



WATER, ELECTRIC, OR JOINT UTILITY ANNUAL REPORT

OF

CITY OF WAUKESHA WATER UTILITY

PO BOX 1648
WAUKESHA, WI 53187-1648

For the Year Ended: DECEMBER 31, 2018

TO

PUBLIC SERVICE COMMISSION OF WISCONSIN

P.O. Box 7854
Madison, WI 53707-7854
(608) 266-3766

This form is required under Wis. Stat. § 196.07. Failure to file the form by the statutory filing date can result in the imposition of a penalty under Wis. Stat. § 196.66. The penalty which can be imposed by this section of the statutes is a forfeiture of not less than \$25 nor more than \$5,000 for each violation. Each day subsequent to the filing date constitutes a separate and distinct violation. The filed form is available to the public and personally identifiable information may be used for purposes other than those related to public utility regulation.

I **JOSEPH P. CIURRO, CPA, ADMINISTRATIVE SERVICES MANAGER** of **CITY OF WAUKESHA WATER UTILITY**, certify that I am the person responsible for accounts; that I have examined the following report and, to the best of my knowledge, information and belief, it is a correct statement of the business and affairs of said utility for the period covered by the report in respect to each and every matter set forth therein.

Date Signed: **3/22/2019**

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Identification and Ownership - Contacts

Utility employee in charge of correspondence concerning this report

Name: JOSEPH P. CIURRO, CPA

Title: ADMINISTRATIVE SERVICES MANAGER

Mailing Address: P.O. BOX 1648
WAUKESHA, WI 53187-1648

Phone: (262) 409-4420

Email Address: jciurro@waukesha-water.com

Accounting firm or consultant preparing this report (if applicable)

Name:

Title:

Mailing Address:

Phone:

Email Address:

Name and title of utility General Manager (or equivalent)

Name: DANIEL S. DUCHNIAK, PE

Title: GENERAL MANAGER

Mailing Address: P.O. BOX 1648
WAUKESHA, WI 53187-1648

Phone: (262) 409-4440

Email Address: dduchniak@waukesha-water.com

President, chairman, or head of utility commission/board or committee

Name: JOSEPH PIATT

Title: COMMISSION PRESIDENT

Mailing Address: 727 ROBERTA AVENUE
WAUKESHA, WI 53186

Phone: (262) 548-9991

Email Address: jpiatt@carrollu.edu

Contact person for cybersecurity issues and events

Name: DANIEL S. DUCHNIAK, PE

Title: GENERAL MANAGER

Mailing Address: P.O. BOX 1648
WAUKESHA, WI 53187-1648

Phone: (262) 409-4440

Email Address: dduchniak@waukesha-water.com

Identification and Ownership - Governing Authority and Audit Information

Utility Governing Authority

Select the governing authority for this utility.

☒ Reports to utility board/commission

☐ Reports directly to city/village council

Audit Information

Are utility records audited by individuals or firms other than utility employees? ☒ Yes ☐ No

Date of most recent audit report: 12/31/2017

Period covered by most recent audit: JANUARY 1, 2018 - DECEMBER 31, 2018

Individual or firm, if other than utility employee, auditing utility records

Name: JODI DOBSON, CPA

Title: PARTNER

Organization Name: BAKER TILLY VIRCHOW KRAUSE, LLP

USPS Address: P.O. BOX 7398

City State Zip MADISON, WI 53707-7398

Telephone: (608) 240-2469

Email Address: jodi.dobson@bakertilly.com

Identification and Ownership - Contract Operations

Do you have any contracts?

Are any the utility administrative or operational functions under contract or agreement with an outside provider for the year covered by this annual report and/or current year (i.e., operation of water or sewer treatment plant)? **NO**

Income Statement

Particulars (a)	This Year (b)	Last Year (c)	
UTILITY OPERATING INCOME			1
Operating Revenues (400)	11,841,292	11,020,365	2
Operating Expenses:			3
Operation and Maintenance Expense (401-402)	4,752,387	4,933,504	4
Depreciation Expense (403)	1,784,287	1,725,358	5
Amortization Expense (404-407)	0	0	6
Taxes (408)	1,991,787	1,909,613	7
Total Operating Expenses	8,528,461	8,568,475	8
Net Operating Income	3,312,831	2,451,890	9
Income from Utility Plant Leased to Others (412-413)			10
Utility Operating Income	3,312,831	2,451,890	11
OTHER INCOME			12
Income from Merchandising, Jobbing and Contract Work (415-416)	6,330	3,542	13
Income from Nonutility Operations (417)	145,177	5,198	14
Nonoperating Rental Income (418)			15
Interest and Dividend Income (419)	494,971	292,868	16
Miscellaneous Nonoperating Income (421)	279,016	638,502	17
Total Other Income	925,494	940,110	18
Total Income	4,238,325	3,392,000	19
MISCELLANEOUS INCOME DEDUCTIONS			20
Miscellaneous Amortization (425)	(191,106)	(191,106)	21
Other Income Deductions (426)	860,574	837,138	22
Total Miscellaneous Income Deductions	669,468	646,032	23
Income Before Interest Charges	3,568,857	2,745,968	24
INTEREST CHARGES			25
Interest on Long-Term Debt (427)	1,062,794	1,031,421	26
Amortization of Debt Discount and Expense (428)	146,185	100,840	27
Amortization of Premium on Debt--Cr. (429)	310,201	279,729	28
Interest on Debt to Municipality (430)	0	0	29
Other Interest Expense (431)	808,481	701,577	30
Interest Charged to Construction--Cr. (432)	71,226	43,497	31
Total Interest Charges	1,636,033	1,510,612	32
Net Income	1,932,824	1,235,356	33
EARNED SURPLUS			34
Unappropriated Earned Surplus (Beginning of Year) (216)	70,778,969	72,305,575	35
Balance Transferred from Income (433)	1,932,824	1,235,356	36
Miscellaneous Credits to Surplus (434)			37
Miscellaneous Debits to Surplus--Debit (435)		2,761,962	38
Appropriations of Surplus--Debit (436)			39
Appropriations of Income to Municipal Funds--Debit (439)			40
Total Unappropriated Earned Surplus End of Year (216)	72,711,793	70,778,969	41

Income Statement Account Details

- Report each item (when individually or when like items are combined) greater than \$10,000 (class AB), \$5,000 (class C) and \$2,000 (class D) and all other lesser amounts grouped as Miscellaneous. Describe fully using other than account titles.
- Nonregulated sewer income should be reported as Miscellaneous Nonoperating Income, Account 421.

Description (a)	Earnings (216.1) (b)	Contributions (216.2) (c)	Total This Year (d)	
UTILITY OPERATING INCOME	0	0	0	1
Operating Revenues (400)	0	0	0	2
Derived	11,841,292		11,841,292	3
Total (Acct. 400)	11,841,292	0	11,841,292	4
Operation and Maintenance Expense (401-402)	0	0	0	5
Derived	4,752,387		4,752,387	6
Total (Acct. 401-402)	4,752,387	0	4,752,387	7
Depreciation Expense (403)	0	0	0	8
Derived	1,784,287		1,784,287	9
Total (Acct. 403)	1,784,287	0	1,784,287	10
Amortization Expense (404-407)	0	0	0	11
Derived	0		0	12
Total (Acct. 404-407)	0	0	0	13
Taxes (408)	0	0	0	14
Derived	1,991,787		1,991,787	15
Total (Acct. 408)	1,991,787	0	1,991,787	16
TOTAL UTILITY OPERATING INCOME	3,312,831	0	3,312,831	17
OTHER INCOME	0	0	0	18
Income from Merchandising, Jobbing and Contract Work (415-416)	0	0	0	19
Derived	6,330	0	6,330	20
Total (Acct. 415-416)	6,330	0	6,330	21
Income from Nonutility Operations (417)	0	0	0	22
MISC NON-OPERATING REVENUE	145,177		145,177	23
Total (Acct. 417)	145,177	0	145,177	24
Interest and Dividend Income (419)	0	0	0	25
INTEREST INCOME	494,971		494,971	26
Total (Acct. 419)	494,971	0	494,971	27
Miscellaneous Nonoperating Income (421)	0	0	0	28
Contributed Plant - Water		279,016	279,016	29
Impact Fees - Water			0	30
Total (Acct. 421)	0	279,016	279,016	31
TOTAL OTHER INCOME	646,478	279,016	925,494	32
MISCELLANEOUS INCOME DEDUCTIONS	0	0	0	33
Miscellaneous Amortization (425)	0	0	0	34
Regulatory Liability (253) Amortization	(191,106)		(191,106)	35
Total (Acct. 425)	(191,106)	0	(191,106)	36
Other Income Deductions (426)	0	0	0	37
Depreciation Expense on Contributed Plant - Water		756,445	756,445	38
LOBBYING EXPENSE	84,738		84,738	39
MISC INTEREST EXPENSE	19,391		19,391	40

Income Statement Account Details

- Report each item (when individually or when like items are combined) greater than \$10,000 (class AB), \$5,000 (class C) and \$2,000 (class D) and all other lesser amounts grouped as Miscellaneous. Describe fully using other than account titles.
- Nonregulated sewer income should be reported as Miscellaneous Nonoperating Income, Account 421.

Description (a)	Earnings (216.1) (b)	Contributions (216.2) (c)	Total This Year (d)	
Total (Acct. 426)	104,129	756,445	860,574	41
TOTAL MISCELLANEOUS INCOME DEDUCTIONS	(86,977)	756,445	669,468	42
INTEREST CHARGES	0	0	0	43
Interest on Long-Term Debt (427)	0	0	0	44
Derived	1,062,794		1,062,794	45
Total (Acct. 427)	1,062,794	0	1,062,794	46
Amortization of Debt Discount and Expense (428)	0	0	0	47
2018 BONDS	99,442		99,442	48
AMORT OF PREPAID INTEREST EXP/LOSS	46,743		46,743	49
Total (Acct. 428)	146,185	0	146,185	50
Amortization of Premium on Debt--Cr. (429)	0	0	0	51
BONDS	113,305		113,305	52
NOTES PAYABLE	196,896		196,896	53
Total (Acct. 429)	310,201	0	310,201	54
Interest on Debt to Municipality (430)	0	0	0	55
Derived	0		0	56
Total (Acct. 430)	0	0	0	57
Other Interest Expense (431)	0	0	0	58
Derived	808,481		808,481	59
Total (Acct. 431)	808,481	0	808,481	60
Interest Charged to Construction--Cr. (432)	0	0	0	61
INTEREST EXPENSE CONTRA	71,226		71,226	62
Total (Acct. 432)	71,226	0	71,226	63
TOTAL INTEREST CHARGES	1,636,033	0	1,636,033	64
NET INCOME	2,410,253	(477,429)	1,932,824	65
EARNED SURPLUS	0	0	0	66
Unappropriated Earned Surplus (Beginning of Year) (216)	0	0	0	67
Derived	41,641,375	29,137,594	70,778,969	68
Total (Acct. 216)	41,641,375	29,137,594	70,778,969	69
Balance Transferred from Income (433)	0	0	0	70
Derived	2,410,253	(477,429)	1,932,824	71
Total (Acct. 433)	2,410,253	(477,429)	1,932,824	72
UNAPPROPRIATED EARNED SURPLUS (END OF YEAR)	44,051,628	28,660,165	72,711,793	73

Income from Merchandising, Jobbing & Contract Work (Accts. 415-416)

Particulars (a)	Water (b)	Electric (c)	Gas (d)	Sewer (e)	Total (f)	
Revenues						1
Revenues (account 415)	7,805,268				7,805,268	2
Cost and Expenses of Merchandising, Jobbing and Contract Work (416)						3
Cost of merchandise sold	7,798,938				7,798,938	4
Payroll					0	5
Materials					0	6
Taxes					0	7
Total costs and expenses	7,798,938	0	0	0	7,798,938	8
Net Income (or loss)	6,330	0	0	0	6,330	9

Revenues Subject to Wisconsin Remainder Assessment

- Report data necessary to calculate revenue subject to Wisconsin remainder assessment pursuant to Wis. Stat § 196.85(2) and Wis. Admin. Code Ch. PSC 5.
- If the sewer department is not regulated by the PSC, do not report sewer department in data column (d).

Description (a)	Water Utility (b)	Electric Utility (c)	Gas Utility (d)	Sewer Utility (Regulated Only (e)	Total (f)	
Total operating revenues	11,841,292				11,841,292	1
Less: interdepartmental sales	0				0	2
Less: interdepartmental rents	0				0	3
Less: return on net investment in meters charged to regulated sewer department. (Do not report if nonregulated sewer.)					0	4
Less: uncollectibles directly expensed as reported in water acct. 904 (690 class D), sewer acct. 843, and electric acct. 904 -or- Net write-offs when Accumulated Provision for Uncollectible Accounts (acct. 144) is maintained	6,469				6,469	5
Revenues subject to Wisconsin Remainder Assessment	11,834,823	0	0	0	11,834,823	6

Distribution of Total Payroll

- Amounts charged to Utility Financed and to Contributed Plant accounts should be combined and reported in plant or accumulated depreciation accounts.
- Amount originally charged to clearing accounts as shown in column (b) should be shown as finally distributed in column (c).
- The amount for clearing accounts in column (c) is entered as a negative for account "Clearing Accounts" and the distributions to accounts on all other lines in column (c) will be positive with the total of column (c) being zero.
- Provide additional information in the schedule footnotes when necessary.

Accounts Charged (a)	Direct Payroll Distribution (b)	Allocation of Amounts Charged Clearing Accts. (c)	Total (d)	
Water operating expenses	1,309,071	391,361	1,700,432	1
Electric operating expenses			0	2
Gas operating expenses			0	3
Heating operating expenses			0	4
Sewer operating expenses			0	5
Merchandising and jobbing			0	6
Other nonutility expenses			0	7
Water utility plant accounts	225,898		225,898	8
Electric utility plant accounts			0	9
Gas utility plant accounts			0	10
Heating utility plant accounts			0	11
Sewer utility plant accounts			0	12
Accum. prov. for depreciation of water plant			0	13
Accum. prov. for depreciation of electric plant			0	14
Accum. prov. for depreciation of gas plant			0	15
Accum. prov. for depreciation of heating plant			0	16
Accum. prov. for depreciation of sewer plant			0	17
Clearing accounts	391,361	(391,361)	0	18
All other accounts	306,708		306,708	19
Total Payroll	2,233,038	0	2,233,038	20

Full-Time Employees (FTE)

- Use FTE numbers where FTE stands for Full-Time Employees or Full-Time Equivalency. FTE can be computed by using total hours worked/2080 hours for a fiscal year. Estimate to the nearest hundredth. If an employee works part time for more than one industry then determine FTE based on estimate of hours worked per industry.
- Example: An employee worked 35% of their time on electric jobs, 30% on water jobs, 20% on sewer jobs and 15% on municipal nonutility jobs. The FTE by industry would be .35 for electric, .30 for water and .20 for sewer.

Industry (a)	FTE (b)	
Water	30.0	1
Electric		2
Gas		3
Sewer		4

Balance Sheet

Assets and Othe Debits (a)	Balance End of Year (b)	Balance First of Year (c)	
ASSESTS AND OTHER DEBITS			1
UTILITY PLANT			2
Utility Plant (101)	128,487,072	124,168,397	3
Less: Accumulated Provision for Depreciation and Amortization of Utility Plant (111)	33,683,739	31,521,639	4
Utility Plant Acquisition Adjustments (117-118)	0	0	5
Other Utility Plant Adjustments (119)	0	0	6
Net Utility Plant	94,803,333	92,646,758	7
OTHER PROPERTY AND INVESTMENTS			8
Nonutility Property (121)	0	0	9
Less: Accumulated Provision for Depreciation and Amortization of Nonutility Property (122)	0	0	10
Investment in Municipality (123)	0	0	11
Other Investments (124)	0	0	12
Sinking Funds (125)	2,791,124	2,862,044	13
Depreciation Fund (126)	13,969,869	13,734,163	14
Other Special Funds (128)	0	0	15
Total Other Property and Investments	16,760,993	16,596,207	16
CURRENT AND ACCRUED ASSETS			17
Cash (131)	4,533,705	1,985,110	18
Special Deposits (134)	0	0	19
Working Funds (135)	1,184	844	20
Temporary Cash Investments (136)	8,559,102	9,272,002	21
Notes Receivable (141)	0	0	22
Customer Accounts Receivable (142)	6,810,713	4,929,030	23
Other Accounts Receivable (143)	0	0	24
Accumulated Provision for Uncollectible Accounts- -Cr. (144)	6,808	6,392	25
Receivables from Municipality (145)	563,914	555,466	26
Plant Materials and Operating Supplies (154)	400,692	413,799	27
Merchandise (155)	0	0	28
Other Materials and Supplies (156)	0	0	29
Stores Expense (163)	0	0	30
Prepayments (165)	153,160	144,965	31
Interest and Dividends Receivable (171)	0	0	32
Accrued Utility Revenues (173)	0	0	33
Miscellaneous Current and Accrued Assets (174)	403,235	(120,942)	34
Total Current and Accrued Assets	21,418,897	17,173,882	35
DEFERRED DEBITS			36
Unamortized Debt Discount and Expense (181)	362,260	409,003	37
Extraordinary Property Losses (182)	0	0	38
Preliminary Survey and Investigation Charges (183)	23,431,490	15,847,283	39
Clearing Accounts (184)	0	0	40
Temporary Facilities (185)	0	0	41
Miscellaneous Deferred Debits (186)	1,230,407	997,542	42
Total Deferred Debits	25,024,157	17,253,828	43
TOTAL ASSETS AND OTHER DEBITS	158,007,380	143,670,675	44

Balance Sheet

Liabilities and Othe Credits (a)	Balance End of Year (b)	Balance First of Year (c)	
LIABILITIES AND OTHER CREDITS			1
PROPRIETARY CAPITAL			2
Capital Paid in by Municipality (200)	2,707,846	2,669,743	3
Appropriated Earned Surplus (215)	0	0	4
Unappropriated Earned Surplus (216)	72,711,793	70,778,969	5
Total Proprietary Capital	75,419,639	73,448,712	6
LONG-TERM DEBT			7
Bonds (221)	38,722,714	28,179,042	8
Advances from Municipality (223)	0	0	9
Other Long-Term Debt (224)	26,610,000	27,285,000	10
Total Long-Term Debt	65,332,714	55,464,042	11
CURRENT AND ACCRUED LIABILITIES			12
Notes Payable (231)	0	0	13
Accounts Payable (232)	3,545,416	1,523,763	14
Payables to Municipality (233)	2,896,577	2,810,537	15
Customer Deposits (235)	161,492	188,280	16
Taxes Accrued (236)	1,874,879	1,793,627	17
Interest Accrued (237)	423,687	390,162	18
Tax Collections Payable (241)	6,857	6,086	19
Miscellaneous Current and Accrued Liabilities (242)	350,689	326,569	20
Total Current and Accrued Liabilities	9,259,597	7,039,024	21
DEFERRED CREDITS			22
Unamortized Premium on Debt (251)	2,260,747	2,570,948	23
Customer Advances for Construction (252)	0	0	24
Other Deferred Credits (253)	5,734,683	5,147,949	25
Total Deferred Credits	7,995,430	7,718,897	26
OPERATING RESERVES			27
Property Insurance Reserve (261)	0	0	28
Injuries and Damages Reserve (262)	0	0	29
Pensions and Benefits Reserve (263)	0	0	30
Miscellaneous Operating Reserves (265)	0	0	31
Total Operating Reserves	0	0	32
TOTAL LIABILITIES AND OTHER CREDITS	158,007,380	143,670,675	33

Net Utility Plant

- Report utility plant accounts and related accumulated provisions for depreciation and amortization after allocation of common plant accounts and related provisions for depreciation and amortization to utility departments as of December 31.

Particulars (a)	Water (b)	Electric (c)	Gas (d)	Sewer (e)	
First of Year					1
Total Utility Plant - First of Year	124,168,397	0	0	0	2
	124,168,397	0	0	0	3
Plant Accounts					4
Utility Plant in Service - Financed by Utility Operations or by the Municipality (101.1)	86,814,120				5
Utility Plant in Service - Contributed Plant (101.2)	40,946,008				6
Utility Plant Purchased or Sold (102)					7
Utility Plant Leased to Others (104)					8
Property Held for Future Use (105)	435,090				9
Completed Construction not Classified (106)					10
Construction Work in Progress (107)	291,854				11
Total Utility Plant	128,487,072	0	0	0	12
Accumulated Provision for Depreciation and Amortization					13
Accumulated Provision for Depreciation of Utility Plant in Service - Financed by Utility Operations or by the Municipality (111.1)	21,431,750				14
Accumulated Provision for Depreciation of Utility Plant in Service - Contributed Plant (111.2)	12,251,989				15
Accumulated Provision for Depreciation of Utility Plant Leased to Others (112)					16
Accumulated Provision for Depreciation of Property Held for Future Use (113)					17
Accumulated Provision for Amortization of Utility Plant in Service (114)					18
Accumulated Provision for Amortization of Utility Plant Leased to Others (115)					19
Accumulated Provision for Amortization of Property Held for Future Use (116)					20
Total Accumulated Provision	33,683,739	0	0	0	21
Accumulated Provision for Depreciation and Amortization					22
Utility Plant Acquisition Adjustments (117)					23
Accumulated Provision for Amortization of Utility Plant Acquisition Adjustments (118)					24
Other Utility Plant Adjustments (119)					25
Total Other Utility Plant Accounts	0	0	0	0	26
Net Utility Plant	94,803,333	0	0	0	27

Accumulated Provision for Depreciation of Utility Plant on Utility Plant Financed by Utility Operations or by the Municipality (Acct. 111.1)

Depreciation Accruals (Credits) during the year (111.1):

- Report the amounts charged in the operating sections to Depreciation Expense (403).
- If sewer operations are nonregulated, do not report sewer depreciation on this schedule.
- Report the Depreciation Expense on Meters charged to sewer operations as an addition in the Water Column. If the sewer is also a regulated utility by the PSC, report an equal amount as a reduction in the Sewer column.
- Report all other accruals charged to other accounts, such as to clearing accounts.

Description (a)	Water (b)	Electric (c)	Gas (d)	Sewer (e)	Total (f)	
Balance First of Year (111.1)	20,014,854	0	0	0	20,014,854	1
Credits during year						2
Charged Depreciation Expense (403)	1,784,287				1,784,287	3
Depreciation Expense on Meters Charged to Sewer	174,710				174,710	4
Salvage	16,594				16,594	5
Total credits	1,975,591	0	0	0	1,975,591	6
Debits during year						7
Book Cost of Plant Retired	515,114				515,114	8
Cost of Removal	43,581				43,581	9
Total debits	558,695	0	0	0	558,695	10
Balance end of year (111.1)	21,431,750	0	0	0	21,431,750	11

Accumulated Provision for Depreciation of Utility Plant on Contributed Plant in Service (Acct. 111.2)

Depreciation Accruals (Credits) during the year (111.2):

- Report the amounts charged in the operating sections to Other Income Deductions (426).
- If sewer operations are nonregulated, do not report sewer depreciation on this schedule.
- Report the Depreciation Expense on Meters charged to sewer operations as an addition in the Water Column. If the sewer is also a regulated utility by the PSC, report an equal amount as a reduction in the Sewer column.
- Report all other accruals charged to other accounts, such as to clearing accounts.

Description (a)	Water (b)	Electric (c)	Gas (d)	Sewer (e)	Total (f)	
Balance First of Year (111.2)	11,506,785	0	0	0	11,506,785	1
Credits during year						2
Charged Other Income Deductions (426)	756,445				756,445	3
Depreciation Expense on Meters Charged to Sewer					0	4
Salvage	0				0	5
Total credits	756,445	0	0	0	756,445	6
Debits during year						7
Book Cost of Plant Retired	11,241				11,241	8
Cost of Removal	0				0	9
Total debits	11,241	0	0	0	11,241	10
Balance end of year (111.2)	12,251,989	0	0	0	12,251,989	11

Net Nonutility Property (Accts. 121 & 122)

- Report separately each item of property with a book cost of \$5,000 or more included in account 121.
- Other items may be grouped by classes of property.
- Describe in detail any investment in sewer department carried in this account.

Description (a)	Balance First of Year (b)	Additions During Year (c)	Deductions During Year (d)	Balance End of Year (e)	
Nonregulated sewer plant	0			0	1
Total Nonutility Property (121)	0	0	0	0	2
Less accum. prov. depr. & amort. (122)	0			0	3
Net Nonutility Property	0	0	0	0	4

Accumulated Provision for Uncollectible Accounts-Cr. (Acct. 144)

Description (a)	Amount (b)	
Balance first of year	6,392	1
Additions		2
Provision for uncollectibles during year	6,470	3
Collection of accounts previously written off: Utility Customers	1,138	4
Collection of accounts previously written off: Others	0	5
Total Additions	7,608	6
Accounts Written Off		7
Accounts written off during the year: Utility Customers	5,428	8
Accounts written off during the year: Others	1,764	9
Total Accounts Written Off	7,192	10
Balance End of Year	6,808	11

Materials and Supplies

Account (a)	Generation (b)	Transmission (d)	Distribution (d)	Other (e)	Total End of Year (f)	Amount Prior Year (g)	
Electric Utility							1
Fuel (151)					0	0	2
Fuel stock expenses (152)					0	0	3
Plant mat. & oper. sup. (154)					0	0	4
Total Electric Utility	0	0	0	0	0	0	5

Account	Total End of Year	Amount Prior Year	
Electric utility total	0	0	1
Water utility (154)	400,692	413,799	2
Sewer utility (154)			3
Heating utility (154)			4
Gas utility (154)			5
Merchandise (155)			6
Other materials & supplies (156)			7
Stores expense (163)			8
Total Material and Supplies	400,692	413,799	9

Unamortized Debt Discount & Expense & Premium on Debt (Accts. 181 and 251)

Report net discount and expense or premium separately for each security issue.

Debt Issue to Which Related (a)	Written Off During Year		Balance End of Year (d)	
	Amount (b)	Account Charged or Credited (c)		
Unamortized debt discount & expense (181)				1
None				2
Prepaid Interest Exp - Unamortized Loss on Adv Refunding	46,743	0	362,260	3
Total	46,743		362,260	4
Unamortized premium on debt (251)				5
None				6
Unamortized Premium - Bond 2013	41,000	0	574,005	7
Unamortized Premium - Bond 2014	10,257	0	156,413	8
Unamortized Premium - Bond 2015	22,177	0	362,218	9
Unamortized Premium - Bond 2016	39,871	0	691,103	10
Unamortized Premium - Note Payable 2016	140,453	0	288,863	11
Unamortized Premium - Note Payable 2017	56,443	0	188,145	12
Total	310,201		2,260,747	13

Capital Paid in by Municipality (Acct. 200)

Report each item (when individually or when like items are combined) greater than \$10,000 (class AB), \$5,000 (class C) and \$2,000 (class D, sewer and privates) and all other lesser amounts grouped as Miscellaneous. Describe fully using other than account titles.

Description (a)	Amount (b)	
Balance first of year	2,669,743	1
CITY OF WAUKESHA CONTRIBUTED HYDRANTS	4,739	2
CITY OF WAUKESHA CONTRIBUTED MAINS	30,921	3
CITY OF WAUKESHA CONTRIBUTED SERVICES	2,443	4
Balance end of year	2,707,846	5

Bonds (Acct. 221)

- Report information required for each separate issue of bonds.
- If there is more than one interest rate for an aggregate obligation issue, average the interest rates and report one rate.
- Proceeds advanced by the municipality from sale of general obligation bonds, if repayable by utility, should be included in account 223.
- Enter interest rates in decimal form. For example, enter 6.75% as 0.0675

Description of Issue (a)	Date of Issue (b)	Final Maturity Date (c)	Interest Rate (d)	Principal Amount End of Year (e)	
2013 BOND ISSUE	05/07/2013	10/01/2032	2.76%	8,865,000 *	1
2013 SDWLP	05/22/2013	05/01/2033	1.93%	878,908 *	2
2014 BOND ISSUE	04/08/2014	10/01/2033	3.59%	4,375,000 *	3
2015 BOND ISSUE	05/12/2015	10/01/2034	2.45%	5,415,000 *	4
2016 BOND ISSUE	05/10/2016	10/01/2035	3.84%	6,280,000 *	5
2018 BOND ISSUE (BAN)	04/02/2018	05/01/2038	2.45%	12,229,032 *	6
2018 SDWLP	06/27/2018	05/01/2038	1.87%	679,774 *	7
Total				38,722,714	8

Bonds (Acct. 221)

- Report information required for each separate issue of bonds.
- If there is more than one interest rate for an aggregate obligation issue, average the interest rates and report one rate.
- Proceeds advanced by the municipality from sale of general obligation bonds, if repayable by utility, should be included in account 223.
- Enter interest rates in decimal form. For example, enter 6.75% as 0.0675

Bonds (Acct. 221) (Page F-17)**General Footnote**

A/N 221 Bonds: Dollar amount includes current portion of long-term debt.

Notes Payable & Miscellaneous Long-Term Debt

- Report each class of debt included in Accounts 223, 224 and 231.
- Proceeds of general obligation issues, if subject to repayment by the utility, should be included in Account 223.
- If there is more than one interest rate for an aggregate obligation issue, average the interest rates and report one rate.
- Enter interest rates in decimal form. For example, enter 6.75% as 0.0675

Account and Description of Obligation (a and b)	Date of Issue (c)	Final Maturity Date (d)	Interest Rate (e)	Principal Amount End of Year (f)	
Other Long-Term Debt (224)					1
A/N 230 NOTES PAYABLE TO CITY - 2016B	05/10/2016	05/01/2021	3.00%	16,725,000	2
A/N 230 NOTES PAYABLE TO CITY - 2017C	05/23/2017	05/01/2022	3.00%	9,885,000	3
Total for Account 224				26,610,000	4

Taxes Accrued (Acct. 236)

Description (a)	Amount (b)	
Balance first of year	1,793,627	1
Charged water department expense	1,991,787	2
Charged electric department expense		3
Charged gas department expense		4
Charged sewer department expense	34,899	5
Total accruals and other credits	2,026,686	6
County, state and local taxes	1,793,628	7
Social Security taxes	140,639	8
PSC Remainder Assessment	11,042	9
Gross Receipts Tax		10
DNR Water Use Fee	125	11
Total payments and other debits	1,945,434	12
Balance end of year	1,874,879	13

Interest Accrued (Acct. 237)

- Report below interest accrued on each utility obligation.
- Report customer deposits under account 235.

Description of Issue (a)	Interest Accrued Balance First of Year (b)	Interest Accrued During Year (c)	Interest Paid During Year (d)	Interest Accrued Balance End of Year (e)	
Bonds (221)	0	0	0	0	1
REVENUE BONDS - 2008 ISSUE	22,348	67,045	89,393	0	2
REVENUE BONDS - 2013 ISSUE	78,204	312,816	312,816	78,204	3
REVENUE BONDS - 2014 ISSUE	41,566	165,138	166,263	40,441	4
REVENUE BONDS - 2015 ISSUE	50,150	200,600	200,600	50,150	5
REVENUE BONDS - 2016 ISSUE	58,488	233,950	233,950	58,488	6
REVENUE BONDS - 2018 ISSUE		59,546	1,127	58,419	7
REVENUE BONDS - SDWLP 2013	2,981	17,241	17,402	2,820	8
REVENUE BONDS - SDWLP 2018		6,458	4,343	2,115	9
Subtotal Bonds (221)	253,737	1,062,794	1,025,894	290,637	10
Advances from Municipality (223)	0	0	0	0	11
None				0	12
Subtotal Advances from Municipality (223)	0	0	0	0	13
Other Long-Term Debt (224)	0	0	0	0	14
None				0	15
Subtotal Other Long-Term Debt (224)	0	0	0	0	16
Notes Payable (231)	0	0	0	0	17
NOTE PAYABLE 2016	87,000	511,931	515,306	83,625	18
NOTE PAYABLE 2017	49,425	296,550	296,550	49,425	19
Subtotal Notes Payable (231)	136,425	808,481	811,856	133,050	20
Customer Deposits (235)	0	0	0	0	21
None				0	22
Subtotal Customer Deposits (235)	0	0	0	0	23
Total	390,162	1,871,275	1,837,750	423,687	24

Balance Sheet Detail - Other Accounts

Report each item (when individually or when like items are combined) greater than \$10,000 (class AB), \$5,000 (class C) and \$2,000 (class D) and all other lesser amounts grouped as Miscellaneous. Describe fully using other than account titles.

Description (a)	Balance End of Year (b)	
Sinking Funds (125)	0	1
A/N 1250 DEBT PAYMENT FUND	411,882	2
A/N 1259 BOND RESERVE FUND	477,655	3
A/N 1287 TAX EQUIVALENT (PILOT) RESERVE	1,901,587	4
Total (Acct. 125)	2,791,124	5
Depreciation Fund (126)	0	6
A/N 1261 IMPROVEMENT FUND	150	7
A/N 1265 EQUIPMENT REPLACEMENT FUND	13,969,719	8
Total (Acct. 126)	13,969,869	9
Cash and Working Funds (131)	0	10
Cash	4,533,705	11
Total (Acct. 131)	4,533,705	12
Working Funds (135)	0	13
A/N 135 WORKING FUNDS	1,184	14
Total (Acct. 135)	1,184	15
Temporary Cash Investments (136)	0	16
A/N 1365 LGIP - GENERAL FUND	8,559,102	17
Total (Acct. 136)	8,559,102	18
Customer Accounts Receivable (142)	0	19
Water	5,022,068	20
A/N 1423 A/R RETURN FLOW CHARGES	138,615	21
Sewer (Regulated)	1,650,030	22
Total (Acct. 142)	6,810,713	23
Other Accounts Receivable (143)	0	24
Sewer (Non-regulated)		25
Merchandising, jobbing and contract work		26
Total (Acct. 143)	0	27
Receivables from Municipality (145)	0	28
A/N 1449 A/R TAX ROLL - SEWER	5,024 *	29
A/N 1450 A/R TAX ROLL - WATER	548,253 *	30
A/N 1451 A/R TAX ROLL - RETURN FLOW	71 *	31
A/N 1452 A/R SEWER BILLING REIMBURSEMENT	10,566 *	32

Balance Sheet Detail - Other Accounts

Report each item (when individually or when like items are combined) greater than \$10,000 (class AB), \$5,000 (class C) and \$2,000 (class D) and all other lesser amounts grouped as Miscellaneous. Describe fully using other than account titles.

Total (Acct. 145)	563,914	33
Prepayments (165)	0	34
A/N 1650 PREPAID INS - PLC & WC	37,377	35
A/N 1651 PREPAID INS - LT DISABILITY	552	36
A/N 1652 PREPAID INS - HEALTH & DENTAL	59,645	37
A/N 1653 PREPAID INS - LIFE	1,936	38
A/N 1655 PREPAID OTHER	53,650	39
Total (Acct. 165)	153,160	40
Miscellaneous Current and Accrued Assets (174)	0	41
A/N RESTRICTED NET PENSION ASSET	403,235	42
Total (Acct. 174)	403,235	43
Preliminary Survey and Investigation Charges (183)	0	44
A/N 1830 FUTURE WATER SUPPLY	23,431,490	45
Total (Acct. 183)	23,431,490	46
Miscellaneous Deferred Debits (186)	0	47
A/N 1875 DEFERRED OUTFLOW PENSION	1,212,122	48
A/N 1877 DEFERRED OUTFLOW LIFE INS.	18,285	49
Total (Acct. 186)	1,230,407	50
Accounts Payable (232)	0	51
Accounts Payable	3,545,416	52
Total (Acct. 232)	3,545,416	53
Payables to Municipality (233)	0	54
A/N 2331 SEWER USER CHARGES	2,651,154 *	55
A/N 2332 RETURN FLOW USER CHARGES	225,968 *	56
A/N 2336 SEWER CONNECTION FEES	19,455 *	57
Total (Acct. 233)	2,896,577	58
Customer Deposits (235)	0	59
A/N 2351 CUSTOMER DEPOSITS	161,492	60
Total (Acct. 235)	161,492	61
Tax Collections Payable (241)	0	62
A/N 241 TAX COLLECTIONS PAYABLE	6,857	63
Total (Acct. 241)	6,857	64
Miscellaneous Current and Accrued Liabilities (242)	0	65
A/N 242 MISC CURRENT & ACCRUED LIABILITIES	350,689	66

Balance Sheet Detail - Other Accounts

Report each item (when individually or when like items are combined) greater than \$10,000 (class AB), \$5,000 (class C) and \$2,000 (class D) and all other lesser amounts grouped as Miscellaneous. Describe fully using other than account titles.

Total (Acct. 242)	350,689	67
Other Deferred Credits (253)	0	68
Regulatory Liability	955,528	69
A/N 2175 DEFERRED INFLOW PENSION	1,256,845	70
A/N 2177 DEFERRED INFLOW LIFE INS.	3,627	71
A/N 2530-100 REGULATORY LIABILITY - PENSION	(360,747) *	72
A/N 2532 OPEB LIABILITY - HEALTH	3,945,189	73
A/N 2532-100 REGULATORY LIABILITY - OPEB (HEALTH)	(101,115) *	74
A/N 2534 OPEB LIABILITY - LIFE INS	159,404	75
A/N 2534-100 REGULATORY LIABILITY - OPEB (LIFE)	(144,746) *	76
A/N 2535 UNEARNED REVENUE - CONSERVATION	20,702	77
ROUNDING ADJUSTMENT TO TIE BALANCE SHEET	(4)	78
Total (Acct. 253)	5,734,683	79

Balance Sheet Detail - Other Accounts

Report each item (when individually or when like items are combined) greater than \$10,000 (class AB), \$5,000 (class C) and \$2,000 (class D) and all other lesser amounts grouped as Miscellaneous. Describe fully using other than account titles.

Balance Sheet Detail - Other Accounts (Page F-22)

Explain amounts in Accounts 143, 145 and/or 233 in excess of \$10,000. Provide a short list or detailed description, but do not use terms such as other revenues, general, miscellaneous, or repeat the account title.

A/N 1449 A/R Tax Roll– Sewer: This account represents the tax roll invoice sent to the City that remains outstanding as of 12/31/18.

A/N 1450 A/R Tax Roll– Water: This account represents the tax roll invoice sent to the City that remains outstanding as of 12/31/18.

A/N 1451 A/R Tax Roll– Return Flow: This account represents the tax roll invoice sent to the City that remains outstanding as of 12/31/18.

A/N 1452 A/R Sewer Billing Reimbursement: This account represents the amount due from the City for 2018 under-billed monthly invoice for sewer billing and collection as of 12/31/18.

A/N 2331 A/P Sewer User Charges: This account represents all sewer user charges payable to the City as of 12/31/18.

A/N 2332 A/P Return Flow User Charges: This account represents all return flow user charges payable to the City as of 12/31/18.

A/N 2336 A/P Sewer Connection Fees: This account represents all sewer connection fees payable to the City as of 12/31/18.

General Footnote

A/N 2530-100 Regulatory Liability Pension – includes PSC vs. GASB 68 adjustment of (\$360,747).

A/N 2532-100 Regulatory Liability - OPEB (Health) – includes PSC vs. GASB 75 adjustment of (\$101,115).

A/N 2534-100 Regulatory Liability - OPEB (Life) – includes PSC vs. GASB 75 adjustment of (\$144,746).

Return on Rate Base Computation

- The data used in calculating rate base are averages.
- Calculate those averages by summing the first-of-year and the end-of-year figures for each account and then dividing the sum by two.
- For municipal utilities, do not include contributed plant in service, property held for future use, or construction work in progress with utility plant in service. These are not rate base components.
- For private utilities, do not include property held for future use, or construction work in progress with utility plant in service. These are not rate base components.

Average Rate Base (a)	Water (b)	Electric (c)	Gas (d)	Sewer (e)	Total (f)	
Add Average						1
Utility Plant in Service (101.1)	84,828,173				84,828,173	2
Materials and Supplies	407,245				407,245	3
Less Average						4
Reserve for Depreciation (111.1)	20,723,302				20,723,302	5
Customer Advances for Construction					0	6
Regulatory Liability	1,051,081				1,051,081	7
Average Net Rate Base	63,461,035	0	0	0	63,461,035	8
Net Operating Income	3,312,831				3,312,831	9
Net Operating Income as a percent of Average Net Rate Base	5.22%	N/A	N/A	N/A	5.22%	10

Regulatory Liability - Pre-2003 Historical Accumulated Depreciation on Contributed Utility Plant (253)

Description (a)	Water (b)	Electric (c)	Gas (d)	Sewer (e)	Total (f)	
Balance First of Year	1,146,634	0	0	0	1,146,634	1
Credits During Year					0	2
None					0	3
Charges (Deductions)					0	4
Miscellaneous Amortization (425)	191,106				191,106	5
Balance End of Year	955,528	0	0	0	955,528	6

Important Changes During the Year

Report changes of any of the following types:

1. Acquisitions

None.

2. Leaseholder changes

None.

3. Extensions of service

Developers completed improvements in 2018.

4. Estimated changes in revenues due to rate changes

None.

5. Obligations incurred or assumed, excluding commercial paper

1.) A long-term Revenue Draw Bond for \$32,800,000 was issued to the City of Waukesha on behalf of the Utility on 4/2/2018. 2.) A long-term Safe Drinking Water Loan Program (SDWLP) bond for \$679,774.15 was issued to the City of Waukesha on behalf of the Utility on 6/27/2018.

6. Formal proceedings with the Public Service Commission

1.) Docket #6240-GF-100 Great Lakes Diversion Project Application

7. Any additional mattersNone.

Water Operating Revenues & Expenses

Description (a)	This Year (b)	Last Year (c)	
Operating Revenues - Sales of Water			1
Sales of Water (460-467)	11,319,091	10,479,782	2
Total Sales of Water	11,319,091	10,479,782	3
Other Operating Revenues			4
Forfeited Discounts (470)	135,782	129,899	5
Rents from Water Property (472)	229,715	228,827	6
Interdepartmental Rents (473)	0	0	7
Other Water Revenues (474)	156,704	181,857	8
Total Other Operating Revenues	522,201	540,583	9
Total Operating Revenues	11,841,292	11,020,365	10
Operation and Maintenance Expenses			11
Source of Supply Expense (600-617)	607,015	813,467	12
Pumping Expenses (620-633)	900,349	901,026	13
Water Treatment Expenses (640-652)	421,079	426,384	14
Transmission and Distribution Expenses (660-678)	1,322,459	1,233,326	15
Customer Accounts Expenses (901-906)	222,723	211,213	16
Sales Expenses (910)	0	0	17
Administrative and General Expenses (920-932)	1,278,762	1,348,088	18
Total Operation and Maintenance Expenses	4,752,387	4,933,504	19
Other Operating Expenses			20
Depreciation Expense (403)	1,784,287	1,725,358	21
Amortization Expense (404-407)			22
Taxes (408)	1,991,787	1,909,613	23
Total Other Operating Expenses	3,776,074	3,634,971	24
Total Operating Expenses	8,528,461	8,568,475	25
NET OPERATING INCOME	3,312,831	2,451,890	26

Water Operating Revenues - Sales of Water

- Where customer meters record cubic feet, multiply by 7.48 to obtain number of gallons.
- Report estimated gallons for unmetered sales.
- Sales to multiple dwelling buildings through a single meter serving 3 or more family units should be classified multifamily residential.
- Account 460, Unmetered Sales to General Customers - Gallons of Water Sold should not include in any way quantity of water, i.e. metered or measured by tank of pool volume. The quantity should be estimated based on size of pipe, flow, foot of frontage, etc. Bulk water sales should be Account 460 if the quantity is estimated and should be Account 461 if metered or measured by volume. Water related to construction should be a measured sale of water (Account 461).
- Report average number of individually-metered accounts (meters). The amount reported should be the average meter count. E.g. if a hospital has 5 meters, a total of 5 meters should be reported on this schedule in column b (Average No. of Customers).

Description (a)	Average No. Customer (b)	Thousand of Gallons of Water Sold (c)	Amount (d)	
Unmetered Sales to General Customers (460)				1
Residential (460.1)				2
Commercial (460.2)				3
Industrial (460.3)				4
Public Authority (460.4)				5
Multifamily Residential (460.5)				6
Irrigation (460.6)				7
Total Unmetered Sales to General Customers (460)	0	0	0	8
Metered Sales to General Customers (461)				9
Residential (461.1)	17,723	881,451	4,851,853	10
Commercial (461.2)	1,258	338,426	1,425,857	11
Industrial (461.3)	149	230,557	788,371	12
Public Authority (461.4)	116	67,339	276,268	13
Multifamily Residential (461.5)	1,027	376,472	1,585,378	14
Irrigation (461.6)	133	4,447	35,664	15
Total Metered Sales to General Customers (461)	20,406	1,898,692	8,963,391	16
Private Fire Protection Service (462)	1		247,886	17
Public Fire Protection Service (463)	1		2,107,814	18
Other Water Sales (465)				19
Sales for Resale (466)	0	0	0	20
Interdepartmental Sales (467)				21
Total Sales of Water	20,408	1,898,692	11,319,091	22

Sales for Resale (Acct. 466)

Use a separate line for each delivery point.
--

- - - THIS SCHEDULE NOT APPLICABLE TO THIS UTILITY- - -

Other Operating Revenues (Water)

- Report revenues relating to each account and fully describe each item using other than the account title.
- Report each item (when individually or when like items are combined) greater than \$10,000 (class AB), \$5,000 (class C) and \$2,000 (class D and privates) and all other lesser amounts grouped as Miscellaneous.
- For a combined utility which also provides sewer service that is based upon water readings, report the return on net investment in meters charged to sewer department in Other Water Revenues (474).

Description (a)	Amount (b)	
Public Fire Protection Service (463)		1
Amount billed (usually per rate schedule F-1 or Fd-1)	2,107,814	2
Wholesale fire protection billed		3
Amount billed for fighting fires outside utility's service areas (usually per rate schedule F-2 or BW-1)		4
Total Public Fire Protection Service (463)	2,107,814	5
Forfeited Discounts (470)		6
Customer late payment charges	135,782	7
Total Forfeited Discounts (470)	135,782	8
Rents from Water Property (472)		9
Rent of tower for cellular antennas	229,715	10
Total Rents from Water Property (472)	229,715	11
Interdepartmental Rents (473)		12
None		13
Total Interdepartmental Rents (473)	0	14
Other Water Revenues (474)		15
Return on net investment in meters charged to sewer department	47,617	16
A/N 474 MISC SERVICE REVENUES	53,323 *	17
INTEREST CHARGES	55,764 *	18
Total Other Water Revenues (474)	156,704	19

Other Operating Revenues (Water)

- Report revenues relating to each account and fully describe each item using other than the account title.
 - Report each item (when individually or when like items are combined) greater than \$10,000 (class AB), \$5,000 (class C) and \$2,000 (class D and privates) and all other lesser amounts grouped as Miscellaneous.
 - For a combined utility which also provides sewer service that is based upon water readings, report the return on net investment in meters charged to sewer department in Other Water Revenues (474).

Other Operating Revenues (Water) (Page W-04)

Explain all amounts in Account 474 in excess of \$10,000.

A/N 474 Interest Charges: Reported as \$55,764.14 because of a year-end accrual for water revenue metered, but not billed \$55,443.65.
Actual interest charges less the accrual were \$320.50.

