



OFFICIAL NOTICE AND AGENDA

Notice is hereby given that the City of Stoughton Utilities Committee will hold a regular meeting on the date and at the time and location given below.

Meeting of: **CITY OF STOUGHTON UTILITIES COMMITTEE**
Date/Time: Monday, October 16, 2017 at 5:00 p.m.
Location: Edmund T. Malinowski Board Room, Stoughton Utilities Administration Office
600 South Fourth Street, Stoughton, Wisconsin
Members: Mayor Donna Olson (Chair), Alderperson Matt Bartlett, Alderperson Michael Engelberger (Vice-Chair), Alderperson Pat O'Connor, Citizen Member David Erdman, Citizen Member John Kallas, Citizen Member Alan Staats

AGENDA:

CALL TO ORDER

CONSENT AGENDA

(All items are considered routine and will be enacted upon by one motion. There will be no separate discussion of these items unless a Stoughton Utilities Committee member so requests, in which event the item will be removed from the consent agenda and be considered on the regular agenda.)

- a. Stoughton Utilities Payments Due List Report
- b. Draft Minutes of the September 25, 2017 Regular Utilities Committee Meeting
- c. Stoughton Utilities August 2017 Financial Summary
- d. Stoughton Utilities August 2017 Statistical Report
- e. Stoughton Utilities September 2017 Activities Report
- f. Utilities Committee Annual Calendar
- g. Communications

OLD BUSINESS

1. Status of the Utilities Committee recommendation(s) to the Stoughton Common Council **(Discussion)**
2. Stoughton Utilities personnel status **(Discussion)**

NEW BUSINESS

3. Draft Wisconsin Department of Natural Resources (DNR) Wisconsin Pollutant Discharge Elimination System (WPDES) wastewater treatment facility permit **(Discussion)**
4. Round-Up program eligibility **(Action)**
5. Scheduling of the Utilities Committee regular meetings in November and December **(Action)**
6. Utilities Committee future agenda item(s) **(Discussion)**
7. Tour of the Stoughton Utilities Wastewater Treatment Facility **(Discussion)**

ADJOURNMENT

Notices Sent To:

Stoughton Utilities Committee Members
Stoughton Utilities Director Robert P. Kardasz, P.E.
Stoughton Utilities Assistant Director Brian Hoops
Stoughton Utilities Wastewater System Supervisor Brian Erickson

cc: Stoughton City Attorney Matthew Dregne
Stoughton City Clerk Lana Kropf
Stoughton Common Council Members
Stoughton Leadership Team
Stoughton Utilities Finance Manager Jamin Friedl, CPA
Stoughton Utilities Operations Superintendent Sean Grady
Unified Newspaper Group - Stoughton Courier Hub

ATTENTION COMMITTEE MEMBERS: Two-thirds of members are needed for a quorum. The committee may only conduct business when a quorum is present. If you are unable to attend the meeting, please contact Robert Kardasz or Brian Hoops via telephone at (608) 877-7423 or (608) 877-7412 respectively, or via email at RKardasz@stoughtonutilities.com or BHoops@stoughtonutilities.com.

It is possible that members of, and possibly a quorum of members of other committees of the Common Council of the City of Stoughton may be in attendance at this meeting to gather information. No action will be taken by any such group(s) at this meeting other than the Stoughton Utilities Committee consisting of the members listed above. An expanded meeting may constitute a quorum of the Common Council.

Upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. For information, or to request such assistance, please contact Stoughton Utilities at (608) 873-3379.

Current and past Stoughton Utilities Committee documents, including meeting notices, meeting packets, and meeting minutes, are available for public download at <http://stoughtonutilities.com/uc>.

Date: Tuesday, October 03, 2017
 Time: 11:14AM
 User: SGUNSOLUS

Stoughton Utilities
Check Register Summary - Standard

Page: 1 of 8
 Report: 03699W.rpt
 Company: 7430

Periods: - Through 00-17 As of: 10/3/2017

Check Nbr	Type	Date	Amount Paid	Vendor ID / Name	Description
Company: 7430					
001480	EP	9/7/2017	35,717.85	516 WELLS FARGO BANK	VO for check batch: 307793/VO for check batch: 307793
001481	HC	9/25/2017	1,242,844.89	009 WPPI	WPPI-Renwable Energy/WPPI-Renwable Energy/WPPI-Buy Back Solar Credit/WPPI-Buy Back Solar Credit/WPPI-Shared Savings/WPPI-Shared Savings/WPPI-Large Power/WPPI-Large Power/WPPI-Support/WPPI-Support/WPPI-Support /WPPI-Support/WPPI-Support/WPPI-Support
001482	HC	9/30/2017	38,887.01	025 Payroll Federal Taxes- Ach	Federal Taxes-Sept Ach/Federal Taxes-Sept Ach/Federal Taxes-Sept Ach/Federal Taxes-Sept Ach/Federal Taxes-Sept Ach/Federal Taxes-Sept Ach
001483	HC	9/30/2017	103.26	856 GORDON FLESCH COMPANY, INC.	Gordon Flesch-Sept Ach/Gordon Flesch-Sept Ach/Gordon Flesch-Sept Ach/Gordon Flesch-Sept Ach/Gordon Flesch-Sept Ach/Gordon Flesch-Sept Ach
001484	HC	9/30/2017	22.54	952 AT&T	AT&T-Sept Ach/AT&T-Sept Ach/AT&T-Sept Ach/AT&T-Sept Ach/AT&T-Sept Ach/AT&T-Sept Ach
001485	HC	9/30/2017	461.62	007 TDS Metrocom - Ach	TDS Metrocom - Sept Ach/TDS Metrocom - Sept Ach/TDS Metrocom - Sept Ach/TDS Metrocom - Sept Ach/TDS Metrocom - Sept Ach/TDS Metrocom - Sept Ach
001486	HC	9/30/2017	415.92	547 Charter Communications-Ach	Charter-Sept Ach/Charter-Sept Ach/Charter-Sept Ach/Charter-Sept Ach/Charter-Sept Ach/Charter-Sept Ach
001487	HC	9/30/2017	1,856.19	004 Us Cellular - Ach	Us Cellular - Sept Ach/Us Cellular - Sept Ach/Us Cellular - Sept Ach/Us Cellular - Sept Ach/Us Cellular - Sept Ach/Us Cellular - Sept Ach
001488	HC	9/30/2017	1,109.44	002 Employee Benefits Corp - Ach	EBC-Sept Ach/EBC-Sept Ach/EBC-Sept Ach/EBC-Sept Ach/EBC-Sept Ach/EBC-Sept Ach

Date: Tuesday, October 03, 2017
 Time: 11:14AM
 User: SGUNSOLUS

Stoughton Utilities
Check Register Summary - Standard

Page: 2 of 8
 Report: 03699W.rpt
 Company: 7430

Periods: - Through 00-17 As of: 10/3/2017

Check Nbr	Type	Date	Amount Paid	Vendor ID / Name	Description
001489	HC	9/30/2017	30.52	421 FIRST DATA CHARGES	First Data Charges-Sept Ach/First Data Charges-Sept Ach/First Data Charges-Sept Ach/First Data Charges-Sept Ach/First Data Charges-Sept Ach/First Data Charges-Sept Ach/First Data Charges-Sept Ach
001490	HC	9/30/2017	292.79	003 Alliant Energy - Ach	Alliant Energy - Sept Ach/Alliant Energy - Sept Ach/Alliant Energy - Sept Ach/Alliant Energy - Sept Ach/Alliant Energy - Sept Ach/Alliant Energy - Sept Ach/Alliant Energy - Sept Ach/Alliant Energy - Sept Ach/Alliant Energy - Sept Ach/More...
001491	HC	9/30/2017	70,109.21	010 WI Dept. of Revenue Taxpayment-Ach	Dept of Rev-Sept Ach/Dept of Rev-Sept Ach/Dept of Rev-Sept Ach/Dept of Rev-Sept Ach
001492	HC	9/30/2017	2,716.04	001 Delta Dental - Ach	Delta Dental - Sept Ach/Delta Dental - Sept Ach/Delta Dental - Sept Ach/Delta Dental - Sept Ach/Delta Dental - Sept Ach
001493	HC	10/2/2017	10,404.75	020 Wells Fargo Bank-Ach	Client Analysis-Sept Ach/Client Analysis-Sept Ach/Client Analysis-Sept Ach/Client Analysis-Sept Ach/Client Analysis-Sept Ach/Client Analysis-Sept Ach
001494	HC	9/30/2017	7,224.27	008 Payroll State Taxes - Ach	State Taxes-Sept Ach/State Taxes-Sept Ach/State Taxes-Sept Ach/State Taxes-Sept Ach
025141	CK	9/6/2017	15,342.75	290 MID-WEST TREE & EXCAVATION, INC	Midwest-Trenching/Midwest-Trenching/Midwest-Trenching/Midwest-Trenching/Midwest-Trenching/Midwest-Trenching/Midwest-Trenching/Midwest-Trenching/Midwest-Trenching
025142	CK	9/6/2017	843.94	454 GREGORY RICE	G Rice-Construction Refund/G Rice-Construction Refund
025143	CK	9/6/2017	685.78	592 RONALD STEELE	R Steele-Construction Refund/R Steele-Construction Refund
025144	CK	9/6/2017	12.88	324 ELECTRICAL TESTING LAB., LLC.	Elec Testing-Glove Testing/Elec Testing-Glove Testing
025145	CK	9/6/2017	17,049.74	448 STRAND ASSOCIATES INC.	Strand-Ordinance update/Strand-Ordinance update/Strand-Nordic ridge/Strand-Nordic ridge/Strand-Utility const.

Date: Tuesday, October 03, 2017
 Time: 11:14AM
 User: SGUNSOLUS

Stoughton Utilities
Check Register Summary - Standard

Page: 3 of 8
 Report: 03699W.rpt
 Company: 7430

Periods: - Through 00-17 As of: 10/3/2017

Check Nbr	Type	Date	Amount Paid	Vendor ID / Name	Description
025146	CK	9/6/2017	130.95	558 SCOTT HUGGETT	S Huggett-Customer Refund/S Huggett-Customer Refund/S Huggett-Customer Refund/S Huggett-Customer Refund/S Huggett-Customer Refund
025147	CK	9/6/2017	64.87	573 SELECT PORTFOLIO SERVICING, INC.	Select Portfolio-Customer Ref/Select Portfolio-Customer Ref
025148	CK	9/6/2017	93.61	792 SUE PEDERSON	S Pederson-Customer Refund/S Pederson-Customer Refund
025149	CK	9/6/2017	73.23	924 LISA R JOHNSON	L Johnson-Customer refund/L Johnson-Customer refund/L Johnson-Customer refund/L Johnson-Customer refund
025150	CK	9/6/2017	176.77	133 WISCONSIN SCTF	WI SCTF-Support/WI SCTF-Support
025151	CK	9/6/2017	4,985.50	362 UTILITY SERVICE CO., INC	Utility-Qtr tower maint/Utility-Qtr tower maint
025152	CK	9/6/2017	1,398.69	309 HAWKINS, INC.	Hawkins-Supplies/Hawkins-Supplies
025153	CK	9/6/2017	1,004.96	327 BORDER STATES ELECTRIC SUPPLY	Border States-Inventory/Border States-Inventory/Border States-Supplies/Border States-Supplies
025154	CK	9/6/2017	12,847.50	400 RESCO	Resco-Inventory/Resco-Inventory/Resco-Transformers/Resco-Transformers/Resco-Supplies/Resco-Supplies
025155	CK	9/6/2017	38.82	553 ADRIZ PREUSCHL	A Preuschl-Customer Refund/A Preuschl-Customer Refund
025156	CK	9/6/2017	15,775.00	959 G. FOX & SON, INC.	G Fox-Street Water Lateral rep/G Fox-Street Water Lateral rep/G Fox-Water Lateral repairs/G Fox-Water Lateral repairs/G Fox-Water lateral repair/G Fox-Water lateral repair/G Fox-Manhole Repair/G Fox-Manhole Repair/G Fox-Street Leak Repair/More...
025157	CK	9/8/2017	4,088.88	235 PEWAUKEE COFFEE, LLC	Pewaukee-Customer Refund/Pewaukee-Customer Refund
025158	CK	9/8/2017	131.50	257 DIANNA BRADLEY	D Bradley-Customer Refund/D Bradley-Customer Refund

Date: Tuesday, October 03, 2017
 Time: 11:14AM
 User: SGUNSOLUS

Stoughton Utilities
Check Register Summary - Standard

Page: 4 of 8
 Report: 03699W.rpt
 Company: 7430

Periods: - Through 00-17 As of: 10/3/2017

Check Nbr	Type	Date	Amount Paid	Vendor ID / Name	Description
025159	CK	9/13/2017	303.85	110 ROBERT R MILLER	R Miller-Customer Refund/R Miller-Customer Refund/R Miller-Customer Refund/R Miller-Customer Refund/R Miller-Customer Refund
025160	CK	9/13/2017	203.50	186 STAFFORD ROSENBAUM LLC	Stafford-Atty fees/Stafford-Atty fees
025161	CK	9/13/2017	16.45	324 ELECTRICAL TESTING LAB., LLC.	EL Testing-Sleeve Tests/EL Testing-Sleeve Tests
025162	CK	9/13/2017	575.00	335 LUBE E-Z LLC	Lube EZ-Oil/Lube EZ-Oil
025163	CK	9/13/2017	259.75	400 RESCO	Resco-Supplies/Resco-Supplies
025164	CK	9/13/2017	113.06	425 TALLULAH WEST	T West-Customer Refund/T West-Customer Refund
025165	CK	9/13/2017	997.35	451 INSIGHT FS	Insight-Fuel/Insight-Fuel/Insight-Fuel/Insight-Fuel/Insight-Fuel/Insight-Fuel
025166	CK	9/13/2017	288.54	474 WOODWARD COMMUNITY MEDIA	Woodward-Ads/Woodward-Ads/Woodward-Ads/Woodward-Ads
025167	CK	9/13/2017	57.00	584 VINING SPARKS IBG, L.P.	Vining Sparks-Safekeeping/Vining Sparks-Safekeeping
025168	CK	9/13/2017	55.00	673 MULCAHY SHAW WATER	Mulcahy-Class Expense/Mulcahy-Class Expense
025169	CK	9/13/2017	25.00	675 WI STATE LABORATORY OF HYGIENE	Wi State Lab-Fluoride tests/Wi State Lab-Fluoride tests
025170	CK	9/13/2017	193.37	714 AMY HUBERT	A Hubert-Customer Refund/A Hubert-Customer Refund/A Hubert-Customer Refund/A Hubert-Customer Refund/A Hubert-Customer Refund
025171	CK	9/13/2017	2,199.27	781 DUNKIRK WATER POWER CO LLC	Dunkirk-Dunkirk Dam/Dunkirk-Dunkirk Dam
025172	CK	9/13/2017	48,745.26	131 CITY OF STOUGHTON	City Stoton-July Legal Shield/City Stoton-July Legal Shield/City Stoton-Aug Wat Tower rent/City Stoton-Aug Wat Tower rent/City Stoton-Sept Life Ins/City Stoton-Sept Life Ins/City Stoton-August Rent/City Stoton-August Rent/City Stoton-Sept Life Ins+

Date: Tuesday, October 03, 2017
 Time: 11:14AM
 User: SGUNSOLUS

Stoughton Utilities
Check Register Summary - Standard

Page: 5 of 8
 Report: 03699W.rpt
 Company: 7430

Periods: - Through 00-17 As of: 10/3/2017

Check Nbr	Type	Date	Amount Paid	Vendor ID / Name	Description
025173	CK	9/19/2017	3,426.75	327 BORDER STATES ELECTRIC SUPPLY	Border States-Supplies/Border States-Supplies/Border States-Inventory/Border States-Inventory/Border States-Supplies/Border States-Supplies/Border States-Supplies
025174	CK	9/19/2017	11,897.97	400 RESCO	Resco-Inventory/Resco-Inventory/Resco-Transformer/Resco-Transformer/Resco-Transformers/Resco-Transformers/Resco-Supplies/Resco-Supplies/Resco-Supplies/Resco-Supplies
025175	CK	9/19/2017	315.81	405 ROSENBAUM CRUSHING & EXCAV.	Rosenbaum-Dump Fees/Rosenbaum-Dump Fees
025176	CK	9/19/2017	24,859.08	691 ASPLUNDH TREE EXPERTS CO., INC.	Asplundh-Tree Trimming/Asplundh-Tree Trimming/Asplundh-Tree Trimming/Asplundh-Tree Trimming/Asplundh-Tree Trimming/Asplundh-Tree Trimming/Asplundh-Tree Trimming
025177	CK	9/19/2017	5,612.50	727 GLS UTILITY LLC	GLS Utility-August Locates/GLS Utility-August Locates/GLS Utility-August Locates/GLS Utility-August Locates/GLS Utility-August Locates
025178	CK	9/20/2017	72.00	102 ALERE TOXICOLOGY SERVICES, INC.	Alere-Drug Tests/Alere-Drug Tests
025179	CK	9/20/2017	19,053.30	131 CITY OF STOUGHTON	City Stoton-Sept Retirement/City Stoton-Sept Retirement/City Stoton-Sept Retirement/City Stoton-Sept Retirement/City Stoton-Sept Retirement
025180	CK	9/20/2017	176.77	133 WISCONSIN SCTF	WI SCTF-Sept B Support/WI SCTF-Sept B Support
025181	CK	9/26/2017	70,123.14	269 UTILITY SALES AND SERVICE	Utlitiy Sales-Bucket Truck/Utlitiy Sales-Bucket Truck
025182	CK	9/26/2017	1,500.00	284 POSM SOFT LLC	Posm-Annual Maint.
025183	CK	9/26/2017	3,076.87	400 RESCO	Resco-Metering/Resco-Supplies/Resco-Supplies/Resco-Metering/Resco-Supplies/Resco-Supplies/Resco-Inventory/Resco-Inventory/Resco-Supplies/Resco-Supplies/Resco-Supplies/Resco-Supplies/Resco-Supplies

Date: Tuesday, October 03, 2017
 Time: 11:14AM
 User: SGUNSOLUS

Stoughton Utilities
Check Register Summary - Standard

Page: 6 of 8
 Report: 03699W.rpt
 Company: 7430

Periods: - Through 00-17 As of: 10/3/2017

Check Nbr	Type	Date	Amount Paid	Vendor ID / Name	Description
025184	CK	9/26/2017	1,033.00	124 CLEAN GREEN WISCONSIN	Clean Green-Bldg Cleaning/Clean Green-Bldg Cleaning/Clean Green-Bldg Cleaning/Clean Green-Bldg Cleaning/Clean Green-Bldg Cleaning
025185	CK	9/26/2017	30.00	126 DANE COUNTY REGISTER OF DEEDS	Dane Cnty-Register of deeds/Dane Cnty-Register of deeds
025186	CK	9/26/2017	73.15	494 BRUCE ANDRE	B Andre-Customer Refund/B Andre-Customer Refund
025187	CK	9/26/2017	17.47	787 GENE GRYTTHENHOLM	G Gryttenham-Customer Refund/G Gryttenham-Customer Refund
025188	CK	9/26/2017	541.13	858 CASEY HARKINS	C Harkins-Customer Refund/C Harkins-Customer Refund
025189	CK	9/26/2017	167.12	158 JAMES POST	J Post-Customer Refund/J Post-Customer Refund
025190	CK	9/26/2017	3,068.00	290 MID-WEST TREE & EXCAVATION, INC	Midwest-Trenching/Midwest-Trenching/Midwest-Trenching/Midwest-Trenching/Midwest-Trenching/Midwest-Trenching/Midwest-Trenching
025191	CK	9/26/2017	57.00	584 VINING SPARKS IBG, L.P.	Vining Sparks-Safekeeping/Vining Sparks-Safekeeping
025192	CK	9/26/2017	106.92	768 JENNA MAURER & AUSTIN MOSTELLER	J Maurer-Customer Refund/J Maurer-Customer Refund
025193	CK	9/26/2017	320.80	964 STEVE FELIO	S Felio-Customer Refund/S Felio-Customer Refund
025194	CK	9/28/2017	43,552.27	131 CITY OF STOUGHTON	City Stoton-Stormwater/City Stoton-Stormwater
025195	CK	10/2/2017	25.00	956 WI DNR	WI DNR-WW Exams/WI DNR-WW Exams
101517	CK	9/6/2017	114.00	181 BRIAN HOOPS	B Hoops-Class Meals/B Hoops-Class Meals
101518	CK	9/6/2017	2,600.00	463 GREAT-WEST	Great West-Sept A Def Comp/Great West-Sept A Def Comp
101519	CK	9/6/2017	134.00	478 JAMIN FRIEDL	J Friedl-Class Meals/J Friedl-Class Meals
101520	CK	9/6/2017	114.00	499 ROBERT KARDASZ	R Kardasz-Class Meals/R Kardasz-Class Meals
101521	CK	9/6/2017	375.00	731 NORTH SHORE BANK FSB	N Shore Bk-Sept A Def Comp/N Shore Bk-Sept A Def Comp

Date: Tuesday, October 03, 2017
 Time: 11:14AM
 User: SGUNSOLUS

Stoughton Utilities
Check Register Summary - Standard

Page: 7 of 8
 Report: 03699W.rpt
 Company: 7430

Periods: - Through 00-17 As of: 10/3/2017

Check Nbr	Type	Date	Amount Paid	Vendor ID / Name	Description
101522	CK	9/6/2017	22.95	181 BRIAN HOOPS	B Hoops-Transportation/B Hoops-Transportation
101523	CK	9/6/2017	549.75	809 CINTAS CORPORATION #446	Cintas-Clothes Cleaning/Cintas-Clothes Cleaning/Cintas- Clothes cleaning/Cintas- Clothes cleaning/Cintas-Clothes Cleaning/Cintas-Clothes Cleaning/Cintas-Clothes Cleaning/Cintas-Clothes cleaning/Cintas- Clothes cleaning/Cintas- Clothes cleaning/More...
101524	CK	9/6/2017	520.00	995 MEUW	Meuw-Conference/Meuw-Conference
101525	CK	9/12/2017	152.00	525 TYLER HARDING	T Harding-Meal Expenses/T Harding-Meal Expenses
101526	CK	9/20/2017	19,264.99	157 FORSTER ELEC. ENG.,INC.	Forster-Roundabouts/Forster-Roundabouts/Forster-W Substation/Forster-W Substation/Forster-KPW/Forster-KPW/Forster-Scada/Forster-Scada
101527	CK	9/20/2017	44.00	310 HANSON PEST MANAGEMENT	Hanson Pest-Pest Maint.
101528	CK	9/20/2017	2,600.00	463 GREAT-WEST	Great West-Sept B Def Comp/Great West-Sept B Def Comp
101529	CK	9/20/2017	114.00	499 ROBERT KARDASZ	R Kardasz-Awwa conf.
101530	CK	9/20/2017	1,740.00	519 B & H LAWN CARE	B & H-Taylor Ln Mowing/B & H-Taylor Ln Mowing/B & H-Academy St mowing/B & H-Academy St mowing/B & H-South St Sub Mowing/B & H-South St Sub Mowing/B & H-Van Buren mowing/B & H-Van Buren mowing/B & H-Water tower mowing/B & H-Water tower mowing/More...
101531	CK	9/20/2017	114.00	529 SEAN GRADY	S Grady-Awwa Conf.
101532	CK	9/20/2017	375.00	731 NORTH SHORE BANK FSB	N Shore Bank-Sept B Def Comp/N Shore Bank-Sept B Def Comp
101533	CK	9/20/2017	568.58	809 CINTAS CORPORATION #446	Cintas-Bldg Cleaning/Cintas-Clothes Cleaning/Cintas-Clothes Cleaning/Cintas-Clothes Cleaning/Cintas-Bldg Cleaning/Cintas-Clothes Cleaning/Cintas-Bldg Cleaning/Cintas-Clothes Cleaning/Cintas-Clothes Cleaning/Cintas-Clothes Cleaning/More...
101534	CK	9/20/2017	152.00	859 ANDREW RUDER	A Ruder-Lineman School/A Ruder-Lineman School

Date: Tuesday, October 03, 2017
Time: 11:14AM
User: SGUNSOLUS

Stoughton Utilities
Check Register Summary - Standard

Page: 8 of 8
Report: 03699W.rpt
Company: 7430

Periods: - Through 00-17 As of: 10/3/2017

Check Nbr	Type	Date	Amount Paid	Vendor ID / Name	Description
101535	CK	9/20/2017	344.78	880 STEVE HARTMAN	S Hartman-Mileage/S Hartman-Mileage/S Hartman-School/S Hartman-School
101536	CK	9/20/2017	4,855.00	995 MEUW	MEUW-JT&S program/MEUW-JT&S program/MEUW-Seminar Brian H/MEUW-Seminar Brian H
101537	CK	9/28/2017	5,468.38	603 SEERA	Seera-Ctc Funds/Seera-Ctc Funds
101538	CK	9/28/2017	3,630.89	852 INFOSEND, INC	Infosend-Billing & mailing/Infosend-Billing & mailing/Infosend-Billing & mailing/Infosend-Billing & mailing/Infosend-Billing & mailing/Infosend-Billing & mailing
Company Total			1,773,933.44		

Date: Thursday, September 07, 2017

Time: 09:29AM

User: SGUNSOLUS

Stoughton Utilities Posting Preview Report

Select By: {PSSPurchCard.RefNbr} = '0000000076'

Company	Account	Sub	Vendor ID	Merchant	Amount	Description	Post Date	Emp ID	Projec
Import ID: 009010		Import # : 0000000076							
7430	143	000000	604	CDW GOVT #JTL7161	-257.82	RMAD IPAD CASES FROM JULY STATEMENT	08/16/2017	5250	-
7460	828	000000	148	FASTENAL COMPANY01	-17.45	JET VAC CONNECTOR REFUND	08/21/2017	8200	-
7460	833	000000	390	BADGER WATER	33.80	WATER FOR WW LAB	08/01/2017	8300	-
7460	107.14	000000	974	NORTHERN LAKE SERVICE, IN	281.00	STREET DEPT TESTING	08/04/2017	8300	170303XX - 1
7460	833	000000	830	NCL OF WISCONSIN INC	120.49	LAB SUPPLIES	08/08/2017	8300	-
7460	833	000000	907	ENVIRONMENTAL CONSULTING	1,400.00	WET TESTING	08/14/2017	8300	-
7460	833	000000	830	NCL OF WISCONSIN INC	34.63	LAB SUPPLIES	08/15/2017	8300	-
7460	833	000000	937	SPEE-DEE DELIVERY	20.33	SHIPPING FOR SAMPLES	08/21/2017	8300	-
7460	107.14	000000	974	NORTHERN LAKE SERVICE, IN	152.00	STREET DEPT TESTING	08/25/2017	8300	170303XX - 1
7460	833	000000	830	NCL OF WISCONSIN INC	44.78	LAB SUPPLIES	08/28/2017	8300	-
7460	107.14	000000	974	NORTHERN LAKE SERVICE, IN	129.00	STREET DEPT TESTING	08/28/2017	8300	170303XX - 1
7460	833	000000	974	NORTHERN LAKE SERVICE, IN	39.00	WW SAMPLE TESTING	08/31/2017	8300	-
7460	850	000000	894	BANUSHIS BAR & GRILL	43.00	Meeting expense - WW Operator Interviews	08/17/2017	1000	-
7430	921	000000	836	MSFT E0400473QO	30.80	HOSTED MICROSOFT LYNC - MONTHLY	08/03/2017	5250	-
7450	921	000000	836	MSFT E0400473QO	11.20	HOSTED MICROSOFT LYNC - MONTHLY	08/03/2017	5250	-
7460	851	000000	836	MSFT E0400473QO	14.00	HOSTED MICROSOFT LYNC - MONTHLY	08/03/2017	5250	-
7430	903	000000	419	PAYFLOW/PAYPAL	56.87	CC processing - Online MyAccount	08/03/2017	5250	-
7450	903	000000	419	PAYFLOW/PAYPAL	20.47	CC processing - Online MyAccount	08/03/2017	5250	-
7460	840	000000	419	PAYFLOW/PAYPAL	27.30	CC processing - Online MyAccount	08/03/2017	5250	-
7430	233	001099	419	PAYFLOW/PAYPAL	9.11	CC processing - Online MyAccount	08/03/2017	5250	-
7430	903	000000	419	PAYFLOW/PAYPAL	35.67	CC processing - Desktop and recurring	08/03/2017	5250	-
7450	903	000000	419	PAYFLOW/PAYPAL	12.84	CC processing - Desktop and recurring	08/03/2017	5250	-
7460	840	000000	419	PAYFLOW/PAYPAL	17.12	CC processing - Desktop and recurring	08/03/2017	5250	-
7430	233	001099	419	PAYFLOW/PAYPAL	5.72	CC processing - Desktop and recurring	08/03/2017	5250	-
7430	921	000000	604	CDW GOVT #JRP6514	44.99	FIELD IPAD CASES X2	08/07/2017	5250	-
7450	921	000000	604	CDW GOVT #JRP6514	139.06	FIELD IPAD CASES X3	08/07/2017	5250	-
7460	851	000000	604	CDW GOVT #JRP6514	61.35	FIELD IPAD CASES X1	08/07/2017	5250	-
7430	920	000000	994	GLACIER CANYON LLC	99.99	Training expense - WPPI Annual Meeting - Partial Lodging - RKardasz	08/14/2017	5250	-
7430	920	000000	994	GLACIER CANYON LLC	99.99	Training expense - WPPI Annual Meeting - Partial Lodging - BHoops	08/14/2017	5250	-
7430	921	000000	854	DISCOUNT ASP.NET	160.50	SU public website hosting and services - Annual	08/21/2017	5250	-
7450	921	000000	854	DISCOUNT ASP.NET	57.78	SU public website hosting and services - Annual	08/21/2017	5250	-
7460	851	000000	854	DISCOUNT ASP.NET	77.04	SU public website hosting and services - Annual	08/21/2017	5250	-
7430	233	001099	854	DISCOUNT ASP.NET	25.68	SU public website hosting and services - Annual	08/21/2017	5250	-
7430	921	000000	690	RADIOSHACK DEA00019513	47.95	PHONE COVER/SCREEN PROTECTOR	08/02/2017	5200	-
7430	593	000000	108	ASLESON'S TRUE VALUE HDW	8.84	MISC PARTS	08/22/2017	5200	-
7430	594	000000	108	ASLESON'S TRUE VALUE HDW	8.84	MISC PARTS	08/22/2017	5200	-
7460	833	000000	164	THE UPS STORE 3617	141.49	WW LAB SAMPLES SHIPPING	08/07/2017	5275	-
7430	594	000000	436	STOUGHTON LUMBER CO	12.50	LATH FOR UG STAKING	08/14/2017	5275	-
7450	642	000000	974	NORTHERN LAKE SERVICE, IN	16.00	WATER TESTING	08/23/2017	5275	-
7450	642	000000	974	NORTHERN LAKE SERVICE, IN	280.00	WATER TESTING	08/25/2017	5275	-
7450	678	000000	108	ASLESON'S TRUE VALUE HDW	25.98	WATER DEPT TOOLS	08/01/2017	8400	-
7450	673	000000	108	ASLESON'S TRUE VALUE HDW	2.88	BOLT FOR 8 INCH VALVE	08/29/2017	8400	-

Date: Thursday, September 07, 2017

Time: 09:29AM

User: SGUNSOLUS

Stoughton Utilities Posting Preview Report

Select By: {PSSPurchCard.RefNbr} = '0000000076'

