017 Bid      \$0.88/lb\***

2016 Bid      \$1.083/lb

Est. Usage      50,000 lbs

Est. Cost      \$44,000.00

Vendor      Hydrite

\*Low Bid

*Only Bid*

### **Amendment #3 to the Professional Services Agreement with CH2M**

Date: December 13, 2016

**RECOMMENDATION: That the Commission consider a motion to authorize the Utility Engineer to amend the existing professional services agreement with CH2M in order to provide design permitting services for the CT Tank Compliance Project in the not to exceed amount of \$250,000.**

The CT Tank Compliance project construction authorization was denied by the Public Service Commission of Wisconsin (PSC) in September 2016. The plans and specifications need to be re-designed based on the comments of the Public Service Commission in order to secure a permit to construct the facilities. The elements of the new design include:

- 1) Smaller capacity pumps in the intermediate and high lift pump stations for an initial firm capacity of 20 million gallons per day (mgd). Three 10mgd pumps with one future pump space provided. The original design had two 12mgd pumps, two 9mgd pumps, and two future pump spaces in the intermediate and high lift pump stations
- 2) Two UV reactors with space for one future UV reactor. The original design had three UV reactors with space for one future reactor
- 3) Smaller buildings in the UV and high lift pump station rooms
- 4) Relocating the fluoride and sodium hypochlorite rooms from the north side of the high lift pump station to the west side

# 2017 CAPITAL BUDGET

## SUMMARY SHEET

### Capital Budget Financed by Operations:

Administrative and General	\$	12,000.00
Distribution		146,650.00
Engineering		18,000.00
Treatment Plant		32,500.00
Capital Improvement Projects		4,635,000.00
Projects in Progress		<u>4,015,000.00</u>
<b>Total 2017 Capital Budget</b>	<b>\$</b>	<b><u>8,859,150.00</u></b>

## 2017 CAPITAL BUDGET

		<u>Total</u>	<u>Water</u>	<u>Sewer</u>
Administration	Copy Machine	\$ 12,000.00	\$ 8,400.00	\$ 3,600.00
Distribution	2004 Vehicle Replacement	30,000.00	30,000.00	-
	Sewer Tractor	16,650.00	-	16,650.00
	Meter Exchange Program	60,000.00	60,000.00	-
	Backhoe Replacement Reserve	20,000.00	20,000.00	-
	Tandem Dump Truck Reserve	20,000.00	20,000.00	-
	Subtotal	<u>146,650.00</u>	<u>130,000.00</u>	<u>16,650.00</u>
Engineering	GIS Mobile Tool Upgrade	<u>18,000.00</u>	<u>12,600.00</u>	<u>5,400.00</u>
Treatment Plant	Dehumidification Equipment Installation	15,000.00	15,000.00	-
	Sample Pump and CL2 Analyzer	7,500.00	7,500.00	-
	22nd Street Booster Station Roof	10,000.00	10,000.00	-
	Subtotal	<u>32,500.00</u>	<u>32,500.00</u>	<u>-</u>
Projects	13th Street Hydrant Relocation Project (Design)	35,000.00	30,000.00	5,000.00
	2017 Water Valve Cut-In Project	275,000.00	275,000.00	-
	Ridgeview Drive Water Main Loop	300,000.00	300,000.00	-
	Sanitary Sewer Rehabilitation	800,000.00	-	800,000.00
	Low Lift Drive Landscaping Project	15,000.00	15,000.00	-
	Security Upgrades	200,000.00	140,000.00	60,000.00
	Jewell Street Sanitary Sewer Lift Station Replacement	530,000.00	-	530,000.00
	CT Tank Compliance Project Permitting	250,000.00	250,000.00	-
	Pipeline Route Study	100,000.00	100,000.00	-
	CT Tank Compliance Project	2,000,000.00	2,000,000.00	-
	Knights Way Water Main Relay (Not Recommended by Staff)	130,000.00	130,000.00	-
	Subtotal	<u>4,635,000.00</u>	<u>3,240,000.00</u>	<u>1,395,000.00</u>
<b>TOTAL</b>		<u>\$4,844,150.00</u>	<u>\$3,423,500.00</u>	<u>\$1,420,650.00</u>

### Five Year History

<u>Year</u>	<u>Total</u>	<u>Water</u>	<u>Sewer</u>
2016	\$ 4,969,650.00	\$ 4,197,250.00	\$ 772,400.00
2015	1,875,000.00	1,758,500.00	116,500.00
2014	9,205,450.00	8,476,750.00	728,700.00
2013	3,024,800.00	2,613,360.00	411,440.00
2012	1,074,810.00	905,310.00	169,500.00



# 2017 CAPITAL BUDGET

## ADMINISTRATIVE AND GENERAL

### Copy Machine

This request is for a new color copy machine to replace the old one. The current copier is approximately seven years old and is beginning to require frequent maintenance. The typical life of a copier is five years. The new copier will allow employees to copy and print in color. It will also include a built-in fax machine and scanner.

Water	8,400.00
Sewer	3,600.00

\$ 12,000.00

### TOTAL ADMINISTRATIVE AND GENERAL BUDGET

\$ 12,000.00

Water	8,400.00
Sewer	3,600.00
<u>\$</u>	<u>12,000.00</u>

# 2017 CAPITAL BUDGET

## DISTRIBUTION

<p><b>2004 Vehicle Replacement</b></p> <p>This vehicle is a pickup used in the sewer department. It is 12 years old and maintenance is becoming an issue. The truck only has 47,000 miles on it, but 6,500 engine hours which equates to about 228,000 miles. The new vehicle would be a 1/2-ton, 2-wheel-drive pickup truck.</p> <p style="margin-left: 20px;">Water            30,000.00</p>	<p>\$    30,000.00</p>
<p><b>Sewer Tractor</b></p> <p>The Utility would like to buy a second Trans Star Tractor to use with the sewer camera. This tractor has a gear reduction and is designed for use in larger diameter pipe, but can also be used in smaller pipe. In addition, if one of the tractors would need repair, the crew would be able to continue working on inspection of the sewer lines. The tractor the Utility has now was purchased in March 2010 and has been in for repair five times to date.</p> <p style="margin-left: 20px;">Sewer            16,650.00</p>	<p>16,650.00</p>
<p><b>Meter Exchange Program</b></p> <p>In 2005, the Utility started installing Orion meter heads to replace the Trace meter heads. In 2012, Badger Meter stopped supporting the Trace meter reading equipment; therefore, the Utility did a major change-out program to Orion in 2012 and 2013, doing over 4,400 meters and heads. The meter department wants to start a change-out program in 2017, doing 450 meters and heads per year. This would be an 18-year change-out schedule.</p> <p style="margin-left: 20px;">Water            60,000.00</p>	<p>60,000.00</p>
<p><b>Backhoe Replacement Reserve</b></p> <p>The John Deere backhoe 310SE is a 1998 model with over 5,270 hours on it. Replacement cost today is approximately \$100,000. This would be the second year the Utility adds \$20,000 to the budget for the purchase of a new backhoe in the year 2018. Therefore, the total budget for the backhoe is at \$40,000.</p> <p style="margin-left: 20px;">Water            20,000.00</p>	<p>20,000.00</p>
<p><b>Tandem Dump Truck Reserve</b></p> <p>The Freightliner tandem dump truck is a 2000 model with 38,150 miles and 4,750 hours on it. Replacement cost today is approximately \$120,000. This would be the second year the Utility adds \$20,000 to the budget for the purchase of a new tandem dump truck in the year 2020. Therefore, the total budget for the dump truck is at \$40,000.</p> <p style="margin-left: 20px;">Water            20,000.00</p>	<p style="border-top: 1px solid black;">20,000.00</p>
<p><b>TOTAL DISTRIBUTION BUDGET</b></p>	<p style="border-top: 1px solid black; border-bottom: 3px double black;">\$    146,650.00</p>
<p style="margin-left: 40px;">Water</p> <p style="margin-left: 40px;">Sewer</p>	<p>130,000.00</p> <p>16,650.00</p> <p style="border-top: 1px solid black; border-bottom: 3px double black;">\$    146,650.00</p>

