



City of Appleton

100 North Appleton Street
Appleton, WI 54911-4799
www.appleton.org

Meeting Agenda - Final Utilities Committee

Tuesday, June 13, 2023

4:30 PM

Council Chambers, 6th Floor

1. Call meeting to order

2. Pledge of Allegiance

3. Roll call of membership

4. Approval of minutes from previous meeting

[23-0418](#) Approval of the April 11, 2023 Utilities Committee Meeting minutes.

Attachments: [April 11, 2023 Utilities Committee Meeting Minutes.pdf](#)

5. **Public Hearing/Appearances**

6. **Action Items**

[23-0654](#) Anticipated award for Unit N-23, Spot Repairs, Protruding Tap and Mineral Deposit Removal (bids to be opened Monday, June 12, 2023).

Attachments: [Unit N-23 Anticipated Award memo.pdf](#)

[23-0655](#) Request Approval of the Electronic Compliance Maintenance Annual Report (eCMAR) for 2022 and Request the following Resolution be presented to the Common Council for approval:

Whereas, the City of Appleton manages, operates, and maintains a sewer collection system and wastewater treatment plant; and

Whereas, the treatment efforts produce a liquid effluent and a biosolids that are returned to the environment; and

Whereas, the State of Wisconsin evaluates wastewater utilities throughout the State of Wisconsin through an electronic Compliance Maintenance Annual Report (eCMAR); and

Whereas, Appleton received the score of 4.00 GPA; and

Whereas, the State of Wisconsin requests the Common Council pass a resolution accepting the eCMAR report;

Now, therefore, be it resolved by the City Council that the City of Appleton:

Article 1. Continue supporting treatment and maintenance programs at the utility

Article 2. Continue planning efforts that will address and promote long term performance results at the facility.

Attachments: [2022 eCMAR Validated.pdf](#)

[23-0432](#) Elect a Vice-Chair for the Utilities Committee.

7. Information Items

[23-0433](#) Confirm Meeting Date and Time for the Utilities Committee to meet.

[23-0434](#) Designate a Contact Person who can answer specific questions about agenda items for the Utilities Committee.

[23-0493](#) Update on Aquahawk Sign-ups

[23-0657](#) AWWTP Polymer Incident Update

[23-0683](#) Appleton Wastewater SARS-CoV-2 Report

Attachments: [SARS CoV-2 Report 060823.pdf](#)

[23-0419](#) Monthly Reports for January, February, and March 2023:
- Wastewater Treatment Plant Synopsis and Receiving Station Revenue Report
- Water Treatment Facility Synopsis
- Water Distribution and Meter Team Monthly Report - March

Attachments: [2023 Q1 Wastewater Plant Synopsis.pdf](#)

[2023 Q1 Receiving Station Revenue Report.pdf](#)

[2023 Q1 Water Plant Synopsis.pdf](#)

[March 2023 Water Main Breaks.pdf](#)

[23-0559](#) Monthly Report for April 2023:
- Water Distribution and Meter Team Monthly Report

Attachments: [April 2023 Water Main Breaks.pdf](#)

8. Adjournment

Notice is hereby given that a quorum of the Common Council may be present during this meeting, although no Council action will be taken.

Reasonable Accommodations for Persons with Disabilities will be made upon Request and if Feasible.

**We are currently experiencing intermittent issues/outages with our audio/video equipment. Meeting live streams and recordings are operational but unreliable at times. This is due to delays in receiving necessary system hardware components. We continue to look for solutions in the interim and we hope to have these issues resolved soon.*

For questions on the agenda, contact Chris Shaw at 920-832-5945 or Danielle Block at 920-832-6474.



City of Appleton

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Meeting Minutes - Final Utilities Committee

Tuesday, April 11, 2023

4:30 PM

Council Chambers, 6th Floor

1. Call meeting to order

Chairperson Meltzer called the Utilities Committee Meeting to order at 4:30 p.m.

2. Roll call of membership

Present: 4 - Meltzer, Doran, Firkus and Schultz

Excused: 1 - Jones

3. Approval of minutes from previous meeting

[23-0340](#)

Approval of the March 21, 2023 Utilities Committee Meeting minutes.

Attachments: [March 21, 2023 Utilities Committee Meeting Minutes.pdf](#)

**Schultz moved, seconded by Firkus, that the Minutes be approved. Roll Call.
Motion carried by the following vote:**

Aye: 4 - Meltzer, Doran, Firkus and Schultz

Excused: 1 - Jones

4. Public Hearings/Appearances

5. Action Items

[23-0341](#)

Award Unit F-23 Sanitary & Storm Sewer Cleaning and Televising to Green Bay Pipe & TV, LLC in an amount not to exceed \$266,500.

Attachments: [Utilities Committee - 04-11-23 - Award of Contract Unit F-23.pdf](#)

Firkus moved, seconded by Schultz, that the Report Action Item be recommended for approval. Roll Call. Motion carried by the following vote:

Aye: 4 - Meltzer, Doran, Firkus and Schultz

Excused: 1 - Jones

6. Information Items

7. Adjournment

Schultz moved, seconded by Firkus, that the Utilities Committee Meeting be adjourned at 4:34 p.m.. Roll Call. Motion carried by the following vote:

Aye: 4 - Meltzer, Doran, Firkus and Schultz

Excused: 1 - Jones



DEPARTMENT OF PUBLIC WORKS
Engineering Division
100 North Appleton Street
Appleton, WI 54911
TEL (920) 832-6474

To: Utilities Committee
From: Danielle Block, Director of Public Works
Date: June 7, 2023
Re: Unit N-23 Anticipated Award of Contract

The Department of Public Works will be opening bids for Unit N-23, Spot Repairs, Protruding Tap & Mineral Deposit Removal contract on Monday, June 12, 2023. An updated Award memo and contractor bid tabs will be distributed during the Utilities Meeting on Tuesday, June 13, 2023.

Thank you for your consideration.

CITY OF APPLETON
Department of Public Works
MEMORANDUM

TO: Finance Committee
 Municipal Services Committee
 Utilities Committee

cc: City Clerk
Contract File

SUBJECT: Anticipated Award and/or Award of Contract

ANTICIPATED AWARD

The Department of Public Works is planning to award Unit N-23, Spot Repairs, Protruding Tap & Mineral Deposit Removal

Committee Date: 6/13/23

Council Date: 6/21/23

***** **AND / OR** *****

AWARD OF CONTRACT

The Department of Public Works recommends that Mineral Deposit Removal

Be awarded to: Name: _____
Address: _____

In the amount of _____ with a contingency of _____ \$0.00

**** OR **** in the amount Not To Exceed _____

Budget: _____

Estimate: _____

Committee Date: _____

Council Date: _____

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

Influent Flow and Loading

1. Monthly Average Flows and BOD Loadings

1.1 Verify the following monthly flows and BOD loadings to your facility.

Influent No. 701	Influent Monthly Average Flow, MGD	x	Influent Monthly Average BOD Concentration mg/L	x	8.34	=	Influent Monthly Average BOD Loading, lbs/day
January	8.4981	x	415	x	8.34	=	29,413
February	7.7300	x	386	x	8.34	=	24,885
March	14.2010	x	234	x	8.34	=	27,655
April	19.0553	x	89	x	8.34	=	14,144
May	11.7987	x	186	x	8.34	=	18,303
June	11.8440	x	190	x	8.34	=	18,768
July	8.8100	x	256	x	8.34	=	18,810
August	10.5097	x	191	x	8.34	=	16,741
September	10.6250	x	218	x	8.34	=	19,273
October	8.0606	x	290	x	8.34	=	19,495
November	11.6710	x	157	x	8.34	=	15,282
December	10.1423	x	269	x	8.34	=	22,754

2. Maximum Monthly Design Flow and Design BOD Loading

2.1 Verify the design flow and loading for your facility.

Design	Design Factor	x	%	=	% of Design
Max Month Design Flow, MGD	24.2	x	90	=	21.78
		x	100	=	24.2
Design BOD, lbs/day	40900	x	90	=	36810
		x	100	=	40900

2.2 Verify the number of times the flow and BOD exceeded 90% or 100% of design, points earned, and score:

	Months of Influent	Number of times flow was greater than 90% of	Number of times flow was greater than 100% of	Number of times BOD was greater than 90% of design	Number of times BOD was greater than 100% of design
January	1	0	0	0	0
February	1	0	0	0	0
March	1	0	0	0	0
April	1	0	0	0	0
May	1	0	0	0	0
June	1	0	0	0	0
July	1	0	0	0	0
August	1	0	0	0	0
September	1	0	0	0	0
October	1	0	0	0	0
November	1	0	0	0	0
December	1	0	0	0	0
Points per each		2	1	3	2
Exceedances		0	0	0	0
Points		0	0	0	0
Total Number of Points					0

0

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 2022

3. Flow Meter

3.1 Was the influent flow meter calibrated in the last year?

- Yes Enter last calibration date (MM/DD/YYYY)

2022-06-03

- No

If No, please explain:

4. Sewer Use Ordinance

4.1 Did your community have a sewer use ordinance that limited or prohibited the discharge of excessive conventional pollutants ((C)BOD, SS, or pH) or toxic substances to the sewer from industries, commercial users, hauled waste, or residences?