Company	Account	Sub	Vendor ID	Merchant	Amount	Description	Post Date	Emp ID	Projec
7430	934	000000	317	CENEX D M SERV07083686	17.60	LP FOR FORKLIFT	08/03/2017	8700	-
7450	934	000000	317	CENEX D M SERV07083686	6.40	LP FOR FORKLIFT	08/03/2017	8700	-
7460	828	000000	317	CENEX D M SERV07083686	8.00	LP FOR FORKLIFT	08/03/2017	8700	-
7430	933	000000	148	FASTENAL COMPANY01	30.89	PARTS FOR TRUCK #15	08/11/2017	8700	-
7450	673	000000	492	HD SUPPLY WATERWORKS 233	176.00	MISC PARTS	08/15/2017	8700	-
7450	232	001099	492	HD SUPPLY WATERWORKS 233	383.00	WATER INVENTORY	08/15/2017	8700	-
7430	933	000000	148	FASTENAL COMPANY01	11.97	PARTS FOR TRUCK #15	08/15/2017	8700	-
7430	934	000000	317	CENEX D M SERV07083686	17.60	LP FOR FORKLIFT	08/17/2017	8700	-
7450	934	000000	317	CENEX D M SERV07083686	6.40	LP FOR FORKLIFT	08/17/2017	8700	-
7460	828	000000	317	CENEX D M SERV07083686	8.00	LP FOR FORKLIFT	08/17/2017	8700	-
7450	624	003505	108	ASLESON'S TRUE VALUE HDW	7.58	WELL #5 BOOSTER PUMP VENT	08/17/2017	8700	-
7450	933	000000	436	STOUGHTON LUMBER CO	27.60	BODY BOARDS TRUCK #6	08/18/2017	8700	-
7450	675	000000	436	STOUGHTON LUMBER CO	79.99	PORTABLE PUMP	08/18/2017	7400	-
7450	675	000000	108	ASLESON'S TRUE VALUE HDW	10.99	TIE DOWNS FOR PORTABLE PUMP	08/23/2017	7400	-
7450	642	000000	108	ASLESON'S TRUE VALUE HDW	11.16	SAMPLE STORAGE BAGS	08/29/2017	7400	-
7460	833	000000	164	THE UPS STORE 3617	138.07	SHIPPING FOR WET TEST	08/01/2017	8710	-
7460	833	000000	994	KWIK TRIP 73900007393	5.97	ICE FOR WET TEST	08/02/2017	8710	-
7460	833	000000	108	ASLESON'S TRUE VALUE HDW	32.33	PLUMBING SUPPLIES	08/02/2017	8710	-
7460	833	000000	164	THE UPS STORE 3617	38.73	SHIPPING FOR WET TESTING	08/03/2017	8710	-
7460	833	000000	994	KWIK TRIP 73900007393	5.97	ICE FOR WET TESTING	08/04/2017	8710	-
7460	834	000000	626	663 STOUGHTON BUMPER TO B	40.24	AIR COMPRESSOR FILTERS	08/30/2017	8710	-
7460	828	000000	626	663 STOUGHTON BUMPER TO B	111.99	BATTERY FOR TRUCK #7	08/31/2017	8710	-
7460	833	000000	108	ASLESON'S TRUE VALUE HDW	17.10	PLUMBING FITTINGS	08/01/2017	8200	-
7460	833	000000	067	SCHAEFFER MANUFACTURING	611.20	GREASE FOR SCREW PUMPS	08/02/2017	8200	-
7460	833	000000	108	ASLESON'S TRUE VALUE HDW	2.49	BUSHING	08/02/2017	8200	-
7460	827	000000	436	STOUGHTON LUMBER CO	75.98	GARAGE DOOR OPENERS	08/07/2017	8200	-
7460	827	000000	994	MAGID GLOVE SAFETY	154.00	DISPOSABLE GLOVES	08/10/2017	8200	-
7460	827	000000	148	FASTENAL COMPANY01	33.78	BATTERIES	08/11/2017	8200	-
7460	828	000000	148	FASTENAL COMPANY01	17.45	JET VAC CONNECTOR	08/11/2017	8200	-
7460	831	000000	571	USA BLUE BOOK	114.04	DYE TABLETS	08/15/2017	8200	-
7460	828	000000	184	LAKESIDE INTERNATIONAL	749.87	JET VAC REPAIR	08/17/2017	8200	-
7430	933	000000	969	PAYPAL SAFETYSIGN	34.20	FUEL TANK LABELS	08/21/2017	8200	-
7450	933	000000	969	PAYPAL SAFETYSIGN	12.43	FUEL TANK LABELS	08/21/2017	8200	-
7460	828	000000	969	PAYPAL SAFETYSIGN	15.56	FUEL TANK LABELS	08/21/2017	8200	-
7460	852	000000	800	CLASS 1 AIR INC	105.00	LAB FUME HOOD TESTING	08/21/2017	8200	-
7460	833	000000	571	USA BLUE BOOK	155.17	SLUDGE JUDGE FINAL/PRIM CLAR.	08/22/2017	8200	-
7460	850	000000	419	PAYPAL WWOA	410.00	WWOA CONFERENCE FEES	08/23/2017	8200	-
7460	833	000000	108	ASLESON'S TRUE VALUE HDW	22.47	PLUMBING FITTINGS	08/24/2017	8200	-
7450	932	000000	526	BATTERIES PLUS 583	419.00	BATTERIES	08/24/2017	8200	-
7460	833	000000	148	FASTENAL COMPANY01	57.59	FASTENAL	08/25/2017	8200	-
7460	851	000000	164	THE UPS STORE 3617	4.95	SHIPPING	08/30/2017	8200	-
7450	932	000000	526	BATTERIES PLUS 583	112.00	BATTERIES	08/30/2017	8200	-
7460	834	000000	969	PAYPAL ROBIDOUXINC	51.95	PAINT BRUSHES	08/31/2017	8200	-
7460	833	000000	550	FIRST SUPPLY WFPG MAD	571.68	PLUMBING SUPPLIES/AIR LINE	08/31/2017	8200	-

Date: Thursday, September 07, 2017

Time: 09:29AM

User: SGUNSOLUS

Stoughton Utilities Posting Preview Report

Select By: {PSSPurchCard.RefNbr} = '0000000076'

Company	Account	Sub	Vendor ID	Merchant	Amount	Description	Post Date	Emp ID	Projec
7460	834	000000	748	SHERWIN WILLIAMS 703833	58.84	PAINT	08/31/2017	8200	-
7460	833	000000	236	WW GRAINGER	156.60	SPILL CONTAINMENT	08/31/2017	8200	-
7450	642	000000	824	UPS 1ZG194WT0336072939	9.40	SHIPPING OF WATER SAMPLES FOR TESTING	08/07/2017	3680	-
7430	921	000000	352	STAPLS7181224551000001	52.60	GENERAL KITCHEN AND JANITORIAL SUPPLIES	08/11/2017	3680	-
7450	921	000000	352	STAPLS7181224551000001	19.12	GENERAL KITCHEN AND JANITORIAL SUPPLIES	08/11/2017	3680	-
7460	851	000000	352	STAPLS7181224551000001	23.92	GENERAL KITCHEN AND JANITORIAL SUPPLIES	08/11/2017	3680	-
7450	642	000000	824	UPS 1ZG194WT0329203140	11.67	SHIPPING OF WATER SAMPLES FOR TESTING	08/14/2017	3680	-
7430	921	000000	352	STAPLS7181354505000001	43.98	MAPPING PRINTER INK	08/14/2017	3680	-
7450	921	000000	352	STAPLS7181354505000001	15.99	MAPPING PRINTER INK	08/14/2017	3680	-
7460	851	000000	352	STAPLS7181354505000001	20.01	MAPPING PRINTER INK	08/14/2017	3680	-
7430	921	000000	889	PITNEY BOWES PI	23.81	General mailing supplies	08/14/2017	3680	-
7450	921	000000	889	PITNEY BOWES PI	8.57	General mailing supplies	08/14/2017	3680	-
7460	851	000000	889	PITNEY BOWES PI	11.43	General mailing supplies	08/14/2017	3680	-
7430	233	001099	889	PITNEY BOWES PI	3.82	General mailing supplies	08/14/2017	3680	-
7430	921	000000	994	KWIK TRIP 73900007393	6.25	Meeting expense - Conference room supplies	08/14/2017	3680	-
7450	921	000000	994	KWIK TRIP 73900007393	2.27	Meeting expense - Conference room supplies	08/14/2017	3680	-
7460	851	000000	994	KWIK TRIP 73900007393	2.85	Meeting expense - Conference room supplies	08/14/2017	3680	-
7430	921	000000	352	STAPLS7181422243000001	168.43	TONER AND GENERAL OFFICE SUPPLIES	08/14/2017	3680	-
7450	921	000000	352	STAPLS7181422243000001	60.63	TONER AND GENERAL OFFICE SUPPLIES	08/14/2017	3680	-
7460	851	000000	352	STAPLS7181422243000001	80.84	TONER AND GENERAL OFFICE SUPPLIES	08/14/2017	3680	-
7430	233	001099	352	STAPLS7181422243000001	26.97	TONER AND GENERAL OFFICE SUPPLIES	08/14/2017	3680	-
7450	642	000000	824	UPS 1ZG194WT0318219010	9.40	SHIPPING OF WATER SAMPLES FOR TESTING	08/14/2017	3680	-
7430	920	000000	601	FOSDAL BAKERY LLC	4.67	Meeting expense - Utilities Committee	08/16/2017	3680	-
7450	920	000000	601	FOSDAL BAKERY LLC	1.70	Meeting expense - Utilities Committee	08/16/2017	3680	-
7460	850	000000	601	FOSDAL BAKERY LLC	2.13	Meeting expense - Utilities Committee	08/16/2017	3680	-
7450	642	000000	824	UPS 1ZG194WT0325771150	9.40	SHIPPING OF WATER SAMPLES FOR TESTING	08/21/2017	3680	-
7430	920	000000	089	MUNICIPAL ELECTRIC UTILIT	110.00	Training expense - Registration - MEUW Accounting and Customer Service - ξ	08/23/2017	3680	-
7450	920	000000	089	MUNICIPAL ELECTRIC UTILIT	40.00	Training expense - Registration - MEUW Accounting and Customer Service - ξ	08/23/2017	3680	-
7460	850	000000	089	MUNICIPAL ELECTRIC UTILIT	50.00	Training expense - Registration - MEUW Accounting and Customer Service - ξ	08/23/2017	3680	-
7430	926	000000	841	FARM & FLEET OF MADISON	159.99	SAFTEY BOOTS	08/07/2017	6910	-
7450	677	000000	245	DAVIES WATER #1479	651.00	HYDRANT PARTS	08/09/2017	4000	-
7430	932	000000	322	IN SUNDANCE BIOCLEAN, IN	137.50	ADMIN BLDG CLEANING	08/11/2017	4000	-
7450	932	000000	322	IN SUNDANCE BIOCLEAN, IN	50.00	ADMIN BLDG CLEANING	08/11/2017	4000	-
7460	834	000000	322	IN SUNDANCE BIOCLEAN, IN	62.50	ADMIN BLDG CLEANING	08/11/2017	4000	-
7450	920	000000	105	AWWA.ORG	20.00	AWWA MEMBER DUES	08/21/2017	4000	-
7430	934	000000	975	VERMEER-WISCONSIN #1	208.86	PARTS FOR CHIPPER MAINT.	08/25/2017	4000	-
7450	107.14	000000	354	HYDRO DESIGNS	1,000.00	CROSS CONNECTION	08/30/2017	4000	170901XX - 1
7450	920	000000	994	WISCONSIN AWWA	235.00	AWWA ANNUAL CONFERENCE	08/31/2017	4000	-
7430	593	000000	894	CVTC CHIPPEWA CAMPUS	352.06	CLASS REGISTRATION	08/17/2017	6940	-
7430	594	000000	894	CVTC CHIPPEWA CAMPUS	352.06	CLASS REGISTRATION	08/17/2017	6940	-
7430	593	000000	994	CVTC CONTINUING ED	275.00	OH HOT LINE CLASS	08/18/2017	6940	-
7430	593	000000	994	CVTC CONTINUING ED	95.00	APPARATUS WORKSHOP	08/18/2017	6940	-
7430	594	000000	994	CVTC CONTINUING ED	95.00	APPARATUS WORKSHOP	08/18/2017	6940	-
7430	593	000000	317	CENEX D M SERV07083686	8.50	PROPANE FOR TORCHES	08/29/2017	6940	-

Date: Thursday, September 07, 2017

Time: 09:29AM

User: SGUNSOLUS

Stoughton Utilities

Posting Preview Report

Select By: {PSSPurchCard.RefNbr} = '0000000076'

Company	Account	Sub	Vendor ID	Merchant	Amount	Description	Post Date	Emp ID	Projec
7430	232	001099	134	CRESCENT ELECTRIC 087	114.00	ELECTRIC INVENTORY	08/01/2017	4100	-
7430	232	001099	355	STUART C IRBY	204.00	ELECTRIC INVENTORY	08/03/2017	4100	-
7430	232	001099	355	STUART C IRBY	160.97	ELECTRIC INVENTORY	08/03/2017	4100	-
7430	232	001099	355	STUART C IRBY	581.35	ELECTRIC INVENTORY	08/08/2017	4100	-
7430	594	000000	355	STUART C IRBY	390.00	TRANSFORMER LEADS	08/08/2017	4100	-
7430	107.14	000000	327	BORDER STATES ELECTRIC	3,933.75	ETHERNET FIBER	08/11/2017	4100	160200XX - 1
7430	232	001099	134	CRESCENT ELECTRIC 087	1,856.18	ELECTRIC INVENTORY	08/15/2017	4100	-
7430	232	001099	355	STUART C IRBY	49.00	ELECTRIC INVENTORY SHIPPING	08/16/2017	4100	-
7430	232	001099	355	STUART C IRBY	131.00	ELECTRIC INVENTORY	08/16/2017	4100	-
7430	232	001099	355	STUART C IRBY	12,495.76	ELECTRIC INVENTORY	08/16/2017	4100	-
7430	232	001099	355	STUART C IRBY	7.29	ELECTRIC INVENTORY SHIPPING	08/16/2017	4100	-
7430	232	001099	355	STUART C IRBY	49.00	ELECTRIC INVENTORY	08/16/2017	4100	-
7430	593	000000	327	BORDER STATES ELECTRIC	502.14	STIRRUP CLAMPS	08/17/2017	4100	-
7430	232	001099	355	STUART C IRBY	4.79	ELECTRIC INVENTORY SHIPPING	08/18/2017	4100	-
7430	593	000000	355	STUART C IRBY	390.00	WEDGE AND LINE CLAMPS	08/18/2017	4100	-
7430	232	001099	355	STUART C IRBY	70.00	ELECTRIC INVENTORY	08/18/2017	4100	-
7450	673	000000	492	HD SUPPLY WATERWORKS 233	41.50	MISC PARTS	08/18/2017	4100	-
7450	232	001099	492	HD SUPPLY WATERWORKS 233	604.00	WATER INVENTORY	08/18/2017	4100	-
7430	595	000000	994	J HARLEN CO INC	85.19	TRANSFORMER ROPE SLING	08/18/2017	4100	-
7430	932	000000	786	NAPA PARTS - SNP 0027410	25.67	SHOP TOWELS	08/21/2017	4100	-
7430	593	000000	786	NAPA PARTS - SNP 0027410	468.26	SAFETY SUPPLIES	08/21/2017	4100	-
7430	232	001099	355	STUART C IRBY	60.00	ELECTRIC INVENTORY SHIPPING	08/21/2017	4100	-
7430	934	000000	994	CAPITAL EQUIPMENT	37.95	FORKLIFT MAINT.	08/22/2017	4100	-
7450	934	000000	994	CAPITAL EQUIPMENT	13.80	FORKLIFT MAINT.	08/22/2017	4100	-
7460	828	000000	994	CAPITAL EQUIPMENT	17.25	FORKLIFT MAINT.	08/22/2017	4100	-
7430	932	000000	994	AMAZON MKTPLACE PMTS	25.24	BATHROOM SUPPLIES	08/23/2017	4100	-
7450	932	000000	994	AMAZON MKTPLACE PMTS	9.18	BATHROOM SUPPLIES	08/23/2017	4100	-
7460	834	000000	994	AMAZON MKTPLACE PMTS	11.48	BATHROOM SUPPLIES	08/23/2017	4100	-
7430	932	000000	422	AMAZON.COM	18.54	GARAGE DOOR LUBE	08/24/2017	4100	-
7450	932	000000	422	AMAZON.COM	6.74	GARAGE DOOR LUBE	08/24/2017	4100	-
7460	834	000000	422	AMAZON.COM	8.44	GARAGE DOOR LUBE	08/24/2017	4100	-
7430	232	001099	134	CRESCENT ELECTRIC 087	79.50	ELECTRIC INVENTORY	08/30/2017	4100	-
7450	673	000000	492	HD SUPPLY WATERWORKS 233	29.00	8 INCH FLANGE GASKET	08/30/2017	4100	-

Total: 35,717.85

DRAFT STOUGHTON UTILITIES COMMITTEE REGULAR MEETING MINUTES

Monday, September 25, 2017 – 5:00 p.m.

Stoughton, WI

Page No. 1

Location: Edmund T. Malinowski Board Room
Stoughton Utilities Administration Office
600 South Fourth Street
Stoughton, Wisconsin, 53589

Members Present: Alderperson Matt Bartlett, Alderperson Michael Engelberger, Citizen Member David Erdman, Citizen Member John Kallas, Mayor Donna Olson, and Citizen Member Alan Staats

Excused: Alderperson Pat O'Connor

Absent: None

Others Present: Stoughton Utilities Wastewater System Supervisor Brian Erickson, Stoughton Utilities Finance Manager Jamin Friedl, CPA, Stoughton Utilities Assistant Director Brian Hoops, Stoughton Utilities Director Robert Kardasz, P.E., and Stoughton Utilities Water and Wastewater Operator/Meter Technician Martin Seffens

Call to Order: Mayor Donna Olson called the Regular Stoughton Utilities Committee Meeting to order at 5:02 p.m.

Utilities Committee Consent Agenda: Stoughton Utilities Director Robert Kardasz and Stoughton Utilities Assistant Director Brian Hoops presented and discussed the Stoughton Utilities Committee consent agenda items. Discussion followed.

Motion by Alderperson Michael Engelberger, the motion seconded by Citizen Member Alan Staats, to approve the following consent agenda items as presented: Stoughton Utilities Payments Due List, Draft Minutes of the August 14, 2017 Regular Stoughton Utilities Committee Meeting, Stoughton Utilities July 2017 Financial Summary, Stoughton Utilities July 2017 Statistical Information, Stoughton Utilities August 2017 Activities Report, Utilities Committee Annual Calendar, and Communications. The motion carried unanimously 5 to 0.

Status of the Utilities Committee recommendation(s) to the Stoughton Common Council:

Stoughton Utilities Director Robert Kardasz presented and discussed the following items from the Stoughton Utilities Committee that were approved and/or placed on file by the Stoughton Common Council:

- Stoughton Utilities Payments Due List Report
- Stoughton Utilities Committee July 17, 2017 Regular Meeting Minutes
- Stoughton Utilities June 2017 Financial Summary
- Stoughton Utilities June 2017 Statistical Information

Citizen Member David Erdman arrived at the meeting at 5:06 p.m.

DRAFT STOUGHTON UTILITIES COMMITTEE REGULAR MEETING MINUTES

Monday, September 25, 2017 – 5:00 p.m.

Stoughton, WI

Page No. 2

Proposed 2018 budget and five year (2018-2022) Capital Improvement Plan (CIP): Stoughton Utilities Director Robert Kardasz and Stoughton Utilities Finance Manager Jamin Friedl presented and discussed the proposed 2018 Stoughton Utilities budget. Discussion followed. Motion by Alderperson Michael Engelberger, the motion seconded by Citizen Member David Erdman, to approve the Stoughton Utilities 2018 budget and recommend its approval to the Stoughton Common Council. The motion carried unanimously 6 to 0.

Stoughton Utilities Director Robert Kardasz presented and discussed the proposed 2018 five year Capital Improvement Plan (CIP). Discussion followed. Motion by Alderperson Michael Engelberger, the motion seconded by Citizen Member David Erdman, to approve the Stoughton Utilities 2018 five year (2018-2022) Capital Improvement Plan (CIP) and recommend its approval to the Stoughton Common Council. The motion carried unanimously 6 to 0.

Utilities Committee future agenda items:

- Stoughton Utilities Round-Up program eligibility
- Stoughton Utilities Draft Wisconsin Department of Natural Resources Wisconsin Pollutant Discharge Elimination System (WPDES) Wastewater Treatment Facility Permit status.
- Tour of the Stoughton Utilities Wastewater Treatment Facility.

Adjournment: Motion by Citizen Member David Erdman, the motion seconded by Citizen Member John Kallas, to adjourn the Regular Stoughton Utilities Committee Meeting at 5:56 p.m. The motion carried unanimously 6 to 0.

Respectfully submitted

Brian R. Hoops
Stoughton Utilities Assistant Director

Stoughton Utilities

Financial Summary

August 2017-YTD

Highlights-Comparison to prior month

I have no concerns with the utility's financial status. The following items are meant to illustrate significant changes in the financial summary from prior periods.

Overall Summary:

- The August 2017 results are reasonable in comparison to the July 2017 and August 2016 results. Detailed analysis is provided below.

Electric Summary:

- Electric sales decreased \$101,000 compared to July due to a 7% decrease in consumption
- Purchased power costs decreased \$74,800 compared to July due to a 14% decrease in kWh purchased
- Operating expenses decreased \$41,100 compared to July mainly due to the fact the health insurance costs were double in July because the City did not invoice them timely
- Amounts in Construction in Progress to date that will be expensed at year-end:

\$ 122,000

Water Summary:

- Water sales increased \$9,600 compared to July due to a 14% increase in consumption
- Operating expenses decreased \$18,000 compared to July mainly due to the fact the health insurance costs were double in July because the City did not invoice them timely along with decreases in pump maintenance expenses and chemical purchases
- Amounts in Construction in Progress to date that will be expensed at year-end:

\$ 28,000

Wastewater Summary:

- Wastewater sales increased \$3,900 compared to July due to a 4% increase in gallons billed
- Other operating income decreased \$6,700 compared to July due to approximately \$2,500 in June surcharges being billed in July
- Operating expenses decreased \$6,700 compared to July mainly due to the fact the health insurance costs were double in July because the City did not invoice them timely

Submitted by:
Jamin Friedl, CPA

STOUGHTON UTILITIES

Balance Sheets

As of August 31, 2017

	<u>Electric</u>	<u>Water</u>	<u>Wastewater</u>	<u>Combined</u>
Assets				
Cash & Investments	\$ 9,059,280	\$ 1,638,547	\$ 2,882,518	\$ 13,580,344
Customer A/R	1,849,210	201,549	197,974	2,248,734
Other A/R	143,177	17,308	20,321	180,807
Other Assets	1,054,799	468,320	275,410	1,798,529
Plant in Service	25,902,859	14,806,545	28,936,398	69,645,801
Accumulated Depreciation	(13,620,704)	(5,154,201)	(10,774,047)	(29,548,952)
Plant in Service - CIAC	3,373,716	7,378,544	-	10,752,260
Accumulated Depreciation-CIAC	(1,618,274)	(1,992,232)	-	(3,610,506)
Construction Work in Progress	995,177	401,018	362,200	1,758,395
GASB 68 Deferred Outflow	575,914	206,806	227,166	1,009,886
Total Assets	<u>\$ 27,715,155</u>	<u>\$ 17,972,204</u>	<u>\$ 22,127,939</u>	<u>\$ 67,815,298</u>
Liabilities + Net Assets				
Accounts Payable	\$ 89,916	\$ 63,948	\$ 45,096	\$ 198,960
Payable to City of Stoughton	684,337	677,283	5,843	1,367,463
Interest Accrued	53,221	43,780	42,863	139,864
Other Liabilities	577,127	86,521	124,351	787,999
Long-Term Debt	5,771,571	3,079,385	5,026,967	13,877,924
Net Assets	20,317,737	13,943,340	16,795,425	51,056,502
GASB 68 Deferred Inflow	221,246	77,947	87,394	386,587
Total Liabilities + Net Assets	<u>\$ 27,715,155</u>	<u>\$ 17,972,204</u>	<u>\$ 22,127,939</u>	<u>\$ 67,815,298</u>

STOUGHTON UTILITIES

Year-to-Date Combined Income Statement
August 2017

	Electric	Water	Wastewater	Total
<i>Operating Revenue:</i>				
Sales	\$ 10,221,806	\$ 1,347,442	\$ 1,313,708	\$ 12,882,955
Other	99,443	43,304	56,741	199,487
<i>Total Operating Revenue:</i>	\$ 10,321,249	\$ 1,390,745	\$ 1,370,448	\$ 13,082,442
<i>Operating Expense:</i>				
Purchased Power	7,835,804	-	-	7,835,804
Expenses (Including Taxes)	1,036,736	594,412	631,874	2,263,022
PILOT	264,000	280,664	-	544,664
Depreciation	663,904	307,136	543,336	1,514,376
<i>Total Operating Expense:</i>	\$ 9,800,443	\$ 1,182,212	\$ 1,175,210	\$ 12,157,866
<i>Operating Income</i>	\$ 520,805	\$ 208,533	\$ 195,238	\$ 924,576
Non-Operating Income	345,307	44,108	55,107	444,522
Non-Operating Expense	(89,119)	(62,664)	(90,000)	(241,783)
<i>Net Income</i>	\$ 776,993	\$ 189,977	\$ 160,345	\$ 1,127,315

STOUGHTON UTILITIES

Year-to-Date Combined Income Statement
August 2016

	Electric	Water	Wastewater	Total
<i>Operating Revenue:</i>				
Sales	\$ 10,047,667	\$ 1,282,852	\$ 1,340,496	\$ 12,671,015
Other	115,642	\$ 50,850	\$ 26,328	192,820
<i>Total Operating Revenue:</i>	\$ 10,163,309	\$ 1,333,702	\$ 1,366,824	\$ 12,863,835
<i>Operating Expense:</i>				
Purchased Power	7,749,846	-	-	7,749,846
Expenses (Including Taxes)	1,021,339	519,001	636,857	2,177,197
PILOT	297,195	253,336	-	550,531
Depreciation	632,936	286,136	546,664	1,465,736
<i>Total Operating Expense:</i>	\$ 9,701,316	\$ 1,058,473	\$ 1,183,521	\$ 11,943,310
<i>Operating Income</i>	\$ 461,993	\$ 275,229	\$ 183,303	\$ 920,525
Non-Operating Income	351,039	13,524	13,287	377,850
Non-Operating Expense	(93,112)	(114,478)	(113,336)	(320,926)
<i>Net Income</i>	\$ 719,920	\$ 174,275	\$ 83,254	\$ 977,449

STOUGHTON UTILITIES
Detailed Monthly Income Statements
August 2017

ELECTRIC

	August 2017	July 2017	Change from Prior Month	August 2016
<i>Operating Revenue:</i>				
Sales	\$ 1,551,252	\$ 1,652,171	\$ (100,919)	\$ 1,501,188
Other	1,143	694	449	3,767
<i>Total Operating Revenue:</i>	\$ 1,552,396	\$ 1,652,865	\$ (100,470)	\$ 1,504,955
<i>Operating Expense:</i>				
Purchased Power	1,241,701	1,316,530	(74,829)	1,174,773
Expenses (Including Taxes)	82,548	123,675	(41,127)	111,646
PILOT	33,000	33,000	-	32,083
Depreciation	82,988	82,988	-	79,117
<i>Total Operating Expense:</i>	\$ 1,440,237	\$ 1,556,193	\$ (115,957)	\$ 1,397,619
<i>Operating Income</i>	\$ 112,159	\$ 96,672	\$ 15,487	\$ 107,336
Non-Operating Income	20,078	26,182	(6,104)	15,224
Non-Operating Expense	(10,594)	(11,988)	1,395	(11,251)
<i>Net Income</i>	\$ 121,643	\$ 110,866	\$ 10,777	\$ 111,309

WATER

	August 2017	July 2017	Change from Prior Month	August 2016
<i>Operating Revenue:</i>				
Sales	\$ 176,763	\$ 167,137	\$ 9,626	\$ 173,717
Other	5,280	5,148	132	5,552
<i>Total Operating Revenue:</i>	\$ 182,043	\$ 172,284	\$ 9,759	\$ 179,269
<i>Operating Expense:</i>				
Expenses (Including Taxes)	64,111	82,154	(18,043)	(10,288)
PILOT	35,083	35,083	-	31,667
Depreciation	38,392	38,392	-	35,767
<i>Total Operating Expense:</i>	\$ 137,586	\$ 155,629	\$ (18,043)	\$ 57,146
<i>Operating Income</i>	\$ 44,457	\$ 16,655	\$ 27,802	\$ 122,123
Non-Operating Income	3,662	8,189	(4,527)	1,000
Non-Operating Expense	(7,833)	(7,833)	-	(8,334)
<i>Net Income</i>	\$ 40,287	\$ 17,011	\$ 23,275	\$ 114,789

WASTEWATER

	August 2017	July 2017	Change from Prior Month	August 2016
<i>Operating Revenue:</i>				
Sales	\$ 168,280	\$ 164,351	\$ 3,930	\$ 170,912
Other	5,934	12,671	(6,737)	3,527
<i>Total Operating Revenue:</i>	\$ 174,214	\$ 177,022	\$ (2,807)	\$ 174,439
<i>Operating Expense:</i>				
Expenses (Including Taxes)	67,819	74,530	(6,711)	64,073
Depreciation	67,917	67,917	-	68,333
<i>Total Operating Expense:</i>	\$ 135,736	\$ 142,447	\$ (6,711)	\$ 132,406
<i>Operating Income</i>	\$ 38,478	\$ 34,575	\$ 3,903	\$ 42,033
Non-Operating Income	(340)	13,621	(13,961)	1,000
Non-Operating Expense	(11,250)	(11,250)	-	(14,167)
<i>Net Income</i>	\$ 26,888	\$ 36,946	\$ (10,057)	\$ 28,866

STOUGHTON UTILITIES

Rate of Return

Year-to-Date August 2017

	Electric	Water
Operating Income (Regulatory)	\$ 520,805	\$ 208,533
Average Utility Plant in Service	25,168,597	14,650,252
Average Accumulated Depreciation	(13,135,922)	(4,932,083)
Average Materials and Supplies	191,340	35,210
Average Regulatory Liability	(144,044)	(222,486)
Average Customer Advances	(59,092)	-
Average Net Rate Base	\$ 12,020,879	\$ 9,530,892
August 2017 Rate of Return	4.33%	2.19%
August 2016 Rate of Return	3.88%	3.37%
December 2016 Rate of Return	4.95%	3.46%
Authorized Rate of Return	5.00%	6.50%

STOUGHTON UTILITIES
Cash and Investments Summary
As of August 31, 2017

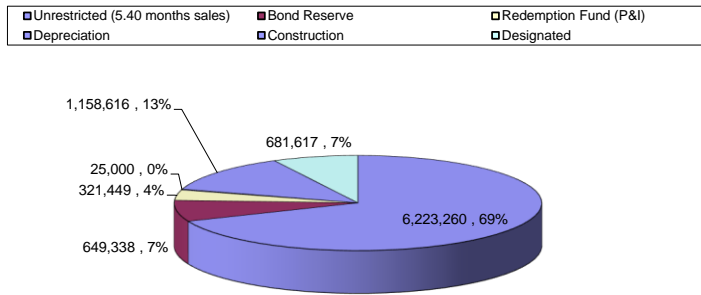
Electric

August 2017

Unrestricted (5.40 months sales)	6,223,260
Bond Reserve	649,338
Redemption Fund (P&I)	321,449
Depreciation	25,000
Construction	1,158,616
Designated	681,617
Total	<u>9,059,280</u>

Note - City has not invoiced the 2016 PILOT yet which reduces the ratio to 5.11 months

Electric Cash - August 2017



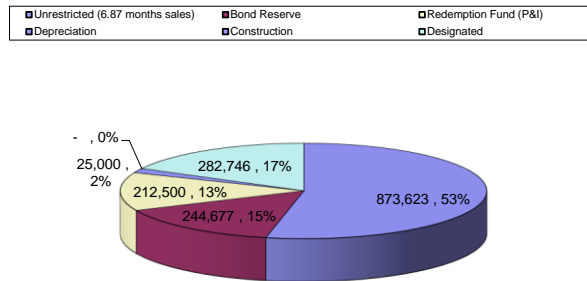
Water

August 2017

Unrestricted (6.87 months sales)	873,623
Bond Reserve	244,677
Redemption Fund (P&I)	212,500
Depreciation	25,000
Construction	-
Designated	282,746
Total	<u>1,638,546</u>

Note - City has not invoiced the 2016 PILOT yet which reduces the ratio to 4.56 months

Water Cash - August 2017

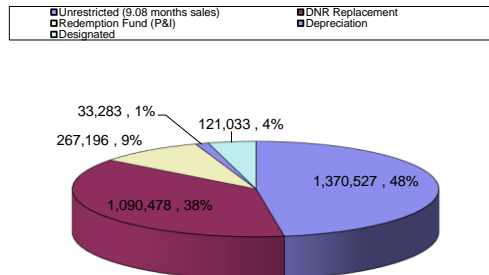


Wastewater

August 2017

Unrestricted (9.08 months sales)	1,370,527
DNR Replacement	1,090,478
Redemption Fund (P&I)	267,196
Depreciation	33,283
Designated	121,033
Total	<u>2,882,517</u>

Wastewater Cash - August 2017



STOUGHTON UTILITIES
2017 Statistical Worksheet

Electric	Total Sales 2016 kWh	Total kWh Purchased 2016	Total Sales 2017 kWh	Total kWh Purchased 2017	Demand Peak 2016	Demand Peak 2017
January	12,434,016	12,616,291	12,379,222	12,812,545	23,731	23,662
February	11,135,691	11,327,318	10,691,419	10,759,773	21,504	21,934
March	10,581,639	10,809,478	11,785,378	11,607,813	20,668	20,399
April	9,868,197	10,133,681	9,553,672	10,048,660	18,242	18,091
May	10,526,624	10,568,931	10,496,558	10,622,971	20,689	21,934
June	12,461,104	12,841,397	12,732,532	12,662,125	29,731	32,720
July	13,984,983	14,358,016	13,227,532	13,912,583	32,378	30,828
August	14,391,132	14,795,716	12,288,406	12,624,031	32,246	28,159
September						
October						
November						
December						
TOTAL	95,383,386	97,450,828	93,154,719	95,050,501		

Water	Total Sales 2016 Gallons	Total Gallons Pumped 2016	Total Sales 2017 Gallons	Total Gallons Pumped 2017	Max Daily High 2016	Max Daily Highs 2017
January	38,657,000	42,976,000	37,110,000	43,748,000	1,642,000	1,629,000
February	37,426,000	40,703,000	34,905,000	41,145,000	1,877,000	1,780,000
March	38,688,000	42,714,000	38,893,000	40,725,000	1,745,000	1,542,000
April	36,824,000	40,784,000	33,884,000	39,290,000	1,618,000	2,105,000
May	40,240,000	43,744,000	38,370,000	41,634,000	1,754,000	1,732,000
June	41,868,000	49,688,000	41,534,000	46,477,000	2,310,000	1,876,000
July	41,277,000	52,189,000	37,083,000	43,980,000	2,216,000	2,057,000
August	41,673,000	46,456,000	42,326,000	45,656,000	1,900,000	1,839,000
September						
October						
November						
December						
TOTAL	316,653,000	359,254,000	304,105,000	342,655,000		

Wastewater	Total Sales 2016 Gallons	Total Treated Gallons 2016	Total Sales 2017 Gallons	Total Treated Gallons 2017	Precipitation 2016	Precipitation 2017
January	26,559,000	29,125,000	25,221,000	33,337,000	0.55	2.43
February	23,957,000	26,577,000	23,196,000	27,663,000	0.64	1.34
March	25,438,000	30,379,000	26,255,000	29,882,000	4.07	2.69
April	25,232,000	30,654,000	23,309,000	32,828,000	1.96	6.80
May	27,412,000	30,376,000	26,366,000	34,190,000	3.04	3.62
June	26,768,000	29,147,000	28,445,000	34,688,000	5.64	7.55
July	27,893,000	31,955,000	25,129,000	40,536,000	4.77	6.60
August	26,931,000	32,189,000	26,126,000	36,658,000	5.80	3.99
September						
October						
November						
December						
TOTAL	210,190,000	240,402,000	204,047,000	269,782,000	26.47	35.02



Stoughton Utilities Activities Report September 2017

Administration

Robert P. Kardasz, P.E.
Utilities Director

During September, the Utilities Director participated in a Utilities Committee meeting, a Personnel Committee meeting, a Common Council meeting, a Claims Review Committee meeting, a potential TIF effort conference call, and two meetings with our electric engineering consultants regarding the West Substation. Also during September, the Director attended hazardous communications safety training, a desktop emergency planning exercise conducted by Dane County Emergency Management Department, the WPPI Energy Annual Meeting, and the Wisconsin Section of the American Waterworks Annual meeting.