Water Operation & Maintenance Expenses

- Each expense account that has a difference between This Year and Last Year greater than 15 percent and \$10,000 (class AB), 25 percent and \$5,000 (class C), 30 percent and \$2,000 (class D) shall be fully explained in the schedule footnotes.
- Class C and class D report all expenses in Other Expense (column c)

Description (a)	Labor Expense (b)	Other Expense (c)	Total This Year (d)	Last Year (e)	
SOURCE OF SUPPLY EXPENSES					1
Operation Supervision and Engineering (600)			0	2,219	2
Operation Labor and Expenses (601)			0	0	3
Purchased Water (602)			0	0	4
Miscellaneous Expenses (603)	385	591,491	591,876	793,964 *	5
Rents (604)			0	0	6
Maintenance Supervision and Engineering (610)	11,139		11,139	7,615	7
Maintenance of Structures and Improvements (611)			0	0	8
Maintenance of Collecting and Impounding Reservoirs (612)			0	0	9
Maintenance of Lake, River and Other Intakes (613)			0	0	10
Maintenance of Wells and Springs (614)		4,000	4,000	9,669	11
Maintenance of Supply Mains (616)			0	0	12
Maintenance of Miscellaneous Water Source Plant (617)			0	0	13
Total Source of Supply Expenses	11,524	595,491	607,015	813,467	14
PUMPING EXPENSES					15
Operation Supervision and Engineering (620)	37,442		37,442	29,634	16
Fuel for Power Production (621)			0	0	17
Power Production Labor and Expenses (622)			0	0	18
Fuel or Power Purchased for Pumping (623)		684,689	684,689	656,384	19
Pumping Labor and Expenses (624)	37,639		37,639	35,762	20
Expenses Transferred--Credit (625)			0	0	21
Miscellaneous Expenses (626)	15,890	20,838	36,728	70,008 *	22
Rents (627)			0	0	23
Maintenance Supervision and Engineering (630)	10,509		10,509	10,549	24
Maintenance of Structures and Improvements (631)	32,259	21,012	53,271	22,379 *	25
Maintenance of Power Production Equipment (632)			0	0	26
Maintenance of Pumping Equipment (633)	25,313	14,758	40,071	76,310 *	27
Total Pumping Expenses	159,052	741,297	900,349	901,026	28
WATER TREATMENT EXPENSES					29
Operation Supervision and Engineering (640)	4,716		4,716	6,096	30
Chemicals (641)		159,885	159,885	165,256	31
Operation Labor and Expenses (642)	94,333	128,177	222,510	229,856	32
Miscellaneous Expenses (643)		697	697	0	33
Rents (644)			0	0	34
Maintenance Supervision and Engineering (650)			0	3,533	35
Maintenance of Structures and Improvements (651)	57	1,388	1,445	684	36
Maintenance of Water Treatment Equipment (652)	17,243	14,583	31,826	20,959 *	37
Total Water Treatment Expenses	116,349	304,730	421,079	426,384	38
TRANSMISSION AND DISTRIBUTION EXPENSES					39
Operation Supervision and Engineering (660)	32,140		32,140	36,752	40
Storage Facilities Expenses (661)	15,314	173,080	188,394	324,346 *	41

Water Operation & Maintenance Expenses

- Each expense account that has a difference between This Year and Last Year greater than 15 percent and \$10,000 (class AB), 25 percent and \$5,000 (class C), 30 percent and \$2,000 (class D) shall be fully explained in the schedule footnotes.
- Class C and class D report all expenses in Other Expense (column c)

Description (a)	Labor Expense (b)	Other Expense (c)	Total This Year (d)	Last Year (e)	
Transmission and Distribution Lines Expenses (662)	123,228	23,159	146,387	119,729 *	42
Meter Expenses (663)	58,919	1,714	60,633	64,116	43
Customer Installations Expenses (664)	2,854	46,099	48,953	49,193	44
Miscellaneous Expenses (665)	60,106	60,148	120,254	102,947 *	45
Rents (666)			0	0	46
Maintenance Supervision and Engineering (670)	25,407	1,561	26,968	27,738	47
Maintenance of Structures and Improvements (671)			0	0	48
Maintenance of Distribution Reservoirs and Standpipes (672)		309	309	58	49
Maintenance of Transmission and Distribution Mains (673)	152,906	175,475	328,381	281,828 *	50
Maintenance of Services (675)	56,979	223,982	280,961	155,231 *	51
Maintenance of Meters (676)	2,353		2,353	869	52
Maintenance of Hydrants (677)	40,022	16,261	56,283	47,114	53
Maintenance of Miscellaneous Plant (678)	16,666	13,777	30,443	23,405	54
Total Transmission and Distribution Expenses	586,894	735,565	1,322,459	1,233,326	55
CUSTOMER ACCOUNTS EXPENSES					56
Supervision (901)	13,808		13,808	6,487	57
Meter Reading Expenses (902)	11,310	178	11,488	12,862	58
Customer Records and Collection Expenses (903)	98,334	23,327	121,661	123,517	59
Uncollectible Accounts (904)		6,469	6,469	820	60
Miscellaneous Customer Accounts Expenses (905)	7,026		7,026	5,310	61
Customer Service and Informational Expenses (906)		62,271	62,271	62,217	62
Total Customer Accounts Expenses	130,478	92,245	222,723	211,213	63
SALES EXPENSES					64
Sales Expenses (910)			0	0	65
Total Sales Expenses	0	0	0	0	66
ADMINISTRATIVE AND GENERAL EXPENSES					67
Administrative and General Salaries (920)	397,501	1,632	399,133	397,715	68
Office Supplies and Expenses (921)	36,715	232,936	269,651	243,140	69
Administrative Expenses Transferred--Credit (922)	203,438	359,988	563,426	467,381 *	70
Outside Services Employed (923)		20,003	20,003	20,204	71
Property Insurance (924)		69,981	69,981	74,073	72
Injuries and Damages (925)		22,521	22,521	14,823	73
Employee Pensions and Benefits (926)		873,866	873,866	812,440	74
Regulatory Commission Expenses (928)	4,786		4,786	52,026 *	75
Duplicate Charges--Credit (929)			0	0	76
Miscellaneous General Expenses (930)	22,112	15,904	38,016	57,011 *	77
Rents (931)			0	0	78
Maintenance of General Plant (932)	47,098	97,133	144,231	144,037	79
Total Administrative and General Expenses	304,774	973,988	1,278,762	1,348,088	80
TOTAL OPERATION AND MAINTENANCE EXPENSES	1,309,071	3,443,316	4,752,387	4,933,504	81

Water Operation & Maintenance Expenses

- Each expense account that has a difference between This Year and Last Year greater than 15 percent and \$10,000 (class AB), 25 percent and \$5,000 (class C), 30 percent and \$2,000 (class D) shall be fully explained in the schedule footnotes.
- Class C and class D report all expenses in Other Expense (column c)

Water Operation & Maintenance Expenses (Page W-05)

Explain all This Year amounts that are more than 15% and \$10,000 higher or lower than the Last Year amount.

a/n 603 Source Miscellaneous Expense - 25% Decrease - Per the direction of the PSC with the 2016/2017 rate case, in November 2017, the Utility reduced the monthly amortization of preliminary studies for the GWA project from \$69,341 to \$49,290.92 monthly.

a/n 626 Pumping Miscellaneous Expense - 48% Decrease - Pump structure maintenance increased in 2017. Labor associated with pump structure maintenance was recorded in 6310-300 in 2018.

a/n 631 Maintenance of Structures & Improvements - 138% Increase - In 2017, pump structure maintenance was recorded in 626.

a/n 633 Maintenance of Pumping Equipment - 47% Decrease - Maintenance repairs to the pump at well #10, as well as temporary pump installation and removal was booked to this account in 2017.

a/n 652 Maintenance of Water Treatment Equipment - 52% Increase - Treatment maintenance activities increased in 2018 including repairs to the Saylesville mixer tank.

a/n 661 Storage Facilities Expense - 42% Decrease - Davidson Tower was painted in 2017. Morris Tower was painted in 2018. Davidson is a larger structure which cost more.

a/n 662 Transmission and Distribution Expense - 22% Increase - Locating labor increased in 2018 because of cross training needed for the GWA project. Training for new GPS equipment also took place in 2018.

a/n 665 Miscellaneous Expenses - 17% Increase - The City of Waukesha increased the fees they charge for GIS services/software in 2018.

a/n 673 Maintenance of Transmission & Distribution Mains - 17% Increase - Repair costs for street openings (through the City of Waukesha) increased in 2017, but increased by even more in 2018. When the street is opened, a larger area is required to be repaired per City policy.

a/n 675 Maintenance of Services - 81% Increase - Additional street service tie-overs occurred in 2018 (water main replacement projects). Because the tie-over did not replace more than 50% of the street service, the tie-over was expensed.

a/n 922 Administrative Expenses Transferred - Credit - 21% Increase - In 2018, a return flow credit was established (similar to sewer credit) to recover Utility costs from the City that are spent on return flow. Also, in August of 2018, overhead was added to the labor associated with the GWA project, as it was determined that all tasks performed after that point are related to the capital assets.

a/n 928 Regulatory Commission Expenses - 91% Decrease - Work related to the 2016/2017 conventional rate case increased in 2017.

a/n 930 Miscellaneous General Expenses - 33% Decrease - In 2017, commission meeting preparation increased due to the numerous discussions with the commission on project negotiations and implementation for the GWA project.

Taxes (Acct. 408 - Water)

When allocation of taxes is made between departments, explain method used.

Description of Tax (a)	This Year (b)	Last Year (c)	
Property Tax Equivalent	1,874,880	1,793,628	1
Less: Local and School Tax Equivalent on Meters Charged to Sewer Department	34,899	34,465	2
Net Property Tax Equivalent	1,839,981	1,759,163	3
Social Security	140,639	140,007	4
PSC Remainder Assessment	11,042	10,318	5
DNR WATER USE FEE	125	125	6
Total Tax Expense	1,991,787	1,909,613	7

Water Property Tax Equivalent - Detail

- No property tax equivalent shall be determined for sewer utilities or town sanitary district water utilities.
- Tax rates are those issued in November (usually) of the year being reported and are available from the municipal treasurer. Report the tax rates in mills to six (6) decimal places.
- The assessment ratio is available from the municipal treasurer. Report the ratio as a decimal to six (6) places.
- The utility plant balance first of year should include the gross book values of plant in service (total of utility financed and contributed plant), property held for future use and construction work in progress.
- An "other tax rate" is included in the "Net Local and School Tax Rate Calculation" to the extent that it is local. An example is a local library tax. Fully explain the rate in the Property Tax Equivalent schedule footnotes.
- Property Tax Equivalent - Total**
If the municipality has authorized a lower tax equivalent amount, the authorization description and date of the authorization must be reported in the schedule footnotes. If the municipality has NOT authorized a lower amount, leave the cell blank.

COUNTY: WAUKESHA(1)

SUMMARY OF TAX RATES

1. State Tax Rate	mills	0.000000
2. County Tax Rate	mills	1.960000
3. Local Tax Rate	mills	10.650000
4. School Tax Rate	mills	8.100000
5. Vocational School Tax Rate	mills	0.380000
6. Other Tax Rate - Local	mills	0.000000
7. Other Tax Rate - Non-Local	mills	0.000000
8. Total Tax Rate	mills	21.090000
9. Less: State Credit	mills	1.520000
11. Net Tax Rate	mills	19.570000

PROPERTY TAX EQUIVALENT CALCULATION

12. Local Tax Rate	mills	10.650000
13. Combined School Tax Rate	mills	8.480000
14. Other Tax Rate - Local	mills	0.000000
15. Total Local & School Tax Rate	mills	19.130000
16. Total Tax Rate	mills	21.090000
17. Ratio of Local and School Tax to Total	dec.	0.907065
18. Total Tax Net of State Credit	mills	19.570000
19. Net Local and School Tax Rate	mills	17.751261
20. Utility Plant, Jan 1	\$	124,168,397
21. Materials & Supplies	\$	413,799
22. Subtotal	\$	124,582,196
23. Less: Plant Outside Limits	\$	6,107,525
24. Taxable Assets	\$	118,474,671
25. Assessment Ratio	dec.	0.962200
26. Assessed Value	\$	113,996,328
27. Net Local and School Tax Rate	mills	17.751261
28. Tax Equiv. Computed for Current Year	\$	2,023,579

PROPERTY TAX EQUIVALENT - TOTAL

PROPERTY TAX EQUIVALENT CALCULATION

1. Utility Plant, Jan 1	\$	124,168,397
2. Materials & Supplies	\$	413,799
3. Subtotal	\$	124,582,196
4. Less: Plant Outside Limits	\$	6,107,525
5. Taxable Assets	\$	118,474,671
6. Assessed Value	\$	113,996,328
7. Tax Equiv. Computed for Current Year	\$	2,023,579
8. Tax Equivalent per 1994 PSC Report	\$	840,079
9. Amount of Lower Tax Equiv. as Authorized by Municipality for Current Year (see notes)	\$	1,874,880
10. Tax Equivalent for Current Year (see notes)	\$	1,874,880

Water Property Tax Equivalent - Detail

- No property tax equivalent shall be determined for sewer utilities or town sanitary district water utilities.
- Tax rates are those issued in November (usually) of the year being reported and are available from the municipal treasurer. Report the tax rates in mills to six (6) decimal places.
- The assessment ratio is available from the municipal treasurer. Report the ratio as a decimal to six (6) places.
- The utility plant balance first of year should include the gross book values of plant in service (total of utility financed and contributed plant), property held for future use and construction work in progress.
- An "other tax rate" is included in the "Net Local and School Tax Rate Calculation" to the extent that it is local. An example is a local library tax. Fully explain the rate in the Property Tax Equivalent schedule footnotes.
- **Property Tax Equivalent - Total**
If the municipality has authorized a lower tax equivalent amount, the authorization description and date of the authorization must be reported in the schedule footnotes. If the municipality has NOT authorized a lower amount, leave the cell blank.

Water Property Tax Equivalent - Total (Page W-07)

Lower Tax Equivalent authorized by municipality is greater than or equal to zero, please explain.

The Lower Tax Equivalent for 2018 was lower because we use an equivalent calculated from the 2016 report. Due to timing and budgets, the Utility and City have agreed to this two-year cycle (reported in 2016, calculated in 2017, expensed in 2018) verified in a memo dated 2/7/12.

Water Utility Plant in Service - Plant Financed by Utility or Municipality

- All adjustments, corrections and reclassifications (including to/from plant financed by contributions) should be reported in Column (e), Adjustments.
- Explain fully as a footnote the nature of all entries reported in Column (e), Adjustments.
- For each account over \$100,000 (class AB) or \$50,000 (class C) or \$10,000 (class D), explain in the footnotes section the dollar additions and retirements. If applicable, the footnotes should cite construction authorization, complete with PSC docket number.
- Use only the account titles listed. If the utility has subaccounts other than accounts 391.1 and 397.1, combine them into one total and detail by subaccount as a schedule footnote.

Accounts (a)	Balance First of Year (b)	Additions During Year (c)	Retirements During Year (d)	Adjustments Increase or (Decrease) (e)	Balance End of Year (f)	
INTANGIBLE PLANT						1
Organization (301)	0				0	2
Franchises and Consents (302)	0				0	3
Miscellaneous Intangible Plant (303)	0				0	4
Total Intangible Plant	0	0	0	0	0	5
SOURCE OF SUPPLY PLANT						6
Land and Land Rights (310)	204,625				204,625	7
Structures and Improvements (311)	0				0	8
Collecting and Impounding Reservoirs (312)	0				0	9
Lake, River and Other Intakes (313)	0				0	10
Wells and Springs (314)	1,507,630				1,507,630	11
Supply Mains (316)	1,084,144				1,084,144	12
Other Water Source Plant (317)	0				0	13
Total Source of Supply Plant	2,796,399	0	0	0	2,796,399	14
PUMPING PLANT						15
Land and Land Rights (320)	181,670				181,670	16
Structures and Improvements (321)	3,952,183	9,989	948		3,961,224	17
Other Power Production Equipment (323)	0				0	18
Electric Pumping Equipment (325)	4,106,769	32,422	103,384		4,035,807 *	19
Diesel Pumping Equipment (326)	0				0	20
Other Pumping Equipment (328)	0				0	21
Total Pumping Plant	8,240,622	42,411	104,332	0	8,178,701	22
WATER TREATMENT PLANT						23
Land and Land Rights (330)	0				0	24
Structures and Improvements (331)	2,147,280				2,147,280	25
Sand or Other Media Filtration Equipment (332)	368,521	5,185	2,500		371,206	26
Membrane Filtration Equipment (333)	0				0	27
Other Water Treatment Equipment (334)	1,473,714				1,473,714	28
Total Water Treatment Plant	3,989,515	5,185	2,500	0	3,992,200	29
TRANSMISSION AND DISTRIBUTION PLANT						30
Land and Land Rights (340)	110,083				110,083	31
Structures and Improvements (341)	0				0	32
Distribution Reservoirs and Standpipes (342)	6,461,511	7,589			6,469,100	33
Transmission and Distribution Mains (343)	42,325,321	3,427,886	184,293		45,568,914	34
Services (345)	5,400,759	554,692	22,570		5,932,881	35
Meters (346)	4,186,805	230,622	114,353	(106,598)	4,196,476 *	36
Hydrants (348)	3,285,005	205,791	25,110		3,465,686	37

Water Utility Plant in Service - Plant Financed by Utility or Municipality

- All adjustments, corrections and reclassifications (including to/from plant financed by contributions) should be reported in Column (e), Adjustments.
- Explain fully as a footnote the nature of all entries reported in Column (e), Adjustments.
- For each account over \$100,000 (class AB) or \$50,000 (class C) or \$10,000 (class D), explain in the footnotes section the dollar additions and retirements. If applicable, the footnotes should cite construction authorization, complete with PSC docket number.
- Use only the account titles listed. If the utility has subaccounts other than accounts 391.1 and 397.1, combine them into one total and detail by subaccount as a schedule footnote.

Accounts (a)	Balance First of Year (b)	Additions During Year (c)	Retirements During Year (d)	Adjustments Increase or (Decrease) (e)	Balance End of Year (f)	
Other Transmission and Distribution Plant (349)	0				0	38
Total Transmission and Distribution Plant	61,769,484	4,426,580	346,326	(106,598)	65,743,140	39
GENERAL PLANT						40
Land and Land Rights (389)	69,179				69,179	41
Structures and Improvements (390)	2,246,923				2,246,923	42
Office Furniture and Equipment (391)	181,736				181,736	43
Computer Equipment (391.1)	576,893	37,217	38,099		576,011	44
Transportation Equipment (392)	903,436	75,982	14,279		965,139	45
Stores Equipment (393)	9,764				9,764	46
Tools, Shop and Garage Equipment (394)	464,593	6,230	9,578		461,245	47
Laboratory Equipment (395)	5,842				5,842	48
Power Operated Equipment (396)	658,735				658,735	49
Communication Equipment (397)	64,714				64,714	50
SCADA Equipment (397.1)	864,392				864,392	51
Miscellaneous Equipment (398)	0				0	52
Total General Plant	6,046,207	119,429	61,956	0	6,103,680	53
Total utility plant in service directly assignable	82,842,227	4,593,605	515,114	(106,598)	86,814,120	54
Common Utility Plant Allocated to Water Department	0				0	55
TOTAL UTILITY PLANT IN SERVICE	82,842,227	4,593,605	515,114	(106,598)	86,814,120	56

Water Utility Plant in Service - Plant Financed by Utility or Municipality

- All adjustments, corrections and reclassifications (including to/from plant financed by contributions) should be reported in Column (e), Adjustments.
- Explain fully as a footnote the nature of all entries reported in Column (e), Adjustments.
- For each account over \$100,000 (class AB) or \$50,000 (class C) or \$10,000 (class D), explain in the footnotes section the dollar additions and retirements. If applicable, the footnotes should cite construction authorization, complete with PSC docket number.
- Use only the account titles listed. If the utility has subaccounts other than accounts 391.1 and 397.1, combine them into one total and detail by subaccount as a schedule footnote.

Water Utility Plant in Service - Plant Financed by Utility or Municipality (Page W-08)**Adjustments for one or more accounts are nonzero, please explain.**

a/n 346 Transmission and Distribution Meters: Meters are held in inventory throughout the year. At year-end, they are re-classified to the asset. This entry is reversed at the beginning of the following year. The adjustment is transferring in-stock meters back to inventory for the year 2018.

Retirements for Accounts OTHER than 316, 343, 345, 346 or 348 exceed \$100,000, please explain.

a/n 325 Electric Pumping Equipment: Engler (well #13) well rehab was completed in 2018. All pumping equipment was replaced at a much cheaper bid price than the original installation. The initial install also included very expensive mobilization and sitework costs.

Water Utility Plant in Service - Plant Financed by Contributions

- All adjustments, corrections and reclassifications (including to/from plant financed by contributions) should be reported in Column (e), Adjustments.
- Explain fully as a footnote the nature of all entries reported in Column (e), Adjustments.
- For each account over \$100,000 (class AB) or \$50,000 (class C) or \$10,000 (class D), explain in the footnotes section the dollar additions and retirements. If applicable, the footnotes should cite construction authorization, complete with PSC docket number.
- Use only the account titles listed. If the utility has subaccounts other than accounts 391.1 and 397.1, combine them into one total and detail by subaccount as a schedule footnote.

Accounts (a)	Balance First of Year (b)	Additions During Year (c)	Retirements During Year (d)	Adjustments Increase or (Decrease) (e)	Balance End of Year (f)	
INTANGIBLE PLANT						1
Organization (301)	0				0	2
Franchises and Consents (302)	0				0	3
Miscellaneous Intangible Plant (303)	0				0	4
Total Intangible Plant	0	0	0	0	0	5
SOURCE OF SUPPLY PLANT						6
Land and Land Rights (310)	0				0	7
Structures and Improvements (311)	0				0	8
Collecting and Impounding Reservoirs (312)	0				0	9
Lake, River and Other Intakes (313)	0				0	10
Wells and Springs (314)	0				0	11
Supply Mains (316)	0				0	12
Other Water Source Plant (317)	0				0	13
Total Source of Supply Plant	0	0	0	0	0	14
PUMPING PLANT						15
Land and Land Rights (320)	0				0	16
Structures and Improvements (321)	629,970				629,970	17
Other Power Production Equipment (323)	0				0	18
Electric Pumping Equipment (325)	1,151,755		5,769		1,145,986	19
Diesel Pumping Equipment (326)	0				0	20
Other Pumping Equipment (328)	0				0	21
Total Pumping Plant	1,781,725	0	5,769	0	1,775,956	22
WATER TREATMENT PLANT						23
Land and Land Rights (330)	0				0	24
Structures and Improvements (331)	638,453				638,453	25
Sand or Other Media Filtration Equipment (332)	613,980				613,980	26
Membrane Filtration Equipment (333)	0				0	27
Other Water Treatment Equipment (334)	0				0	28
Total Water Treatment Plant	1,252,433	0	0	0	1,252,433	29
TRANSMISSION AND DISTRIBUTION PLANT						30
Land and Land Rights (340)	190,856	2,447			193,303	31
Structures and Improvements (341)	0				0	32
Distribution Reservoirs and Standpipes (342)	8,205				8,205	33
Transmission and Distribution Mains (343)	26,255,742	95,286			26,351,028	34
Services (345)	7,773,634	128,629	5,472		7,896,791	35
Meters (346)	0				0	36
Hydrants (348)	3,415,638	52,654			3,468,292	37

Water Utility Plant in Service - Plant Financed by Contributions

- All adjustments, corrections and reclassifications (including to/from plant financed by contributions) should be reported in Column (e), Adjustments.
- Explain fully as a footnote the nature of all entries reported in Column (e), Adjustments.
- For each account over \$100,000 (class AB) or \$50,000 (class C) or \$10,000 (class D), explain in the footnotes section the dollar additions and retirements. If applicable, the footnotes should cite construction authorization, complete with PSC docket number.
- Use only the account titles listed. If the utility has subaccounts other than accounts 391.1 and 397.1, combine them into one total and detail by subaccount as a schedule footnote.

Accounts (a)	Balance First of Year (b)	Additions During Year (c)	Retirements During Year (d)	Adjustments Increase or (Decrease) (e)	Balance End of Year (f)	
Other Transmission and Distribution Plant (349)	0				0	38
Total Transmission and Distribution Plant	37,644,075	279,016	5,472	0	37,917,619	39
GENERAL PLANT						40
Land and Land Rights (389)	0				0	41
Structures and Improvements (390)	0				0	42
Office Furniture and Equipment (391)	0				0	43
Computer Equipment (391.1)	0				0	44
Transportation Equipment (392)	0				0	45
Stores Equipment (393)	0				0	46
Tools, Shop and Garage Equipment (394)	0				0	47
Laboratory Equipment (395)	0				0	48
Power Operated Equipment (396)	0				0	49
Communication Equipment (397)	0				0	50
SCADA Equipment (397.1)	0				0	51
Miscellaneous Equipment (398)	0				0	52
Total General Plant	0	0	0	0	0	53
Total utility plant in service directly assignable	40,678,233	279,016	11,241	0	40,946,008	54
Common Utility Plant Allocated to Water Department	0				0	55
TOTAL UTILITY PLANT IN SERVICE	40,678,233	279,016	11,241	0	40,946,008	56

Water Accumulated Provision for Depreciation - Plant Financed by Utility or Municipality

- Use only the account titles listed. If the utility has subaccounts other than accounts 391.1 and 397.1, combine them into one total and detail by subaccount in a schedule footnote.
- If more than one depreciation rate is used, report the average rate in column (c).
- Enter depreciation rates in decimal form. For example, enter 6.75% as 0.0675

Primary Plant Accounts (a)	Balance First of Year (b)	Rate % Used (c)	Accruals During Year (d)	Book Cost of Plant Retired (e)	Cost of Removal (f)	Salvage (g)	Adjustments Increase or (Decrease) (h)	Balance End of Year (i)	
SOURCE OF SUPPLY PLANT									1
Structures and Improvements (311)	0							0	2
Collecting and Impounding Reservoirs (312)	0							0	3
Lake, River and Other Intakes (313)	0							0	4
Wells and Springs (314)	1,373,459	2.90%	43,721					1,417,180	5
Supply Mains (316)	248,980	1.80%	19,514					268,494	6
Other Water Source Plant (317)	0							0	7
Total Source of Supply Plant	1,622,439		63,235	0	0	0	0	1,685,674	8
PUMPING PLANT									9
Structures and Improvements (321)	1,628,619	3.20%	126,615	948				1,754,286	10
Other Power Production Equipment (323)	0							0	11
Electric Pumping Equipment (325)	925,065	4.40%	179,137	103,384	1,840			998,978	12
Diesel Pumping Equipment (326)	0							0	13
Other Pumping Equipment (328)	0							0	14
Total Pumping Plant	2,553,684		305,752	104,332	1,840	0	0	2,753,264	15
WATER TREATMENT PLANT									16
Structures and Improvements (331)	847,848	3.20%	68,713					916,561	17
Sand or Other Media Filtration Equipment (332)	88,049	3.30%	12,206	2,500				97,755	18
Membrane Filtration Equipment (333)	0							0	19
Other Water Treatment Equipment (334)	860,096	6.00%	88,423					948,519	20
Total Water Treatment Plant	1,795,993		169,342	2,500	0	0	0	1,962,835	21
TRANSMISSION AND DISTRIBUTION PLANT									22
Structures and Improvements (341)	0							0	23
Distribution Reservoirs and Standpipes (342)	2,116,715	1.90%	122,840					2,239,555	24
Transmission and Distribution Mains (343)	3,941,282	1.30%	571,313	184,293	20,954	1,252		4,308,600	25
Services (345)	1,518,545	2.90%	164,338	22,570		176		1,660,489	26
Meters (346)	2,260,678	5.50%	230,541	114,353		11,101		2,387,967	27

Water Accumulated Provision for Depreciation - Plant Financed by Utility or Municipality

- Use only the account titles listed. If the utility has subaccounts other than accounts 391.1 and 397.1, combine them into one total and detail by subaccount in a schedule footnote.
- If more than one depreciation rate is used, report the average rate in column (c).
- Enter depreciation rates in decimal form. For example, enter 6.75% as 0.0675

Primary Plant Accounts (a)	Balance First of Year (b)	Rate % Used (c)	Accruals During Year (d)	Book Cost of Plant Retired (e)	Cost of Removal (f)	Salvage (g)	Adjustments Increase or (Decrease) (h)	Balance End of Year (i)	
Hydrants (348)	406,859	2.20%	74,257	25,110	20,787			435,219	28
Other Transmission and Distribution Plant (349)	0							0	29
Total Transmission and Distribution Plant	10,244,079		1,163,289	346,326	41,741	12,529	0	11,031,830	30
GENERAL PLANT									31
Structures and Improvements (390)	858,174	2.90%	65,161					923,335	32
Office Furniture and Equipment (391)	180,957	5.80%	779					181,736	33
Computer Equipment (391.1)	472,294	20.00%	49,093	38,099				483,288	34
Transportation Equipment (392)	903,436	13.30%	5,053	14,279		4,000		898,210	35
Stores Equipment (393)	9,764	5.80%						9,764	36
Tools, Shop and Garage Equipment (394)	356,176	5.80%	8,363	9,578		65		355,026	37
Laboratory Equipment (395)	5,842	5.80%						5,842	38
Power Operated Equipment (396)	435,519	7.50%	49,405					484,924	39
Communication Equipment (397)	64,714	15.00%						64,714	40
SCADA Equipment (397.1)	511,781	9.20%	79,524					591,305	41
Miscellaneous Equipment (398)	0							0	42
Total General Plant	3,798,657		257,378	61,956	0	4,065	0	3,998,144	43
Total accum. prov. directly assignable	20,014,852		1,958,996	515,114	43,581	16,594	0	21,431,747	44
Common Utility Plant Allocated to Water Department	0							0	45
TOTAL ACCUM, PROV, FOR DEPRECIATION	20,014,852		1,958,996	515,114	43,581	16,594	0	21,431,747	46

Water Accumulated Provision for Depreciation - Plant Financed by Contributions

- Use only the account titles listed. If the utility has subaccounts other than accounts 391.1 and 397.1, combine them into one total and detail by subaccount in a schedule footnote.
- If more than one depreciation rate is used, report the average rate in column (c).
- Enter depreciation rates in decimal form. For example, enter 6.75% as 0.0675

Primary Plant Accounts (a)	Balance First of Year (b)	Rate % Used (c)	Accruals During Year (d)	Book Cost of Plant Retired (e)	Cost of Removal (f)	Salvage (g)	Adjustments Increase or (Decrease) (h)	Balance End of Year (i)	
SOURCE OF SUPPLY PLANT									1
Structures and Improvements (311)	0							0	2
Collecting and Impounding Reservoirs (312)	0							0	3
Lake, River and Other Intakes (313)	0							0	4
Wells and Springs (314)	0							0	5
Supply Mains (316)	0							0	6
Other Water Source Plant (317)	0							0	7
Total Source of Supply Plant	0		0	0	0	0	0	0	8
PUMPING PLANT									9
Structures and Improvements (321)	179,133	3.20%	20,159					199,292	10
Other Power Production Equipment (323)	0							0	11
Electric Pumping Equipment (325)	430,658	4.40%	50,550	5,769				475,439	12
Diesel Pumping Equipment (326)	0							0	13
Other Pumping Equipment (328)	0							0	14
Total Pumping Plant	609,791		70,709	5,769	0	0	0	674,731	15
WATER TREATMENT PLANT									16
Structures and Improvements (331)	178,017	3.20%	20,431					198,448	17
Sand or Other Media Filtration Equipment (332)	155,497	3.30%	20,261					175,758	18
Membrane Filtration Equipment (333)	0							0	19
Other Water Treatment Equipment (334)	0	6.00%						0	20
Total Water Treatment Plant	333,514		40,692	0	0	0	0	374,206	21
TRANSMISSION AND DISTRIBUTION PLANT									22
Structures and Improvements (341)	0							0	23
Distribution Reservoirs and Standpipes (342)	1,480	1.90%	156					1,636	24
Transmission and Distribution Mains (343)	5,575,513	1.30%	341,944					5,917,457	25
Services (345)	3,736,286	2.90%	227,221	5,472				3,958,035	26
Meters (346)	0							0	27

Water Accumulated Provision for Depreciation - Plant Financed by Contributions

- Use only the account titles listed. If the utility has subaccounts other than accounts 391.1 and 397.1, combine them into one total and detail by subaccount in a schedule footnote.
- If more than one depreciation rate is used, report the average rate in column (c).
- Enter depreciation rates in decimal form. For example, enter 6.75% as 0.0675

Primary Plant Accounts (a)	Balance First of Year (b)	Rate % Used (c)	Accruals During Year (d)	Book Cost of Plant Retired (e)	Cost of Removal (f)	Salvage (g)	Adjustments Increase or (Decrease) (h)	Balance End of Year (i)	
Hydrants (348)	1,250,201	2.20%	75,723					1,325,924	28
Other Transmission and Distribution Plant (349)	0							0	29
Total Transmission and Distribution Plant	10,563,480		645,044	5,472	0	0	0	11,203,052	30
GENERAL PLANT									31
Structures and Improvements (390)	0							0	32
Office Furniture and Equipment (391)	0							0	33
Computer Equipment (391.1)	0							0	34
Transportation Equipment (392)	0							0	35
Stores Equipment (393)	0							0	36
Tools, Shop and Garage Equipment (394)	0							0	37
Laboratory Equipment (395)	0							0	38
Power Operated Equipment (396)	0							0	39
Communication Equipment (397)	0							0	40
SCADA Equipment (397.1)	0							0	41
Miscellaneous Equipment (398)	0							0	42
Total General Plant	0		0	0	0	0	0	0	43
Total accum. prov. directly assignable	11,506,785		756,445	11,241	0	0	0	12,251,989	44
Common Utility Plant Allocated to Water Department	0							0	45
TOTAL ACCUM, PROV, FOR DEPRECIATION	11,506,785		756,445	11,241	0	0	0	12,251,989	46

Age of Water Mains

- If asset management, capital improvement, or other infrastructure-related documents are not available, the utility should consult other potential sources of information: the year the utility was formed, year of initial build-out area, year in which new developments, subdivisions, etc. were added. This information can be used to develop estimated figures.
- If pipe diameter value is between those offered in the column, choose the diameter that is closest to the actual value.
- Report all pipe larger than 72" in diameter in the 72" category.

Pipe Size (a)	Feet of Main										Total (l)	
	pre-1900 (b)	1901-1920 (c)	1920-1940 (d)	1941-1960 (e)	1961-1970 (f)	1971-1980 (g)	1981-1990 (h)	1991-2000 (i)	2001-2010 (j)	2011-2020 (k)		
2.000					184		230	8	234	8	664	1
3.000								5			5	2
4.000						5	9	1,428	1,664		3,106	3
6.000		43,056	56,473	101,454	46,472	28,806	15,470	13,787	5,098	746	311,362	4
8.000		8,497	3,330	61,183	117,168	152,167	107,151	195,656	130,783	48,177	824,112	5
10.000		102	685	142	179		90	1,436	22		2,656	6
12.000		988	2,892	25,484	56,029	57,607	36,915	79,722	88,697	55,075	403,409	7
14.000				174	282				8		464	8
16.000		881		133	11,603	36,391	9,624	21,330	28,496	16,315	124,773	9
20.000				10,785	16,478	4,663	2,803	11,877	13,037	2,575	62,218	10
24.000				1,103		2,096	6		4,298	19,055	26,558	11
30.000										186	186	12
Total	0	53,524	63,380	200,458	248,395	281,735	172,298	325,249	272,337	142,137	1,759,513	13

If utility is unable to provide the detailed information above, utility must provide the following:
 All utility main is from this year range
 (Example: 1954-1972)

Describe source of information used to develop data:
Water Main Age was Extracted from GIS.

Sources of Water Supply - Statistics

- For Raw Water Withdrawn, use metered volume of untreated water withdrawn from the source.
- For Finished Water Pumped, use metered volume of treated water entering the distribution network, adjusted for known meter errors.
- If Finished Water is not metered, use Raw Water Withdrawn and subtract estimated water used in treatment.

Month (a)	Sources of Water Supply (000's gal)						Total Gallons	
	Raw Water Withdrawn		Finished Water Pumped		Purchased Water (Imported)		Entering Distribution	
	Ground Water (b)	Surface Water (c)	Ground Water (d)	Surface Water (e)	Ground Water (f)	Surface Water (g)	System (h)	
January	187,243		187,243				187,243	1
February	161,030		161,030				161,030	2
March	169,155		169,155				169,155	3
April	160,989		160,989				160,989	4
May	180,518		180,518				180,518	5
June	180,999		180,999				180,999	6
July	191,051		191,051				191,051	7
August	189,602		189,602				189,602	8
September	174,372		174,372				174,372	9
October	167,877		167,877				167,877	10
November	157,742		157,742				157,742	11
December	155,437		155,437				155,437	12
TOTAL	2,076,015	0	2,076,015	0	0	0	2,076,015	13

Water Audit and Other Statistics

- Where possible, report actual metered values. If water uses are not metered, estimate values for each line based on best available information. For assistance, refer to AWWA M36 Manual – Water Audits and Loss Control Programs.
- For unbilled, unmetered gallons (line 16), include water used for system operation and maintenance and water used for non-regulated sewer utility.
- If gallons estimated due to theft, data, and billing errors is unknown, multiply net gallons entering distribution system (line 3) by .0025.

Description (a)	Value (b)
WATER AUDIT STATISTICS	
Finished Water pumped or purchased (000s)	2,076,015
Less: Gallons (000s) sold to wholesale customers (exported water)	0
Subtotal: Net gallons (000s) entering distribution system	2,076,015
Less: Gallons (000s) sold to retail customers - Billed Authorized Consumption	1,898,692
Gallons (000s) of Non-Revenue Water	177,323
Gallons (000s) of unbilled-metered (including customer use to prevent freezing)	45,034
Gallons (000s) of unbilled-unmetered (including unmetered flushing, fire protection)	1,114
Subtotal: Unbilled Authorized Consumption	46,148
Total Water Loss	131,175
Gallons (000s) estimated due to theft, data, and billing errors (default)	124887
Gallons (000s) estimated due to customer meter under-registration	1
Subtotal Apparent Losses	124,888
Gallons (000s) estimated due to reported leakage (mains, services, hydrants, overflows)	6,287
Gallons (000s) estimated due to unreported and background leakage	0
Subtotal Real Losses (leakage)	6,287
Non-Revenue Water as percentage of net water supplied	9%
Total Water Loss as percentage of net water supplied	6%
OTHER STATISTICS	
Maximum gallons (000s) pumped by all methods in any one day during reporting year	8,502
Date of maximum	08/25/2018
Cause of maximum	
Refilling reservoir.	
Minimum gallons (000s) pumped by all methods in any one day during reporting year	2,902
Date of minimum	11/25/2018
Total KWH used by the utility (including pumping, treatment facilities and other utility operations)	7,880,896
If water is purchased:	
Vendor Name	
Point of Delivery	
Source of purchased water	
Vendor Name (2)	
Point of Delivery (2)	
Source of purchased water (2)	
Vendor Name (3)	
Point of Delivery (3)	
Source of purchased water (3)	
Number of main breaks repaired this year	33
Number of service breaks repaired this year	12

Sources of Water Supply - Well Information

- Enter characteristics for each of the utility's functional wells (regardless of whether it is "in service" or not).
- Do not include abandoned wells on this schedule.
- All abandoned wells should be retired from the plant accounts and no longer listed in the utility's annual report.
- Abandoned wells should be permanently filled and sealed per Wisconsin Administrative codes Chapters NR811 and NR812.

Utility Name/ID for Well (a)	DNR Well ID (b)	Depth (feet) (c)	Casing Diameter (inches) (d)	Yield Per Day (gallons) (e)	In Service? (f)	
WELL #10	BH436	2,145	28	3,892,684	Yes	1
WELL #11	RL255	127	16	226,842	Yes	2
WELL #12	RL256	144	16	784,733	Yes	3
WELL #13	WK947	105	16	790,879	Yes	4
WELL #2	EQ944	1,835	14	1	No	* 5
WELL #3	BH429	1,995	14	1,114,629	Yes	6
WELL #4	BH430	1,995	12	1	No	* 7
WELL #5	BH431	2,120	19	1,651,033	Yes	8
WELL #6	BH432	2,075	20	3,327,938	Yes	9
WELL #7	BH433	1,650	20	1,016,271	Yes	10
WELL #8	BH434	2,024	20	2,559,954	Yes	11
WELL #9	BH435	1,725	20	1,854,296	Yes	12
				17,219,261		13

Sources of Water Supply - Well Information

- Enter characteristics for each of the utility's functional wells (regardless of whether it is "in service" or not).
- Do not include abandoned wells on this schedule.
- All abandoned wells should be retired from the plant accounts and no longer listed in the utility's annual report.
- Abandoned wells should be permanently filled and sealed per Wisconsin Administrative codes Chapters NR811 and NR812.

Sources of Water Supply - Well Information (Page W-16)

General Footnote

Well #2 & Well #4 are not in service; therefore, column (e) should show Yield per Day (gallons) is zero. However, the program will not save the schedule as "Completed" without a value greater than zero in this column.

Sources of Water Supply - Intake Information

- - - THIS SCHEDULE NOT APPLICABLE TO THIS UTILITY- - -

Pumping & Power Equipment

Identification (a)	Location (b)	Pump					Pump Motor or Standby Engine			
		Primary Purpose (c)	Primary Destination (d)	Year Installed (e)	Type (f)	Actual Capacity (gpm) (g)	Year Installed (j)	Type (k)	Horse- power (l)	
#10	WELL #10	Primary	Reservoir	2017	Submersible	2,704	2017	Electric	700	1
#13A	WELL #13	Primary	Reservoir	2018	Vertical Turbine	550	2009	Electric	30	2
#13B	WELL #13	Booster	Distribution	2009	Centrifugal	900	2009	Electric	100	3
#13C	WELL #13	Booster	Distribution	2009	Centrifugal	900	2009	Electric	100	4
#3A	WELL #3	Primary	Distribution	2015	Submersible	774	2015	Electric	250	5
#5A	WELL #5	Primary	Reservoir	2001	Vertical Turbine	1,150	1991	Electric	250	6
#5B	WELL #5	Booster	Distribution	1956	Centrifugal	1,200	1956	Electric	75	7
#5C	WELL #5	Booster	Distribution	1996	Centrifugal	1,108	1996	Electric	40	8
#6A	WELL #6	Primary	Reservoir	2015	Submersible	2,311	2015	Electric	400	9
#6B	WELL #6	Booster	Distribution	2004	Centrifugal	2,000	2004	Electric	150	10
#6C	WELL #6	Booster	Distribution	2000	Centrifugal	2,300	2000	Electric	150	11
#7	WELL #7	Primary	Distribution	2005	Submersible	705	2005	Electric	200	12
#8A	WELL #8	Primary	Reservoir	2018	Submersible	1,778	2014	Electric	300	13
#8B	WELL #8	Booster	Distribution	2006	Centrifugal	2,600	2006	Electric	150	14
#8C	WELL #8	Booster	Distribution	2006	Centrifugal	2,600	2006	Electric	150	15
#9A	WELL #9	Primary	Reservoir	2002	Submersible	1,288	2002	Electric	350	16
#9B	WELL #9	Booster	Distribution	2009	Centrifugal	2,200	2009	Electric	150	17
#9C	WELL #9	Booster	Distribution	2009	Centrifugal	2,200	2009	Electric	150	18
#9D	WELL #9	Booster	Distribution	2009	Centrifugal	1,400	2009	Electric	50	19
AIRPORT BOOSTER-A	AIRPORT BOOSTER	Booster	Distribution	2017	Centrifugal	1,100	2017	Electric	125	20
HIGHLINE BOOSTER-A	HIGHLINE BOOSTER	Booster	Distribution	1998	Centrifugal	1,000	1998	Electric	50	21
HIGHLINE BOOSTER-B	HIGHLINE BOOSTER	Booster	Distribution	1998	Centrifugal	1,000	1998	Electric	50	22
HIGHLINE BOOSTER-C	HIGHLINE BOOSTER	Booster	Distribution	1998	Centrifugal	1,000	1998	Electric	50	23

Pumping & Power Equipment

Identification (a)	Location (b)	Pump				Actual Capacity (gpm) (g)	Pump Motor or Standby Engine			
		Primary Purpose (c)	Primary Destination (d)	Year Installed (e)	Type (f)		Year Installed (j)	Type (k)	Horse- power (l)	
HILLCREST BOOSTER-A	HILLCREST BOOSTER	Booster	Distribution	1996	Centrifugal	250	1996	Electric	15	24
HILLCREST BOOSTER-B	HILLCREST BOOSTER	Booster	Distribution	2008	Centrifugal	120	2008	Electric	15	25
HILLCREST BOOSTER-C	HILLCREST BOOSTER	Booster	Distribution	1996	Centrifugal	2,000	1996	Electric	75	26
HILLCREST BOOSTER-D	HILLCREST BOOSTER	Booster	Distribution	2016	Centrifugal	60	2016	Electric	15	27
MADISON BOOSTER-A	MADISON BOOSTER	Booster	Distribution	2007	Centrifugal	2,100	2007	Electric	125	28
MADISON BOOSTER-B	MADISON BOOSTER	Booster	Distribution	2007	Centrifugal	2,100	2007	Electric	125	29
OAKMONT BOOSTER #1	OAKMONT BOOSTER	Booster	Distribution	2004	Centrifugal	150	2004	Electric	8 *	30
OAKMONT BOOSTER #2	OAKMONT BOOSTER	Booster	Distribution	2004	Centrifugal	150	2004	Electric	8 *	31
OAKMONT BOOSTER #3	OAKMONT BOOSTER	Booster	Distribution	2004	Centrifugal	1,000	2004	Electric	40	32
OAKMONT BOOSTER #4	OAKMONT BOOSTER	Booster	Distribution	2004	Centrifugal	1,000	2004	Electric	40	33
RIVER HILLS-A	RIVER PLACE	Booster	Distribution	2004	Centrifugal	175	2004	Electric	5	34
RIVER HILLS-B	RIVER PLACE	Booster	Distribution	2007	Centrifugal	175	2007	Electric	5	35
SOUTHEAST BOOSTER	WELL #5	Booster	Distribution	1983	Centrifugal	900	1983	Electric	40	36
STARDUST BOOSTER-A	STARDUST BOOSTER	Booster	Distribution	2003	Centrifugal	700	2003	Electric	15	37
STARDUST BOOSTER-B	STARDUST BOOSTER	Booster	Distribution	2015	Centrifugal	1,000	1991	Electric	30	38
STARDUST BOOSTER-C	STARDUST BOOSTER	Booster	Distribution	2013	Centrifugal	2,000	2013	Electric	60	39
WELL #11	2578 RIVER RD	Primary	Reservoir	2013	Submersible	158	2013	Electric	40	40
WELL #12	2566 RIVER RD	Primary	Reservoir	2013	Submersible	545	2013	Electric	50	41
WOODRIDGE BOOSTER-A	WOODRIDGE BOOSTER	Booster	Distribution	2014	Centrifugal	1,000	1999	Electric	40	42
WOODRIDGE BOOSTER-B	WOODRIDGE BOOSTER	Booster	Distribution	2014	Centrifugal	1,000	1999	Electric	40	43

Pumping & Power Equipment

Pumping & Power Equipment (Page W-18)

General Footnote

Oakmont Booster #1 & #2 actual Horsepower, column (I) should be "7.5". However, the program gives an error if whole numbers are not entered, so we rounded up to "8" in order to save and complete the schedule.

Reservoirs, Standpipes and Elevated Tanks

- Enter elevation difference between highest water level in Standpipe or Elevated Tank, (or Reservoir only on an elevated site) and the water main where the connection to the storage begins branching into the distribution system.

Facility Name (a)	Facility ID Site Code (b)	Year Constructed (c)	Type (d)	Primary Material (e)	Elevation Difference in Feet (f)	Total Capacity In Gallons (g)	
#13	#13	2009	Reservoir	Concrete	0	300,000	1
#2	#2	1932	Reservoir	Concrete	0	222,000 *	2
#5	#5	1956	Reservoir	Concrete	0	2,000,000	3
#6	#6	1960	Reservoir	Concrete	0	2,000,000	4
#8	#8	1968	Reservoir	Concrete	0	2,000,000	5
#9	#9	1970	Reservoir	Concrete	0	1,500,000	6
EVERGREEN TOWER	EVERGREEN TOWER	1958	Elevated Tank	Steel	108	250,000 *	7
HILLCREST/WELL #10	#10	1978	Reservoir	Concrete	123	5,000,000	8
HUNTER TOWER	HUNTER TOWER	1998	Elevated Tank	Steel	185	400,000	9
MEADOWBROOK	MEADOWBROOK	1999	Elevated Tank	Steel	159	300,000	10
MORRIS TOWER	MORRIS TOWER	1998	Elevated Tank	Steel	120	100,000	11
NE AREA/DAVIDSON	NE AREA/DAVIDSON	1968	Elevated Tank	Steel	88	250,000	12
NW AREA/UWW	NW AREA/UWW	2009	Elevated Tank	Concrete	99	1,000,000	13

Reservoirs, Standpipes and Elevated Tanks

- Enter elevation difference between highest water level in Standpipe or Elevated Tank, (or Reservoir only on an elevated site) and the water main where the connection to the storage begins branching into the distribution system.

Reservoirs, Standpipes and Elevated Tanks (Page W-19)

General Footnote

Well #2 has been temporarily abandoned.

Evergreen Tower is out of service, but is still owned by the Utility as of 12/31/18.

Water Treatment Plant

- Provide a generic description for (a). Do not give specific address of location.
- Please select all that apply for (d) and (e). If Other is selected please explain in Notes (h).
- Please identify the point of application for each treatment plant for (g). For example, please list each well or central treatment facility served by this unit.