# 2017 CAPITAL BUDGET

## ENGINEERING

### GIS Mobile Tool Upgrade

\$ 18,000.00

The current GIS software used for tracking maintenance of the water and sewer systems is being retired by the software provider (ESRI). Thus, support for this software will no longer be provided. Consequently, the Utility needs to upgrade to a new software called ARCGIS Online. Benefits of the new system include:

- Instant updating and access to maintenance records
- Reduced paperwork redundancy
- Increased efficiency and accuracy in the GIS system

The work will consist of consultant services in moving to the new system, hardware costs and monthly data plan fees via US Cellular.

Water	12,600.00
Sewer	5,400.00

### TOTAL ENGINEERING BUDGET

\$ 18,000.00

Water	12,600.00
Sewer	5,400.00
	<u>\$ 18,000.00</u>

# 2017 CAPITAL BUDGET

## TREATMENT PLANT

<b>Dehumidification Equipment Installation</b>		\$	15,000.00
In the 2016 CIP Budget, \$125,000 was approved for the upper Kathabar unit replacement. An additional \$15,000 is being requested for removal, fabrication and installation.			
Water	15,000.00		
<b>Sample Pump and CL2 Analyzer</b>			7,500.00
An additional chlorine sample point would be created to monitor the chlorine residual after the filters. This would validate our CT calculations.			
Water	7,500.00		
<b>22nd Street Booster Station Roof</b>			<u>10,000.00</u>
A roof at 22nd Street Booster Station needs to be replaced due to leakage. The existing roof was last replaced in 2003.			
Water	10,000.00		
<b>TOTAL TREATMENT PLANT BUDGET</b>		\$	<u><u>32,500.00</u></u>
	Water		32,500.00
	Sewer		-
		\$	<u><u>32,500.00</u></u>

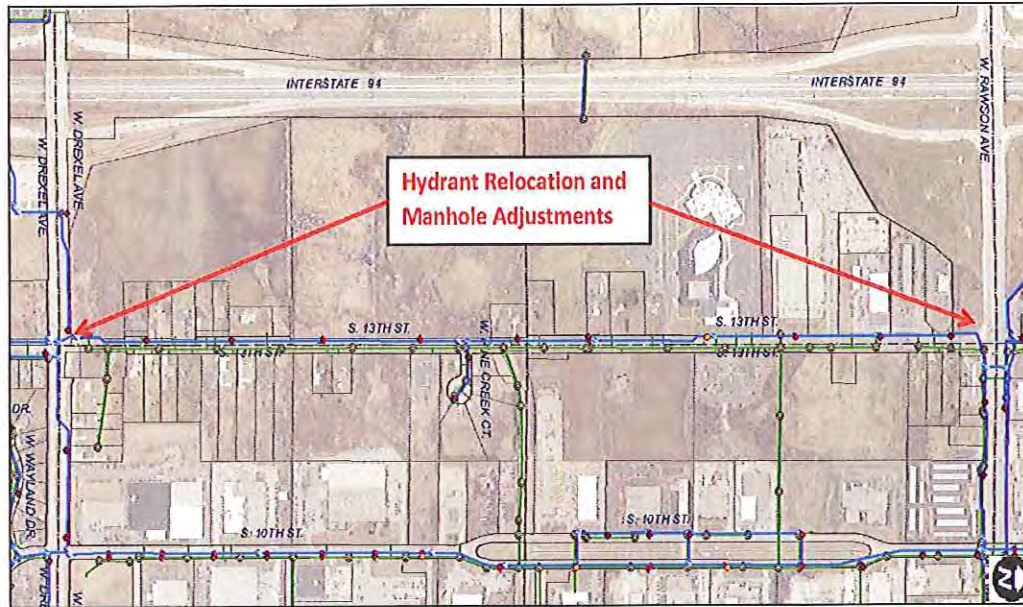
# 2017 CAPITAL BUDGET

## CAPITAL IMPROVEMENT PROJECTS

### 13th Street Hydrant Relocation Project (Design Only)

\$ 35,000.00

Milwaukee County plans on reconstructing South 13th Street between West Drexel Avenue and West Rawson Avenue in 2018. This project includes relocating fire hydrants along the South 13th Street construction corridor, adjusting sanitary manholes and adjusting valves.