Stoughton Utilities was proud to host an in-district meeting with Wisconsin Senator Mark Miller, along with Sun Prairie Utilities, WPPI Energy, and members of the Stoughton Utilities Committee members, and Stoughton Utilities staff. SU also welcomes our newest employee, Wastewater Operator Mark Bakken.

Technical Operations Division

Brian R. Hoops
Assistant Utilities Director

Customer Payments: Staff processed 8,862 payments totaling \$1.97 million, including 1,691 checks, 1,762 lockbox payments, 1,096 credit cards, 1,329 *My Account* online payments, 2,033 automated bank withdrawals, 737 direct bank payments, and \$26,800 in cash.

Delinquent Collections: As of September 1, there were 1,892 active accounts carrying delinquent balances totaling nearly \$320,000, and 122 final-billed accounts carrying delinquent balances totaling over \$19,200. Of the total amount delinquent, \$43,300 was 30 or more days past due. SU will continue to pursue electric service disconnections for delinquent customers through November 1, which marks the beginning of the cold weather disconnection moratorium.

- Throughout the month of September, we mailed out 10-day notices of pending disconnection to 705 customers with delinquent balances.
- On September 25, we delivered automated phone calls to 317 customers providing a 48-hour notice of pending service disconnection.
- On September 26, we delivered automated phone calls to 143 customers providing a 24-hour final notice of pending service disconnection.
- On September 27, we disconnected electric service to seven customers that remained severely delinquent. Of those, four remain disconnected due to continued non-payment.

We ended the month of September with \$49,710 remaining 30 or more days past-due. For comparison, 30+ day delinquencies are 19% lower than this time last year (\$61,337).

Energy Assistance: During the month of September, energy assistance (EA) payments for three customers totaling \$608 were received from the State of Wisconsin Public Benefits Program and applied to customer accounts to assist low-income customers with their home cooling expenses.

The Public Benefits Program has begun to accept customer applications for energy assistance for the 2017-18 heating season, and staff has been busy providing EA staff with the customer electric usage data used to calculate the customer's benefit. Payments will begin being dispersed by the state and applied to customer accounts in late-October or early-November.

GIS Geometric Networks: Work continued on the planning for the creation of our GIS geometric network for the electric distribution system. Staff met with an outside consulting engineering firm to formulate a partnership that will provide in-house staff with the tools and knowledge needed to formulate a development roadmap, an analysis of the upcoming ESRI Utility Network model, and an analysis of existing SU data.

PCI Compliance: Staff completed our annual PCI compliance filing (Payment Card Industry Data Security Standard). As part of the filing, our data security and emergency response policies were reviewed and updated, and all staff that handles financial data completed training refreshers on cyber, physical, and information security; secure data handling; password and web browsing security; and more. By remaining PCI DSS compliant, we receive reduced credit card processing fees from our merchant bank.

SU processes over 12,000 customer credit card transactions each year, so secure handling of this data is imperative.

SCADA Infrastructure and Software Upgrade Project: Work continued on the electric SCADA upgrade project. Programming and implementation staff from OSI were onsite for a week to configure the three servers that form the SCADA system, create and establish points, configure alarms, create the system processing, historical, and trending databases, and more. The Site Acceptance Testing was completed at the end of the onsite week, which marks the end of OSI's major involvement in the SCADA project.

Our engineering consultant was also onsite to work with OSI, as well as continuing to perform system upgrades and configurations at the substations. The implementation project has been delayed due to a longer than anticipated lead-times by the hardware providers and the company selected to perform the panel assembly in the substation cabinets. We are currently awaiting the arrival of the cabinets for installation, which will provide us with the last pieces needed to complete the system implementation.

Senator Mark Miller: Stoughton Utilities hosted an in-district meeting with Wisconsin Senator Mark Miller. Several members of SU staff participated, along with staff from Sun Prairie Utilities and WPPI Energy, Mayor Donna Olson, and Utilities Committee members Dave Erdman and Alderman Matt Bartlett. Numerous topics relevant to the electric, water, and wastewater utilities were discussed, including ongoing projects and proposed legislation. The meeting was an important opportunity to provide our elected officials at the state level with knowledge of the local Public Power communities in their district.

Training and Meetings: Brian participated in several internal meetings regarding the 2018 budget and CIP; attended meetings of the City of Stoughton Common Council, Utilities Committee, and Committee of the Whole; attended the WPPI Energy Annual Conference and meeting of the Board of Directors; participated in meetings with our engineering consultant to discuss the ongoing easement acquisition for the new West substation and SCADA system implementation; and met with Senator Mark Miller.

Brandi Yungen, our Customer Service Technician, attended a two-day Northstar Customer Information System (CIS) "Bootcamp" training course, which touched on all areas of the CIS and provided both review and advanced training.

Brandi and Shannon Gunsolus, Accountant II, attended the annual Account & Customer Service Seminar provided by Municipal Electric Utilities of Wisconsin (MEUW), which presented topics ranging from the open records law, cash handling and auditing policies, utility customer service, and Public Service Commission (PSC) accounting and customer service requirements.

Shannon also participated in a webinar provided by WPPI Energy discussing upcoming changes to the Wisconsin Retirement System (WRS) reporting requirements and how our financial software program will meet these requirements.

Lou Rada participated in an online self-guided training course provided by ESRI on their Geo Apps platform, attended an ESRI government software solutions product showcase held locally in Stoughton, and attended the annual Municipal GIS User Group meeting (a special interest group of the WLIA Municipal Users

Group). Lou also met with our GIS engineering consultant to review our existing data and discuss the electric geometric network.

Electric, Metering, Planning, and Water Divisions

Sean O Grady

Utilities Operations Superintendent

Aldi's Store: The new electric service was installed and cables were energized.

Asplundh Tree Expert Company: Two crews cleared overhead lines on Hammond, Hannerville, Tower, and Stebbinsville Roads this month.

Commercial Water Meter Testing: Approximately 85 commercial customer meters are scheduled to be tested this year. Testing is required to occur at least once every four years, and it is anticipated that one water operator will be busy for two months to complete this task.

East Substation: A voltage regulator on the south bay was discovered during our weekly inspection to be inoperable. Working in close coordination with our electric engineering consultant, we attempted to troubleshoot the regulator without success. We removed the bay from service to prevent additional damage and AC Engineering was brought onsite to repair the unit. This also presented an opportune time to lower the tap setting on the transformer.

Electric Services Installations: During the month of September we installed five temporary services, six new service installations, and two overhead service upgrades.

Former Pamida & Kohl's Food Store: The existing underground electric services laterals were disconnected and replaced with one underground electric service. The existing services and metering equipment were disconnected on Friday and the new equipment and feeds were installed and energized on Saturday.

Former Walmart Store: A second newly installed metering point was red tagged by the commercial building inspector. The new service was required to be fed off the existing metering equipment.

Lead and Copper Samples: We collected and submitted our last round of lead and copper samples for testing. Test results came in under the action levels, indicating that lead is not present in dangerous levels in the public drinking water system.

Lead Water Service Lateral Replacements: Two lead water services were replaced in coordination with the customer's contractor as they replaced their portion of the lead lateral.

Main Line Water Main and Hydrant Valve Testing: Staff is making tremendous strides operating valves and we are on track to complete all of the valves in our system before yearend. Operating distribution valves is a mandate from Wisconsin Department of Natural Resources (DNR), and this will be the first time in our history that every valve on our water distribution system has been tested.

Nordic Ridge Phase II: We experienced a two week delay while installing the new streetlights in this development. The supplier shipped the wrong poles, which required us to make modifications at our pole yard to add mounting provisions for the street light arms.

Secondary Cable Failure: We had a section of underground cable that serves three homes in the rural area fail. The failure occurred at night and the cable was direct buried beneath the street, making replacement difficult. Staff temporarily hung a span of underground cable above the street until the cable could be replaced during normal business hours.

Skaalen Home Project: With close coordination and planning with Skaalen Home staff, Hoffman Construction (general contractor), and Hill Electric (electrician), Stoughton Utilities staff switched the Skaalen campus from off of the old electrical service feed and to the newly installed service. Good planning and coordination between all parties minimized the outage to less than ten minutes, which is remarkable considering all the underground work that has been completed on site over the past year.

Water Main Reconstruction Projects: Forest Landscape and Construction completed the underground water main reconstruction projects in September – on schedule. The final portion of the citywide project was the west end of Ridge Street, which was not only the smallest project, but also the most complicated and difficult. Once excavation began, we discovered water mains that we were previously unaware existed, and the services feeding IKI were not where we thought they were. We even called in our historian, former Water System Supervisor Roger Thorson, for assistance.

This portion of the project should have only taken a couple days, yet lasted over a week as staff and engineers chased out pipes, abandoned mains, and documented services which we are still not entirely certain what they feed.

Wastewater Division

Brian G. Erickson
Stoughton Utilities Wastewater System Supervisor

The wastewater treatment facility processed an average daily flow of 1.153 million gallons with a monthly total of 32.065 million gallons. Total precipitation for the month of September was 0.70 inches.

2018 Sanitary Sewer Projects: We continue to work with engineers on planning efforts for underground reconstruction projects scheduled for next year.

Digester Safety Equipment: New equipment was ordered and will be installed as it arrives.

Mercury Reduction Program: Letters were mailed to all local dental and medical facilities in accordance with our mercury reduction program. The U.S. Environmental Agency (EPA) and the Wisconsin Department of Natural Resources (DNR) are currently making revisions to this program, and are expected to make it more stringent than what we are currently doing.

Miscellaneous Projects: The plant return flow pump has failed, and was removed to be taken in for repair. Staff has been painting plant equipment, replacing the pump guide rails in the sludge storage tank, and making repairs to the explosion proof exhaust fan motor.

Screw Pump Paint Failure: The paint on both screw pumps has failed after just four years in service. I am working with our consulting engineers and the manufacturer on this issue.

Sanitary Sewer Municipal Code Changes: Working with our engineering consultants, we finalized new language for our City of Stoughton sewer use ordinances. Changes to the ordinance largely focus on our grease trap program and other updates to conform to the CMOM requirements. We will have the attorney review the changes before forwarding them to the Utilities Committee and Stoughton City Council for approval.

Sewer Cleaning Machine: We have been experiencing mechanical issues with our Jet-Vac sewer-cleaning machine, which has been out of service for most of the month. We have funds budgeted for 2018 to purchase a replacement vehicle, but in the meantime we have been working with the mechanic at the Department of Public Works to address maintenance and repairs.

Sewer System Maintenance: Staff has been flushing and televising the sanitary sewer collection system, which will continue through the remainder of autumn.

Sludge Hauling: Approximately 500,000 gallons of sludge were hauled from our storage facility to local farmer's fields in September. The sludge is injected into the soil to provide nutrients without surface runoff. Our next haul will be in the spring and I anticipate we will have around 700,000 gallons to haul because of the early haul this fall.

Staffing Update: Stoughton Utilities welcomed Mark Bakken to our team. Mark comes to us with extensive wastewater collection system experience from his many years in the industry.

Treatment challenges: We continue to receive high-strength wastes from a local industry that is causing disruptions at the treatment plant. We are looking into new sampling equipment that we can deploy into the collection system to determine where the waste is coming from.

WPDES Permit: The Wisconsin DNR has issued the draft version of our reissued permit. We are working with our consulting engineer and Municipal Environment Group (MEG) on the proposed permit. There are still several steps to complete before the permit is finalized and goes into effect on January 1, 2018.

Finance

Jamin Friedl, CPA
Stoughton Utilities Finance Manager

Accomplishments:

- Completed and presented Stoughton Utilities 2018 budget to the Utilities Committee.
- Assisted the Department of Human Resources and Risk Management with developing a payroll consolidation scope for Baker Tilly.
- Requested Water Rate template from the PSCW.
- Completed statewide electric, water and wastewater rate comparison(s).
- Processed A/P, A/R, CCER, payroll and treasury management approvals; tracked investment sales/purchases and income; and completed the monthly account reconciliation, work order closings, reporting and billing statistics for August 2017.

In Progress:

- 2018 budget finalization and presentation to the Committee of the Whole and Stoughton City Council.
- Continue to work with the Department of Human Resources and Risk Management to finalize the scope for a payroll consolidation study requested by the Personnel Committee.
- Complete monthly account reconciliation and reporting for September 2017, and an analytical review comparing YTD 2017 to YTD 2016.
- Begin water and wastewater rate analysis.

During the month of September, I participated in a meeting of the Utilities Committee and a meeting of the Stoughton City Council, attended the WPPI Annual Conference, attended the American Public Power Association (APPA) Business & Financial Conference, participated in several 2018 budget meetings, and attended the first monthly meeting of Leadership Stoughton.

Energy Services Section of the Planning Division

Cory Neeley
Stoughton Utilities and WPPI Energy Services Representative (ESR)

- We are working with Uniroyal to perform a study to evaluate a possible replacement of their regenerative thermal oxidizer, which would help with not only energy efficiency, but also their emissions.
- I have been assisting numerous residential customers to help them analyze their electrical consumption to address higher than expected bills. These increases are due in part to the seasonal Power Cost Adjustment Clause (PCAC) increases, as well as their consumption patterns and habits.
- I have been working with Rosenbaum Crushing to analyze their usage using our PM3000 recording equipment with the goal of reducing their peak demand.

- I have submitted a final report to DEED for the tunable lighting project that was completed at Fox Prairie School. Included with the report was the video we produced with the assistance of WPPI Energy. The remainder of the grant funds (\$2500) should be released to us soon.
- The Stoughton Area School District (SASD) is working to enroll in DEET, which is a special program offered through Focus on Energy. This looks into low and no-cost alternatives to save energy in schools. This was one of the goals our Energy Efficiency Team identified.
- Along with WPPI Energy's Marketing Department, I created a document for the SASD board that highlighted the various energy saving projects that we have completed.

Safety Services Section of the Planning Division

Andrew Paulson

Stoughton Utilities and Municipal Electric Utilities of Wisconsin Regional Safety Coordinator

ACCOMPLISHMENTS

1. Training

- a. Weekly safety manual review
- b. Hazard communications

2. Audits/Inspections

- a. Field Inspection – Water – Curb stop repair
- b. Field Inspection – Electric – Highway 138 overhead line replacement
- c. Utility Walkthrough – General Inspection
- d. WWTP Walkthrough – General Inspection
- e. Harnesses
- f. Hand tools

3. Compliance/Risk Management

- a. Stoughton General Safety Rules written program – Annual review
- b. Reviewing Personal Protective Equipment (PPE) hazard assessments
- c. Reviewed soils analysis forms
- d. Reviewed safety for upcoming confined space entry in the digester at the Wastewater Treatment Facility.

GOALS AND OBJECTIVES

1. Training

- a. Weekly Safety Manual Review
- b. Lockout / Tagout
- c. Confined Space Entry
- d. Fall Protection
- e. Bloodborne Pathogens (Office)
- f. Emergency Action Plan (Office)
- g. Fire Extinguisher Training

2. Audits/Inspections

- a. Field Inspections
- b. Utility Walkthrough
- c. WWTP Walkthrough
- d. Wells
- e. Water Towers
- f. Fork Truck Inspection

3. Compliance/Risk Management

- a. Confined Space written program
- b. Sling inspections – work with Bryce
- c. Ladder inspections – work with Bryce
- d. Update SDS's
- e. SharePoint
- f. Organize Folders and Training Records

Regional Safety Coordinator was at Stoughton Utilities on September 5th, 12th, and 19th.

Please visit us on our website at www.stoughtonutilities.com to view current events, follow project schedules, view Utilities Committee meeting notices, packets and minutes, review our energy conservation programs, or to learn more about your Stoughton Utilities electric, water, and wastewater services. You can also view your current and past billing statements, update your payment and billing preferences, enroll in optional account programs, and make an online payment using *My Account* online.



Stoughton Utilities

600 South Fourth Street
P.O. Box 383
Stoughton, WI 53589-0383

Serving Electric, Water & Wastewater Since 1886

Date: October 10, 2017
To: Stoughton Utilities Committee
From: Robert P. Kardasz, P.E.
Stoughton Utilities Director
Subject: Stoughton Utilities Committee Annual Calendar

The following calendar is provided for information and discussion.

October 16, 2017	Regular Meeting: Tour Wastewater Treatment Facility
October 17-20, 2017	Wisconsin Wastewater Operators Association (WWOA) Annual Conference – Middleton
October 17, 2017	Orientation to WPPI Energy – Sun Prairie
October 24, 2017	Stoughton Utilities 2018 Budget and CIP presentation to the Stoughton Common Council
November 14, 2017	Common Council action on the Stoughton Utilities 2018 Budget and CIP
November 20, 2017	Regular Meeting (tentative)
December 18, 2017	Regular Meeting (tentative)
January 16, 2018	Regular Meeting: Stoughton Utilities RoundUp Donation; Declarations of Official Intent
January 17-19, 2018	Municipal Electric Utilities of Wisconsin (MEUW) Superintendents Conference – Wisconsin Dells
February 20, 2018	Regular Meeting: Bad debt write off discussion
February 26 - 28, 2018	American Public Power Association (APPA) Legislative Rally – Washington, D.C.
February 27, 2018	Common Council Meeting: Approve bad debt write offs
March 19, 2018	Regular Meeting: Annual Drinking Water Consumer Confidence Report (CCR)
March 26-29, 2018	Wisconsin Rural Water Association (WRWA) Annual Conference – La Crosse

April 16, 2018	Regular Meeting: Presentation of the Stoughton Utilities 2017 annual audit and management letter, and the SU tax-stabilization dividends
April 18, 2018	National Lineman Appreciation Day
April 24, 2018	Common Council Meeting: Approve 2017 annual audit and management letter; presentation of the tax-stabilization dividends
April 29 – May 2, 2018	American Public Power Association (APPA) Engineering and Operations Conference – Raleigh, North Carolina
May 2018, date TBD	WPPI Energy Regional Power Dinner Meeting
May 6-12, 2018	Drinking Water Week
May 14, 2018	Regular Meeting: Annual reorganization and selection of meeting time and date; discuss SU goals
June 2018, date TBD	Orientation to WPPI Energy – Sun Prairie
June 18, 2018	Regular Meeting: Approve the annual Wastewater Compliance Maintenance Annual Report (CMAR); tour of well no. 5
June 26, 2018	Common Council Meeting: Approve the CMAR
June 2018, date TBD	Municipal Electric Utilities of Wisconsin (MEUW) Annual Conference
July 16, 2018	Regular Meeting: Stoughton Utilities RoundUp Donation; tour of the Stoughton Utilities Administration Building
August 20, 2018	Regular Meeting: Approve Declaration(s) of Official Intent; tour the Wastewater Treatment Facility
August 2018, date TBD	Wisconsin Rural Water Outdoor Exposition – Plover
September 2018, date TBD	WPPI Energy (WPPI) Annual Meeting
September 2018, date TBD	Wisconsin Waterworks Association (AWWA) Annual Conference – Wisconsin Dells
September 17, 2018	Regular Meeting: Approve the Stoughton Utilities 2019 Budget including the maintenance of market rates, and five year (2019-2023) Capital Projects Program
October 2018, date TBD	Orientation to WPPI Energy – Sun Prairie
October 2018, dates TBD	Common Council Budget Workshop(s)
October 7-13, 2018	Public Power Week



Stoughton Utilities

600 South Fourth Street
P.O. Box 383
Stoughton, WI 53589-0383

Serving Electric, Water & Wastewater Since 1886

Date: October 10, 2017
To: Stoughton Utilities Committee
From: Robert P. Kardasz, P.E.
Stoughton Utilities Director
Subject: Stoughton Utilities Communications

September 12, 2017 Final project report on the LED Tunable Lighting project in three classrooms at Fox Prairie Elementary School

September 12, 2017 Video produced by WPPI Energy for the LED Tunable Lighting DEED Grant

September 25, 2017 Yahara Watershed Improvement Network (Yahara WINS) 2016 Annual Report

September 27, 2017 Fact sheet created by SU and WPPI Energy regarding the Stoughton Area School District's (SASD) Energy Team and recent energy-saving projects

October 1, 2017 Year to date incentives received by Stoughton Utilities customers from Wisconsin Focus on Energy.

October 1, 2017 President's Message from the Friends of Lake Kegonsa Society, Inc.'s (FOLKS) quarterly newsletter that discusses the recent donation from Stoughton Utilities' Round-UP program, and a recent grant from WINS.

October 5, 2017 WPPI Energy memorandum "Things You Should Know" from WPPI Energy President and CEO Michael Peters

Encl.

Tunable Lighting in Schools: Energy Savings and an Improved Learning Environment

General Overview

Many schools are looking into replacing traditional fluorescent lighting with Light Emitting Diode (LED) lighting. LED technology is rapidly advancing, and there's a growing field of study focused on human-centric lighting that enhances an individual's performance within a space. One recent innovation is tunable lighting, which allows a user to change the color temperature of a space's lighting. The application of this technology in schools has thus far been limited to special needs classrooms. Due to the price, longevity and potential health benefits of the fixture, it's important to use discretion when choosing a replacement light. Most utilities offer financial incentives that can make it more affordable to switch to LED technology.

Purpose

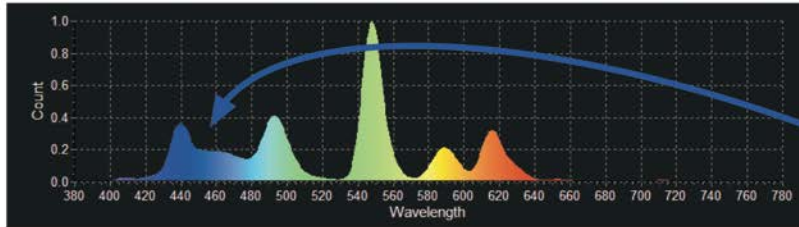
During a visit in 2015, to an elementary classroom at Fox Prairie Elementary school in Stoughton, WI, our team observed that some teachers in the interior classrooms were using blue lenses over their fluorescent lighting. The science teacher claimed that blue lenses helped the children's concentration and helped reduce migraines for teachers. After researching the effects of blue light, our team found that there was little research its effects in a typical classroom. Cory Neeley, Energy Services Representative for Stoughton Utilities, spoke with Tamara Sondgeroth, President of the Midwest Lighting Institute, about the school. She suggested the school try tunable lighting, which allows a user to change a light's color and intensity. At the time of our conversation, there was one school in the United States that had adopted tunable lighting; a special needs school in Des Moines, IA.

In addition to the classrooms we observed at Fox Prairie Elementary School, there are many others in the Stoughton Area School District that don't have windows. During winter, students and teachers spend the majority of their day under fluorescent light, which limits their access to the blue spectrum wavelengths found in daylight and specialized lighting. Seasonal Affective Disorder, a type of depression that is linked to seasonal changes in light, can be treated with light therapy. Spectrum readings of a room with blue lenses showed the lenses did not create a dramatic change the amount of blue light as much as they blocked red light from the fluorescent lighting. (Fig. 1)

In our research, we came across two papers that pointed to the physiological effects of light in humans and specifically focused on the effects of light in the classroom. An article published in 2012 (Mott, Robinson, Walden, Burnette, & Rutherford, 2012) pointed to increased reading fluency in third graders exposed to 6000k lighting. Another article published in 2012 (Barkmann, Wessolowski, & Schulte-Markwort, 2012) pointed to a nine-month study in two schools in Germany where the children exposed to the "concentrate" program that offered higher color temperatures showed increased reading speed and comprehension with "fewer errors of omission."

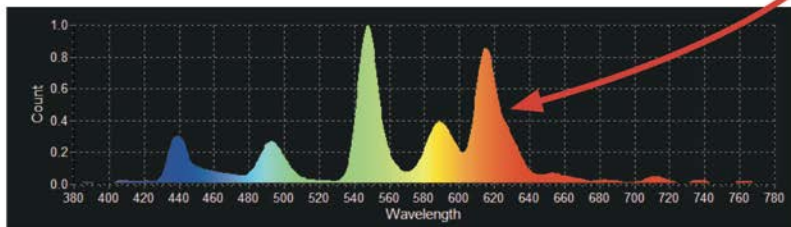
Figure 1: Spectrum Comparison of Existing Fluorescent Lighting

Spectrum Comparison of Existing Fluorescent Lighting



Fox Prairie Room 307: Equipped with Blue Filter

The light in the room equipped with the blue filters has a slightly more robust blue spectrum, and much less robust red spectrum compared to the room with standard fluorescent lighting



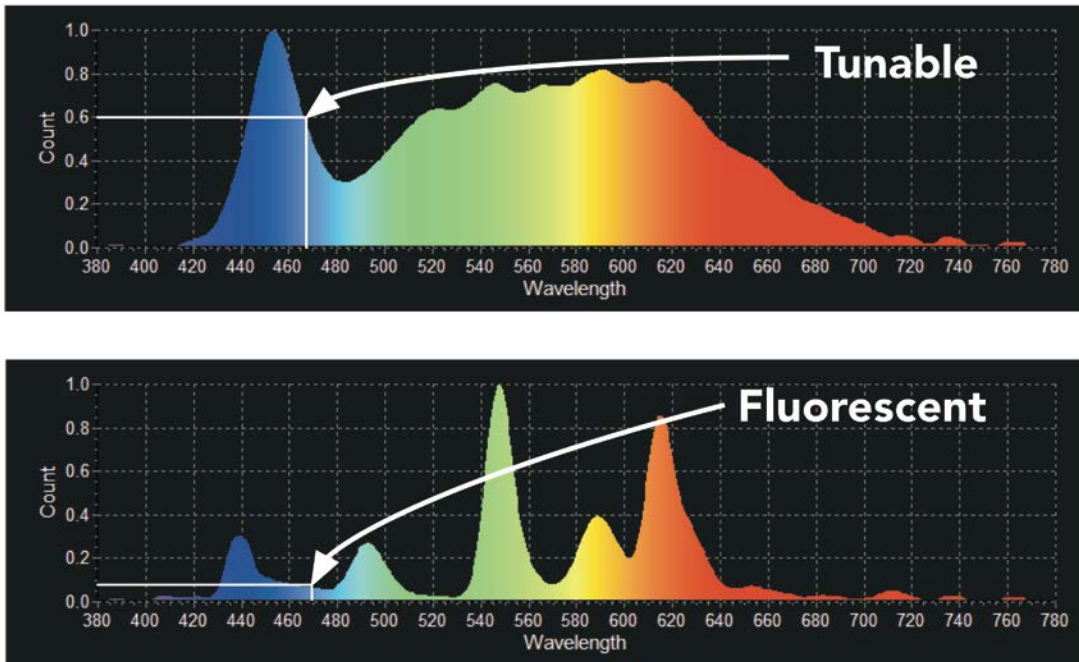
Fox Prairie Room 310: Standard 3500k Fluorescent Lighting

For years, teachers have used blue light filters over their fluorescent lighting. This dramatically reduces the footcandles (they measured at 10 fc) According to one of the teachers at Fox Prairie, adding the filters helped to reduce the frequency of migraine headaches and helped calm children. Our spectrum analysis shows a modest change in the blue and red spectrums.

Two other research papers pointed to the effect of light therapy for Seasonal Affective Disorders. One paper (Glickman, Byrne, Pineda, Hauck, & Brainard, 2006) pointed to short wave blue light as a significant factor in reducing Seasonal Affective Disorder (SAD). The other paper (Anderson, Glod, Dai, Cao, & Lockley, 2009) showed that the wavelength of the light was a factor in treating people with SAD, specifically focusing on light that was 468 nanometers for their study. Spectrum analysis of our retrofitted classrooms (Fig. 2) showed nearly six times the amount of light at the 468 nanometer wavelength compared to standard fluorescent lighting. One of the high school teachers we approached struggled with Seasonal Affective Disorder and volunteered specifically with hopes that the lighting could help her manage this disorder.

Figure 2. Spectrum bandwidth comparison at 468 nanometers

Spectrum Bandwidth Comparison at 468 Nanometers



Description

Our team retrofitted three classrooms at Fox Prairie Elementary school and two classrooms at the high school. We targeted interior classrooms, because we knew that there would be no additional light sources and the teachers in these rooms were used to teaching under fluorescent light. We worked with the school district to change the lights during winter break so that the teachers would have one semester with fluorescent light and one semester with tunable lighting. Some fixtures were broken during shipping, so we had to abandon the health room. Instead, we retrofitted the biology room, with the idea that when the replacement fixtures came, we would be able to retrofit an additional room. The science rooms at the high school have workstations with black surfaces, which meant we'd need more lights than originally expected. We decided to instead put static 5000k lights over the workstations and use tunable lighting in the instruction areas. One reason was cost, but another was that we felt that some experiments could be compromised if they were performed under different light colors.

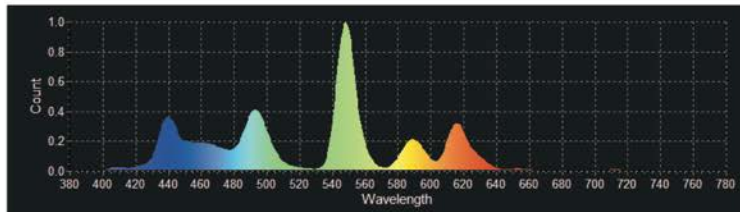
The kindergarten classroom is larger than all of the other classrooms and has two doors. We ended up putting two control pods in this room so the teacher could manipulate the lighting at each door. We were able to remove additional fixtures in a few of the rooms, because new lights provided more footcandles than the previous fixtures. The contractor completed the work in a few days, and when it came time to retrofit the last classroom in February, they completed that in one evening after school.

Before break, I took a display model to show the teachers how the system worked and how to run the controls. When teachers came back from break, we sat down with them and went over the controls again. The biology teacher was able to figure out his controls without any instruction, and once we were able to speak with him in person, he was excited to learn more about light's effects on humans. It helped that both teachers in the high school were science instructors and were very interested in the science behind our project. At the end of the first month, we sent out the first of the five monthly surveys.

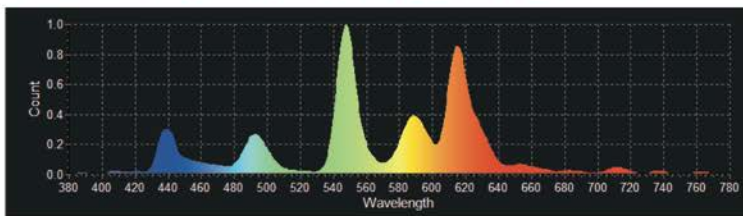
After all of the rooms were completed and we had some time to get into the classrooms, the Midwest Lighting Institute came with a spectrometer to measure the lighting in the classrooms, and took readings in rooms that were not retrofitted to compare the spectrum readings.

Figure 3: Retrofitted vs Standard Room Spectrum Comparison. Note: all of the retrofitted classrooms below were measured using Energy setting (5000k, full intensity)

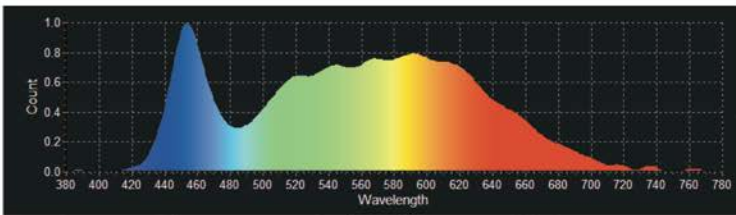
Retrofitted vs Standard Room Spectrum Comparison



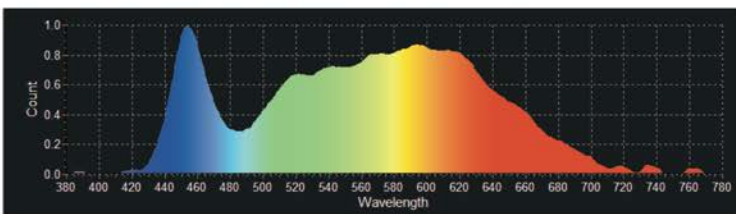
Fox Prairie Room 307: Equipped with Blue Filter



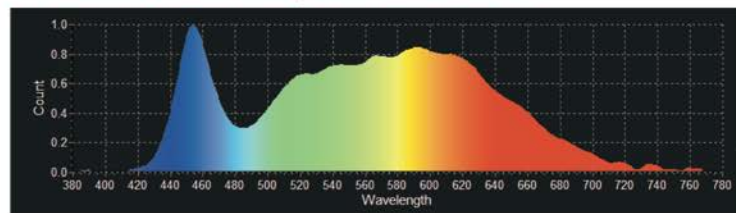
Fox Prairie Room 310: Standard 3500k Fluorescent



Fox Prairie Elementary School Room 207



Fox Prairie Elementary School Room 407



Stoughton High School Room 152

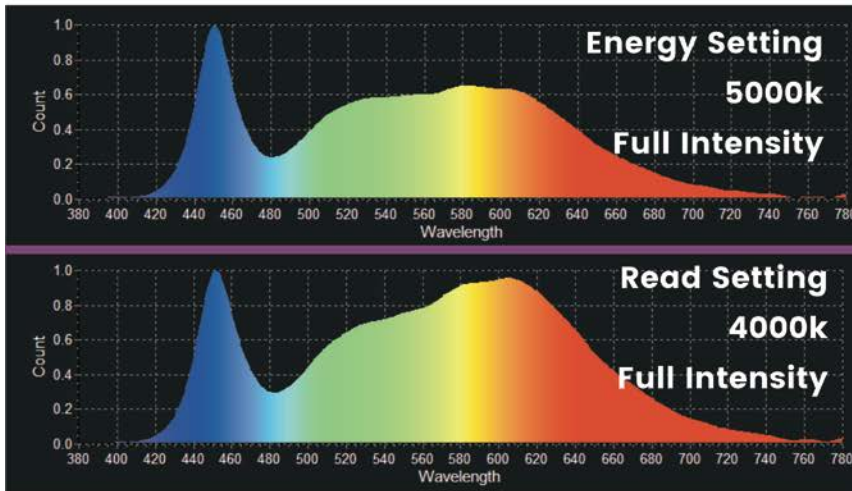
Standard Room

Retrofitted Room

Figure 4 . Spectrum analysis of the four lighting settings in a retrofitted classroom

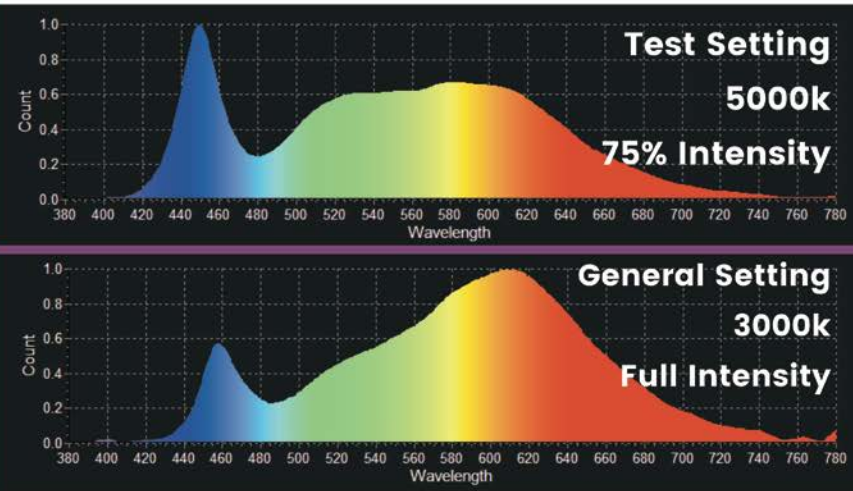
Energy

Best to maintain concentration and alertness. Good to use as a default setting for typical classroom use.