Unit Description (a)	Year Constructed (b)	Rated Capacity (mgd) (c)	Disinfection (d)	Additional Treatment (e)	Fluoridated (f)	Point of Application (g)	Notes (h)	
#2	1932		<input type="checkbox"/> Ultraviolet Light <input type="checkbox"/> Liquid Chlorine <input type="checkbox"/> Gas Chlorine <input type="checkbox"/> Ozone <input type="checkbox"/> Other <input checked="" type="checkbox"/> None	<input type="checkbox"/> Flocculation/Sedimentation <input type="checkbox"/> Sand Filtration <input type="checkbox"/> Activated Carbon Filtration <input type="checkbox"/> Membrane Filtration <input type="checkbox"/> Iron Exchange <input type="checkbox"/> Iron/Manganese <input type="checkbox"/> Nutrient Removal <input type="checkbox"/> Radium Removal <input type="checkbox"/> Other	No		Not in service.	1
#3	1930	1	<input type="checkbox"/> Ultraviolet Light <input checked="" type="checkbox"/> Liquid Chlorine <input type="checkbox"/> Gas Chlorine <input type="checkbox"/> Ozone <input type="checkbox"/> Other <input type="checkbox"/> None	<input type="checkbox"/> Flocculation/Sedimentation <input type="checkbox"/> Sand Filtration <input type="checkbox"/> Activated Carbon Filtration <input type="checkbox"/> Membrane Filtration <input type="checkbox"/> Iron Exchange <input type="checkbox"/> Iron/Manganese <input type="checkbox"/> Nutrient Removal <input checked="" type="checkbox"/> Radium Removal <input checked="" type="checkbox"/> Other	Yes	WELLHOUSE	Other: Silicate/corrosion control	2
#5	1956	1	<input type="checkbox"/> Ultraviolet Light <input checked="" type="checkbox"/> Liquid Chlorine <input type="checkbox"/> Gas Chlorine <input type="checkbox"/> Ozone <input type="checkbox"/> Other <input type="checkbox"/> None	<input type="checkbox"/> Flocculation/Sedimentation <input type="checkbox"/> Sand Filtration <input type="checkbox"/> Activated Carbon Filtration <input type="checkbox"/> Membrane Filtration <input type="checkbox"/> Iron Exchange <input type="checkbox"/> Iron/Manganese <input type="checkbox"/> Nutrient Removal <input type="checkbox"/> Radium Removal <input type="checkbox"/> Other	No	WELLHOUSE		3
#6	1960	3	<input type="checkbox"/> Ultraviolet Light <input checked="" type="checkbox"/> Liquid Chlorine <input type="checkbox"/> Gas Chlorine <input type="checkbox"/> Ozone <input type="checkbox"/> Other <input type="checkbox"/> None	<input type="checkbox"/> Flocculation/Sedimentation <input type="checkbox"/> Sand Filtration <input type="checkbox"/> Activated Carbon Filtration <input type="checkbox"/> Membrane Filtration <input type="checkbox"/> Iron Exchange <input type="checkbox"/> Iron/Manganese <input type="checkbox"/> Nutrient Removal <input type="checkbox"/> Radium Removal <input type="checkbox"/> Other	No	WELLHOUSE		4

Water Treatment Plant

- Provide a generic description for (a). Do not give specific address of location.
- Please select all that apply for (d) and (e). If Other is selected please explain in Notes (h).
- Please identify the point of application for each treatment plant for (g). For example, please list each well or central treatment facility served by this unit.

Unit Description (a)	Year Constructed (b)	Rated Capacity (mgd) (c)	Disinfection (d)	Additional Treatment (e)	Fluoridated (f)	Point of Application (g)	Notes (h)	
#8	1968	2	<input type="checkbox"/> Ultraviolet Light <input checked="" type="checkbox"/> Liquid Chlorine <input type="checkbox"/> Gas Chlorine <input type="checkbox"/> Ozone <input type="checkbox"/> Other <input type="checkbox"/> None	<input type="checkbox"/> Flocculation/Sedimentation <input type="checkbox"/> Sand Filtration <input type="checkbox"/> Activated Carbon Filtration <input type="checkbox"/> Membrane Filtration <input type="checkbox"/> Iron Exchange <input type="checkbox"/> Iron/Manganese <input type="checkbox"/> Nutrient Removal <input checked="" type="checkbox"/> Radium Removal <input checked="" type="checkbox"/> Other	Yes	WELLHOUSE	Other: Silicate/corrosion control	5
#9	1970	2	<input type="checkbox"/> Ultraviolet Light <input checked="" type="checkbox"/> Liquid Chlorine <input type="checkbox"/> Gas Chlorine <input type="checkbox"/> Ozone <input type="checkbox"/> Other <input type="checkbox"/> None	<input type="checkbox"/> Flocculation/Sedimentation <input type="checkbox"/> Sand Filtration <input type="checkbox"/> Activated Carbon Filtration <input type="checkbox"/> Membrane Filtration <input type="checkbox"/> Iron Exchange <input type="checkbox"/> Iron/Manganese <input type="checkbox"/> Nutrient Removal <input type="checkbox"/> Radium Removal <input type="checkbox"/> Other	No	WELLHOUSE		6
HILLCREST/WELL #10	1978	3	<input type="checkbox"/> Ultraviolet Light <input checked="" type="checkbox"/> Liquid Chlorine <input type="checkbox"/> Gas Chlorine <input type="checkbox"/> Ozone <input type="checkbox"/> Other <input type="checkbox"/> None	<input type="checkbox"/> Flocculation/Sedimentation <input type="checkbox"/> Sand Filtration <input type="checkbox"/> Activated Carbon Filtration <input type="checkbox"/> Membrane Filtration <input type="checkbox"/> Iron Exchange <input type="checkbox"/> Iron/Manganese <input type="checkbox"/> Nutrient Removal <input checked="" type="checkbox"/> Radium Removal <input checked="" type="checkbox"/> Other	Yes	WELLHOUSE	Other: Silicate/corrosion control	7
WELL #11	2006	1	<input type="checkbox"/> Ultraviolet Light <input checked="" type="checkbox"/> Liquid Chlorine <input type="checkbox"/> Gas Chlorine <input type="checkbox"/> Ozone <input type="checkbox"/> Other <input type="checkbox"/> None	<input type="checkbox"/> Flocculation/Sedimentation <input type="checkbox"/> Sand Filtration <input type="checkbox"/> Activated Carbon Filtration <input type="checkbox"/> Membrane Filtration <input type="checkbox"/> Iron Exchange <input checked="" type="checkbox"/> Iron/Manganese <input type="checkbox"/> Nutrient Removal <input type="checkbox"/> Radium Removal <input checked="" type="checkbox"/> Other	Yes	WELL 8 TRMT PLANT	Other: Silicate/corrosion control	8

Water Treatment Plant

- Provide a generic description for (a). Do not give specific address of location.
- Please select all that apply for (d) and (e). If Other is selected please explain in Notes (h).
- Please identify the point of application for each treatment plant for (g). For example, please list each well or central treatment facility served by this unit.

Unit Description (a)	Year Constructed (b)	Rated Capacity (mgd) (c)	Disinfection (d)	Additional Treatment (e)	Fluoridated (f)	Point of Application (g)	Notes (h)	
WELL #12	2006	1	<input type="checkbox"/> Ultraviolet Light <input checked="" type="checkbox"/> Liquid Chlorine <input type="checkbox"/> Gas Chlorine <input type="checkbox"/> Ozone <input type="checkbox"/> Other <input type="checkbox"/> None	<input type="checkbox"/> Flocculation/Sedimentation <input type="checkbox"/> Sand Filtration <input type="checkbox"/> Activated Carbon Filtration <input type="checkbox"/> Membrane Filtration <input type="checkbox"/> Iron Exchange <input checked="" type="checkbox"/> Iron/Manganese <input type="checkbox"/> Nutrient Removal <input type="checkbox"/> Radium Removal <input checked="" type="checkbox"/> Other	Yes	WELL 8 TRMT PLANT	Other: Silicate/corrosion control	9
WELL #13	2009	1	<input type="checkbox"/> Ultraviolet Light <input checked="" type="checkbox"/> Liquid Chlorine <input type="checkbox"/> Gas Chlorine <input type="checkbox"/> Ozone <input type="checkbox"/> Other <input type="checkbox"/> None	<input type="checkbox"/> Flocculation/Sedimentation <input type="checkbox"/> Sand Filtration <input type="checkbox"/> Activated Carbon Filtration <input type="checkbox"/> Membrane Filtration <input type="checkbox"/> Iron Exchange <input type="checkbox"/> Iron/Manganese <input type="checkbox"/> Nutrient Removal <input type="checkbox"/> Radium Removal <input checked="" type="checkbox"/> Other	Yes	WELLHOUSE	Other: Silicate/corrosion control	10
WELL #7	1963	1	<input type="checkbox"/> Ultraviolet Light <input checked="" type="checkbox"/> Liquid Chlorine <input type="checkbox"/> Gas Chlorine <input type="checkbox"/> Ozone <input type="checkbox"/> Other <input type="checkbox"/> None	<input type="checkbox"/> Flocculation/Sedimentation <input type="checkbox"/> Sand Filtration <input type="checkbox"/> Activated Carbon Filtration <input type="checkbox"/> Membrane Filtration <input type="checkbox"/> Iron Exchange <input type="checkbox"/> Iron/Manganese <input type="checkbox"/> Nutrient Removal <input type="checkbox"/> Radium Removal <input checked="" type="checkbox"/> Other	No	WELLHOUSE	Other: Silicate/corrosion control	11

Water Mains

- Report mains separately by pipe material, function, diameter and either within or outside the municipal boundaries.
- Explain all reported adjustments as a schedule footnote.
- For main additions reported in column (e), as a schedule footnote:
 - Explain how the additions were financed.
 - If assessed against property owners, explain the basis of the assessments.
 - If the assessments are deferred, explain.
- Report all pipe larger than 72" in diameter in the 72" category.

Pipe Material (a)	Main Function (b)	Diameter (inches) (c)	Number of Feet				Adjustments Increase or (Decrease) (g)	End of Year (h)	
			First of Year (d)	Added During Year (e)	Retired During Year (f)				
Other Metal	Distribution	2	664					664	1
Ductile Iron, Lined (late 1960's to present)	Distribution	3	5					5	2
Ductile Iron, Lined (late 1960's to present)	Distribution	4	1,424				(6)	1,418 *	3
Ductile Iron, Lined (late 1960's to present)	Transmission	4	15					15	4
PVC	Distribution	4	18					18	5
Asbestos-Cement (Transite)	Distribution	6	453					453	6
Ductile Iron, Lined (late 1960's to present)	Distribution	6	92,295	48	16		(82)	92,245 *	7
Ductile Iron, Lined (late 1960's to present)	Transmission	6	4					4	8
Galvanized	Distribution	6	24				(24)	0 *	9
Lined Cast Iron (mide-1950's to early 1970)	Distribution	6	215,809		3,519		(250)	212,040 *	10
Other Metal	Distribution	6	17					17	11
PVC	Distribution	6	6,157		10		(46)	6,101 *	12
Ductile Iron, Lined (late 1960's to present)	Distribution	8	517,990	283	1,463		(430)	516,380 *	13
Ductile Iron, Lined (late 1960's to present)	Supply	8	505					505	14
Ductile Iron, Lined (late 1960's to present)	Transmission	8	124					124	15
HDPE	Distribution	8	3,025					3,025	16
Lined Cast Iron (mide-1950's to early 1970)	Distribution	8	86,404		2,913		8	83,499 *	17
Other Metal	Distribution	8	932				(41)	891 *	18
PVC	Distribution	8	205,796	4,635	216		(79)	210,136 *	19
Ductile Iron, Lined (late 1960's to present)	Distribution	10	224					224	20
Ductile Iron, Lined (late 1960's to present)	Transmission	10	19					19	21
Lined Cast Iron (mide-1950's to early 1970)	Distribution	10	1,165				(188)	977 *	22
PVC	Distribution	10	1,436					1,436	23
Ductile Iron, Lined (late 1960's to present)	Distribution	12	202,673	828	176		(16)	203,309 *	24
Ductile Iron, Lined (late 1960's to present)	Supply	12	1,163					1,163	25
Ductile Iron, Lined (late 1960's to present)	Transmission	12	8,554					8,554	26
HDPE	Distribution	12	782					782	27

Water Mains

- Report mains separately by pipe material, function, diameter and either within or outside the municipal boundaries.
- Explain all reported adjustments as a schedule footnote.
- For main additions reported in column (e), as a schedule footnote:
 - Explain how the additions were financed.
 - If assessed against property owners, explain the basis of the assessments.
 - If the assessments are deferred, explain.
- Report all pipe larger than 72" in diameter in the 72" category.

Pipe Material (a)	Main Function (b)	Diameter (inches) (c)	Number of Feet				End of Year (h)	
			First of Year (d)	Added During Year (e)	Retired During Year (f)	Adjustments Increase or (Decrease) (g)		
Lined Cast Iron (mide-1950's to early 1970)	Distribution	12	37,196		1,541	54	35,709 *	28
Other Metal	Distribution	12	2,864			(63)	2,801 *	29
PVC	Distribution	12	135,303	1,791	245	(10)	136,839 *	30
PVC	Supply	12	2				2	31
Ductile Iron, Lined (late 1960's to present)	Transmission	14	290				290	32
Lined Cast Iron (mide-1950's to early 1970)	Transmission	14	174				174	33
Ductile Iron, Lined (late 1960's to present)	Supply	16	3,803				3,803	34
Ductile Iron, Lined (late 1960's to present)	Transmission	16	94,781	1,662	4	(1,565)	94,874 *	35
HDPE	Supply	16	793				793	36
HDPE	Transmission	16	1,858			11	1,869 *	37
Lined Cast Iron (mide-1950's to early 1970)	Transmission	16	4,026			15	4,041 *	38
PVC	Transmission	16	4,283				4,283	39
Ductile Iron, Lined (late 1960's to present)	Transmission	20	33,758	1,061	22	(1,330)	33,467 *	40
Lined Cast Iron (mide-1950's to early 1970)	Transmission	20	13,486			(7)	13,479 *	41
PVC	Transmission	20	2,823				2,823	42
Ductile Iron, Lined (late 1960's to present)	Transmission	24	19,343	2,564		(10)	21,897 *	43
HDPE	Transmission	24	1,306				1,306	44
Lined Cast Iron (mide-1950's to early 1970)	Transmission	24	1,109				1,109	45
HDPE	Transmission	30	186				186	46
Total Within Municipality			1,705,061	12,872	10,125	(4,059)	1,703,749	47
Ductile Iron, Lined (late 1960's to present)	Distribution	4	1,656				1,656	48
Ductile Iron, Lined (late 1960's to present)	Distribution	6	501				501	49
Ductile Iron, Lined (late 1960's to present)	Distribution	8	6,758				6,758	50
HDPE	Distribution	8	52				52	51
PVC	Distribution	8	2,741				2,741	52
Ductile Iron, Lined (late 1960's to present)	Distribution	12	10,347				10,347	53
PVC	Distribution	12	3,904				3,904	54
Ductile Iron, Lined (late 1960's to present)	Transmission	16	9,862				9,862	55

Water Mains

- Report mains separately by pipe material, function, diameter and either within or outside the municipal boundaries.
- Explain all reported adjustments as a schedule footnote.
- For main additions reported in column (e), as a schedule footnote:
 - Explain how the additions were financed.
 - If assessed against property owners, explain the basis of the assessments.
 - If the assessments are deferred, explain.
- Report all pipe larger than 72" in diameter in the 72" category.

Pipe Material (a)	Main Function (b)	Diameter (inches) (c)	Number of Feet				End of Year (h)	
			First of Year (d)	Added During Year (e)	Retired During Year (f)	Adjustments Increase or (Decrease) (g)		
HDPE	Transmission	16	692				692	56
Lined Cast Iron (mide-1950's to early 1970)	Transmission	16	4,474				4,474	57
PVC	Transmission	16	82				82	58
Ductile Iron, Lined (late 1960's to present)	Transmission	20	9,042				9,042	59
Lined Cast Iron (mide-1950's to early 1970)	Transmission	20	3,407				3,407	60
Ductile Iron, Lined (late 1960's to present)	Transmission	24	1,717				1,717	61
HDPE	Transmission	24	529				529	62
Total Outside Municipality			55,764				55,764	63
Total Utility			1,760,825	12,872	10,125	(4,059)	1,759,513	64

Water Mains

- Report mains separately by pipe material, function, diameter and either within or outside the municipal boundaries.
- Explain all reported adjustments as a schedule footnote.
- For main additions reported in column (e), as a schedule footnote:
 - Explain how the additions were financed.
 - If assessed against property owners, explain the basis of the assessments.
 - If the assessments are deferred, explain.
- Report all pipe larger than 72" in diameter in the 72" category.

Water Mains (Page W-21)

Added During Year total is greater than zero, please explain financing following the criteria listed in the schedule headnotes.

The number of feet added for 2018 for Developer projects was 2,228', added at actual cost. There was also 10,644' of Utility financed main installed in 2018.

Adjustments are nonzero for one or more accounts, please explain.

Adjustments were made based on an audit between PSC records and the Utility's GIS records. These adjustments will correct the size, footage, and material of the main to actual.

General Footnote

The footage listed under "added during year" varies from that used in the conservation report because projects that are not financially closed in 2018 are not included in schedule W-21 and remain in WIP.

Utility-Owned Water Service Lines

- The utility's service line is the pipe from the main to and through the curb stop.
- Explain all reported adjustments as a schedule footnote.
- Report in column (h) the number of utility-owned service lines included in columns (g) which are temporarily shut off at the curb box or otherwise not in use at end of year.
- For service lines added during the year in column (d), as a schedule footnote:
 - Explain how the additions were financed.
 - If assessed against property owners, explain the basis of the assessments.
 - If installed by a property owner or developer, explain the basis of recording the cost of the additions, the total amount and the number of service lines recorded under this method.
 - If any were financed by application of Cz-1, provide the total amount recorded and the number of service lines recorded under this method.
- Report service lines separately by diameter and pipe materials.

Pipe Material (a)	Diameter (inches) (b)	First of Year (c)	Added During Year (d)	Removed or Permanently Disconnected During Year (e)	Adjustments Increase or (Decrease) (f)	End of Year (g)	NOT in Use at End of Year (h)	
Other Metal	0.500	4				4		1
Lead	0.750	39		30	7	16	*	2
Other Metal	0.750	1,508		13		1,495	7	3
Other Metal	1.000	13,992		45		13,947	24	4
Other Plastic	1.000	810	64	4		870	*	5
Other Metal	1.250	1,653		6		1,647	1	6
Other Plastic	1.250	357	66			423	*	7
Other Metal	1.500	515		3		512	1	8
Other Plastic	1.500	95	5			100	*	9
Lead	2.000	5				5		10
Other Metal	2.000	464		6		458	5	11
Other Plastic	2.000	49	2			51	*	12
Other Metal	3.000	8				8		13
Other Metal	4.000	141		2		139	3	14
Other Plastic	4.000	16				16	1	15
Other Metal	6.000	138	4			142	1 *	16
Other Plastic	6.000	177	3			180	1 *	17
Other Metal	8.000	95	1			96	*	18
Other Plastic	8.000	27	2			29	3 *	19
Other Plastic	10.000	1				1		20
Other Metal	12.000	3				3		21
Other Plastic	12.000	1				1		22
Utility Total		20,098	147	109	7	20,143	47	23

Utility-Owned Water Service Lines

- The utility's service line is the pipe from the main to and through the curb stop.
- Explain all reported adjustments as a schedule footnote.
- Report in column (h) the number of utility-owned service lines included in columns (g) which are temporarily shut off at the curb box or otherwise not in use at end of year.
- For service lines added during the year in column (d), as a schedule footnote:
 - Explain how the additions were financed.
 - If assessed against property owners, explain the basis of the assessments.
 - If installed by a property owner or developer, explain the basis of recording the cost of the additions, the total amount and the number of service lines recorded under this method.
 - If any were financed by application of Cz-1, provide the total amount recorded and the number of service lines recorded under this method.
- Report service lines separately by diameter and pipe materials.

Utility-Owned Water Service Lines (Page W-22)

Additions are greater than zero, please explain financing by following criteria listed in the schedule headnotes.

In 2018, 46 services were Developer/Contractor installed and are accounted for based on actual cost. 101 services were replaced or installed and funded by the Utility. Services installed by a home owner are contracted by that home owner.

Adjustments are nonzero for one or more accounts, please explain.

Adjustments were made based on an audit between PSC records and the Utility's GIS records. These adjustments will correct the material of the service to actual.

Meters

- Include in Columns (b-f) meters in stock as well as those in service.
- Report in Column (c) all meters purchased during the year and in Column (d) all meters junked, sold or otherwise permanently retired during the year.
- Use Column (e) to show correction to previously reported meter count because of inventory or property record corrections
- Totals by size in Column (f) should equal same size totals in Column (s).
- Explain all reported adjustments as schedule footnote.
- Do not include station meters in the meter inventory used to complete these tables.

Number of Utility-Owned Meters

Classification of All Meters at End of Year by Customers

Size of Meter	First of Year	Added During Year	Retired During Year	Adjust. Increase or Decrease															
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	
5/8	17,405	360	344	(2)	17,419	114	16,378	508	44	7	36	118					328	17,419	*
3/4	1,698	42	29	3	1,714	6	1,282	231	16	3	116	6					60	1,714	*
1	949	8	15	(1)	941	19	52	251	32	28	545	4					29	941	*
1 1/2	379		2		377	84		121	14	13	197	1					31	377	
2	374		0		374	84		134	31	52	120	4					33	374	
3	46	2	0		48	25		16	3	9	13						7	48	
4	18		1		17	4		3	6	3	1						4	17	
6	10		0		10	9		2	6	1							1	10	*
Total	20,879	412	391	0	20,900	345	17,712	1,266	152	116	1,028	133					493	20,900	9

Meters

- Include in Columns (b-f) meters in stock as well as those in service.
- Report in Column (c) all meters purchased during the year and in Column (d) all meters junked, sold or otherwise permanently retired during the year.
- Use Column (e) to show correction to previously reported meter count because of inventory or property record corrections
- Totals by size in Column (f) should equal same size totals in Column (s).
- Explain all reported adjustments as schedule footnote.
- Do not include station meters in the meter inventory used to complete these tables.

1. Indicate your residential meter replacement schedule:

Meters tested once every 10 years and replaced as needed

☒ All meters replaced within 20 years of installation

Other schedule as approved by PSC

2. Indicate the method(s) used to read customer meters

Manually - remote register

Manually - inside the premises

☒ Radio Frequency - Drive or walk-by technology

Radio Frequency - fixed network or other automatic infrastructure (AMI)

Other

Meters

- Include in Columns (b-f) meters in stock as well as those in service.
- Report in Column (c) all meters purchased during the year and in Column (d) all meters junked, sold or otherwise permanently retired during the year.
- Use Column (e) to show correction to previously reported meter count because of inventory or property record corrections
- Totals by size in Column (f) should equal same size totals in Column (s).
- Explain all reported adjustments as schedule footnote.
- Do not include station meters in the meter inventory used to complete these tables.

Meters (Page W-23)

Adjustments are nonzero for one or more meter sizes, please explain.

Adjustments are a result of the reconciliation between the end of the year report and a physical inventory of all in-stock meters.

General Footnote

We have 10 6" meters, but only 9 were tested in 2018. The 10th meter is in stock, which is why it was not tested.

Hydrants and Distribution System Valves

- Distinguish between fire and flushing hydrants by lead size.
 - Fire hydrants normally have a lead size of 6 inches or greater.
 - Record as a flushing hydrant where the lead size is less than 6 inches or if pressure is inadequate to provide fire flow.
- Explain all reported adjustments in the schedule footnotes.
- Report fire hydrants as within or outside the municipal boundaries.

Hydrant Type (a)	Number In Service First of Year (b)	Added During Year (c)	Removed During Year (d)	Adjustments Increase or (Decrease) (e)	Number In Service End of Year (f)	
Fire - Outside Municipality	74				74	1
Fire - Within Municipality	3,403	33	26	(1)	3,409 *	2
Total Fire Hydrants	3,477	33	26	(1)	3,483	3
Flushing Hydrants	0				0	4

NR810.13(2)(a) recommends that a schedule shall be adopted and followed for operating each system valve and hydrant at least once each two years. Please provide the number operated during the year.

Number of Hydrants operated during year	3,331
Number of Distribution System Valves end of year	8,229
Number of Distribution Valves operated during Year	1,981

Hydrants and Distribution System Valves

- Distinguish between fire and flushing hydrants by lead size.
 - Fire hydrants normally have a lead size of 6 inches or greater.
 - Record as a flushing hydrant where the lead size is less than 6 inches or if pressure is inadequate to provide fire flow.
- Explain all reported adjustments in the schedule footnotes.
- Report fire hydrants as within or outside the municipal boundaries.

Hydrants and Distribution System Valves (Page W-25)

Adjustments are nonzero for one or more accounts, please explain.

An adjustment has been made to hydrants based on an audit between PSC records and the Utility's GIS records. The adjustment will correct the number of hydrants listed to actual.

General Footnote

WWU continues to test and operate distribution valves and hydrants following DNR code NR810.

List of All Station and Wholesale Meters

- Definition of Station Meter is any meter in service not used to measure customer consumption.
- Definition of Wholesale Meter is any meter used to measure sales to other utilities.
- Retail customer meters should not be included in this inventory.

Purpose (a)	Meter Size (inches) (b)	Location or Description (c)	Type (d)	Date of Last Meter Test (e)		
Station Meter	6	Well #11	Magnetic	03/23/2017	*	1
Station Meter	8	Well #12	Magnetic	03/23/2017	*	2
Station Meter	8	Well #3	Magnetic	03/23/2017	*	3
Station Meter	8	Well #7	Magnetic	03/23/2017	*	4
Station Meter	12	Well #13-1	Magnetic	03/23/2017	*	5
Station Meter	12	Well #13-2	Magnetic	03/23/2017	*	6
Station Meter	12	Well #5	Magnetic	03/23/2017	*	7
Station Meter	12	Well #6	Magnetic	03/23/2017	*	8
Station Meter	12	Well #8-1	Magnetic	03/23/2017	*	9
Station Meter	12	Well #8-2	Magnetic	03/23/2017	*	10
Station Meter	16	Well #10	Magnetic	03/23/2017	*	11
Station Meter	16	Well #9	Magnetic	03/23/2017	*	12

List of All Station and Wholesale Meters

- Definition of Station Meter is any meter in service not used to measure customer consumption.
- Definition of Wholesale Meter is any meter used to measure sales to other utilities.
- Retail customer meters should not be included in this inventory.

List of All Station and Wholesale Meters (Page W-26)

General Footnote

Waukesha Water Utility supply meter testing is on a two-year cycle and is scheduled for testing on March 20, 2019.

Water Conservation Programs

- List all water conservation-related expenditures for the reporting year. Include administrative costs, customer outreach and education, other program costs, and payments for rebates and other customer incentives.
- If the Commission has approved conservation program expenses, these should be charged to Account 186. Otherwise, these expenses are reported in Account 906 on Schedule W-05 (Account 691 for class D utilities).

Item Description (a)	Expenditures (b)	Number of Rebates (c)	Water Savings Gallons (d)	
Administrative and General Expenses				1
Program Administration	8,954	0	0	2
Customer Outreach & Education	14,318	0	0	3
Other Program Costs	15,185	0	0	4
Total Administrative and General Expenses	38,457	0	0	5
Customer Incentives				6
Residential Toilets	9,125	92	852,224	7
Multifamily/Commercial Toilets	8,464	87	1,638,628	8
Faucets	0	0	0	9
Showerheads	450	18	37,121	10
Clothes Washers	0	0	0	11
Dishwashers	0	0	0	12
Smart Irrigation Controller	0	0	0	13
Commercial Pre-Rinse Spray Valves	0	0	0	14
Cost Sharing Projects (Nonresidential Customers)	14,838	1	4,599,626	15
Customer Water Audits	0	0	0	16
Other Incentives	140	7	9,100 *	17
Total Customer Incentives	33,017	205	7,136,699	18
TOTAL CONSERVATION	71,474	205	7,136,699	19

Water Conservation Programs

- List all water conservation-related expenditures for the reporting year. Include administrative costs, customer outreach and education, other program costs, and payments for rebates and other customer incentives.
 - If the Commission has approved conservation program expenses, these should be charged to Account 186. Otherwise, these expenses are reported in Account 906 on Schedule W-05 (Account 691 for class D utilities).

Water Conservation Programs (Page W-27)

Expenditures for Other Incentives are non-zero, please explain.

Seven rain barrel incentives were reimbursed for a total of \$140.00 with a water savings of 9,100 gallons.

General Footnote

The full conservation report was submitted electronically.

Water Customers Served

- List the number of customer accounts in each municipality for which your utility provides retail general service. Do not include wholesale customers or fire protection accounts.
- Per Wisconsin state statute, a city, village, town or sanitary district owning water plant or equipment may serve customers outside its corporate limits, including adjoining municipalities. For purposes of this schedule, customers located "Within Muni Boundary" refers to those located inside the jurisdiction that owns the water utility.

Municipality (a)	Customers End of Year (b)	
Pewaukee (City)	53	1
Waukesha (City) **	20,224	2
Waukesha (Town)	129	3
Total - Waukesha County	20,406	4
Total - Customers Served	20,406	5
Total - Outside Muni Boundary	182	6
Total - Within Muni Boundary **	20,224	7

** = Within municipal boundary

Privately-Owned Water Service Lines

- The privately owned service line is the pipe from the curb stop to the meter.
- Explain all reported adjustments in columns(f) as a schedule footnote.
- Report in column (h) the number of privately-owned service lines included in columns (g) which are temporarily shut off at the curb box or otherwise not in use at end of year.
- Separate reporting of service lines by diameter and pipe material.

Pipe Material (a)	Diameter (inches) (b)	First of Year (c)	Added During Year (d)	Removed or Permanently Disconnected During Year (e)	Adjustments Increase or (Decrease) (f)	End of Year (g)	Utility Owned Service Laterals Not in Use at End of Year (i)	Replaced During Year Using Financial Assistance from Utility (h)	
Other Metal	0.500	4				4			1
Other Metal	0.750	1,547		43	7	1,511	7	30 *	2
Other Metal	1.000	13,992		45		13,947	24		3
Other Plastic	1.000	810	64	4		870			4
Other Metal	1.250	1,653		6		1,647	1		5
Other Plastic	1.250	357	66			423			6
Other Metal	1.500	515		3		512	1		7
Other Plastic	1.500	95	5			100			8
Other Metal	2.000	469		6		463	5	1	9
Other Plastic	2.000	49	2			51			10
Other Metal	3.000	8				8			11
Other Metal	4.000	141		2		139	3		12
Other Plastic	4.000	16				16	1		13
Other Metal	6.000	138	4			142	1		14
Other Plastic	6.000	177	3			180	1		15
Other Metal	8.000	95	1			96			16
Other Plastic	8.000	27	2			29	3		17
Other Plastic	10.000	1				1			18
Other Metal	12.000	3				3			19
Other Plastic	12.000	1				1			20
Utility Total		20,098	147	109	7	20,143	47	47	21

Privately-Owned Water Service Lines

- The privately owned service line is the pipe from the curb stop to the meter.
- Explain all reported adjustments in columns(f) as a schedule footnote.
- Report in column (h) the number of privately-owned service lines included in columns (g) which are temporarily shut off at the curb box or otherwise not in use at end of year.
- Separate reporting of service lines by diameter and pipe material.

Privately-Owned Water Service Lines (Page W-29)

General Footnote

This information is based on the data that the Utility has for street services. The Utility will continue to work with GIS and other known information to update property service line data. The Utility is not aware of any lead property services remaining in the system.

The adjustment was made based on an audit between PSC records and the Utility's GIS records. These adjustments will correct the material of the service to actual.

Total Utility-Owned Service Not In Use at End of Year is reported as zero, please explain.

PSC OIT Entry - This footnote should not exist. The field was removed when the schedule was redone for 2018.

**PUBLIC SERVICE COMMISSION OF WISCONSIN
REPORT ON WATER CONSERVATION PROGRAMS**

Utility Name: Waukesha Water Utility - 6240

Report Date: 03/22/2019

Report Period: 01/01/2018 – 12/31/2018

Report Frequency: Annual

Billing Frequency: Quarterly

Person Submitting Report: Joseph Ciurro

Waukesha Water Utility is submitting this report to the Public Service Commission, as required by PSC 185.97. This report addresses each of the points requested by the Commission, including the following information.

<u>Section</u>	<u>Topic</u>	<u>Page</u>
I	EXECUTIVE SUMMARY	2
II	ANNUAL BUDGET AND EXPENSES	3
III	INCENTIVE PROGRAMS	4
IV	EFFECTS OF WATER RATES STRUCTURE	24
V	CONSERVATION - EFFICIENCY MEASURES - NON RESIDENTIAL	29
VI	EDUCATION PROGRAMS AND PARTNERSHIPS	72
VII	WATER LOSSES AND ACCOUNTED FOR WATER	125
VIII	CONCLUSION	128

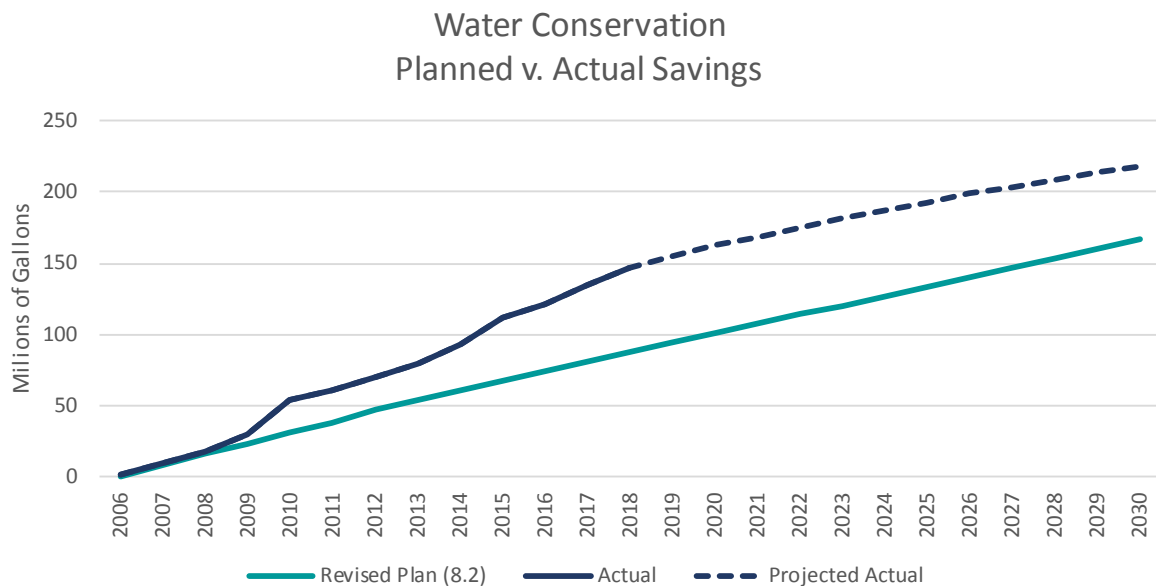
I. EXECUTIVE SUMMARY

Water conservation is important in the City of Waukesha. Since 2006, the Utility has implemented a variety of conservation programs, and the City's conservation efforts became more focused with the passage of NR 852.



This report shows that the Utility is addressing all the requirements of NR 852; and that by addressing the requirements, the City's consumption has steadily decreased. Since its passage in 2010, the City's annual pumpage and average day pumpage have decreased by 11%.

Waukesha is exceeding its conservation goals. The 2012 Conservation Plan projected a cumulative savings of 98.6 million gallons by 2017. As shown in the graph below, the Utility is ahead of its conservation goals. If Waukesha stays on track, the Utility will exceed savings of 0.8 million gallons per day by 2050.



Finally, because the Utility uses the criterion recommended in the 2012 Plan (cost effectiveness) to guide its efforts, the Utility achieves its goals by spending only a modest amount.

II. ANNUAL BUDGET AND EXPENDITURES

Per Docket 6240-WR-107 the PSC determined that a “reasonable level of conservation costs recoverable in rates for the test year (2012) is \$62,271.” Subsequently, with Docket 6240-WR-109, the PSC agreed that the same level of costs was reasonable with a revised test year of 2017.

The actual costs since 2012 are as follows:

	Actual				
	2018	2017	2016	2015	2014
<u>Revenue</u>					
Rates	\$ 62,271	\$ 62,271	\$ 62,271	\$ 62,271	\$62,271
Sewer Reimbursement	30,000	30,000	30,123	41,354	30,484
	92,271	92,271	92,394	103,625	92,755
<u>Expenses</u>					
Program Administration	8,954	17,873	15,205	14,493	9,831
Customer Outreach and Education	15,102	22,030	22,440	20,216	15,681
Other Program Costs	2,951	1,544	859	-	3,829
Leak Surveys	11,450	15,197	10,206	10,290	
Toilet Rebates	17,589	32,824	17,652	11,225	7,976
Grants & Incentives	15,428	2,819	4,298	36,773	29,626
	71,474	92,287	70,660	92,998	66,943
Excess(Deficit)	\$ 20,797	\$ (16)	\$ 21,735	\$ 10,627	\$25,812

Program revenue remained consistent from 2017 to 2018. The current rate order (Docket #6240-WR-109), effective on December 1, 2017, allows for \$62,271 in conservation costs to be recoverable by water rates, with \$30,000 of funding charged to the City’s Sewer Department.

It is important to note that the Utility spent all of the money generated through water rates, \$62,271, while spending \$9,203 of the funding from the City’s Sewer Department. The average excess generated by the program since 2012 has increased from \$8,210 per year in 2017 to \$10,008 per year in 2018.

The significant expenses change between 2018 and 2017 was a decrease in toilet rebates (197 vs. 330) and labor time spent specifically on conservation outreach. In 2018, the Utility’s outreach included conservation topics, but had a strong focus around the overall great lakes water supply project and sustainability. The Utility plans to continue its efforts of replacing inefficient toilets and promoting its business conservation incentive program in 2019.

III. INCENTIVE PROGRAMS

The Utility has five incentive programs:

1. Toilet Rebate Program
2. Shower Head Rebate Program
3. Rain Barrel Rebate Program
4. A Pilot Rebate Program for Irrigation Controllers
5. Grants for Innovative Site Specific Water Savings Measures

WaterSense®



1. Toilet Rebate Program

Waukesha Water Utility's High-Efficiency, 1.28 gpf (gallons per flush), WaterSense toilet rebate program has been in effect since October 2008. From October 2008 to July 2012, the program offered a \$25 rebate. In 2012, the Utility increased the rebate to \$100, although less is paid if the actual cost to the customer is less.

In 2018, there were 179 toilet rebates given out. This included 92 residential toilets and 87 non-residential. The non-residential toilets are classified as commercial but are related to two multi-family apartment buildings.

- JJGR Real Estate, a multi-family apartment building, changed out 5 of their old 5 gpf toilets from 1968-1972 with 1.28 gpf toilets.
- Mountain Village Apartments (MVA), a large multi-family apartment complex, originally planned to change out 200 of their 3.5 – 4.5 gpf toilets with 1.28 gpf toilets. However, because the toilets were coming from China, their order was delayed due to the tariffs and trade charges. For this reason, MVA was only able changed out 82 toilets this past year and plan to do the rest in the near future when they receive their order.

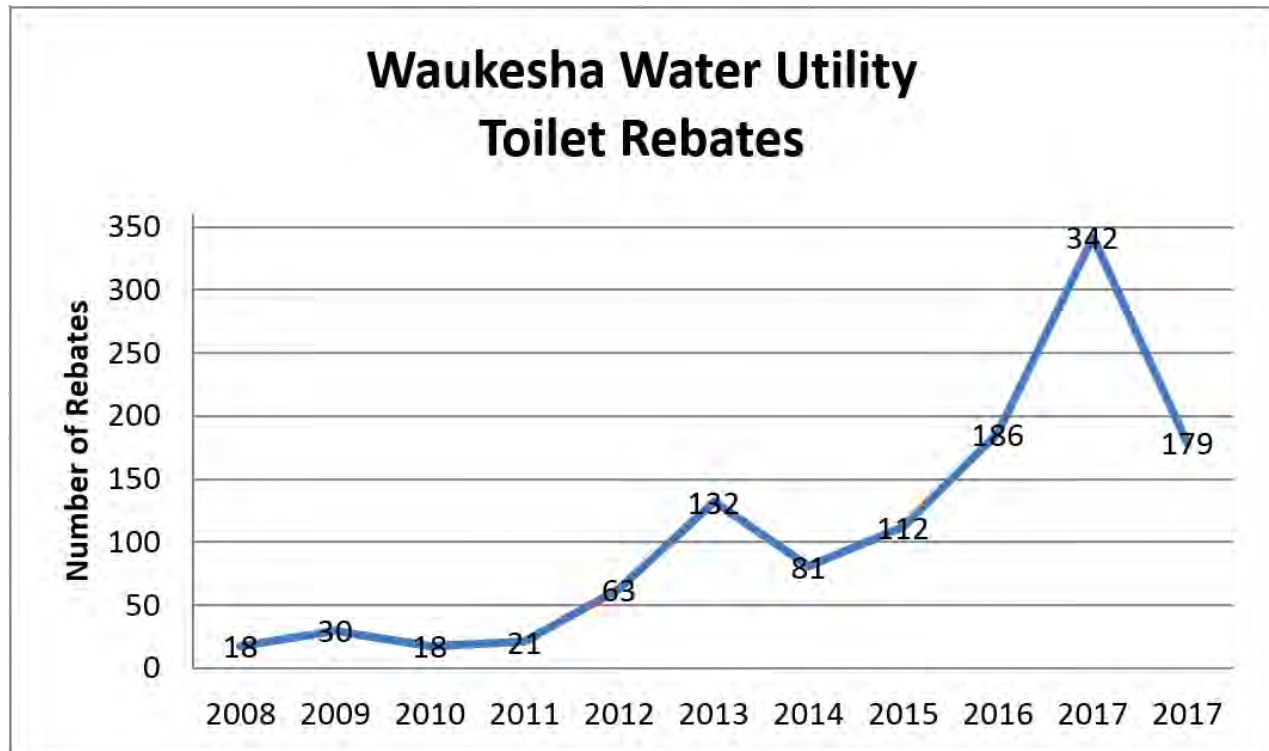


JJGR Real Estate changed out 5 more of their old 5 gpf toilets from 1968-1972 with 1.28 gpf toilets.



Mt. Village Apartment complex changed out 82 additional toilets – from 3.5-4.5 gpf to 1.28 gpf toilets.

Historically, the following rebates have been awarded:

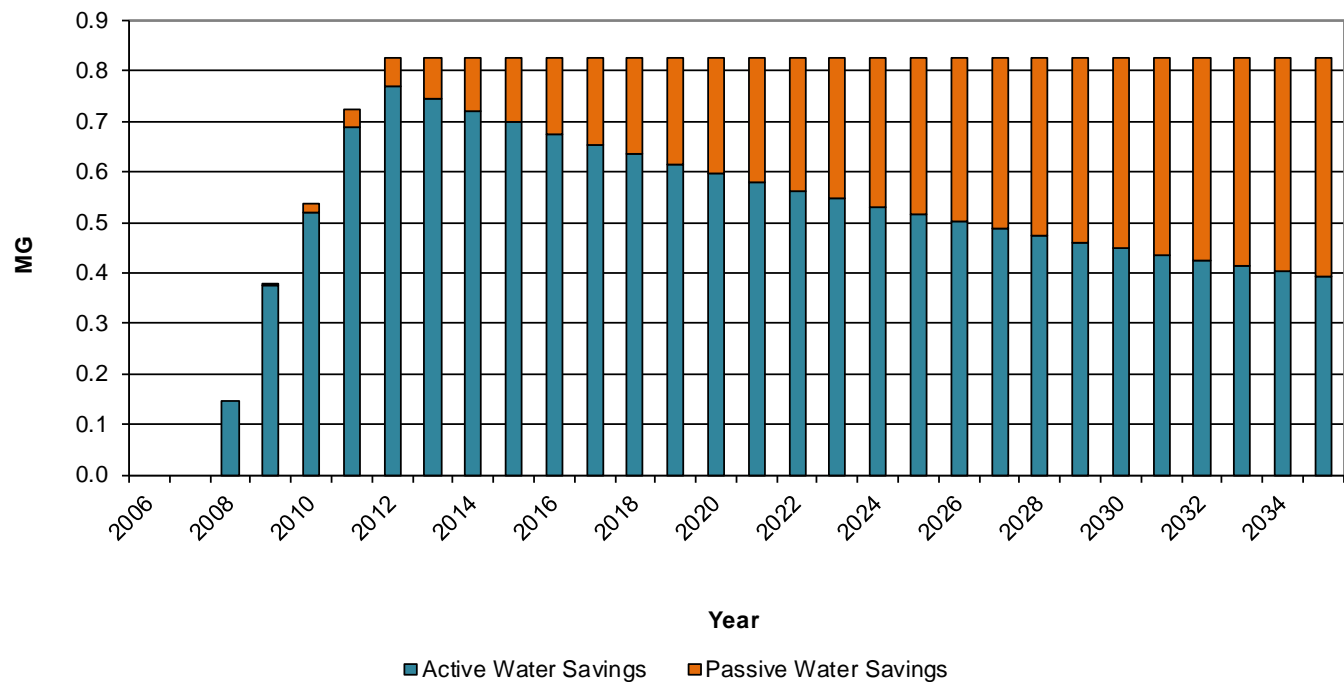


Using the Alliance for Water Efficiency (AWE) Conservation Tracking Tool, the annual cost effectiveness of the program is demonstrated below.

Class	Activity Name	Unit Cost (\$/MG)	PV Cost	Unit Benefit (\$/MG)	PV Benefit	Avoided Supply	Avoided Wastewater	B/C Ratio
Residential	Residential HE Toilets, \$25 Rebate	412.18	8,729.64	1,662.09	35,201.33	19,596.13	15,605.20	4.03
Residential	Residential HE Toilets, \$100 Rebate	654.80	97,753.53	1,868.65	278,967.48	155,478.69	123,488.79	2.85
Commercial	Commercial HE Toilet, Large MF \$100 Rebate	329.85	57,852.49	1,946.97	341,481.93	190,398.94	151,082.98	5.90
Industrial	CII Tank-Type HE Toilet, \$50 Rebate (Industrial)	147.91	475.55	1,948.21	6,263.97	3,492.59	2,771.37	13.17

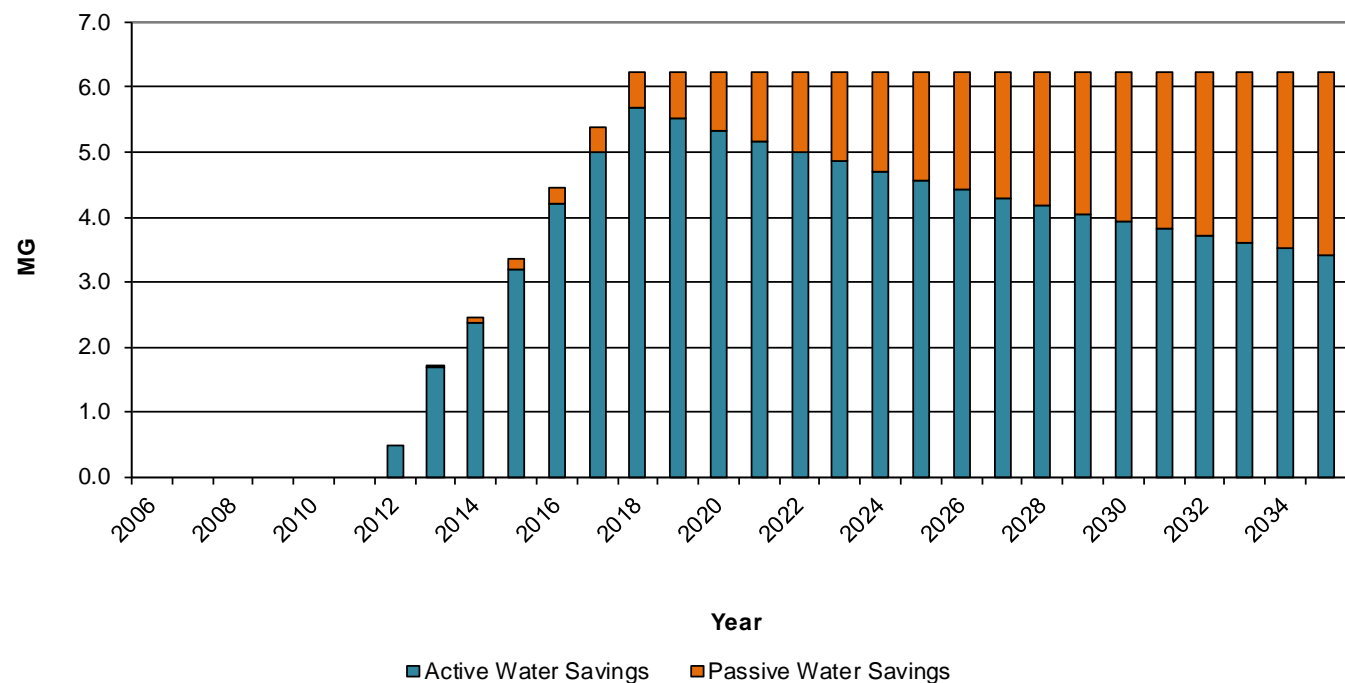
The projected water savings through 2035 is demonstrated by the four graphs below. The first relates to water savings from the \$25 residential rebates.