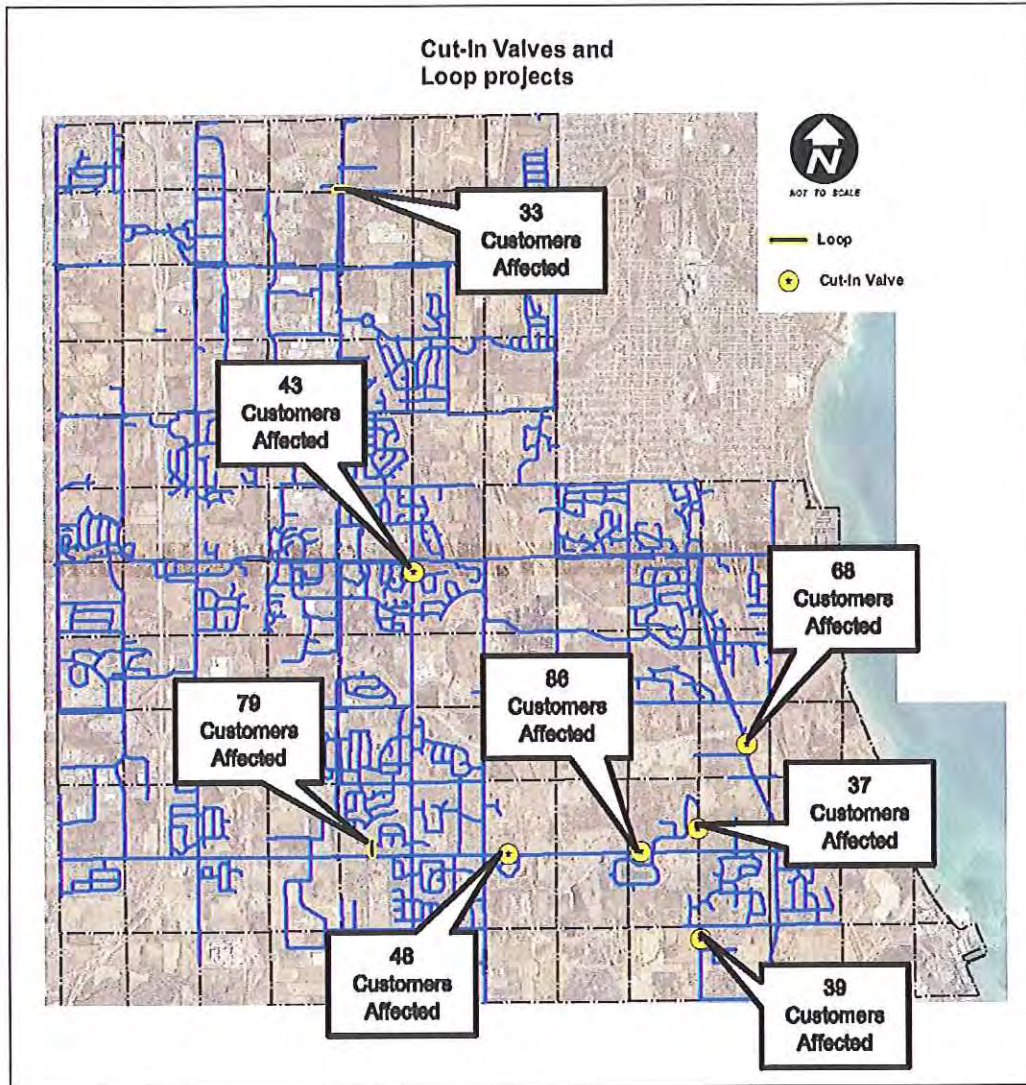


Water	30,000.00
Sewer	5,000.00

**2017 Water Valve Cut-in Project**

275,000.00

This project consists of installing valving in the water system to ensure redundancy in the case of a water main break. Utilizing the Utility's GIS system, vulnerable locations were determined where a single point of failure would cause large amounts of customers to be without service. Each location was prioritized based on the amount of customers that would be without water service should a single point of failure occur.



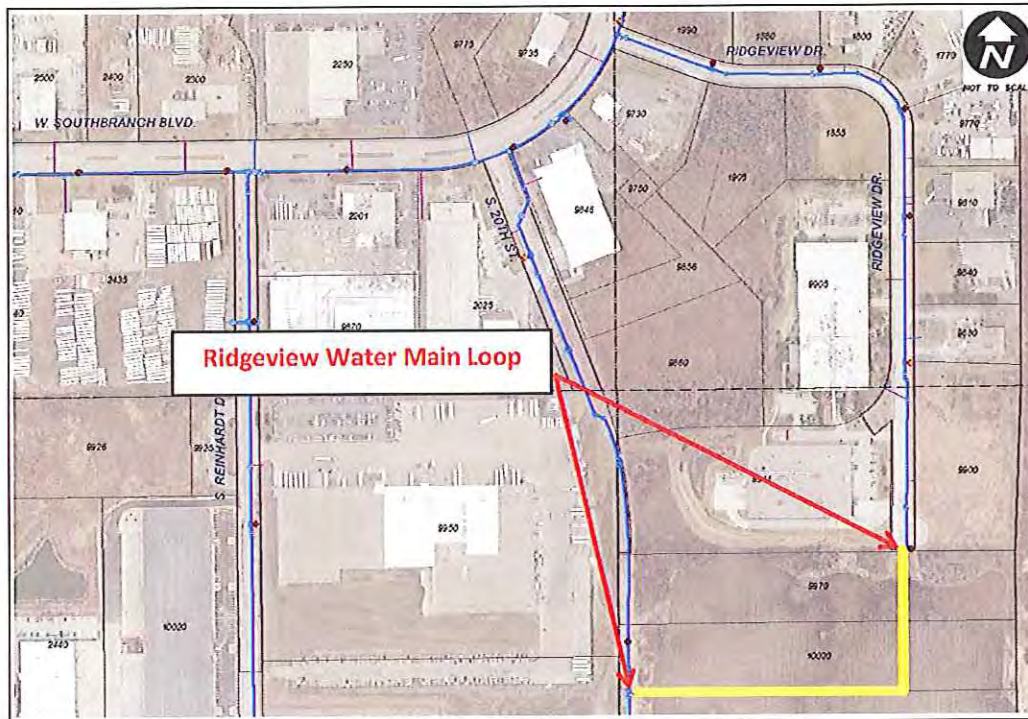
The project also includes looping of mains where possible in order to provide a second feed to areas with only one water main feed.

Water 275,000.00

### Ridgeview Drive Water Main Loop

300,000.00

This project consists of extending approximately 1,300' of water main between Ridgeview Drive and South 20th Street. The dead end at Ridgeview produces the worst chlorine residual measurements in the City. By creating a loop in the existing system, the flow of water will improve and result in less chlorine degradation. The results of an extended period water modeling simulations show that in its current state, it takes 18 days for the water in the pipe to be turned over. The addition of this loop will result in turning the volume of water in the pipe over every 2.3 hours.