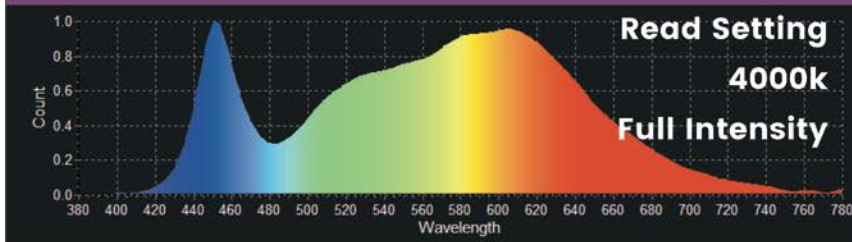
Test

Will maintain concentration and alertness. Reduced intensity can help with glare, especially when utilizing tablets or computers.



Read

The blue spectrum is maintained to keep concentration and a richer color profile allows books and images to come to life.



General

Reduced blue setting will have calming effect. Calming effect can be enhanced by dimming. Best to use after recess or other times when children need to calm down.

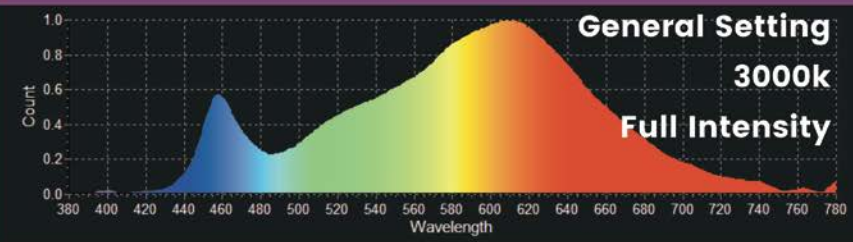


Figure 5. Wall Control for Classrooms

Tunable White Wall Pods



nPODM 4S DX EDUTW

Project Timeline

December 20, 2016: Met with elementary teachers to show demonstration unit

December 21, 2016: Met to discuss video pre-production

December 22, 2016: Met with high school teachers to show demonstration unit

December 27-29, 2016: Installed lighting system at elementary and high school locations. Conducted on-site video documentation of installation on December 28

January 3, 2017: First day teachers were back at school. Visited sites to take spectrum readings and speak with teachers

January 30, 2017: Sent first survey

February 9, 2017: Retrofitted final classroom. This classroom was done pro-bono and had no impact on the budget

February 27, 2017: Sent second survey

March 9, 2017: Attended the Wisconsin Association of School Business Officials conference to do a presentation on the project and talk about tunable lighting

April 6, 2017: Sent third survey

May 2, 2017: Sent final survey

May 11, 2017: Filmed interviews at Fox Prairie Elementary School

May 25, 2017: Participated in Webinar: Energy Efficient Lighting and the Healthy Classroom, Filmed interviews at Stoughton High School

June 5, 2017: Started editing video of interviews

June 12, 2017: Filmed B-roll at both sites

July 17, 2017: Started editing final video

September 5, 2017: Completed video

Results to Date

Our team retrofitted the following rooms:

- SHS room 340 (high school biology)
- SHS room 152 (high school chemistry)
- Fox Prairie room 207 (kindergarten)
- Fox Prairie room 407 (4th grade math)

- Fox Prairie room 306 (5th grade math)

Energy Savings

Total savings (includes all five classrooms):

Annual energy cost savings	\$1,018.00
Annual maintenance and product savings	\$147.00
Energy reduction	69.5%
Simple payback	17.17
Return on investment	5.83%

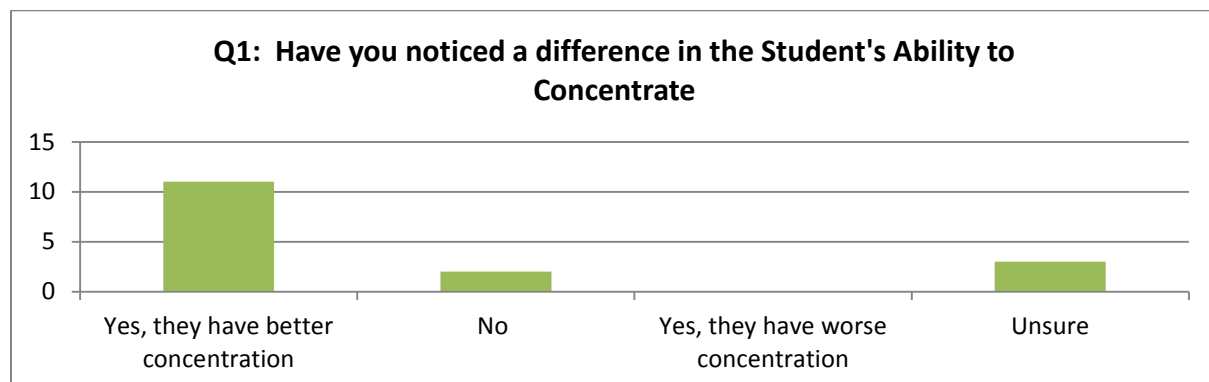
The savings figures are not impressive when comparing the cost and payback in comparison with mature static-color LED technology. As with current LED lighting, our team expects the cost to manufacture tunable LED fixtures will decrease as the technology becomes more mature and competition intensifies. Since purchasing the lighting for this project the cost for the same fixtures has come down 15% according to the contractor. The contractor is also testing another product that could be on par with the cost for traditional static LED fixtures.

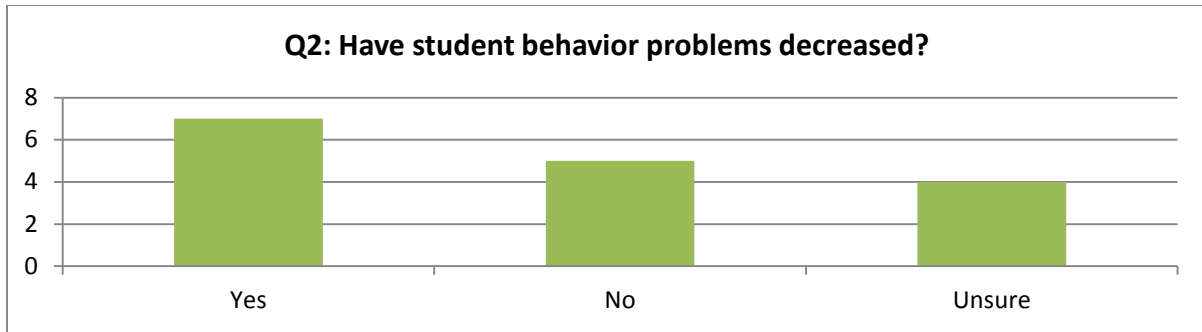
Qualitative Results

During each of the four months of the project, our team surveyed teachers on student behavior, teacher behavior and operational use of the lights. Overall, teachers enjoyed the lighting and were excited about using it as a tool. According to the monthly surveys, most teachers felt that the students exhibited better concentration and reduced behavior problems. Teachers did not feel that there was a distinct change in sleep patterns. Most felt that they were more alert and less tired at the end of the day. Most adjusted the lighting sometimes, with a majority using the energy setting as their default mode of operation. Most said that they dimmed the lights sometimes. They reported no issues with the equipment, other than to say that they wish they had a remote control for the lighting.

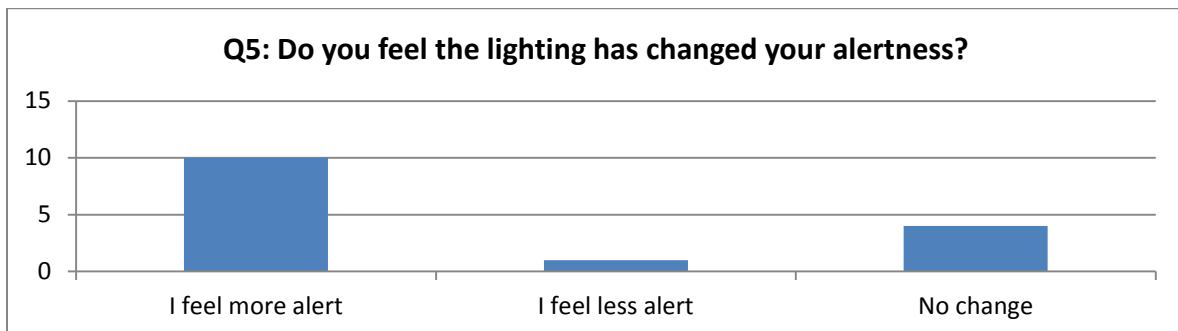
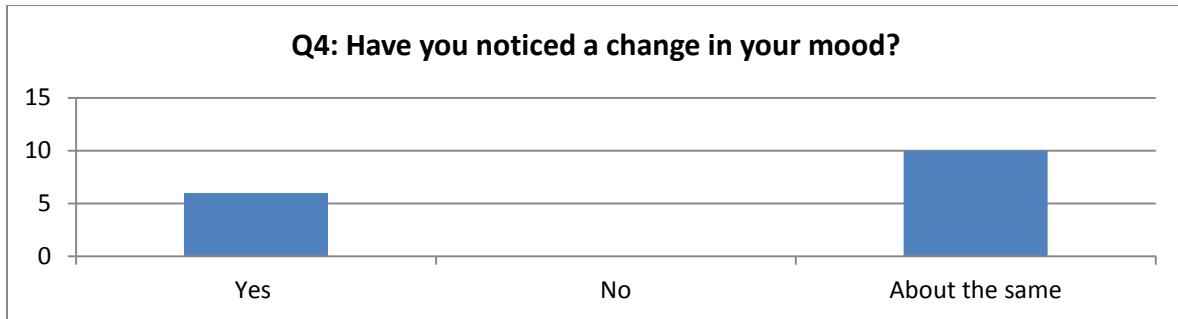
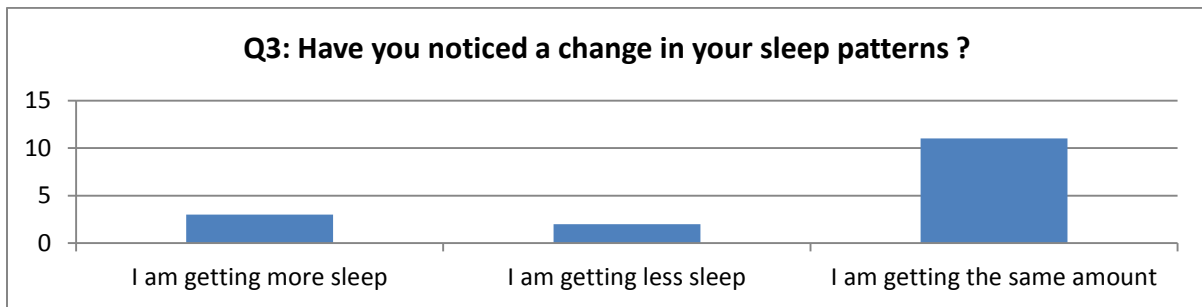
Below are the aggregated answers:

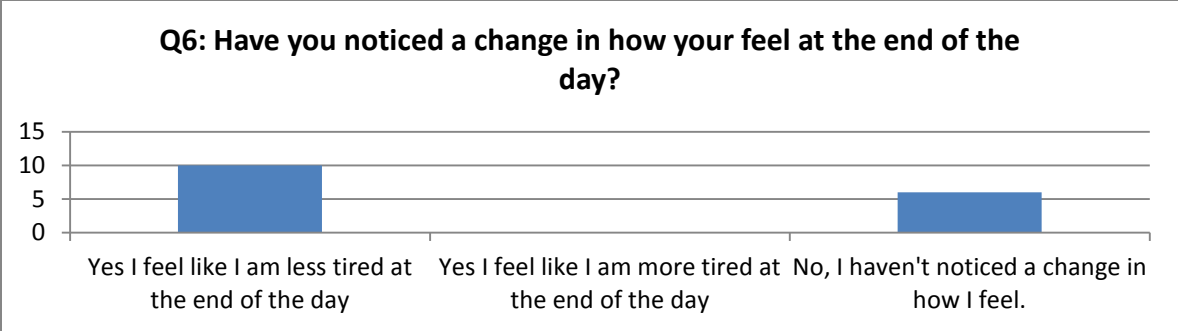
Student Behavior



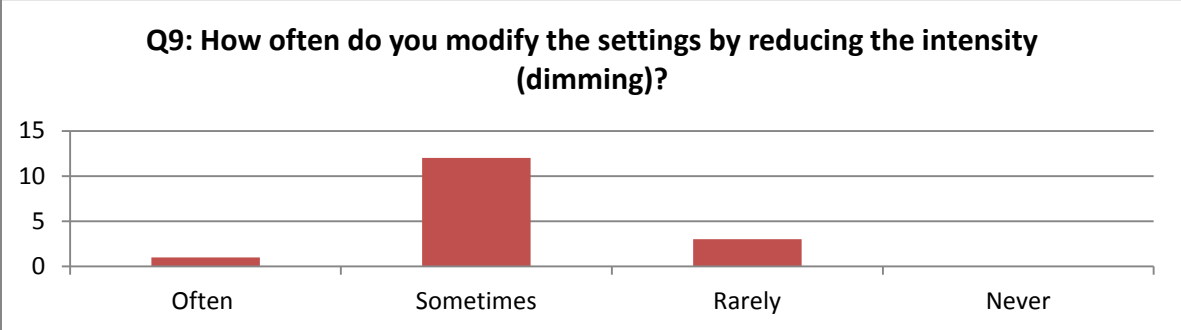
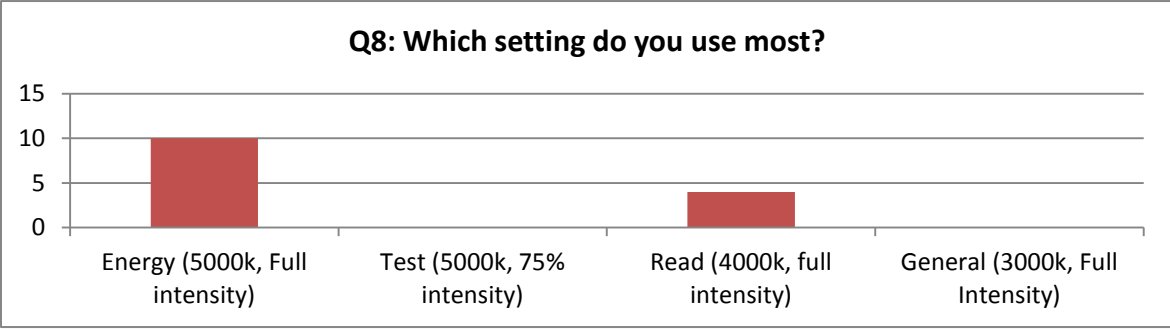
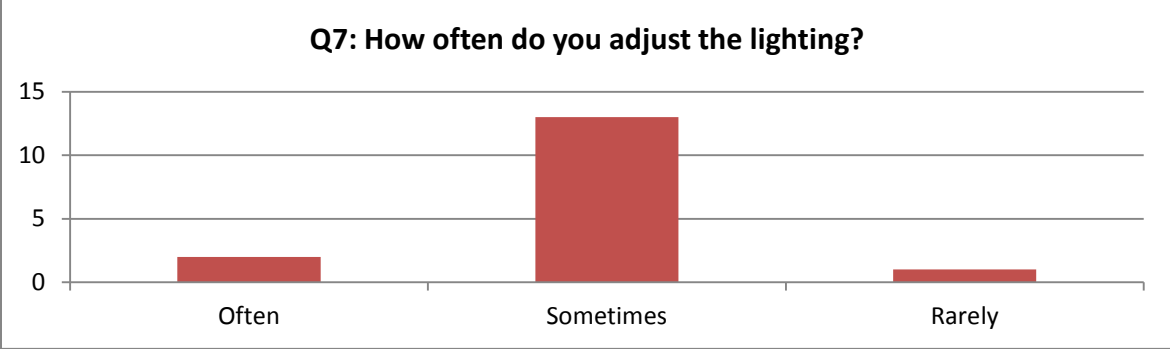


Teacher Behavior





Operational Questions



Equipment

For our installation, the contractor Energy Performance Lighting purchased and installed Lithonia Lighting® 2BLT4 Series Tunable White LED lights and utilized the Lithonia Lighting® nPODM4S DX EDUTW Tunable White Wall Pod controller for this system. We found that the teachers were able to use the controller very easily and there were no malfunctions with either the controller or lighting during the study. The only negative that teachers mentioned was that they wanted to be able to have a remote control to change the color temperatures. Manually adjusting the lights often required walking across the room, which they thought could be distracting.

Settings for the controller were programmed as follows:

- General: 3000-3500K Full intensity
- Read: 4000K Full intensity
- Test: 5000K 75% intensity
- Energy: 5000K Full intensity

Figure 6: Lithonia Brand Fixture used in classrooms



Tunable White GPHD

- **Gamut:** One dimensional Warm-Cool
- **Path:** Direct 3000K to 5000K (Productivity Range)
- **Handle:** Two Natural Language Handles: Intensity and CCT
- **Data:** nLight with nTune technology for both handles of control

Budget

<u>Funding Sources</u>	<u>Amount</u>
DEED Grant	\$10,000
WPPI/Stoughton Utilities Local Energy Efficiency Funds	\$10,000
WPPI Energy Video Production Grant	\$5,000
Total Funds:	\$25,000

The budget was very straight forward on this project. We had agreed to a price for the labor and materials before writing the grant. Labor amounted to roughly \$6,800 of the total budget. For future projects, using internal labor could provide some cost savings, but we recommend working with a lighting professional to ensure proper design of the system. See figure 7 for an itemized invoice from the contractor.

Figure 7: Itemized invoice from contractor



Energy Performance Lighting
 243 Bonnie Road
 Cottage Grove, WI 53527

Phone: 608-661-5555
 Fax: 608-839-4377

Customer Invoice

Date	Invoice #
1/17/17	10-1427

Bill To
Stoughton Utilities Attn: Cory Neeley 600 S 4th Street Stoughton, WI 53589

Ship To
Stoughton S.D. Fox Prairie Elementary & High School 600 S 4th Street Stoughton, WI 53589

P.O. Number	Terms	Rep	Project	Job Number
	Net 30	ACH		Stoughton School 10/...

Quantity	Description	U/M	Price Each	Amount
46	Lithonia 2BLT4 TUWH PROR 30L ADP NLT - 2BLT Tunable White Volumetric Recessed Lighting 2'x4'	ea	204.183	9,392.42T
27	Sylvania LED15T8/L48/F/850/SUB/G5 LED Tube 19w, 5000K, 4ft	ea	13.00	351.00T
9	Sylvania Quicktronic High Efficiency 3x32 Watt, T8, Universal Voltage Instant Start Normal Ballast		13.965	125.69T
12	Acuity NPODM 4S DX EDUTW WH ABL-Acuity Brands 4 scene control, On/off + raise/lower control, Tunable White	ea	163.50	1,962.00T
10	Acuity NPS 80 ABL-Acuity nLight Power Supply	ea	68.649	686.49T
	Job Preparation and installation for above product		6,792.61	6,792.61
	Misc parts and materials, recycling, and mobilization for energy efficient lighting project for Stoughton School Tunable Lighting project at Fox Prairie Elementary School and Stoughton High School		689.79	689.79T

--

Subtotal	USD 20,000.00
Sales Tax (0.0%)	USD 0.00
Total	USD 20,000.00
Payments/Credits	USD 0.00
Balance Due	USD 20,000.00

accounting@energyperformance.net

Project Status

The project has concluded and we will be working with the teachers in the classrooms in the upcoming year to continue to work with teachers to determine best practices for tunable lighting. The school district is pleased with the project, and there may be an opportunity to retrofit more classrooms and engage the district in a broader study of the effects of tunable lighting.

Applicability

Our team feels that the use of tunable lighting can be an effective resource for teachers. We learned that teachers like the ability to modify lighting to match their needs. One thing to note is that we allowed teachers to use the lights however they wished. Working with a lighting specialist, schools could develop guidelines for the use of the lights during instruction, based on the schedule and class load for students. In classrooms that have no windows, lighting designers should look into adding tunable lighting, or a static concentration level lighting that includes blue spectrum light that has been shown to reduce the effects of Seasonal Affective Disorder. Dimming is an important feature to have, especially with the implementation of more computer-based learning. Static lights with high foot candle levels can cause headaches when children are using computers because of the glare on the screen.

Alternatives

Instead of offering a tunable light, schools could employ static light color with a dimming option. This is what many schools have done prior to tunable lighting products became available, and is less expensive than offering tunable lighting. One thing that we feel is important to consider is that there is a distinct difference in the amount of time that children in elementary schools spend in one classroom compared to the amount of time high school students spend in one classroom. Because of that difference, it may be more important for students in elementary and intermediate schools to have access to broad spectrum light or tunable light, especially those that spend much of the day in interior rooms. Teachers generally stay in the same classroom all day long, and it is important to think about the effects of light on their wellbeing.

Future Plans

If we can secure additional funding, our team will look to retrofit the remaining rooms in Fox Prairie Elementary School that lack windows. Funding a retrofit in the High School would require a referendum, so this is unlikely to happen at this time. This fall we will present the study and other information to the school board as part of a series of energy efficiency projects we have done in the past few years. Our team would like to expand this option to all interior classrooms in K-8 instruction, but in order to justify the additional cost, we will need to inform the public and garner support from the board. There is room

for additional research and outreach in schools on the effects of lighting in the classroom environment, and for schools to educate parents about how light from screens might be reducing their child's ability to rest.

Utility Name and Address

Stoughton Utilities
600 S. Fourth Street
Stoughton, WI 53589

Utility Description

Stoughton Utilities

- Water, wastewater and electric utility
- 8,665 electric meters
- 7,756 residential customers
- 897 commercial customers
- 55 light industrial and industrial customers
- Member of WPPI Energy, a regional power company serving 51 locally owned electric utilities

Key Personnel and Phone Numbers

Cory Neeley
Energy Services Representative (Tunable Project Manager)
608-825-1755

Robert Kardasz
Stoughton Utilities Director
608-877-7423

Tamara Sondgeroth
Midwest Lighting Institute
608-335-2816

Calvin Merath
Stoughton Area School District
608-877-5071

Rod Heller (Contractor)
Energy Performance Lighting
608-661-5555

Additional Notes

In addition to use in schools, tunable lighting is currently being studied in nursing homes and other medical facilities. In nursing homes, the hope is that tunable lighting can help reduce falls, medication use and other medical costs. In hospitals, employees hope to use the tunable lighting to help patients sleep better and heal faster. The Midwest Lighting Institute recently received a \$200,000 federal grant to implement tunable lighting in nursing homes.

Bibliography

- Anderson, J., GLod, C., Dai, J., Cao, Y., & Lockley, S. (2009). LUX vs Wavelength in light treatment of Seasonal Affective Disorder. *Acta Pschyiatrica Scandinavica*, 203-212.
- Barkmann, C., Wessolowski, N., & Schulte-Markwort, M. (2012). Applicability and efficacy of variable light in schools. *Physiology and Behavior*, 621-627.
- Glickman, G., Byrne, B., Pineda, C., Hauck, W. W., & Brainard, G. C. (2006). Light Therapy For Seasonal Affective Disorder with Blue Narrow-Ban Light-Emitting Diodes. *Biological Psychiatry*, 502-507.
- Mott, M. S., Robinson, D. H., Walden, A., Burnette, J., & Rutherford, A. S. (2012). Illuminating the Effects of Dynamic Lighting on Student Learning. *Sage Open*, 2(2), Vol. 2 No 2.



600 South Fourth Street P.O. Box 383
Stoughton, WI 53589-0383

Serving Electric, Water & Wastewater Since 1886

DEED Grant Video Tunable Lighting Project

This project has concluded and we will be working with the teachers in the classrooms in the upcoming year to continue to determine best practices for tunable lighting. The school district is pleased with the project, and there may be an opportunity to retrofit more classrooms in the future.

Below is a link to the DEED Grant video that was produced by WPPI Energy discussing the project.

<https://www.dropbox.com/s/jkjq9vkysmzzlp8/WPPI%20-%20Tunable%20Lighting.mp4?dl=0>



currents of change

2016 ANNUAL REPORT

PROJECT BACKGROUND

The Yahara Watershed Improvement Network, known as Yahara WINS, is a groundbreaking initiative to achieve clean water goals for the Yahara Watershed. In this effort, community partners led by Madison Metropolitan Sewerage District, are collaborating on a strategy called watershed adaptive management, in which all sources of phosphorus in a watershed work together to reduce phosphorus.

This report includes highlights of project activities in 2016. More information about the activities and partners featured in this report is available on the Yahara WINS webpage, <http://www.madsewer.org/Programs-Initiatives/Yahara-WINs>.

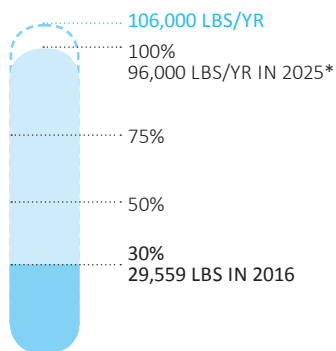
ABOUT THE DISTRICT

Madison Metropolitan Sewerage District began work on adaptive management in 2012, when it collaborated with partners to initiate a successful four-year pilot project. The district is pursuing adaptive management to comply with phosphorus requirements in its Clean Water Act discharge permit. Compared with upgrades to the treatment plant, adaptive management has the potential to be a more comprehensive and less expensive route to clean water. The district is one of the first wastewater treatment plants to use adaptive management and is committed to the success of this approach as it works to cost-effectively meet clean water standards. To advance the adaptive management project, the district facilitates partnerships, promotes adaptive management through outreach, pools resources to fund phosphorus-reducing practices in the watershed, analyzes stream samples and works with the Wisconsin Department of Natural Resources to address regulatory needs for the project.

currents carry positive results forward



PROGRESS ON PHOSPHORUS REDUCTION GOALS



**Based on updated modeling, the phosphorus reduction goal has been revised downward to 96,000 pounds per year.*

During 2016, work by the Yahara Watershed Improvement Network and its partners kept more than 29,000 pounds of phosphorus from area surface waters—more than 30 percent of the total reduction of 96,000 pounds per year needed over the next 20 years. The 96,000 pound total is based on revised modeling and is lower than the previous target of 106,000 pounds.

The reduction came as Yahara WINS transitioned from a four-year adaptive management pilot effort to the full-scale project. The transition period allowed for completion of administrative and planning tasks to scale the pilot up to a larger geographic area and lay the groundwork for the more formal, 20-year project.

Yahara WINS pools resources from local municipalities and funds practices that reduce phosphorus.

Yahara WINS partners including Dane County and Yahara Pride Farms worked with local farmers to put in place practices that kept nearly 29,600 pounds of phosphorus from entering local waters. Efforts ranged from cover crop planting and stream bank stabilization to low-disturbance

manure injection. Local municipalities and homeowners made further reductions through leaf management, erosion control and stormwater management.

Other highlights included:

- Creation of an intergovernmental agreement among 23 participants, providing a long-term framework for the full-scale project.
- A service agreement between Yahara WINS and Dane County outlining the terms and expectations of the county’s work to implement phosphorus-reducing practices.
- Notification from the Wisconsin Department of Natural Resources that Madison Metropolitan Sewerage District’s adaptive management plan—a requirement of the district’s discharge permit—was approvable.
- Two awards acknowledging Yahara WINS’ success: one from the National Association of Clean Water Agencies and the other from the Rock River Coalition.

CONTENTS

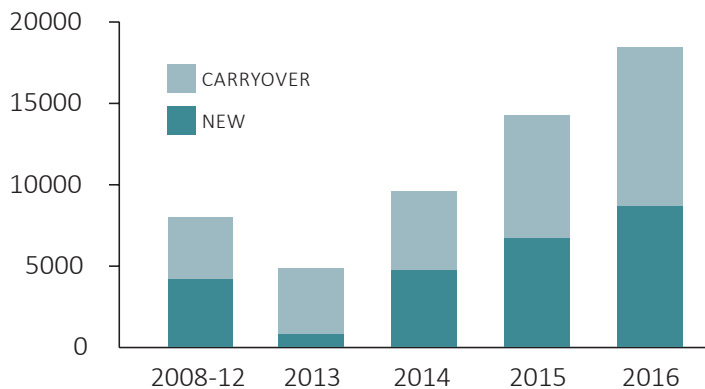
PHOSPHORUS REDUCTIONS 2016	2
YAHARA WINS GRANTS	5
OTHER WINS-RELATED ACTIVITIES IN 2016	8
YAHARA WINS BUDGET INFORMATION	9
INTERGOVERNMENTAL AGREEMENT AND RELATED AGREEMENTS	10
LOOKING AHEAD	11

phosphorus reductions

Phosphorus reductions documented in 2016 exceeded the reduction target for the year, reflecting the persistent efforts of WINS partners to implement runoff control practices. The adaptive management cost model, which is the source of calculations of necessary phosphorus reductions and associated costs per year of the full-scale project, established a target reduction of 15,000 pounds in 2016. The combined actions of the Dane County Land and Water Resources Department and Yahara Pride, working with area farmers, resulted in an estimated reduction in phosphorus of more than 29,000 pounds (counting new pounds reduced in 2016 as well as continuing pounds reduced from practices implemented in previous years).

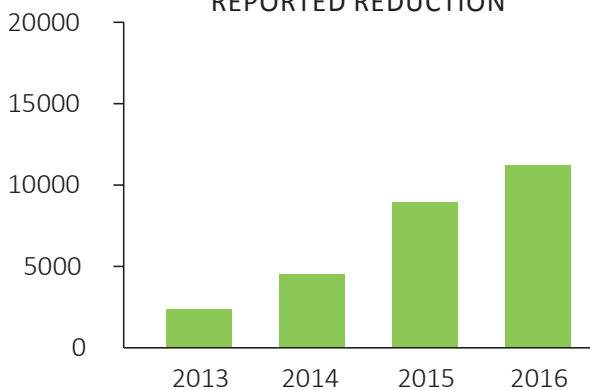
YAHARA WATERSHED PHOSPHORUS REDUCTIONS

DANE COUNTY REPORTED REDUCTION



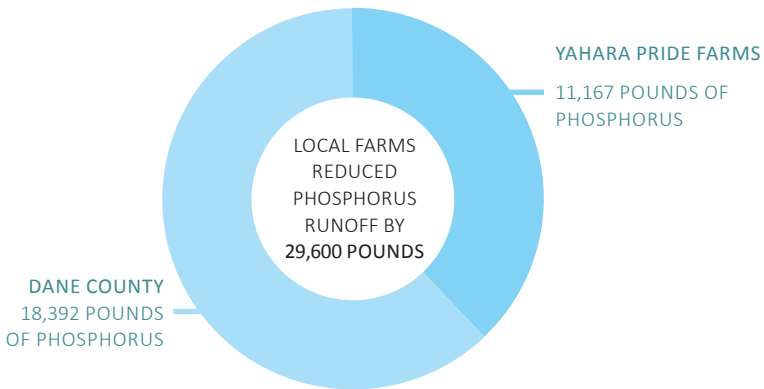
Dane County's reported reduction of new and carryover pounds of phosphorus. Dane County works with farmers throughout the watershed to put in place practices that reduce phosphorus runoff.

YAHARA PRIDE FARMS REPORTED REDUCTION



This graph shows the phosphorus reduction reported by Yahara Pride Farms for each year the group has received funding from Yahara WINS. Reported phosphorus reductions include amounts directly supported by grant dollars as well as reductions accomplished by Yahara Pride Farms members without cost share funds. All reductions count toward the total phosphorus reduction goal for the watershed.

REPORTED PHOSPHORUS REDUCTION IN 2016



THIS SECTION DETAILS HIGHLIGHTS FROM EACH OF THESE PARTNERS' WORK IN 2016.

DANE COUNTY LAND AND WATER RESOURCES DEPARTMENT

Dane County Land and Water Resources Department is working with farmers on behalf of Yahara WINS to implement agricultural conservation practices to reduce phosphorus. In 2016, this included a reduction of some **18,392 total pounds of phosphorus** with:

- 8,642 pounds from new practices; and
- 9,750 pounds from ongoing practices.

Also during the year, the county:

- **Assisted 295 landowners** in the Yahara Watershed;
- Implemented and tracked more than **313 conservation practices**, including harvestable buffers (pictured above); and
- **Entered into 24 cost-share agreements** totaling more than **\$677,000** for conservation practices throughout the watershed.

Full Dane County Report: <http://www.madsewer.org/Programs-Initiatives/Yahara-WINs/Resources>

Harvestable buffers help keep phosphorus laden sediment in place.