- Yes

- No

If No, please explain:

4.2 Was it necessary to enforce the ordinance?

- Yes

- No

If Yes, please explain:

Infractions occurred that exceeded the industrial limits for pH. All industries demonstrated a return to compliance for these infractions. The AWWTP did not experience an upset as a result of the discharges.

5. Septage Receiving

5.1 Did you have requests to receive septage at your facility?

Septic Tanks Holding Tanks Grease Traps

- Yes

- Yes

- Yes

- No

- No

- No

5.2 Did you receive septage at your facility? If yes, indicate volume in gallons.

Septic Tanks

- Yes gallons

- No

Holding Tanks

- Yes gallons

- No

Grease Traps

- Yes gallons

- No

5.2.1 If yes to any of the above, please explain if plant performance is affected when receiving any of these wastes.

Plant performance is not affected by these discharges.

6. Pretreatment

6.1 Did your facility experience operational problems, permit violations, biosolids quality concerns, or hazardous situations in the sewer system or treatment plant that were attributable to commercial or industrial discharges in the last year?

- Yes

- No

If yes, describe the situation and your community's response.

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

<div data-bbox="134 205 1461 260" style="border: 1px solid black; height: 26px;"></div> <p>6.2 Did your facility accept hauled industrial wastes, landfill leachate, etc.?</p> <ul style="list-style-type: none"><input checked="" type="radio"/> Yes<input type="radio"/> No <p>If yes, describe the types of wastes received and any procedures or other restrictions that were in place to protect the facility from the discharge of hauled industrial wastes.</p> <div data-bbox="134 443 1461 590" style="border: 1px solid black; padding: 5px;"><p>AWWTP receives food processing wastes and landfill leachate. All wastes are tested prior to acceptance. Acceptance is based on toxicity and loading potential. Once waste has been screened and approved by AWWTP staff, it is discharged to the headworks or digestion for treatment.</p></div>
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Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

Effluent Quality and Plant Performance (BOD/CBOD)

1. Effluent (C)BOD Results

1.1 Verify the following monthly average effluent values, exceedances, and points for BOD or CBOD

Outfall No. 001	Monthly Average Limit (mg/L)	90% of Permit Limit > 10 (mg/L)	Effluent Monthly Average (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance	90% Permit Limit Exceedance
January	25	22.5	6	1	0	0
February	25	22.5	6	1	0	0
March	25	22.5	5	1	0	0
April	25	22.5	5	1	0	0
May	25	22.5	5	1	0	0
June	25	22.5	4	1	0	0
July	25	22.5	4	1	0	0
August	25	22.5	5	1	0	0
September	25	22.5	4	1	0	0
October	25	22.5	7	1	0	0
November	25	22.5	6	1	0	0
December	25	22.5	6	1	0	0

* Equals limit if limit is <= 10

Months of discharge/yr	12		
Points per each exceedance with 12 months of discharge		7	3
Exceedances		0	0
Points		0	0
Total number of points			0

NOTE: For systems that discharge intermittently to state waters, the points per monthly exceedance for this section shall be based upon a multiplication factor of 12 months divided by the number of months of discharge. Example: For a wastewater facility discharging only 6 months of the year, the multiplication factor is $12/6 = 2.0$

1.2 If any violations occurred, what action was taken to regain compliance?

2. Flow Meter Calibration

2.1 Was the effluent flow meter calibrated in the last year?

Yes Enter last calibration date (MM/DD/YYYY)

No

If No, please explain:

Our effluent outfall wasn't designed for installation of a flowmeter. Influent flow is used in place of an effluent flowmeter.

3. Treatment Problems

3.1 What problems, if any, were experienced over the last year that threatened treatment?

None

4. Other Monitoring and Limits

4.1 At any time in the past year was there an exceedance of a permit limit for any other pollutants such as chlorides, pH, residual chlorine, fecal coliform, or metals?

Yes

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

<p><input checked="" type="radio"/> No</p> <p>If Yes, please explain:</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>
<p>4.2 At any time in the past year was there a failure of an effluent acute or chronic whole effluent toxicity (WET) test?</p> <p><input type="radio"/> Yes</p> <p><input checked="" type="radio"/> No</p> <p>If Yes, please explain:</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>
<p>4.3 If the biomonitoring (WET) test did not pass, were steps taken to identify and/or reduce source(s) of toxicity?</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p><input checked="" type="radio"/> N/A</p> <p>Please explain unless not applicable:</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

Effluent Quality and Plant Performance (Total Suspended Solids)

1. Effluent Total Suspended Solids Results

1.1 Verify the following monthly average effluent values, exceedances, and points for TSS:

Outfall No. 001	Monthly Average Limit (mg/L)	90% of Permit Limit >10 (mg/L)	Effluent Monthly Average (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance	90% Permit Limit Exceedance
January	30	27	4	1	0	0
February	30	27	5	1	0	0
March	30	27	4	1	0	0
April	30	27	2	1	0	0
May	30	27	2	1	0	0
June	30	27	1	1	0	0
July	30	27	1	1	0	0
August	30	27	4	1	0	0
September	30	27	2	1	0	0
October	30	27	3	1	0	0
November	30	27	5	1	0	0
December	30	27	3	1	0	0

0

* Equals limit if limit is <= 10

Months of Discharge/yr	12		
Points per each exceedance with 12 months of discharge:	7	3	
Exceedances	0	0	
Points	0	0	
Total Number of Points		0	

NOTE: For systems that discharge intermittently to state waters, the points per monthly exceedance for this section shall be based upon a multiplication factor of 12 months divided by the number of months of discharge.

Example: For a wastewater facility discharging only 6 months of the year, the multiplication factor is $12/6 = 2.0$

1.2 If any violations occurred, what action was taken to regain compliance?

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

Effluent Quality and Plant Performance (Ammonia - NH3)

1. Effluent Ammonia Results

1.1 Verify the following monthly and weekly average effluent values, exceedances and points for ammonia

Outfall No. 001	Monthly Average NH3 Limit (mg/L)	Weekly Average NH3 Limit (mg/L)	Effluent Monthly Average NH3 (mg/L)	Monthly Permit Limit Exceedance	Effluent Weekly Average for Week 1	Effluent Weekly Average for Week 2	Effluent Weekly Average for Week 3	Effluent Weekly Average for Week 4	Weekly Permit Limit Exceedance
January	10		1.426	0					
February	10		1.026	0					
March	10		.665	0					
April	11		.415	0					
May	11		.105	0					
June	4.4		.108	0					
July	4.4		.18	0					
August	4.4		.401	0					
September	4.4		1.111	0					
October	18		.545	0					
November	18		.894	0					
December	18		2.04	0					
Points per each exceedance of Monthly average:									10
Exceedances, Monthly:									0
Points:									0
Points per each exceedance of weekly average (when there is no monthly average):									2.5
Exceedances, Weekly:									0
Points:									0
Total Number of Points									0

0

NOTE: Limit exceedances are considered for monthly OR weekly averages but not both. When a monthly average limit exists it will be used to determine exceedances and generate points. This will be true even if a weekly limit also exists. When a weekly average limit exists and a monthly limit does not exist, the weekly limit will be used to determine exceedances and generate points.