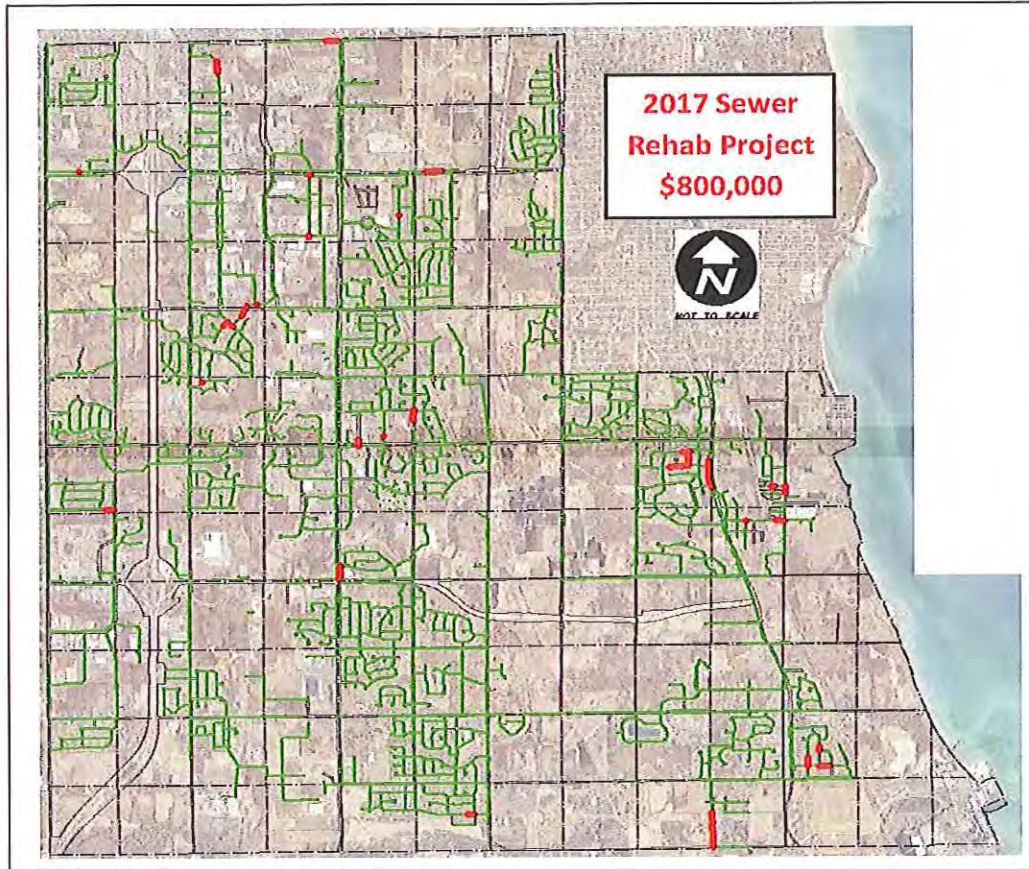


Water 300,000.00

### Sanitary Sewer Rehabilitation

800,000.00

This project is the second installment in a five-year sanitary sewer rehabilitation process and consists of lining approximately 8,000' and relaying approximately 1,000' of sanitary sewer pipe. Utility distribution crews have televised all sanitary sewers. Those sewers have been evaluated using the NAASCO rating system and prioritized based on the severity of the defects. This project will continue to address the most critical sanitary sewer areas in the City of Oak Creek.



Sewer 800,000.00

### Security Upgrades

200,000.00

This project includes a Utility-wide physical and informational security vulnerability analysis culminating in realistic recommendations to improve the Utility's security posture. The work will be performed by a consultant specializing in this type of work.

The level of security around the low lift pump station has degraded due to the Lake Vista project. The fence line along the south side of the building is no longer there as a deterrent. With an overlook being placed within close range of the station, security concerns have increased.

The CT Tank Compliance project will add approximately thirty new cameras to the system. Strategies for their employment need to be addressed. Challenges regarding operator interfaces at the treatment plant operations center itself will also be a part of this project.



Information technology - especially GIS tools - have improved to a point where mobile devices using an internet connection are able to update GIS mapping in real time. In fact, support for the older software is not being offered in favor of internet mobile devices. This is the general direction in which the industry is moving. Greater internet connectivity means there could be additional information security risks/vulnerabilities. The current mobile tool used by Utility distribution personnel does not have internet connectivity, will no longer be supported and requires separate entry into the GIS system. While this lack of connectivity is inherently more secure, it adds an extra step in the process of entering important information on water main breaks, maintenance cards, valve operations and sewer inspections. Moving toward an internet-based mobile tool will require a security evaluation to ensure the right security measures are in place.

Water	140,000.00
Sewer	60,000.00

**Low Lift Drive Landscaping Project**

15,000.00

The purpose of this project is to strategically place landscaping elements in order to provide additional security for the low lift pump station. The new construction in the vicinity has resulted in a less secure entrance to the low lift pump station. In order to mitigate the security risk, this project proposes to emplace trees, shrubs and large decorative boulders at the entrance area to the low lift road in order to dissuade deliberate and/or mistaken entrance to the facility.



Water	15,000.00
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## Jewell Street Sanitary Sewer Lift Station Replacement

530,000.00

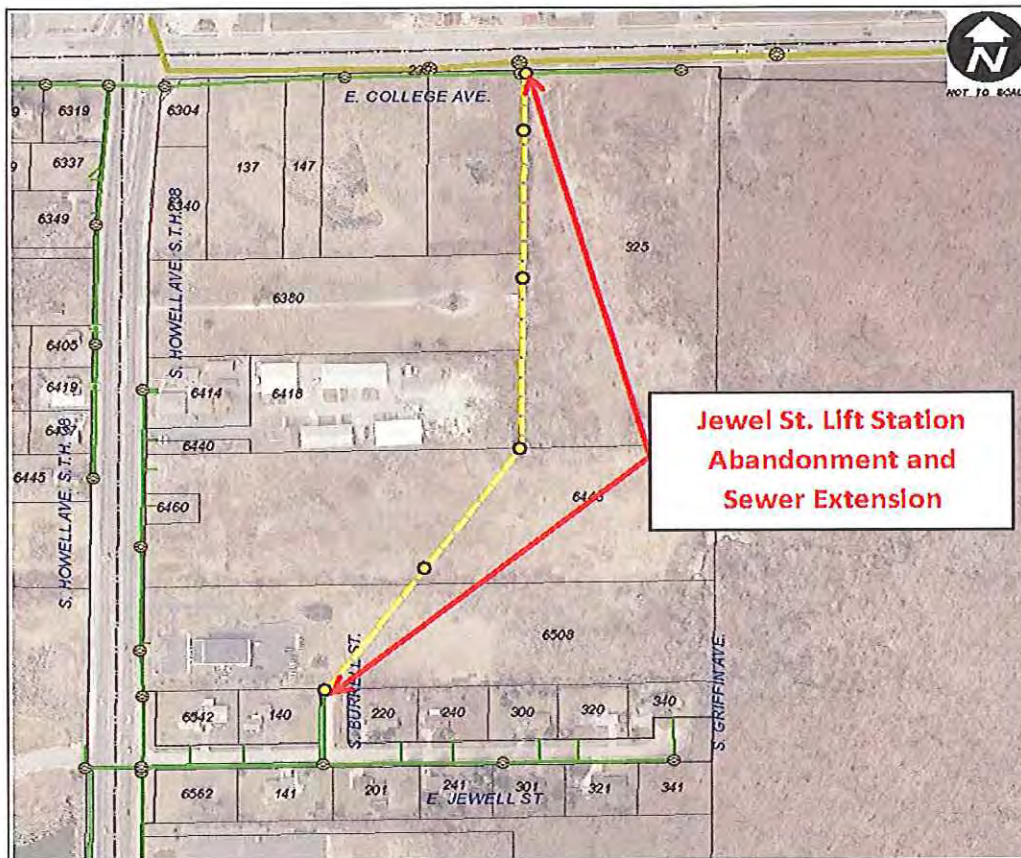
This project consists of recommending alternatives for replacement of the East Jewell Street Lift Station.