Service agreement between Yahara WINS and Dane County

A significant development in 2016 was the signing of a service agreement between Dane County and Yahara WINS. This five-year agreement defines the expected actions and phosphorus reductions to be achieved by the county. Dane County services provided through this agreement include:

- Identifying resource concerns related to water quality and measures to address them;
- Assisting landowners with practice implementation and cost-share for those practices;
- Verifying practice installation and maintenance; and
- Calculating resulting phosphorus reductions and reporting progress.

The agreement also includes cost-share funds and a pay-for-performance component if phosphorus reductions exceed baseline reduction goals.



Low disturbance manure injection puts nutrients where crops can use them.



Cover crops provide a layer of protection for area waterways by holding sediment in place.

YAHARA PRIDE FARMS

Yahara Pride Farms is a farmer-led, nonprofit organization working to implement conservation practices in the watershed. In 2016, Yahara Pride Farms was awarded \$80,000 from Yahara WINS, and with this funding offered cost-share for five types of practices, as well as bonus payments for combinations of practices and implementing a practice for multiple consecutive years.

The pounds of phosphorus reduced by cost-share practices in 2016 are listed at right. Yahara Pride Farms activities in 2016

included a watershed conference in March, an Ag Innovation Day in August with a focus on manure management and a farm tour of Ripp’s Dairy Valley that included a look at the nearby manure digester.

Full Yahara Pride Report: <http://www.madsewer.org/Programs-Initiatives/Yahara-WINs/Resources>

LAND USE PRACTICES CUT PHOSPHORUS

PRACTICE	TOTAL PREDICTED PHOSPHORUS REDUCTION (POUNDS)
Strip Tillage	703
Low-Disturbance Manure Injection (LDMI)	1106
LDMI plus Cover Crop	548
Cover Crop	7130
Headland Stacking Manure	107
Combination of Practices	1085
Multiple Years of Adoption- 1	297
Multiple Years of Adoption- 2	191
TOTAL	11,167

Yahara WINS grants

Yahara WINS has offered grants for urban and rural phosphorus reduction projects since 2013. These grants are designed to advance projects that reduce phosphorus at the lowest cost per pound. The program was offered again in 2016 and received six applications for agricultural and urban stormwater runoff control projects.

While the grant budget was initially \$60,000, the Yahara WINS executive committee approved increasing the total funding allotted to these grants to allow for funding these projects, summarized below, at the full amount requested. Note that the WINS funding does not cover the total cost of these projects.

GRANTS DIVERSIFY PRACTICES

APPLICANT	PROJECT TITLE	COMPLETED IN 2016	TOTAL AWARD GRANTED BY WINS	TOTAL POUNDS (LIFESPAN)
Dane County Extension	Cover Crops for Seed Corn	N	\$4,500	270
Dane County Land and Water Resources Department	Pollinator cover – Cherokee Marsh Natural Resource Area	N	\$15,000	1,320
Village of DeForest	Yahara River Banks – Stabilization	Y	\$15,000	280
City of Madison	Diversion of water basin to pond	N	\$15,000	200
City of Monona	Installation of stormwater treatment devices, dredging of silt, replacement of 2 outfalls	Y	\$15,000	220
City of Stoughton	Stabilization and restoration of Yahara River Streambank	Y	\$15,000	640
		TOTAL	\$79,500	2930



The City of Monona completed a shoreline restoration project.



Monona also upgraded a stormwater outfall.

water quality monitoring snapshot

USGS WATER QUALITY MONITORING SUMMARY

Yahara WINS contracts with U.S. Geological Survey to collect and analyze water quality throughout the watershed, as water quality monitoring is a requirement of adaptive management and will demonstrate progress made toward phosphorus goals over the project. Water samples are collected from five stations funded by Yahara WINS: Dorn Creek at Highway Q, Dorn Creek at Highway M, Sixmile Creek at Highway 19, Sixmile Creek at Highway M and the Yahara River at Fulton.

In Water Year 2016 (Oct. 1, 2015 – Sep. 30, 2016), USGS monitoring recorded the following data:

Precipitation

- Forty percent more precipitation fell in the Yahara Watershed than normal. Meanwhile, the winter of 2015-16 was relatively mild, with lower-than-normal total snowfall.
- Above-average rainfall at times of the year corresponded to higher streamflow discharge into Lake Mendota from its four major tributaries, with the largest runoff event happening in July during intense thunderstorms.

Phosphorus loads

- A total of 42,500 pounds of phosphorus entered Lake Mendota through its four major tributaries, which is about 30 percent below the long-term loading estimate. However, annual phosphorus loads can vary significantly based on the timing and intensity of rain and runoff events.
- For comparison, and to illustrate the variability in phosphorus loads from year to year, at right is a table of total phosphorus load to Lake Mendota by water year.

PHOSPHORUS VARIES BY YEAR

WATER YEAR	TOTAL P LOAD TO LAKE MENDOTA (LBS.)
2013	77,000
2014	63,000
2015	25,000
2016	42,500



Volunteers assist in monitoring phosphorus levels through sample collection.



A permanent USGS monitoring station monitors flow and phosphorus.

Phosphorus sampling data

- A total of 624 water samples were collected and analyzed from six USGS monitoring locations.
- Median baseflow concentrations for USGS-monitored sites for the relevant monitored periods to date are shown in the table below.

Median phosphorus concentrations are above the statewide phosphorus criteria. However, at this point of the project, this is expected as it will take time to see a response in water quality following implementation of phosphorus-reducing practices.

MEDIAN PHOSPHORUS CONCENTRATIONS

MONITORING SITE	TOTAL P CONCENTRATION, MG/L	STATE PHOSPHORUS CRITERION, MG/L
Dorn Creek @ Hwy Q	0.12	0.075
Dorn Creek @ Hwy M	0.24	0.075
Sixmile Creek @ Hwy 19	0.21	0.075
Sixmile Creek @ Hwy M	0.18	0.075
Yahara River @ Fulton	*0.13	0.10

The computed values represent the median of daily total phosphorus concentrations for the 15th of each month from Aug. 2012- Oct. 2012, and May-Oct. 2013-2016.

**For the Yahara River at Fulton, the computed value represents the median of daily total phosphorus concentrations for the 15th of each month from May-Oct. 2014-2016.*

TP LOAD DISTRIBUTION, WY 2016 ~42,000 LB TOTAL



WATERSHED SIZE (LOCATION)

- 8,000 ACRES (DORN - M)
- 12,000 ACRES (PHEASANT BRANCH)
- 24,000 ACRES (YAHARA - WINDSOR)
- 31,000 ACRES (SIXMILE - M)

ROCK RIVER COALITION VOLUNTEER MONITORING

USGS monitoring is supplemented by additional samples taken by volunteer monitors through the Rock River Coalition. This was the fourth year that Yahara WINS has provided funding to the coalition for its stream monitoring program. This monitoring engages citizen scientists to provide additional water quality data throughout the watershed, helping establish a more robust baseline for measuring water quality improvements through adaptive management projects.

In 2016, this funding supported:

- Training and equipment for about 85 volunteer monitors;
- Monitoring of 50 stream monitoring sites, including 35 sites where samples are collected for analysis at the district's lab; and
- Two training workshops and a watershed conference for Yahara River Watershed volunteers.



Citizen scientists provide support in our efforts to monitor water quality.

other WINS-related activities in 2016



REFINING PHOSPHORUS MODELING TOOLS

Researchers from UW-Madison, UW-Platteville and the U.S. Department of Agriculture's Agricultural Research Service continued to work in 2016 to better assess potential phosphorus losses in certain scenarios. One research project is focused on improving the winter runoff predictions of the Wisconsin Phosphorus Index (P Index), a common tool for predicting phosphorus loss from agricultural areas. Another project examined phosphorus loss from cattle lots, helping test modifications to another phosphorus loss model (APLE-Lots). This research can help conservation planners better understand impacts of land use actions on phosphorus loss and focus actions.



DANE COUNTY LEGACY PHOSPHORUS REMOVAL

A WINS-funded study by UW-Madison's Water Resources Management program indicated that legacy sediment in stream beds, deposited over decades, can continue contributing significant amounts of phosphorus to water bodies. This could mask the effects of phosphorus reduction efforts. In response, in 2016 Dane County announced a \$12 million, four-year effort to remove legacy sediment associated with 870,000 pounds of phosphorus. In 2016, Yahara WINS provided a letter of support to the Dane County Board for this effort. This project will begin in 2017 and take place in streams throughout the watershed.



AWARDS

Madison Metropolitan Sewerage District received two awards related to its work on Yahara WINS in 2016:

- **National Environmental Achievement Award - Operations & Environmental Performance Award** (National Association of Clean Water Agencies) ; and
- **Protector Award** (Rock River Coalition).

These awards reflect the work of all Yahara WINS partners, without whom the innovative adaptive management approach would not be possible.

Yahara WINS budget

The Yahara WINS executive committee approved the 2017 and five-year budget in 2016. Notable budget actions in 2016 included the allocation of funds to conduct an audit of WINS finances and the adoption of a resolution by the Yahara WINS executive committee to establish a designated operating fund reserve.

2016 ACTUAL BUDGET

Balance on 1/1/2016	\$288,144
2016 Revenue	\$469,000
Expenditures (<i>through 12/12/16</i>)	\$488,132
REMAINING BALANCE	\$259,012
Encumbered funds	\$177,000
Estimated additional expenses	\$7,000
ESTIMATED ENCUMBERED CARRYOVER TO 2017	\$75,012



After winter wheat harvest, an application of nutrients prepares the field for the next crop to be planted.

2017 BUDGET

	STARTING BALANCE	\$87,000
REVENUE		
IGA participants		\$1,467,000
Contributions from non-IGA participants		\$17,300
Savings account interest		\$1,200
	TOTAL REVENUE	\$1,485,500
EXPENDITURES-GROUPED BY CATEGORY		
<i>Phosphorus reduction</i>		
Dane County phosphorus reduction services agreement		\$450,000
Columbia County phosphorus reduction services agreement		\$40,000
Rock County phosphorus reduction services agreement		\$40,000
Yahara Pride Farms phosphorus reduction services agreement		\$110,000
General P reduction practice funding		\$120,000
Phosphorus reduction grant program		\$100,000
	Subtotal	\$860,000
<i>Water Quality Monitoring or modeling</i>		
Water quality monitoring analytical services (MMSD)		\$35,000
USGS joint funding agreement		\$75,000
New USGS JFA for an additional gaging station		\$0
Rock River Coalition water quality monitoring		\$27,000
SWAT modeling update		\$0
	Subtotal	\$137,000
<i>General</i>		
WINS staffing		\$43,500
Financial audit		\$7,000
Communications		\$15,000
Miscellaneous		\$10,000
Legal services agreement		\$20,000
	Subtotal	\$95,500
	TOTAL EXPENDITURES	\$1,092,500
Contribution to designated operating reserve fund		\$480,000

intergovernmental agreement and related agreements

To set the legal and administrative framework for the full-scale, compliance-based adaptive management plan, Yahara WINS entered into several formal agreements with project partners and technical assistance providers in 2016, described below.

INTERGOVERNMENTAL AGREEMENT

In 2016, WINS participants contributing funding to the project (i.e., municipalities) and Madison Metropolitan Sewerage District executed an intergovernmental agreement that outlines mutual goals and expectations of participants. The agreement specifies the proportion of funding that each participant is responsible for, project governing bodies, the administrative structure of the project and “off-ramps” for participants every five years. The signatories are contributing funding to the project in proportion to the amount of phosphorus they are each required to reduce to meet targets.

OTHER AGREEMENTS

These agreements are found in full at <http://www.madsewer.org/Programs-Initiatives/Yahara-WINS/Resources> and listed below (omitting the intergovernmental agreement and service agreement with Dane County, which are described earlier). These agreements also reflect contributions from municipalities that have already met their phosphorus reduction obligations under the Rock River Total Maximum Daily Load (TMDL), but decided to support Yahara WINS regardless in recognition of the project’s benefit to the community. Several of the agreements are memoranda of understanding.

AGREEMENT	DESCRIPTION
MOU with Town of Pleasant Springs	Agreement for one-time contribution to Yahara WINS from Town of Pleasant Springs
MOU with Town of Dunn	Agreement for annual contributions to Yahara WINS by Town of Dunn despite having already met TMDL requirements
MOU with Town of Burke	Agreement for annual contributions to Yahara WINS by Town of Burke
MOU with Town of Westport	Agreement for annual contributions to Yahara WINS by Town of Westport for purposes of TSS compliance and support of the project
Legal Services Agreement	Contract with Stafford Rosenbaum, LLP for retention of general legal counsel for Yahara WINS
Joint Funding Agreement with USGS	5-year agreement between USGS and MMSD (using WINS funding) for the continued service of USGS water quality monitoring for WINS.
MGE Foundation Pledge to Yahara WINS	Contribution from the Madison Gas and Electric Foundation to provide funding to WINS over three years

IGA PARTICIPANTS

Towns

Blooming Grove
Cottage Grove
Dunn
Middleton
Westport

Villages

Cottage Grove
DeForest
Maple Bluff
McFarland
Shorewood Hills
Waunakee
Windsor

Cities

Fitchburg
Madison
Middleton
Monona
Stoughton
Sun Prairie

Others

Madison Metropolitan Sewerage District
Village of Oregon Waste Water Treatment Plant
Stoughton Utilities
University of Wisconsin-Madison
Wisconsin DNR

looking ahead



With the necessary transition steps taken, Yahara WINS is moving ahead as a full-scale project. Actions in the near term will include:

- Creation of a video highlighting the Yahara WINS project, to be completed in fall 2017.
- Development and implementation of agreements with Rock County and Columbia County for conservation practices in the Yahara Watershed in those counties.
- Continued meetings of the Yahara WINS group and executive committee. The schedule includes meetings on: Sept. 13, 2017; Oct. 17, 2017; and Dec. 13, 2017.
- Exploration of a pay-for-performance funding program with Yahara Pride Farms.
- Final approval of the adaptive management plan when the district's discharge permit is approved by DNR (anticipated early 2018).

Yahara WINS has also contracted with Dave Taylor, formerly of the Madison Metropolitan Sewerage District and now of NEMOA Environmental, to act as consulting director of Yahara WINS to facilitate continuity in advancing the Yahara WINS project.



Injecting nutrients into the soil helps keep phosphorus where crops will then use it.



Volunteer monitors help track water quality.



COMPILED BY MADISON METROPOLITAN SEWERAGE DISTRICT

Stoughton Area School District Energy Team

Energy Star Scores

Fox Prairie	92
Kegonsa	93
Sand Hill	87
River Bluff	97
High School	60

The ENERGY STAR Score is an assessment of the energy performance of K-12 school buildings. The score uses a 1 to 100 percentile ranking of performance, relative to school building across the US.

By the numbers

2,171,198

Lifecycle kWh Savings of
Focus on Energy Projects Since 2014

\$2,865

Focus On Energy Incentives
from 2015-2016

\$31,349

2017 YTD
Focus On Energy Incentives

Possible future projects

- ▶ Retrocommissioning
- ▶ Ice Storage/Chiller Replacement
- ▶ VFD Conversion
- ▶ Comprehensive Lighting Plan
- ▶ Computer shut down protocol

Mark Your Calendars

Sept 29th

RFP for Energy Efficiency
Applications Due

Jan 1st

Focus on Energy Program
Incentives Announced

Recent Energy-Saving Projects

Swimming Pool Upgrade

NECCYS Ventilation & Pump System

Lighting Upgrade



Performing Arts Center

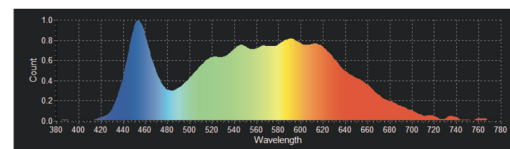
Lighting Upgrade



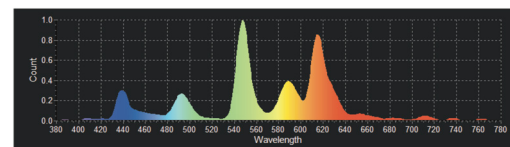
After LED Upgrade

Tunable Lighting Project

Retrofitted vs Standard Room Spectrum Comparison



Retrofitted Room



Standard Room



At Stoughton Utilities, we believe affordable public power strengthens our community and helps our neighbors. That's why, through WPPI Energy, we're partnering with other local not-for-profit utilities to share resources and lower costs.

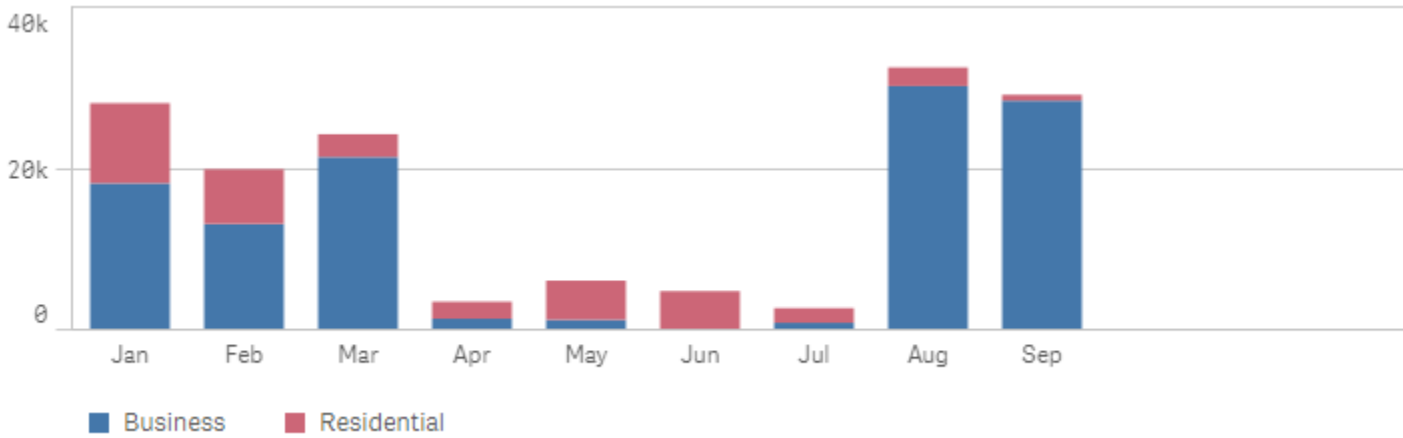
www.stoughtonutilities.com • (608) 873-3379

Utility Incentives and Savings

Stoughton Electric Utility

\$149,719.58

2017 Total Incentives to Date



Incentive Summary

Summary	Residential - Last Mth	Business - Last Mth	Total - Last Mth	Residential - YTD	Business - YTD	Total - YTD
kW	1	17	18	35	287	322
kWh - Lifecycle	145,719	4,305,052	4,450,771	3,337,285	33,711,921	37,049,206
Therms - Lifecycle	0	0	0	0	0	0
mmBtu - Lifecycle	979	55,256	56,236	27,640	155,593	183,232
kWh - First Year	7,213	436,953	444,166	171,886	2,423,214	2,595,100
Therms - First Year	0	0	0	0	0	0
Incentives	\$728.43	\$28,264.69	\$28,993.12	\$35,989.96	\$113,729.62	\$149,719.58

Energy Efficiency	Residential - Last Mth	Business - Last Mth	Total - Last Mth	Residential - YTD	Business - YTD	Total - YTD
kW	1	17	18	26	287	312
kWh - Lifecycle	145,719	4,305,052	4,450,771	2,759,970	33,711,921	36,471,891
Therms - Lifecycle	0	0	0	0	0	0
mmBtu - Lifecycle	979	55,256	56,236	25,670	155,593	181,262
kWh - First Year	7,213	436,953	444,166	148,793	2,423,214	2,572,007
Therms - First Year	0	0	0	0	0	0
Incentives	\$728.43	\$28,264.69	\$28,993.12	\$29,989.96	\$113,729.62	\$143,719.58

Renewables	Residential - Last Mth	Business - Last Mth	Total - Last Mth	Residential - YTD	Business - YTD	Total - YTD
kW	0	0	0	9	0	9
kWh - Lifecycle	0	0	0	577,315	0	577,315
Therms - Lifecycle	0	0	0	0	0	0
mmBtu - Lifecycle	0	0	0	1,970	0	1,970
kWh - First Year	0	0	0	23,093	0	23,093
Therms - First Year	0	0	0	0	0	0
Incentives	\$0.00	\$0.00	\$0.00	\$6,000.00	\$0.00	\$6,000.00



Friends of Lake Kegonsa Society, Inc.
P.O. Box 173
Stoughton, WI 53589-0173
October 2017

President’s Message ~ Peter Foy

We have had another very busy quarter with many different projects and activities that you will be reading about in this newsletter. I would like to thank our Board and all of our members for their interest and participation in our various FOLKS activities. We have also had great support and partnering from the Madison Metropolitan Sewer District and Stoughton Utilities.

Watershed Improvement Network (WINs) Grant

FOLKS was awarded a \$5,000 Madison Metropolitan Sewer District WINs Grant. WINs focuses on phosphorus reduction in the Yahara watershed. As we move into October we will be shifting our focus to our new leaf initiative and this Grant will be used to help fund our leaf project. We will collect the money as we complete the various phases of the project.

This is a very ambitious project being headed up by Gary Smithback and his committee. It involves working with both the Town of Dunn and the Town of Pleasant Springs to better manage our leaves, in an effort to help reduce phosphorus run off into our lake. You can read all about it in this newsletter.

Good news from Stoughton Utilities

We received a notice this month that FOLKS had been awarded a \$1,000 donation from Stoughton Utilities. This donation is part of Stoughton Utilities’ RoundUP program, a voluntary program that ‘rounds up’ customers’ utility bills to the next whole dollar. All proceeds are distributed to and benefit local community organizations. We will use the money to help with our Fish Camp County Park projects and other lake projects. I want to thank our Treasurer, Connie Hagen, who developed and submitted the application for the donation.

Continued On Page 2.

In This Issue:

Demonstration Shoreline Garden at Fish Camp County Park.....	2
The Mad City Ski Team Takes on Lake Kegonsa By Daniele Thompson.....	6
2017 Yahara River/ Door Creek Aquatic Tour	7
Announcing An Ambitious New FOLKS Leaf Management Project By Gary Smithback.....	10
Summer Fling.....	11
FOLKS Business Members.....	12
FOLKS Officers 2017.....	14

President's Message ~ Peter Foy (Continued From Page 1)

Update on the Carp Project

The commercial fishermen should be back on the lake removing more carp as soon as the water cools off and the carp start to congregate to the warmest part of the lake.

Phosphorus (P) reduction from removing carp

We just received some new information about how removing carp will reduce the amount of P in our lake. Based on a formula provided by Mark Sesing, a retired DNR Lake Biologist, removing carp has the following benefit.

- When carp are harvested P is essentially "mined" from the system. This estimated to be between 0.5 and 1.0% We will use the average of 0.75%
- In addition P reduction will also be realized through the elimination of the carp disturbing sediment, (resuspension), disrupting aquatic plants and regenerate P by solubilizing nutrients, including P. This is estimated to be 0.011 lbs. /lb. carp/year.
- So, Phosphorus generation (lbs.)=0.0185 x carp weight (lbs.)
- **The bottom line is that based on this conversion factor the first 111,000 lbs. of carp we removed this spring would result in 2,053 lbs. of P reduction. Remember, one lb. of P generates 500 lbs. of algae. This would be 1,026,750 lbs. of algae.**
- We hope this conversion rate is totally accurate, but if it is even close our carp project will have a major impact on the quality of our lake.

things you should KNOW

Michael W. Peters, President/CEO

Monthly Wrap-Up for September, 2017

Issued Oct. 5, 2017

Things You Should Know is my monthly wrap-up for members of all things related to WPPI Energy. As always, I welcome your feedback. Hearing directly from you is critical to our ability to serve our members. If you have any questions, comments or concerns, please contact me at 608-834-4557 or mpeters@wppienergy.org.

A Successful Annual Meeting. Thank you to the many member governing body representatives, mayors, utility officials and employees who attended our 2017 Annual Meeting. During the Thursday program, we heard from a diverse lineup of speakers on topics ranging from meeting large customer expectations to the future of renewable energy. WPPI Energy Board Chair Jeff Feldt and I spoke on “The State of WPPI Energy,” and in keeping with the theme of this year’s meeting, our presentation focused on the many joint-action opportunities ahead for our membership to continue “Doing More Together.” The reception later that evening provided an opportunity to socialize and enjoy the beautiful weather in a fun and relaxed setting. I trust you found the meeting informative, but we would like to hear your thoughts. If you have not responded to the evaluation survey, please do so. We value your input and take it into consideration in planning each year.

Executive Committee Members, Officers Re-Elected. The WPPI Energy Board of Directors gathered for its September business meeting on the morning following the annual meeting. One of the agenda items was an election to fill four seats on the Executive Committee (EC) of the Board of Directors. Re-elected to those seats were Jeff Feldt (Kaukauna), Dale Lythjohan (Cedarburg), Mike Reynolds (Boscobel) and Steve Thompson (New London). Subsequently, at its meeting on September 28, the EC re-elected Feldt as Chair, Jim Stawicki (Sturgeon Bay) as Vice Chair, Reynolds as Secretary, and Tim Herlitzka (Waunakee) as Treasurer. I thank all of our EC members for their continued service.

Aligning our Efforts to Meet Customer Expectations. We were pleased to welcome to this year’s annual meeting a speaker panel representing member customer businesses from the healthcare, manufacturing and papermaking industries. Supporting strong local economies is a hallmark of public power, and our membership has made a priority to provide local businesses and employers with superior services and support.

“It’s not one-size-fits-all”. As I listened to our guests from Steel King Industries, Expera Specialty Solutions and Aurora Health Care answer a question about how their local utilities can

best support their business needs, I was struck by this comment in particular. Each speaker offered varying perspectives on the importance of topics like energy efficiency, financial incentives, sustainability and renewables. There's no question that the utility's support is expected in all of these areas, but what's also expected is an understanding of the individual customers' business strategies, current industry issues and preferred approach to interacting with their utility.

These comments reinforce the importance of having in place not only the programs to meet customer expectations, but also strong relationships built on a shared understanding of the customer's unique and specific needs.

Your Energy Services Representative. As customer expectations evolve, it is more important than ever for utilities to continue providing their key accounts with personalized support. One of the ways in which WPPI Energy members do so is through the work of their Energy Services Representatives (ESR).

Your ESR is responsible to work with you to develop and implement an ongoing plan for building strong relationships with each of your utility's key accounts. You should hear from your local rep regularly about these interactions. In addition, because we know that the strongest relationships are those that reach the customer at levels ranging from facility managers up to chief executives, your ESR also works to identify opportunities for fostering interactions between your local staff/officials and appropriate key contacts throughout the customer's organizational structure.

Measurable Results. Our market research demonstrates the value of these efforts. When our members' largest business customers were last surveyed two years ago, they ranked their local utility and the utility's ESR higher than average as compared to other utilities for customer satisfaction. We're wrapping up a 2017 version of this large customer survey now, and I look forward to sharing the updated results later this fall.

Member-Directed. As it has been since the creation of our ESR program more than 20 years ago, the work of the ESRs is directed by each utility they serve. Now is the time of year when ESRs meet with each utility manager in order to create an action plan for the year to come. This is an opportunity to discuss the communications and program promotions you would like to focus on. Your plan can include setting a specific budget and schedule for your outreach activities, as well as identifying responsibilities for the plan's implementation. If you have not yet had such a conversation with your ESR this fall, expect to hear from him or her on this topic shortly.

I invite you to contact your ESR directly anytime you have questions about the work he or she is doing to help foster excellent customer relationships for your utility. For more information about the ESR program overall, contact Jake Oelke at joelke@wppienergy.org or 608-834-4536.

Gov. Snyder Names Tom Harrell to Michigan's Unmanned Aircraft Systems Task Force.

Managing the potential benefits and impacts of new technologies is a constant theme for the electric utility industry, and the increasing popularity of “unmanned aircraft systems” (read: drones) is a current and prominent example. When it comes to policies regulating the use of such new technologies, the details matter greatly, and it’s important that our industry is at the table when they are developed.

I’m pleased to report that Michigan Gov. Rick Snyder recently appointed Tom Harrell, CEO of WPPI Energy member Alger Delta, to the state’s new Unmanned Aircraft Systems Task Force. The 27-member panel will develop statewide policy recommendations on the operation, use, and regulation of unmanned aircraft systems in Michigan.

Participating in efforts like this is one of the most effective ways our members can help shape important policies to protect the interests of the local utility, its customers and the community. Congrats, Tom, on your appointment. I know that the work of the task force will benefit greatly from your contributions.

Update: Appleton Coated. As we discussed recently at our annual meeting, Appleton Coated LLC, filed in August a voluntary court petition for receivership. Appleton Coated, a paper manufacturer in Combined Locks, Wis., is the largest electric customer of Kaukauna Utilities and the second-largest electric customer on the WPPI system.

Although the company’s management team expressed a strong desire to find a buyer that would continue operating the mill, the winning bid in a September 19 auction to sell the company was made by Industrial Assets Corp. (IA), a used machinery dealer and liquidator. Earlier today, the court approved the sale to IA. As part of the sale, there will be a 90-day period during which IA will participate in a search for a different buyer to run the mill as a going concern. During the 90 days, a skeleton crew of employees will be kept on to keep the building maintained. It is not clear at this time whether such negotiations will be successful or such a buyer will be identified.

WPPI Energy will continue to participate in the receivership proceedings to the extent necessary to protect its interests and assess impacts to the membership from potential changes in operation of the mill. I will continue to provide you with updates.

RSVP for Upcoming Member Events. WPPI Energy coordinates a variety of educational opportunities and events aimed at helping you get the most out of your utility’s WPPI Energy membership. I hope you’ll join us for one or more of the following:

- ***Fall Orientation to WPPI Energy – October 17.*** Each year, WPPI Energy hosts two “Orientation to WPPI Energy” half-day programs that are designed to help members educate employees and utility stakeholders about our joint action agency. The next

orientation is Tuesday, October 17, and any utility employee, official and/or governing body leader is encouraged to attend this informational session.

- ***Wisconsin Chief Executives Breakfast – October 19.*** Every fall, WPPI Energy hosts a breakfast for Wisconsin member community mayors and other elected officials, also known as “chief executives.” This year’s breakfast will take place on Thursday, October 19, at the Radisson Paper Valley Hotel in Appleton, Wis. The breakfast coincides with the League of Wisconsin Municipalities Annual Conference. The early morning event will be a great opportunity to network and learn about the community’s ownership in WPPI Energy. An invitation was sent directly to member community chief executives with encouragement to pass along to any other member attendees of the conference.
- ***Building Community Connections Workshop – November 2.*** The Building Community Connections Workshop will be held on Thursday, November 2, at WPPI Energy. Member employees, including utility managers, with responsibilities in customer service, communications, and marketing can all benefit from this workshop. Hear from fellow members, WPPI Energy staff, and special guest speakers who will focus on customer engagement, case studies, social media, and available resources in building good will towards your utility.

For more information about these events, please contact Kayla Pierce at 608-834-4537 or kpierce@wppienergy.org.

I am always open to suggestions and feedback from WPPI Energy members. If you have any questions, comments or concerns about WPPI Energy or the updates I have provided here, please don’t hesitate to contact me at 608-834-4557 or mpeters@wppienergy.org.