Residential HE Toilets, \$25 Rebate Annual Water Savings

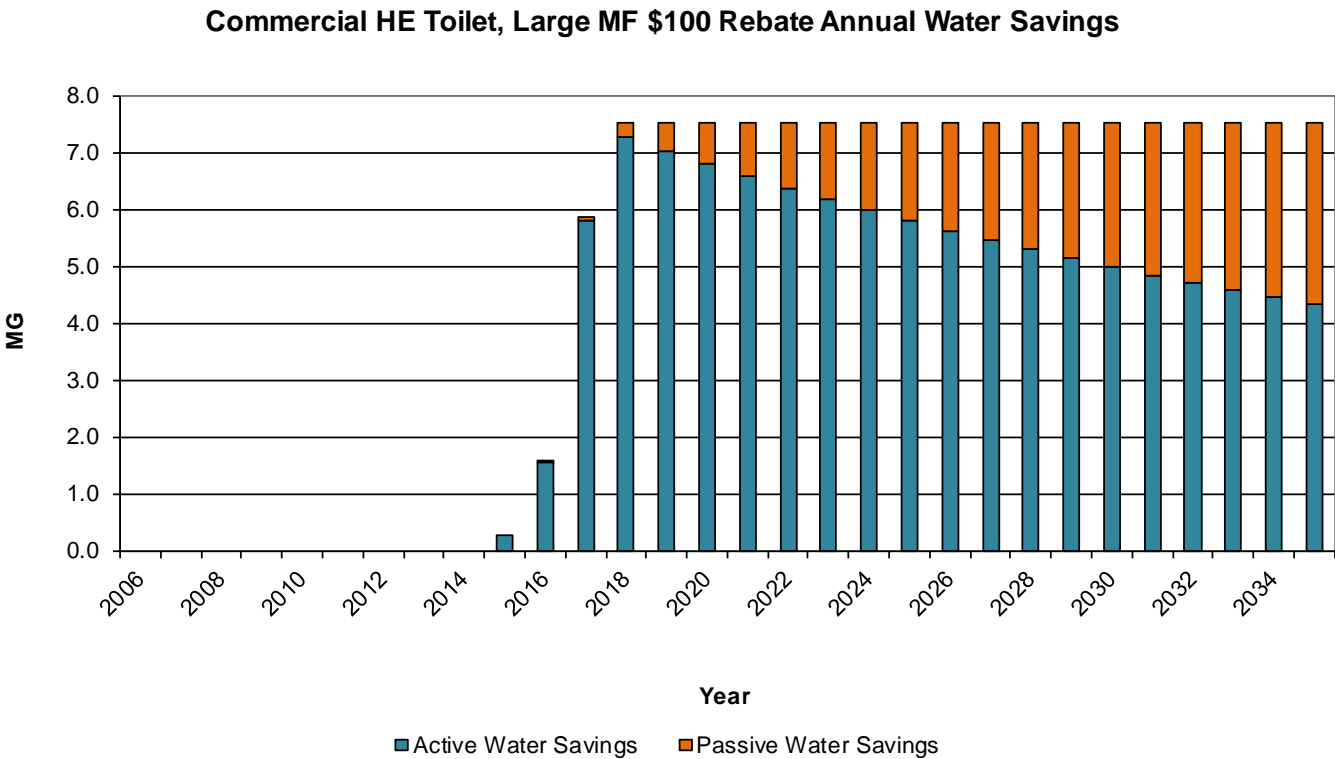


The second graph relates to water saved by the \$100 residential rebates.

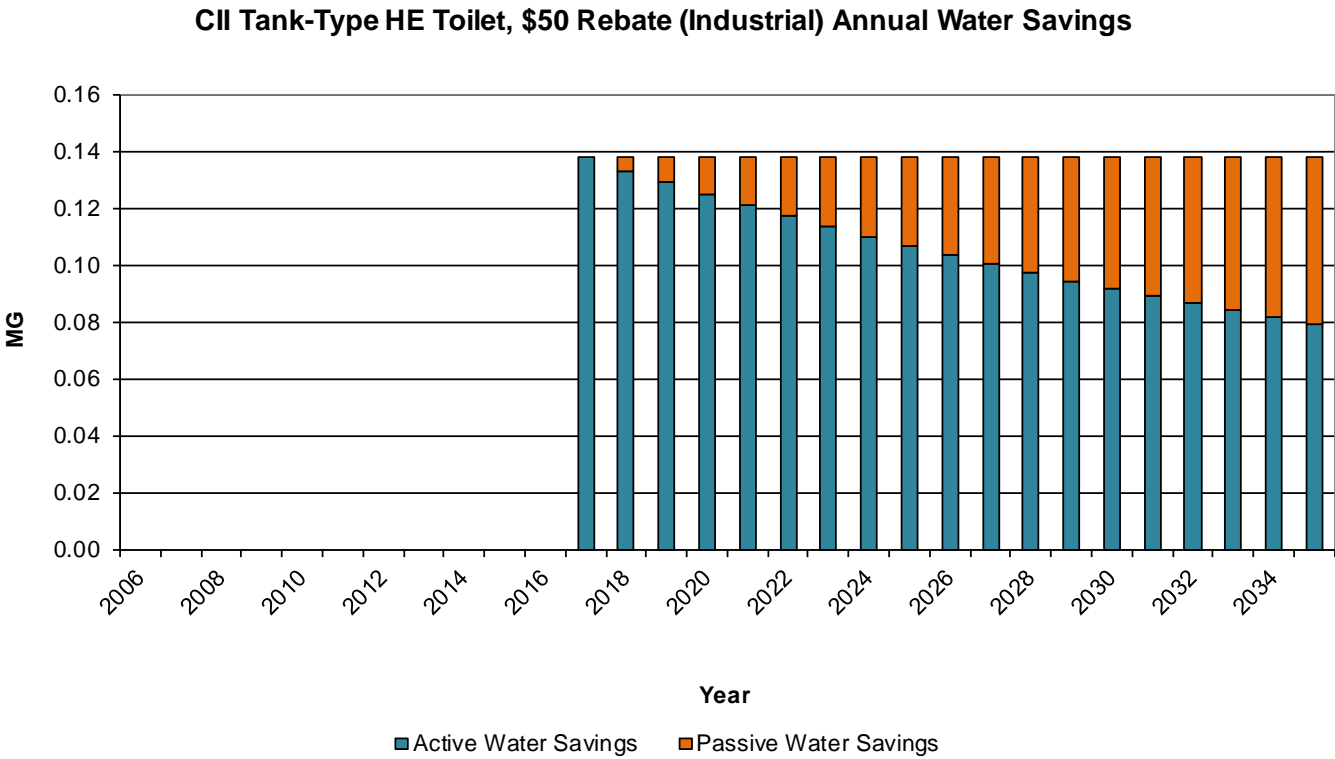
Residential HE Toilets, \$100 Rebate Annual Water Savings



The third graph relates to water saved by the \$100 commercial rebates.



The last graph relates to water saved by the \$50 industrial rebates awarded in 2017.



WaterSense®



2. Shower Head Rebate Program

In late 2016, the Utility implemented a shower head rebate program. Customers who replace their 1992 or older shower head with a high-efficiency WaterSense shower head would be eligible for a \$25 rebate. In 2017, there were 11 rebates. In 2018, there were 17 shower head rebates.

The toilet & showerhead rebate application is shown on the following two pages. The press release, ad on our website, and the ad in Waukesha's Activity Guide, is shown under the public Education section.



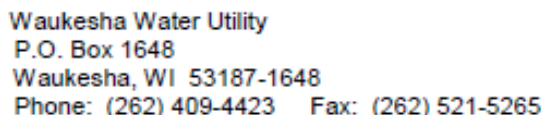
Waukesha Water Utility
P. O. Box 1648
Waukesha, WI 53187-1648
www.waukesha-water.com
Phone: 262-409-4423
Fax: 262-521-5265

HIGH-EFFICIENCY TOILET & SHOWER HEAD REBATES

<u>\$100 Toilet Rebate</u>	Replace a 1993 or Older toilet with a WaterSense High-Efficiency 1.28 gallons per flush toilet and receive up to a \$100 rebate. (Residential customers can save 9,000 – 11,000 gals. of water/year, depending on family size.)
<u>\$25 Shower Head Rebate</u>	Replace a 1992 or Older shower head with a WaterSense model shower head and receive up to a \$25 rebate. (Residential customers can save approximately 2,900 gals. of water/year, and approximately 300 kwh of electricity annually.)

Customer Eligibility/Program Rules:

1. Rebates are available on first-come, first-served basis until funds are exhausted.
2. The property where toilet/showerhead is installed is a customer of Waukesha Water Utility.
3. High efficiency toilets must replace toilets installed in 1993 or prior.
4. Shower heads must replace shower heads installed in 1992 or prior.
5. New construction is not eligible.
6. New toilet/showerhead must have the WaterSense logo (as shown on top of this page).
7. Applicant must be the owner of the property listed on the rebate application.
8. An original, unaltered, dated sales receipt listing the make and model numbers, **MUST** accompany the rebate application.
9. A picture showing proof of installation is required and needs to be attached to the application in order to receive the rebate.
10. Owners who occupy the dwelling (live full-time at the dwelling) may either use a licensed plumber to install the toilet/fixture or do it themselves. Owners who do not occupy the dwelling (i.e. landlords) must use a licensed plumber to install the toilet/fixture.
11. Applicant agrees and understands that Waukesha Water Utility or its representatives reserve the right to inspect the installation before or after the rebate credit is mailed out.
12. The Utility will withhold the rebate until all conditions are met.
13. Rebates are not available for the costs of installation.
14. Old toilets/showerheads cannot be reused.
15. Submit the application materials to the Waukesha Water Utility (address listed above).



Please Print & Read All Program Rules, on the Other Side of This Form, Prior to Submitting

New Toilet/Shower Head Information:

Toilet: Date of purchase: _____ Store where purchased from: _____ Purchase Price: \$ _____

_____	_____	_____	Is this a 1.28 gal/flush Toilet? _____
Manufacturer	Model Name	Model Number	Is this a WaterSense Toilet? _____

_____	_____	_____	Is this a 1.28 gal/flush Toilet? _____
Manufacturer	Model Name	Model Number	Is this a WaterSense Toilet? _____

Date(s) installed: _____ Install Cost: \$ _____ Installed by: ☐ Do-it yourself ☐ Plumber

Shower Head: Date of purchase: _____ Store where purchased from: _____ Price: \$ _____

_____	_____	_____	Is this a WaterSense Fixture? _____
Manufacturer	Model Name	Model Number	How Many Installed? _____

_____	_____	_____	Is this a WaterSense Fixture? _____
Manufacturer	Model Name	Model Number	How Many Installed? _____

Date installed: _____ Install Cost: \$ _____ Installed by: ☐ Do-it yourself ☐ Plumber

I have read and understand the policy as stated in the program guidelines and I agree to a possible site visit by Waukesha Water Utility for installation verification. Reminder: Receipt & Installation Pictures Must Be Attached.

Date _____

Using the Alliance for Water Efficiency (AWE) Conservation Tracking Tool, the annual cost effectiveness of the program is demonstrated below. A B/C Ratio just under 1 indicates that the program currently costs more than the cost of the water saved.

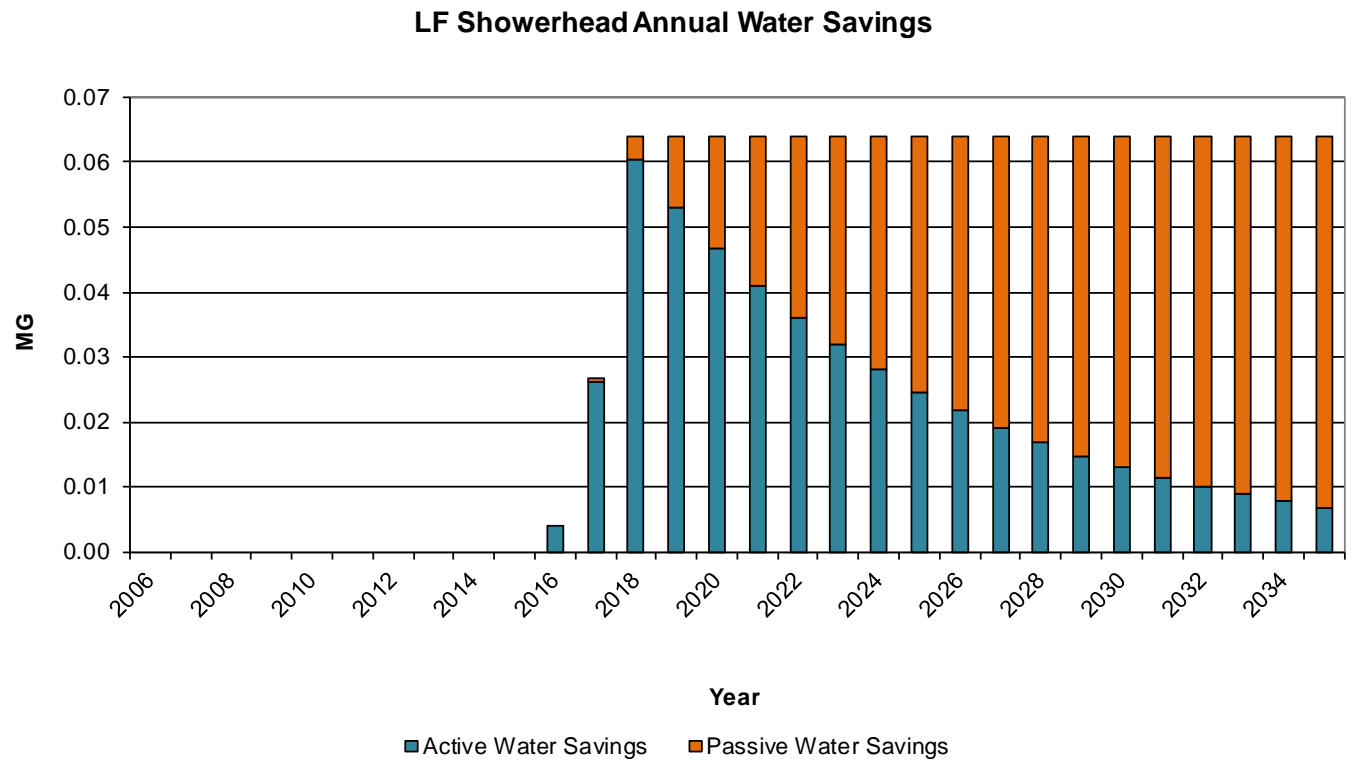
The Utility undertook this program because it was part of the 2012 Conservation Plan. The 2012 plan indicated a larger positive B/C Ratio, but the fixed costs of developing the program were underestimated.

The Utility hopes that as more showerhead programs are implemented, the fixed costs will go down and the program will yield a better ratio.

Still, water is being conserved and that is the ultimate goal of the program.

Class	Activity Name	Unit Cost (\$/MG)	PV Cost	Unit Benefit (\$/MG)	PV Benefit	Avoided Supply	Avoided Wastewater	B/C Ratio
Residential	LF Showerhead	1,400.04	683.01	1,105.90	539.51	297.59	241.93	0.79

The projected water savings through 2035 is demonstrated below.



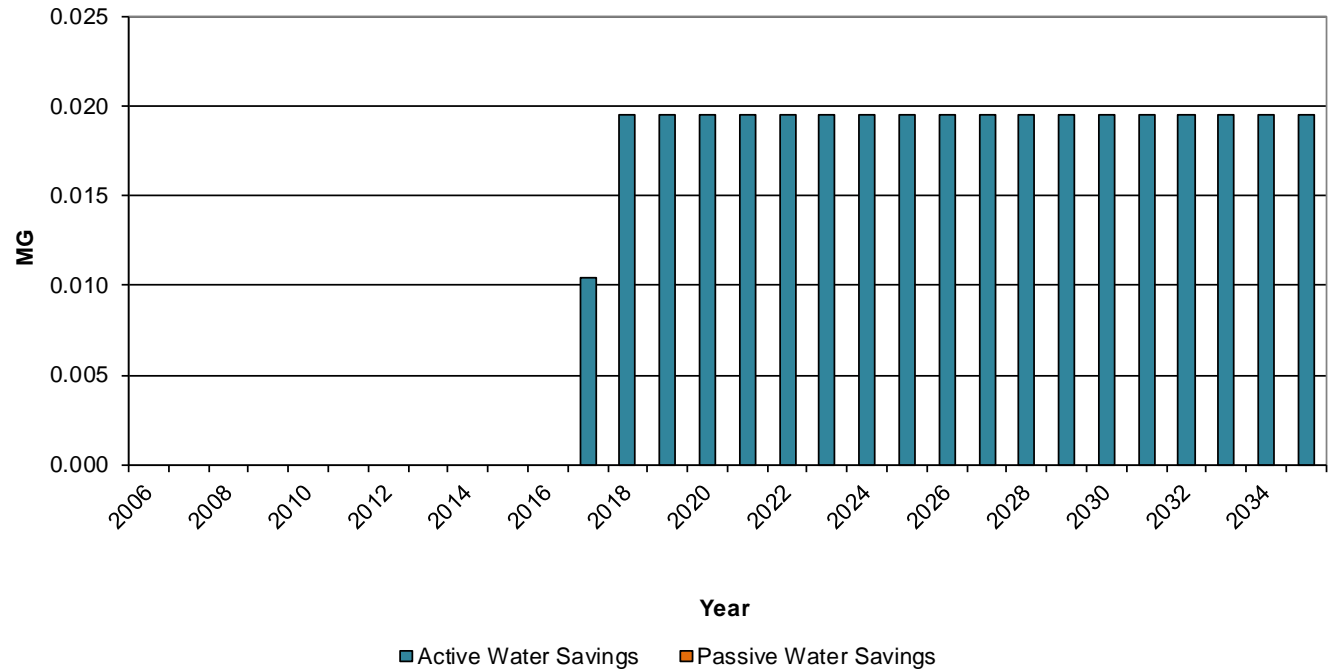


3. Rain Barrel Rebate Program

In May 2017, the Utility implemented a rain barrel rebate program. Customers who purchase and install a qualifying rain barrel, and submit their application with their original receipt and post-installation picture, are eligible for a \$20 rebate. In 2018, there were 7 rain barrel rebates.

The projected water savings through 2035 is demonstrated by the graph below:

Rain Barrel Rebate, \$20 Annual Water Savings





Waukesha Water Utility
P.O. Box 1648
Waukesha, WI 53187-1648
Phone: (262) 409-4423
Fax: (262) 521-5265

RAIN BARREL \$20 REBATE



- Saves most homeowners about 1,300 gallons of water during the summer.
- Naturally soft, chlorine-free water is great for watering plants and washing windows or cars.

TO QUALIFY

- ☐ Rain barrels must be installed in the Waukesha Water Utility's service area.
- ☐ Renters may be eligible to participate with the written consent of the property owner.
- ☐ Qualifying barrels must be newly purchased, a minimum size of 50 gallons, and designed for the intended purpose of rain capture.
- ☐ Homemade rain barrels do not qualify for the rebate.
- ☐ Rain barrels must have a secure lid for child safety; and rust-proof screening or sealed designs over the top and on the overflow spigot for mosquito, rodent, and debris control.
- ☐ Rain barrels must not be connected to the (potable water) irrigation system.
- ☐ The original purchase receipt, that includes the purchase amount and barrel size, must be submitted within 90 days of purchase.
- ☐ Post-installation pictures must be included with the application.
- ☐ Maximum of 2 rain barrels allowed per address.
- ☐ Rebates are available on a first-come, first-served basis and are subject to the availability of funds.

TIPS FOR INSTALLATION & USE

- **Raise the barrel up on cinder blocks to increase pressure.** (But make sure the barrel is on a level, firm surface to prevent the barrel from falling over – a full 55 gal. barrel weighs over 400 lbs.)
- **Make sure the overflow from the barrel is directed away from your house.**
- **Disconnect the barrel in the winter and turn it upside down or take it inside.** If your downspout has been cut off for the rain barrel, be sure to add an extension hose for the winter.
- **Enclose the top of the barrel, where the water enters the barrel, with a tight-fitting, fine-mesh screen to prevent a nesting site for mosquitoes.**
- **Do not drink the water from your rain barrel.** Water from your roof is not safe to drink, but is fine to water your yard. It is not recommended to water vegetable gardens with your rain barrel.
- **Do not connect the rain barrel to your sprinkler systems or put the hose, which is connected to your house, into the rain barrel, as unintended suction can contaminate the water in your home.** (The best way to prevent this is to only hook a garden hose, or isolated drip irrigation system, to the outlet of your barrel and water your landscape directly.)

The rain barrel rebate application is shown below. The press release and website information is shown in the Education section.



WAUKESHA WATER UTILITY
\$20 RAIN BARREL REBATE APPLICATION

Name: _____ Owner ☐ Occupant ☐ Account Number: _____

Service Address (Where rain barrel is installed ~ must be installed in the Waukesha Water Utility service area): _____

Mail Rebate to this Address: _____

Phone (Day): _____ Phone (Evening): _____ Email Address: _____

How Did You Hear About the Rain Barrel Rebate Program?: _____

Number of Rain Barrels at this Address: _____ Number of Rain Barrels for this Rebate Application: _____

Date of Purchase: _____ Store/Place Where Purchased From: _____ Purchased Price: _____

Type of Barrel: _____ Capacity (Gallons): _____ Date Installed: _____
(Brand/Make) (Model Number)

If you are the renter, is the required written consent of the property owner attached: Yes ☐ No ☐ Or, not required, I am the Property Owner: ☐

Is the required photo attached showing the installed Rain Barrel (on a level, firm surface, under the downspout, with a secure lid): Yes ☐ No ☐

Is the required original purchase receipt attached: Yes ☐ No ☐

I have read the rain barrel rebate program qualifications, along with the tips for installing and using the rain barrel (on the back of this brochure).
I have all the necessary paperwork and photos attached, and agree to a possible site visit by the Waukesha Water Utility for installation verification.

Signature

Date

WaterSense®



WaterSense labeled Irrigation Controller

4. Rebate Pilot Program for Irrigation Controllers

In 2015, the Utility implemented a pilot rebate program for WaterSense Irrigation Controllers for the new Cloverland Farms Subdivision.

The Utility chose Cloverland Farms subdivision because prior to the rebate program, the Wisconsin Water Conservation Coalition, which the Utility is a partner of, talked with the developer about a partnering opportunity to do a WaterSense Irrigation case study. The developer company was interested in participating and placed a deed restriction on the entire subdivision. The deed restriction is as follows:

If a home is equipped with an irrigation system, they are required to use an EPA WaterSense approved system.

The deed restriction is a great foundation for the Utility's pilot program. Any owner, in this subdivision, who installs a WaterSense labeled controller on their irrigation system would be eligible for a \$175 rebate. (Per WaterSense, the irrigation controllers tell the sprinkler systems "when to turn on and off, use local weather and landscape conditions to tailor watering schedules....[and] allow watering schedules to better match plants' water needs.")

2015 - 2018, the Utility contacted all 3 builders of this subdivision and informed/reminded them about the rebate program. In 2017, we did receive one inquiry about the irrigation controllers from a customer living in this area. According to the inquiry, most of the residents in this subdivision do not have automatic sprinklers. A copy of the Irrigation Rebate Application is shown on the next page.





5. Grants for Innovative Site Specific Water Saving Measures

In 2014, Waukesha Water Utility began to support innovative, site specific, water saving measures for non-residential accounts. In 2015, the Utility added more structure to the program which consists of the following:

- The program focuses on the replacement of capital assets – incenting organizations to replace equipment with new technology that will conserve water.
- In order to receive an incentive, an Incentive Application must be completed and the company must receive approval prior to the new technology being ordered.
- The Utility ranks the Applications with respect to pay back periods and cost benefit ratios; and incentives are granted in rank order until the annual funds are exhausted.

Over the past 4 years, letters with the Incentive Application were mailed to the top 50 water users in the commercial, public, and industrial sectors.

The Incentive Letter, Application, and information on a 2018 incentive payout is shown on the following pages.



Waukesha Water Utility

SERVING WAUKESHA SINCE 1886

115 DELAFIELD STREET
WAUKESHA, WI 53188-3615

Telephone: (262) 521-5272 • Fax: (262) 521-5265 • E-mail: contactus@waukesha-water.com

August 1, 2018

Re: Water Conservation Incentive Program

To Whom It May Concern:

Waukesha Water Utility is sending you a reminder about our Conservation Incentive program for non-residential customers. The purpose of the program is to incent organizations to replace equipment with new technology that will conserve water. Incentives are available to help implement those projects.

In order to be eligible for an incentive, the organization must complete a *Water Conservation Incentive Application* **no later than September 17, 2018**; and receive approval for the project *before* the new technology is ordered. Waukesha Water will assess pending projects to determine if the project is eligible for an incentive.

For more information about the program, please refer to the enclosed Incentive Application or visit Waukesha Water Utility's website at www.waukesha-water.com.

For questions, please call Waukesha Water Utility at (262) 409-4423.

Sincerely,

WAUKESHA WATER UTILITY
Customer Service

Enclosure: Water Conservation Incentive Application

Copy of the Business Incentive Cover Letter Mailed to the Top 50 Industrial, Commercial, and Public Water Users

SECTION 1: INCENTIVE INFORMATION

Incentives are calculated on a case-by-case basis depending on the application and the size of the facility. See Section 2 for customer eligibility information. Customers must work with the Utility to determine if their project would qualify and then obtain approval (in the form of an Incentive Agreement) prior to purchasing the equipment. Incentives are available to help implement projects that otherwise would not be completed, or to complete projects sooner than scheduled.

SECTION 2: APPLICATION REQUIREMENTS

The purpose of this form is to assess pending projects to determine if the project is eligible for a custom incentive. Funding provided through custom incentives is contingent upon the following requirements and upon receiving all requested documents:

- **You MUST receive pre-approval from Waukesha Water Utility prior to beginning any custom projects, including ordering equipment.**
- Custom incentives will not be provided for projects falling under a 1.5 year payback.
- Based on project type, technology and situation, projects may be limited to a maximum simple payback of four to ten years.
- Custom incentives cannot be more than 50 percent of the project cost. Custom incentives that are less than 10% of the project cost may be considered.
- The total maximum incentive a customer may receive for custom projects combined is \$20,000 per calendar year, per EIN.

SECTION 3: CUSTOMER LEGAL INFORMATION

Company Legal Name:		Tax Identification Number (complete ONE only, must be 9 digits):	
		FEIN: _____ OR SSN: _____	
Company Contact Name:	Business Classification of Customer (Check ONE only. Required for all businesses, including non-profits):		
	<input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> LLC <input type="checkbox"/> Other		
Street Address:	City:	State:	Zip Code:
Owner Name (Corporations excluded):	Phone:	Fax:	Email:

SECTION 4: PAYMENT INFORMATION (All information is required to receive payment)

Make Incentive Check Payable to (check ONE): ☐ Company Name ☐ Business Owner's Legal Name (Only if Sole Proprietor)

Make Check to the Attention of:

Alternate Mailing Address (if different from address above):	City:	State:	Zip Code:
--	-------	--------	-----------

SECTION 5: JOB SITE INFORMATION (Where project will occur)

Job Site Name:		Project Contact Name:	
Job Site Street Address (physical address):		City:	State: Zip Code:
Project Contact Phone	Project Contact Fax :	Project Contact E-mail:	Preferred Means of communication: <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> Mail <input type="checkbox"/> E-mail
Account #:		Customer #:	

Business Type (Check ONE):

- ☐ School ☐ Food Processing ☐ Food Service ☐ Lodging ☐ Other _____
☐ Healthcare ☐ Manufacturing, type _____

SECTION 6: PROJECT PARAMETERS - project specific information will be held as confidential

Project Description (including costs):

Projected Annual Gallons Saved	3 yr. Average Annual Consumption:	Project Start Date:	Project Completion Date:			
Hours of Operation (i.e. 8 a.m. - 9 p.m.)						
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
_____ to _____	_____ to _____	_____ to _____	_____ to _____	_____ to _____	_____ to _____	_____ to _____

☐ Information on existing equipment, system operation and building operation attached (If available).

☐ Specification sheets and/or project proposals attached (If available).

SECTION 7: BACKGROUND QUESTIONS

1. Check which best describes where you are right now with your project:

- ☐ Considering project
- ☐ Assessing feasibility
- ☐ Getting vendor bids and/or savings estimates
- ☐ Received management approval
- ☐ Started installation

2. Check your reasons for pursuing this project:

- ☐ Reduce maintenance costs
- ☐ Replace worn out equipment
- ☐ Reduce energy costs
- ☐ Comply with regulatory equipment
- ☐ Achieve company goal or mandate

APPLICANT:

Name: _____

Signature: _____

Date: _____

WAUKESHA WATER UTILITY:

Name: _____

Signature: _____

Date: _____

After sending out the Business Incentive letters, the Utility received a call from Eaton/Cooper Power Systems on Lincoln Avenue.



Eaton's 2nd Recirculating Water Chiller



Eaton's 3rd Recirculating Water Chiller

A. Eaton/Cooper Power Systems (on Lincoln Avenue) – Industrial

Eaton/Cooper Power Systems, on Lincoln Avenue, is a manufacturer of power transformers and used to be one of Waukesha's top 10 water users. The main reason for the high water usage was due to Eaton using city water to cool their equipment and then sending the exiting heated water right to the sanitary sewer.

In 2015, Eaton submitted an Incentive Application to have their three water cooled vacuum pump systems, that sent the water right to the drain, replaced with three recirculating water chillers that sent no water to the drain. Each new chiller would cost approximately \$150,000. In July of 2015, Eaton replaced their first vacuum pump system and received an incentive from the Utility, but the other two chiller systems were put on hold.

In 2018, after the incentive letters were sent out, the Utility was notified by the new project manager that the original project manager had retired and that the other two recirculating water chillers had been installed.

The Utility calculated the water savings for these two additional water chillers to be 4.6 million gallons per year. Using the cost benefit ratio of \$1:310 gallons of water saved, the incentive payout was \$14,837.51. Eaton's remittance letter for the 2018 financial payout is shown on the following page.



Waukesha Water Utility

SERVING WAUKESHA SINCE 1886

115 DELAFIELD STREET
WAUKESHA, WI 53188-3615

Telephone: (262) 521-5272 • Fax: (262) 521-5265 • E-mail: contactus@waukesha-water.com

October 30, 2018

Eaton PLC
Attention: Patricia Olsen
1319 Lincoln Avenue
Waukesha, WI 53186

Dear Jim Sager & Patricia Olsen,

Thank you for participating in Waukesha Water Utility's Conservation Incentive program. Waukesha Water is remitting this check for \$14,837.51. The monies are to be used to offset the costs associated with installing the 2 additional recirculating water chillers at the Lincoln Avenue facility. We are pleased that this new system will eliminate the need to send cooling water to the drain.

Your efforts, with these 2 additional new water chillers, are estimated to save 4.6 million gallons of water per year!

Thank you for helping our community conserve this important natural resource.

Sincerely,

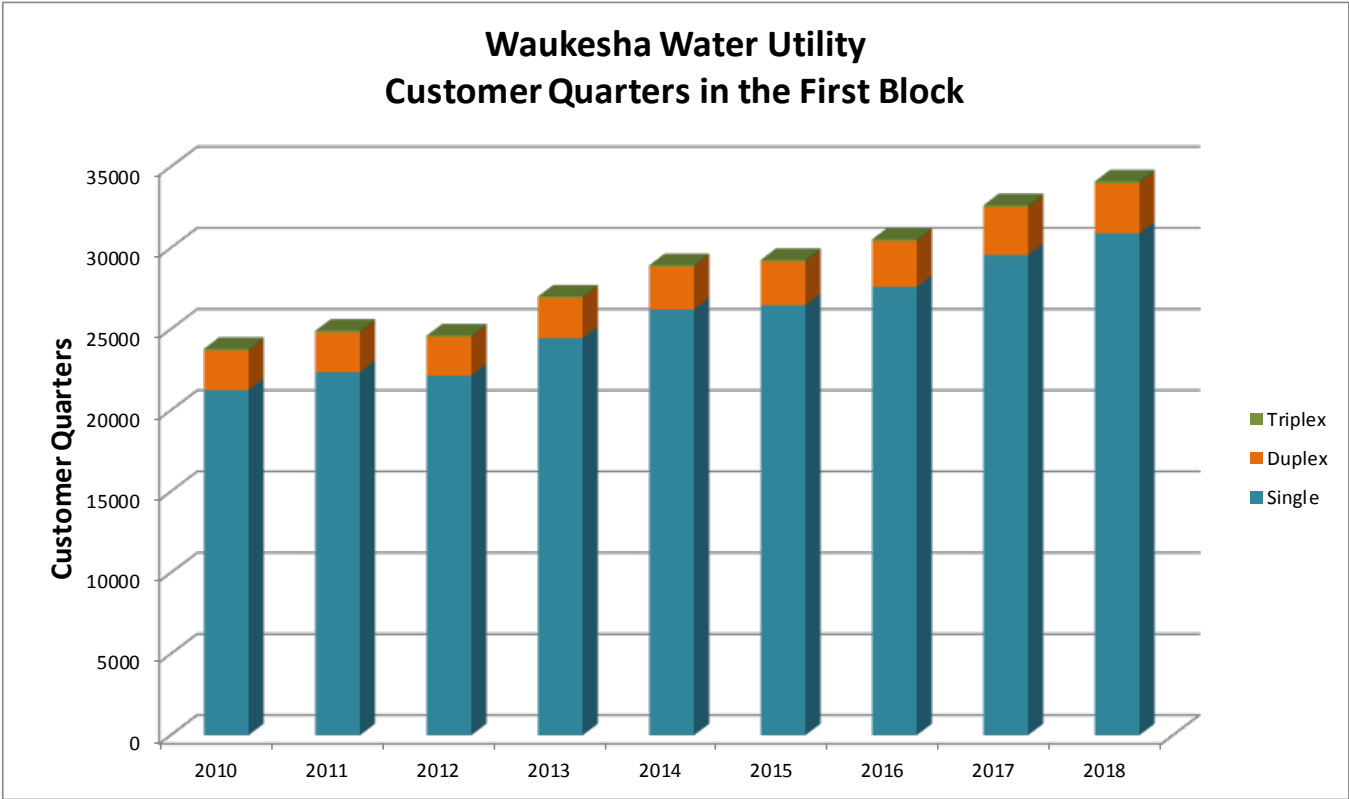
Waukesha Water Utility

Mary Adelmeyer
Customer Relations Coordinator

2018 Remittance Letter for Eaton

IV. EFFECTS OF WATER RATES STRUCTURE

While the Utility implemented an inclining rate block structure in 2007, it wasn’t until 2010 that it had data separated into single, duplex and triplex customers. Since 2010 the number of customers that have been in the first block has increased. Regardless, it is impossible to know whether the rate structure alone is causing an increase in “frugal” customers, or whether other conservation measures are involved.

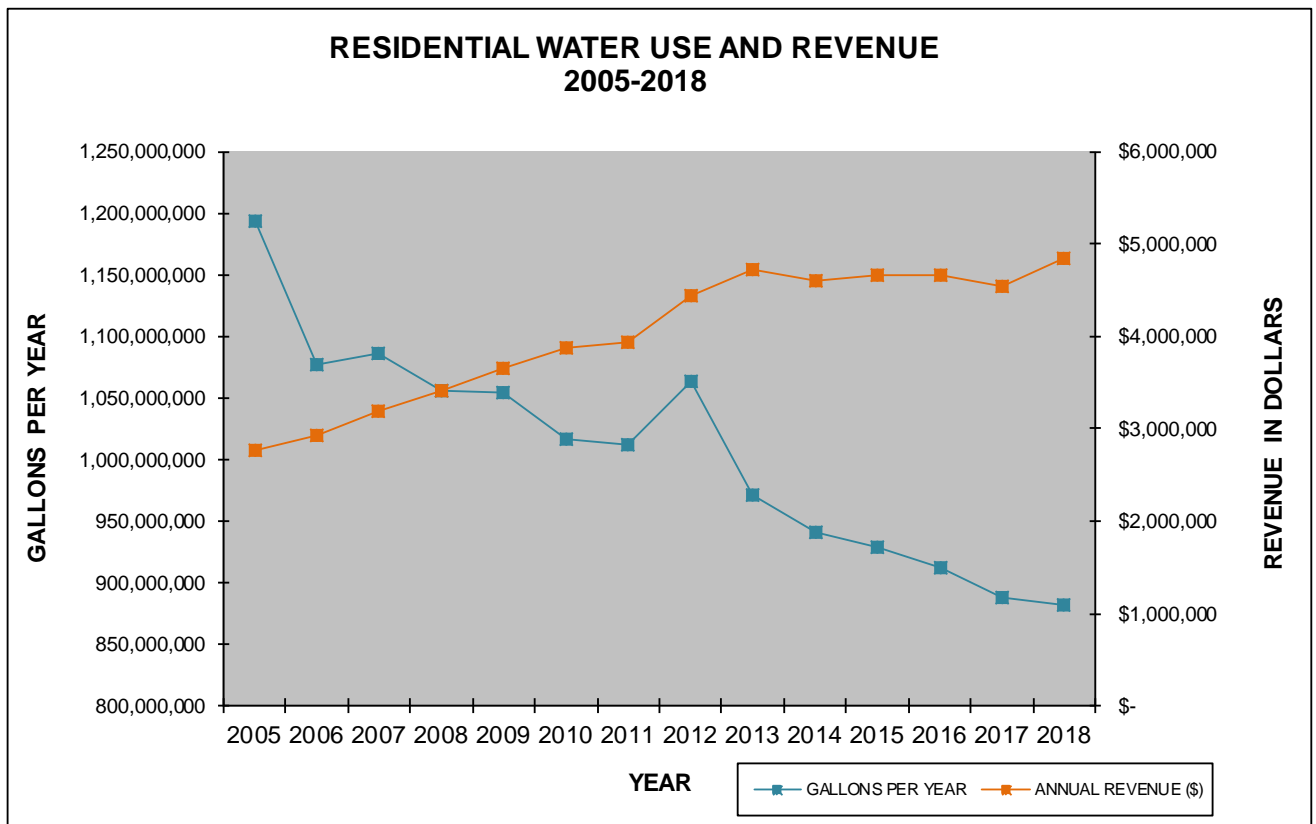


The detailed data, on the next three pages, supplements the consumption history; supplied in previous years’ reports. In order to provide a more accurate picture of “# of customers,” volumes associated with final reads have been excluded.

Single Family Consumption																																							
2014						2015						2016						2017						2018															
Interval	# of Customers	%	Consumption	%		# of Customers	%	Consumption	%		# of Customers	%	Consumption	%		# of Customers	%	Consumption	%		# of Customers	%	Consumption	%		# of Customers	%	Consumption	%		# of Customers	%	Consumption	%		# of Customers	%	Consumption	%
0-10,000 10,001-30,000 >30,000 Q Total	Quarter 1																																						
	6,707	42.0%	41,519,300	21.3%		6,715	42.5%	43,099,000	22.3%		7,072	44.4%	45,343,100	24.3%		7,521	46.5%	47,052,400	25.4%		7,785	47.8%	49,277,700	25.9%															
	8,944	56.0%	139,750,000	71.6%		8,830	55.8%	137,314,900	71.1%		8,592	54.0%	131,111,300	70.1%		8,413	52.0%	127,505,300	68.8%		8,271	50.7%	125,403,200	65.8%															
	312	2.0%	13,828,400	7.1%		269	1.7%	12,756,600	6.6%		260	1.6%	10,477,200	5.6%		249	1.5%	10,734,000	5.8%		246	1.5%	15,850,800	8.3%															
	15,963	100.0%	195,097,700	100.0%		15,814	100.0%	193,170,500	100.0%		15,924	100.0%	186,931,600	100.0%		16,183	100.0%	185,291,700	100.0%		16,302	100.0%	190,531,700	100.0%															
Quarter 2																																							
0-10,000 10,001-30,000 >30,000 Q Total	Quarter 2																																						
	6,552	40.9%	41,039,600	20.0%		7,042	44.2%	44,187,600	23.4%		7,253	45.1%	45,445,300	24.3%		7,862	48.5%	49,685,600	27.2%		8,087	49.5%	51,168,800	27.9%															
	8,969	56.0%	141,451,900	68.8%		8,592	54.0%	131,722,000	69.7%		8,536	53.1%	130,437,000	69.6%		8,106	50.0%	122,668,700	67.3%		8,015	49.1%	121,607,500	66.2%															
	490	3.1%	22,980,000	11.2%		290	1.8%	12,975,200	6.9%		290	1.8%	11,490,800	6.1%		247	1.5%	10,005,600	5.5%		233	1.4%	10,789,800	5.9%															
	16,011	100.0%	205,471,500	100.0%		15,924	100.0%	188,884,800	100.0%		16,079	100.0%	187,373,100	100.0%		16,215	100.0%	182,359,900	100.0%		16,335	100.0%	183,566,100	100.0%															
Quarter 3																																							
0-10,000 10,001-30,000 >30,000 Q Total	Quarter 3																																						
	6,109	38.1%	38,701,200	18.2%		5,875	36.6%	37,547,200	16.8%		6,160	38.1%	39,552,100	17.6%		6,792	41.8%	43,901,300	21.0%		6,932	42.4%	44,197,800	21.2%															
	9,374	58.5%	151,431,200	71.1%		9,422	58.8%	153,361,500	68.6%		9,233	57.1%	149,021,400	66.4%		8,893	54.8%	140,510,800	67.3%		8,884	54.3%	140,303,800	67.3%															
	539	3.4%	22,878,200	10.7%		737	4.6%	32,575,600	14.6%		767	4.7%	35,959,100	16.0%		554	3.4%	24,290,900	11.6%		530	3.2%	23,825,600	11.4%															
	16,022	100.0%	213,010,600	100.0%		16,034	100.0%	223,484,300	100.0%		16,160	100.0%	224,532,600	100.0%		16,239	100.0%	208,703,000	100.0%		16,346	100.0%	208,327,200	100.0%															
Quarter 4																																							
0-10,000 10,001-30,000 >30,000 Q Total	Quarter 4																																						
	6,856	42.7%	43,272,300	22.0%		6,842	42.7%	44,013,900	22.2%		7,121	44.1%	45,894,500	23.6%		7,390	45.4%	47,228,200	24.2%		8,098	49.4%	51,610,700	28.0%															
	8,844	55.1%	138,233,600	70.3%		8,757	54.7%	136,245,600	68.8%		8,669	53.7%	133,649,700	68.7%		8,486	52.1%	130,856,700	67.1%		8,041	49.1%	121,690,100	66.0%															
	357	2.2%	15,098,300	7.7%		412	2.6%	17,644,200	8.9%		344	2.1%	14,907,700	7.7%		401	2.5%	16,839,200	8.6%		252	1.5%	11,063,900	6.0%															
	16,057	100.0%	196,604,200	100.0%		16,011	100.0%	197,903,700	100.0%		16,134	100.0%	194,451,900	100.0%		16,277	100.0%	194,924,100	100.0%		16,391	100.0%	184,364,700	100.0%															
Annual																																							
0-10,000 10,001-30,000 >30,000 Total	Annual																																						
	6,556	40.9%	164,532,400	20.3%		6,619	41.5%	168,847,700	21.0%		6,902	42.9%	176,235,000	22.2%		7,391	45.5%	187,867,500	24.4%		7,726	47.3%	196,255,000	25.6%															
	9,033	56.4%	570,866,700	70.5%		8,900	55.8%	558,644,000	69.5%		8,758	54.5%	544,219,400	68.6%		8,475	52.2%	521,541,500	67.6%		8,303	50.8%	509,004,600	66.4%															
	425	2.7%	74,784,900	9.2%		427	2.7%	75,951,600	9.5%		415	2.6%	72,834,800	9.2%		363	2.2%	61,869,700	8.0%		315	1.9%	61,530,100	8.0%															
	16,013	100.0%	810,184,000	100.0%		15,946	100.0%	803,443,300	100.0%		16,074	100.0%	793,289,200	100.0%		16,229	100.0%	771,278,700	100.0%		16,344	100.0%	766,789,700	100.0%															

Two Family Consumption																				
Interval	2014				2015				2016				2017				2018			
	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%
Quarter 1																				
0-20,000	666	47.7%	8,611,000	27.0%	673	48.7%	8,714,400	27.9%	712	52.0%	9,143,600	31.3%	729	53.8%	9,374,000	32.3%	763	56.9%	10,045,100	34.8%
20,001-35,000	537	38.4%	14,207,500	44.5%	526	38.1%	13,840,000	44.4%	509	37.2%	13,424,700	45.9%	470	34.7%	12,415,400	42.8%	433	32.3%	11,187,700	38.8%
>35,000	194	13.9%	9,108,500	28.5%	183	13.2%	8,641,300	27.7%	147	10.7%	6,648,500	22.8%	157	11.6%	7,214,600	24.9%	144	10.7%	7,628,900	26.4%
Q Total	1,397	100.0%	31,927,000	100.0%	1,382	100.0%	31,195,700	100.0%	1,368	100.0%	29,216,800	100.0%	1,356	100.0%	29,004,000	100.0%	1,340	100.0%	28,861,700	100.0%
Quarter 2																				
0-20,000	645	46.0%	8,332,900	25.8%	704	50.8%	9,137,500	30.5%	722	52.6%	9,220,200	31.6%	745	55.0%	9,499,700	34.2%	786	58.7%	10,225,400	37.4%
20,001-35,000	556	39.7%	14,598,900	45.2%	523	37.8%	13,724,500	45.7%	513	37.4%	13,637,400	46.7%	469	34.6%	12,085,400	43.5%	411	30.7%	10,666,400	39.0%
>35,000	201	14.3%	9,393,200	29.1%	158	11.4%	7,146,100	23.8%	137	10.0%	6,321,800	21.7%	140	10.3%	6,228,600	22.4%	142	10.6%	6,482,800	23.7%
Q Total	1,402	100.0%	32,325,000	100.0%	1,385	100.0%	30,008,100	100.0%	1,372	100.0%	29,179,400	100.0%	1,354	100.0%	27,813,700	100.0%	1,339	100.0%	27,374,600	100.0%
Quarter 3																				
0-20,000	639	45.8%	8,319,600	25.1%	638	46.2%	8,364,700	25.5%	680	49.7%	8,980,200	29.3%	715	53.0%	9,462,200	31.7%	754	56.4%	9,834,700	34.3%
20,001-35,000	545	39.1%	14,330,200	43.2%	539	39.0%	14,439,900	44.0%	508	37.2%	13,525,100	44.1%	470	34.9%	12,318,400	41.2%	416	31.1%	10,797,500	37.7%
>35,000	211	15.1%	10,502,900	31.7%	205	14.8%	10,041,200	30.6%	179	13.1%	8,152,700	26.6%	163	12.1%	8,100,300	27.1%	168	12.6%	8,006,500	28.0%
Q Total	1,395	100.0%	33,152,700	100.0%	1,382	100.0%	32,845,800	100.0%	1,367	100.0%	30,658,000	100.0%	1,348	100.0%	29,880,900	100.0%	1,338	100.0%	28,638,700	100.0%
Quarter 4																				
0-20,000	668	47.7%	8,557,700	27.1%	663	48.0%	8,462,400	27.1%	701	51.5%	9,146,800	30.0%	759	56.3%	10,137,200	35.1%	772	57.7%	9,886,500	35.9%
20,001-35,000	544	38.8%	14,155,900	44.9%	533	38.6%	13,940,600	44.7%	482	35.4%	12,669,000	41.6%	451	33.5%	11,783,600	40.7%	415	31.0%	10,648,300	38.7%
>35,000	189	13.5%	8,826,900	28.0%	186	13.5%	8,817,000	28.2%	179	13.1%	8,630,600	28.3%	137	10.2%	6,996,300	24.2%	150	11.2%	6,980,600	25.4%
Q Total	1,401	100.0%	31,540,500	100.0%	1,382	100.0%	31,220,000	100.0%	1,362	100.0%	30,446,400	100.0%	1,347	100.0%	28,917,100	100.0%	1,337	100.0%	27,515,400	100.0%
Annual																				
0-20,000	655	46.8%	33,821,200	26.2%	670	48.4%	34,679,000	27.7%	704	51.5%	36,490,800	30.5%	737	54.5%	38,473,100	33.3%	769	57.4%	39,991,700	35.6%
20,001-35,000	546	39.0%	57,292,500	44.4%	530	38.3%	55,945,000	44.7%	503	36.8%	53,256,200	44.6%	465	34.4%	48,602,800	42.0%	419	31.3%	43,299,900	38.5%
>35,000	199	14.2%	37,831,500	29.3%	183	13.2%	34,645,600	27.7%	161	11.7%	29,753,600	24.9%	149	11.0%	28,539,800	24.7%	151	11.3%	29,098,800	25.9%
Total	1,399	100.0%	128,945,200	100.0%	1,383	100.0%	125,269,600	100.0%	1,367	100.0%	119,500,600	100.0%	1,351	100.0%	115,615,700	100.0%	1,339	100.0%	112,390,400	100.0%

Interval	Three Family Consumption															
	2014				2015				2016				2017			
	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%
0-20,000 20,001-60,000 >60,001 Q Total	Quarter 1				Quarter 1				Quarter 1				Quarter 1			
	24	32.0%	332,900	15.2%	25	33.3%	364,300	17.3%	27	36.5%	358,600	18.7%	35	46.7%	512,100	27.5%
	33	44.0%	907,600	41.3%	49	65.3%	1,636,200	77.6%	47	63.5%	1,560,400	81.3%	38	50.7%	1,174,800	63.1%
	18	24.0%	954,600	43.5%	1	1.3%	107,900	5.1%	-	0.0%	-	0.0%	2	2.7%	175,000	9.4%
	75	100.0%	2,195,100	100.0%	75	100.0%	2,108,400	100.0%	74	100.0%	1,919,000	100.0%	75	100.0%	1,861,900	100.0%
0-20,000 20,001-60,000 >60,001 Q Total	Quarter 2				Quarter 2				Quarter 2				Quarter 2			
	26	34.7%	385,900	18.4%	27	36.0%	398,800	20.2%	29	38.7%	365,700	20.1%	33	44.0%	475,900	28.1%
	30	40.0%	792,100	37.8%	46	61.3%	1,412,700	71.4%	45	60.0%	1,380,500	75.7%	42	56.0%	1,216,900	71.9%
	19	25.3%	916,600	43.8%	2	2.7%	166,600	8.4%	1	1.3%	76,800	4.2%	-	0.0%	-	0.0%
	75	100.0%	2,094,600	100.0%	75	100.0%	1,978,100	100.0%	75	100.0%	1,823,000	100.0%	75	100.0%	1,692,800	100.0%
0-20,000 20,001-60,000 >60,001 Q Total	Quarter 3				Quarter 3				Quarter 3				Quarter 3			
	24	32.0%	339,700	16.3%	28	36.4%	386,200	17.0%	27	35.1%	372,300	18.6%	24	31.6%	316,200	17.0%
	32	42.7%	819,800	39.3%	44	57.1%	1,441,000	63.6%	49	63.6%	1,566,800	78.1%	52	68.4%	1,548,800	83.0%
	19	25.3%	928,300	44.5%	5	6.5%	440,000	19.4%	1	1.3%	67,400	3.4%	-	0.0%	-	0.0%
	75	100.0%	2,087,800	100.0%	77	100.0%	2,267,200	100.0%	77	100.0%	2,006,500	100.0%	76	100.0%	1,865,000	100.0%
0-20,000 20,001-60,000 >60,001 Q Total	Quarter 4				Quarter 4				Quarter 4				Quarter 4			
	24	32.0%	354,400	17.3%	30	39.5%	400,400	19.8%	30	40.0%	413,300	22.0%	31	40.8%	430,300	22.3%
	35	46.7%	907,500	44.3%	44	57.9%	1,448,000	71.8%	44	58.7%	1,379,100	73.4%	44	57.9%	1,440,400	74.6%
	16	21.3%	788,400	38.5%	2	2.6%	169,200	8.4%	1	1.3%	87,700	4.7%	1	1.3%	60,500	3.1%
	75	100.0%	2,050,300	100.0%	76	100.0%	2,017,600	100.0%	75	100.0%	1,880,100	100.0%	76	100.0%	1,931,200	100.0%
0-20,000 20,001-60,000 >60,001 Total	Annual				Annual				Annual				Annual			
	25	32.7%	24	0.0%	28	36.3%	1,549,700	18.5%	28	37.5%	1,509,900	19.8%	31	40.7%	1,734,500	23.6%
	33	43.3%	35	0.0%	46	60.4%	5,937,900	70.9%	46	61.5%	5,886,800	77.2%	44	58.3%	5,380,900	73.2%
	18	24.0%	16	0.0%	3	3.3%	883,700	10.6%	1	1.0%	231,900	3.0%	1	1.0%	235,500	3.2%
	75	100.0%	8,427,800	100.0%	76	100.0%	8,371,300	100.0%	75	100.0%	7,628,600	100.0%	76	100.0%	7,350,900	100.0%



A review of residential revenue and gallons billed indicates that, in general, the Utility has done a good job of using the rate making process to offset the decrease in revenue that would come from fewer gallons consumed.