### Alternative 1

Alternative 1 consists of replacing the existing lift station. A typical design life of a lift station is twenty years with components as follows:

Lift Station Structure = 40 years	} All components 37 years old
Pumps and Controls = 20 years	
Motors = 10 years	
Impellers = 7 years	
Valves = 25 years	

Cost to Construct Lift Station = \$250,000  
Lift Station Power Costs = \$25,000  
Yearly Maintenance Costs = \$84,000  
Replacement of Pumps and Control Panels = \$74,000  
Cleaning and Televising Gravity Sewer = \$15,000  
Total 20-Year Present Value = \$448,000



Alternative 2

Alternative 2 consists of a specially assessable project proposed to eliminate the East Jewell Street Lift Station by extending approximately 1,750' of sanitary sewer north to East College Avenue. The existing lift station is 37 years old and needs replacement. The 20-year life cycle cost for a new lift station is approximately \$448,000 including yearly operation and maintenance costs, power, pumps and controls replacement.

Cost to Construct Gravity Sewer = \$444,000  
Operation and Maintenance Costs = \$15,000  
Approximate Costs Recovered Through Special Assessments = Up to \$167,226  
Total 20-Year Present Value = \$291,774

The gravity solution will produce a more lasting resolution with a 20-year life cycle cost of \$291,774. While the 20-year present values were calculated for comparison purposes, new PVC sanitary sewer gravity main useful life is 77 years as per the Public Service Commission of Wisconsin. Furthermore, the operation and maintenance costs only consist of cleaning and televising the new sewer line.

Other factors besides cost are worth considering. The gravity alternative is much more reliable than the lift station alternative. Lift stations are always susceptible to power failures. While a new station would have back-up generation, the length of outage may over stress the capabilities of the generator and thus cause sewer back-ups in the tributary area served by it. Furthermore, the cost of private property damage caused by sewer back-ups as a result of lift station failures are borne by the Utility.

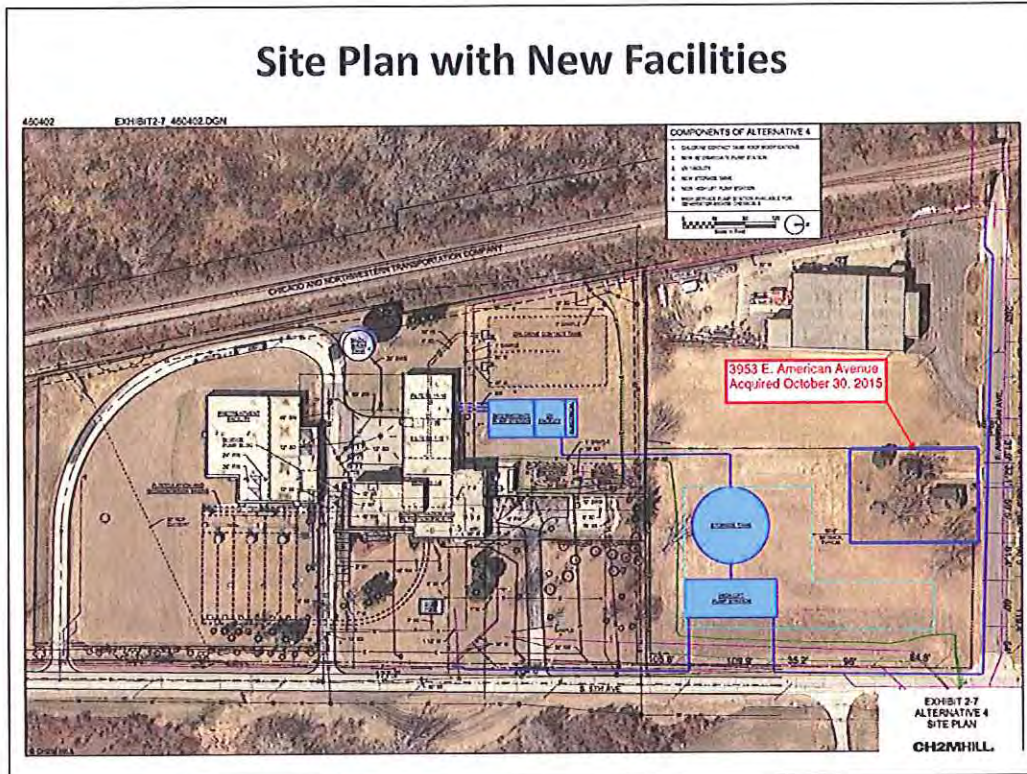
Thus the cost of installing gravity sanitary sewer main in a 20-year design window is less than the cost to construct a new lift station. Additionally, operations and maintenance costs are much greater for a lift station than the gravity solution. Finally, the gravity solution is much more reliable and less susceptible to outside influences. For these reasons, the gravity solution is recommended. The alternatives evaluation conducted in this scenario only include construction costs. The costs for design, construction inspection, and administration are not included. Thus the capital budget for this project is higher when compared with Alternative 2 because all of the above mentioned costs are included.

Sewer            530,000.00

### CT Tank Compliance Project Permitting

250,000.00

The Utility began design work on this project in 2014, which will correct code compliance issues with the existing CT tank. The application for construction authorization for the project was denied by the Public Service Commission of Wisconsin (PSC) in September 2016. Thus a new construction authorization permitting process must begin with a design whose components meet the requirements of the PSC as outlined in their findings.



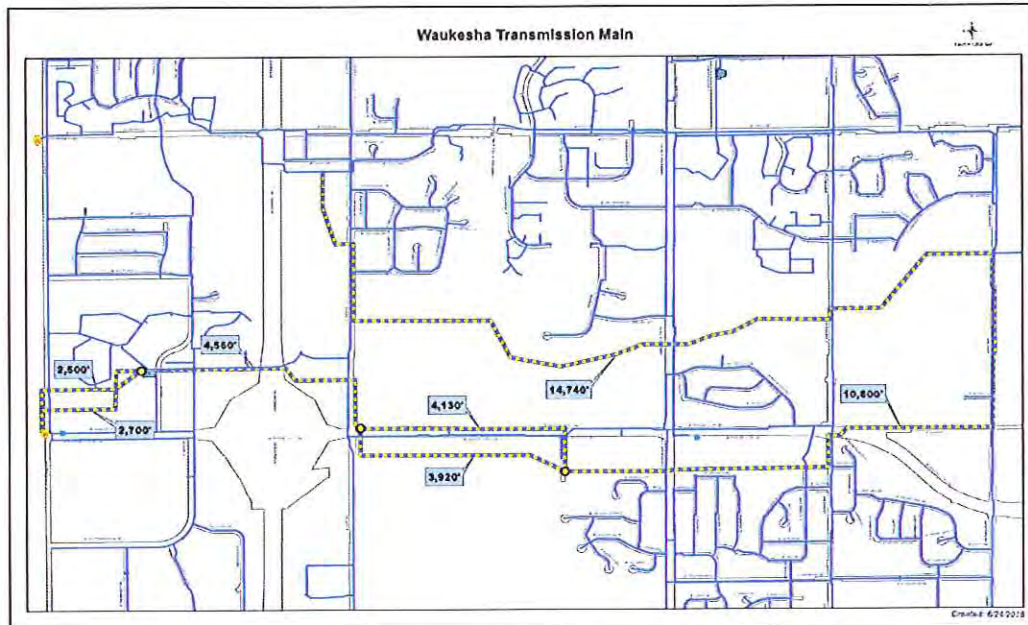
This project includes submitting a new construction authorization permit application to the PSC with design elements that meet their requirements.