Stoughton Utilities

600 South Fourth Street
P.O. Box 383
Stoughton, WI 53589-0383

Serving Electric, Water & Wastewater Since 1886

Date: October 10, 2017

To: Stoughton Utilities Committee

From: Robert P. Kardasz, P.E.
Stoughton Utilities Director

Subject: Status of the Utilities Committee recommendation(s) to the Stoughton Common Council

The following items from prior Stoughton Utilities Committee Meeting(s) were acted upon by the Stoughton Common Council at their September 26 meeting:

Business:

- Stoughton Utilities Proposed Updated Position Descriptions for Utilities Wastewater Operator, Utilities Basic Certified Wastewater Operator, Utilities Advanced Certified Wastewater Operator, Utilities Advanced Certified Wastewater Operator / Laboratory Technician, and Wastewater System Supervisor.
- Proposed Position Description for the Utilities Operations Specialist

The following items from prior Stoughton Utilities Committee Meeting(s) were acted upon by the Stoughton Committee of the Whole at their October 6 meeting:

Business:

- Proposed Stoughton Utilities 2018 budget and five year (2018-2022) Capital Improvement Plan (CIP)

The following items from prior Stoughton Utilities Committee Meeting(s) were expected to be reported to, or acted upon by the Stoughton Common Council at their October 10 meeting:

Consent Agenda:

- Stoughton Utilities Payments Due List Report
- Stoughton Utilities Committee August 17, 2017 Meeting Minutes
- Stoughton Utilities July 2017 Financial Summary
- Stoughton Utilities July 2017 Statistical Report



Stoughton Utilities

600 South Fourth Street
P.O. Box 383
Stoughton, WI 53589-0383

Serving Electric, Water & Wastewater Since 1886

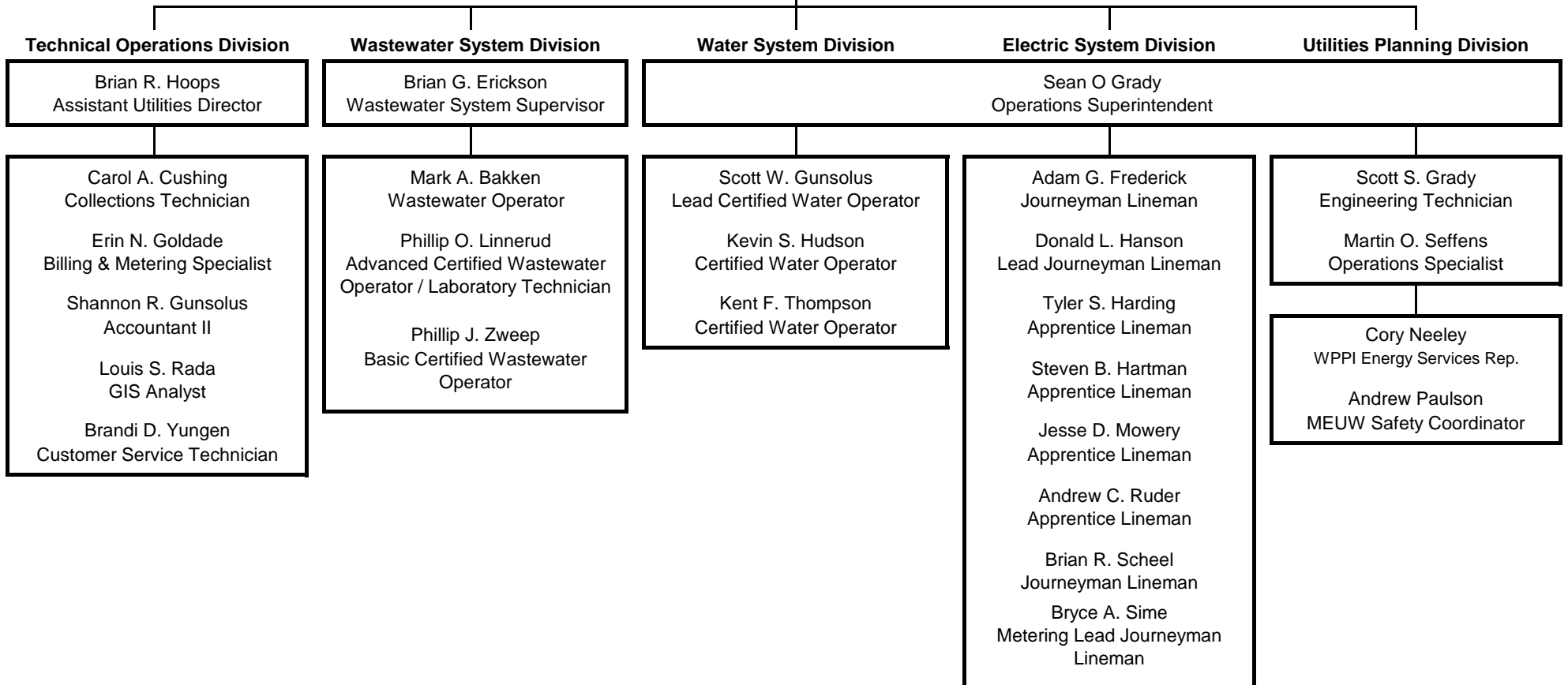
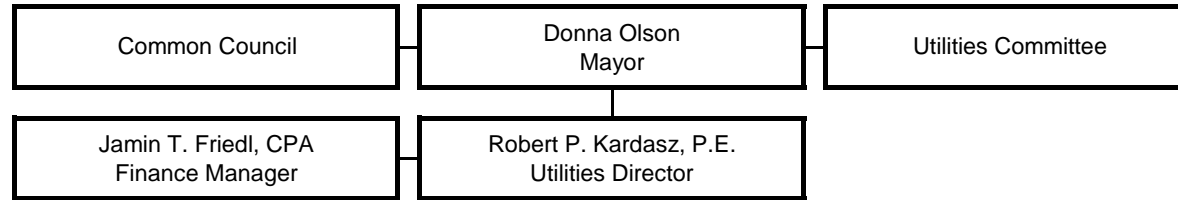
Date: October 10, 2017
To: Stoughton Utilities Committee
From: Robert P. Kardasz, P.E.
Stoughton Utilities Director
Subject: Stoughton Utilities personnel status

It was reported at the July 17, 2017 meeting of the Utilities Committee that Stoughton Utilities had two vacancies due to recent resignations, and that the recruitment process to select qualified candidates to fill each of these vacancies was under way.

On July 25, 2017 we filled the Apprentice Lineman vacancy by hiring Jesse D. Mowery. Mr. Mowery comes from Stoughton and has completed preliminary electric power distribution technical training at Southwest Wisconsin Technical College. He will begin in the second year of the four year apprenticeship program.

On August 21, 2017 we filled the Wastewater Operator vacancy by hiring Mark A. Bakken. Mr. Bakken comes from Stoughton and has extensive wastewater collection experience from his prior employment at Honey Wagon Services. Mark began work at SU on September 11, 2017.

Encl.





Stoughton Utilities

600 South Fourth Street
P.O. Box 383
Stoughton, WI 53589-0383

Serving Electric, Water & Wastewater Since 1886

Date: October 10, 2017

To: Stoughton Utilities Committee

From: Robert P. Kardasz, P.E.
Stoughton Utilities Director

Brian G. Erickson
Stoughton Utilities Wastewater System Supervisor

Subject: Draft Wisconsin Department of Natural Resources (DNR) Wisconsin Pollutant Discharge Elimination System (WPDES) wastewater treatment facility permit

Our current Wisconsin Pollutant Discharge Elimination System (WPDES) issued by the Wisconsin Department of Natural Resources (DNR) is scheduled to expire on June 30, 2019.

Stoughton Utilities was notified by the DNR on July 19, 2016 that they intended to revoke our current permit and reissue it at the same time as the permits of several other permittees in our sub-watershed. The stated purpose of this action was to implement a coordinated adaptive management approach to complying with total phosphorus water quality based effluent limits (WQBELs).

We received the draft of our proposed reissued WPDES permit on September 22, 2017. This draft copy precedes the public notice of the proposed permit and related documents, and the DNR is requesting comments on factual inaccuracies in the permit and supporting documents. We have submitted this draft to our engineering consultants for the review and comment.

The next step in the permit reissuance will be a 30-day public notice and comment period. It is anticipated that the reissued permit will have an effective date of January 1, 2018, and will remain in effect for a period of five years, expiring on December 31, 2022.

Enclosed for your review is our initial response to the draft permit, a summary Permit Fact Sheet, and the draft WPDES permit.

Encl.

Brian Hoops

From: Carlson, Jane <Jane.Carlson@strand.com>
Sent: Monday, October 09, 2017 3:35 PM
To: Phillip.Spranger@wisconsin.gov
Cc: Garbe, Amy M - DNR; Robert Kardasz; Brian Erickson; Brian Hoops; 'kathyl@madsewer.org'
Subject: FW: Stoughton DRAFT Permit Documents for Fact Check Review
Attachments: Stoughton DRAFT Permit-09.pdf; Stoughton DRAFT Fact Sheet-09.pdf; Stoughton WQBEL - May 22, 2017.pdf

Dear Phillip,

I am writing on behalf of Stoughton Utilities. Thank you for the opportunity to review the draft permit. While we understand this was intended to be a fact-check, we believe there are some requirements listed for adaptive management that do not align with the "facts" of the Yahara WINs adaptive management plan and the WDNR's adaptive management technical guidance. We wanted to bring these to WDNR's attention as early as possible in the process.

1. The adaptive management plan indicates the WWTPs will meet the 0.6 mg/L interim limit by the end of the first permit term; please see Appendix 1. Stoughton Utilities' capital improvements plan is based on the expected 5-year compliance schedule. The primary method of phosphorus removal at the Stoughton WWTP is biological, which has variable performance; the 5-year compliance schedule would be helpful so Stoughton Utilities can assess the ability to meet the 0.6 mg/L limit, secure funding, and design and construct a backup phosphorus removal chemical storage and feed system.
2. We request the numeric load reduction requirements be removed from the WPDES permit (in two places) because they may set a precedent that has unintended consequences. For one thing, measurement of the load reductions is not straight-forward and would be difficult to describe briefly in the permit. The code and guidance do not require that these numbers be included in the permit. Instead, we suggest the WDNR follow its guidance and only include in the permit a general statement about implementing the actions in the approved adaptive management plan. We think this is reasonable for this first permit term and would be best for all parties including the WDNR, since the adaptive management plan contains details on how and when to implement the load reductions and how performance will be measured.
3. If the above no. 2. is not acceptable to WDNR, then we request a correction to the numeric load reduction requirements. The values shown in the draft permit are the load reductions listed in the adaptive management plan for the end of the last permit term. For this first permit term, the listed load reductions should be multiplied by 0.4 as described in the adaptive management plan. See Tables 26 and 27. A note on measurement of the load reductions may also need to be added if the numeric values are included in the permit. The plan discusses using a combination of modeling and monitoring to measure performance.

In addition, please check the effluent pH - ammonia limits table in the draft permit, as it is different than the one in the current permit. It looks like one of the columns shifted. We have not yet checked the administrative code to see which table is correct. We were also surprised to see monthly average ammonia limits in the draft permit since the WWTP design flow did not increase. We will review this and may submit comments on this or other items during the 30-day public notice period.

Sincerely,
Jane



Jane Carlson, P.E., ENV SP | Senior Associate

Strand Associates, Inc.®

608.251.2129 ext.1041

jane.carlson@strand.com | www.strand.com

Excellence in Engineering Since 1946.

c: file Stoughton 1040.310

Permit Fact Sheet

General Information

Permit Number:	WI-0020338-09-0													
Permittee Name:	CITY OF STOUGHTON													
Address: City/State/Zip:	700 Mandt Parkway PO Box 383 Stoughton WI 53589													
Discharge Location:	NEQ, SEQ , Section 8, T5N, R11E , Township of Dunkirk at 700 Mandt Parkway in the City of Stoughton Lat: 42° 54' 37" Long: 89° 12' 48"													
Receiving Water:	Yahara River (Yahara River & Lake Kegonsa Watershed, LR06 – Lower Rock River Basin) in Dane County													
StreamFlow (Q _{7,10}) (cfs):	Ann	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	21	97	79	76	46	54	27	24	33	32	36	100	120	
Stream Classification:	Warmwater Sport Fishery Community (WWSF)													
Design Flow(s)	Daily Maximum			4 MGD										
	Weekly Maximum			3.14 MGD										
	Annual Average			1.65 MGD										
Significant Industrial Loading?	B&G Foods, Inc., Color-Con and Uniroyal Global Engineered Products, LLC													
Operator at Proper Grade?	Advanced facility with required subclasses: A1–Suspended Growth Processes; B–Solids Separation; C–Biological Solids/Sludges; P–Total Phosphorus; D–Disinfection; and L–Laboratory. Multiple operators fully certified.													

Facility Description

The City of Stoughton serves a population of approximately 13,000 people as well as several significant industries (see list above). This facility is a conventional activated sludge plant consisting of fine screening, grit removal, primary settling, and biological treatment including Bio-P removal, final clarification and UV disinfection. Waste sludge is thickened in a dissolved air flotation thickener before being combined with primary sludge and anaerobically digested. The digested sludge is dewatered on a gravity belt thickener before storage. Land spreading on Department approved farmland is the final disposal option for the stored bio-solids. Back up chemical is available to treat side streams (or the forward flow if necessary) for Phosphorus. The collection system for the City of Stoughton is a separate sewer system with no constructed overflow points. The City is also covered under a “no exposure certification” for storm water. The Department has found the City to be in substantial compliance with its current permit.

The attached water quality based effluent limitation (WQBEL) recommendations by the Water Quality Bureau for this permit reissuance dated May 22, 2017 contains additional information regarding the discharge to the Yahara River. The WQBEL memo also include an outfall location map depicting the location of the Stoughton Wastewater Treatment Plant outfall.

Proposed Permit Reissuance

The Department anticipates an effective date of January 1, 2018 for the proposed permit. Therefore, to allow a full permit term of five years, the proposed permit’s expiration date is December 31, 2022. If the permit reissuance process takes more or less time than anticipated, the permit’s dates of effectiveness and expiration may be changed accordingly.

Sample Point Designation

Sample Point Designation		
Sample Point Number	Discharge Flow, Units, and Averaging Period	Sample Point Location, Waste Type/sample Contents and Treatment Description (as applicable)
701	1.066 MGD (Average 7/1/14 to 6/30/17)	Influent: 24-hour flow proportional composite sampler located prior to the mechanical bar screen.
001	0.937 MGD (Average 7/1/14 to 6/30/17)	Effluent: 24-hour flow proportional composite sampler intake located in the disinfection channel prior to UV disinfection. Grab samples after disinfection prior to discharge to Yahara River.
002	140 dry U.S. Tons (Average 2014 – 2016)	Class B, liquid, anaerobically digested, dissolved air flotation and gravity belt thickened, liquid biosolids. Representative samples are taken from the sludge storage tank.
101	N/A	In-plant Mercury: Collet a mercury field blank every day that mercury samples are collected at influent and effluent using the clean hands/dirty hands sample collection procedure from EPA method 1669.

1 Influent - Proposed Monitoring

Sample Point Number: 701- INFLUENT

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Continuous	Continuous	
CBOD ₅		Mg/L	3/Week	24-Hr Flow Prop Comp	
BOD ₅ , Total		mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total		mg/L	3/Week	24-Hr Flow Prop Comp	
Mercury, Total Recoverable		ng/L	Quarterly	24-Hr Flow Prop Comp	See subsection 1.2.1.1 in the permit for mercury monitoring requirements.

Changes from Previous Permit and Explanation of Monitoring Requirements

No Changes. Standard influent monitoring parameters and frequencies for a Major municipal treatment facility of this size. Quarterly influent mercury monitoring is required per NR 106.145(3)(a)2, Wis. Adm. Code, for municipal major WWTF's with actual flows greater than 1.0 MGD.

2 Inplant - Proposed Monitoring and Limitations

Sample Point Number: 101- FIELD BLANK for Hg MONITORING

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Mercury, Total Recoverable		ng/L	Quarterly	Blank	See subsection 2.2.1.1 in the permit for mercury monitoring requirements.

Changes from Previous Permit & Explanation Monitoring Requirements

No changes from previous permit. A mercury field blank shall be collected using the Clean Hands/Dirty Hands sample collection procedure excerpted from EPA Method 1669 for every day that mercury influent and effluent samples are collected.

3 Surface Water - Proposed Monitoring and Limitations

Sample Point Number: 001- EFFLUENT to YAHARA RIVER

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Continuous	Continuous	
CBOD5	Weekly Avg	33 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect May through October annually.
CBOD5	Weekly Avg	40 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect November through April annually.
CBOD5	Monthly Avg	25 mg/L	3/Week	24-Hr Flow Prop Comp	
CBOD5	Weekly Avg	454 lbs/day	3/Week	Calculated	Limit in effect May through October annually.
Suspended Solids, Total	Weekly Avg	40 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Weekly Avg	567 lbs/day	3/Week	Calculated	Limit in effect January, March, May, July, August, October and December annually.
Suspended Solids, Total	Weekly Avg	625 lbs/day	3/Week	Calculated	Limit in effect February annually.
Suspended Solids,	Weekly Avg	590 lbs/day	3/Week	Calculated	Limit in effect April, June,

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Total					September and November annually.
Suspended Solids, Total	Monthly Avg	402 lbs/day	3/Week	Calculated	Limit in effect January, March, May, July, August, October and December annually.
Suspended Solids, Total	Monthly Avg	444 lbs/day	3/Week	Calculated	Limit in effect February annually.
Suspended Solids, Total	Monthly Avg	419 lbs/day	3/Week	Calculated	Limit in effect April, June, September and November annually.
pH Field	Daily Min	6.0 su	3/Week	Grab	
pH Field	Daily Max	9.0 su	3/Week	Grab	
Dissolved Oxygen	Daily Min	6.0 mg/L	3/Week	Grab	Limit in effect May through October annually.
Fecal Coliform	Geometric Mean - Monthly	400 #/100 ml	2/Week	Grab	Limit in effect May through October annually.
Fecal Coliform	Geometric Mean - Wkly	780 #/100 ml	2/Week	Grab	Limit in effect May through October annually.
Nitrogen, Ammonia Variable Limit		mg/L	3/Week	24-Hr Flow Prop Comp	Using the daily effluent pH result, look up the daily maximum variable ammonia limit from the pH dependent table at subsection 3.2.1.2 in the permit. Report the variable limit in the Nitrogen, Ammonia Variable Limit column of the eDMR.
Nitrogen, Ammonia (NH3-N) Total	Daily Max - Variable	mg/L	3/Week	24-Hr Flow Prop Comp	Report the daily maximum Ammonia result in the Nitrogen, Ammonia (NH3-N) Total column of the eDMR. Compare to daily maximum variable ammonia limit to determine compliance.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	18 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect October through March annually.

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	11 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect April and May annually.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	28 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect June through September annually.
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	28 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect June through March annually.
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	20 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect April and May annually.
Phosphorus, Total	Monthly Avg	1.0 mg/L	3/Week	24-Hr Flow Prop Comp	
Phosphorus, Total	6-Month Avg	0.6 mg/L	3/Week	24-Hr Flow Prop Comp	This is an Adaptive Management (AM) interim limit that goes into effect beginning November 1, 2020. See subsection 5.1 for the AM interim limit compliance schedule and subsection 3.2.1.3 in the permit for averaging periods and compliance determination.
Phosphorus, Total		lbs/day	3/Week	Calculated	Calculate the daily mass discharge of phosphorus in lbs/day on the same days phosphorus sampling occurs.
Mercury, Total Recoverable	Daily Max	3.3 ng/L	Quarterly	Grab	This is an Alternative Mercury Effluent Limit. See subsections 3.2.1.8 in the permit for Mercury Variance information, 3.2.1.9 for Mercury Monitoring Requirements and 5.2 for the mercury variance compliance schedule.
Acute WET	Daily Max	1.0 TUa	See Listed Qtr(s)	24-Hr Flow Prop Comp	See subsection 3.2.1.11 in the permit for whole effluent toxicity (WET) testing monitoring dates and WET requirements.

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Chronic WET	Daily Max	3.0 TUc	See Listed Qtr(s)	24-Hr Flow Prop Comp	See subsection 3.2.1.11 in the permit for whole effluent toxicity (WET) testing monitoring dates and WET requirements.
Chloride		mg/L	4/Month	24-Hr Flow Prop Comp	Monitoring Only - January 1, 2021 through December 31, 2021. Samples shall be collected on four consecutive days one week per month. See subsection 3.2.1.10 in the permit for chloride monitoring requirements.
Nitrogen, Total Kjeldahl		mg/L	Quarterly	24-Hr Flow Prop Comp	Monitoring Only
Nitrogen, Nitrite + Nitrate Total		mg/L	Quarterly	24-Hr Flow Prop Comp	Monitoring Only
Nitrogen, Total		mg/L	Quarterly	Calculated	Monitoring Only

Changes from Previous Permit

Stoughton's reissued permit will now contain weekly average ammonia nitrogen limits of 20 mg/L for April through May and 28 mg/L for June through March. Monthly average limits of 11 mg/L for April through May, 28 mg/L for June through September and 18 mg/L for October through March will also apply. The current permit contains only daily maximum ammonia nitrogen limits that vary based on effluent pH. The reissued permit will have a new fecal coliform limit of 780 #/100 ml as a weekly geometric mean, effective May 1 through September 30 annually that is in addition to the current fecal coliform limit of 400 #/100 ml as a monthly geometric mean. Total phosphorus (TP) mass limits calculated for the Rock River total maximum daily load (TMDL) are recommended and were to go into effect per a phosphorus compliance schedule contained in the current permit; however, Stoughton has requested and the Department has approved a plan to implement a watershed adaptive management approach under s. NR 217.18, Wis. Adm. Code, as a means for Stoughton to achieve compliance with the phosphorus water quality standards in s. NR 102.06, Wis. Adm. Code. This adaptive management plan is a partnership between the City of Stoughton, City of Madison, Village of Oregon and the Wisconsin DNR Nevin Fish Hatchery plus various municipal separate storm sewer system (MS4s) within the Yahara River action area as defined in the adaptive management plan. An adaptive management TP interim limit of 0.6 mg/L will apply beginning November 1, 2020 per a compliance schedule, while a 1.0 mg/L monthly average TP limit applies on the permit effective date. Stoughton's current permit has an alternative phosphorus limit of 1.3 mg/L as a monthly average. Stoughton has applied for a continuation of a variance from the water quality standard for mercury based on the wildlife criterion of 1.3 ng/L as a monthly average. If approved by EPA a daily maximum Alternative Mercury Effluent Limit (variance limit) of 3.3 ng/L will apply on the permit effective date, Stoughton will be required to implement an approved mercury pollutant minimization program (PMP) plan and submit annual mercury progress reports per a Mercury PMP compliance schedule. The reissued permit will require quarterly monitoring of total nitrogen parameters (total kjeldahl nitrogen, nitrite + nitrate nitrogen and total nitrogen).

Explanation of Limits and Monitoring Requirements

Water Quality Based Limits and WET Requirements and Disinfection

CBOD₅, Total Suspended Solids (TSS) Dissolved Oxygen (DO) and pH

No changes are recommended in the permit limitations for CBOD₅, Total Suspended Solids (concentration and TMDL mass), Dissolved Oxygen (DO) and pH. Because the reference effluent flow rates and receiving water characteristics have not changed, limitations for these water quality characteristics do not need to be re-evaluated at this time.

Disinfection – Seasonal disinfection is required May through October and is accomplished using ultra-violet (UV) light.

Fecal Coliform – The current permit has a fecal coliforms limit of 400 #/100 ml as a monthly geometric mean that is being retained in the reissued permit. Due to recent revisions to ch. NR 106 (effective September 1, 2016), whenever a monthly average limitation is determined necessary to protect water quality, a weekly average limit shall be calculated using procedures specified in s. NR 106.07(3)(e)4. Based on these calculations a fecal coliforms limit of 780 #/100 ml as a weekly geometric mean shall be included in the proposed permit.

Ammonia Nitrogen – Current acute and chronic ammonia toxicity criteria for the protection of aquatic life are included in Tables 2C and 4B of ch. NR 105, Wis. Adm. Code (effective March 1, 2004). Subchapter III of ch. NR 106 establishes the procedure for calculating water quality based effluent limitations (WQBELs) for ammonia (effective March 1, 2004). Acute (daily maximum) ammonia limits are a function of receiving stream classification and effluent pH at the time of discharge. The maximum reasonably expected pH of Stoughton's effluent is 7.7 s.u. (standard pH units), which yields a computed daily maximum limit of 27.91 mg/L (28 mg/L, rounded). However, Stoughton's reissued permit will once again contain variable ammonia limits that vary with effluent pH. Weekly and monthly average ammonia limits were calculated in the May 22, 2017 WQBEL memo for Spring (April through May), Summer (June through September) and Winter (October through March). The calculated limits were compared to the 4-day (weekly) and 30-day (monthly) Upper 99th Percentiles (P99s) of ammonia data collected during the current permit term. The only period of months that showed a reasonable potential to exceed the calculated limits were the weekly and monthly average limits for April through May (spring). The 4-day P99 of 20.64 mg/L exceeded the calculated limit of 19.78 mg/L and therefore a weekly average limit of 20 mg/L (rounded) shall be included in the reissued permit for spring. The 30-day P99 was 14.53 mg/L, which exceeded the calculated limitation of 11.22 mg/L so a monthly average limit of 11 mg/L (rounded) will also apply.

Expression of Limits

Revisions to ch. NR 106, require weekly average and monthly average limits 1) whenever a daily maximum limitation is determined necessary to protect water quality or 2) the calculated weekly average and monthly average limit (regardless of reasonable potential), whichever is more restrictive. Since a daily maximum limit of 28 mg/L was determined to be necessary for all of the periods of months analyzed (spring, summer and winter) weekly average and monthly average limits for summer (June through September) were both set equal to the daily maximum limit of 28 mg/L. For winter (October through March) since a daily maximum limit of 28 mg/L was determined to be necessary the weekly average ammonia limit for winter was set equal to 28 mg/L. The calculated monthly average ammonia limit for winter was 18 mg/L, which is more stringent than the daily maximum limit so the monthly average limit was set equal to 18 mg/L.

Phosphorus – Phosphorus requirements are based on the Phosphorus Rules that became effective December 1, 2010 as detailed in chs. NR 102 Water Quality Standards and NR 217 Effluent Standards and Limitations for Phosphorus. See <http://dnr.wi.gov/topic/surfacewater/phosphorus.html> for details regarding the administrative rules for phosphorus discharges.

As noted below, total phosphorus mass limits based on the Rock River Total Maximum Daily Load (TMDL) Waste Load Allocation (WLA) have been determined necessary for the Stoughton WWTF. However, Stoughton has requested and the Department has approved a plan to implement a watershed adaptive management approach under s. NR 217.18, as a means for Stoughton to achieve compliance with the phosphorus water quality standards in s. NR 102.06, and the Rock River TMDL. The phosphorus limitations and conditions in the proposed permit reflect the approved adaptive management (AM) plan No. WQT-2017-0003. AM Plan No. WQT-2017-0003 is a partnership between the City of Stoughton, Village of Oregon, WDNR Nevin Fish Hatchery, Madison Metropolitan Sewage District and various Municipal Separate Storm Sewer Systems (MS4s) located in the Yahara River watershed. The AM Plan identifies the

Yahara River action area, which encompasses the entire Yahara River watershed, where watershed projects shall be implemented to reduce phosphorus and total suspended solids loadings from point and non-point sources of these pollutants.

At the end of the first permit, the total minimum phosphorus reduction required is 13,320 lbs/yr. Stoughton’s portion of the total reduction is 25 lbs/yr.

The Adaptive Management Plan was written such that Madison Met is solely responsible for coordinating in-stream monitoring and submittal of all required data and annual reports for all entities that are participating in the Yahara River Basin AM Plan; this includes the City of Stoughton, Village of Oregon, WDNR Nevin Fish Hatchery, and various MS4 partners. Each entity has a signed an Intergovernmental Agreement (IGA) indicating more details on roles and responsibilities. This IGA as well as the Memorandum of Understanding (MOU) that the Department signed with Madison Met can be found in the appendix of the Adaptive Management Plan.

Total phosphorus mass limits were calculated to comply with the Rock River TMDL, and were derived consistent with the assumptions and requirements of the EPA-approved waste load allocation for the Rock River. Limits were determined using the code changes and the provision of the TMDL. For informational purposes, the final TMDL mass limits are presented in the following table:

Total Phosphorus Effluent Limitations

Month	Monthly Ave Total P Effluent Limit (lbs/day)
Jan	4.3
Feb	5.6
March	4.9
April	5.3
May	5.2
June	5.3
July	5.1
Aug	4.6
Sept	4.9
Oct	4.1
Nov	4.0
Dec	3.9

Mercury – Actual flow is greater than 1.0 MGD so the quarterly mercury influent, effluent and field blank monitoring requirements for Major WWTFs in Subchapter III, NR 106.145, apply. Mercury effluent and field blank data generated during the current permit term were evaluated for sampling and analysis requirements in accordance with ss. NR 106.145 (9) and (10). The 30-day P99 of effluent results calculated using the procedures in s. NR 106.05(5), was 1.89 ng/L, which is greater than the water quality standard for the protection of wildlife of 1.3 ng/L (the most stringent criterion for this substance), so a limit is necessary (WQBEL). However, s. NR 106.145(4), provides for a variance from water quality standards for this substance in light of its presence in the environment and Stoughton has requested this variance. An Alternative Mercury Effluent Limit (AMEL) would normally be established at the calculated 1-day P99 of 3.5 ng/L (rounded). However, since the previous AMEL of 3.3 ng/L is less than this value, antidegradation rules (ch. NR 207) require that the new AMEL be no greater than the current AMEL. Therefore, the AMEL (variance limit) shall remain 3.3 ng/L. The permit requires Stoughton to continue quarterly influent, field blank and effluent monitoring, maintain mercury discharge concentrations at or below 3.3 ng/L as a daily maximum and implement a Pollutant Minimization Program designed to minimize mercury influent to the plant with the ultimate goal of meeting the unvaried mercury limit.

WET – Whole effluent toxicity (WET) testing requirements and limits (if applicable) are determined in accordance with ss. NR 106.08 and NR 106.09, as revised August 2016. (See the current version of the Whole Effluent Toxicity Program Guidance Document and checklist and WET information, guidance and test methods at <http://dnr.wi.gov/topic/wastewater/wet.html>). Based on a reasonable potential analysis in the May 22, 2017 WQBEL memo an acute WET limit of 1.0 TUa (daily maximum) and a chronic WET limit of 3.0 TUc (monthly average) are required in Stoughton's reissued permit. A minimum of annual acute and chronic monitoring is required because acute and chronic WET limits are required. See subsection 3.2.1.10 in the permit for WET testing dates and WET requirements.

Toxics/Metals – Subsection NR 200.06(1)(a), Table 1, establishes minimum application monitoring requirements for discharges to surface waters. For a major municipal discharger that monitoring includes a Priority Pollutant scan (PPS) for toxic parameters, including metals. These data were reviewed in the WQBEL memo dated May 22, 2017. Chromium 6+ and Bis(2-ethylhexyl)phthalate were detected at levels greater than 1/5 of the calculated daily maximum limits and permit limitations were recommended for both substances. However, Stoughton submitted two additional samples for both parameters and the average effluent concentration for Chromium 6+ dropped to below 1/5 of the daily maximum limit and therefore no limit is necessary. For Bis(2-ethylhexyl)phthalate, the two sample results were both non-detects leading to the conclusion that the original result that triggered the need for a limit is unrepresentative of the discharge and limits are no longer recommended for the parameter. Many of the other substances in the PPS were below levels of detection. No additional limitations are proposed in the reissued permit.

Chloride – Acute and chronic chloride toxicity criteria for the protection of aquatic life are included in Tables 1 and 5 of ch. NR 105. Subchapter IV of ch. NR 106 establishes the procedure for calculating water quality based effluent limitations (WQBELs) for chloride. The calculated 1-day Upper 99th Percentile (566.58 mg/L) of Stoughton's reported chloride effluent concentrations is less than the acute (daily maximum) chloride limit (1,514 mg/L) and the 4-day Upper 99th Percentile (483.99 mg/L) is less than the chronic (weekly average) chloride limit (1,207.28 mg/L), so chloride limits are not needed in the permit (WQBEL). Four samples per month (on consecutive days) chloride monitoring is required in calendar year 2021 to collect data for the next permit reissuance process.

Thermal – Requirements for Temperature are included in NR 102 Subchapter II Water Quality Standards for Temperature and NR 106 Subchapter V Effluent Limitations for Temperature. Thermal discharges must meet the Public Health criterion of 120° F and the Fish & Aquatic Life criteria which are established to protect aquatic communities from lethal and sub-lethal thermal effects. The lowest daily maximum effluent limitation for temperature is 100° F compared to the highest daily maximum effluent temperature of 74° F and the lowest weekly average effluent temperature limitation is 88° F compared to the highest weekly average effluent temperature of 74° F, so temperature limitations are unnecessary. One year of effluent temperature monitoring is recommended in the WQBEL memo; however, since the limits are so much higher than the measured temperatures no monitoring will be required.

Total Nitrogen Monitoring (NO₂+NO₃, TKN and Total N) – Based on the “Guidance for Total Nitrogen Monitoring in WPDES Permits” dated October 2012, quarterly effluent monitoring for Total Nitrogen is required for municipal majors discharging to the Mississippi River Basin.

4 Land Application - Proposed Monitoring and Limitations

Municipal Sludge Description						
Sample Point	Sludge Class (A or B)	Sludge Type (Liquid or Cake)	Pathogen Reduction Method	Vector Attraction Method	Reuse Option	Amount Reused/Disposed (Dry Tons/Year)
002	B	Liquid	Anaerobic Digestion	Injection	Land Application	140 dry U.S. Tons (Avg. 2014 – 2016)
Does sludge management demonstrate compliance? Yes						
Is additional sludge storage required? No						
Is Radium-226 present in the water supply at a level greater than 2 pCi/liter? No If yes, special monitoring and recycling conditions will be included in the permit to track any potential problems in landapplying sludge from this facility						
Is a priority pollutant scan required? Not applicable, design flow of 1.65 MGD is less than 5 MGD. Priority pollutant scans are required once every 10 years at facilities with design flows between 5 MGD and 40 MGD, and once every 5 years if design flow is greater than 40 MGD.						

Sample Point Number: 002- SLUDGE

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
PCB Total Dry Wt	Ceiling	50 mg/kg	Once	Composite	Jan 1, 2019 - Dec 31, 2019
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	Jan 1, 2019 - Dec 31, 2019
Solids, Total		Percent	Annual	Composite	
Arsenic Dry Wt	Ceiling	75 mg/kg	Annual	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	Annual	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	Annual	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	Annual	Composite	
Copper Dry Wt	Ceiling	4,300 mg/kg	Annual	Composite	
Copper Dry Wt	High Quality	1,500 mg/kg	Annual	Composite	
Lead Dry Wt	Ceiling	840 mg/kg	Annual	Composite	
Lead Dry Wt	High Quality	300 mg/kg	Annual	Composite	
Mercury Dry Wt	Ceiling	57 mg/kg	Annual	Composite	
Mercury Dry Wt	High Quality	17 mg/kg	Annual	Composite	
Molybdenum Dry Wt	Ceiling	75 mg/kg	Annual	Composite	
Nickel Dry Wt	Ceiling	420 mg/kg	Annual	Composite	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nickel Dry Wt	High Quality	420 mg/kg	Annual	Composite	
Selenium Dry Wt	Ceiling	100 mg/kg	Annual	Composite	
Selenium Dry Wt	High Quality	100 mg/kg	Annual	Composite	
Zinc Dry Wt	Ceiling	7,500 mg/kg	Annual	Composite	
Zinc Dry Wt	High Quality	2,800 mg/kg	Annual	Composite	
Nitrogen, Total Kjeldahl		Percent	Annual	Composite	
Nitrogen, Ammonium (NH4-N) Total		Percent	Annual	Composite	
Phosphorus, Total		Percent	Annual	Composite	
Phosphorus, Water Extractable		% of Tot P	Annual	Composite	
Potassium, Total Recoverable		Percent	Annual	Composite	

Changes from Previous Permit & Explanation of Limits and Monitoring Requirements

New time frame for PCB monitoring is calendar year 2019. Requirements for land application of municipal sludge are determined in accordance with ch. NR 204 Wis. Adm. Code. Ceiling and high quality limits for metals in sludge are specified in s. NR 204.07(5). Requirements for pathogens are specified in s. NR 204.07(6) and in s. NR 204.07 (7) for vector attraction requirements. Limitations for PCBs are addressed in s. NR 204.07(3)(k).