V. CONSERVATION EFFICIENCY MEASURES - NONRESIDENTIAL CUSTOMERS

Commercial, Industrial and Public rates were set in 2012 with declining blocks and the Utility had a rate increase approved by the PSC, effective December 1, 2017.

Rates per 1,000 Gallons December 1, 2017	
Gallons	Commercial, Industrial, Public
0 - 75,000	\$3.60
75,001 - 1,500,000	\$3.40
Over 1,500,000	\$3.00

As seen below, there appears to be enough variation in consumption within the classes to question whether the structure is affecting utilization. Anecdotally, consumption seems to move with the economy and the weather.

Metered Usage for Non-Residential							
Billing Class	2012 (Gallons)	2013 (Gallons)	2014 (Gallons)	2015 (Gallons)	2016 (Gallons)	2017 (Gallons)	2018 (Gallons)
Commercial	816,621,116	795,377,000	780,972,720	774,316,900	763,290,200	729,873,000	707,267,000
Industrial	334,776,300	266,539,000	270,877,200	262,476,500	237,069,700	232,668,900	230,557,100
Public	114,020,400	92,508,000	92,618,300	99,075,700	83,040,900	72,384,600	67,338,800
Irrigation	n/a	n/a	n/a	n/a	n/a	n/a	4,447,476

Therefore the Utility uses efforts, other than the rate structure, to incent conservation.

To bolster the rate increase, the Utility has additional conservation programs that affect Non-Residential customers and some that affect all customer classes. The additional programs include the following:

1. Irrigation Rates (for all customer classes) (New in Dec. 2017)
2. Sprinkling Ordinance (for all customer classes)
3. Irrigation Ordinance (for all customer classes)
4. Sewer Ordinance Change (for all customer classes)
5. Yard Sign Campaign (for all customer classes)
6. Waukesha Rain Barrel Promotion Program (for all customer classes)
7. Rain Garden Plants Sale (for all customer classes)
8. Outdoor Conservation Tips (for all customer classes)
9. Pre-rinsed Spray Valves (for non-residential classes)
10. Why it's Important To Conserve & What You Can Do (for all customer classes)
11. How Much Water Do You Use? & Things to do to Lower Your Bill (all customer classes)
12. Program on Finding & Fixing Leaks (for all customers)
13. Web Based Consumption History and Comparisons Available (for all customers)
14. Audit Program (for residential & non-residential customers)

1. Irrigation Rates

Effective December 1, 2017, the Wisconsin Public Service Commission (PSC) approved our application to offer Irrigation Rates to our customers.

The irrigation rates were designed with two goals in mind. First, to bill for water used outside that is not collected into the sewer system. Second, to encourage conservation of a limited resource.

The Utility notified customers about the new irrigation rates by mailing letters to accounts that were billed water only (for the accounts that had a public sprinkling meter) and to accounts who previously had and still have sewer credit meters. A copy of the letter is shown on the following page.

In addition to the mailings, the account type for the public sprinkling meters was changed on our billing system to an Irrigation account; and the volumetric rate was increased to \$5.70 per thousand gallons, as opposed to the residential or commercial step rate.

Finally, an Application for Irrigation Meters was created and placed on our website. This Application includes a cover letter, instructions on what needs to be done to get an irrigation meter installed, and a meter installation specification sheet.

In 2018, the Utility received 11 applications for irrigation meters. A copy of the Irrigation Application, with all of its attachments, is also shown on the following pages.



Waukesha Water Utility

SERVING WAUKESHA SINCE 1886

115 DELAFIELD STREET
WAUKESHA, WI 53188-3615

Telephone: (262) 521-5272 • Fax: (262) 521-5265 • E-mail: contactus@waukesha-water.com

Dear Customer:

We would like to inform you that the Wisconsin Public Service Commission (PSC) has approved our application to offer irrigation rates to our customers. You have a meter that is subject to these new rates.

Irrigation rates are designed with two goals in mind. First, to bill for water that is used outside and is not collected into the sewer system. Second, to encourage the conservation of a limited resource; one that we will soon have to buy from Lake Michigan.

The rates that became effective on December 1, 2017 are as follows:

Quarterly Charge			
<u>Meter Size</u>	<u>\$</u>	<u>Meter Size</u>	<u>\$</u>
5/8	27.00	3	198.00
3/4	27.00	4	270.00
1	45.00	6	438.00
1 1/4	66.00	8	666.00
1 1/2	75.00	10	960.00
2	117.00	12	1260.00
Volumetric Charge		\$5.70 per 1,000 gallons	

If you have questions about these new irrigation rates or would like to install an irrigation meter, please contact us at 262 521 5272.

Thank you,

The Waukesha Water Utility

C:\Users\mka\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Outlook\JJUU611E\Irrigation Letter to Water Only - public and sprinkling Customers.docx

Initial Irrigation Letter Mailed Out to Accounts Billed Water Only for Public Sprinkling Meters



Waukesha Water Utility

SERVING WAUKESHA SINCE 1886

115 Delafield Street
Waukesha, WI 53188-3615

Telephone: (262) 521-5272 • Fax: (262) 521-5265 • E-mail: contactus@waukesha-water.com

Re: Irrigation Meter

Dear Customer:

This letter is regarding your inquiry into an irrigation meter for your property. If you are interested in the installation of an irrigation meter, please review the instructions, complete the enclosed application, and return it to the Waukesha Water Utility with a check for \$125.00 for each irrigation meter you would like to install. Please note that in order to complete the application, you will need to obtain a plumbing permit. The permit can be obtained at City Hall.

Also, when considering an irrigation meter, please remember that the city of Waukesha has a Sprinkling Ordinance. Every year, beginning May 1st – October 1st, addresses ending in an Odd number, may only water on Tuesdays & Saturdays (before 9 a.m. or after 5 p.m.); addresses ending in an Even number, may only water on Thursdays & Sundays (before 9 a.m. or after 5 p.m.). If you have an automatic sprinkling system, please be sure to schedule the sprinkling times appropriately.

The billing rates for an irrigation meter, effective on December 1, 2017, are as follows:

Quarterly Charge			
<u>Meter Size</u>	<u>\$</u>	<u>Meter Size</u>	<u>\$</u>
5/8	27.00	3	198.00
3/4	27.00	4	270.00
1	45.00	6	438.00
1 1/4	66.00	8	666.00
1 1/2	75.00	10	960.00
2	117.00	12	1260.00
Volumetric Charge		\$5.70 per 1,000 gallons	

If you have any further questions, please call us at 262.521.5272 between 8:00 a.m. and 4:00 p.m.

Sincerely,

Waukesha Water Utility



Waukesha Water Utility

IRRIGATION METER

In order to install an irrigation meter and radio, please do the following:

1. **Complete the attached application**
You may need to work with a plumber or our customer service staff to complete the application. Please be aware that you will receive a separate bill for this meter.
2. **Obtain a plumbing permit from City Hall**
Plumbing permits are issued by the Building Inspector. They may be obtained in room 200 in the City Hall at 201 Delafield St. The office is open from 8:00 to 4:30. The telephone is (262) 524-3750.
3. **Pay the application fee (\$125)**
The fee is paid at the Water Utility. It covers the time our engineering staff spends to ensure that the meter will be the appropriate size to meet your needs from information supplied by you or your plumber. It also covers the administrative time spent processing the application. Finally, it covers the time our field crew will spend installing the meter and radio at the premises.
4. **Install the fixtures for the irrigation meter and radio**
Whether you intend to do-it-yourself or hire a plumber, the pipes, meter valve, and the copperhorn for the meter must installed according to the attached specifications. The materials must also be in compliance with Wisconsin Administrative Code. Because you pay for all of these materials and work, you will own all of this plumbing.
5. **Set an appointment with the Water Utility to install the meter and radio**
To have the meter installed, please call Customer Service at (262) 521-5272. You will want to make this appointment at least a week in advance, especially if you want to coordinate the work so that it gets done on the same day that a plumber is present. The Water Utility owns, operates and maintains only the meter and the radio. If your installation of the meter and radio requires additional hardware, you will be invoiced for that additional hardware.
6. **Schedule your sprinkling times according to Waukesha's Sprinkling Ordinance**
Every year, beginning May 1st – October 1st, Waukesha has the following Sprinkling Ordinance: addresses ending in an Odd number, may only water on Tuesdays & Saturdays (before 9 a.m. or after 5 p.m.); addresses ending in an Even number, may only water on Thursdays & Sundays (before 9 a.m. or after 5 p.m.). If you have an automatic sprinkling system, please be sure to schedule the sprinkling times appropriately.

115 Delafield Street
P.O. Box 1648
Waukesha, WI 53187-1648

Questions regarding the application process: (262) 521-5272

Fax Number: (262) 521-5265

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Instruction Sheet for Irrigation Meters



Waukesha Water Utility

APPLICATION FOR IRRIGATION METER

1. Property Address _____
2. Building Type ☐ Single Family ☐ Duplex ☐ Triplex ☐ Apartment (> 4 units) ☐ Condo
3. Owner's Name _____ Phone _____
4. Owner's Address _____
5. Plumber's Name _____ Phone _____
6. Plumber's Address _____
7. Please list the number of water using devices that will be measured by this meter

_____ 3/4" Garden Hose _____ 1/2" Garden Hose _____ Underground Sprinkler
8. Gallons per minute needed _____
9. City Plumbing Permit # _____
10. Who is responsible for payment? ☐ Owner ☐ Plumber
11. Are you aware of Waukesha's Sprinkling Ordinance (as explained in the cover letter)? ☐ Yes ☐ No

Signature _____ Date _____

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Irrigation Meter Application Form



IRRIGATION METER SPECIFICATIONS



Installation of a 5/8 inch irrigation meter

NOTE 1: Copperhorns shall comply with ANSI/AWWA C-800, have a lead free brass body with copper arms and swivel connections manufactured by Ford in the following sizes.

Meter Size	Copperhorn
5/8"	No. 1 provided with union nuts
3/4"	No. 3 provided with union nuts
1 "	No. 4 provided with union nuts

NOTE 2: The Utility will install the meter valve and the copperhorn upon the request of the applicant. The cost will be billed to the applicant as outlined in the current Waukesha Water Utility Fee Schedule.

NOTE 3: The Utility Rules and Regulations Manual requires a four foot clearance around the meter.

NOTE 4: All brass must be lead free.

NOTE 5: The Utility will replace (at the cost of the applicant) any copperhorn or valve that does not comply with the specifications, above.

NOTE 6: Certified vacuum breakers shall be installed at each hose bib.

NOTE 7: Fixtures serving, and served by, the irrigation should be separately labeled.

P:\ADMIN\Applications for New Services\Irrigation Meter App\Irrigation Meter Ap 3 18.docx

In addition to the Irrigation Rates, the Utility also uses the next seven programs (previously listed) to encourage conservation during the summer months.

There is a discussion of each of these tools below; followed by data that demonstrates the efficacy of the Utility's approach.

2. Sprinkling Ordinance

City Ordinance 13.11 was enacted in 2006 and applies to all customers in Waukesha. The ordinance is in effect from May 1 to Oct 1 each year. This ordinance bans all sprinkling during the daytime hours of 9 AM to 5 PM during the stated time period. Customers are allowed to irrigate two days a week according to their address.

A **brochure** that explains the ordinance is placed at several public locations.



Brochure Outside



Brochure Inside

In addition to the Sprinkling Ordinance brochure, **Bill stuffers** are sent to all customers each year beginning in April and ending in June. The stuffers are designed to remind customers of the Ordinance. A copy of the stuffer is below.

**City of Waukesha's
Annual Sprinkling Ordinance
May 1st - October 1st**

Addresses Ending With An	May Water On The Following Days	During These Hours
Odd Number	Tuesdays & Saturdays	Before 9 am or After 5 pm
Even Number	Thursdays & Sundays	Before 9 am or After 5 pm

Hand watering may be done any day at any time.

Enforcement: Warnings will be given for the first watering violation. Subsequent offenses will result in fines as per Ordinance. Violations may be reported anonymously at (262) 521-5272.

Save Money & Mow Less: Join "My Brown Lawn is GREEN" campaign. Since established lawns go dormant in the summer and turn green again with the autumn rain, watering the grass is unnecessary.

Front

Did you know...

- 💧 If you replace your old water guzzling toilet (3.5 gallon or more) with a 1.28 gpf (gallons per flush) WaterSense toilet, you may be eligible to receive a rebate from the Water Utility.
- 💧 You can purchase rain barrels through the Waukesha School District's Environmental Education Department (262-970-4333) or Retzer Nature Center (262-896-8007). Capturing rain water not only saves you money but is better for your garden, lawn, and plants because the water is not chlorinated.
- 💧 It is not necessary to water the lawn. It is natural for lawns to turn brown in the hottest months. The lawn doesn't die, it just goes dormant. The green lawn will return with the autumn rain.
- 💧 Toilets should be checked for leaks at least twice a year because they are one of the most common places where leaks occur. Hundreds of gallons of water per day can be wasted. Free Leak Detection Dye Tablets are available at the Utility.
- 💧 Dripping faucets are usually easily and inexpensively repaired by replacing the washer inside the handle. Check both internal and external faucets for leaks. See our website for videos on how to fix leaks.

For more detailed information,
please visit our website at www.ci.waukesha.wi.us/waterhome

Back

Street signs, alerting the public to the Ordinance, have been place on every major street.



Time Warner Cable aired a **public service announcement** that addressed the Sprinkling Ordinance in 2012. The same announcement is broadcast annually on the City's TV25. TV25 airs information pertaining to local government and community events.

Reminders are placed in **local papers** (as seen on the next page).

Fines are approved and in place for violations to this Ordinance, as follows:

1 st Citation	\$172
2 nd Citation	\$298
3 rd Citation	\$424
4 th Citation	\$676

Before citations are issued, **Notices are sent to violators** to encourage them to comply. In 2018, there were 5 violators who received notices. Compared to previously years, the number of notices mailed out had decreased. This decrease was due to the amount of rainfall this past year - the lawns were green for the majority of the summer.

Contact: Mary Adelmeyer
115 Delafield Street
Waukesha, WI 53188 Phone
262-409-4423 Fax
262-521-5265

Waukesha Water Utility

For Immediate Release

Press Release

June 2018 - With the arrival of hot weather, the Waukesha Water Utility would like to remind city residents of the annual Sprinkling Ordinance in effect from May 1st – October 1st.

Odd-numbered street addresses may water on Tuesdays and Saturdays prior to 9 a.m. or after 5 p.m.

Even-numbered street addresses may water on Thursdays and Sundays prior to 9 a.m. or after 5 p.m.

A hand-held watering can, container, or hose may be used at any time to water gardens, trees, or shrubs, but only if the water device is utilized manually and not left unattended.

The City developed the sprinkling ordinance as part of an ongoing water conservation program. Additional water conservation is needed to protect local water resources and reduce demand during peak hours. The City is requiring customers to refrain from watering during daytime hours, when up to 40% of the water applied by a sprinkler can be lost to evaporation.

To help with the sprinkling, a \$20 rebate for rain barrels is available for Waukesha Water Utility customers; along with a yard sign, that can be picked up at 115 Delafield Street, that reads "My Brown Lawn is Green" to show your dedication to conservation.

For additional information on the sprinkling ordinance and rebates, please visit the Water Utility's website at www.waukesha-water.com/conservation.html or phone the Utility at (262) 521-5272.

Sprinkling Ordinance Press Release



Waukesha Water Utility

SERVING WAUKESHA SINCE 1886

115 DELAFIELD STREET
WAUKESHA, WI 53188-3615

Telephone: (262) 521-5272 • Fax: (262) 521-5265 • E-mail: contactus@waukesha-water.com

Re:

Dear Water Utility Customer:

It has been observed that you have been sprinkling at your property during unauthorized periods, specifically on _____ at _____ a.m./p.m.

Conservation Ordinance #20-06, Chapter 13.11 of the City Municipal Code was passed by the Waukesha Common Council in April 2006 which restricts the days and times for outdoor water sprinkling. These restrictions are in effect Annually from May 1st through October 1st, and are as follows:

Addresses ending with an Odd Number may water on Tuesdays and Saturdays, before 9:00 a.m. or after 5:00 p.m.

Addresses ending with an Even Number may water on Thursdays and Sundays, before 9:00 a.m. or after 5:00 p.m.

Please adjust your sprinkling times to coordinate with the days and times that are applicable to your address; and please adjust your sprinklers so that they are not watering the sidewalks or driveway.

Enclosed is a brochure to help answer any questions you may have. If you would like additional information, please contact the Waukesha Water Utility at 262-521-5272.

We appreciate your prompt response and your assistance in helping protect and maintain our water supplies for the future.

Sincerely,

WAUKESHA WATER UTILITY
Customer Service

Violation Letter



Waukesha Water Utility
Serving Waukesha Since 1886

Department Home

Customer Service

Great Lakes
ApplicationUtility and
Fertilization

Construction

Sprinkling Ordinance

[City Ordinance 13.11](#) applies to all customers in Waukesha and is in effect from May 1 to October 1 each year.

City of Waukesha's Annual Sprinkling Ordinance May 1st - October 1st		
Addresses Ending With An	May Water On The Following Days	During These Hours
Odd Number	Tuesdays & Saturdays	Before 9 am or After 5 pm
Even Number	Thursdays & Sundays	Before 9 am or After 5 pm
Hand watering may be done any day at any time.		
Enforcement: Warning will be given for the first watering violation. Subsequent offenses will result in fines as per Ordinance. Violations may be reported anonymously at (262) 521-5272.		
Save Money & More Water: Join City's Smart Lawn Irrigation Program. Since established trees go dormant in the summer and turn green again with the autumn rain, watering the grass is unnecessary.		

Sprinkling Tips

- Established lawns need only one inch of water per week.
- Place a tuna can or small container outside to measure this amount.
- Set a timer as a reminder to move sprinklers.
- Water before 8:00 a.m. - this will limit the amount of water lost to evaporation.
- Avoid watering at night - this will reduce the chance of lawn diseases.
- Raise your lawn mower blade to at least three inches, or to its highest level - this will provide protection to the roots and allow moisture to remain in the soil.
- Avoid over fertilizing - fertilizers increase the need for water.
- Purchase a slow release, water-insoluble form of nitrogen for your fertilizing needs.
- Do not water on windy days.
- Position sprinklers to avoid watering the roof, driveway, sidewalk, or street.
- Use sprinklers that have larger holes - water evaporates faster with sprinklers that spray a fine mist.
- Use drip irrigation systems for plants, trees, shrubs, and vegetable gardens. Or use soaker hoses but turn them upside down (so that holes are on the bottom). This will also help prevent evaporation.



Last updated 06/05/2015

Sprinkling Ordinance & Tips Posted on the Website

WaterSense®



3. Landscape Irrigation System Ordinance

In May of 2015, the Utility began working on an ordinance to incent the installation of water efficient irrigation systems. With the assistance of DJ's Sprinkler Systems and Milwaukee Sprinkler Systems, the City Building Inspector, and the City Attorney, the Utility drafted the ordinance and permitting documents. The Wisconsin Public Service Commission was unaware of other utilities in the state that had ordinances, so Waukesha analyzed aspects of the ordinances from Dallas and Denver.

Ordinance 19.175, Landscape Irrigation Systems, was adopted in the fourth quarter of 2015 by the Common Council. In short, the ordinance exists to ensure that all Landscape Irrigation Systems in the City of Waukesha are designed, installed, maintained, altered, and operated in a manner that prevents the waste of water, promotes the most efficient usage of water, controls erosion, and applies the minimum amount of water required to maintain healthy individual plants. The ordinance can be found at:

http://waukesha-water.com/downloads/PressReleases/Irrigation_Ordinance_Final_10_15_15.pdf

In addition to conservation minded landscape design, the ordinance mandates the use of a WaterSense labeled controller. Waukesha Water Utility is a WaterSense partner and as such relied on the research WaterSense had already done. They found that a Water Sense controller can save a home between 30-50% on its summer water bills, and reduces landscape run off by as much as 71%.

The administrative duties are performed by the City Building Inspector's Office and, to a much lesser degree, the Water Utility. The Inspector's Office performs the plan review, issues the permit, and retains the records surrounding the installation of the systems. The Utility will educate the public about the new ordinance and supply the Inspector's Office with the permitting forms.

In 2018, there were 2 permits for new residential accounts.

Copies of the application, instructions and contractor certificate can be found below.



CITY OF WAUKESHA
DEPARTMENT OF COMMUNITY DEVELOPMENT- BUILDING INSPECTION
201 DELAFIELD STREET * WAUKESHA, WI 53188 * (262) 524-3530

PERMIT NO: _____

APPLICATION FOR IRRIGATION SYSTEM PERMIT

Owner _____ Phone _____

Address _____

Job Address (if different) _____

Contractor _____ License (if applicable) _____

Address _____ Phone _____

SYSTEM DESCRIPTION

☐ Single Family ☐ 2 Family ☐ 3 Family ☐ Multi Family ☐ Commercial ☐ Industrial ☐ Public

Fixtures	Type	Quantity
Backflow Preventer	Annual Inspection Required Y N	
Irrigation Controller	WaterSense Labeled Y N Provide Cut Sheet	

Estimated System Cost _____

Signature of Applicant _____ Date _____

The nonrefundable permit fee of \$50.00 and the applicable plan review fee per approved fee schedule was collected, and the permit is hereby approved.

Signature _____ Title _____ Date _____

White Copy – Contractor Yellow Copy – Owner Pink Copy – City of Waukesha, Building Inspector

This form is also available online at <http://www.ci.waukesha.wi.us/dept/building/FORMS.htm>

P:\Conservation\2015\Irrigation Plumbing Ordinance\Permit 10 15 15.docx8/12/15

Application for Irrigation System Permit

INSTRUCTIONS FOR IRRIGATION SYSTEM PERMIT

City of Waukesha Ordinance 19.175 requires that a permit be issued before an irrigation system may be installed, materially altered, or completely replaced. The purpose of this ordinance is to require all irrigation systems to be installed, materially altered, or completely replaced in a manner that is consistent with the City's water conservation goals. Systems shall prevent the waste of water, control erosion, promote the most efficient use of water, and apply the least amount of water that is required to maintain healthy individual plant material.

The Ordinance, available at <http://www.ci.waukesha.wi.us/web/quest/chapter19>, outlines the features required of irrigation systems, and the procedures required when the system is turned over to the owner.

A permit must be issued before the work commences.

The contractor shall prepare an irrigation plan to scale for each site where a new irrigation system will be installed or altered. Plans shall:

1. Be drawn to scale and indicate the scale used.
2. Include the name and dated signature of the designer.
2. Designate the location of the parcel.
3. Depict both areas to be and not to be irrigated within the parcel.
4. Reveal the major physical features and boundaries of the areas to be watered.
5. Indicate the location and type of each:
 - water source, backflow prevention device, controller, sensor, and electrical splice.
 - water emission device, including, but not limited to, spray heads, rotary sprinklers, quick couplers, bubblers, drip, or micro sprays.
 - valve, including but not limited to, zone valves, station solenoid valves, automatic master valve, and isolation valve.

Back flow preventers are required to be installed by licensed plumbers.

All systems subject to the ordinance must include a WaterSense labeled Irrigation Controller. A list of controllers is available at http://www.epa.gov/watersense/product_search.html?Category=5. A cut sheet of the controller must be submitted with the application.

The permit fee is due at the time of application and is nonrefundable.

The application must be submitted to Building Inspection. The review may take as many as 10 business days before a permit can be issued.

Upon completion of the system, the Contractor must review the Contractor Certificate specified in the ordinance and secure the owner's signature. A copy of the signed Contractor Certificate shall be sent to the Department.

Failure to follow these instructions subjects the violator to the fines specified in the ordinance.

This form is also available online at <http://www.ci.waukesha.wi.us/dept/building/FORMS.htm>

P:\Conservation\2015\Irrigation Plumbing Ordinance\Permit 10 15 15.docx8/12/15

PERMIT NO: _____

**IRRIGATION SYSTEM
CONTRACTOR CERTIFICATE**

Within 30 days of completion of the installation of the System, the Contractor shall:

- complete and deliver this signed and dated Certificate to the Owner
- deliver a fully signed copy to the Department

I, _____, installed an Irrigation System installed at
Name of Contractor

_____, and certify that I have:
Installation Address

✓ (Check those that apply)

- ☐ Installed the System in accordance with all applicable ordinances, statutes, codes, rules and regulations; confirmed the correct operation of the entire System; and confirmed that the System has been installed substantially according to the Irrigation Plan and all terms and conditions of the permit.
- ☐ Provided the Owner with a copy of the Irrigation Plan indicating the System, as built.
- ☐ Performed a final walk-through with the Owner to explain the operation of the System.
- ☐ Supplied the Owner with the manufacturers' manuals for the controller and other components of the System.
- ☐ Supplied the Owner with a list of System components that require maintenance, and the recommended frequency for maintenance.
- ☐ Informed the Owner of their responsibility to drain the System before November 1st of each year.

Contractor's Signature

Date

Owner's Signature

Date

White Copy – Contractor Yellow Copy – Owner Pink Copy – City of Waukesha, Building Inspector

This form is also available online at <http://www.ci.waukesha.wi.us/dept/building/FORMS.htm>

P:\Conservation\2015\Irrigation Plumbing Ordinance\Permit 10 15 15.docx8/12/15

Irrigation System Contractor Certificate



4. **Sewer Ordinance Change** (Sprinkling Credit Meters)

In December 2016, Waukesha's Sewer Credit Meter Ordinance was revised to better support Waukesha's water conservation efforts. The recent Ordinance change was focused on eliminating water use for activities that are considered non-essential – such as outdoor water use.

Prior to the Ordinance change, customers who had a sewer credit meter could have their wastewater charges reduced by the amount of water used outdoors. However, as of January 1, 2017, sewer credit meter accounts, installed for more than seven years, will no longer receive a credit.

Sewer credit meters installed for less than seven years will be phased out. The Utility calculated that it takes an average of seven years for customers to recover the money they spent for the meter and installation costs. Therefore, sewer credit meters installed between January 1, 2010 and December 31, 2016 will expire seven years from the date they were installed.

In 2018, the Utility mailed 29 letters to customers who reached their 7 year phase out period and were scheduled to have their sewer credit discontinued. A copy of the letter is shown on the following page.

There are 167 sewer credit accounts remaining.



Waukesha Water Utility

P O Box 1648

Waukesha, WI 53187-1648

SERVING WAUKESHA SINCE 1886

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Telephone: (262) 521-5272 • Fax: (262) 521-5265 • E-mail: [contactus@waukesha-water.com](mailto:contactus@waukesha-water.com)

February 2018

RE: Sewer Credit Ordinance Change

Service Address, Account #Account Number

Dear Customer Name:

The City updated its Sewer Credit Ordinance to sunset the use of sewer credit meters. The ordinance was changed to ultimately support the Water Utility's water conservation efforts, but also, to allow customers to recover the cost of buying and installing a sewer credit meter. On average, a home owner is able to recover these costs in seven years.

You are being contacted as the related meter on your property has been in use for seven years.

You have until May 20, 2018, to provide a final reading from your sewer credit meter. That reading will be used to calculate the last sewer credit that you are entitled to. You may send in a meter card or phone in a reading.

The sewer credit meter is customer owned but does not need to be removed. The Water Utility will "disconnect" the meter in our records. As a result, your bill will no longer be reduced by the value of the water that passes through your sewer credit meter.

Please keep in mind that Waukesha's water conservation program is an important factor leading to its ability to secure water from Lake Michigan. This change is aimed at reducing water use for activities that are considered non-essential.

We understand how these changes affect you. Please consider changing how you use the water that was passing through your sewer credit meter.

If you have any questions about the sewer credit meters, or would like information about our conservation rebates or Irrigation Only rates, please contact the Utility at (262) 521-5272.

Thank you,

Waukesha Water Utility

Copy of the Letter Sent to Customers  
Who Are No Longer Going to Receive a Sewer Credit



## 5. My Brown Lawn is Green Yard Sign Campaign

Furthermore, the Utility continued to encourage customers to let their lawns go dormant. Large colorful lawn signs, designed by a local artist, are available free of charge to customers who wish to demonstrate their commitment to water conservation. The signs serve to acknowledge those who are conserving and to encourage their neighbors to do the same. A sample of the lawn sign is below.





## 6. Rain Barrel Promotion Program

In addition to Waukesha Water Utility's new rain barrel rebate program, as mentioned previously in Section II under Incentives, the Utility also helps promote the Waukesha School District's and Waukesha County's rain barrel sales.

To help advertise the rain barrels, the Utility sends out bill inserts; and any time a customer calls and requests information about a rain barrel, we inform them about these two local programs. In addition, we promote rain barrels at all public outreach events.





## 7. Rain Garden Plant Sales & Free Workshops

In addition to promoting rain barrels, the Utility also helps promote Waukesha County's annual plant sales for rain gardens and their free workshops.

### GOING ON NOW: RETZER NATURE CENTER'S ANNUAL SPRING SALES!

(Waukesha, WI) Retzer Nature Center's annual Spring Workshop and Pre-Sale of compost bins, rain barrels and native plants is going on now through March 30. Order on line and view items at [www.waukeshacounty.gov/SpringSale](http://www.waukeshacounty.gov/SpringSale). Orders will be available for pick up at Retzer Nature Center on May 12 from 9 am to noon only.

The advertisement is a collage of images and text promoting a spring sale. It includes a central circular graphic with the text 'Spring Sale Orders' and 'Order Now!'. It also features several photographs: one of various native plants in pots, one of black rain barrels, one of blue compost bins, and one of more native plants. Text overlays provide pricing information: 'Native Plants starting at \$2.50' and 'Compost Bins \$50 Rain Barrels \$60'. A call to action 'Order Online until March 30' is prominently displayed. The website address [www.waukeshacounty.gov/springsale](http://www.waukeshacounty.gov/springsale) is at the bottom.

**Spring Sale Orders**  
Compost Bins  
Native Plants  
Rain Barrels  
**Order Now!**

**Order Online**  
until March 30

Native Plants  
starting at  
\$2.50

Compost Bins  
\$50  
Rain Barrels  
\$60

[www.waukeshacounty.gov/springsale](http://www.waukeshacounty.gov/springsale)

Advertisement for Waukesha County's Rain Barrels, Rain Garden, & Workshops




## 8. Outdoor Conservation Tips

Waukesha Water Utility has outdoor conservation tips on its website. As seen below, the topics covered are the following: Rain Harvesting, Garden Hose, Plants/Trees/Shrubs/Vegetable Gardens, Pools/Spas, and Rain Gardens.

City of Waukesha | Mayor's Office | Common Council | Contact Us

search



Home & R/IRGVE    Customer Service    Water & Sewer Collection    Utility and Infrastructure    Corporate

### Outdoor Conservation Tips

**Rain Harvesting**  
Use a bucket or a rain barrel to catch and store fresh rainwater from your rooftop. Then use this water for washing your car or for watering your lawn, garden, trees, and plants. Rainwater is better for your plants because it is not chlorinated. If you put a screen over your bucket, this will keep the insects out and keep mosquitoes from laying their eggs in the rainwater.

**Garden Hose**  
Use a spray nozzle on your hose. If this is an adjustable type, the water can be turned down to a fine spray. When finished using the hose, turn the water off at the faucet instead of the nozzle - this will help control leaks. Sweep off your driveway and sidewalk with a broom or use a blower - do NOT use the hose.

**Plants, Trees, Shrubs, Vegetable Gardens**  
Water plants only when needed. Soaker hoses use less water than overhead sprinklers. Turn the soaker hose upside down (so that the holes are facing down). This will help to avoid evaporation. Remove weeds - they steal water from other plants. Use organic mulches (such as woodchips, shredded bark, grass clippings, straw, hay, leaves, or compost) - to retain moisture.

**Pools/Spas**  
Cover the pool or spa to prevent evaporation and to keep the water cleaner. To avoid water going over the sides, do not over fill. Install a water-saving pool filter - traditional filters use 180-250 gallons of water. Do not drain pools/spas unless repair work is needed.

**Rain Gardens**  
Rain gardens are a more natural landscape that uses wildflowers and other native plants. The native plants are low maintenance, use a lot less water, and do not require fertilizers. Due to their deep root system, native plants help the environment by increasing the soil's ability to store water, reducing runoff (flooding), and providing a habitat for birds and butterflies. The DNR provides a lot of information about [Rain Gardens](#).



Last updated 06/04/2015

Outdoor Conservation Tips on Website



## These 8 Tools Are Working

The information below indicates that Waukesha uses, on average, much less water in the summer now than it did before these eight tools, previously mentioned, were put into place. We have effectively reduced our peak demands, even during the extreme drought conditions of 2012.

Gallons Pumped, during the summer months of 2018, was at a fourteen year low.

| Summer Volumes as a Percent of Total Gallons Pumped |                  |                |                        |                    |                |                        |                    |                |                        |                  |                |                        |
|-----------------------------------------------------|------------------|----------------|------------------------|--------------------|----------------|------------------------|--------------------|----------------|------------------------|------------------|----------------|------------------------|
| Year                                                | Waukesha Pumpage |                |                        | Brookfield Pumpage |                |                        | Oconomowoc Pumpage |                |                        | Pewaukee Pumpage |                |                        |
|                                                     | Annual (000's)   | Summer (000's) | Summer as a % of Total | Annual (000's)     | Summer (000's) | Summer as a % of Total | Annual (000's)     | Summer (000's) | Summer as a % of Total | Annual (000's)   | Summer (000's) | Summer as a % of Total |
| 2005                                                | 2,838,403        | 1,333,367      | 47.0%                  | 1,496,931          | 737,230        | 49.2%                  | 708,458            | 370,121        | 52.2%                  | 500,991          | 279,850        | 55.9%                  |
| 2006                                                | 2,623,418        | 1,175,795      | 44.8%                  | 1,465,878          | 738,889        | 50.4%                  | 673,143            | 337,035        | 50.1%                  | 479,448          | 262,317        | 54.7%                  |
| 2007                                                | 2,618,461        | 1,183,827      | 45.2%                  | 1,368,726          | 669,849        | 48.9%                  | 686,683            | 355,702        | 51.8%                  | 445,630          | 232,840        | 52.2%                  |
| 2008                                                | 2,531,108        | 1,128,313      | 44.6%                  | 1,446,256          | 638,479        | 44.1%                  | 677,227            | 337,653        | 49.9%                  | 473,648          | 245,615        | 51.9%                  |
| 2009                                                | 2,479,905        | 1,109,337      | 44.7%                  | 1,295,283          | 653,848        | 50.5%                  | 676,528            | 344,909        | 51.0%                  | 442,530          | 247,172        | 55.9%                  |
| 2010                                                | 2,441,221        | 1,074,691      | 44.0%                  | 1,272,681          | 607,443        | 47.7%                  | 719,994            | 342,468        | 47.6%                  | 441,760          | 219,440        | 49.7%                  |
| 2011                                                | 2,545,103        | 1,129,986      | 44.4%                  | 1,436,548          | 683,145        | 47.6%                  | 689,523            | 329,580        | 47.8%                  | 480,001          | 250,294        | 52.1%                  |
| 2012                                                | 2,527,370        | 1,187,305      | 47.0%                  | 1,365,823          | 714,678        | 52.3%                  | 751,326            | 404,770        | 53.9%                  | 515,842          | 297,556        | 57.7%                  |
| 2013                                                | 2,348,655        | 1,048,020      | 44.6%                  | 1,376,089          | 661,420        | 48.1%                  | 693,971            | 336,449        | 48.5%                  | 454,881          | 237,323        | 52.2%                  |
| 2014                                                | 2,413,582        | 1,015,137      | 42.1%                  | 1,687,514          | 813,598        | 48.2%                  | 696,960            | 337,605        | 48.4%                  | 435,998          | 220,317        | 50.5%                  |
| 2015                                                | 2,213,900        | 970,596        | 43.8%                  | 1,373,750          | 729,687        | 53.1%                  | 630,635            | 307,853        | 48.8%                  | 477,185          | 248,273        | 52.0%                  |
| 2016                                                | 2,166,893        | 962,749        | 44.4%                  | 1,247,811          | 624,014        | 50.0%                  | 589,534            | 291,165        | 49.4%                  | 464,850          | 248,778        | 53.5%                  |
| 2017                                                | 2,128,111        | 933,128        | 43.8%                  | 1,254,510          | 606,530        | 48.3%                  | 564,324            | 270,424        | 47.9%                  | 464,290          | 237,116        | 51.1%                  |
| 2018                                                | 2,068,522        | 914,652        | 44.2%                  | 1,252,833          | 603,142        | 48.1%                  | 553,523            | 271,499        | 49.0%                  | 465,553          | 236,112        | 50.7%                  |
| Average                                             |                  |                | 44.6%                  |                    |                | 49.0%                  |                    |                | 49.7%                  |                  |                | 52.9%                  |

Further support for the efficacy of the Utility's program can be found by comparing its summer water use with its neighbors (who are affected by similar weather conditions). Waukesha uses a lower proportion of water in the summer than does its neighbors.



In addition to the Outdoor programs, the Utility has other conservation programs (for non-residential customers as well as for all customer classes).

**WaterSense®**



## **9. Pre-Rinsed Spray Valves**

In November 2015, the Utility kicked off a new water conservation initiative for water efficient pre-rinsed spray valves. Pre-rinsed spray valves were offered to large water using customers for free. The spray valves are valued at approximately \$150 and maintain good pressure while using 60% less water. The spray valves are endorsed by The Green Restaurant Association, Alliance for Water Efficiency, The Green Building Council, and EPA WaterSense.

In 2016, the Utility changed out 25 pre-rinsed spray valves. The large customers that participated in this change out program consisted of the following:

- Schools
- County Expo Building
- Elks Lodge
- Salvation Army
- Restaurants

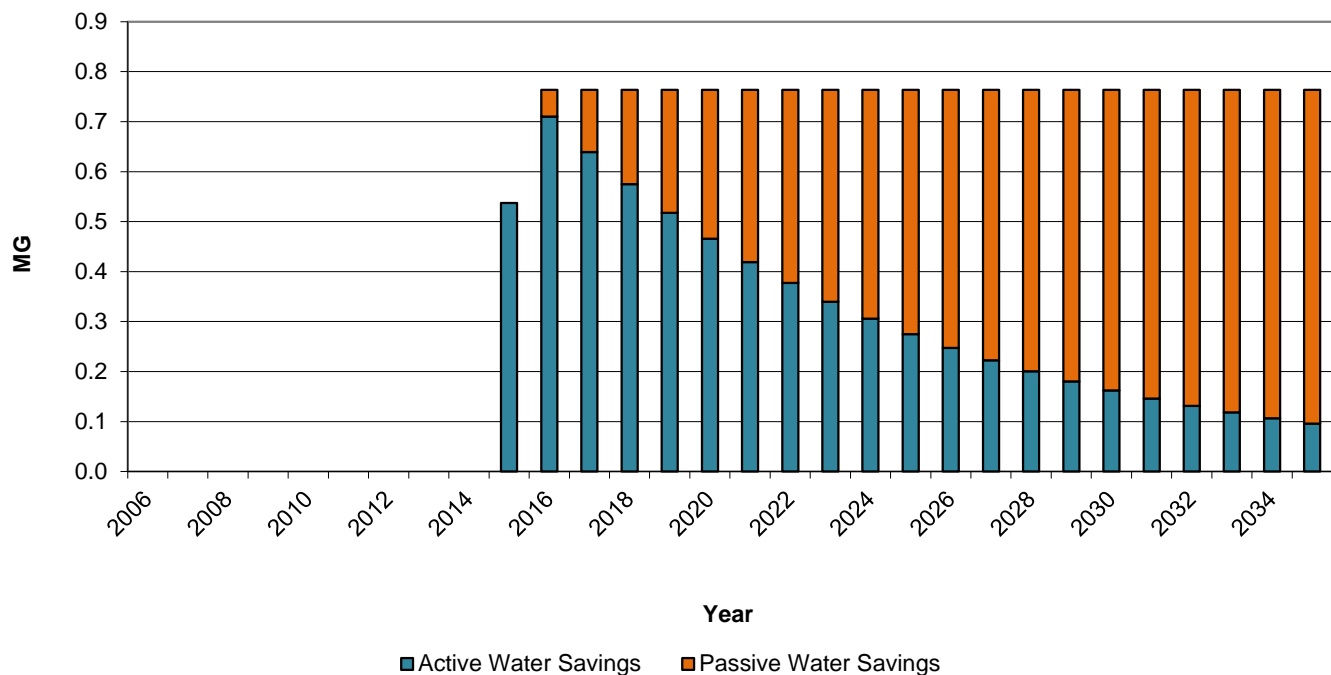
In 2018, the Utility did not change out any pre-rinsed spray valves but plans to continue the change out program in 2019.

The following page shows the annual cost effectiveness of the program, along with the projected water savings through 2035, for both commercial and public accounts.

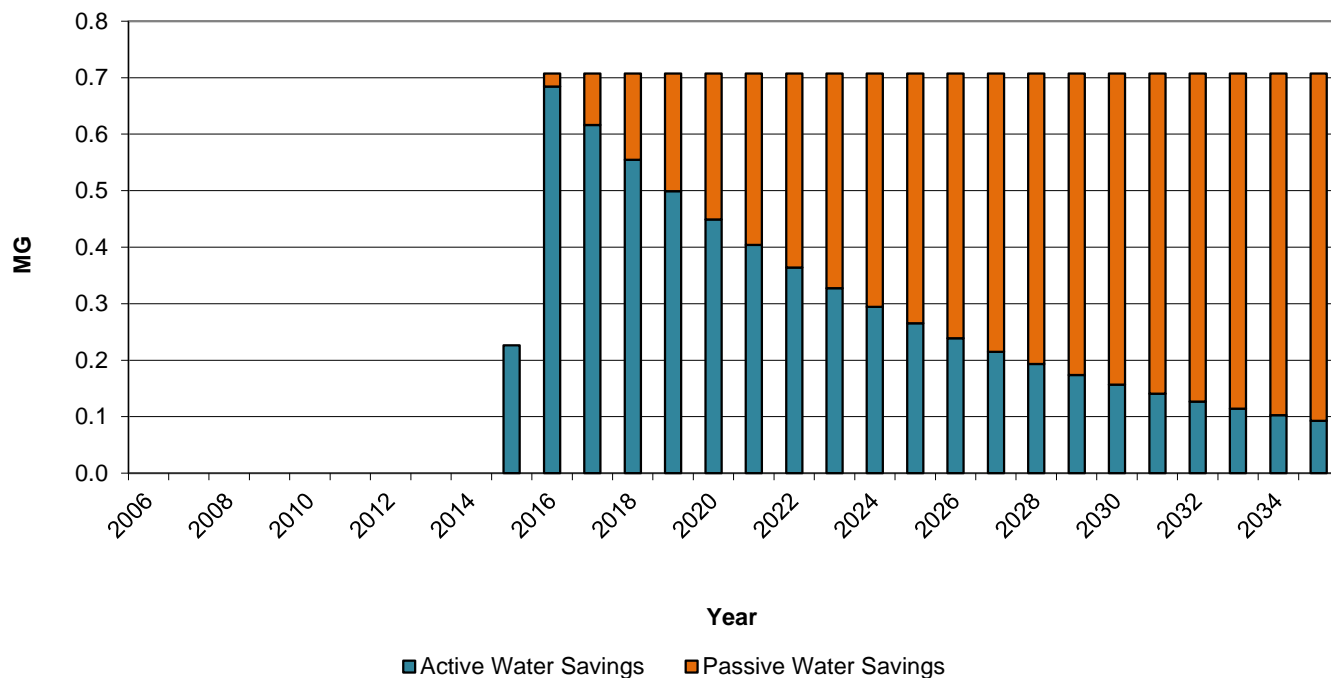


| Class      | Activity Name                            | Unit Cost (\$/MG) | PV Cost  | Unit Benefit (\$/MG) | PV Benefit | Avoided Supply | Avoided Wastewater | B/C Ratio |
|------------|------------------------------------------|-------------------|----------|----------------------|------------|----------------|--------------------|-----------|
| Commercial | CII Spray Rinse Valve Grant (Commercial) | 229.76            | 4,537.00 | 1,190.52             | 23,508.94  | 12,987.75      | 10,521.19          | 5.18      |
| Public     | CII Spray Rinse Valve Grant              | 229.56            | 1,484.60 | 1,110.54             | 7,182.06   | 3,963.48       | 3,218.58           | 4.84      |

**CII Spray Rinse Valve Grant (Commercial) Annual Water Savings**



**CII Spray Rinse Valve Grant (Public) Annual Water Savings**





## 10. Why It's Important to Conserve & Ways to Conserve

There is information on our website, for all customer classes, on “Why It's Important to Conserve” & “Ways to Conserve”.