1.2 If any violations occurred, what action was taken to regain compliance?

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

Effluent Quality and Plant Performance (Phosphorus)

1. Effluent Phosphorus Results

1.1 Verify the following monthly average effluent values, exceedances, and points for Phosphorus

Outfall No. 001	Monthly Average phosphorus Limit (mg/L)	Effluent Monthly Average phosphorus (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance
January	1	0.199	1	0
February	1	0.198	1	0
March	1	0.192	1	0
April	1	0.128	1	0
May	1	0.129	1	0
June	1	0.119	1	0
July	1	0.175	1	0
August	1	0.218	1	0
September	1	0.169	1	0
October	1	0.150	1	0
November	1	0.192	1	0
December	1	0.165	1	0
Months of Discharge/yr			12	
Points per each exceedance with 12 months of discharge:				10
Exceedances				0
Total Number of Points				0

0

NOTE: For systems that discharge intermittently to waters of the state, the points per monthly exceedance for this section shall be based upon a multiplication factor of 12 months divided by the number of months of discharge.

Example: For a wastewater facility discharging only 6 months of the year, the multiplication factor is $12/6 = 2.0$

1.2 If any violations occurred, what action was taken to regain compliance?

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

Outfall No. 010 - Biosolids- Compost Class A

Parameter	80% of Limit	H.Q. Limit	Ceiling Limit	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	80% Value	High Quality	Ceiling
Arsenic		41	75					3			2.11						0	0
Cadmium		39	85					.226			.219						0	0
Copper		1500	4300					34.1			39.5						0	0
Lead		300	840					10.5			8.41						0	0
Mercury		17	57					.062			.06						0	0
Molybdenum	60		75					1.77			2.25					0		0
Nickel	336		420					6.45			17.7					0		0
Selenium	80		100					.597			1.43					0		0
Zinc		2800	7500					89			94.7						0	0

Outfall No. 003 - Cake Sludge

Parameter	80% of Limit	H.Q. Limit	Ceiling Limit	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	80% Value	High Quality	Ceiling
Arsenic		41	75	<7.66		2.3		<2.3		<7.1		<10		<6.79			0	0
Cadmium		39	85	<.18		<.05		.132		.265		.324		<.161			0	0
Copper		1500	4300	76		75		71		69		70		76			0	0
Lead		300	840	4		4.03		3.5		3.83		4		<2.19			0	0
Mercury		17	57	.141		<.125		<.129		<.093		<.127		<.121			0	0
Molybdenum	60		75	3.49		5.16		2.9		3.21		3.06		4.15		0		0
Nickel	336		420	11		11		9.3		11		12		13		0		0
Selenium	80		100	<6.76		<1.91		<2		<6.29		<8.98		<5.97		0		0
Zinc		2800	7500	127		138		109		125		146		164			0	0

0

3.1.1 Number of times any of the metals exceeded the high quality limits OR 80% of the limit for molybdenum, nickel, or selenium = 0

Exceedence Points

- 0 (0 Points)
- 1-2 (10 Points)
- > 2 (15 Points)

3.1.2 If you exceeded the high quality limits, did you cumulatively track the metals loading at each land application site? (check applicable box)

- Yes
- No (10 points)
- N/A - Did not exceed limits or no HQ limit applies (0 points)
- N/A - Did not land apply biosolids until limit was met (0 points)

3.1.3 Number of times any of the metals exceeded the ceiling limits = 0

Exceedence Points

- 0 (0 Points)
- 1 (10 Points)
- > 1 (15 Points)

3.1.4 Were biosolids land applied which exceeded the ceiling limit?

- Yes (20 Points)
- No (0 Points)

3.1.5 If any metal limit (high quality or ceiling) was exceeded at any time, what action was taken? Has the source of the metals been identified?

Not applicable

4. Pathogen Control (per outfall):

4.1 Verify the following information. If any information is incorrect, use the Report Issue button under the Options header in the left-side menu.

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

Outfall Number:	003
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	01/01/2022 - 02/28/2022
Density:	6,551
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	No
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion with a 21-day HRT

Outfall Number:	003
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	03/01/2022 - 04/30/2022
Density:	18,909
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion with a 21-day HRT

Outfall Number:	003
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	05/01/2022 - 06/30/2022
Density:	11,644
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion with a 21-day HRT

Outfall Number:	003
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	07/01/2022 - 08/31/2022
Density:	3,542
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion with a 21-day HRT

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

Outfall Number:	003
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	09/01/2022 - 10/31/2022
Density:	15,781
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Aerobic Digestion
Process Description:	Anaerobic digestion with a 21-day HRT

Outfall Number:	003
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	11/01/2022 - 12/31/2022
Density:	16,886
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Aerobic Digestion
Process Description:	Anaerobic digestion with a 21-day HRT

Outfall Number:	010
Biosolids Class:	A
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	04/01/2022 - 06/30/2022
Density:	0
Sample Concentration Amount:	MPN/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Composting
Process Description:	The composting material maintained a temperature of 55 degrees C or higher for 15 days or longer. During this period, a minimum of 5 windrow turns occurred.

Outfall Number:	010
Biosolids Class:	A
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	07/01/2022 - 09/30/2022
Density:	0
Sample Concentration Amount:	MPN/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Composting
Process Description:	The composting material maintained a temperature of 55 degrees C or higher for 15 days or longer. During this period, a minimum of 5 windrow turns occurred.

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

4.2 If exceeded Class B limit or did not meet the process criteria at the time of land application.

4.2.1 Was the limit exceeded or the process criteria not met at the time of land application?

Yes (40 Points)

No

If yes, what action was taken?

0

5. Vector Attraction Reduction (per outfall):

5.1 Verify the following information. If any of the information is incorrect, use the Report Issue button under the Options header in the left-side menu.

Outfall Number:	003
Method Date:	01/18/2022
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	>= 38
Results (if applicable):	39.40

Outfall Number:	003
Method Date:	03/15/2022
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	>= 38
Results (if applicable):	41.10

Outfall Number:	003
Method Date:	06/30/2022
Option Used To Satisfy Requirement:	Incorporation when land apply
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	003
Method Date:	07/12/2022
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	>= 38
Results (if applicable):	39.50

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

Outfall Number:	003
Method Date:	10/31/2022
Option Used To Satisfy Requirement:	Incorporation when land apply
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	003
Method Date:	12/31/2022
Option Used To Satisfy Requirement:	Incorporation when land apply
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	010
Method Date:	06/30/2022
Option Used To Satisfy Requirement:	Aerobic Composting Process
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	010
Method Date:	09/30/2022
Option Used To Satisfy Requirement:	Aerobic Composting Process
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

5.2 Was the limit exceeded or the process criteria not met at the time of land application?

Yes (40 Points)

No

If yes, what action was taken?

6. Biosolids Storage

6.1 How many days of actual, current biosolids storage capacity did your wastewater treatment facility have either on-site or off-site?

\geq 180 days (0 Points)

150 - 179 days (10 Points)

120 - 149 days (20 Points)

90 - 119 days (30 Points)

$<$ 90 days (40 Points)

N/A (0 Points)

6.2 If you checked N/A above, explain why.

0

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 2022

	0
<p>7. Issues</p> <p>7.1 Describe any outstanding biosolids issues with treatment, use or overall management:</p> <p>On December 26, 2022, the AWWTP experienced an interruption of the anaerobic digestion process due to polymer entering the digesters. As a result, on December 27, 2022, the anaerobic digestion process was bypassed with approval from the Wisconsin DNR. The bypassing continued into early January 2023. Environmental Programs Coordinator Brian Kreski, subsequently requested approval to land apply the primary/secondary dewatered sludge in his January 11, 2023 letter to Barti Oumarou.</p>	

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

Staffing and Preventative Maintenance (All Treatment Plants)

<p>1. Plant Staffing</p> <p>1.1 Was your wastewater treatment plant adequately staffed last year?</p> <ul style="list-style-type: none">● Yes○ No <p>If No, please explain:</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <p>Could use more help/staff for:</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <p>1.2 Did your wastewater staff have adequate time to properly operate and maintain the plant and fulfill all wastewater management tasks including recordkeeping?</p> <ul style="list-style-type: none">● Yes○ No <p>If No, please explain:</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
<p>2. Preventative Maintenance</p> <p>2.1 Did your plant have a documented AND implemented plan for preventative maintenance on major equipment items?</p> <ul style="list-style-type: none">● Yes (Continue with question 2) <input type="checkbox"/><input type="checkbox"/>○ No (40 points) <input type="checkbox"/><input type="checkbox"/> <p>If No, please explain, then go to question 3:</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <p>2.2 Did this preventative maintenance program depict frequency of intervals, types of lubrication, and other tasks necessary for each piece of equipment?</p> <ul style="list-style-type: none">● Yes○ No (10 points) <p>2.3 Were these preventative maintenance tasks, as well as major equipment repairs, recorded and filed so future maintenance problems can be assessed properly?</p> <ul style="list-style-type: none">● Yes<ul style="list-style-type: none">○ Paper file system○ Computer system● Both paper and computer system○ No (10 points)	0
<p>3. O&M Manual</p> <p>3.1 Does your plant have a detailed O&M and Manufacturer Equipment Manuals that can be used as a reference when needed?</p> <ul style="list-style-type: none">● Yes○ No	
<p>4. Overall Maintenance /Repairs</p> <p>4.1 Rate the overall maintenance of your wastewater plant.</p> <ul style="list-style-type: none">○ Excellent● Very good○ Good○ Fair○ Poor <p>Describe your rating:</p>	

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

Operation/maintenance staff are knowledgeable and dedicated to repairing immediate needs, while also planning ahead for future maintenance and capital improvement projects.