5 Compliance Schedules

5.1 Adaptive Management Interim Limit Compliance Update

Required Action	Due Date
Progress Report #1: Submit the first progress report on the ability of the wastewater treatment facility to consistently meet the Adaptive Management interim effluent limit of 0.6 mg/L as a 6-month seasonal average with averaging periods of May through October and November through April.	11/30/2018
Progress Report #2: Submit the second progress report on the ability of the wastewater treatment facility to consistently meet the Adaptive Management interim effluent limit of 0.6 mg/L as a 6-month seasonal average with averaging periods of May through October and November through April.	11/30/2019
Comply with Adaptive Management Interim Limit: The Adaptive Management interim effluent limit of 0.6 mg/L as a six-month average goes into effect. The averaging periods are May through October and November through April. Compliance with the 6-month average limit is evaluated at the end of each 6-month period on April 30 and October 31 annually.	11/01/2020

Explanation of Adaptive Management Interim Limit Compliance Update Schedule

This compliance schedule provides Stoughton until November 1, 2020 to comply with the phosphorus adaptive management limit of 0.6 mg/L as a 6-month seasonal average. Annual progress reports on the facility's ability to meet the interim limit are required for the first two years of the permit.

5.2 Mercury Pollutant Minimization Program

As a condition of the variance to the water quality based effluent limitation(s) for mercury granted in accordance with s. NR 106.145(6), Wis. Adm. Code, the permittee shall perform the following actions.

Required Action	Due Date
<p>Annual Mercury Progress Reports: Submit an annual mercury progress report. The annual mercury progress report shall:</p> <p>Indicate which mercury pollutant minimization activities or activities outlined in the approved Pollutant Minimization Plan have been implemented;</p> <p>Include an analysis of trends in monthly and annual total effluent mercury concentrations based on mercury sampling; and</p> <p>Include an analysis of how influent and effluent mercury varies with time and with significant loading of mercury such as loads from industries into the collection system.</p> <p>The first annual mercury progress report is to be submitted by the Due Date.</p>	01/31/2019
Annual Mercury Progress Report #2: Submit a mercury progress report as defined above.	01/31/2020
Annual Mercury Progress Report #3: Submit a mercury progress report as defined above.	01/31/2021
Annual Mercury Progress Report #4: Submit a mercury progress report as defined above.	01/31/2022
<p>Final Mercury Report: Submit a final report documenting the success in reducing mercury concentrations in the effluent, as well as the anticipated future reduction in mercury sources and mercury effluent concentrations. The report shall summarize mercury pollutant minimization activities that have been implemented during the current permit term and state which, if any, pollutant minimization activities from the approved pollutant minimization plan were not pursued and why. The report shall include an analysis of trends in monthly and annual total effluent mercury concentrations based on mercury sampling during the current permit term. The report shall also include an analysis of how influent and effluent mercury varies with time and with significant loading of mercury such as loads from industries into the collection system.</p> <p>If the permittee intends to re-apply for a mercury variance per s. NR 106.145, Wis. Adm. Code, for the reissued permit, a detailed pollutant minimization plan outlining the pollutant minimization activities proposed for the upcoming permit term should be submitted along with the final report.</p>	06/30/2022
Annual Mercury Reports After Permit Expiration: In the event that this permit is not reissued on time, the permittee shall continue to submit annual mercury reports each year covering pollutant minimization activities implemented and mercury concentration trends.	

5.3 Explanation of Mercury Pollutant Minimization Program Schedule

Stoughton has applied for a variance from the mercury water quality criterion for the protection of wildlife (1.3 ng/L). As conditions of receiving a mercury variance Stoughton shall maintain effluent quality at or below an alternative mercury effluent (variance) limit of 3.3 ng/L, implement the "Mercury Pollutant Minimization Program (PMP) Plan" dated June 7, 2017 and submit annual mercury progress reports as described in the compliance schedule above.

Attachments:

Water Quality Based Effluent Limits (WQBEL) – May 22, 2017

WET Checklist Summary – May 22, 2017, WQBEL Memo, Page 17

Map – May 22, 2017, WQBEL Memo, Page 20

Substantial Compliance Determination – April 10, 2017

Public Notice –

Proposed Expiration Date:

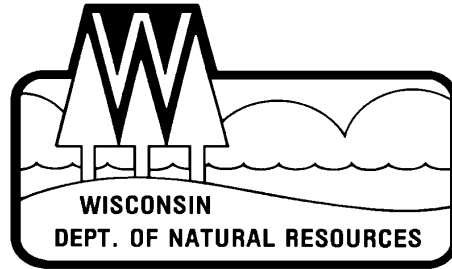
December 31, 2022

Prepared By:

Phillip Spranger, Wastewater Specialist

Date: September 22, 2017

cc: Amy Garbe



WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
**PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE
ELIMINATION SYSTEM**

CITY OF STOUGHTON

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility
located at

700 MANDT PARKWAY, STOUGHTON, WISCONSIN
NE ¼ of SE ¼ of Section 8, T5N, R11E

to

YAHARA RIVER

**(YAHARA RIVER & LAKE KEGONSA WATERSHED, LR06 – LOWER ROCK RIVER BASIN)
IN DANE COUNTY**

Outfall – Lat: 42.91035° N, Lon: 89.21348° W

in accordance with the effluent limitations, monitoring requirements and other conditions set
forth in this permit.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date an application shall be filed for reissuance of this permit, according to Chapter NR 200, Wis. Adm. Code, at least 180 days prior to the expiration date given below.

State of Wisconsin Department of Natural Resources
For the Secretary

By

Tim Ryan
Wastewater Field Supervisor

Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - January 01, 2018

EXPIRATION DATE - December 31, 2022

TABLE OF CONTENTS

1 INFLUENT REQUIREMENTS	1
1.1 SAMPLING POINT(S)	1
1.2 MONITORING REQUIREMENTS	1
1.2.1 <i>Sampling Point 701 - INFLUENT</i>	1
2 IN-PLANT REQUIREMENTS	2
2.1 SAMPLING POINT(S)	2
2.2 MONITORING REQUIREMENTS AND LIMITATIONS	2
2.2.1 <i>Sampling Point 101 - FIELD BLANK for Hg MONITORING</i>	2
3 SURFACE WATER REQUIREMENTS	3
3.1 SAMPLING POINT(S)	3
3.2 MONITORING REQUIREMENTS AND EFFLUENT LIMITATIONS	3
3.2.1 <i>Sampling Point (Outfall) 001 - EFFLUENT to YAHARA RIVER</i>	3
4 LAND APPLICATION REQUIREMENTS	10
4.1 SAMPLING POINT(S)	10
4.2 MONITORING REQUIREMENTS AND LIMITATIONS	10
4.2.1 <i>Sampling Point (Outfall) 002 - SLUDGE</i>	10
5 SCHEDULES	14
5.1 ADAPTIVE MANAGEMENT INTERIM LIMIT COMPLIANCE UPDATE	14
5.2 MERCURY POLLUTANT MINIMIZATION PROGRAM	14
6 STANDARD REQUIREMENTS	16
6.1 REPORTING AND MONITORING REQUIREMENTS	16
6.1.1 <i>Monitoring Results</i>	16
6.1.2 <i>Sampling and Testing Procedures</i>	16
6.1.3 <i>Recording of Results</i>	16
6.1.4 <i>Reporting of Monitoring Results</i>	17
6.1.5 <i>Compliance Maintenance Annual Reports</i>	17
6.1.6 <i>Records Retention</i>	17
6.1.7 <i>Other Information</i>	17
6.1.8 <i>Reporting Requirements – Alterations or Additions</i>	18
6.2 SYSTEM OPERATING REQUIREMENTS	18
6.2.1 <i>Noncompliance Reporting</i>	18
6.2.2 <i>Flow Meters</i>	18
6.2.3 <i>Raw Grit and Screenings</i>	19
6.2.4 <i>Sludge Management</i>	19
6.2.5 <i>Prohibited Wastes</i>	19
6.2.6 <i>Bypass</i>	19
6.2.7 <i>Scheduled Bypass</i>	19
6.2.8 <i>Controlled Diversions</i>	20
6.2.9 <i>Proper Operation and Maintenance</i>	20
6.2.10 <i>Operator Certification</i>	20
6.3 SEWAGE COLLECTION SYSTEMS	20
6.3.1 <i>Sanitary Sewage Overflows and Sewage Treatment Facility Overflows</i>	20
6.3.2 <i>Capacity, Management, Operation and Maintenance (CMOM) Program</i>	22
6.3.3 <i>Sewer Cleaning Debris and Materials</i>	22
6.4 SURFACE WATER REQUIREMENTS	23
6.4.1 <i>Permittee-Determined Limit of Quantitation Incorporated into this Permit</i>	23
6.4.2 <i>Appropriate Formulas for Effluent Calculations</i>	23
6.4.3 <i>Effluent Temperature Requirements</i>	23

<i>6.4.4 Visible Foam or Floating Solids</i>	24
<i>6.4.5 Surface Water Uses and Criteria</i>	24
<i>6.4.6 Percent Removal</i>	24
<i>6.4.7 Fecal Coliforms</i>	24
<i>6.4.8 Seasonal Disinfection</i>	24
<i>6.4.9 Whole Effluent Toxicity (WET) Monitoring Requirements</i>	24
<i>6.4.10 Whole Effluent Toxicity (WET) Identification and Reduction</i>	25
<i>6.4.11 Reopener Clause</i>	25
6.5 LAND APPLICATION REQUIREMENTS	25
<i>6.5.1 Sludge Management Program Standards And Requirements Based Upon Federally Promulgated Regulations</i>	25
<i>6.5.2 General Sludge Management Information</i>	25
<i>6.5.3 Sludge Samples</i>	25
<i>6.5.4 Land Application Characteristic Report</i>	26
<i>6.5.5 Calculation of Water Extractable Phosphorus</i>	26
<i>6.5.6 Monitoring and Calculating PCB Concentrations in Sludge</i>	26
<i>6.5.7 Annual Land Application Report</i>	27
<i>6.5.8 Other Methods of Disposal or Distribution Report</i>	27
<i>6.5.9 Approval to Land Apply</i>	27
<i>6.5.10 Soil Analysis Requirements</i>	27
<i>6.5.11 Land Application Site Evaluation</i>	27
<i>6.5.12 Class B Sludge: Fecal Coliform Limitation</i>	28
<i>6.5.13 Class B Sludge: Anaerobic Digestion</i>	28
<i>6.5.14 Class B Sludge - Vector Control: Injection</i>	28
7 SUMMARY OF REPORTS DUE	29

1 Influent Requirements

1.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
701	Influent: 24-hour flow proportional composite sampler located prior to the mechanical bar screen.

1.2 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

1.2.1 Sampling Point 701 - INFLUENT

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Continuous	Continuous	
CBOD ₅		mg/L	3/Week	24-Hr Flow Prop Comp	
BOD ₅ , Total		mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total		mg/L	3/Week	24-Hr Flow Prop Comp	
Mercury, Total Recoverable		ng/L	Quarterly	24-Hr Flow Prop Comp	See subsection 1.2.1.1 for mercury monitoring requirements.

1.2.1.1 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), Wisconsin Administrative Code. The limit of quantitation (LOQ) used for the effluent and field blank shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

2 In-Plant Requirements

2.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)
101	In-plant Mercury: Collect a mercury field blank every day that mercury samples are collected at influent and effluent using the clean hands/dirty hands sample collection procedure from EPA method 1669.

2.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

2.2.1 Sampling Point 101 - FIELD BLANK for Hg MONITORING

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Mercury, Total Recoverable		ng/L	Quarterly	Blank	See subsection 2.2.1.1 for mercury monitoring requirements.

2.2.1.1 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), Wisconsin Administrative Code. The limit of quantitation (LOQ) used for the effluent and field blank shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

3 Surface Water Requirements

3.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
001	Effluent: 24-hour flow proportional composite sampler intake located in the disinfection channel prior to UV disinfection. Grab samples after disinfection prior to discharge to Yahara River.

3.2 Monitoring Requirements and Effluent Limitations

The permittee shall comply with the following monitoring requirements and limitations.

3.2.1 Sampling Point (Outfall) 001 - EFFLUENT to YAHARA RIVER

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Continuous	Continuous	
CBOD ₅	Weekly Avg	33 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect May through October annually.
CBOD ₅	Weekly Avg	40 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect November through April annually.
CBOD ₅	Monthly Avg	25 mg/L	3/Week	24-Hr Flow Prop Comp	
CBOD ₅	Weekly Avg	454 lbs/day	3/Week	Calculated	Limit in effect May through October annually.
Suspended Solids, Total	Weekly Avg	40 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Weekly Avg	567 lbs/day	3/Week	Calculated	Limit in effect January, March, May, July, August, October and December annually.
Suspended Solids, Total	Weekly Avg	625 lbs/day	3/Week	Calculated	Limit in effect February annually.
Suspended Solids, Total	Weekly Avg	590 lbs/day	3/Week	Calculated	Limit in effect April, June, September and November annually.
Suspended Solids, Total	Monthly Avg	402 lbs/day	3/Week	Calculated	Limit in effect January, March, May, July, August, October and December annually.
Suspended Solids, Total	Monthly Avg	444 lbs/day	3/Week	Calculated	Limit in effect February annually.

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Suspended Solids, Total	Monthly Avg	419 lbs/day	3/Week	Calculated	Limit in effect April, June, September and November annually.
pH Field	Daily Min	6.0 su	3/Week	Grab	
pH Field	Daily Max	9.0 su	3/Week	Grab	
Dissolved Oxygen	Daily Min	6.0 mg/L	3/Week	Grab	Limit in effect May through October annually.
Fecal Coliform	Geometric Mean - Monthly	400 #/100 ml	2/Week	Grab	Limit in effect May through September annually.
Fecal Coliform	Geometric Mean - Wkly	780 #/100 ml	2/Week	Grab	Limit in effect May through September annually.
Nitrogen, Ammonia Variable Limit		mg/L	3/Week	24-Hr Flow Prop Comp	Using the daily effluent pH result, look up the daily maximum variable ammonia limit from the pH dependent table at subsection 3.2.1.2. Report the variable limit in the Nitrogen, Ammonia Variable Limit column of the eDMR.
Nitrogen, Ammonia (NH ₃ -N) Total	Daily Max - Variable	mg/L	3/Week	24-Hr Flow Prop Comp	Report the daily maximum Ammonia result in the Nitrogen, Ammonia (NH ₃ -N) Total column of the eDMR. Compare to daily maximum variable ammonia limit to determine compliance.
Nitrogen, Ammonia (NH ₃ -N) Total	Monthly Avg	18 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect October through March annually.
Nitrogen, Ammonia (NH ₃ -N) Total	Monthly Avg	11 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect April and May annually.
Nitrogen, Ammonia (NH ₃ -N) Total	Monthly Avg	28 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect June through September annually.
Nitrogen, Ammonia (NH ₃ -N) Total	Weekly Avg	28 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect June through March annually.
Nitrogen, Ammonia (NH ₃ -N) Total	Weekly Avg	20 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect April and May annually.
Phosphorus, Total	Monthly Avg	1.0 mg/L	3/Week	24-Hr Flow Prop Comp	

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Phosphorus, Total	6-Month Avg	0.6 mg/L	3/Week	24-Hr Flow Prop Comp	This is an Adaptive Management (AM) interim limit that goes into effect beginning November 1, 2020. See subsection 5.1 for the AM interim limit compliance schedule and subsection 3.2.1.3 for averaging periods and compliance determination.
Phosphorus, Total		lbs/day	3/Week	Calculated	Calculate the daily mass discharge of phosphorus in lbs/day on the same days phosphorus sampling occurs.
Mercury, Total Recoverable	Daily Max	3.3 ng/L	Quarterly	Grab	This is an Alternative Mercury Effluent Limit. See subsections 3.2.1.8 for Mercury Variance information, 3.2.1.9 for Mercury Monitoring requirements and 5.2 for the mercury variance compliance schedule.
Acute WET	Daily Max	1.0 TU _a	See Listed Qtr(s)	24-Hr Flow Prop Comp	See subsection 3.2.1.11 for whole effluent toxicity (WET) testing monitoring dates and WET requirements.
Chronic WET	Daily Max	3.0 TU _c	See Listed Qtr(s)	24-Hr Flow Prop Comp	See subsection 3.2.1.11 for whole effluent toxicity (WET) testing monitoring dates and WET requirements.
Chloride		mg/L	4/Month	24-Hr Flow Prop Comp	Monitoring Only - January 1, 2021 through December 31, 2021. Samples shall be collected on four consecutive days one week per month. See subsection 3.2.1.10 for chloride monitoring requirements.
Nitrogen, Total Kjeldahl		mg/L	Quarterly	24-Hr Flow Prop Comp	Monitoring Only
Nitrogen, Nitrite + Nitrate Total		mg/L	Quarterly	24-Hr Flow Prop Comp	Monitoring Only
Nitrogen, Total		mg/L	Quarterly	Calculated	Monitoring Only

3.2.1.1 Average Annual Design Flow

The average annual design flow of the permittee’s wastewater treatment facility is 1.65 MGD.

3.2.1.2 pH Dependent Variable Ammonia Limitations

The following table provides daily maximum limits throughout the pH Range:

Effluent pH s.u.	NH ₃ -N Limit mg/L	Effluent pH s.u.	NH ₃ -N Limit mg/L	Effluent pH s.u.	NH ₃ -N Limit mg/L
6.0 < pH ≤ 6.1	110	7.0 < pH ≤ 7.1	72	8.0 < pH ≤ 8.1	17
6.1 < pH ≤ 6.2	108	7.1 < pH ≤ 7.2	66	8.1 < pH ≤ 8.2	14
6.2 < pH ≤ 6.3	106	7.2 < pH ≤ 7.3	59	8.2 < pH ≤ 8.3	11
6.3 < pH ≤ 6.4	104	7.3 < pH ≤ 7.4	52	8.3 < pH ≤ 8.4	9.4
6.4 < pH ≤ 6.5	101	7.4 < pH ≤ 7.5	46	8.4 < pH ≤ 8.5	7.8
6.5 < pH ≤ 6.6	98	7.5 < pH ≤ 7.6	40	8.5 < pH ≤ 8.6	6.4
6.6 < pH ≤ 6.7	94	7.6 < pH ≤ 7.7	34	8.6 < pH ≤ 8.7	5.3
6.7 < pH ≤ 6.8	89	7.7 < pH ≤ 7.8	29	8.7 < pH ≤ 8.8	4.4
6.8 < pH ≤ 6.9	84	7.8 < pH ≤ 7.9	24	8.8 < pH ≤ 8.9	3.7
6.9 < pH ≤ 7.0	78	7.9 < pH ≤ 8.0	20	8.9 < pH ≤ 9.0	3.1

3.2.1.3 Total Phosphorus Interim Limit, Averaging Periods and Compliance Determination

The adaptive management total phosphorus interim limit of 0.6 mg/L goes into effect beginning the period from November 1, 2020 through April 30, 2021. The averaging periods are May through October and November through April. Compliance with the 6-month average limit is evaluated at the end of each 6-month period on April 30th and October 31st annually.

3.2.1.4 Phosphorus Limitation(s)

The City of Stoughton has requested and the Department has approved a plan to implement a watershed adaptive management approach under s. NR 217.18, Wis. Adm. Code, as a means for Stoughton to achieve compliance with the phosphorus water quality standard in s. NR 102.06, Wis. Adm. Code. The phosphorus limitations and conditions in this permit reflect the approved adaptive management plan WQT-2017-0003. Failure to implement terms and conditions of this section is a violation of this permit. The permittee shall design and implement the actions identified in section 3 of the AM Plan No. WQT-2017-0003 in accordance with the goals and measures identified in the approved plan. If total phosphorus loadings within the Yahara River action area, as identified in AM Plan No. WQT-2017-0003, are not reduced by at least 25 pounds per year by December 31, 2022 the watershed adaptive management option may not be available to the permittee upon permit reissuance.

Pursuant to s. NR 217.18(3)(e)2, Wis. Adm. Code, the adaptive management interim limitation is 0.6 mg/L, expressed as a six-month average. Additionally, a 1.0 mg/L limitation expressed as a monthly average is required. The final calculated water quality based effluent limitations for phosphorus are based on the Rock River TMDL and are listed in the table below and are effective at the end of four permit terms unless the AM project is terminated per s. NR 217.18(3)(g), Wis. Adm. Code or successful prior to the effective date. These limitations may be recalculated based on changes in the in-stream data at the time of permit reissuance.

Total Phosphorus Effluent Limitations

Month	Monthly Ave Total P Effluent Limit (lbs/day)
Jan	4.3
Feb	5.6
March	4.9
April	5.3
May	5.2
June	5.3
July	5.1
Aug	4.6
Sept	4.9
Oct	4.1
Nov	4.0
Dec	3.9

3.2.1.5 Watershed Adaptive Management Project

Adaptive Management Plan No. WQT-2017-0003 is a partnership between the City of Stoughton, Village of Oregon, WDNR Nevin Fish Hatchery, Madison Metropolitan Sewage District and various Municipal Separate Storm Sewer Systems (MS4s) as a means to achieve compliance with the phosphorus water quality standard in s. NR 102.06, Wis. Adm. Code and the Rock River TMDL. As the approved plan is written, Madison Metropolitan Sewage District is responsible for the submittal of all surface water samples as identified in AM Plan No. WQT-2017-0003 and the submittal of annual reports on the implementation of AM Plan No. WQT-2017-0003.

The total phosphorus reductions within the Yahara River action area, as identified in AM Plan No. WQT-2017-0003, shall be the combination of all four point sources (City of Stoughton, Village of Oregon, WDNR Nevin Fish Hatchery, Madison Metropolitan Sewage District) totaling at least 13,320 pounds per year by December 31, 2022. Failure to meet the reductions may result in the watershed adaptive management option not being available to the permittee upon permit reissuance.

3.2.1.6 Adaptive Management Reopener Clause

Per NR 217.18(3)(g), Wis. Adm. Code, the Department may terminate the adaptive management option for a permittee through permit modification or at permit reissuance and require compliance with a phosphorus effluent limitation calculated under s. NR 217.13, Wis. Adm. Code, or a US EPA approved TMDL based on any of the following reasons:

1. Failure to implement the adaptive management actions in accordance with the approved adaptive management plan and compliance schedule established in the permit.
2. New information becomes available that changes the Department's determinations made under s. NR 217.18(2), Wis. Adm. Code.
3. Circumstances beyond the permittee's control have made compliance with the applicable phosphorus criterion in s. NR 102.06, Wis. Adm. Code, pursuant to the plan's goals and measures infeasible.
4. A determination by the Department that sufficient reductions have not been achieved to timely reduce the amount of total phosphorus to meet the criteria in s. NR 102.06, Wis. Adm. Code.

3.2.1.7 Adaptive Management Requirements – Optimization

The permittee shall continue to optimize performance to control phosphorus discharges in accordance with s. NR 217.18(3)(c), Wis Adm. Code.

3.2.1.8 Mercury Variance – Implement Pollutant Minimization Plan

This permit contains a variance to the water quality-based effluent limit (WQBEL) for mercury granted in accordance with s. 283.15, Stats. As conditions of this variance the permittee shall (a) maintain effluent quality at or below the interim effluent limitation specified in the table above, (b) implement the mercury pollutant minimization measures specified in the “Stoughton Mercury Pollutant Minimization Program PMP Plan” dated June 7, 2017, (c) follow the approved Pollutant Minimization Plan and (d) perform the actions listed in the compliance schedule. (See the Schedules section herein.)

3.2.1.9 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), Wisconsin Administrative Code. The limit of quantitation (LOQ) used for the effluent and field blank shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

3.2.1.10 Chloride Monitoring Requirements

A sample frequency of 4/month requires that samples be collected on four consecutive days one week each month. Any four consecutive days of sampling shall be exclusive to one week of a month; where Week 1 is days 1-7, Week 2 is days 8-14, Week 3 is days 15-21, and Week 4 is days 22-28.

3.2.1.11 Whole Effluent Toxicity (WET) Testing

Primary Control Water: A grab sample from the Yahara River, upstream/out of the influence of the mixing zone and any other discharge

Instream Waste Concentration (IWC): 33%

Dilution series: At least five effluent concentrations and dual controls must be included in each test.

- **Acute:** 100, 50, 25, 12.5, 6.25% and any additional selected by the permittee.
- **Chronic:** 100, 75, 50, 25, 12.5% and any additional selected by the permittee.

WET Testing Frequency:

Acute tests shall be conducted once each year in rotating quarters in order to collect seasonal information about the discharge. Tests are required during the following quarters.

- **Acute:** *July 1–September 30, 2018; October 1–December 31, 2019; January 1–March 31, 2020; April 1–June 30, 2021; and July 1–September 30, 2022*

Acute WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the last full calendar year of this permit. For example, the next test would be required in July 1–September 30, 2023.

Chronic tests shall be conducted once each year in rotating quarters in order to collect seasonal information about the discharge. Tests are required during the following quarters.

- **Chronic:** *July 1–September 30, 2018; October 1–December 31, 2019; January 1–March 31, 2020; April 1–June 30, 2021; and July 1–September 30, 2022*

Chronic WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the last full calendar year of this permit. For example, the next test would be required in July 1–September 30, 2023.

Testing: WET testing shall be performed during normal operating conditions. Permittees are not allowed to turn off or otherwise modify treatment systems, production processes, or change other operating or treatment conditions during WET tests.

Reporting: The permittee shall report test results on the Discharge Monitoring Report form, and also complete the "Whole Effluent Toxicity Test Report Form" (Section 6, "*State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition*"), for each test. The original, complete, signed version of the Whole Effluent Toxicity Test Report Form shall be sent to the Biomonitoring Coordinator, Bureau of Water Quality, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921, within 45 days of test completion. The Discharge Monitoring Report (DMR) form shall be submitted electronically by the required deadline.

Determination of Positive Results: An acute toxicity test shall be considered positive if the Toxic Unit - Acute (TU_a) is greater than 1.0 for either species. The TU_a shall be calculated as follows: $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Toxic Unit - Chronic (TU_c) is greater than 3.0 for either species. The TU_c shall be calculated as follows: $TU_c = 100 \div IC_{25}$.

Additional Testing Requirements: Within 90 days of a test which showed positive results, the permittee shall submit the results of at least 2 retests to the Biomonitoring Coordinator on "Whole Effluent Toxicity Test Report Forms". The 90 day reporting period shall begin the day after the test which showed a positive result. The retests shall be completed using the same species and test methods specified for the original test (see the Standard Requirements section herein).

4 Land Application Requirements

4.1 Sampling Point(s)

The discharge(s) shall be limited to land application of the waste type(s) designated for the listed sampling point(s) on Department approved land spreading sites or by hauling to another facility.

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
002	Class B, liquid, anaerobically digested, dissolved air flotation and gravity belt thickened, liquid biosolids. Representative samples are taken from the sludge storage tank.

4.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

4.2.1 Sampling Point (Outfall) 002 - SLUDGE

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
PCB Total Dry Wt	Ceiling	50 mg/kg	Once	Composite	Jan 1, 2019 - Dec 31, 2019
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	Jan 1, 2019 - Dec 31, 2019
Solids, Total		Percent	Annual	Composite	
Arsenic Dry Wt	Ceiling	75 mg/kg	Annual	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	Annual	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	Annual	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	Annual	Composite	
Copper Dry Wt	Ceiling	4,300 mg/kg	Annual	Composite	
Copper Dry Wt	High Quality	1,500 mg/kg	Annual	Composite	
Lead Dry Wt	Ceiling	840 mg/kg	Annual	Composite	
Lead Dry Wt	High Quality	300 mg/kg	Annual	Composite	
Mercury Dry Wt	Ceiling	57 mg/kg	Annual	Composite	
Mercury Dry Wt	High Quality	17 mg/kg	Annual	Composite	
Molybdenum Dry Wt	Ceiling	75 mg/kg	Annual	Composite	
Nickel Dry Wt	Ceiling	420 mg/kg	Annual	Composite	
Nickel Dry Wt	High Quality	420 mg/kg	Annual	Composite	
Selenium Dry Wt	Ceiling	100 mg/kg	Annual	Composite	
Selenium Dry Wt	High Quality	100 mg/kg	Annual	Composite	
Zinc Dry Wt	Ceiling	7,500 mg/kg	Annual	Composite	
Zinc Dry Wt	High Quality	2,800 mg/kg	Annual	Composite	
Nitrogen, Total Kjeldahl		Percent	Annual	Composite	
Nitrogen, Ammonium (NH ₄ -N) Total		Percent	Annual	Composite	
Phosphorus, Total		Percent	Annual	Composite	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Phosphorus, Water Extractable		% of Tot P	Annual	Composite	
Potassium, Total Recoverable		Percent	Annual	Composite	

Other Sludge Requirements	
Sludge Requirements	Sample Frequency
List 3 Requirements – Pathogen Control: The requirements in List 3 shall be met prior to land application of sludge.	Annual
List 4 Requirements – Vector Attraction Reduction: The vector attraction reduction shall be satisfied prior to, or at the time of land application as specified in List 4.	Annual

4.2.1.1 List 2 Analysis

If the monitoring frequency for List 2 parameters is more frequent than "Annual" then the sludge may be analyzed for the List 2 parameters just prior to each land application season rather than at the more frequent interval specified.

4.2.1.2 Changes in Feed Sludge Characteristics

If a change in feed sludge characteristics, treatment process, or operational procedures occurs which may result in a significant shift in sludge characteristics, the permittee shall reanalyze the sludge for List 1, 2, 3 and 4 parameters each time such change occurs.

4.2.1.3 Sludge Which Exceeds the High Quality Limit

Cumulative pollutant loading records shall be kept for all bulk land application of sludge which does not meet the high quality limit for any parameter. This requirement applies for the entire calendar year in which any exceedance of Table 3 of s. NR 204.07(5)(c), is experienced. Such loading records shall be kept for all List 1 parameters for each site land applied in that calendar year. The formula to be used for calculating cumulative loading is as follows:

$[(\text{Pollutant concentration (mg/kg)} \times \text{dry tons applied/ac}) \div 500] + \text{previous loading (lbs/acre)} = \text{cumulative lbs pollutant per acre}$

When a site reaches 90% of the allowable cumulative loading for any metal established in Table 2 of s. NR 204.07(5)(b), the Department shall be so notified through letter or in the comment section of the annual land application report (3400-55).

4.2.1.4 Sludge Analysis for PCBs

The permittee shall analyze the sludge for Total PCBs one time during **2019**. The results shall be reported as "PCB Total Dry Wt". Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with Table EM in s. NR 219.04, Wis. Adm. Code and the conditions specified in Standard Requirements of this permit. PCB results shall be submitted by January 31, following the specified year of analysis.

4.2.1.5 Lists 1, 2, 3, and 4

<p>List 1 TOTAL SOLIDS AND METALS</p> <p>See the Monitoring Requirements and Limitations table above for monitoring frequency and limitations for the List 1 parameters</p>
Solids, Total (percent)
Arsenic, mg/kg (dry weight)
Cadmium, mg/kg (dry weight)
Copper, mg/kg (dry weight)
Lead, mg/kg (dry weight)
Mercury, mg/kg (dry weight)
Molybdenum, mg/kg (dry weight)
Nickel, mg/kg (dry weight)
Selenium, mg/kg (dry weight)
Zinc, mg/kg (dry weight)

<p>List 2 NUTRIENTS</p> <p>See the Monitoring Requirements and Limitations table above for monitoring frequency for the List 2 parameters</p>
Solids, Total (percent)
Nitrogen Total Kjeldahl (percent)
Nitrogen Ammonium (NH ₄ -N) Total (percent)
Phosphorus Total as P (percent)
Phosphorus, Water Extractable (as percent of Total P)
Potassium Total Recoverable (percent)

<p>List 3 PATHOGEN CONTROL FOR CLASS B SLUDGE</p> <p>The permittee shall implement pathogen control as listed in List 3. The Department shall be notified of the pathogen control utilized and shall be notified when the permittee decides to utilize alternative pathogen control.</p> <p>The following requirements shall be met prior to land application of sludge.</p>		
Parameter	Unit	Limit
Fecal Coliform*	MPN/gTS or CFU/gTS	2,000,000
OR, ONE OF THE FOLLOWING PROCESS OPTIONS		
Aerobic Digestion	Air Drying	
Anaerobic Digestion	Composting	
Alkaline Stabilization	PSRP Equivalent Process	
* The Fecal Coliform limit shall be reported as the geometric mean of 7 discrete samples on a dry weight basis.		

List 4
VECTOR ATTRACTION REDUCTION

The permittee shall implement any one of the vector attraction reduction options specified in List 4. The Department shall be notified of the option utilized and shall be notified when the permittee decides to utilize an alternative option.

One of the following shall be satisfied prior to, or at the time of land application as specified in List 4.

Option	Limit	Where/When it Shall be Met
Volatile Solids Reduction	≥38%	Across the process
Specific Oxygen Uptake Rate	≤1.5 mg O ₂ /hr/g TS	On aerobic stabilized sludge
Anaerobic bench-scale test	<17 % VS reduction	On anaerobic digested sludge
Aerobic bench-scale test	<15 % VS reduction	On aerobic digested sludge
Aerobic Process	>14 days, Temp >40°C and Avg. Temp > 45°C	On composted sludge
pH adjustment	>12 S.U. (for 2 hours) and >11.5 (for an additional 22 hours)	During the process
Drying without primary solids	>75 % TS	When applied or bagged
Drying with primary solids	>90 % TS	When applied or bagged
Equivalent Process	Approved by the Department	Varies with process
Injection	-	When applied
Incorporation	-	Within 6 hours of application

4.2.1.6 Daily Land Application Log

Daily Land Application Log		
Discharge Monitoring Requirements and Limitations		
<p>The permittee shall maintain a daily land application log for biosolids land applied each day when land application occurs. The following minimum records must be kept, in addition to all analytical results for the biosolids land applied. The log book records shall form the basis for the annual land application report requirements.</p>		
Parameters	Units	Sample Frequency
DNR Site Number(s)	Number	Daily as used
Outfall number applied	Number	Daily as used
Acres applied	Acres	Daily as used
Amount applied	As appropriate * /day	Daily as used
Application rate per acre	unit */acre	Daily as used
Nitrogen applied per acre	lb/acre	Daily as used
Method of Application	Injection, Incorporation, or surface applied	Daily as used

*gallons, cubic yards, dry US Tons or dry Metric Tons

5 Schedules

5.1 Adaptive Management Interim Limit Compliance Update

Required Action	Due Date
Progress Report #1: Submit the first progress report on the ability of the wastewater treatment facility to consistently meet the Adaptive Management interim effluent limit of 0.6 mg/L as a 6-month seasonal average with averaging periods of May through October and November through April.	11/30/2018
Progress Report #2: Submit the second progress report on the ability of the wastewater treatment facility to consistently meet the Adaptive Management interim effluent limit of 0.6 mg/L as a 6-month seasonal average with averaging periods of May through October and November through April.	11/30/2019
Comply with Adaptive Management Interim Limit: The Adaptive Management interim effluent limit of 0.6 mg/L as a six-month average goes into effect. The averaging periods are May through October and November through April. Compliance with the 6-month average limit is evaluated at the end of each 6-month period on April 30 and October 31 annually.	11/01/2020

5.2 Mercury Pollutant Minimization Program

As a condition of the variance to the water quality based effluent limitation(s) for mercury granted in accordance with s. NR 106.145(6), Wis. Adm. Code, the permittee shall perform the following actions.