City of Waukesha | Mayor's Office | Common Council | Contact Us

search



**Waukesha Water Utility**  
Serving Waukesha Since 1886

Requirements & Forms | Conservation Services | Great Lakes Aquifer Protection | Water & Sewer Conservation | Conservation

How Much Water You Use  
Ways to Conserve  
Sprinkling Ordinance  
Community Outreach and Education  
2012 Water Conservation Plan (4.8 MB)  
PSC Conservation Report (4.5 MB)  
News Room

**Conservation**

**Why Conservation is Important**

Water is precious because it is essential for life and it is a limited resource. Of all the water on Earth, we have only 1% to use. 97% of the planet's water is located in the ocean and due to its salt content is not easily used for drinking. Another 2% is frozen at the poles in the form of icebergs and glaciers.

But if this reason seems too big or global, consider what is happening locally.

In the past, our primary aquifer provided an abundance of high quality water. However, that deep aquifer is covered by a thick layer of shale rock that restricts recharge by rain or snowmelt. It is also shared by many communities in southeastern Wisconsin and northeastern Illinois. Years of pumping in the region have severely reduced the level of groundwater in the aquifer, while increasing contaminants like radium. And adding or switching to shallow aquifer wells instead would have permanent adverse effects on thousands of acres of wetlands.

Our ratepayers know that continued reliance on groundwater is increasingly expensive. More importantly, it is not environmentally sustainable. We are applying to use Lake Michigan water instead, and would recycle it back to the lake after use and treatment. However, aggressive water conservation will still be required.

For all these reasons, the City of Waukesha developed a water conservation/protection plan. Our goal is to reduce the water usage by 20% by the year 2020. Regardless of our future water source, a water resource protection plan will help to protect the environment and ensure an adequate water supply for the future.

Please join us and learn what you can do to help meet our conservation goals and to protect our water supply and our natural resources.

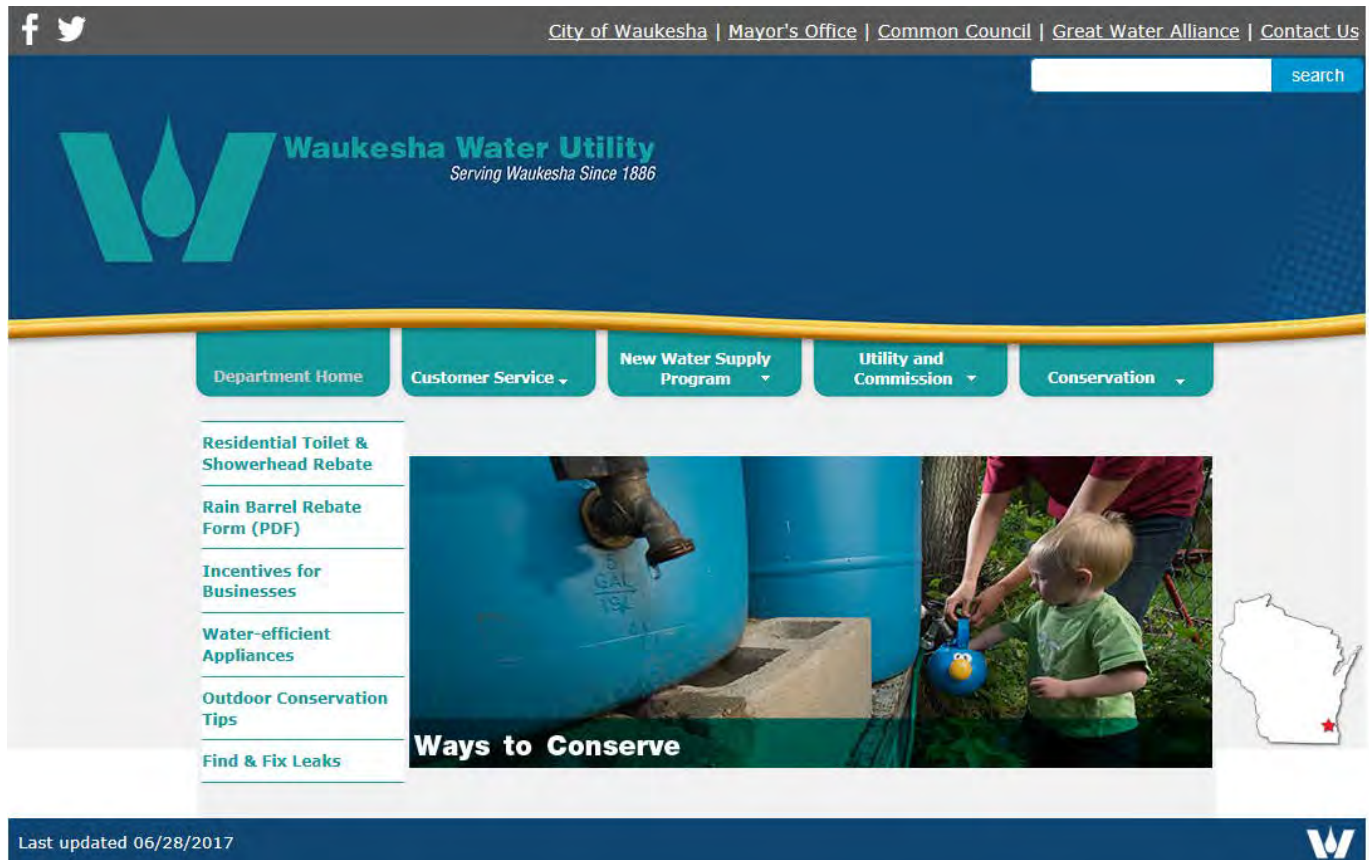


Last updated 06/04/2015

Why It's Important to Conserve on the Webpage



Under the “Ways to Conserve” heading, we talk about the toilet rebate, the incentives for businesses, the sprinkling ordinance, and outdoor conservation tips. All of these topics have been previously addressed. However, there is one more topic that hasn’t been addressed and that is water-efficient Appliances, as shown on the next page.



Ways to Conserve on Webpage





## Water-efficient Appliances

The US Environmental Protection Agency provides information on [Water Efficient Appliances](#) that can save you money.

### Gallons of Water Used per Year (Family of Four)

|                 | Efficient Appliances | Without Efficient Appliances |
|-----------------|----------------------|------------------------------|
| Toilets         | 11,972               | 27,010                       |
| Clothes Washers | 14,600               | 21,900                       |
| Showers         | 12,848               | 16,936                       |
| Faucets         | 15,768               | 15,914                       |
| Dishwashers     | 1,022                | 1,460                        |
| Gallons Used    | 56,210               | 83,220                       |
| At 2015 Rates   | \$671.92             | \$908.53                     |

You can save **27,010 gallons** and **\$236.61 per year** by replacing your old appliances. If you qualify, we will give you up to \$100 to offset the cost of your new toilet.



Last updated 06/05/2015

Water Efficient Appliances Webpage

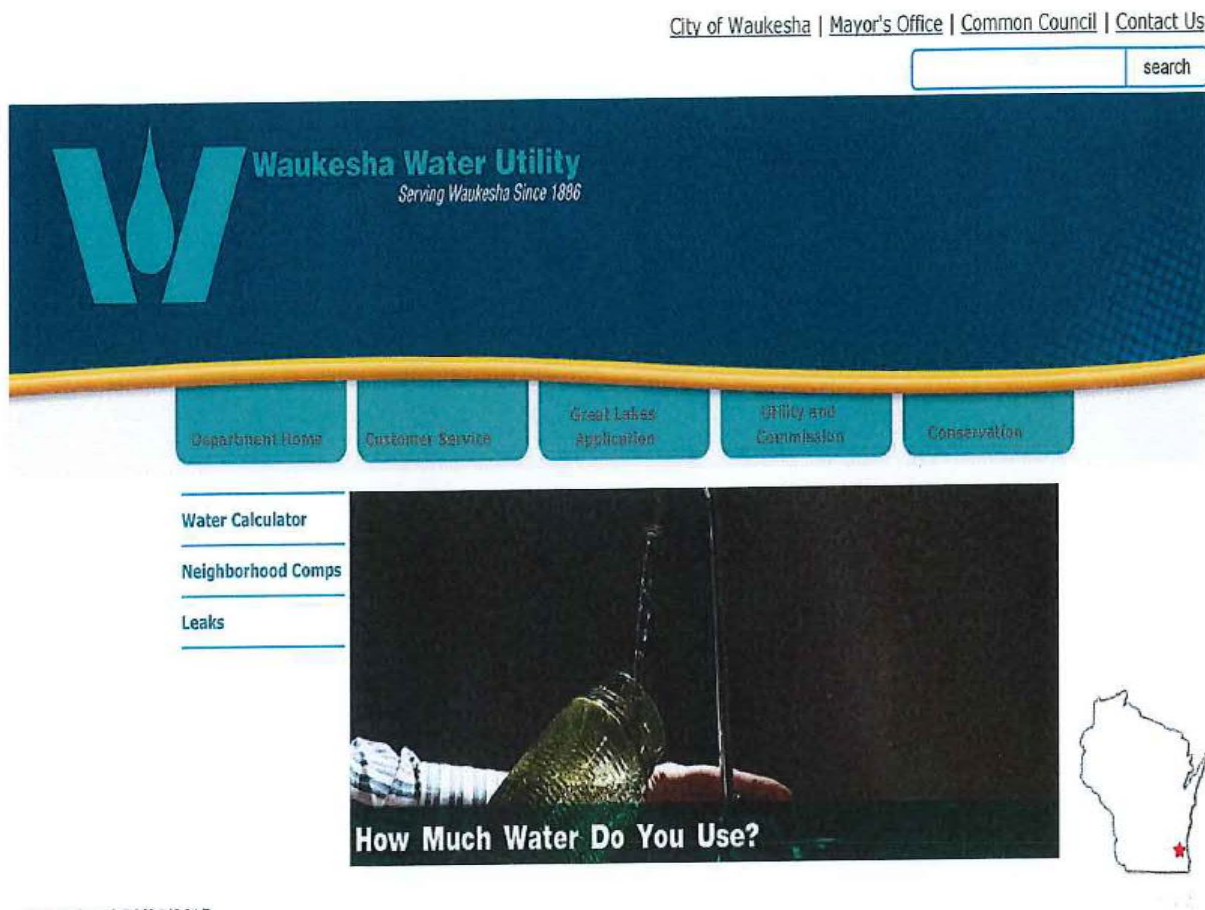


## 11. How Much Water Do You Use & Things To Do To Lower Your Bill

Other information on our website includes “How Much Water Do You Use?” and “Things to do to Lower Your Bill”.

The headings under the “How Much Water Do You Use” webpage are the following:

- Water Calculator (as shown on the next page)
- Leaks (please refer to section 12)
- How Your Water Consumption Compares to your Neighbors (please refer to section 13)



Last updated 06/04/2015

Information Regarding 'How Much Water Do You Use' on Webpage



The water calculator links to [H<sub>2</sub>OUSE Water Saver Water Use Calculator](#).

This tool calculates how much water is being used vs. how much water would be saved if fixtures, appliances, and landscaping were efficient. The link also compares the actual water bill to what a person could be saving with conservation.

## Water Use Calculator

How much water are you using at your home? Follow the easy steps below and fill in the information boxes on our **Water Use Calculator** to learn. Our Calculator will give you a water budget for the inside and outside of your home. A water budget tells you the right amount of water you should be using. Compare the water budget to your actual water bill and see how much water you could be saving. Then try the **Water Use Calculator** again with more water efficient landscaping added and see the difference in savings \$\$ this can make.

### Site Information

Name:   
Site Name:  (e.g., My House)  
  
Zip:

### Home/Interior Water Consumption Estimate

Number of Residents:   
  
Number of Showerheads:  Number installed before 1994:  Number installed in 1994 or after:   
Number of Toilets:    
Number of Faucets:    
  
Do you have a clothes washer? ☐ Yes ☐ No  
  
If yes, please answer below.  
  
Energy Star? ☐ Yes ☐ No

### Landscape Water Consumption Estimate

Grass/lawn Area:  sq.ft.  
Shrubs/Ground Cover Area:  sq.ft.  
Water-Conserving Plants Area:  sq.ft.  
  
Or if you don't know any of the above, enter the Total Landscape Area:  sq.ft.

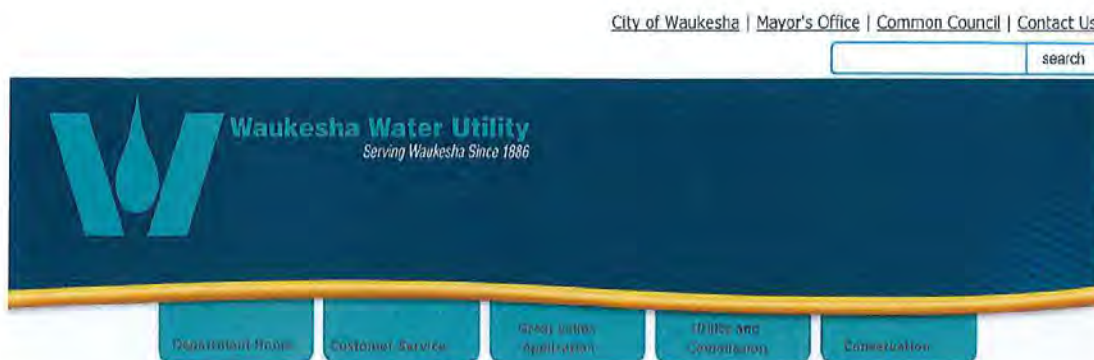
### Actual Water Usage

Select water measure for values you enter below: ☐ CCFs or HCFs ☐ Thousand Gallons (KGals)



The headings under the “Things to do to Lower Your Bill” webpage are the following:

- Repair Leaks (please refer to Section 12)
- Sprinkling Practice/Outdoor Conservation (which links to the Ordinance & Outdoor Tips – as mentioned previously)
- Install Aerators/Low-Flow Showerheads/Toilet Displacement Devices/Low-Flush Toilets (as shown on the next page)
- Purchase High Efficiency Appliances That Use Less Water (as mentioned previously)
- Develop and Practice Daily Conservation Habits (as shown on two pages from this page)



### Things To Do To Lower Your Bill

#### Repair Leaks

Leaks not only waste a lot of water, but they also waste a lot of money - especially leaks that occur in toilets. Click on leaks to learn how to locate a leak, calculate the amount of water being wasted, read customer experiences regarding leaks, and find easy and economical repair suggestions.

#### Sprinkling Practice / Outdoor Conservation

Learn about sprinkling and lawn care tips. Learn how much water your grass and vegetable gardens really need. Receive information about rain harvesting and rain gardens. In addition, find out what you can do to conserve water in regard to your pool/spa and vehicles.

#### Install Aerators/Low-Flow Showerheads/Toilet Displacement Devices/ Low-Flush Toilets

For approximately \$35, the average homeowner can install low-flow aerators on faucets, install two low-flow showerheads, and put a toilet displacement bottle in the toilet tank. This will help you conserve water and lower your water bill.

#### Purchase High Efficiency Appliances That Use Less Water

Whether you're in the process of remodeling, replacing old appliances, or buying appliances for the first time, remember high-efficiency appliances conserve water and, at the same time, save you money on both your water and energy bills.

#### Develop And Practice Daily Conservation Habits

Here are some more great water-saving ideas that we all can implement into our daily lives. These ideas will help conserve water and lower water bills. Remember, every little bit helps.



Last updated 06/04/2015

Information on Things to do to Lower Your Bill on Webpage





## Install Water Saving Devices

Conserving water in your home could save you over \$115 annually in water charges and help protect your water resources.

### Faucet Aerator

Household Sinks should be equipped with faucet aerators. Although it may not seem like much, a bathroom faucet can easily draw more than 2,500 gallons of water per year! Aerators conserve water by mixing air and water as the water leaves the spout. Aerators will not reduce the amount of water needed to fill a sink or pitcher, but will reduce the amount of water needed for rinsing. Aerators are easy to install and cost approximately \$2 each.

### Water Efficient Showerhead

Install water saving showerheads. An average 5-minute shower with a typical non-conserving showerhead sends approximately 40 gallons of fresh water down the drain and into the sewer. Water efficient shower heads provide a water savings of at least 44% compared to non-conserving shower heads. Water efficient showerheads cost approximately \$12 and up.

### Low Flow Toilet

Toilet flushing uses more water than any other household use! A typical non-conserving 5.5 gallon flush toilet (many of which are still in use) contaminates 13,000 gallons of fresh water per year to remove 165 gallons of body waste! An efficient low-flow toilet costs approximately \$100. It will save you 41.2 gallons of water per day. If you don't have a Water efficient toilet, displace water in the tank with two half-gallon plastic jugs filled with pebbles.

Source: Northwestern Indiana Regional Planning Commission and the Lake Michigan Federation (now the Alliance for the Great Lakes).



Last updated 06/05/2015

Information on Aerators, High-Efficiency Shower Heads and Toilets on Webpage





**Waukesha Water Utility**  
 Serving Waukesha Since 1886

## Daily Conservation Tips

### Kitchen Conservation Tips

- Install a low-flow aerator on your kitchen faucet.
- Place a pitcher of water in the fridge, or warm the water in the microwave or on the stove instead of running the water from the tap and waiting for the temperature to change. Otherwise, while waiting, capture the running water for watering the plants.
- Thaw frozen foods by putting them in the refrigerator overnight or use the microwave to defrost instead of using water to thaw them.
- Use only a little water in the bottom of the pan for cooking purposes. This is what most foods require and, at the same time, the foods will be more nutritious since the vitamins will stay more in the food instead of the water.
- Only run the dishwasher when you have a full load; and, if available, select the "light wash" option in order to use less water.
- Scrape dirty dishes instead of rinsing them off with water. Most dishwashers clean dishes very well and do not need to be rinsed.
- When washing dishes by hand, place the stoppers in the sinks or use two containers, one with soapy water and one with rinsing water, instead of turning the faucet on each time a rinse is needed.
- Begin a compost pile rather than running the water for a garbage disposal.
- Use a pan of water to clean vegetables instead of running the water from the faucet. Then, reuse this water for watering plants.

### Laundry Conservation Tips

- Use the wash machine only when there is a full load. Adjust the water level based on the size of the load.
- When purchasing a new wash machine, buy a high-efficiency appliance. This will not only conserve water, but will also save money on water and energy bills.

### Bathroom Conservation Tips

- Install a low-flow faucet aerator on your bathroom sink.
- Turn the water off while brushing your teeth, washing, or shaving.
- Install a low-flow showerhead.
- Take a shower instead of a bath. A fast shower, especially one with a low-flow showerhead, will use less water.
- Place a bucket in the shower to catch excess water for watering plants.
- While in the shower, turn the water on to get wet, turn it off while soaping up, and turn it back on to rinse off. Do the same when washing your hair.
- Only flush the toilet when necessary. Use the trash for tissues, insects, and waste instead of flushing them down the toilet.
- Check for toilet leaks twice a year. (See Leaks for more information.)
- If the handle of the toilet often stays in the flush position, after flushing, and allows the water to run, get it fixed.
- Put a plastic gallon jug filled with rocks, into the toilet tank. This will raise the water level in the tank so that less water will be used. Otherwise, you can purchase a toilet displacement device from a hardware store to do the same thing.
- When remodeling or purchasing a new home, install a low-flow flushing toilet that uses only 1.6 gallons of water per flush.

### General Conservation Tips

- Do not pour water down the drain when it could be reused for watering plants, gardens, etc.
- Check your water meter to verify that your house is leak free.
- Repair toilet leaks or dripping faucets right away. These waste a lot of water and can significantly increase.


Information on Conservation Habits & Tips for Inside the Home on Webpage



## 12. Program on Finding & Fixing Leaks

The Utility has information on its website to help customers understand the importance of finding and fixing leaks quickly. The information below informs customers on how much water and money can be wasted when it comes to leaks.

[City of Waukesha](#) | [Mayor's Office](#) | [Common Council](#) | [Contact Us](#)



# Waukesha Water Utility

Serving Waukesha Since 1886

[Department Home](#) | [Customer Service](#) | [Small Leaks Appraisal](#) | [Utility and Consumption](#) | [Conservation](#)

### What is a Water Audit?

[AWE Audit \(Tool\)](#)

[AWWA Audit \(Excel Tool\)](#)

[AWWA Drip Calculator \(Tool\)](#)

[EPA WaterSense \(Tool\)](#)


[Your Toilet](#)

### Finding and Measuring Leaks

...but it's just a little leak ...

- A customer reported that every few hours his toilet seemed to flush itself. This was caused by the tank refilling after water leaked around the plunger ball. Our service people found the problem and the customer had it repaired quickly. Fortunately, the water bill for the leak was only \$89, but the water wasted was over 26,000 gallons.
- The Public Service Commission was contacted about a high water bill. A family was away on extended vacation when a toilet leak developed. The toilet leaked continuously for about 60 days. A 3/8" diameter line was feeding the toilet. Approximately 85,000 gallons leaked through the overflow and the bill was almost \$195.
- While paying a water and sewer bill of \$115 for 90 days use, a customer mentioned that the house rule to "rattle the handle" after a flush was a costly mistake. In this case, the plunger ball wasn't seating properly and one family member didn't always follow the rule. The toilet ran continuously for up to 4 hours on almost all school days. This went on for about 45 days. The water wasted was over 20,000 gallons.
- A customer said "I know the toilet was leaking, but it can't cost \$231 for 3 months!" Approximately 92,000 gallons were wasted.

[How to Find & Fix Leaks](#)



Information on website for Finding and Fixing Leaks



Also, the Utility has a link on its website to the Environmental Protection Agency's (EPA) WaterSense site for detailed information on Finding & Fixing Leaks.



About Us Products Outdoor New Homes Commercial Our Water Partners



WaterSense® An EPA Partnership Program

Product Search | Meet Our Partners | Contact Us | FAQ | Partner Login

WaterSense Our Water What You Can Do Fix a Leak Fixing Leaks Around the Home

## Fixing Leaks Around the Home

Being handy around the house doesn't have to be difficult. Common types of leaks found in the home are worn toilet flappers, dripping faucets, and other leaking valves. These types of leaks are often easily correctable, requiring only a few tools and hardware that can pay for themselves in water savings.

Repare goteos y fugas alrededor del hogar (En Español)



- Checking for Leaks
- Toilets
- Faucets
- Showerheads
- Outdoors
- Leaks Still Flowing Overboard?



### Checking for Leaks

To check for leaks in your home, you first need to determine whether you're wasting water. Then identify the source of the leak.

- Take a look at your water usage during a colder month, such as January or February. If a family of four exceeds 12,000 gallons per month, there are serious leaks.
- Check your water meter before and after a two-hour period when no water is being used. If the meter changes at all, you probably have a leak.
- Identify toilet leaks by placing a drop of food coloring in the toilet tank. If any color shows up in the bowl after 15 minutes, you have a leak. (Be sure to flush immediately after the experiment to avoid staining the tank.)
- Examine faucet gaskets and pipe fittings for any water on the outside of the pipe to check for surface leaks.
- The Regional Water Providers Consortium has a [video on detecting household leaks](#) [\[exit disclaimer\]](#) that you may find helpful.

### Toilets

A common reason why toilets will leak is an old or worn-out toilet flapper (e.g., valve seal). Flappers are inexpensive rubber parts that can build up minerals or decay over time. Replacing them can be a quick and easy fix for your water woes. To fix this leak, consult your local hardware store, home improvement retailer, or licensed plumber. Here are some online resources from WaterSense partners:

- Spartanburg Water has a useful [video tutorial on detecting leaky toilets](#) [\[exit disclaimer\]](#).
- The Regional Water Providers Consortium has a [step-by-step video on how to fix a leaky toilet](#) [\[exit disclaimer\]](#).

**Tip:** Bring the old flapper to the hardware store for comparison to make sure you buy a new flapper that fits your toilet model. You can also check the owner's manual, if you have it, or the manufacturer's website for the appropriate replacement part number for the flapper.

### Faucets

Old and worn faucet washers and gaskets frequently cause leaks in faucets. Many tutorials are available online for how to fix a wide variety of faucets. Here are a couple of examples:


[Link to Water Sense Finding and Fixing Leaks](#)



In addition, the Utility's website has information pertaining specifically to toilet leaks (as to how much water is wasted & information on the toilet rebate).

City of Waukesha | Mayor's Office | Common Council | Contact Us

search



Waukesha Water Utility

Serving Waukesha Since 1886

Department Home

Customer Services

Water Lines Identification

Utility and Commission

Conservation

Toilet Leaks

Toilet leaks are one of the most common and costly leaks. Hundreds of gallons a day can be wasted on toilet leaks. Although they tend to be invisible, you can often hear the sound of water running.

It's best to check for leaks twice each year. Check your toilet for parts which are out of adjustment or worn out. Leaks usually occur in the overflow pipe or the plunger ball.

After you have fixed the leak, use the leak indicator on your water meter to verify successful repair.

How Much Water is Wasted?


| A leak of _____ per minute, | wastes _____ gallons per month. |
|-----------------------------|---------------------------------|
| 1 pint                      | 5,475                           |
| 1 quart                     | 10,950                          |
| ½ gallon                    | 21,900                          |
| 1 gallon                    | 43,800                          |
| 3 gallons                   | 131,400                         |

High Efficiency Toilet Rebate Program

If you have an old toilet, it's probably best to replace it.

Replace a Water Guzzling Toilet, Receive \$100!

[Rebate Qualifications and Application.](#)




Information on website regarding Toilet Leaks

65



Along with a link to American Water Works Association's (AWWA) drip calculator – to calculate how much water is wasted on dripping and running faucets.

**American Water Works Association**  
*Dedicated to the World's Most Important Resource™*

Abc

|                   |                                    |                              |                                         |                                     |            |
|-------------------|------------------------------------|------------------------------|-----------------------------------------|-------------------------------------|------------|
| <b>MEMBERSHIP</b> | <b>CONFERENCES &amp; EDUCATION</b> | <b>RESOURCES &amp; TOOLS</b> | <b>PUBLICATIONS</b>                     | <b>LEGISLATION &amp; REGULATION</b> | Search aww |
| Water Knowledge   | Public Affairs                     | Career Center                | Water and Wastewater Utility Management | Resource Dev                        |            |

**PUBLIC INFORMATION**  
DripCalculator

**PRESS ROOM**

**COMMUNICATIONS TOOLS**


**PUBLIC AFFAIRS EVENTS**

Home > Resources & Tools > Public Affairs > Public Information > DripCalculator

## Drip Calculator

Use AWWA's online tool to estimate water waste and learn how much water you could be saving.

### DRIPPING FAUCETS


 For smaller/slower leaks - count the number of drips in one minute from the leaky fixture. Note: 5 drips per second amounts to a steady stream.

Drips Per Minute:

Unit of Measurement:

**Calculate Waste**

### FAST RUNNING FAUCETS

 For larger/more rapid leaks - hold an 8 ounce cup under the dripping fixture and time, in seconds, how long it takes to fill the cup.

Time In seconds:

Unit of Measurement:

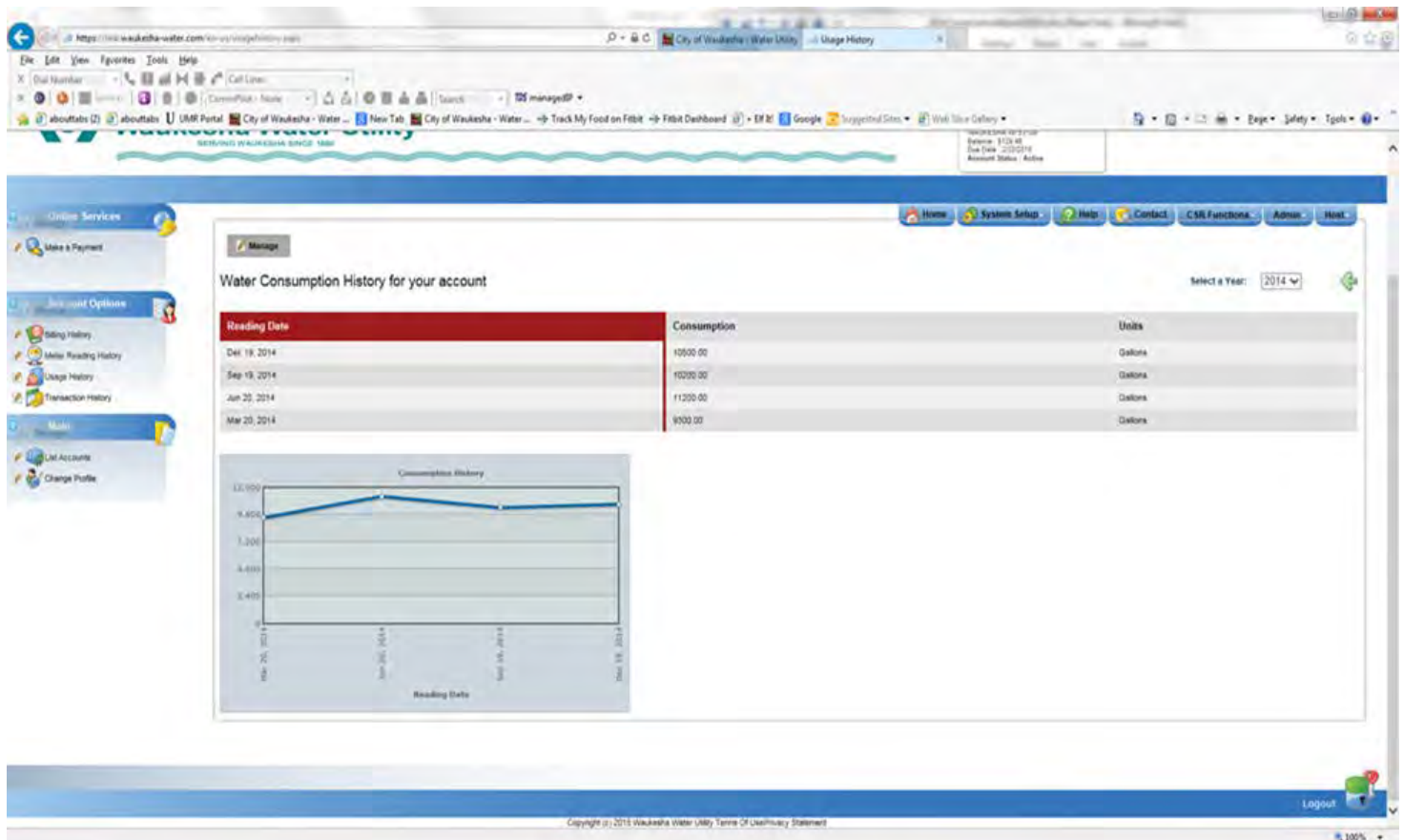
**Calculate Waste**

Link to AWWA's Drip Calculator



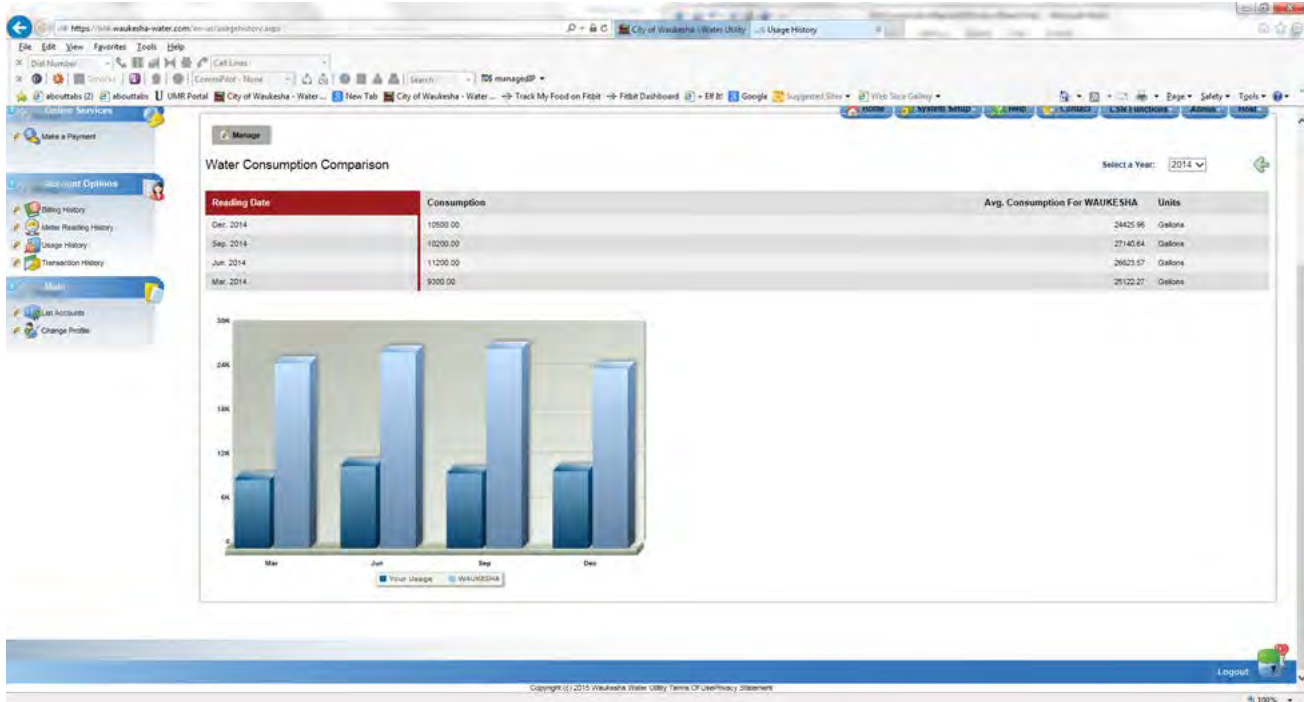
### 13. Web Based Consumption History and Comparisons (for all customers)

In 2014, the Utility installed Link, a system available to customers to pay their bills online. Integral to Link is the customer's ability to search transaction and consumption history. Now, a customer can compare their consumption across seasons.

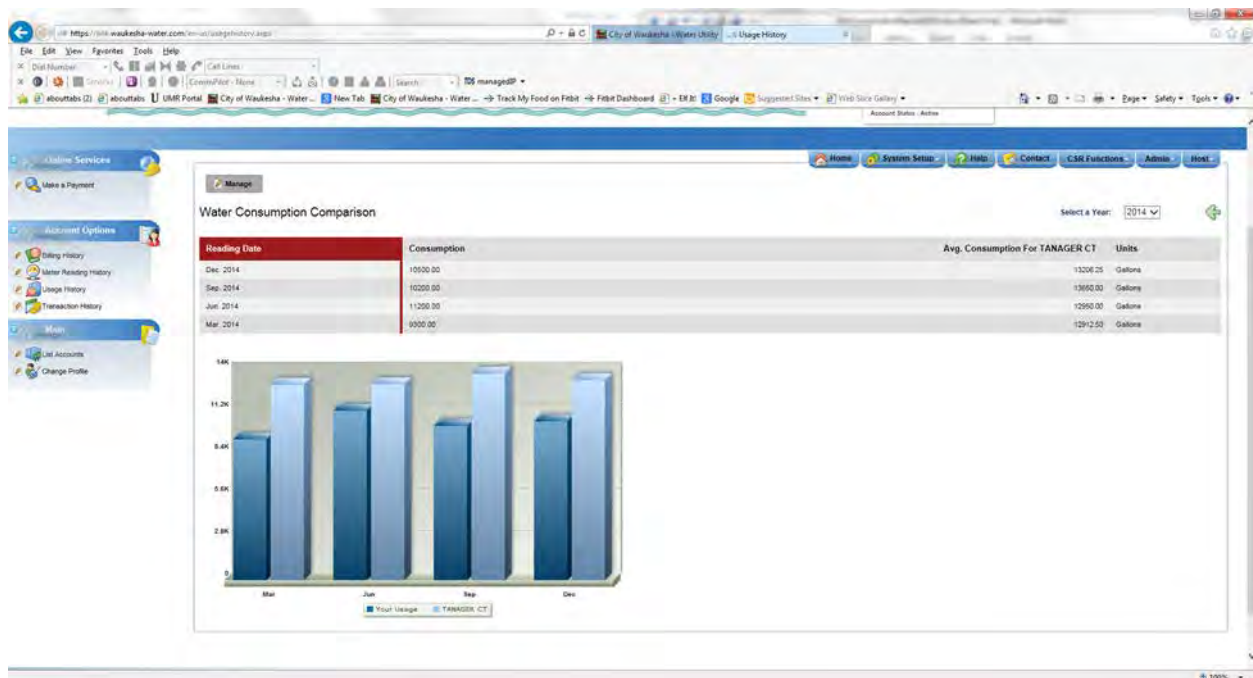




They can also compare themselves to the City as a whole,



as well as to the neighbors on their street.



The Utility hopes that if a customer sees they are consuming more than their neighbors, they will begin to ask why. While there may be legitimate reasons for higher consumption, for example family size, the consumer may also touch on other habits, and with change, could lead to conservation.



## 14. Leak Detection & Water Audit Program

Waukesha Water Utility has a leak detection program where our Billing Department runs a Pre-Exception Report. This Pre-Exception report shows the low and high consumptions for possible stopped meters and leaks. For stop meters, our Meter Technicians go to property to check and replace the meter, if needed. For high consumptions, the Utility sends a Courtesy Postcard to notify the customer that they might have a leak; and advises them to check the leak indicator on their meter. A copy of the Courtesy Postcard is shown below.

**COURTESY CARD**

---

Service Address \_\_\_\_\_


---

Account Number \_\_\_\_\_ Reading Date \_\_\_\_\_

**It appears you are using more water**

Water used this quarter \_\_\_\_\_

Water used during the same quarter last year \_\_\_\_\_



The increase could be due to lawn sprinkling,  
additional residents, guests, new tenants, etc.  
or  
**you might have a leak.**

Please locate your water meter and check for  
movement of the diamond shaped leak indicator.

As always, if you have any questions, please contact us at 262 521 5272  
Thank you,  
**WAUKESHA WATER UTILITY**

Courtesy Card Notify Customers of a Possible Leak

The Utility normally receives calls from customers after they receive the postcard. When customers call, we explain how to check their meter and toilets, etc. for leaks. Sometimes, customers will request additional help from the Utility to help find the problem.

The Utility will help customers find leaks by either conducting water audits or by running data logging reports. Water audits are conducted for single family homes, duplexes, and triplexes. Data logging reports, that show daily consumptions, are done for large multi-families, commercial, public, and industrial accounts.

In 2018, the Utility conducted 49 residential water audits and 15 data logging reports. The majority of the residential audits found that the high consumptions were related to toilet leaks.

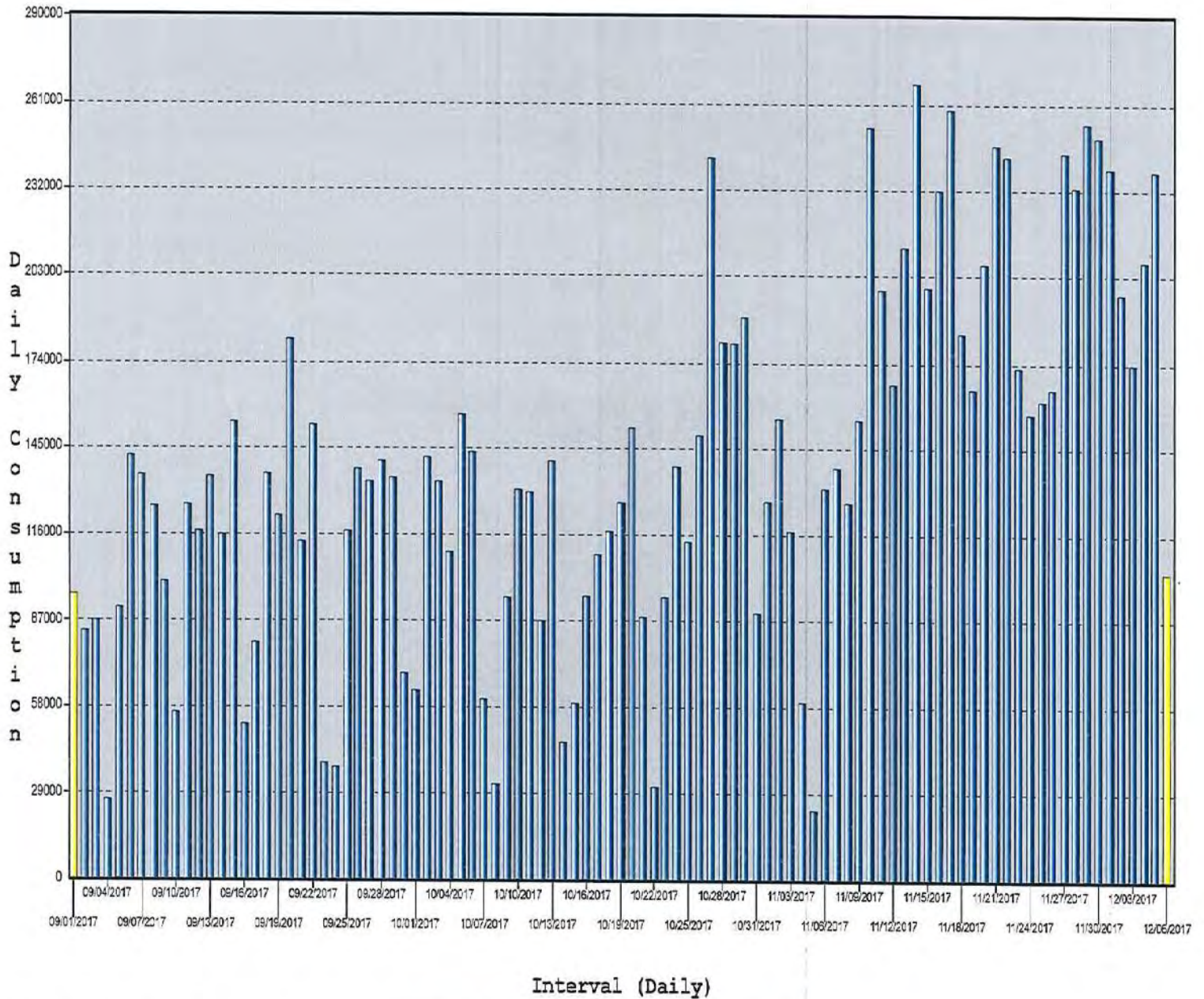
A copy of a data logging report is shown on the following page.



Waukesha Water Utility  
E-Coder R900i Data Logging Report

MIL#: 1545664690 Acct: Unknown Mtr #: 1545664690 Addr: ~~500 S BROWN ST~~ for 09/01/2017 through 12/06/2017, WATER, 1 1/2" - 4" T-10 and HPT, GALLONS

Minor Reverse Flow Flag   Major Reverse Flow Flag   Intermittent Leak Flag   Continuous Leak Flag



Neptune Technology Group 2017

\*All time intervals are represented in standard time.

4.7.141111

Data Logging Report for a Large Customer Account



In addition to the Courtesy Card, Audits, and Data Logging Reports, the Utility has an informational program on its website for customers to conduct their own water audits for residential and non-residential customers; along with links to AWE's Water Audit Process Introduction, and AWWA's Free Water Audit Reporting Tool Kit. (A copy of the information on our website is shown below.)

The Utility also educates its customers about the Audit/Leak Survey program through presentations. The Utility has given presentations to the Business Alliance, Rotary Club, Southside Business Council, Wisconsin Water Conservation Coalition, and the Utility's Conservation Stakeholders Committee. All of these groups have members from the commercial, public, and industrial sectors. The Utility also shares audit/leak information at all outreach events.

Finally, any time a customer calls the Utility asking for information or has a high consumption, Waukesha Water Utility is always willing to act as a resource to help its customers.

## What is a Water Audit?

### Businesses

#### Saving Water: It's just good business

Using water efficiently is not just good for Waukesha and the environment; it's a smart business strategy. Reducing your water use can save you money on your water, wastewater and energy bills and cut on-site treatment costs. Every business is a little different, but a water audit is an easy way to start.

Water audits provide a way to inventory all water uses in your facility and identify ways to increase water use efficiency. The results can help you prioritize steps to implement cost-effective water-saving measures.

- Step One – Gather data such as maps showing locations and equipment where water is used, water bills and consumption data, equipment manuals and so on
- Step Two – Walk through your facility and verify water uses, estimate hours and rate of use, look for leaks and ways to reduce water use
- Step Three – Compare estimated water use with consumption data from water bills
- Step Four – Estimate costs of fixture change-outs, new equipment or new processes and compare with estimated savings for water, wastewater and energy to calculate potential payback period
- Step Five – Prepare a summary of recommended actions and implementation schedule for those actions that make economic sense

More information, see the tools on our website or call the Waukesha Water Utility at (262) 521-5272.

## Information on the Utility's Website



A Link to AWE's Water Audit Process

The screenshot shows the 'AWWA WLCC Free Water Audit Software: Reporting Worksheet'. It is a form for reporting water audit data. The form includes sections for 'Water Audit Report for:', 'Reporting Year:', 'Systematic data handling errors:', 'Apparent Losses:', 'Real Losses (Current Annual Real Losses or CREL)', 'WATER LOSSES:', 'NON-REVENUE WATER:', 'SYSTEM DATA:', and 'COST DATA:'. Each section contains input fields for numerical values and checkboxes. A 'Back to Instructions' button is located in the top right corner. A note on the right side of the form states: 'Enter a percentage less than 10% in the red cell (L4C2) or select "N/A" option'.

A Link to AWWA's Water Audit Reporting Toolkit



## VI. EDUCATION PROGRAMS, OUTREACH EVENTS, YOUTH GROUPS & PARTNERSHIPS

Waukesha Water Utility follows NR 852 Requirements. As a result, several educational programs have been adopted. Section A will highlight how we advertise our current water conservation programs; Section B will focus on community presentations and outreach events; and Section C will concentrate on youth education.



### Tools:

The Education Programs use the following communication tools.