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

Operator Certification and Education

1. Operator-In-Charge

1.1 Did you have a designated operator-in-charge during the report year?

- Yes (0 points)
- No (20 points)

Name:

RYAN RICE

Certification No:

35598

0

2. Certification Requirements

2.1 In accordance with Chapter NR 114.56 and 114.57, Wisconsin Administrative Code, what level and subclass(es) were required for the operator-in-charge (OIC) to operate the wastewater treatment plant and what level and subclass(es) were held by the operator-in-charge?

Sub Class	SubClass Description	WWTP		OIC	
		Advanced	OIT	Basic	Advanced
A1	Suspended Growth Processes	X			X
A2	Attached Growth Processes				
A3	Recirculating Media Filters				
A4	Ponds, Lagoons and Natural				
A5	Anaerobic Treatment Of Liquid				
B	Solids Separation	X			X
C	Biological Solids/Sludges	X			X
P	Total Phosphorus	X			X
N	Total Nitrogen				
D	Disinfection	X			X
L	Laboratory	X			X
U	Unique Treatment Systems				
SS	Sanitary Sewage Collection	X	NA	X	NA

0

2.2 Was the operator-in-charge certified at the appropriate level and subclass(es) to operate this plant? (Note: Certification in subclass SS is required 5 years after permit reissuance.)

- Yes (0 points)
- No (20 points)

3. Succession Planning

3.1 In the event of the loss of your designated operator-in-charge, did you have a contingency plan to ensure the continued proper operation and maintenance of the plant that includes one or more of the following options (check all that apply)?

- One or more additional certified operators on staff
- An arrangement with another certified operator
- An arrangement with another community with a certified operator
- An operator on staff who has an operator-in-training certificate for your plant and is expected to be certified within one year
- A consultant to serve as your certified operator
- None of the above (20 points)

If "None of the above" is selected, please explain:

0

4. Continuing Education Credits

4.1 If you had a designated operator-in-charge, was the operator-in-charge earning Continuing Education Credits at the following rates?

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

OIT and Basic Certification: ○ Averaging 6 or more CECs per year. ○ Averaging less than 6 CECs per year. Advanced Certification: ● Averaging 8 or more CECs per year. ○ Averaging less than 8 CECs per year.	
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Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

Financial Management

1. Provider of Financial Information Name: <input type="text" value="Kelli Rindt"/> Telephone: <input type="text" value="920-832-6316"/> (XXX) XXX-XXXX E-Mail Address (optional): <input type="text" value="kelli.rindt@appleton.org"/>		
2. Treatment Works Operating Revenues 2.1 Are User Charges or other revenues sufficient to cover O&M expenses for your wastewater treatment plant AND/OR collection system ? ● Yes (0 points) <input type="checkbox"/> <input type="checkbox"/> ○ No (40 points) If No, please explain: <input type="text"/> 2.2 When was the User Charge System or other revenue source(s) last reviewed and/or revised? Year: <input type="text" value="2022"/> ● 0-2 years ago (0 points) <input type="checkbox"/> <input type="checkbox"/> ○ 3 or more years ago (20 points) <input type="checkbox"/> <input type="checkbox"/> ○ N/A (private facility) 2.3 Did you have a special account (e.g., CWFPP required segregated Replacement Fund, etc.) or financial resources available for repairing or replacing equipment for your wastewater treatment plant and/or collection system? ● Yes (0 points) ○ No (40 points)		0
REPLACEMENT FUNDS [PUBLIC MUNICIPAL FACILITIES SHALL COMPLETE QUESTION 3]		
3. Equipment Replacement Funds 3.1 When was the Equipment Replacement Fund last reviewed and/or revised? Year: <input type="text" value="2022"/> ● 1-2 years ago (0 points) <input type="checkbox"/> <input type="checkbox"/> ○ 3 or more years ago (20 points) <input type="checkbox"/> <input type="checkbox"/> ○ N/A If N/A, please explain: <input type="text"/>		
3.2 Equipment Replacement Fund Activity		
3.2.1 Ending Balance Reported on Last Year's CMAR	\$ <input type="text" value="3,925,937.77"/>	
3.2.2 Adjustments - if necessary (e.g. earned interest, audit correction, withdrawal of excess funds, increase making up previous shortfall, etc.)	\$ <input type="text" value="0.00"/>	
3.2.3 Adjusted January 1st Beginning Balance	\$ <input type="text" value="3,925,937.77"/>	
3.2.4 Additions to Fund (e.g. portion of User Fee, earned interest, etc.)	\$ <input type="text" value="0.00"/>	
	+	

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 2022

3.2.5 Subtractions from Fund (e.g., equipment replacement, major repairs - use description box 3.2.6.1 below*) -

\$ 316,915.17

3.2.6 Ending Balance as of December 31st for CMAR Reporting Year

\$ 3,609,022.60

All Sources: This ending balance should include all Equipment Replacement Funds whether held in a bank account(s), certificate(s) of deposit, etc.

3.2.6.1 Indicate adjustments, equipment purchases, and/or major repairs from 3.2.5 above.

Unrealized investment losses due to market conditions.

3.3 What amount should be in your Replacement Fund?

\$ 2,933,830.87

0

Please note: If you had a CWFPP loan, this amount was originally based on the Financial Assistance Agreement (FAA) and should be regularly updated as needed. Further calculation instructions and an example can be found by clicking the SectionInstructions link under Info header in the left-side menu.

3.3.1 Is the December 31 Ending Balance in your Replacement Fund above, (#3.2.6) equal to, or greater than the amount that should be in it (#3.3)?

- Yes
- No

If No, please explain.

4. Future Planning

4.1 During the next ten years, will you be involved in formal planning for upgrading, rehabilitating, or new construction of your treatment facility or collection system?

- Yes - If Yes, please provide major project information, if not already listed below.
- No

Project #	Project Description	Estimated Cost	Approximate Construction Year
1	Sludge Storage Improvements	\$8,034,001	2023
2	Belt filter press upgrades	\$10,888,373	2023
3	Multi-Year Electrical Equipment Upgrade	\$1,506,282	2023
4	Multi-year HVAC Upgrades	\$3,668,655	2022
5	PLC & SCADA Upgrades	\$41,686	2023
6	Marshall Heights Lift Station Improvements	\$750,000	2024
7	Lighting Upgrades	\$300,000	2023
8	Roof Replacements	\$750,000	2023
9	Multi-Year Driveway and Walkway Replacements	\$1,204,442	2023
10	Glacier Ridge Lift Station	\$400,000	2024
11	Summer St Lift Station	\$400,000	2026
12	Secondary Clarifier Drive Replacements	\$215,000	2022
13	Blended Sludge Piping & Heat Exchanger Replacement	\$4,181,315	2023
14	Grit Trap Vortex Drive Replacement	\$267,811	2023
15	Phone/Wireless system upgrades	\$587,500	2023
16	Multi-year Elevator replacement	\$950,000	2024
17	Building renovations	\$1,077,616	2023
18	Multi-year MCC Upgrades	\$7,800,000	2023
19	Chemical Systems	\$225,000	2023
20	Final Clarifier Underdrain Replacement	\$349,650	2023

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

21	Aeration Process Upgrade	\$1,200,000	2026
22	Digested Sludge Storage Tank Cover & Blending Pump Replacements	\$1,600,000	2024
23	Midway Lift Station Control Panel	\$400,000	2026
24	Water Street Lift Station	\$750,000	2024