Water 250,000.00

### Pipeline Route Study

100,000.00

As the Utility addresses the possibility of providing water to Waukesha on a wholesale basis, there is a need to determine the route and infrastructure needed to provide that service. The purpose of this project is to determine the route and infrastructure requirements to serve a new customer such as Waukesha.



Water 100,000.00

### CT Tank Compliance Project

2,000,000.00

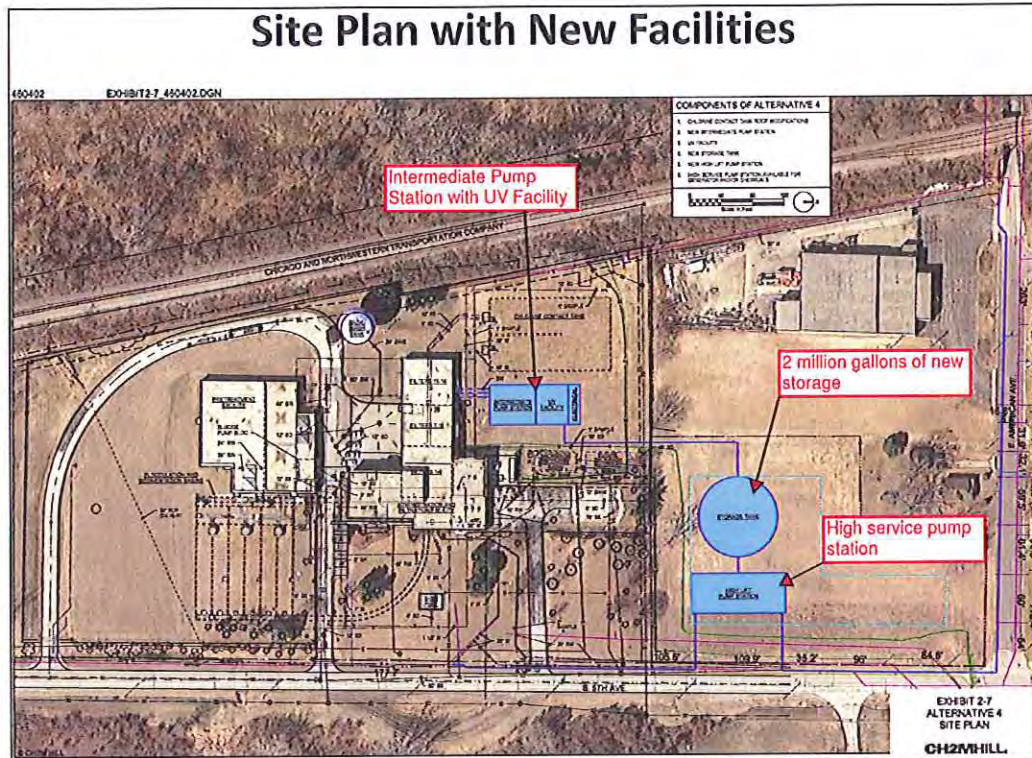
This project was initially part of the 2016 Capital Improvement Program. The construction authorization for the project was filed with the Public Service Commission of Wisconsin (PSC) in March of 2015 and has yet to be approved. This additional interim budget proposal is needed in order to mitigate the effects of inflation as the construction authorization process draws out over time.

The purpose of this project is to construct improvements at the water treatment plant site to address WDNR code compliance issues with the existing chlorine contact (CT) tank. In 2008, the WDNR told the Oak Creek Water and Sewer Utility that all CT tank issues needed to be resolved within 10 years. That time is fast approaching.

The WDNR raised code compliance issues with the CT tank in December 2007, as outlined below:

- There is no means to take the CT tank down for a full inspection. A full drain-down inspection is required at least every 10 years.
- There is no overflow for the CT tank.
- The tank's existing base is below the ground water elevation.
- The pipes to and from the CT tank are not under continuous pressure higher than the groundwater elevation.
- The top of the CT tank is not 2 feet above normal ground elevation.
- The roof has no slope and likely no membrane.

In addition, the high lift pump station has a concrete wet well that is below groundwater and violates the same WDNR code as the CT tank. The WDNR also has recommended that plant storage and additional disinfection be considered at the plant.



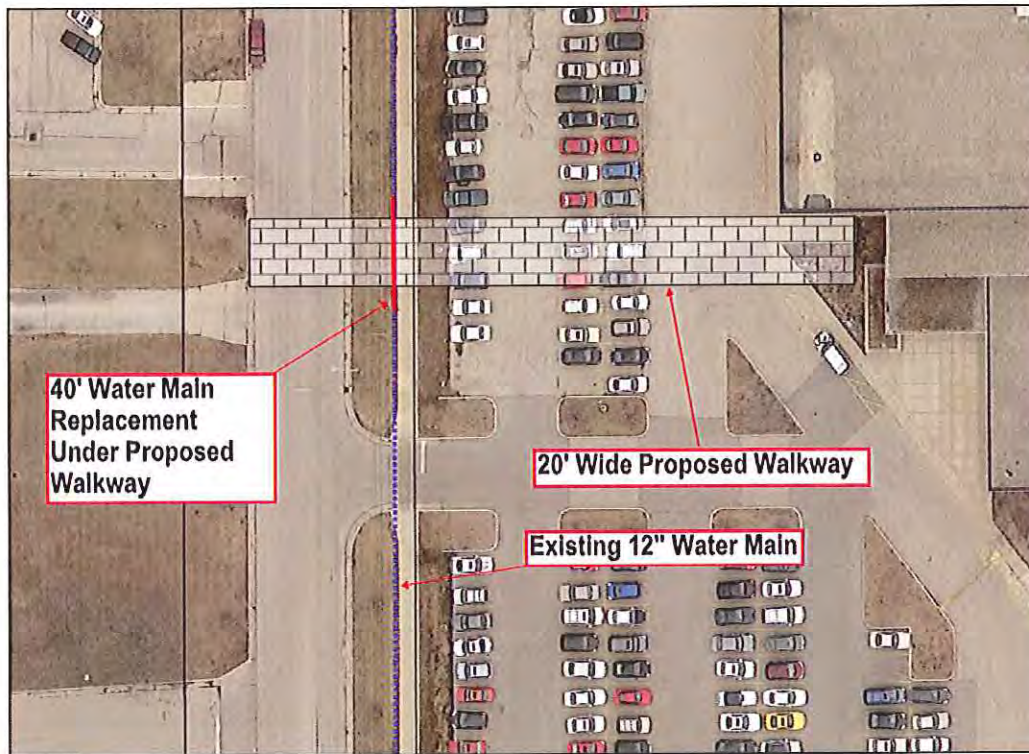
Thus, the improvements under this project include a new intermediate pump station with UV disinfection, new storage (2 million gallons), and a new high service pump station. The project also will upgrade the aged electrical system. The electrical equipment is over 40 years old, does not meet all safety requirements and some spare parts are not available. New equipment is more reliable and safer, ensuring uninterrupted water service from this critical water supply asset.