- [ X ] Website
- [ X ] Website (greatwateralliance.com – an information hub for the Utility's future water supply project that includes information on water conservation.)
- [ X ] Bill Stuffers
- [ X ] Local Newspaper
- [ X ] Public Outreach & Community Meetings – 58 hours
- [ X ] School Programs – 62 hours
- [ X ] Other: Street Signs
- [ X ] Other: Yard Signs - Brown Lawn Campaign
- [ X ] Other: Social Media (Twitter & Facebook)



- [ X ] Other: Public Giveaways: Toilet Leak Detection Tablets & Rain Gauges
- [ X ] Other: Brochures
- [ X ] Other: Bill Messages
- [ X ] Other: Non-Residential Giveaways: Pre-rinsed Spray Valves
- [ X ] Other: Customer Service – in person and over the phone
- [ X ] Other: Neptune 12900 V4 radio/data logger
- [ X ] Other: City's Park and Rec Activity Guide
- [ X ] Other: Sink Tents
- [ X ] Other: City Interdepartmental Meetings
- [ X ] Other: Public Service Announcement (TV 25)
- [ X ] Other: Great Water Alliance's Newsletter (New in 2018)
- [ X ] Other: City of Waukesha's Electronic Newsletter (New in 2018)

## **A. Education Programs**

In addition to the education that has already been discussed throughout this report, the Utility also implemented the following educational conservation program announcements in 2018:

1. Great Water Alliance Electronic Newsletters (New in July 2017)
2. Great Water Alliance Website Evolution (New in 2018)
3. What's Up in Waukesha - City's Electronic Newsletter (New in 2018)
4. Gardening Watering Strategies/Tools of the Trade - Freeman Article (New in 2018)
5. Advertisement for the Toilet & Shower Head Rebate Program
6. Irrigation Ordinance Bill Insert (Updated in 2018)
7. EPA WaterSense's National Fix a Leak Week
8. National Drinking Water Week
9. Tips on How to Prevent Frozen Pipes





## **1. Great Water Alliance Electronic Newsletters**

In 2017, the Great Water Alliance (GWA) was launched – a program/brand name given to an initiative by the Utility to educate and unite the citizens and communities who will be affected by Waukesha's Great Lakes water project. In order to open up the lines of communication and keep people fully informed, a dedicated website/clearinghouse was created. In addition to the website, an electronic newsletter was also created. The newsletters are emailed out every other month; and anyone can sign up to receive a newsletter through GWA's website. By the end of 2018, there were approximately 490 people signed up to receive the newsletters.

The topic of water conservation has been a part of GWA from the very beginning. Information about water conservation has been included on the website, at open houses, talked about in presentations, and in the e-newsletters, etc.

In 2017, the e-newsletters, which are archived on the GWA's website, contained the following water conservation tips: how much water you can save by replacing old appliances, finding & measuring leaks, and outdoor conservation ideas.

In 2018, conservation articles for the e-newsletters had the following: benefits of rain barrels, a poll asking "What ways do you conserve water?", meet a team member article where the Utility's conservation programs were mentioned, information about the advantages of WaterSense certified high-efficiency toilets and showerheads, and tips on how to protect your pipes this winter (to avoid broken services).

Copies of the 2018 conservation articles are shown on the following pages.



# Benefits to Rain Barrels

Spring is here and for many this means we head back out to our yards. Rain barrels are a perfect addition and provide many benefits. Check our list of the top five reasons to purchase a rain barrel.



## Saves you money

The City of Waukesha offers residents a \$20 rebate per barrel on up to two rain barrels per address. Waukesha is no stranger to water conservation. In fact, in 2008 it became the first Wisconsin utility to issue low-flow toilet rebates.



## Saves you money again

Most homeowners who use rain barrels reduce water use by roughly 1,300 gallons during the summer. This will lower your overall water bill.



## Rainwater is better

Naturally soft, chlorine-free water is great for your plants and soil. It is also good for washing windows and cars.

## Controls moisture levels

Collecting rainwater before it soaks into the soil will help prevent water from collecting around your home, preventing dampness which can contribute to mold.



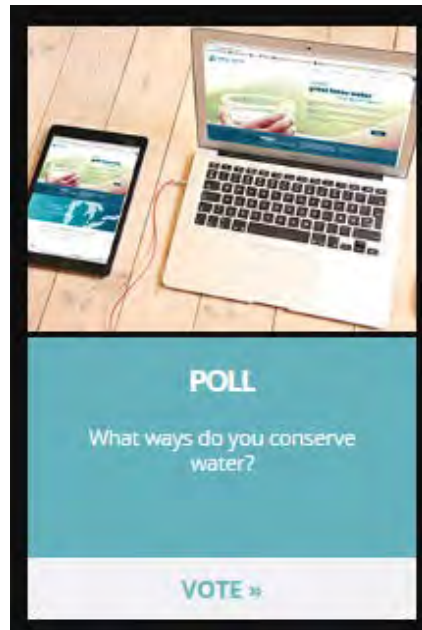
## Feels great

By taking this step to assist the environment, it feels rewarding to do your part.

**Water is a limited, crucial resource. Thus, we can all understand the importance of taking steps to limit our use of water. To see if you qualify for Waukesha Water Utility's rain barrel rebate go to:**

GWA's E-Newsletter Article – The Benefits of Rain Barrels





## WHAT WAYS DO YOU CONSERVE WATER?

What ways do you conserve water?

### Water Conservation

1 What ways do you conserve water?

- |                                                               |                                                            |
|---------------------------------------------------------------|------------------------------------------------------------|
| <input type="checkbox"/> Purchased a rain barrel              | <input type="checkbox"/> Don't water lawn during the day   |
| <input type="checkbox"/> Keep my showers short                | <input type="checkbox"/> Installed high-efficiency toilets |
| <input type="checkbox"/> Turn off tap while brushing my teeth |                                                            |

0 of 1 answered

powered by SurveyMonkey

Create your own user feedback survey

GWA's E-Newsletter Poll – What Ways Do You Conserve Water?



## Meet Mary

Mary Adelmeyer, Customer Relations Coordinator

**Briefly tell us about your role at Waukesha Water Utility?**

I have the privilege of working at the Waukesha Water Utility as the Customer Relations Coordinator. My three primary duties include:

- Responding to customers regarding billing information, utility services, and water quality.
- Updating and implementing the Utility's conservation program by administering the incentive programs, calculating the cost/benefit for conservation activities, serving as a liaison to external committees, and drafting external reports.
- And, my favorite, educating the public on water quality, utility operations, and on the importance of conserving this vital resource by giving presentations, writing press releases and articles, and updating the website.
- In addition to these duties, I also assist with the meter change out and lead & copper programs.



**What is one of your favorite aspects to your job?**

Actually, I have two favorite aspects of my job. My first favorite aspect is the people that work here. We truly have an amazing group of people, from the management team to the staff, who are professional, dedicated, and continually go above and beyond, the supportive team environment makes it a pleasure to work at the Waukesha Water Utility. My other favorite aspect is educating and helping people. I enjoy explaining where their water comes from, how it gets treated, the process of getting the water to their homes, and the reasons Waukesha needs a new water source.

I also enjoy helping people save money by finding ways to conserve water. For instance, I help customers lower their water consumption by giving them tips on how to find water leaks and informing them that they don't need to water established lawns — by not watering their grass, they not only save money, but they don't have to mow as often! In addition, I get to work with large multi-families, businesses, and industrial companies to help them save money and water with our conservation business incentive program, and I coordinate our conservation rebate programs for rain barrels, WaterSense toilets, and showerheads for residential customers. In the end, people understand that conserving this natural resource, that we often take for granted, not only saves them money but is also the right thing to do; and the Utility has conservation programs in place to help.

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By GWA | 6/27 2018 | [Newsletter Highlights](#) |

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GWA's E-Newsletter Article – Meet a Team Member – Mentions Utility's Conservation Programs



look for



**CONSERVATION TIP**

Get informed on the advantages to High-Efficiency Toilets and Showerheads.

**LEARN MORE »**

## Advantages to High-Efficiency Toilets and Showerheads

Like most people, you probably never thought about the fact that the toilets in your house account for almost 30 percent of your home water consumption. If you are still using a toilet from 1993 or earlier, you can greatly reduce your water use by switching to a 1.28 gpf WaterSense, high-efficiency one. And, property owners who are customers of Waukesha Water Utility, *may be able to receive up to a \$100 rebate.*

High-efficiency toilets are designed to remove waste by water velocity, not by excess water volume so you can reduce water use to about 1.28 gallons per flush compared to as much as 5 to 7 gallons per flush. If you consider that individuals flush an average of 5 times per day, a family of four could reduce water use by thousands of gallons each year!

Another leading water use, accounting for an average 17 percent of overall use, is the shower. By replacing a showerhead from 1992 or earlier to a WaterSense, high-efficiency showerhead, you can reduce water use by gallons and also *may qualify for a rebate up to \$25*, if you live in the city of Waukesha. Residential customers can save approximately 2,900 gallons of water and 300 kwh of electricity each year.

Waukesha Water Utility's cash incentive rebates only apply to WaterSense-labeled products because they are certified to use at least 20 percent less water, save energy, and perform as well as or better than regular models. When purchasing new toilets and showerheads, be sure to look for the WaterSense label as shown.

To see if you qualify for the rebates, go to <http://waukesha-water.com/downloads/Toilet-and-Showerhead-Rebate-Form.pdf>. Rebates are available on first-come, first-served basis until funds are exhausted.

Water is a limited, crucial resource and we all can take steps to limit our use.



By GWA | 9/6 2018 | Newsletter Highlights |

GWA's E-Newsletter Article – Get Informed on the Advantages of High-Efficiency Toilets & Showerheads

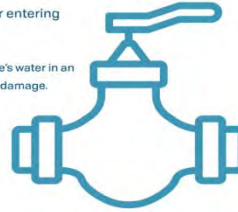


## WATER TERM:

# main water VALVE

The device that controls water entering your home from your utility.

Learning how to shut off your home's water in an emergency can avoid costly water damage.



## TIPS TO PROTECT YOUR PIPES THIS WINTER

Each year winter seems to creep up on us before we are prepared. Since pipes run behind your walls and under your floors to faucets, toilets, showers, and many appliances, it is good to take a few extra steps to keep them running smoothly through the winter months. The following tips will help you get ready for the inevitable cold weather that is heading our way.

### 2 WRAP

If you have areas that are unheated, make sure to wrap those pipes.

These areas might be in a garage or crawl space that the heat cannot reach. Before the temperatures decline too much, head to the hardware store for wrapping materials and Styrofoam faucet covers.

### 4 VALVE SHUT-OFF

Do you know where your main water shut-off valve is?

Now is the time to locate this pumping necessity so you can quickly turn it off, could limit damage should a pipe freeze or burst. The valve is usually in your basement or outside in the front of your property.

### 1 DISCONNECT

Disconnect any outdoor hoses and spigots.

Most importantly, drain the water from each item. It only takes one overnight hard freeze to cause a burst.

### 3 SEAL

Seal off access doors, air vents, and cracks.

Those frosty winds seem to find every crack and open space. They can quickly freeze exposed water pipes, so seal those areas. However, make sure not to seal needed air vents that your furnace or water heater need for good combustion.

### 5 TURN OFF

If you are going to be away for a long period of time, turn off your water.

If you set your thermostat to at least 55 degrees, your home should stay warm enough that the pipes won't freeze or burst. If you reduce your heat lower, consider turning the water off and open all the faucets on the property to drain them.







## 2. Great Water Alliance Website Evolution

In 2018, the Great Water Alliance Website Evolution began with the purpose of updating communication efforts for the Great Lakes Water Supply program, organizing the information to be more user-friendly, and updating/adding more water conservation information.

Included in the water conservation evolution is an update to the financial figures, using the current rates, for dollars **wasted** (when it comes to leaks) and the dollars **saved** (when changing out old appliances for water-efficient appliances).

In addition to the financial updates, a designated water conservation section will be included on GWA's website, which will include links to the Utility's conservation webpage. This website evolution is scheduled to be finalized in 2019.

Below is a copy of the updated financial figures for dollars wasted in regards to leaks.

### **Finding and Measuring Leaks**

When it comes to leaks, we often hear the words "but it's just a little leak." Unfortunately, those little leaks can become very expensive. Please read the stories below. (The bill amounts have been updated using 2019 rates and assumes the average residential consumption is 12,000 gallons per quarter.)

- While paying a water and sewer bill of \$475 for 90 days use, a customer mentioned that the house rule to "rattle the handle" after a flush was a costly mistake. In this case, the plunger ball wasn't seating properly and one family member didn't always follow the rule. The toilet ran continuously for up to 4 hours on almost all school days for about 45 days. This wasted 20,000 gallons of water.
- A customer said, "I know the toilet was leaking, but it can't cost \$1,498 for 3 months!" This leak wasted approximately 92,000 gallons of water.
- The Public Service Commission was contacted about a high water bill. A family was away on extended vacation when a toilet leak developed. The toilet leaked continuously for about 60 days. A 3/8" diameter line was feeding the toilet. Approximately 85,000 gallons of water leaked through the overflow and the bill was \$1,398.
- A customer reported that every few hours his toilet seemed to flush itself. This was caused by the tank refilling after the water leaked around the plunger ball. Our service people found the problem and the customer had it repaired quickly. The amount of water wasted was 26,000 gallons and the water and sewer bill was \$561.

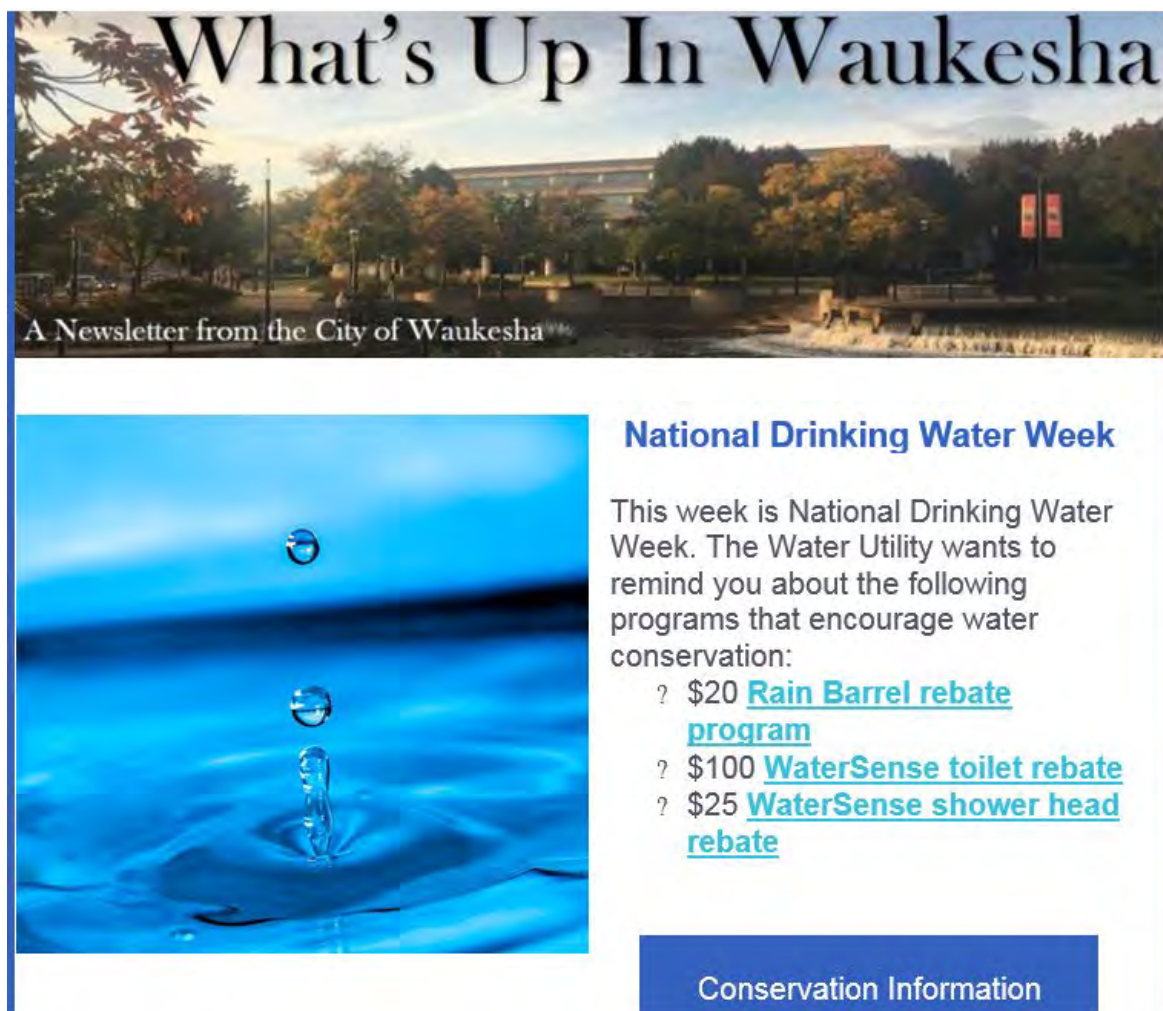
### How to Find & Fix Leaks



### 3. What's Up In Waukesha - City of Waukesha's Electronic Newsletter (New in 2018)

The City's *What's Up in Waukesha* electronic newsletter goes out every week to anyone who signs up to receive it. When the Utility found out that the City had an electronic newsletter, the Utility contacted the City and began to add water conservation information.

In 2018, the Utility had an article for *National Drinking Water Week* and advertised the toilet, showerhead, and rain barrel rebate programs with a link to the Utility's conservation webpage as shown below.



*What's Up In Waukesha* E-Newsletter – Rebates Advertised & With a Link to Utility's Conservation Page



#### 4. Garden Watering Strategies/Tools of the Trade

In 2018, a Waukesha Freeman reporter called the Utility and said that she was assigned to write an article on watering plants during the hot months and she was looking for some helpful tips. The Utility shared information that not only pertained to plants but also to the lawn; and shared information regarding water conservation tools.

In addition talking with the Utility, the reporter also talked with Waukesha County's horticulture educator and with an owner of Plant Land. When the article was written, not only did the reporter provide tips for watering plants, but she also provided the information the Utility shared which included information about irrigation controllers, rain barrels, and the rain barrel rebate program. She also reminded residents about Waukesha's annual sprinkling ordinance by publishing a separate ad.

A copy of the article and the sprinkling ordinance ad is shown below and continues on to the next page.

## Garden watering strategies for the heat of the summer

### Most plants need an inch a week — so don't overwater

By Catherine Jozwik  
*Special to Waukesha County Home*

Less is more when it comes to watering plants, according to experts. There are several key techniques and many tools people can employ to ensure their gardens get the water they need.

"Most plants prefer 1 inch of water a week to thrive," said Ann Wied, consumer horticulture educator for the Waukesha County UW-Extension.

An empty tuna can or receptacle of comparable size can be used to measure the correct amount of water to use, said Wied.

Mark Jorgensen, who co-owns Plant Land in Milwaukee with his sister, Karen Matt, said people tend to overwater rather than underwater their plants.

"Overwatering can be just as

bad, as it saturates soil to the point where it doesn't get enough oxygen," Wied said, adding that native Wisconsin plants have deep root systems and can tolerate drier conditions.

"Once you overwater, you lessen the plant's chance of survival," Jorgensen said.

#### Where the plant meets the soil

Wied recommends directly watering where the plant meets the soil rather than spraying over plants. This way, weeds aren't watered. Wet plant leaves can also lead to fungal diseases.

To make sure the plant absorbs water completely, moisten the soil a bit first, then go back and water. Putting down mulch — which soaks up water — in front of the

See WATERING/Page 2



*Submitted photo*

**Water where the plant meets the soil. This avoids watering weeds and cuts down the chance of fungal disease due to wet leaves.**



# Watering: Rain barrels save on utility bill, provide effective water source

*Continued from Page 1*

plant also helps ensure plants get the moisture they need.

Jorgensen and Wied agree that an easy way to tell if a plant needs water is to put a finger about an inch and a half in the soil and see if it's dry. Generally, vegetable plants should be watered "at least a couple of times a week," Wied said.

Water potted plants about once every other day, said Jorgensen. Morning is the best time to water plants, as less water evaporates then. However, due to time constraints, many people can only water in the afternoon or evening. Wied said that's fine, as long as the plants get the moisture they need.

She cautions against giving droopy plants fertilizer treatment when watering should perk them up. Dry plants can be brought back to life, but over-watered plants sometimes cannot, Jorgensen added.

"Don't kill them with kindness," he said.

## Tools of the trade

Many tools can be used to water your garden effectively, from irrigation controllers to common hoses.

Water Sense irrigation controllers, which can sense rain and soil moisture and be timed, are good watering tools, said Mary Adelmeyer, customer relations coordinator for the Waukesha Water Utility.

"They're pretty handy that way," she said.

Eco-friendly rain barrels — large barrels that collect rainwater from gutter downspouts — help reduce runoff pollution from fertilizer, pesticides and other contaminants. Also, rain water is healthier for plants because it contains a considerable amount of oxygen and none of the salts and fluoride compounds found in tap water.

According to [www.waukeshacounty.gov](http://www.waukeshacounty.gov), "a single rain barrel will save most homeowners about 1,300 gallons of water during the peak summer months." Using less tap water typically means a lower water bill for homeowners.

Adelmeyer said that rain barrels can be purchased from hardware stores such as Home Depot, and the Retzer Nature Center in Waukesha. Prices range from about \$50 to \$125.

To ensure the safety of small children and to prevent animals and insects from getting inside, Adelmeyer recommends securing the barrel and putting a screen over the opening. Rain barrels should be disconnected in the wintertime, and water inside the barrels should not be drunk.

The Waukesha Water Utility offers city residents and customers a \$20 rain barrel rebate. To redeem this, a copy of the rain barrel receipt and a picture of the installation must be submitted. Two rebates per address can be claimed. To fill out an application, visit [www.waukesha-water.com/downloads/RainBarrelRebateForm.pdf](http://www.waukesha-water.com/downloads/RainBarrelRebateForm.pdf) or call the utility at 262-521-5272.

An Article in the Waukesha Freeman Newspaper on Watering Plants & Rain Barrels p. 2

## Water conservation tips

WAUKESHA — As part of its water conservation program, Waukesha's annual sprinkling ordinance is in effect May 1 through Oct. 1.

Street addresses ending with an odd number may water on Tuesdays and Saturdays prior to 9 a.m. or after 5 p.m. Street addresses ending with an even number may water on Thursdays and Sundays prior to 9 a.m. or after 5 p.m.

Forty percent of the water from a sprinkler can be lost to evaporation during day-time hours.

A hand-held watering can, container or hose may be used any time to water gardens or shrubs, but only if it's not left unattended.

— Source: Waukesha Water Utility

Sprinkling Ordinance Ad



## 5. Advertisement of the Toilet & Shower Head Rebate Program

The Utility has publicized the toilet & shower head rebate program in the following ways: messages on bills, bill inserts, ads placed in the City Park & Recreation's Activity Guide, and rebate applications on display with Home Depot, local plumbers, and in the Utility's customer service area. Information is also posted on the Utility's website, mentioned on the Utility's social media accounts, in press releases (as shown in the Fix a Leak Week & National Drinking Water Week sections), and at all speaking and public outreach/educational events.

### a. Messages on water bills for all customer classes

#### IMPORTANT INFORMATION:

"\$100 rebates are available for 1.28 gpf toilets and \$25 rebates are available for shower heads. For detailed information, please visit [www.waukesha-water.com](http://www.waukesha-water.com)"

### b. Bill Insert:

Bill inserts are sent out annually to all customer classes informing them of the 1.28 gpf toilet rebate. In addition, the bill inserts also inform customers where they can purchase rain barrels, that it is not necessary to water the lawn, toilets should be checked twice a year for leaks, and dripping faucets can usually be easily and inexpensively repaired.

#### Did you know...

- If you replace your old water guzzling toilet (3.5 gallon or more) with a 1.28 gpf (gallons per flush) WaterSense toilet, you may be eligible to receive a rebate from the Water Utility.
- You can purchase rain barrels through the Waukesha School District's Environmental Education Department (262-970-4333) or Retzer Nature Center (262-896-8007). Capturing rain water not only saves you money but is better for your garden, lawn, and plants because the water is not chlorinated.
- It is not necessary to water the lawn. It is natural for lawns to turn brown in the hottest months. The lawn doesn't die, it just goes dormant. The green lawn will return with the autumn rain.
- Toilets should be checked for leaks at least twice a year because they are one of the most common places where leaks occur. Hundreds of gallons of water per day can be wasted. Free Leak Detection Dye Tablets are available at the Utility.
- Dripping faucets are usually easily and inexpensively repaired by replacing the washer inside the handle. Check both internal and external faucets for leaks. See our website for videos on how to fix leaks.


For more detailed information, please visit our website at [www.ci.waukesha.wi.us/waterhome](http://www.ci.waukesha.wi.us/waterhome)






c. City's Park & Recreation Activity Guide:

The toilet and shower head rebate program was advertised in the City's Activity Guide. This Guide is on the City's website and is mailed out to approximately 30,000 homes three times a year.

In 2018, the Utility updated its ad by making it larger and added information for the rain barrel rebate program, as shown below.

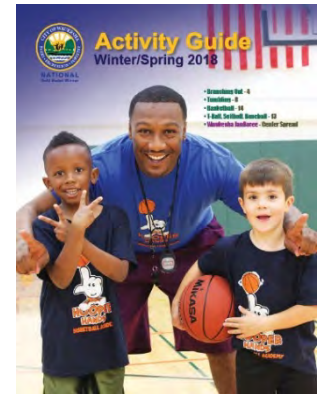


## Waukesha Water Utility Conservation Rebates



- **Replace a Water Guzzling Toilet**  
*Receive \$100*
- **Replace a Water Wasting Showerhead**  
*Receive \$25*
- **Install a Rain Barrel**  
*Receive \$20*

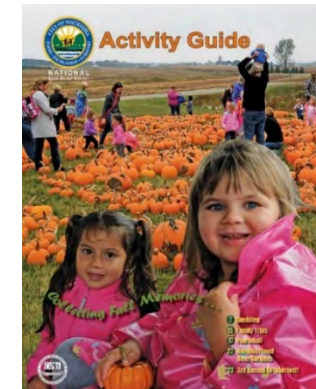
See Details: [www.waukesha-water.com](http://www.waukesha-water.com)  
Or Call: Waukesha Water Utility at (262) 409-4423



Winter/Spring Activity Guide



Summer Activity Guide



Fall Activity Guide

Toilet, Showerhead, & Rain Barrel Rebate Ad in the City's Activity Guide

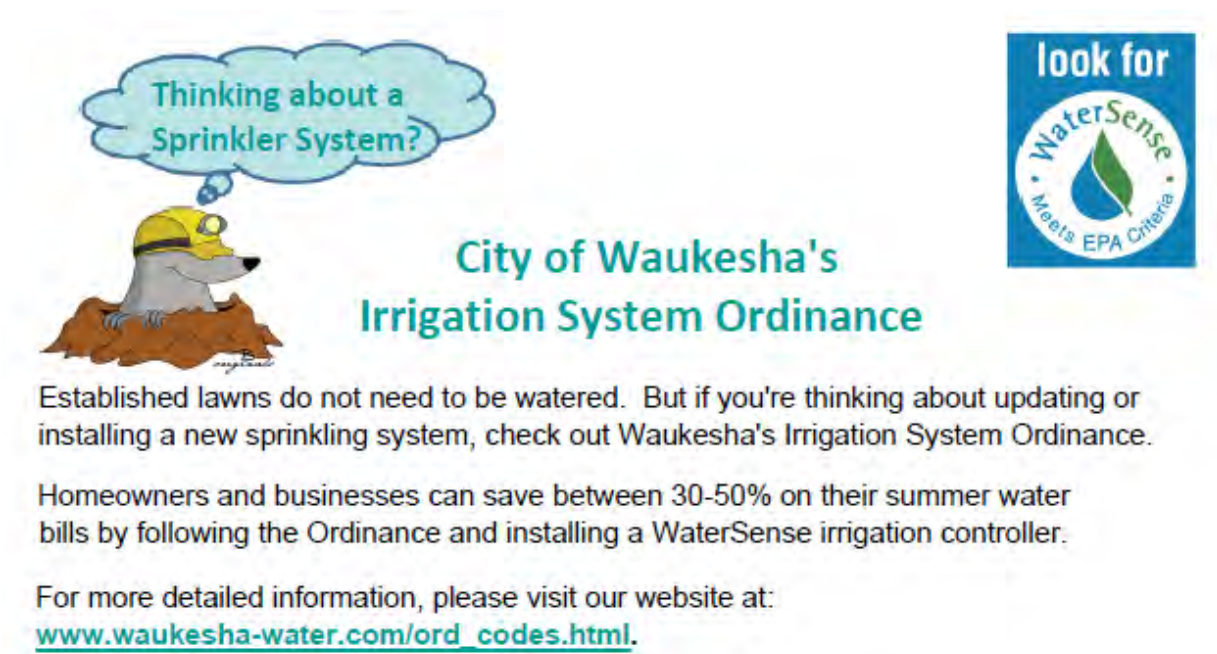


## 6. Irrigation System Ordinance Bill Insert

Bill inserts (as shown below) are sent out on an annual basis to all customer classes informing them of the Irrigation System Ordinance.

In 2018, the Utility updated the first sentence of the postcard with the message that established lawns do not need to be watered. The Utility knows that some customers have sprinkler systems and are going to water their lawns; therefore, the Utility's Irrigation System Ordinance requires a WaterSense irrigation controller to help customers conserve water.

In addition to the bill insert, information regarding the Ordinance is also posted on the Utility's website.



Irrigation System Ordinance Postcard



# WaterSense®



## 7. EPA's WaterSense National Fix a Leak Week

Waukesha Water Utility promoted Environmental Protection Agency (EPA) WaterSense's annual Fix a Leak Week with the following activities:

- Messages were inserted on the Bills.

"March 19<sup>th</sup> – March 25<sup>th</sup> is Fix a Leak Week

Check your winter water bill. If you use 12,000 gallons or more per month, you may have a serious leak! Learn how to fix leaks at [www.waukesha-water/wtc.html](http://www.waukesha-water/wtc.html)."

- An Informational Sheet & Leak Detection Dye Tablets were available in the Utility's customer service reception area.
- A Press Release.
- Information on our website's home page
- A message was sent out on our Twitter account.
- Classroom Materials on our website that teach students to check for toilet leaks.

The last five items, mentioned above, are shown on the following pages.





## Fix a Leak Week



### Save Money and Help Conserve Water During Fix-a-Leak Week

According to the EPA, “did you know that an American home can waste, on average, more than 10,000 gallons of water every year due to running toilets, dripping faucets, and other household leaks?”

As an EPA WaterSense partner, we encourage you to check your plumbing fixtures and irrigation systems for leaks and to repair the leaks you find during this year’s national [Fix a Leak Week](#), March 19-25, 2018.

### Identify Toilet Leaks

Toilet leaks are one of the most common leaks that tend to be invisible and waste hundreds of gallons of water a day. Identify toilet leaks by placing a few drops of food coloring in the toilet. Wait for at least 15 minutes before flushing. If any color appears in the toilet bowl, you have a leak. (Be sure to flush immediately, after the experiment, to avoid staining the tank.) If you don’t have food coloring, you can pick up free leak detection dye tablets from Waukesha Water Utility, located at 115 Delafield Street in Waukesha.

### Find & Fix Leaks

In most instances, leaks are easy and inexpensive to fix and you benefit by saving money! For your convenience, please visit our website at [www.waukesha-water.com/wtc.html](http://www.waukesha-water.com/wtc.html) for videos and tips on how to find and fix leaks.

### Replace the Fixture if Necessary

Look for the WaterSense label. WaterSense products are independently tested and certified to use 20 percent less water and perform as well as or better than standard models. In addition, if you purchase a 1.28 gallon per flush WaterSense toilet, you might be eligible for a [rebate](#).



# PRESS RELEASE

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WAUKESHA WATER UTILITY  
115 DELAFIELD STREET  
WAUKESHA, WI 53188-3615  
Contact: Mary  
Office: (262) 409-4423  
Fax: (262) 521-5265

For Immediate Release

DATE: **(March 19, 2018)**

## CONSUMER NOTICE

### **National Fix a Leak Week March 19<sup>th</sup> – 25<sup>th</sup>**

**Waukesha, WI – March 19, 2018,** Waukesha Water Utility encourages customers to check for leaks during this year's national Fix a Leak Week. "Leaks can cost families a lot of money," said Mary Adelmeyer, Customer Service Coordinator. "Toilet Leaks tend to be invisible and are one of the most common leaks."

The focus is on toilets because they are the main source of water use in the home, accounting for nearly 30% of an average home's indoor water consumption. When toilets leak, hundreds of gallons of water a day can be wasted without the homeowner's knowledge. Toilet leaks are common, so the water utility recommends checking for leaks at least twice each year.

Whether you replace or repair your toilet depends on its age. Replacing toilets that were installed 1993 or earlier with a more water efficient model is one of the best ways to help reduce water usage. Purchasing a 1.28 gallon per flush, WaterSense-labeled toilet can save homeowners up to \$90 per year on water and wastewater bills. If you live in the city of Waukesha, you may also qualify for the \$100 toilet rebate and a \$25 shower head rebate.

For more information on how to find and fix leaks, or for toilet and shower head rebates, please visit the Waukesha Water Utility's website at [www.waukesha-water.com/wtc.html](http://www.waukesha-water.com/wtc.html).

Press Release for National Fix a Leak Week



[Department Home](#)[Customer Service](#) ▾[New Water Supply  
Program](#) ▾[Utility and  
Commission](#) ▾[Conservation](#) ▾

### The great news about Great Lakes water.

In June of 2016, the Great Lakes Compact unanimously approved Waukesha's application to borrow water through a pipeline from Lake Michigan, and then treat it and return it all to the lake via the Root River.

We pledge to keep everyone who may be affected fully informed, every step of the way. To that end, we developed [greatwateralliance.com](http://greatwateralliance.com), a website that will be the information hub for all things related to the project.

#### **NEWS ROOM**

##### **OPERATIONS**

[National Fix a Leak Week March 19th – 25th](#)

[Police warn of men posing as utility workers](#)

##### **GREAT LAKES**

[Federal program could lower Lake Michigan pipeline costs](#)

#### **Pay Bill Online**

[Click Here](#)

Information on our Website's Home Page



## Tweets

## Tweets &amp; replies

## Media

**WaukeshaWaterUtility** @waukeshawater · 4m

Did you know that a leaky shower head could waste more than 500 gallons of water per year? If you live in the city of Waukesha, you qualify for a \$25 shower head rebate. Visit the Waukesha Water Utility's website at [waukesha-water.com/wtc.html](http://waukesha-water.com/wtc.html) for more info.



You Retweeted

**EPA WaterSense** @EPAwatersense · Mar 21

DYK? You can save more than 3,000 gallons of water per year when you #FixaLeak. Start by tightening connections and replacing washers and gaskets. Save even more H2O by switching your aerator for a WaterSense labeled model. Watch how -

**Replace Your Faucet Aerator - WaterSense Bath Ha...**

NOTE: This video only contains music and does not have captions. It doesn't have to be hard to get your better bathroom. Sometimes a little change can lead t...

[youtube.com](http://youtube.com)

1



16



14

[Show this thread](#)**WaukeshaWaterUtility** @waukeshawater · 20h

Toilets installed before 1993 use more water! A new 1.28 gallon per flush, WaterSense-labeled toilet, can save homeowners up to \$90 per year on water and wastewater bills. If you live in the city of Waukesha, you may qualify for the \$100 toilet rebate. [waukesha-water.com/wtc.html](http://waukesha-water.com/wtc.html)

**WaukeshaWaterUtility** @waukeshawater · 23h

Average household's leaks can account for more than 10,000 gallons of water wasted every year. Common types of leaks are worn toilet flappers, dripping faucets, and valves. For more info on how to find and fix leaks, please visit [waukesha-water.com/wtc.html](http://waukesha-water.com/wtc.html)





## Fix a Leak Week: Student Worksheet

Name: \_\_\_\_\_

### Save Water & Money

According to the Environmental Protection Agency (EPA) WaterSense partnership program, "an American home can waste on average, more than 10,000 gallons of water every year due to running toilets, dripping faucets, and other household leaks." That can cost your family a lot of money. That is why Waukesha Water Utility encourages you to use water wisely and check your home for leaks, during this year's national Fix a Leak Week. Try the activities and math problems on both sides of this sheet to see how fast water waste adds up.

### Little Leaks Waste Big Amounts of Water

| SIZE OF LEAK<br>(Diameter) | WATER WASTED<br>EACH QUARTER<br>(Assuming 60 lbs of pressure) |
|----------------------------|---------------------------------------------------------------|
| • 1/32" drip               | 18,500 gallons                                                |
| • 1/16" trickle            | 74,000 gallons                                                |
| ● 1/8" stream              | 296,000 gallons                                               |
| ● 1/4" stream              | 1,181,500 gallons                                             |

#### **Toilet Leaks:**

Toilet leaks are one of the most common leaks. Toilet leaks tend to be invisible. Hundreds of gallons of water a day can be wasted on toilet leaks. The sound of water running in a toilet tank signals costly leakage. For this reason, it is recommended that toilets be checked for leaks at least twice each year.

#### **Activity #1: Test All Your Toilets for Leaks, with the help of your parent.**

Checking a toilet for leaks is easy!

Take lid off the back of the toilet tank.

Put ONE of the attached leak detection tablets into the tank of the toilet.

Do NOT flush the toilet.

Wait for 20 minutes.

If you have another toilet, test that toilet for leaks too by repeating the directions above.

If colored water from the dye tab appears in the bowl within 20 minutes, you have a leak.

Make sure to flush the colored water as soon as the 20 minutes is up, otherwise the coloring may stain.

(Please continue on to page 2 →)



**Activity #2: Record your Data & Calculate How Many Gallons of Water Your Toilet Uses**

1. How many toilets do you have? \_\_\_\_\_ Did you test all your toilets for leaks? \_\_\_\_\_

2. Does your toilet leak? (Did the dye color appear in the bowl?) \_\_\_\_\_

Toilet #1

Toilet #2

3. How old is your toilet? (The year of the toilet can be found on the underside of the tank lid. The date of the manufacture is often stamped into the porcelain.) \_\_\_\_\_

Year

Year

4. What is the size, make, and model of the toilet? (this information may be found in the toilet tank or under the tank lid.)

Toilet #1

Size

Make

Model

Toilet #2

Size

Make

Model

5. Using a ruler on the outside of the toilet tank, measure the water level (Be sure to measure in feet – answers maybe recorded with decimals or fractions.)

Toilet #1

Tank Length

Tank Width

Side Water Depth

Toilet #2

Tank Length

Tank Width

Side Water Depth

6. Calculate how many cubic feet of water is in the tank. (Multiply Length x Width x Depth)

\_\_\_\_\_ cu. ft. \_\_\_\_\_ cu. ft.  
Toilet #1 Toilet #2

7. Calculate how many gallons of water your toilet uses for every flush. (Multiply the cubic feet x 7.47 = Gallons per Flush)

\_\_\_\_\_ gals. \_\_\_\_\_ gals.  
Toilet #1 Toilet #2



**\$100 Toilet Rebate**



8. Is your toilet a pre-1994 toilet? (Look at your answer in #3)

Toilet #1

Toilet #2

9. Does your toilet use 3.5 gallons/flush or more? (Look at your answer in #7)

Toilet #1

Toilet #2

10. Does your family get a water bill from Waukesha Water Utility? (Ask your parents) \_\_\_\_\_

11. If you answered yes to #8, #9, and #10, your family could be eligible to get up to \$100 per toilet for replacing their old water guzzling toilet. Is your family eligible?

Toilet #1

Toilet #2

12. Have you told your parents about this \$100 toilet rebate? \_\_\_\_\_

If your family is eligible, the old toilet needs to be replaced with a WaterSense 1.28 gpf toilet. Your parents can call the Waukesha Water Utility at (262) 521-5272 or visit our website for more information at [www.ci.waukesha.wi.us/waterhome](http://www.ci.waukesha.wi.us/waterhome).

\_\_\_\_\_  
Parent Signature

\_\_\_\_\_  
Date





Drinking Water Week | May 6-12, 2018



**8. National Drinking Water Week / Rain Barrel Rebate Announcement**

May 6<sup>th</sup> – 12<sup>th</sup>, 2018 was National Drinking Water Week. In honor of this week, the Utility had a press release that talked about the importance of protecting/conserving water and talked about the rain barrel rebate program.

In addition, the press release also mentioned the Mayoral Proclamation for National Drinking Water Week and reminded customers about the water conservation programs and incentives that are available through the Utility.

Information was posted on our website and twitter account. Copies of these items are shown on the following pages.





# Waukesha Water Utility

SERVING WAUKESHA SINCE 1886

115 DELAFIELD STREET  
WAUKESHA, WI 53188-3615

Telephone: (262) 521-5272 • Fax: (262) 521-5265 • E-mail: [contactus@waukesha-water.com](mailto:contactus@waukesha-water.com)

For Immediate Release

## Rain Barrel Rebate Program & National Drinking Water Week

**Waukesha, WI** – As Mayor Shawn Reilly commemorates National Drinking Water Week with a Mayoral Proclamation, the Water Utility reminds customers about the new Rain Barrel rebate program.

“Harvesting rain water is easy and a great way to conserve water,” says Mary Adelmeyer of the Waukesha Water Utility. “A 50-60 gallon rain barrel, which connects to a downspout to capture rain water, can collect a surprising amount of water: 1/10<sup>th</sup> of an inch of rain falling on a 1,000 square foot rooftop can fill a 50-gallon barrel. That’s 50 free gallons of naturally soft, chlorine-free water which is great for watering your flowers and plants, washing off your boots, washing the car or bike, or any other outdoor activities.”

Rain barrels can be purchased from local hardware stores or Retzer Nature Center. Rain barrels cost approximately \$70-\$100. To qualify for the \$20 rain barrel rebate, Adelmeyer tells us that the rain barrels must be installed in the utility’s service area, the original purchase receipt must be submitted within 90 days of purchase, and post-installation pictures must be included with the rebate application, which can be found on the utility’s website. Adelmeyer also shared that rebates are available on a first-come, first-served basis and are subject to the availability of funds.

In addition to the rain barrel rebates, the utility is also reminding customers about the \$100 WaterSense toilet rebate and the \$25 WaterSense shower head rebate.

The Mayor tells us that “National Drinking Water Week is the perfect time to remind people of the importance of conserving water; and to inform city residents and businesses about the water conservation programs and incentives that are available through the Waukesha Water Utility to help us conserve.”

For more detailed information, please visit the utility’s website at [www.waukesha-water.com](http://www.waukesha-water.com).

Press Release for National Drinking Water Week





## Office of the Mayor

201 DELAFIELD STREET  
WAUKESHA, WISCONSIN 53188-3633  
TELEPHONE 262/524-3700 FAX 262/524-3899

## Shawn N. Reilly, Mayor

sreilly@waukesha-wi.gov

# PROCLAMATION

WHEREAS, water is one of our most important natural resources; and

WHEREAS, each citizen and business in our city has a responsibility to protect and conserve water; and

WHEREAS, Waukesha has programs in place to encourage water conservation; and

WHEREAS, the Waukesha Water Utility has encouraged and will continue to encourage businesses to conserve water, and

WHEREAS, the Water Utility offers grant money to businesses that replace equipment with new technology that saves water,

WHEREAS, the Waukesha Water Utility encourages and provides \$100.00 rebates to residents to replace all pre-1994 toilets with 1.28 gpf WaterSense toilets, as well as, \$25 WaterSense showerhead rebates, and \$20 rain barrel rebates, and

WHEREAS, all citizens and businesses are urged to comply with all sprinkling and irrigation system ordinances;

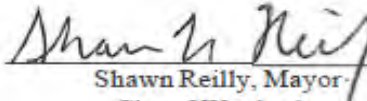
WHEREAS, we are all stewards of our water resources and infrastructure so that future generations will also have clean sustainable water;

NOW, THEREFORE, as Mayor of the City of Waukesha, I hereby proclaim May 6<sup>th</sup> to May 12<sup>th</sup>, 2018 as

## DRINKING WATER WEEK

And ask that we recognize the essential role that drinking water plays in our daily lives.

Signed this 4th day of May, 2018.

  
Shawn Reilly, Mayor  
City of Waukesha

[www.waukesha-wi.gov](http://www.waukesha-wi.gov)



Mayoral Proclamation for National Drinking Water Week



## **9. Tips on How to Prevent Water Pipes from Freezing & Breaking**

Broken water pipes waste a lot of water. To prevent pipes from freezing and breaking, the Utility puts the annual press release in the Waukesha Freeman, on the Utility's website, facebook page, and on the City's TV 25 local government and events channel.

In 2018, we had an unseasonably warm November and December. Therefore, we didn't advertise our annual *How to Prevent Freezing Pipes* information, in the the press release or on our website, until January 2019 when the outdoor temperatures got colder.



## **B. Community Presentations & Public Outreach Events**

In 2018, there were many community presentations and public outreach events that took place, including the following:

1. Waukesha Janboree Pancake Breakfast
2. Wonderful World of Water Day
3. City of Waukesha's Brown Bag Conversations
4. Home Depot Toilet Workshop
5. Adaptive Community Approach Program
6. City Interdepartmental Meetings
7. What's Up In Waukesha YouTube Video
8. Construction Management Association of America (CMAA)
9. Association of Metropolitan Milwaukee Area (AMMA) Public Works Administrators & Engineers
10. American Chemical Society (ACS)
11. Metro Chapter Wisconsin Society of Professional Engineers
12. Tri-County Waterworks Association
13. American Water Works Association (AWWA) – Water Management Seminar in Atlanta
14. American Water Works Association (AWWA) ACE18 Conference – Dan's Presentation
15. American Water Works Association (AWWA) ACE18 Conference – Kelly's Presentation
16. American Water Works Association – Wisconsin Section (WI AWWA)
17. Great Water Alliance & Milwaukee Water Works Open House
18. A list of other presentations, meetings, and interviews that we don't have pictures for.

The detailed information pertaining to this year's presentations and outreach events follows.

### **1. Waukesha Janboree Pancake Breakfast – Water Conservation Booth**

The City of Waukesha had its annual winter Janboree and Pancake Breakfast. Approximately 600 people attend this event. The Utility had a conservation educational booth and an informational sign regarding the 1.28 gpf WaterSense toilet rebate.



Waukesha Water Utility's Conservation Booth at Waukesha's Janboree Pancake Breakfast



## 2. Wonderful World of Water Day

Waukesha County Parks & Land Use invited the Utility to participate in their Wonderful World of Water event. The Utility gave a presentation titled *Water Saving Ideas for the Home: Learn Strategies to Save Water in your Home & Incentives to Help You Use Less Water and Save You Money*.

In addition to the presentation, the Utility also had a staffed conservation educational table outside the speaking rooms and an informational sign regarding the 1.28 gpf WaterSense toilet rebate. The Utility greeted visitors, promoted water conservation, and answered questions.

The Water Day event was a success. There were 40 people who signed up to participate in the event and over 200 visitors that morning between the planetarium shows, World of Water, and the County's spring pre-sale event for rain barrels, compost bins, and plants for rain gardens who also visited the educational tables and attended the presentations.

Pictures showing the Utility's presentation and the water conservation table are shown below; and the event announcement is shown on the next page.



Utility's Presentation - Learn Strategies to Save Water in Your Home & Water Saving Incentives – Picture #1



Utility's Presentation – Picture #2



Utility's Water Conservation Table



# Win A Rain Barrel At World of Water Day

The Wonderful World of Water Day will be held at the Retzer Nature Center on Saturday, February 24.

By News Desk, News Partner | Feb 5, 2018 2:08 pm ET | Updated Feb 5, 2018 3:19 pm ET

0



**From Waukesha County Parks & Land Use:** Celebrate and learn about Earth's most important resource, water, at the Wonderful World of Water Day! This event will be at Retzer Nature Center on Saturday, February 24 from 9:00 a.m. to noon. Participants will enjoy special exhibits and hands-on activities. A variety of speakers will present the following free workshops:

**9 – 9:30 a.m.** An Ounce of Prevention: Learn what creatures are creeping in to our environment as well as ways to prevent their spread. Invasive species can cause great environmental damage, so be prepared.

**9:45 – 10:15 a.m.** Water Saving Ideas for the Home: Learn strategies to save water in your home. The City of Waukesha has several water saving incentives to help you use less water and save you money.

**10:30 – 11 a.m.** Clean Water--What it Takes: What happens to the water that goes down the drain in your home? Learn how water is cleaned and prepared to be put back into the environment.

**Subscribe**

**11:15 – 11:45 a.m.** Our Daily Interactions with Water: Have you thought about water's hidden contributions to your daily life? Learn about society's invisible walk with water. You will leave with ideas about easy things you can do to help protect our life-giving resource.

All Wonderful World of Water Day attendees have the opportunity to win a free rain barrel with diverter kit! Admission and parking at Retzer are free.

For more information call 262-896-8300. For event updates, like [Waukesha County Parks](#) and [Waukesha County Recycles](#) on Facebook.



### **3. City of Waukesha's Brown Bag Conversations**

City of Waukesha's Park and Recreation department schedules monthly Brown Bag Conversations for people age 55 and over. The purpose of the meetings is for people to learn more about their community in a relaxed environment. Participants are encouraged to bring their lunch, thoughts, questions, and ideas.

In 2018, the Utility was contacted by a Park and Recreation representative and asked to give a presentation. The Utility gave a presentation about Waukesha's water – where it comes from, how it's treated/distributed, the declining water levels, water quality concerns, Waukesha's application for Great Lakes water, and the returning the same amount of water to the Root River.