5. Financial Management General Comments

None

ENERGY EFFICIENCY AND USE

6. Collection System

6.1 Energy Usage

6.1.1 Enter the monthly energy usage from the different energy sources:

COLLECTION SYSTEM PUMPAGE: Total Power Consumed

Number of Municipally Owned Pump/Lift Stations:

	Electricity Consumed (kWh)	Natural Gas Consumed (therms)
January	25,005	460
February	25,112	346
March	27,555	155
April	23,897	74
May	16,120	15
June	16,930	4
July	13,373	20
August	14,296	8
September	15,676	11
October	13,478	118
November	20,354	315
December	25,318	254
Total	237,114	1,780
Average	19,760	148

6.1.2 Comments:

None

6.2 Energy Related Processes and Equipment

6.2.1 Indicate equipment and practices utilized at your pump/lift stations (Check all that apply):

- Comminution or Screening
- Extended Shaft Pumps
- Flow Metering and Recording
- Pneumatic Pumping
- SCADA System
- Self-Priming Pumps
- Submersible Pumps
- Variable Speed Drives
- Other:

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

6.2.2 Comments:

None

6.3 Has an Energy Study been performed for your pump/lift stations?

No

Yes

Year:

2009

By Whom:

Donohue & Associates, McMahon Engineers

Describe and Comment:

In the last five years the following lift stations have been reviewed and new designs, some including new energy efficient pumps, VFDs, etc., have been completed through construction projects: Briarcliff, Midway Rd, North Edgewood. Maintaining a lift station inventory that is energy efficient is a City of Appleton objective.

6.4 Future Energy Related Equipment

6.4.1 What energy efficient equipment or practices do you have planned for the future for your pump/lift stations?

Future lift station pump and motor upgrades will replace less efficient equipment with more energy efficient pumps and motors.

7. Treatment Facility

7.1 Energy Usage

7.1.1 Enter the monthly energy usage from the different energy sources:

TREATMENT PLANT: Total Power Consumed/Month

	Electricity Consumed (kWh)	Total Influent Flow (MG)	Electricity Consumed/Flow (kWh/MG)	Total Influent BOD (1000 lbs)	Electricity Consumed/Total Influent BOD (kWh/1000lbs)	Natural Gas Consumed (therms)
January	1,005,538	263.44	3,817	911.80	1,103	3,158
February	901,600	216.44	4,166	696.78	1,294	6,643
March	944,800	440.23	2,146	857.31	1,102	5,216
April	914,400	571.66	1,600	424.32	2,155	1,636
May	882,400	365.76	2,413	567.39	1,555	216
June	824,000	355.32	2,319	563.04	1,463	346
July	847,200	273.11	3,102	583.11	1,453	650
August	887,200	325.80	2,723	518.97	1,710	1,121
September	853,600	318.75	2,678	578.19	1,476	390
October	877,600	249.88	3,512	604.35	1,452	600
November	864,000	350.13	2,468	458.46	1,885	273
December	856,000	314.41	2,723	705.37	1,214	3,272
Total	10,658,338	4,044.93		7,469.09		23,521
Average	888,195	337.08	2,806	622.42	1,489	1,960

7.1.2 Comments:

None

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 2022

7.2 Energy Related Processes and Equipment

7.2.1 Indicate equipment and practices utilized at your treatment facility (Check all that apply):

- Aerobic Digestion
- Anaerobic Digestion
- Biological Phosphorus Removal
- Coarse Bubble Diffusers
- Dissolved O2 Monitoring and Aeration Control
- Effluent Pumping
- Fine Bubble Diffusers
- Influent Pumping
- Mechanical Sludge Processing
- Nitrification
- SCADA System
- UV Disinfection
- Variable Speed Drives
- Other:

7.2.2 Comments:

Effluent pumping is an as-needed process dependent on WWTP inflow and river levels.

7.3 Future Energy Related Equipment

7.3.1 What energy efficient equipment or practices do you have planned for the future for your treatment facility?

Equipment replacement with energy efficient pumps and motors as well optimization of process controls.
Biogas boiler heating system optimization to increase biogas utilization and heating system efficiency.

8. Biogas Generation

8.1 Do you generate/produce biogas at your facility?

No

Yes

If Yes, how is the biogas used (Check all that apply):

- Flared Off
- Building Heat
- Process Heat
- Generate Electricity
- Other:

9. Energy Efficiency Study

9.1 Has an Energy Study been performed for your treatment facility?

No

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

<p><input type="radio"/> Yes</p> <p><input checked="" type="checkbox"/> Entire facility</p> <p>Year: <input type="text" value="2004"/></p> <p>By Whom: <input type="text" value="Joe Cantwell - Focus on Energy"/></p> <p>Describe and Comment:</p> <div style="border: 1px solid black; padding: 5px;"><p>Every project has an energy component. The City reviews projects by completing a conditions assessment followed by a review of alternatives. The City chooses the alternative with the least overall project cost (operating and capital). A number of projects resulted in decreased energy usage. As part of the plant electrical distribution project, two buildings currently heated by electricity will be converted to hot water heating.</p></div> <p><input type="checkbox"/> Part of the facility</p> <p>Year: <input type="text"/></p> <p>By Whom: <input type="text"/></p> <p>Describe and Comment:</p> <div style="border: 1px solid black; height: 20px;"></div>
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Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 2022

Sanitary Sewer Collection Systems

1. Capacity, Management, Operation, and Maintenance (CMOM) Program

1.1 Do you have a CMOM program that is being implemented?

- Yes
- No

If No, explain:

1.2 Do you have a CMOM program that contains all the applicable components and items according to Wisc. Adm Code NR 210.23 (4)?

- Yes
- No (30 points)
- N/A

If No or N/A, explain:

1.3 Does your CMOM program contain the following components and items? (check the components and items that apply)

- Goals [NR 210.23 (4)(a)]

Describe the major goals you had for your collection system last year:

Major Goals: Reconstruction is performed based on existing condition and expected useful life of sanitary sewer infrastructure. Budget constraints limit the amount of sewer infrastructure that can be replaced annually to an amount less than which meets our reconstruction criteria. In 2022, \$4,102,933 was budgeted for sewer reconstruction and \$1,013,663 was budgeted for maintenance. Specific 2022 goals included System cleaning: 37.4%; Defects to correct: 24; televising and root control: 9.7%; Spot Repairs: 22; Trouble call responses: 37; Blockages removed: 3; Cross-connections identified: 11; protruding taps removed: 0; General reduction in I/I through clear water inspection program. These goals are consistent with the 2022 budget for the collection system.

Did you accomplish them?

- Yes
- No

If No, explain:

- Organization [NR 210.23 (4) (b)]

Does this chapter of your CMOM include:

- Organizational structure and positions (eg. organizational chart and position descriptions)
- Internal and external lines of communication responsibilities
- Person(s) responsible for reporting overflow events to the department and the public

- Legal Authority [NR 210.23 (4) (c)]

What is the legally binding document that regulates the use of your sewer system?

Sewer Use Ordinance

If you have a Sewer Use Ordinance or other similar document, when was it last reviewed and revised? (MM/DD/YYYY) 2020-11-03

Does your sewer use ordinance or other legally binding document address the following:

- Private property inflow and infiltration
- New sewer and building sewer design, construction, installation, testing and inspection
- Rehabilitated sewer and lift station installation, testing and inspection
- Sewage flows satellite system and large private users are monitored and controlled, as necessary

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 2022

Fat, oil and grease control
 Enforcement procedures for sewer use non-compliance
 Operation and Maintenance [NR 210.23 (4) (d)]
 Does your operation and maintenance program and equipment include the following:
 Equipment and replacement part inventories
 Up-to-date sewer system map
 A management system (computer database and/or file system) for collection system information for O&M activities, investigation and rehabilitation
 A description of routine operation and maintenance activities (see question 2 below)
 Capacity assessment program
 Basement back assessment and correction
 Regular O&M training
 Design and Performance Provisions [NR 210.23 (4) (e)]
 What standards and procedures are established for the design, construction, and inspection of the sewer collection system, including building sewers and interceptor sewers on private property?
 State Plumbing Code, DNR NR 110 Standards and/or local Municipal Code Requirements
 Construction, Inspection, and Testing
 Others:

Overflow Emergency Response Plan [NR 210.23 (4) (f)]
 Does your emergency response capability include:
 Responsible personnel communication procedures
 Response order, timing and clean-up
 Public notification protocols
 Training
 Emergency operation protocols and implementation procedures
 Annual Self-Auditing of your CMOM Program [NR 210.23 (5)]
 Special Studies Last Year (check only those that apply):
 Infiltration/Inflow (I/I) Analysis
 Sewer System Evaluation Survey (SSES)
 Sewer Evaluation and Capacity Management Plan (SECAP)
 Lift Station Evaluation Report
 Others:

0

2. Operation and Maintenance

2.1 Did your sanitary sewer collection system maintenance program include the following maintenance activities? Complete all that apply and indicate the amount maintained.