Water 2,000,000.00

**Knights Way Water Main Relay (Not Recommended by Staff)**

130,000.00

Oak Creek Franklin Joint School District has requested that 620' of 12" cast iron pipe be relayed along Knight's Way due to their construction of new facilities (school campus addition) to the west. The plans for the new school show a walkway with overhead protection over approximately 40' of existing pipe. The concern is that a water main break or maintenance on the pipe will cause considerable damage to pavement and overhead structure. In the last twenty years, there have been two water main breaks on this 1960's vintage cast iron water main (0.61 breaks/mile/year).



Using break history as a criteria for determining a priority list for pipes to relay, this segment of pipe does not fall within the top ten City-wide. Thus, the Engineering Department recommends that the Commission reject this project because of its low priority rating within the Utility's system. The Engineering Department further recommends that if the school district has concern regarding this pipe, they should relay this segment or a portion of it as part of their development project.

Water 130,000.00

**TOTAL CAPITAL IMPROVEMENT PROJECTS BUDGET**

\$ 4,635,000.00

Water	3,240,000.00
Sewer	1,395,000.00
	<u>\$ 4,635,000.00</u>

## 2017 CAPITAL BUDGET

<u>PROJECTS IN PROGRESS</u>		<u>Total Budgeted</u>	<u>Amount Remaining as of 12/31/16</u>	<u>Water</u>	<u>Sewer</u>
683	Partnership for Safe Water Distribution Improvements	40,000.00	16,840.11	16,640.11	-
693	Chlorine Flow Meter Replacement	10,000.00	10,000.00	10,000.00	-
-	Full Water System Master Plan	300,000.00	300,000.00	300,000.00	-
-	Well No. 1 and Well No. 3 Abandonments	450,000.00	450,000.00	450,000.00	-
16109	I94 and Ryan Road Interchange Improvements	40,000.00	26,029.70	26,029.70	-
-	Forest Hill Water Main Relay Project (Construction Only)	260,000.00	260,000.00	260,000.00	-
16102	CT Tank Compliance Project	2,000,000.00	1,999,091.91	1,999,091.91	-
16107	Sanitary Sewer Lining	700,000.00	656,059.76	-	656,059.76
-	Sewer Machine Dump Site	50,000.00	50,000.00	-	50,000.00
-	Backhoe Replacement Reserve	20,000.00	20,000.00	20,000.00	-
-	Tandem Dump Truck Reserve	20,000.00	20,000.00	20,000.00	-
-	Dehumidification Equipment Replacement at Plant	125,000.00	125,000.00	125,000.00	-
<b>TOTAL PROJECTS IN PROGRESS BUDGET</b>		<b>\$ 4,016,000.00</b>	<b>\$ 3,932,821.48</b>	<b>\$ 3,226,761.72</b>	<b>\$ 706,059.76</b>



## ADMINISTRATIVE OPERATIONS

November 2016

### Capital Budget:

Accounting Supervisor Stenzel prepared the Utility's capital budget for 2017.

### Delinquent Notices:

Senior Accountant Leranath compiled a list of delinquent accounts to be placed on the City of Oak Creek's tax roll. The following table summarizes the accounts rolled to the tax bills for 2016, 2015 and 2014:

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>Variance</u> <u>2016 vs. 2015</u>	<u>Variance</u> <u>2015 vs. 2014</u>
Number of delinquent notices	<u>1,406</u>	<u>1,348</u>	<u>1,412</u>	<u>4.30 %</u>	<u>(4.53) %</u>
Number of customers rolled	<u>722</u>	<u>701</u>	<u>736</u>	<u>3.00 %</u>	<u>(4.76) %</u>
<b>Amounts rolled:</b>					
Water	\$ 249,033	\$ 226,688	\$ 230,492	9.86 %	(1.65) %
Water penalties	<u>25,069</u>	<u>22,751</u>	<u>22,827</u>	<u>10.19</u>	<u>(0.33)</u>
Total	<u>274,102</u>	<u>249,439</u>	<u>253,319</u>	<u>9.89</u>	<u>(1.53)</u>
Sewer	72,255	70,270	70,295	2.82	(0.03)
Sewer penalties	<u>7,264</u>	<u>7,052</u>	<u>6,922</u>	<u>3.01</u>	<u>1.88</u>
Total	<u>79,519</u>	<u>77,322</u>	<u>77,217</u>	<u>2.84</u>	<u>0.14</u>
Metro	102,261	89,785	85,917	13.89	4.50
Metro penalties	<u>10,204</u>	<u>8,948</u>	<u>8,391</u>	<u>14.04</u>	<u>6.64</u>
Total	<u>112,465</u>	<u>98,733</u>	<u>94,308</u>	<u>13.91</u>	<u>4.69</u>
<b>TOTAL</b>	<u>\$ 466,086</u>	<u>\$ 425,494</u>	<u>\$ 424,844</u>	<u>9.54 %</u>	<u>0.15 %</u>

### Credit Card Processing Terminal:

The Utility will be adding a credit card processing terminal at the front counter, which should be completed in January 2017. This terminal will allow customers to conveniently pay their utility bills by credit card in our office.

### Meetings:

Accounting Supervisor Stenzel attended the Wisconsin Section of AWWA Leadership Meeting held in Madison on November 4.