Required Action	Due Date
Annual Mercury Progress Reports: Submit an annual mercury progress report. The annual mercury progress report shall: Indicate which mercury pollutant minimization activities or activities outlined in the approved Pollutant Minimization Plan have been implemented; Include an analysis of trends in monthly and annual total effluent mercury concentrations based on mercury sampling; and Include an analysis of how influent and effluent mercury varies with time and with significant loading of mercury such as loads from industries into the collection system. The first annual mercury progress report is to be submitted by the Due Date.	01/31/2019
Annual Mercury Progress Report #2: Submit a mercury progress report as defined above.	01/31/2020
Annual Mercury Progress Report #3: Submit a mercury progress report as defined above.	01/31/2021
Annual Mercury Progress Report #4: Submit a mercury progress report as defined above.	01/31/2022
Final Mercury Report: Submit a final report documenting the success in reducing mercury concentrations in the effluent, as well as the anticipated future reduction in mercury sources and mercury effluent concentrations. The report shall summarize mercury pollutant minimization activities that have been implemented during the current permit term and state which, if any, pollutant minimization activities from the approved pollutant minimization plan were not pursued and why. The report shall include an analysis of trends in monthly and annual total effluent mercury concentrations based on mercury sampling during the current permit term. The report shall also	06/30/2022

<p>include an analysis of how influent and effluent mercury varies with time and with significant loading of mercury such as loads from industries into the collection system.</p> <p>If the permittee intends to re-apply for a mercury variance per s. NR 106.145, Wis. Adm. Code, for the reissued permit, a detailed pollutant minimization plan outlining the pollutant minimization activities proposed for the upcoming permit term should be submitted along with the final report.</p>	
<p>Annual Mercury Reports After Permit Expiration: In the event that this permit is not reissued on time, the permittee shall continue to submit annual mercury reports each year covering pollutant minimization activities implemented and mercury concentration trends.</p>	

DRAFT

6 Standard Requirements

NR 205, Wisconsin Administrative Code: The conditions in ss. NR 205.07(1) and NR 205.07(2), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in ss. NR 205.07(1) and NR 205.07(2).

6.1 Reporting and Monitoring Requirements

6.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report. The report may require reporting of any or all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

Monitoring results shall be reported on an electronic discharge monitoring report (eDMR). The eDMR shall be certified electronically by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

6.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

6.1.3 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

6.1.4 Reporting of Monitoring Results

The permittee shall use the following conventions when reporting effluent monitoring results:

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.
- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.
- For purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD₅ and Total Suspended Solids shall be considered to be limits of quantitation
- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a 0 (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

6.1.5 Compliance Maintenance Annual Reports

Compliance Maintenance Annual Reports (CMAR) shall be completed using information obtained over each calendar year regarding the wastewater conveyance and treatment system. The CMAR shall be submitted and certified by the permittee in accordance with ch. NR 208, Wis. Adm. Code, by June 30, each year on an electronic report form provided by the Department.

In the case of a publicly owned treatment works, a resolution shall be passed by the governing body and submitted as part of the CMAR, verifying its review of the report and providing responses as required. Private owners of wastewater treatment works are not required to pass a resolution; but they must provide an Owner Statement and responses as required, as part of the CMAR submittal.

The CMAR shall be certified electronically by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The certification verifies that the electronic report is true, accurate and complete.

6.1.6 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings or electronic data records for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application. All pertinent sludge information, including permit application information and other documents specified in this permit or s. NR 204.06(9), Wis. Adm. Code shall be retained for a minimum of 5 years.

6.1.7 Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or correct information to the Department.

6.1.8 Reporting Requirements – Alterations or Additions

The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is only required when:

- The alteration or addition to the permitted facility may meet one of the criteria for determining whether a facility is a new source.
- The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification requirement applies to pollutants which are not subject to effluent limitations in the existing permit.
- The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use of disposal sites not reported during the permit application process nor reported pursuant to an approved land application plan. Additional sites may not be used for the land application of sludge until department approval is received.

6.2 System Operating Requirements

6.2.1 Noncompliance Reporting

Sanitary sewer overflows and sewage treatment facility overflows shall be reported according to the 'Sanitary Sewer Overflows and Sewage Treatment Facility Overflows' section of this permit.

The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance:

- any noncompliance which may endanger health or the environment;
- any violation of an effluent limitation resulting from a bypass;
- any violation of an effluent limitation resulting from an upset; and
- any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit, either for effluent or sludge.

A written report describing the noncompliance shall also be submitted to the Department's regional office within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

A scheduled bypass approved by the Department under the 'Scheduled Bypass' section of this permit shall not be subject to the reporting required under this section.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources **immediately** of any discharge not authorized by the permit. **The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at 1-800-943-0003.**

6.2.2 Flow Meters

Flow meters shall be calibrated annually, as per s. NR 218.06, Wis. Adm. Code.

6.2.3 Raw Grit and Screenings

All raw grit and screenings shall be disposed of at a properly licensed solid waste facility or picked up by a licensed waste hauler. If the facility or hauler are located in Wisconsin, then they shall be licensed under chs. NR 500-555, Wis. Adm. Code.

6.2.4 Sludge Management

All sludge management activities shall be conducted in compliance with ch. NR 204 "Domestic Sewage Sludge Management", Wis. Adm. Code.

6.2.5 Prohibited Wastes

Under no circumstances may the introduction of wastes prohibited by s. NR 211.10, Wis. Adm. Code, be allowed into the waste treatment system. Prohibited wastes include those:

- which create a fire or explosion hazard in the treatment work;
- which will cause corrosive structural damage to the treatment work;
- solid or viscous substances in amounts which cause obstructions to the flow in sewers or interference with the proper operation of the treatment work;
- wastewaters at a flow rate or pollutant loading which are excessive over relatively short time periods so as to cause a loss of treatment efficiency; and
- changes in discharge volume or composition from contributing industries which overload the treatment works or cause a loss of treatment efficiency.

6.2.6 Bypass

This condition applies only to bypassing at a sewage treatment facility that is not a scheduled bypass, approved blending as a specific condition of this permit, a sewage treatment facility overflow or a controlled diversion as provided in the sections titled 'Scheduled Bypass', 'Blending' (if approved), 'SSO's and Sewage Treatment Facility Overflows' and 'Controlled Diversions' of this permit. Any other bypass at the sewage treatment facility is prohibited and the Department may take enforcement action against a permittee for such occurrences under s. 283.89, Wis. Stats. The Department may approve a bypass if the permittee demonstrates all the following conditions apply:

- The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance. When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, costs and affordability of implementation and risks to public health, the environment and, where the permittee is a municipality, the welfare of the community served; and
- The bypass was reported in accordance with the Noncompliance Reporting section of this permit.

6.2.7 Scheduled Bypass

Whenever the permittee anticipates the need to bypass for purposes of efficient operations and maintenance and the permittee may not meet the conditions for controlled diversions in the 'Controlled Diversions' section of this permit, the permittee shall obtain prior written approval from the Department for the scheduled bypass. A permittee's written request for Department approval of a scheduled bypass shall demonstrate that the conditions for bypassing specified in the above section titled 'Bypass' are met and include the proposed date and reason for the bypass, estimated volume and duration of the bypass, alternatives to bypassing and measures to mitigate environmental harm caused by the bypass. The department may require the permittee to provide public notification for a scheduled bypass if it is

determined there is significant public interest in the proposed action and may recommend mitigation measures to minimize the impact of such bypass.

6.2.8 Controlled Diversions

Controlled diversions are allowed only when necessary for essential maintenance to assure efficient operation. Sewage treatment facilities that have multiple treatment units to treat variable or seasonal loading conditions may shut down redundant treatment units when necessary for efficient operation. The following requirements shall be met during controlled diversions:

- Effluent from the sewage treatment facility shall meet the effluent limitations established in the permit. Wastewater that is diverted around a treatment unit or treatment process during a controlled diversion shall be recombined with wastewater that is not diverted prior to the effluent sampling location and prior to effluent discharge;
- A controlled diversion does not include blending as defined in s. NR 210.03(2e), Wis. Adm. Code, and as may only be approved under s. NR 210.12. A controlled diversion may not occur during periods of excessive flow or other abnormal wastewater characteristics;
- A controlled diversion may not result in a wastewater treatment facility overflow; and
- All instances of controlled diversions shall be documented in sewage treatment facility records and such records shall be available to the department on request.

6.2.9 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

6.2.10 Operator Certification

The wastewater treatment facility shall be under the direct supervision of a state certified operator. In accordance with s. NR 114.53, Wis. Adm. Code, every WPDES permitted treatment plant shall have a designated operator-in-charge holding a current and valid certificate. The designated operator-in-charge shall be certified at the level and in all subclasses of the treatment plant, except laboratory. Treatment plant owners shall notify the department of any changes in the operator-in-charge within 30 days. Note that s. NR 114.52(22), Wis. Adm. Code, lists types of facilities that are excluded from operator certification requirements (i.e. private sewage systems, pretreatment facilities discharging to public sewers, industrial wastewater treatment that consists solely of land disposal, agricultural digesters and concentrated aquatic production facilities with no biological treatment).

6.3 Sewage Collection Systems

6.3.1 Sanitary Sewage Overflows and Sewage Treatment Facility Overflows

6.3.1.1 Overflows Prohibited

Any overflow or discharge of wastewater from the sewage collection system or at the sewage treatment facility, other than from permitted outfalls, is prohibited. The permittee shall provide information on whether any of the following conditions existed when an overflow occurred:

- The sanitary sewer overflow or sewage treatment facility overflow was unavoidable to prevent loss of life, personal injury or severe property damage;

- There were no feasible alternatives to the sanitary sewer overflow or sewage treatment facility overflow such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or preventative maintenance activities;
- The sanitary sewer overflow or the sewage treatment facility overflow was caused by unusual or severe weather related conditions such as large or successive precipitation events, snowmelt, saturated soil conditions, or severe weather occurring in the area served by the sewage collection system or sewage treatment facility; and
- The sanitary sewer overflow or the sewage treatment facility overflow was unintentional, temporary, and caused by an accident or other factors beyond the reasonable control of the permittee.

6.3.1.2 Permittee Response to Overflows

Whenever a sanitary sewer overflow or sewage treatment facility overflow occurs, the permittee shall take all feasible steps to control or limit the volume of untreated or partially treated wastewater discharged, and terminate the discharge as soon as practicable. Remedial actions, including those in NR 210.21 (3), Wis. Adm. Code, shall be implemented consistent with an emergency response plan developed under the CMOM program.

6.3.1.3 Permittee Reporting

Permittees shall report all sanitary sewer overflows and sewage treatment overflows as follows:

- The permittee shall notify the department by telephone, fax or email as soon as practicable, but no later than 24 hours from the time the permittee becomes aware of the overflow;
- The permittee shall, no later than five days from the time the permittee becomes aware of the overflow, provide to the department the information identified in this paragraph using department form number 3400-184. If an overflow lasts for more than five days, an initial report shall be submitted within 5 days as required in this paragraph and an updated report submitted following cessation of the overflow. At a minimum, the following information shall be included in the report:
 - The date and location of the overflow;
 - The surface water to which the discharge occurred, if any;
 - The duration of the overflow and an estimate of the volume of the overflow;
 - A description of the sewer system or treatment facility component from which the discharge occurred such as manhole, lift station, constructed overflow pipe, or crack or other opening in a pipe;
 - The estimated date and time when the overflow began and stopped or will be stopped;
 - The cause or suspected cause of the overflow including, if appropriate, precipitation, runoff conditions, areas of flooding, soil moisture and other relevant information;
 - Steps taken or planned to reduce, eliminate and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
 - A description of the actual or potential for human exposure and contact with the wastewater from the overflow;
 - Steps taken or planned to mitigate the impacts of the overflow and a schedule of major milestones for those steps;
 - To the extent known at the time of reporting, the number and location of building backups caused by excessive flow or other hydraulic constraints in the sewage collection system that occurred concurrently with the sanitary sewer overflow and that were within the same area of the sewage collection system as the sanitary sewer overflow; and
 - The reason the overflow occurred or explanation of other contributing circumstances that resulted in the overflow event. This includes any information available including whether the overflow was unavoidable to prevent loss of life, personal injury, or severe property damage and whether there were feasible alternatives to the overflow.

NOTE: A copy of form 3400-184 for reporting sanitary sewer overflows and sewage treatment facility overflows may be obtained from the department or accessed on the department's web site at <http://dnr.wi.gov/topic/wastewater/SSOreport.html>. As indicated on the form, additional information may be submitted to supplement the information required by the form.

- The permittee shall identify each specific location and each day on which a sanitary sewer overflow or sewage treatment facility overflow occurs as a discrete sanitary sewer overflow or sewage treatment facility overflow occurrence. An occurrence may be more than one day if the circumstances causing the sanitary sewer overflow or sewage treatment facility overflow results in a discharge duration of greater than 24 hours. If there is a stop and restart of the overflow at the same location within 24 hours and the overflow is caused by the same circumstance, it may be reported as one occurrence. Sanitary sewer overflow occurrences at a specific location that are separated by more than 24 hours shall be reported as separate occurrences; and
- A permittee that is required to submit wastewater discharge monitoring reports under NR 205.07 (1) (r) shall also report all sanitary sewer overflows and sewage treatment facility overflows on that report.

6.3.1.4 Public Notification

The permittee shall notify the public of any sanitary sewer and sewage treatment facility overflows consistent with its emergency response plan required under the CMOM (Capacity, Management, Operation and Maintenance) section of this permit and s. NR 210.23 (4) (f), Wis. Adm. Code. Such public notification shall occur promptly following any overflow event using the most effective and efficient communications available in the community. At minimum, a daily newspaper of general circulation in the county(s) and municipality whose waters may be affected by the overflow shall be notified by written or electronic communication.

6.3.2 Capacity, Management, Operation and Maintenance (CMOM) Program

- The permittee shall have written documentation of the Capacity, Management, Operation and Maintenance (CMOM) program components in accordance with s. NR 210.23(4), Wis. Adm. Code. Such documentation shall be available for Department review upon request. The Department may request that the permittee provide this documentation or prepare a summary of the permittee's CMOM program at the time of application for reissuance of the WPDES permit.
- The permittee shall implement a CMOM program in accordance with s. NR 210.23, Wis. Adm. Code.
- The permittee shall at least annually conduct a self-audit of activities conducted under the permittee's CMOM program to ensure CMOM components are being implemented as necessary to meet the general standards of s. NR 210.23(3), Wis. Adm. Code.

6.3.3 Sewer Cleaning Debris and Materials

All debris and material removed from cleaning sanitary sewers shall be managed to prevent nuisances, run-off, ground infiltration or prohibited discharges.

- Debris and solid waste shall be dewatered, dried and then disposed of at a licensed solid waste facility.
- Liquid waste from the cleaning and dewatering operations shall be collected and disposed of at a permitted wastewater treatment facility.
- Combination waste including liquid waste along with debris and solid waste may be disposed of at a licensed solid waste facility or wastewater treatment facility willing to accept the waste.

6.4 Surface Water Requirements

6.4.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit

For pollutants with water quality-based effluent limits below the Limit of Quantitation (LOQ) in this permit, the LOQ calculated by the permittee and reported on the Discharge Monitoring Reports (DMRs) is incorporated by reference into this permit. The LOQ shall be reported on the DMRs, shall be the lowest quantifiable level practicable, and shall be no greater than the minimum level (ML) specified in or approved under 40 CFR Part 136 for the pollutant at the time this permit was issued, unless this permit specifies a higher LOQ.

6.4.2 Appropriate Formulas for Effluent Calculations

The permittee shall use the following formulas for calculating effluent results to determine compliance with average concentration limits and mass limits and total load limits:

Weekly/Monthly/Six-Month/Annual Average Concentration = the sum of all daily results for that week/month/six-month/year, divided by the number of results during that time period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Weekly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the week.

Monthly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the month.

Six-Month Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the six-month period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Annual Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the entire year.

Total Monthly Discharge: = monthly average concentration (mg/L) x total flow for the month (MG/month) x 8.34.

Total Annual Discharge: = sum of total monthly discharges for the calendar year.

12-Month Rolling Sum of Total Monthly Discharge: = the sum of the most recent 12 consecutive months of Total Monthly Discharges.

6.4.3 Effluent Temperature Requirements

Weekly Average Temperature – The permittee shall use the following formula for calculating effluent results to determine compliance with the weekly average temperature limit (as applicable): Weekly Average Temperature = the sum of all daily maximum results for that week divided by the number of daily maximum results during that time period.

Cold Shock Standard – Water temperatures of the discharge shall be controlled in a manner as to protect fish and aquatic life uses from the deleterious effects of cold shock. ‘Cold Shock’ means exposure of aquatic organisms to a rapid decrease in temperature and a sustained exposure to low temperature that induces abnormal behavior or physiological performance and may lead to death.

Rate of Temperature Change Standard – Temperature of a water of the state or discharge to a water of the state may not be artificially raised or lowered at such a rate that it causes detrimental health or reproductive effects to fish or aquatic life of the water of the state.

6.4.4 Visible Foam or Floating Solids

There shall be no discharge of floating solids or visible foam in other than trace amounts.

6.4.5 Surface Water Uses and Criteria

In accordance with NR 102.04, Wis. Adm. Code, surface water uses and criteria are established to govern water management decisions. Practices attributable to municipal, industrial, commercial, domestic, agricultural, land development or other activities shall be controlled so that all surface waters including the mixing zone meet the following conditions at all times and under all flow and water level conditions:

- a) Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state.
- b) Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the state.
- c) Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state.
- d) Substances in concentrations or in combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

6.4.6 Percent Removal

During any 30 consecutive days, the average effluent concentrations of BOD₅ and of total suspended solids shall not exceed 15% of the average influent concentrations, respectively. This requirement does not apply to removal of total suspended solids if the permittee operates a lagoon system and has received a variance for suspended solids granted under NR 210.07(2), Wis. Adm. Code.

6.4.7 Fecal Coliforms

The weekly and monthly limit(s) for fecal coliforms shall be expressed as a geometric mean.

6.4.8 Seasonal Disinfection

Disinfection shall be provided from May 1 through September 30 of each year. Monitoring requirements and the limitation for fecal coliforms apply only during the period in which disinfection is required. Whenever chlorine is used for disinfection or other uses, the limitations and monitoring requirements for residual chlorine shall apply. A dechlorination process shall be in operation whenever chlorine is used.

6.4.9 Whole Effluent Toxicity (WET) Monitoring Requirements

In order to determine the potential impact of the discharge on aquatic organisms, static-renewal toxicity tests shall be performed on the effluent in accordance with the procedures specified in the *"State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition"* (PUB-WT-797, November 2004) as required by NR 219.04, Table A, Wis. Adm. Code). All of the WET tests required in this permit, including any required retests, shall be conducted on the *Ceriodaphnia dubia* and fathead minnow species. Receiving water samples shall not be collected from any point in contact with the permittee's mixing zone and every attempt shall be made to avoid contact with any other discharge's mixing zone.

6.4.10 Whole Effluent Toxicity (WET) Identification and Reduction

Within 60 days of a retest which showed positive results, the permittee shall submit a written report to the Biomonitoring Coordinator, Bureau of Water Quality, 101 S. Webster St., PO Box 7921, Madison, WI 53707-7921, which details the following:

- A description of actions the permittee has taken or will take to remove toxicity and to prevent the recurrence of toxicity;
- A description of toxicity reduction evaluation (TRE) investigations that have been or will be done to identify potential sources of toxicity, including some or all of the following actions:
 - (a) Evaluate the performance of the treatment system to identify deficiencies contributing to effluent toxicity (e.g., operational problems, chemical additives, incomplete treatment)
 - (b) Identify the compound(s) causing toxicity
 - (c) Trace the compound(s) causing toxicity to their sources (e.g., industrial, commercial, domestic)
 - (d) Evaluate, select, and implement methods or technologies to control effluent toxicity (e.g., in-plant or pretreatment controls, source reduction or removal)
- Where corrective actions including a TRE have not been completed, an expeditious schedule under which corrective actions will be implemented;
- If no actions have been taken, the reason for not taking action.

The permittee may also request approval from the Department to postpone additional retests in order to investigate the source(s) of toxicity. Postponed retests must be completed after toxicity is believed to have been removed.

6.4.11 Reopener Clause

Pursuant to s. 283.15(11), Wis. Stat. and 40 CFR 131.20, the Department may modify or revoke and reissue this permit if, through the triennial standard review process, the Department determines that the terms and conditions of this permit need to be updated to reflect the highest attainable condition of the receiving water.

6.5 Land Application Requirements

6.5.1 Sludge Management Program Standards And Requirements Based Upon Federally Promulgated Regulations

In the event that new federal sludge standards or regulations are promulgated, the permittee shall comply with the new sludge requirements by the dates established in the regulations, if required by federal law, even if the permit has not yet been modified to incorporate the new federal regulations.

6.5.2 General Sludge Management Information

The General Sludge Management Form 3400-48 shall be completed and submitted prior to any significant sludge management changes.

6.5.3 Sludge Samples

All sludge samples shall be collected at a point and in a manner which will yield sample results which are representative of the sludge being tested, and collected at the time which is appropriate for the specific test.

6.5.4 Land Application Characteristic Report

Each report shall consist of a Characteristic Form 3400-49 and Lab Report. The Characteristic Report Form 3400-49 shall be submitted electronically by January 31 following each year of analysis.

Following submittal of the electronic Characteristic Report Form 3400-49, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report is true, accurate and complete. The Lab Report must be sent directly to the facility's DNR sludge representative or basin engineer unless approval for not submitting the lab reports has been given.

The permittee shall use the following convention when reporting sludge monitoring results: Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 1.0 mg/kg, report the pollutant concentration as < 1.0 mg/kg .

All results shall be reported on a dry weight basis.

6.5.5 Calculation of Water Extractable Phosphorus

When sludge analysis for Water Extractable Phosphorus is required by this permit, the permittee shall use the following formula to calculate and report Water Extractable Phosphorus:

Water Extractable Phosphorus (% of Total P) =

$$[\text{Water Extractable Phosphorus (mg/kg, dry wt)} \div \text{Total Phosphorus (mg/kg, dry wt)}] \times 100$$

6.5.6 Monitoring and Calculating PCB Concentrations in Sludge

When sludge analysis for "PCB, Total Dry Wt" is required by this permit, the PCB concentration in the sludge shall be determined as follows.

Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with the following provisions and Table EM in s. NR 219.04, Wis. Adm. Code.

- EPA Method 1668 may be used to test for all PCB congeners. If this method is employed, all PCB congeners shall be delineated. Non-detects shall be treated as zero. The values that are between the limit of detection and the limit of quantitation shall be used when calculating the total value of all congeners. All results shall be added together and the total PCB concentration by dry weight reported. **Note:** It is recognized that a number of the congeners will co-elute with others, so there will not be 209 results to sum.
- EPA Method 8082A shall be used for PCB-Aroclor analysis and may be used for congener specific analysis as well. If congener specific analysis is performed using Method 8082A, the list of congeners tested shall include at least congener numbers 5, 18, 31, 44, 52, 66, 87, 101, 110, 138, 141, 151, 153, 170, 180, 183, 187, and 206 plus any other additional congeners which might be reasonably expected to occur in the particular sample. For either type of analysis, the sample shall be extracted using the Soxhlet extraction (EPA Method 3540C) (or the Soxhlet Dean-Stark modification) or the pressurized fluid extraction (EPA Method 3545A). If Aroclor analysis is performed using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.11 mg/kg as possible. Reporting protocol, consistent with s. NR 106.07(6)(e), should be as follows: If all Aroclors are less than the LOD, then the Total PCB Dry Wt result should be reported as less than the highest LOD. If a single Aroclor is detected then that is what should be reported for the Total PCB result. If multiple Aroclors are detected, they should be summed and reported as Total PCBs. If congener specific analysis is done using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.003

mg/kg as possible for each congener. If the aforementioned limits of detection cannot be achieved after using the appropriate clean up techniques, a reporting limit that is achievable for the Aroclors or each congener for the sample shall be determined. This reporting limit shall be reported and qualified indicating the presence of an interference. The lab conducting the analysis shall perform as many of the following methods as necessary to remove interference:

3620C – Florisil	3611B - Alumina
3640A - Gel Permeation	3660B - Sulfur Clean Up (using copper shot instead of powder)
3630C - Silica Gel	3665A - Sulfuric Acid Clean Up

6.5.7 Annual Land Application Report

Land Application Report Form 3400-55 shall be submitted electronically by January 31, each year whether or not non-exceptional quality sludge is land applied. Non-exceptional quality sludge is defined in s. NR 204.07(4), Wis. Adm. Code. Following submittal of the electronic Annual Land Application Report Form 3400-55, this form shall be certified electronically via the ‘eReport Certify’ page by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The ‘eReport Certify’ page certifies that the electronic report form is true, accurate and complete.

6.5.8 Other Methods of Disposal or Distribution Report

The permittee shall submit electronically the Other Methods of Disposal or Distribution Report Form 3400-52 by January 31, each year whether or not sludge is hauled, landfilled, incinerated, or exceptional quality sludge is distributed or land applied. Following submittal of the electronic Report Form 3400-52, this form shall be certified electronically via the ‘eReport Certify’ page by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The ‘eReport Certify’ page certifies that the electronic report form is true, accurate and complete.

6.5.9 Approval to Land Apply

Bulk non-exceptional quality sludge as defined in s. NR 204.07(4), Wis. Adm. Code, may not be applied to land without a written approval letter or Form 3400-122 from the Department unless the Permittee has obtained permission from the Department to self approve sites in accordance with s. NR 204.06 (6), Wis. Adm. Code. Analysis of sludge characteristics is required prior to land application. Application on frozen or snow covered ground is restricted to the extent specified in s. NR 204.07(3) (1), Wis. Adm. Code.

6.5.10 Soil Analysis Requirements

Each site requested for approval for land application must have the soil tested prior to use. Each approved site used for land application must subsequently be soil tested such that there is at least one valid soil test in the four years prior to land application. All soil sampling and submittal of information to the testing laboratory shall be done in accordance with UW Extension Bulletin A-2100. The testing shall be done by the UW Soils Lab in Madison or Marshfield, WI or at a lab approved by UW. The test results including the crop recommendations shall be submitted to the DNR contact listed for this permit, as they are available. Application rates shall be determined based on the crop nitrogen recommendations and with consideration for other sources of nitrogen applied to the site.

6.5.11 Land Application Site Evaluation

For non-exceptional quality sludge, as defined in s. NR 204.07(4), Wis. Adm. Code, a Land Application Site Request Form 3400-053 shall be submitted to the Department for the proposed land application site. The Department will

evaluate the proposed site for acceptability and will either approve or deny use of the proposed site. The permittee may obtain permission to approve their own sites in accordance with s. NR 204.06(6), Wis. Adm. Code.

6.5.12 Class B Sludge: Fecal Coliform Limitation

Compliance with the fecal coliform limitation for Class B sludge shall be demonstrated by calculating the geometric mean of at least 7 separate samples. (Note that a Total Solids analysis must be done on each sample). The geometric mean shall be less than 2,000,000 MPN or CFU/g TS. Calculation of the geometric mean can be done using one of the following 2 methods.

Method 1:

$$\text{Geometric Mean} = (X_1 \times X_2 \times X_3 \dots \times X_n)^{1/n}$$

Where X = Coliform Density value of the sludge sample, and where n = number of samples (at least 7)

Method 2:

$$\text{Geometric Mean} = \text{antilog}[(X_1 + X_2 + X_3 \dots + X_n) \div n]$$

Where X = log₁₀ of Coliform Density value of the sludge sample, and where n = number of samples (at least 7)

Example for Method 2

Sample Number	Coliform Density of Sludge Sample	log ₁₀
1	6.0 x 10 ⁵	5.78
2	4.2 x 10 ⁶	6.62
3	1.6 x 10 ⁶	6.20
4	9.0 x 10 ⁵	5.95
5	4.0 x 10 ⁵	5.60
6	1.0 x 10 ⁶	6.00
7	5.1 x 10 ⁵	5.71

The geometric mean for the seven samples is determined by averaging the log₁₀ values of the coliform density and taking the antilog of that value.

$$(5.78 + 6.62 + 6.20 + 5.95 + 5.60 + 6.00 + 5.71) \div 7 = 5.98$$

$$\text{The antilog of } 5.98 = 9.5 \times 10^5$$

6.5.13 Class B Sludge: Anaerobic Digestion

Treat the sludge in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 15 days at 35° C to 55° C and 60 days at 20° C. Straight-line interpolation to calculate mean cell residence time is allowable when the temperature falls between 35° C and 20° C.

6.5.14 Class B Sludge - Vector Control: Injection

No significant amount of the sewage sludge shall be present on the land surface within one hour after the sludge is injected.

7 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Adaptive Management Interim Limit Compliance Update -Progress Report #1	November 30, 2018	14
Adaptive Management Interim Limit Compliance Update -Progress Report #2	November 30, 2019	14
Adaptive Management Interim Limit Compliance Update -Comply with Adaptive Management Interim Limit	November 1, 2020	14
Mercury Pollutant Minimization Program -Annual Mercury Progress Reports	January 31, 2019	14
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #2	January 31, 2020	14
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #3	January 31, 2021	14
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #4	January 31, 2022	14
Mercury Pollutant Minimization Program -Final Mercury Report	June 30, 2022	15
Mercury Pollutant Minimization Program -Annual Mercury Reports After Permit Expiration	See Permit	15
Compliance Maintenance Annual Reports (CMAR)	by June 30, each year	17
General Sludge Management Form 3400-48	prior to any significant sludge management changes	25
Characteristic Form 3400-49 and Lab Report	by January 31 following each year of analysis	26
Land Application Report Form 3400-55	by January 31, each year whether or not non-exceptional quality sludge is land applied	27
Other Methods of Disposal or Distribution Report Form 3400-52	by January 31, each year whether or not sludge is hauled, landfilled, incinerated, or exceptional quality sludge is distributed or land applied	27
Wastewater Discharge Monitoring Report	no later than the date	16

	indicated on the form	
--	-----------------------	--

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to:

Southeast Region - Waukesha, 141 NW Barstow St., Room 180, Waukesha, WI 53188

DRAFT



Stoughton Utilities

600 South Fourth Street
P.O. Box 383
Stoughton, WI 53589-0383

Serving Electric, Water & Wastewater Since 1886

Date: October 10, 2017

To: Stoughton Utilities Committee

From: Brian R. Hoops
Stoughton Utilities Assistant Director

Robert P. Kardasz, P.E.
Stoughton Utilities Director

Subject: Round-Up program eligibility

This item is being added at the request of Alderperson Michael Engelberger, who has requested to review applicant eligibility for the Stoughton Utilities Round-Up Program.

On February 20, 2006, the Stoughton Utilities Committee approved the Round-Up Program for our customers. Under this program, when a Stoughton Utilities customer voluntarily enrolls, they agree to “Round-Up” their utilities bill to the next highest dollar amount. Funds raised are to be awarded by the Stoughton Utilities Committee bi-annually to qualifying applicants that register with us to allow our customers to support local charities, and individuals.

On July 14, 2008, the Stoughton Utilities Committee established the following additional qualifying criteria: Qualifying applicants include individuals providing community service, community service organizations, organizations providing disaster relief, educational organizations, organizations providing service to youth, and advocates for the environment. Such applicants must apply or reapply annually in writing, and applicants may only be eligible as a recipient once each calendar year.

It is requested that the Stoughton Utilities Committee review and modify the qualifying criteria for the Stoughton Utilities Round-Up Program, with changes to be effective January 1, 2018.



Stoughton Utilities

600 South Fourth Street
P.O. Box 383
Stoughton, WI 53589-0383

Serving Electric, Water & Wastewater Since 1886

Date: October 10, 2017

To: Stoughton Utilities Committee

From: Robert P. Kardasz, P.E.
Stoughton Utilities Director

Subject: Scheduling of the Utilities Committee regular meetings in November and December

It is unknown at this time if there will be sufficient new business to be presented to the Utilities Committee in November and December, and none is anticipated. Accordingly, it is recommended that your November and December meetings be cancelled unless new business arises that requires that a meeting be scheduled to address the business in a timely manner.

The November 2016 Utilities Committee meeting had two agenda items, one of which was the cancellation of the December meeting. The December meetings have been cancelled annually since 2011.



600 South Fourth Street P.O. Box 383
Stoughton, WI 53589-0383

Serving Electric, Water & Wastewater Since 1886

Date: October 10, 2017

To: Stoughton Utilities Committee

From: Robert P. Kardasz, P.E.
Stoughton Utilities Director

Subject: Utilities Committee Future Agenda Item(s)

This item appears on all agendas of Committees of the City of Stoughton.



600 South Fourth Street P.O. Box 383
Stoughton, WI 53589-0383

Serving Electric, Water & Wastewater Since 1886

Date: October 10, 2017

To: Stoughton Utilities Committee

From: Robert P. Kardasz, P.E.
Stoughton Utilities Director

Subject: Tour of the Stoughton Utilities Wastewater Treatment Facility

A tour of the Stoughton Utilities Wastewater Treatment Facility located at 700 Mandt Parkway is scheduled to take place immediately following the October 16, 2017 meeting of the Stoughton Utilities Committee.