Cleaning	37.4	% of system/year
Root removal	0.1	% of system/year
Flow monitoring	1.8	% of system/year
Smoke testing	0.0	% of system/year
Sewer line televising	13.0	% of system/year
Manhole inspections	14.7	% of system/year
Lift station O&M	12	# per L.S./year
Manhole rehabilitation		

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

Mainline rehabilitation	<input type="text" value=".19"/>	% of manholes rehabbed
Private sewer inspections	<input type="text" value="0.04"/>	% of system/year
Private sewer I/I removal	<input type="text" value="0.0"/>	% of private services
River or water crossings	<input type="text" value="0.0"/>	% of pipe crossings evaluated or maintained
Please include additional comments about your sanitary sewer collection system below:		
<input type="text" value="No additional comments."/>		

3. Performance Indicators

3.1 Provide the following collection system and flow information for the past year.

<input type="text" value="25.16"/>	Total actual amount of precipitation last year in inches
<input type="text" value="32"/>	Annual average precipitation (for your location)
<input type="text" value="334"/>	Miles of sanitary sewer
<input type="text" value="14"/>	Number of lift stations
<input type="text" value="0"/>	Number of lift station failures
<input type="text" value="1"/>	Number of sewer pipe failures
<input type="text" value="37"/>	Number of basement backup occurrences
<input type="text" value="37"/>	Number of complaints
<input type="text" value="11.1"/>	Average daily flow in MGD (if available)
<input type="text" value="19.1"/>	Peak monthly flow in MGD (if available)
<input type="text" value="60.6"/>	Peak hourly flow in MGD (if available)

3.2 Performance ratios for the past year:

<input type="text" value="0.00"/>	Lift station failures (failures/year)
<input type="text" value="0.00"/>	Sewer pipe failures (pipe failures/sewer mile/yr)
<input type="text" value="0.00"/>	Sanitary sewer overflows (number/sewer mile/yr)
<input type="text" value="0.11"/>	Basement backups (number/sewer mile)
<input type="text" value="0.11"/>	Complaints (number/sewer mile)
<input type="text" value="1.7"/>	Peaking factor ratio (Peak Monthly:Annual Daily Avg)
<input type="text" value="5.5"/>	Peaking factor ratio (Peak Hourly:Annual Daily Avg)

4. Overflows

LIST OF SANITARY SEWER (SSO) AND TREATMENT FACILITY (TFO) OVERFLOWS REPORTED **			
Date	Location	Cause	Estimated Volume
None reported			

** If there were any SSOs or TFOs that are not listed above, please contact the DNR and stop work on this section until corrected.

5. Infiltration / Inflow (I/I)

5.1 Was infiltration/inflow (I/I) significant in your community last year?

- Yes
- No

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

If Yes, please describe:

Rain events in March and April increased influent flows above the average daily flow for the year.

5.2 Has infiltration/inflow and resultant high flows affected performance or created problems in your collection system, lift stations, or treatment plant at any time in the past year?

Yes

No

If Yes, please describe:

5.3 Explain any infiltration/inflow (I/I) changes this year from previous years:

None

5.4 What is being done to address infiltration/inflow in your collection system?

The following activities are being performed to address inflow/infiltration:

- a. 927 manhole Inspections
- b. 12 manholes rehabilitated
- c. 43 miles of sanitary mains televised
- d. 0.70 miles of sewer pipe rehabilitated
- e. 61 sanitary manhole seals installed
- f. 85 laterals replaced
- g. 11 basement inspections in conjunction with plumbing inspections and water meter maintenance, to identify and eliminate illegal clear water connections to the sanitary system. 11 violations were found or corrected.

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 **2022**

Grading Summary

WPDES No: 0023221

SECTIONS	LETTER GRADE	GRADE POINTS	WEIGHTING FACTORS	SECTION POINTS
Influent	A	4	3	12
BOD/CBOD	A	4	10	40
TSS	A	4	5	20
Ammonia	A	4	5	20
Phosphorus	A	4	3	12
Biosolids	A	4	5	20
Staffing/PM	A	4	1	4
OpCert	A	4	1	4
Financial	A	4	1	4
Collection	A	4	3	12
TOTALS			37	148
GRADE POINT AVERAGE (GPA) = 4.00				

Notes:

- A = Voluntary Range (Response Optional)
- B = Voluntary Range (Response Optional)
- C = Recommendation Range (Response Required)
- D = Action Range (Response Required)
- F = Action Range (Response Required)

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/6/2023 2022

Resolution or Owner's Statement

Name of Governing
Body or Owner:

Date of Resolution or
Action Taken:

Resolution Number:

Date of Submittal:

ACTIONS SET FORTH BY THE GOVERNING BODY OR OWNER RELATING TO SPECIFIC CMAR SECTIONS (Optional for grade A or B. Required for grade C, D, or F):

Influent Flow and Loadings: Grade = A

Effluent Quality: BOD: Grade = A

Effluent Quality: TSS: Grade = A

Effluent Quality: Ammonia: Grade = A

Effluent Quality: Phosphorus: Grade = A

Biosolids Quality and Management: Grade = A

Staffing: Grade = A

Operator Certification: Grade = A

Financial Management: Grade = A

Collection Systems: Grade = A

(Regardless of grade, response required for Collection Systems if SSOs were reported)

ACTIONS SET FORTH BY THE GOVERNING BODY OR OWNER RELATING TO THE OVERALL GRADE POINT AVERAGE AND ANY GENERAL COMMENTS

(Optional for G.P.A. greater than or equal to 3.00, required for G.P.A. less than 3.00)

G.P.A. = 4.00

Appleton Wastewater SARS-CoV-2 Report

June 8, 2023



WISCONSIN DEPARTMENT
of HEALTH SERVICES



UNIVERSITY of WISCONSIN



Wisconsin State
Laboratory of Hygiene
UNIVERSITY OF WISCONSIN-MADISON

Samples to Date: 279

Current Concentration: Very Low

Virus levels have been adjusted (normalized) for the flow rate and number of people served by Appleton WWTF. The average of the three most recent SARS-CoV-2 measurements is 30 million gene copies per person per day, which is very low compared to the past six months of data.

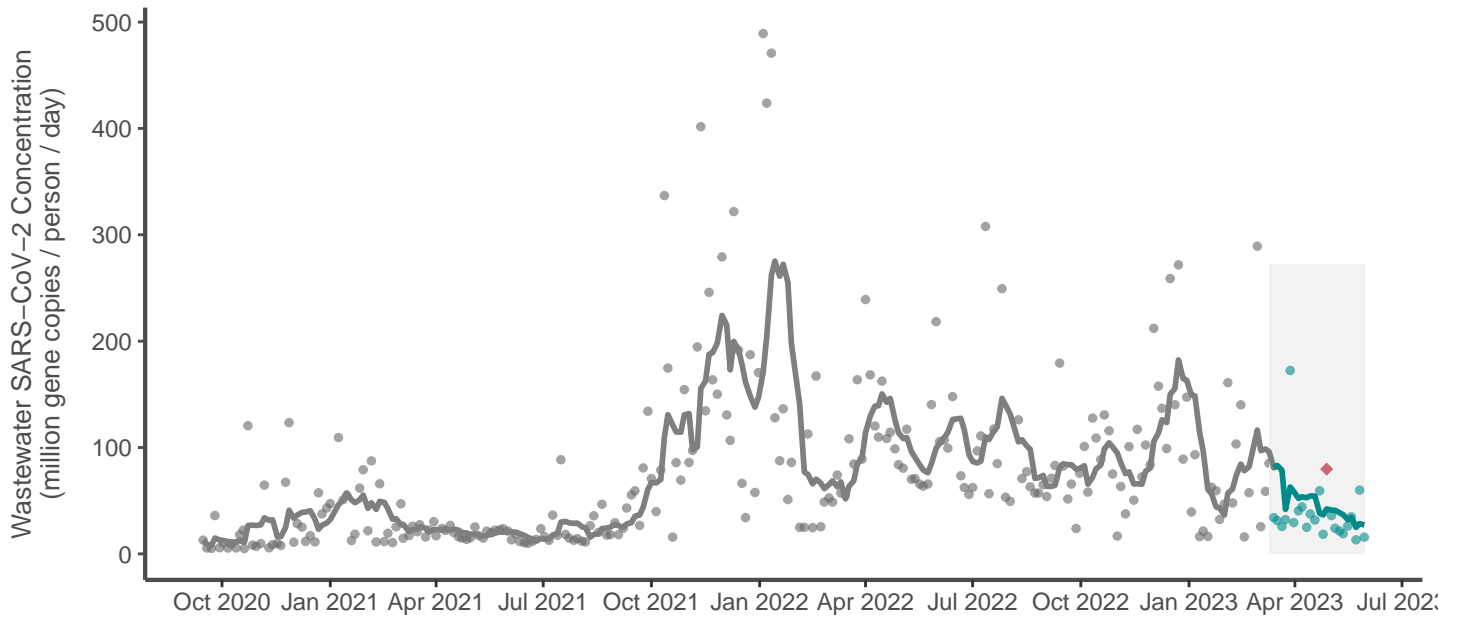
Concentration categories compare the average of the three most recent data points to the last 6 months of data, and assign levels based on percentile:

Very High	Highest 20%
High	60th-80th percentile
Moderate	40th-60th percentile
Low	20th-40th percentile
Very Low	Lowest 20%

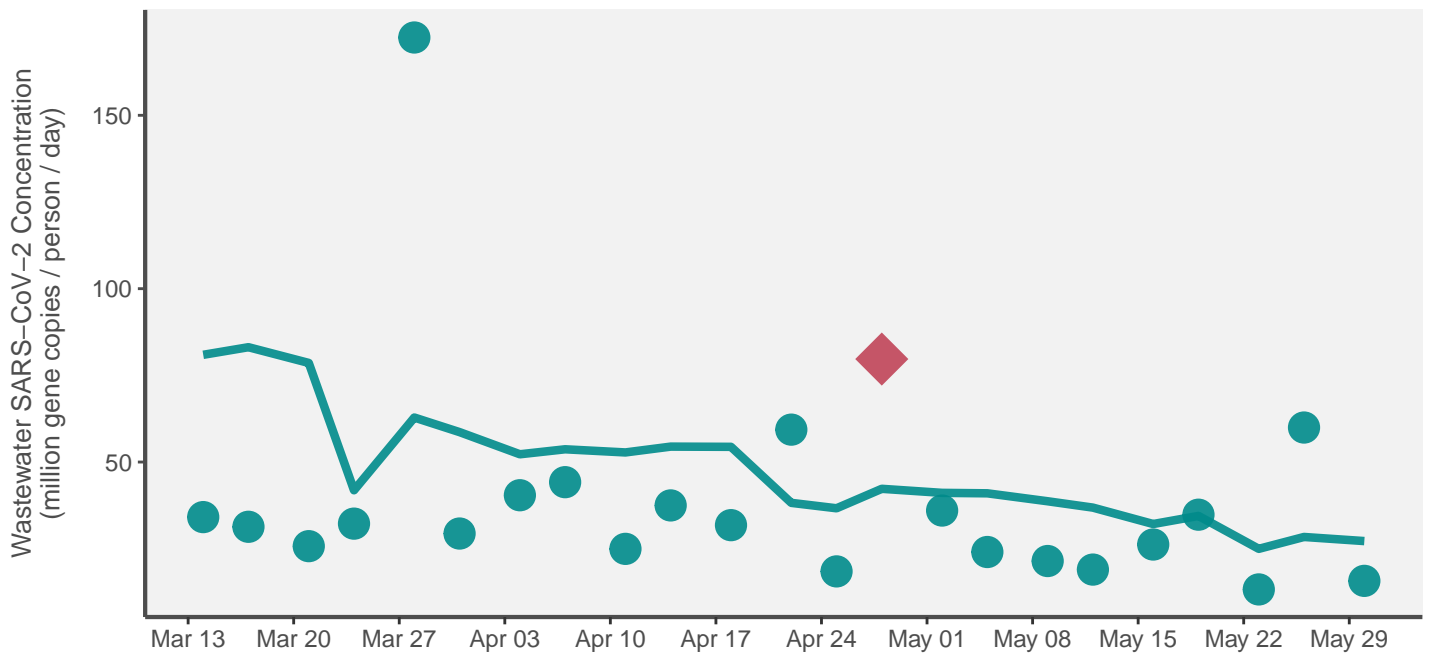
Wastewater trends for Wisconsin can be found on our [Wastewater Surveillance Dashboard](#).



All Time Wastewater Trend for Appleton (Sep 15, 2020–Jun 8, 2023)



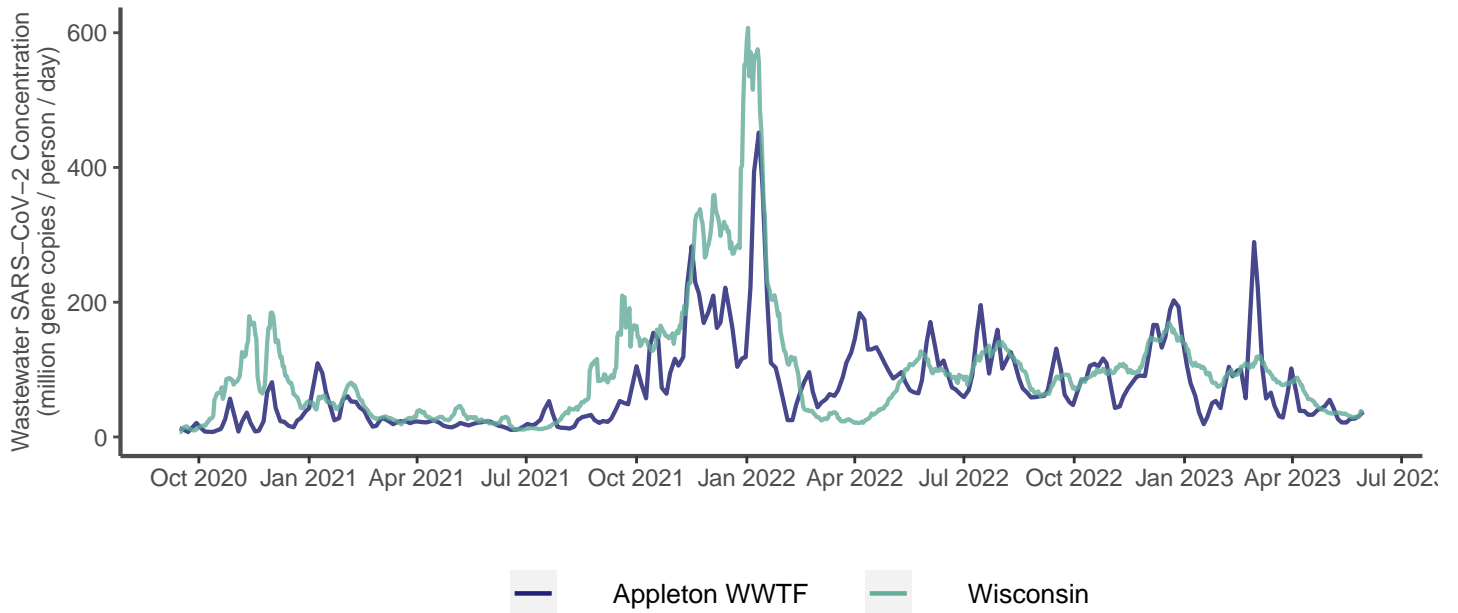
90-Day Wastewater Trend for Appleton (Mar 10, 2023–Jun 8, 2023)