### Workload:

Other administrative tasks included the following:

1. Added 6 customer accounts.
2. Billed 3,253 water customers and 3,376 sewer customers.

**Gallons Billed (in thousands):**

	YTD 2016	YTD 2015	YTD 2014	YTD 2013	YTD 2012	Average
Residential	394,149	382,748	373,423	386,804	452,859	397,997
Commercial	424,804	417,471	404,850	391,715	423,232	412,414
Industrial	405,463	359,439	372,230	359,707	336,481	366,664
Public Authority	13,858	21,475	16,877	20,178	23,048	19,087
Wholesale	1,130,097	1,203,894	1,119,490	1,156,845	1,272,908	1,176,647
Total	2,368,371	2,385,027	2,286,870	2,315,249	2,508,528	2,372,809
% Incr (Decr)	-0.7%	4.3%	-1.2%	-7.7%		

**New Customers:**

	YTD 2016	YTD 2015	YTD 2014	YTD 2013	YTD 2012	Average
Residential	26	22	20	28	32	25.6
Commercial	27	10	1	1	5	8.8
Industrial	0	1	0	0	0	0.2
Public Authority	1	3	1	0	0	1.0
Wholesale	0	0	0	0	0	-
Total	54	36	22	29	37	36
% Incr (Decr)	50.0%	63.6%	-24.1%	-21.6%		

**New Commercial Customers (YTD 2016):** Centennial Park (10 accounts), Chick Fil A (2 accounts), Pet Smart (2 accounts), Mattress Firm, Ryan Road Car Wash, Emerald Row Apartments, Sewing by Suzy, Autumn Creek Assisted Living Home, Splash Pad, Wheaton Franciscan Healthcare (2 accounts), Southfield Apartments (4 accounts), Main Street Apartments

**Public Authority (YTD 2016):** Oak Creek – Franklin School District

## **ENGINEERING OPERATIONS**

**November 2016**

### **I-94 and Ryan Road Water Main Crossing**

On November 28 and November 30, 2016 soil borings were advanced on the east and west side of the interstate near the proposed connection points for the new water main pipe crossing I-94 at Ryan Road. The soils will be analyzed to determine if the location we have selected for the new water main will adequately accept a jack and bored pipe. Once complete, a final determination as to the location of the pipe will be determined.

There is no new information from the Wisconsin Department of Transportation (WisDOT) as to whether or not they will build their project in calendar year 2017. Thus Engineering will complete the design of the project but will not reserve funds via the 2017 Capital Improvement Program until such time as a more definitive timeline is determined by WisDOT for the construction of their project.

### **2016 Sanitary Sewer Rehabilitation Project**

Bids were open for this project on November 11, 2016. Advance Construction, Inc. from Green Bay submitted the low proposal in the amount of \$490,251.00. Advance Construction has done water main work for the Utility in the past five years on the 24" PCCP transmission main in Puetz Road, and the County Line Road water main extension. For both of these projects, the workmanship, communication, and timeliness were excellent.

The contractor is expected to start with the excavation portion (i.e. sanitary relays and spot repairs) of the project the first week in January. In mid-March, the pipe lining portion will begin and last through mid-May.

### **Partnership for Safe Water Distribution Improvements**

All mechanical, plumbing, and cabinetry is complete for this project. The electrical will be complete the second week in December. CH2M will be integrating the data from the chlorine analyzers into the SCADA system. Once complete, plant operators will be able to monitor continuous data from both Sycamore Tower and Howell Tower as to the chlorine residual, pH, and temperature of the water in these facilities. In turn, the Utility will be able to optimize its operation at these facilities as per the requirements of the Partnership for Safe Water.

### **CT Tank Compliance Project**

The Utility, in conjunction with CH2M, has begun reviewing the Public Service Commission of Wisconsin's (PSC) decision regarding the CT Tank Compliance project. Preliminary discussions have begun on how to meet the criteria outlined in their decision. End State: a design that produces the desired elements that meet projected demand, and successful construction authorization permitting through the PSC.

### **Forest Hill Water Main Relay**

Plans and specifications for this project are complete. Engineering expects that the project will be advertised and bids opened in January with a February contract award.

## **DISTRIBUTION & COLLECTION OPERATIONS**

**November 2016**

**Water Main Breaks:** In the month of November there was one water main break.

On November 21<sup>st</sup> the Utility repaired a 12" DIP located 925' east of 7520 South Clement Avenue. After excavating the main, a 2" blow hole was discovered. The main was installed in 1966. This main is one of the remote mains that are walked twice a year, once in January and in the fall.

**Lateral Repairs:**

There were no lateral repairs in the month of November.

**Fire Hydrant Repairs:**

On November 15<sup>th</sup> a crew was sent to 6915 South 20<sup>th</sup> Street to repair a fire hydrant hit by a car. The Utility received a police report and the responsible party was billed.

**Valve Repair:**

On November 16<sup>th</sup> a crew was sent to 8600 South Knights Place to repair a leaking valve. When the crew excavated the valve, they found that the private water main was leaking and not the valve. The Utility notified the owner, and they will repair it. The crew replaced the old packing and bonnet bolts while the valve was exposed.

**Sewer Repairs:**

In the month of November Utility Workers performed 27 maintenance tasks including: cutting deposits, flowline repairs in manholes, installing plates across manhole plugs and cleaning the Clement Avenue lift station wet well

**Miscellaneous:**

On November 17<sup>th</sup> Utility Service Workers Volbrecht and Pier attended a seminar on best practices to improve inspection efficiency of sewer main lines and laterals at Aries Industries in Waukesha.



## PLANT OPERATIONS

November, 2016

<b>PUMPAGE REPORT</b>	<b>2016 (pumpage in gallons)</b>	<b>2015 (pumpage in gallons)</b>	<b>Percentage of Change</b>
Monthly pumpage	212,870,000	205,531,000	+3.6
Monthly average day	7,096,000	6,851,000	+3.6
Monthly peak day	(11/6/16) 10,180,000	(11/8/15) 7,580,000	+34.3
Yearly pumpage	2,636,165,000	2,543,669,000	+3.6
Yearly average day	7,869,000	7,616,000	+3.3
Yearly peak day	(8/11/16) 11,950,000	(7/31/15) 13,150,000	-9.1
West zone pumpage	92,890,000	84,200,000	+10.3

### **WATER QUALITY REPORT**

#### **Raw Water**

#### **Finished Water**

Average free chlorine		1.56 mg/l
Total chlorine		1.74 mg/l
Average alkalinity	108.6 mg/l	109.3 mg/l
Average pH		
Average fluoride	0.10 mg/l	0.76 mg/l
Average turbidity	2.74 N.T.U.	0.04 N.T.U.
Average temperature	52.1°F	
Hardness	137 mg/l	137 mg/l

**Preventative Maintenance Tasks:** Staff completed 140 preventative maintenance tasks, 2 miscellaneous work orders, and 2 safety sessions during the month.

**Winter Equipment Removal:** Staff removed the carbon feeder from the raw water pump station and stored it in the high lift pump room. Staff also removed the pumping equipment from the treatment plant fountain and drained the control pit piping.

**Plant Upgrade Project:** Plant Manager Francis attended two meetings concerning the proposed plant upgrades during the month of November.

**Wisconsin Department of Natural Resources:** Plant Manager Francis met with WDNR representative Jason Chappelle on 11-10 to clarify notes taken at the October sanitary survey meeting.

**Treatment Plant Tours:** Operators Robe and Messerschmidt led tours of the treatment plant to approximately 80 Franklin High School students on 11-28.