In addition, the Utility also talked about the importance of water conservation, the City's water saving incentives, the benefits of using WaterSense certified products, and tips for maximum water conservation. All attendees received leak detection dye tablets, rebate applications (for toilets, showerheads, and rainbarrels), a sprinkling ordinance magnet, rain gauge measuring cups, and a brochure on water conservation. There were approximately 20 people who attended.

The picture of this event is shown below and the advertisement, from the City's Activity Guide, is shown on the next page.



Presentation given to Waukesha's Brown Bag Conversation Group





### **Brown Bag Conversations**

Don't miss the opportunity to learn more about your community! Join us for informal interactive discussions with local officials, business leaders and organization directors in a relaxed environment. Bring your lunch (coffee will be provided), your thoughts, questions and ideas.

If you have a suggestion for a future conversationalist please submit your written ideas to the Senior Advisory Board, 1900 Aviation Dr., Waukesha, WI 53188

| AGE | DATE/DAY         | TIME         | R/NR FEE |
|-----|------------------|--------------|----------|
| 55+ | Third Wednesdays | Noon-1:00 pm | No Fee   |

#### **January 17 – Community Development Director**

Jennifer Andrews will speak to the group on what's new in Waukesha. The mission of the department is to make sound decisions and provide services that maintain and foster sustainable neighborhoods, industrial and business development within the city.

**February 21 – The Waukesha Civic Theatre** is a non-profit corporation whose mission is to provide quality live theatre performances and educational opportunities that will enrich, challenge and entertain both participants and audience members. Members of the theatre (Waukesha Players) will speak to the group on what they do and how you can become involved!

**March 21 – Bonnie Byrd, Waukesha County Museum** Curator will give an overview, talk about building renovations and discuss volunteer opportunities and much more.

**April 18 – Visit and presentation regarding Therapy Dogs.** Molly Johnson is a certified trainer and has two Basset Hounds. She will be joined by Bill and Sue Graham. We will be discussing the difference between therapy dogs and service dogs. We will also have 4 Basset Hounds there. All are certified therapy dogs.

**May 16-** Mary Adelmeyer Customer Service Representative for the Waukesha Water Utility will talk about water quality, ongoing activities of the utility and the diversion of lake Michigan water to Waukesha.

#### **Rotary Building**

NOTE: No fee or registration required.

WPRF Essential to "Comm

Utility's Presentation to the Brown Bag Conversation Group  
Advertised in the City's Activity Guide



#### 4. Home Depot's (and Waukesha Water Utility's) Workshop – Regarding Toilets

In the summer of 2018, the Utility noticed that Waukesha's Home Depot scheduled a workshop on *How to Install Toilets*. The Utility reached out to Home Depot to see if we could partner with them on their workshop. Home Depot welcomed us.

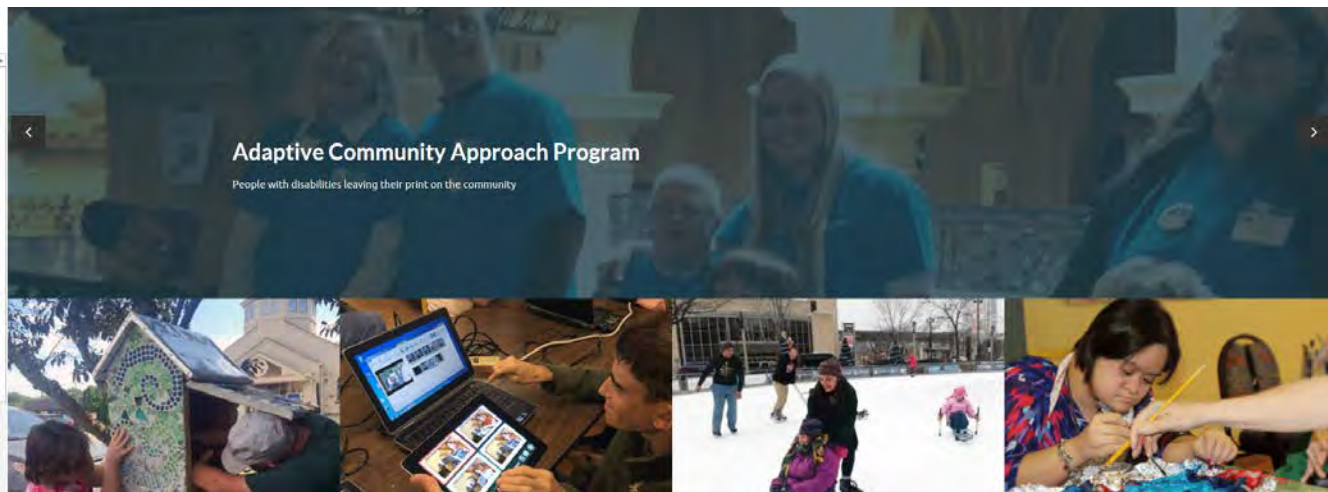
The Utility's presentation focused on how to check your toilet for leaks, how to find the age of the toilet, the Utility's rebates for WaterSense toilets (and showerheads), information pertaining to what the WaterSense logo looks like, and the benefits of using WaterSense certified products. Home Depot's presentation focused on how to install new toilets.

In addition to the presentation, guests were given leak detection dye tablets and a brochure on water conservation tips. Also, because the presentation occurred in the summer, guests also received information about rain barrels, sprinkling ordinance magnets, a rain gauge measuring cup, and information on the water conservation rebates.



Waukesha Water Utility partnering with Home Depot on a Workshop Regarding Toilets





## 5. Adaptive Community Approach Program Presentation and Tour

In 2018, the Waukesha School District started collaborating with the Adaptive Community Approach Program (ACAP), a non-profit organization that provides programs and services to adults with disabilities. The ACAP group was looking to participate in a series of environmental education programs. Waukesha School District's Environmental Education department outlined some program possibilities and water came forward as a theme. The Environmental Education department contacted the Utility and requested a presentation and a tour of the pumping station.

The Utility gave 12 ACAP participants and 2 leaders a tour of the pumping station and a presentation regarding Waukesha's water – where it comes from, how its treated and distributed, information about the water cycle, information about the declining water levels in the aquifer, the importance of water conservation, and ideas on how to conserve water. In addition to the tour and the presentation, group members left with rain gauge cups and sprinkling ordinance magnets.

The School District's confirmation letter regarding this ACAP event is shown on the next page.





**Summer Program Confirmation Form and Invoice**  
E.B. Shurts Environmental Education Center

**Program Participant:** ACAP, 121 Wisconsin Ave, Waukesha, WI 53186

**Main Contact:** Allison Surber, 262-818-4928

**Number of participants:** 10-12 adult participants, 2 adult leaders

**Date Of Visit:** Wednesday, August 1st, 9:30-11:30 am

**Location:** City of Waukesha Pumping Station, 2320 W Sunset Dr., Waukesha WI

**Activities:** Water Utility Tour

**Special Requests:**

**Special Notes:** There is not a bathroom at the pumping station. There is a bathroom at Sentry which is across the parking lot from the pumping station.



## 6. Interdepartmental “IN” Meetings

Every other month, the City holds interdepartmental meetings. Each department takes turn hosting the meeting. The purpose of the meetings are to get to know the other City departments, find out what each department does, and to get a department update.

In 2018, the Utility was not scheduled to host the “IN” meeting, but is scheduled to host in 2019. At each meeting, the Utility gave a department update, answered questions, and shared conservation ideas – especially for Fix a Leak Week and National Drinking Water Week. In addition, all attendees were given toilet leak detection tablets, a sprinkling ordinance magnet, and information pertaining to Waukesha’s conservation incentives.

There wasn’t an updated group picture taken in 2018, so were reusing the picture from 2017.



Interdepartment Group Meeting

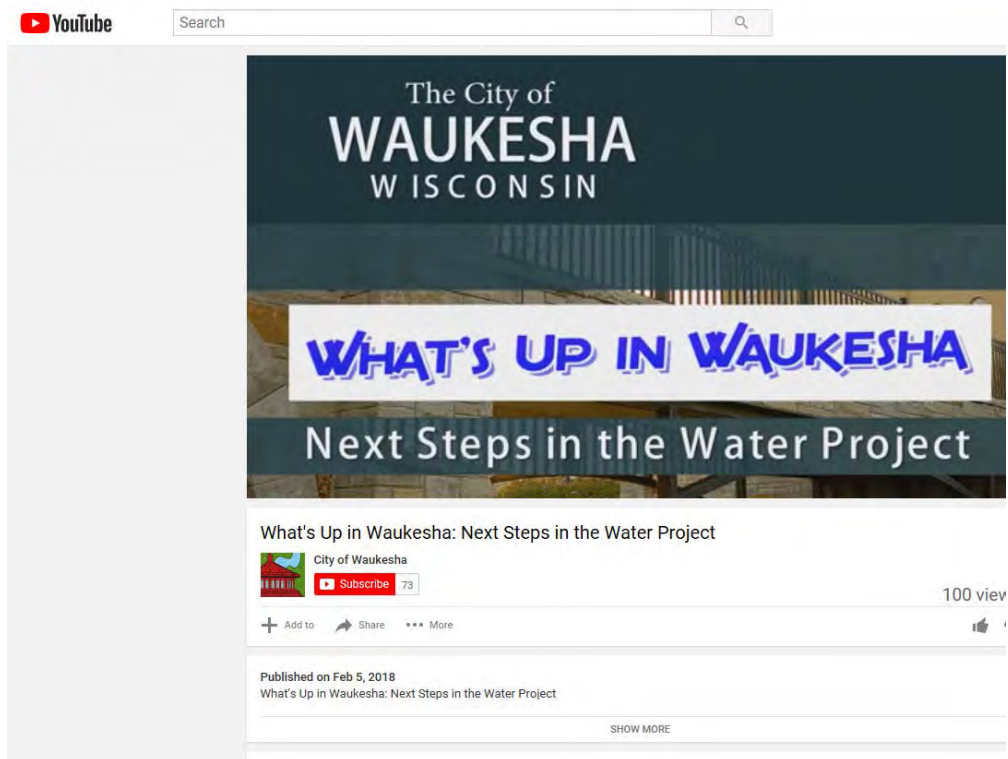


Waukesha recognizes that an important element of water conservation is the sustainability of our water supplies. During the following presentations, the sustainability of our water sources was discussed as part of the presentation.

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## 7. What's Up in Waukesha YouTube Video

For the purpose of keeping people informed, the Utility made a YouTube video titled *What's Up in Waukesha: Next Steps in the Water Project*. In the video, the Utility talks about how the city of Waukesha is going to be getting Lake Michigan water as its new source. The video explains the reason Waukesha needs a new water source – that our aquifer is not sustainable for the longterm and it contains contaminants. The video goes on to explain how the Utility received unanimous approval for Lake Michigan water and the steps involved with this transition, so that the residents of Waukesha can have a radium-free and sustainable water supply.



YouTube Video





## 8. Construction Management Association of America – Wisconsin Section (CMAA)

A presentation was given to the CMAA group regarding Waukesha's current and future water supply. The Utility talked about Waukesha's current source - that Waukesha needs a new water source because its current supply is not sustainable and it has contaminants.

The Utility explained how the recharge of the current deep aquifer is limited by a layer of shale rock, that the water in the aquifer is down more than 350 feet, pumping from shallow wells adversely impacts the area's wetlands and streams, and using reverse osmosis to treat radium would waste about 20% of water, which would increase demands and drawdown.

In addition to talking about the current source, the Utility also talked about the future source (the 15 year process the Utility went through with the DNR to obtain a new water source), the return flow process (how the amount borrowed will be returned to the Root River), and the benefits of the return flow (it will help restore groundwater flow towards the Great Lakes Basin, it will enhance habitat and fisheries, and reduce radium and salt released in the environment).



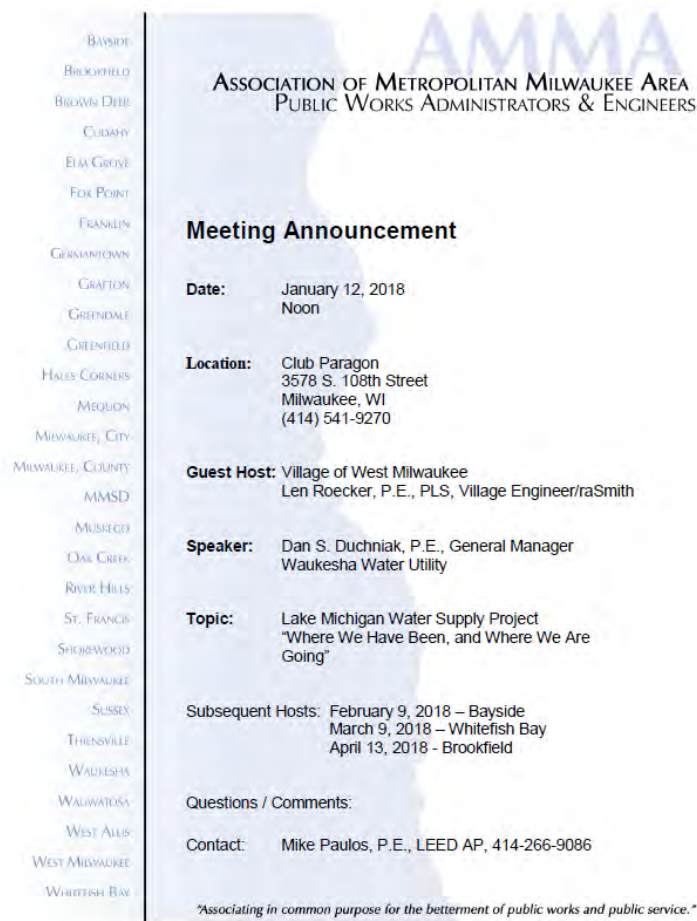
## 9. Assoc. of Metropolitan Milwaukee Area (AMMA) Public Works Administrators & Engineers

The Utility gave a presentation titled *Lake Michigan Water Supply Project: Where We Have Been & Where We Are Going* to the AMMA group. This presentation was also about Waukesha's current and future water supply.

The Utility shared with the audience that Waukesha currently relies on groundwater for its water source (from 3 active deep sandstone wells and 3 active shallow sand and gravel wells). Due to the Maquoketa shale confining layer, the recharge is limited, and over pumping from the regional area has made the water levels drop more than 350 feet. The water supply is unsustainable and has contaminants.

In addition to the sustainability and water quality issues, the Utility also talked about Waukesha's future water supply (how 14 other water sources were extensively analyzed, the Application and approval process for Great Lakes water, and the return flow process and benefits).

The Meeting Announcement for this event is shown below.



The graphic is a meeting announcement for the Association of Metropolitan Milwaukee Area (AMMA) Public Works Administrators & Engineers. It features a vertical list of member municipalities on the left and a central text box with the announcement details. The AMMA logo is at the top right of the central box.

**ASSOCIATION OF METROPOLITAN MILWAUKEE AREA  
PUBLIC WORKS ADMINISTRATORS & ENGINEERS**

**Meeting Announcement**

**Date:** January 12, 2018  
Noon

**Location:** Club Paragon  
3578 S. 108th Street  
Milwaukee, WI  
(414) 541-9270

**Guest Host:** Village of West Milwaukee  
Len Roecker, P.E., PLS, Village Engineer/raSmith

**Speaker:** Dan S. Duchniak, P.E., General Manager  
Waukesha Water Utility

**Topic:** Lake Michigan Water Supply Project  
"Where We Have Been, and Where We Are Going"

**Subsequent Hosts:** February 9, 2018 – Bayside  
March 9, 2018 – Whitefish Bay  
April 13, 2018 - Brookfield

**Questions / Comments:**

**Contact:** Mike Paulos, P.E., LEED AP, 414-266-9086

*"Associating in common purpose for the betterment of public works and public service."*

**Member Municipalities (left side):**  
BAYSIDE  
BROOKFIELD  
BROWN DEER  
CUDAHY  
ELM GROVE  
FOX POINT  
FRANKLIN  
GERMANTOWN  
RAFTON  
GREENDALE  
GREENFIELD  
HALES CORNERS  
MEQUON  
MILWAUKEE, CITY  
MILWAUKEE, COUNTY  
MMSD  
MUSKEGO  
OAK CREEK  
RIVER HILLS  
ST. FRANCIS  
SHIREWOOD  
SOUTH MILWAUKEE  
SUSSEX  
THIENSVILLE  
WAUKESHA  
WALWATONA  
WEST ALLIS  
WEST MILWAUKEE  
WHITEFISH BAY

AMMA's Meeting Announcement – Speaker from Waukesha Water Utility





## **10. American Chemical Society (ACS)**

Waukesha Water Utility gave a presentation to the American Chemical Society group. The presentation began with the history of Waukesha's water. The Utility shared with the audience that in early 2000, it became apparent that Waukesha could no longer rely on its deep aquifer source for drinking water. The speaker talked about Waukesha's water quality issues and spoke about the depleted groundwater levels.

The Utility also talked about the process of how Waukesha applied for a diversion of Lake Michigan water; and that the application encompassed the evaluation of 14 water supply alternatives for safety, sustainability, and economic viability. Waukesha Water shared its water challenges and the lessons learned.



## 11. Metro Chapter Wisconsin Society of Professional Engineers

The Utility was invited to give a presentation to the Wisconsin Society of Professional Engineers during their 2018 Annual Scholarship and Engineer's Week Banquet. Once again, the Utility talked about *Waukesha's Water Supply Project – Where We Have Been and Where We Are Going*.

The Utility talked about how Waukesha's groundwater source and how Waukesha needs a new water supply due to quality and quantity issues. Continuing to use groundwater is unsustainable; and continued use is not a reasonable or sensible alternative.

In addition to the quality and sustainability issues, the Utility talked about Waukesha's future water supply, the route study, the return flow process, and the benefits of the return flow.

The invitation to speaking event is shown below.



### **2018 Annual Scholarship and Engineer's Week Banquet**

|                  |                                                                                                                                                                             |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>When:</b>     | <b>Wednesday February 21, 2018</b>                                                                                                                                          |
| <b>Location:</b> | <b>Thunder Bay Bar and Grill</b><br>N14 W24130 Tower Place<br>Pewaukee, WI 53072                                                                                            |
| <b>Topic:</b>    | <b>"City of Waukesha's Lake Michigan Water Supply Project: Where We Have Been and Where We Are Going"</b>                                                                   |
| <b>Speaker:</b>  | <b>Daniel Duchniak, General Manager Waukesha Water Utility.</b>                                                                                                             |
| <b>Time:</b>     | 5:30 Cocktails/Social Hour<br>6:15 Dinner<br>7:00 Scholarships/Awards<br>Speaker Following Awards                                                                           |
| <b>Cost:</b>     | \$30/person Spouses and Guests are encouraged to attend.<br>Dinner will be served Buffet Style: Entrees, Salad, Side and Vegetable. Rolls and Coffee/tea/soda are included. |

The events of the evening will include presentations of the annual scholarship awards to outstanding area high school seniors and the Metro Chapter Engineer and Young Engineer of the Year Awards.

Wisconsin Society of Professional Engineers – Speaker from Waukesha Water Utility



## 12. Tri-County Waterworks Association

Waukesha Water Utility was asked to give a presentation to the Tri-County Waterworks Association. Kelly Zylstra, the Utility's Operation Manager, and Catherine Richardson (Katie), the Deputy Program Manager for the Great Lakes project, gave a presentation titled, *Navigating New Waters: Designing and Permitting a New Drinking Water Supply System*.

Kelly & Katie began the presentation by talking about the program drivers for Waukesha's Great Lakes project. They shared the following information about Waukesha's water source: The deep aquifer replenishment is very slow due to the shale confining layer, the groundwater levels are declining and has contaminants, the groundwater supply is connected to the Great Lakes Basin water resources, and Waukesha's groundwater supply is not sustainable.

Once the foundation of the presentation was established, about Waukesha needing for a new water supply due to the water quality and sustainability issues, Kelly and Katie then gave an overview of Great Lakes project. They talked about the permitting schedule, the route study and pipeline design, and the evaluation criteria. They also talked about the return flow process and the transition plan that would help to minimize water quality impacts.

A picture showing Kelly's & Katie's powerpoint presentation is shown below.



Kelly's & Katie's Presentation to the Tri-County Group





### **13. American Water Works Association – Water Management Seminar in Atlanta**

The Utility was asked to give a presentation at AWWA's Water Management Seminar. The title of the presentation was *Regional Cooperation: Key to a Sustainable Water Future*.

The Utility talked about our current water supply - how Waukesha relies on groundwater, the Utility was court ordered to comply with the radium standard, the recharge of the deep aquifer is limited due to the confining layer of rock, the deep aquifer water levels have declined more than 350 feet, Waukesha is located near environmentally sensitive areas so pumping shallow wells adversely impacts wetlands and streams, treatment with reverse osmosis for the radium would waste about 20% of water (which would increase demands and drawdown), and the current water supply is unsustainable.

Waukesha Water also talked about how the Utility evaluated 14 alternative water supply options. We talked about the Great Lakes Compact, the application/approval process, the program partnerships, the route study, and the benefits of a new water supply.





Dan Duchniak & Kelly Zylstra both gave presentations at AWWA's ACE18 Conference

#### **14. American Water Works Association – ACE18 Conference (Dan's Presentation)**

Dan Duchniak, Waukesha Water Utility's General Manager, and Kelly Zylstra, Waukesha's Operation Manager, were both asked to give separate presentations at the AWWA ACE18 conference.

Dan Duchniak gave a presentation titled *Delivering Total Water: Borrowing and Returning Water to the Great Lakes Basin*.

Dan began the presentation talking about Waukesha's current water supply. He talked about the condition of the aquifer – that the recharge is limited due to a confining layer of shale, the water levels have declined, and the quality has changed.

Dan also showed a series of slides that showed the simulated history of groundwater pumping and groundwater levels in southeast Wisconsin from the 1800's through the present. The Milwaukee/Chicago cone of depression is one of the largest areas of groundwater drawdown in North America. This information regarding the limited recharge, the declining water levels, and the regional drawdown illustrated that Waukesha's water source is unsustainable for the long term.

Once the water quality and sustainability issues of Waukesha's water supply was communicated, then Dan talked about Waukesha's Diversion Application, the approval process, and the timeline for the Great Lakes project going forward.



## 15. American Water Works Association – ACE18 Conference (Kelly’s Presentation)

Kelly Zylstra & Katie Richardson, the Deputy Program Manager for Waukesha’s Great Lakes project, gave also gave a presentation to the ACE18 conference titled *Waukesha’s Challenge: Designing & Constructing a New Drinking Water Supply & Return Flow System*.

Kelly and Katie talked about Waukesha’s new water supply program drivers. The main program drivers are related to Waukesha’s current water source being contaminated and unsustainable.

The presentation also included an overview and an update to Waukesha’s Great Lake project, including information about Waukesha returning all the water borrowed back to Lake Michigan via the Root River.

◀ BACK TO SCHEDULE ◀ BACK TO THE ANNUAL CONFERENCE AND EXPOSITION PROGRAM



### SPEAKER PROFILE



**Kelly Zylstra**  
Waukesha Water Utility  
Operations Manager

#### PROFILE:

Kelly Zylstra is the Operations Manager for the Waukesha Water Utility. She has a Bachelor's in Geology and Geological Engineering from Michigan Technological University. Prior to 2012, she worked as a consultant for more than two decades gaining expertise in planning, design and construction of groundwater supply and water treatment and distribution facilities. Zylstra has held several positions in WI AWWA and is an award recipient.

#### PRESENTATIONS:

[THU08 - Assessment & Implementation of Alternative Project Delivery Methods to Provide Best Value](#)

[Waukesha’s Challenge: Getting it Right the First Time, Designing and Constructing a New Drinking Water Supply and Return Flow System](#)

Presentation Time: 10:00 AM

Session: THU08 - THU08 - Assessment & Implementation of Alternative Project Delivery Methods to Provide Best Value - 08:30 AM - 11:00 AM

Day: Thursday, June 14, 2018



## 16. American Water Works Association – Wisconsin Section

Kelly Zylstra was also asked to give a presentation at the WI AWWA conference. Once again, she presented with Catherine Richardson (Katie) from Greeley and Hansen. The title of their presentation was *Navigating New Waters: Designing and Permitting a New Drinking Water Supply System*.

Kelly and Katie began the presentation by talking about the program drivers for Waukesha's Great Lakes project. They talked about Waukesha's water quality, the aquifer recharge being very slow due to the geological confining layer, the declining water levels, that Waukesha is part of the Great Lakes Basin, and Waukesha's groundwater is not sustainable.

After it was communicated that Waukesha has water quality and sustainability issues, Kelly and Katie then shared the details about the Great Lakes project which included strategies to minimize project costs and change orders, and their goal to obtain the maximum value for the construction investment.

A copy of WI AWWA's 2018 Technical Program, that shows Kelly's and Katie's presentation is shown below.

| Thursday, September 13, 2018                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Time                                                         | Track A<br>Hall of Ideas Room E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Track B<br>Hall of Ideas Room F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Track C<br>Hall of Ideas Room G                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>SESSION<br/>T5</b><br><br><b>11:15 am<br/>to<br/>Noon</b> | <b>Understanding the PSC<br/>Ratemaking Process</b><br><br><i>Bridgot Gysbers, WI PSC</i><br><br>Learn about the PSC's rate-making process from the Commission's water team auditors. Topics include: • How to avoid mistakes on your rate application • Information you'll need to provide • Typical rate case process and timeline • What can and cannot be included in the revenue requirement • How capital costs are recovered through rates • Two-step rate increases • Exceptions to the benchmark rate of return • Requesting the expense | <b>How to Identify and<br/>Integrate Energy Savings at<br/>Your Facility</b><br><br><i>Joe Kottwitz, Focus on Energy<br/>and Tony Mach, Neenah Water<br/>Utility</i><br><br>Energy is one of the largest expenses for Wisconsin's water utilities - luckily, it is also one of the most manageable. In this presentation, attendees will hear firsthand from Neenah Water Utility on how they were able to incorporate energy efficiency into the culture at their plant. Learn the steps Neenah Water Utility made in under two years to reduce their electrical | <b>Navigating New Waters:<br/>Designing and Permitting<br/>a New Drinking Water<br/>Supply System</b><br><br><i>Catharine Richardson,<br/>Greeley and Hansen and Kelly<br/>Zylstra, Waukesha Water<br/>Utility</i><br><br>The program will highlight risk and cost minimization strategies that reduce construction costs and project administrative burden, minimize change orders and provide stakeholders assurance that maximum value is realized for their construction investment. |

WI AWWA Technical Program – Utility Presentation



## 17. Great Water Alliance – Milwaukee Water Works Open House

The Great Water Alliance and Milwaukee Water Works held an open house at Hamilton High School in Milwaukee so that attendees could get information on the new water supply project. Nearly 100 people attended the open house and spoke with project representatives, received project details, and discussed the three pipeline route options and plans for the new pumping station.

In addition to the project information, Waukesha Water Utility also had a staffed conservation education table with two informational signs regarding Waukesha's 1.28 gpf WaterSense toilet rebate and Conservation tips. The water conservation person assisted with greeting visitors, promoting water conservation, and answering questions.

Pictures from the open house and Waukesha's conservation booth are shown below.



GWA's Open House – Nearly 100 People Attended



Waukesha Water Utility Promoting Water Conservation at GWA's Open House  
Dan Duckniak & Kelly Zylstra – Two Presentations at Michigan's AWWA Conference



**18. Additional Public Outreach, Presentations, Interviews, & Meetings:**

Additional public outreach, presentations, meetings, and interviews in 2018 are listed below.  
The topic of sustainability and water conservation was a part of the meetings and presentations.

- Keven Shafer at MMSD
- UW Whitewater - Price Elasticity of Demand for Water
- Regional of Realtors Association – Cost Impacts to Residents and Market in Waukesha
- Sara Wilke – New Alderman Meeting – Intro to GWA Program and Conservation Program



- **C. Water Education with the Youth – Tomorrow's Future**

Waukesha Water Utility plans for the future by educating our youth. In 2018, the Utility continued to provide water education classes to the following:

1. Waukesha School District's 5<sup>th</sup> graders (for the past 29 years)
2. Waukesha County's Boy Scouts (for the 7th year)
3. Oak Creek High School Environmental Class
4. Carroll University's Environmental Health Class (2<sup>nd</sup> year)
5. Carroll University's Soils and Hydrology Class (New in 2018)
6. Milwaukee School of Engineering (MSOE) Facilities Planning Class (New in 2018)



1. **Waukesha School District's 5<sup>th</sup> Graders**

For the past 29 years, Waukesha Water Utility has partnered with the Waukesha School District to provide water education to all 5<sup>th</sup> graders. As part of their Environmental & Science Curriculum, the students study the natural cycles of water and the human impact on our water resources. Thousands of students have toured the Utility's pumping station. At the station, they learn about the following:

- the water cycle
- where their water comes from
- how their water is treated and distributed
- the quality and quantity of the water they use
- conservation methods that use water resources in a sustainable manner
- the costs of municipal water, and its value compared to bottled water

The students also explore the natural cycles of water by spending a day in the Fox River Sanctuary investigating the chemical and biological components of the river and marsh.

In 2018, we spent approximately 57 hours educating approximately 870 students, along with approximately 45 teachers and chaperones from the Waukesha School District.





2018 Boy Scouts Water Ed Class & Tour

## 2. **Waukesha County Boy Scouts**

Waukesha Water Utility partnered with the Waukesha County Boy Scouts to help them to earn their Soil and Water Conservation Merit Badge. This is the seventh year that the boy scouts toured the water pumping facilities; and, as the picture above shows by the number of boys that signed up for this tour, there was a lot of interest in learning about water.

According to the Boy Scouts of America (BSA), in order to earn this badge, the boys need to learn “about the natural resources on which our lives depend, so that we can help make sure that these resources are used intelligently and cared for properly.”

The water portion requirements of the badge program, as stated in their *Soil & Water Conservation Merit Badge Series* BSA No. 610016, are the following:

- Take a tour of a public drinking water treatment plant,
- Explain what a watershed is,
- Make a drawing to show the hydrologic cycle,
- Tell what is meant by water pollution and describe common sources, and
- Write a report of more than 500 words about the soil, water, and energy conservation practices.

The Utility’s water education presentation & tour covered all the above required water topics.





# Oak Creek High School

### 3. Oak Creek High School

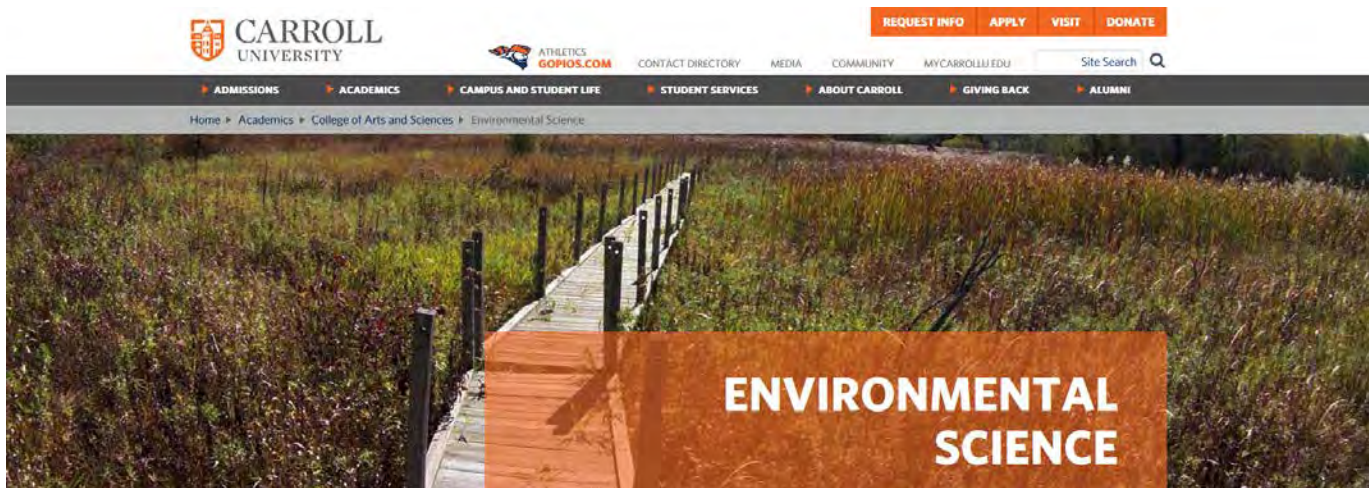
Waukesha Water Utility was asked to give a Water talk to Oak Creek High School students. The presentation began with Water 101 and the Facts About Water – how there is a limited supply and it is exceptionally cheap relative to its value.

The Utility talked about Waukesha's current water supply, the quality and quantity issues – the radium contaminants, about how slowly it takes the aquifer to recharge and the reason for it, the declining water levels, and the sustainability issues.

Waukesha Water also talked about the importance of water conservation. The Utility shared ideas on what the students could do to save water. Talked about how to find and fix leaks, that established lawns do not need to be watered, to take shorter showers, and the benefits of replacing appliances.

The future water supply was also talked about – the application/approval process, the potential rates, the route study and pipeline design, the return flow process, and the transition plan to minimize water quality issues.





#### 4. Carroll University's Environmental Health Class

This is the second year that the Utility was contacted by a Carroll University professor, in the Public Health Department, to give a presentation for their Environmental Health students.

Some of objectives is for students to gain a fundamental knowledge of the development of environmental health problems, the interaction of individuals and communities have with the environment, and the regulatory policies/practices, treatment and prevention strategies associated with environmental issues.

Utility staff gave a presentation and a tour of one of the pumping stations. The presentation started with Water 101 – giving an introduction as to where Waukesha's water comes from, how its treated, quality and quantity issues, what Waukesha test for, costs, and different careers in the water industry.

One of the main themes of the presentation was talking about how we take water for granted and the importance of water conservation. We talked about how North America, including Waukesha, faces water supply and sustainability challenges. The Utility talked about how water is still exceptionally cheap relative to its value, but that everyone is going to pay more for drinking water in the future, and the reasons water rates will be increasing.

We also talked about Waukesha's future water supply – the process we went through to get a new water source and the path forward to implement the project and make the final transition.





## **5. Carroll University's Soils & Hydrology Class**

Waukesha Water Utility was also asked to give a presentation to Carroll University's Soils & Hydrology class.

In this presentation, the Utility talked about Waukesha's geology and reason the aquifer recharges very slowly, that it's due to the shale rock confining layer. We also talked about Waukesha's groundwater – the quality, the declining water levels, and that its not sustainable.

We also talked about water overall, that there is a limited supply and the importance of water conservation.

The Utility talked about how the water is treated and distributed, how much it costs, and what the municipalities test for. We also talked about Waukesha's future water supply - the application and approval process, the potential rates, the benefits of the returning all the water borrowed to the Root River, and the final transition plan of getting Lake Michigan water to Waukesha in a way that minimizes water quality issues.



## **6. Milwaukee School of Engineering (MSOE) – Facilities Planning Class**

Waukesha Water Utility was asked to give a presentation to the MSOE Facilities Planning Class.

Once again, the Utility's presentation began with an introduction about Waukesha's water - Where it comes from, the water quality and sustainability issues. The Utility also talked about the importance of water conservation and the future water supply project - including the plans for the new pumping station, the route study, the pipeline designs for the water and return flow, and the final transition plan.



## D. Partnerships

Waukesha Water Utility has many partnerships. Below are some of the partnerships that, in some way, have already been mentioned throughout the report.





## VII. WATER LOSSES AND ACCOUNTED FOR WATER

Per NR 852.04 and PSC 185 the Utility performs and documents water use audits on a monthly basis. A summary of 2018 is as follows. Data is entered into the format below.

| Data Input |                                  |               |
|------------|----------------------------------|---------------|
|            |                                  | 2018 Total    |
|            | Sales - Metered                  | 1,898,692,100 |
|            | Sales - Est. Consumption         | -             |
|            |                                  |               |
|            | Plant                            | 1,286,300     |
|            | Water Analyzer Water Flow (9)    | 793,920       |
|            | Filter Back wash                 | -             |
|            | # 3                              | 4,580,000     |
|            | # 8                              | 3,640,000     |
|            | # 10                             | 6,928,000     |
|            | Flushing                         | -             |
|            | Mains                            | 27,806,145    |
|            | Services                         | -             |
|            |                                  |               |
|            | Main Breaks                      | 3,209,500     |
|            | Morgan Ave                       | -             |
|            | Service Breaks                   | 3,023,000     |
|            | Filling Mains / New Construction | 702,900       |
|            | Fire (524-3647)                  | 202,450       |
|            |                                  |               |
|            | Misc: Specify                    |               |
|            | Hydrant Repairs                  | 99,750        |
|            | Hydrant Replacement              | 18,800        |
|            | Hydrant Surveys                  | 25,420        |
|            | Valve replacements (2)           | 50,440        |
|            | Fire Flow Test                   | 13,875        |
|            | Leakage & Overflows at Towers    | 54,719        |
|            |                                  |               |
|            | Total Pumped                     | 2,076,015,000 |



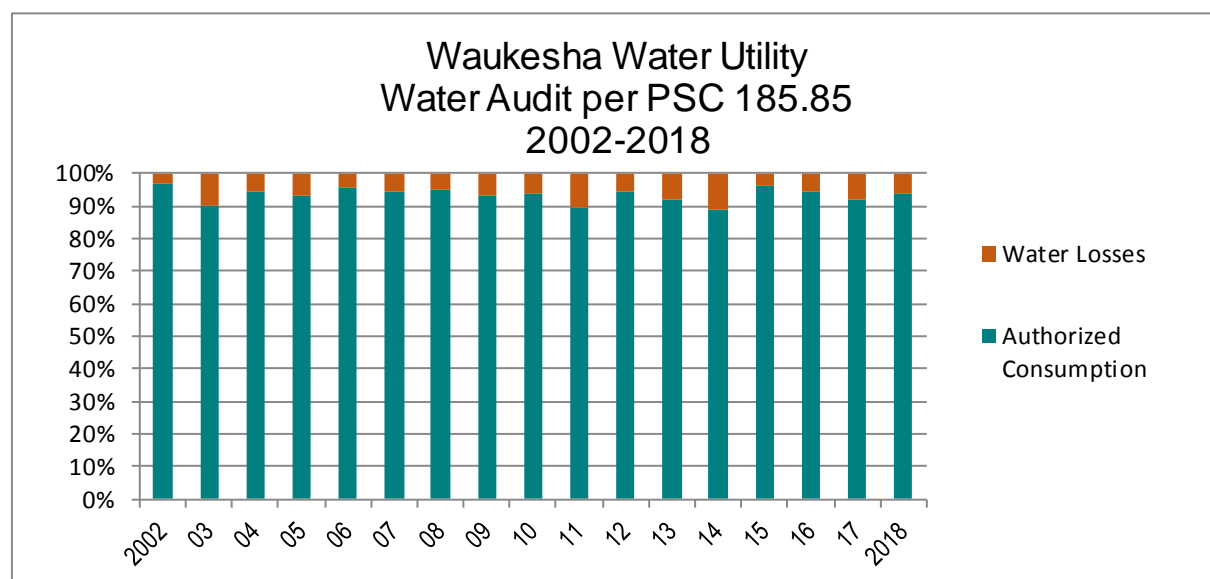
Then the raw data is converted into the Water Balance categories specified in PSC 185.

| Water Balance          |                               |               |
|------------------------|-------------------------------|---------------|
|                        |                               | 2018 Total    |
|                        | System Input Volume =         | 2,076,015,000 |
|                        |                               |               |
|                        | Authorized Consumption =      | 1,944,840,100 |
|                        | Water Losses =                | 131,174,900   |
|                        |                               | 2,076,015,000 |
|                        |                               |               |
|                        | Authorized - Billed =         | 1,898,692,100 |
|                        | Authorized - UnBilled =       | 46,148,000    |
|                        | Losses - Apparent =           | 124,887,681   |
|                        | Losses - Real =               | 6,287,219     |
|                        |                               | 2,076,015,000 |
|                        |                               |               |
| Authorized Consumption | Billed & Metered              | 1,898,692,100 |
|                        | Billed & UnMetered            | -             |
|                        | UnBilled & Metered            | 45,034,365    |
|                        | UnBilled & UnMetered          | 1,113,635     |
| Water Losses           | Unauthorized Consumption      | 124,887,681   |
|                        | Meter Inaccuracies            |               |
|                        | Data Handling Errors          |               |
|                        | Main Breaks                   | 3,209,500     |
|                        | Leakage & Overflows at Towers | 54,719        |
|                        | Service Breaks                | 3,023,000     |
|                        |                               | 2,076,015,000 |
|                        |                               |               |
|                        | Revenue Water =               | 1,898,692,100 |
|                        | Non Revenue Water =           | 177,322,900   |
|                        |                               | 2,076,015,000 |

The summary, above, indicates that in 2018, 6.3% of the Utility's water was lost. This loss is far less than the 15% that has historically triggered a comprehensive survey and corrective action plan.



The stability of the statistics over the last sixteen years and the data itself is indicative of a diligently maintained distribution system. (The Utility reformatted its data from 2002 forward so that its display is consistent with the 2012 requirements.) Accounted for Water ranges between 88.8% and 96.5%.



The results are achieved because the Utility routinely repairs and replaces water services, hydrants and valves. In 2015, the Utility initiated Hydrant Leak Surveys as part of its semi-annual flushing program.

In 2018, 1,288 hydrants were surveyed. Sixteen leaks were detected and the related hydrants were repaired immediately.

In addition, the Utility replaced 10,390 feet of water main in 2018 as compared to 8,156 in 2017. AWWA's 1% replacement goal represents roughly 17,608 feet.



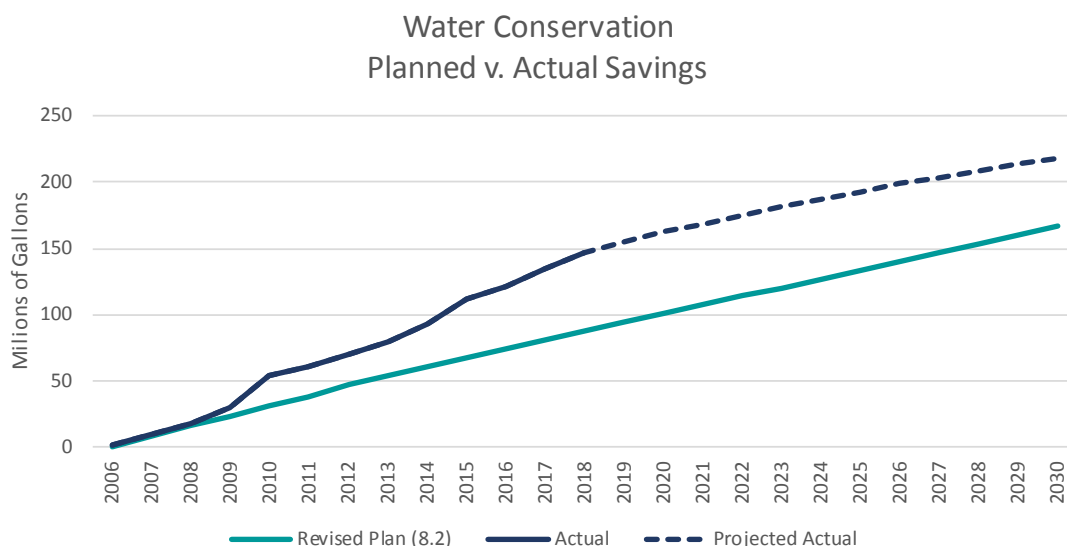
## VIII. CONCLUSION

|                |                | MILLIONS OF GALLONS |       |     |        |      |      |      |      |      |      |       |                                                   |      |  |
|----------------|----------------|---------------------|-------|-----|--------|------|------|------|------|------|------|-------|---------------------------------------------------|------|--|
|                |                |                     |       | 7.8 | 9.0    | 10.0 | 11.0 | 12.0 |      |      |      |       |                                                   |      |  |
|                |                | Avg Day             |       | to  | 8.8 to | to   | to   | to   | to   |      |      |       |                                                   | Peak |  |
| Year           | Annual Pumpage | Pumpage             | < 7.8 | 8.8 | 9.0    | 10.0 | 11.0 | 12.0 | 13.0 | >7.8 | >8.8 | Day   | Notes                                             |      |  |
| Number of Days |                |                     |       |     |        |      |      |      |      |      |      |       |                                                   |      |  |
| 2018           | 2,128,111      | 5,830               | 362   | 3   | -      | -    | -    | -    | -    | -    | -    | 8.50  |                                                   |      |  |
| 2017           | 2,128,111      | 5,830               | 365   | -   | -      | -    | -    | -    | -    | -    | -    | 7.55  |                                                   |      |  |
| 2016           | 2,172,548      | 5,952               | 362   | 3   | -      | -    | -    | -    | -    | 3    | -    | 8.17  |                                                   |      |  |
| 2015           | 2,218,214      | 6,077               | 358   | 7   | -      | -    | -    | -    | -    | 7    | -    | 8.72  | Mild summer temperatures                          |      |  |
| 2014           | 2,314,582      | 6,341               | 340   | 21  | 2      | 1    | 1    | -    | -    | 25   | 4    | 10.14 | Feb 6th Water Runs                                |      |  |
| 2013           | 2,348,955      | 6,435               | 346   | 15  | 2      | 2    | -    | -    | -    | 19   | 4    | 9.06  |                                                   |      |  |
| 2012           | 2,536,368      | 6,930               | 297   | 38  | 3      | 22   | 6    | -    | -    | 69   | 31   | 10.77 | Drought Year                                      |      |  |
| 2011           | 2,545,099      | 6,973               | 318   | 44  | 1      | 2    | -    | -    | -    | 47   | 3    | 9.22  |                                                   |      |  |
| 2010           | 2,441,221      | 6,688               | 342   | 23  | -      | -    | -    | -    | -    | 23   | -    | 8.65  | Fairly Rainy Summer                               |      |  |
| 2009           | 2,479,905      | 6,794               | 330   | 32  | 2      | 1    | -    | -    | -    | 35   | 3    | 9.35  | 2nd set inclining rates blocks - June             |      |  |
| 2008           | 2,528,933      | 6,910               | 328   | 30  | 6      | 2    | -    | -    | -    | 38   | 8    | 9.93  | Spring Flooding                                   |      |  |
| 2007           | 2,618,641      | 7,174               | 292   | 51  | 8      | 14   | -    | -    | -    | 73   | 22   | 9.79  | Inclining rate blocks - June; Dry year except Aug |      |  |
| 2006           | 2,622,418      | 7,185               | 294   | 61  | 1      | 8    | 1    | -    | -    | 71   | 10   | 10.23 | Rainy Year; Sprinkling ordinance in effect        |      |  |
| 2005           | 2,838,403      | 7,776               | 225   | 78  | 6      | 28   | 18   | 7    | 3    | 140  | 62   | 12.87 | Dry Year                                          |      |  |
| 2004           | 2,698,980      | 7,374               | 276   | 59  | 6      | 20   | 5    | -    | -    | 90   | 31   | 10.48 | Rainy Year                                        |      |  |
| 2003           | 2,795,859      | 7,660               | 250   | 67  | 3      | 22   | 18   | 5    | -    | 115  | 48   | 11.67 |                                                   |      |  |
| 2002           | 2,953,216      | 8,091               | 176   | 119 | 10     | 28   | 17   | 14   | 1    | 189  | 70   | 12.78 |                                                   |      |  |
| 2001           | 2,821,968      | 7,731               | 217   | 103 | 8      | 16   | 15   | 2    | 4    | 148  | 45   | 12.53 |                                                   |      |  |
| 2000           | 2,836,140      | 7,749               | 190   | 139 | 15     | 21   | 1    | -    | -    | 176  | 37   | 10.15 |                                                   |      |  |
| 1999           | 3,028,414      | 8,297               | 116   | 145 | 23     | 57   | 21   | 3    | -    | 249  | 104  | 11.59 |                                                   |      |  |
| 1998           | 2,974,540      | 8,149               | 156   | 123 | 14     | 49   | 16   | 5    | 2    | 209  | 86   | 12.79 |                                                   |      |  |

The data, above, shows the combined effect of our conservation programs. Over time:

- Total water pumped has steadily declined
- Average day pumpage has steadily declined
- The number of days where >7.8 million gallons needed to be pumped has decreased from a high of 145 in 1999 to a low of 0 in 2017.

Ultimately, the Utility must compare it's savings to that of the 2012 Conservation Plan. The plan predicted savings of 203,300,000 by the year 2030. The actual and projected savings are below.



If it stays on track, the Utility will exceed its goal of saving 0.8 mgd by 2050.