◆ - Significant Increase

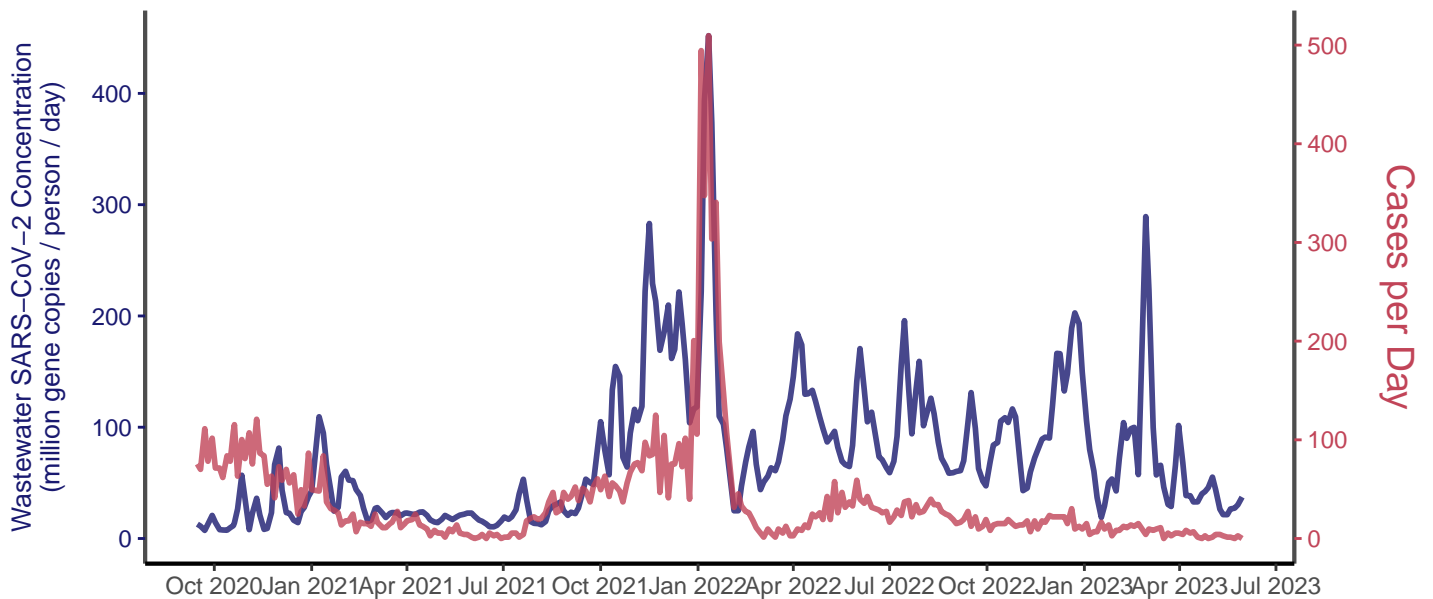
A datapoint is defined as a **significant increase** if a linear regression for the past five measurements is significantly increasing ($p < 0.3$) and if the average of the most recent three datapoints is greater than 80% of the measurements from the last 30 days.

Comparison of Appleton Wastewater Trends with Statewide Average



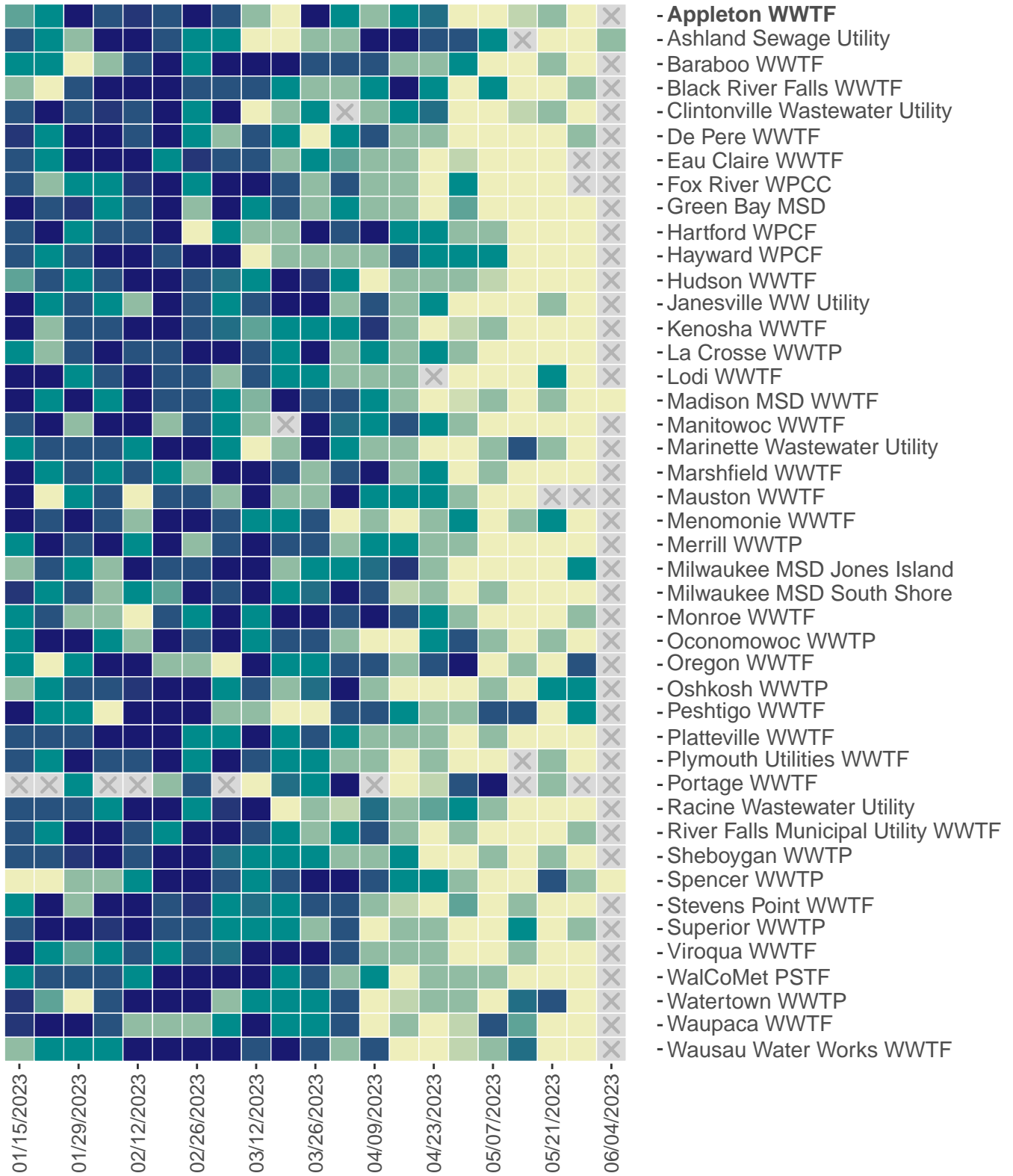
The statewide average is based on the 7-day rolling average SARS-CoV-2 concentration for all participating wastewater treatment facilities combined.

Comparison Between Appleton SARS-CoV-2 Concentrations and COVID-19 Cases



The number of cases is based on the 7-day rolling average number of cases in the location served by Appleton WWTF.

Comparison of Wastewater SARS-CoV-2 Concentrations Between Facilities



**Appleton Wastewater Treatment Plant
Operations Synopsis
January 2023 – March 2023**

Wastewater Treatment Program

- The Appleton Wastewater Treatment Plant (AWWTP) final effluent met Wisconsin Department of Natural Resources (WDNR) discharge monitoring reporting limits for carbonaceous biochemical oxygen demand (CBOD), total suspended solids (TSS), phosphorous, and ammonia. The plant maintained good treatment and a healthy microbiological population with a sludge retention time of 9.5 days. Dewatering processes functioned well and converted 15.3 million gallons (MG) of primary digested sludge to biosolids.
- On December 26, 2022, a bulk load of cationic polymer was off loaded into the Hauled Waste Station. The polymer entered the anaerobic digesters and caused a cascade of equipment and process issues resulting in bypassing the digesters. This matter is being addressed separately from the synopsis and communicated to the Utilities Committee through a series of updates at the Utilities Committee meetings.

Summary of Treatment

Parameter	January	February	March	Average
Industrial Flow (MG)	36.9	36.2	38.2	37.1
Domestic Flow (MG)	348.1	295.8	676.8	440.2
Total Flow (MG)	385.0	332.0	715.0	477.3
Influent CBOD Load (Avg Daily lbs)	21,314	24,612	25,956	23,961
Influent TSS Load (Avg Daily lbs)	43,824	51,887	53,005	49,572
Influent Phosphorous Load (Avg Daily lbs)	422	433	443	433
Influent Ammonia Load (Avg Daily lbs)	2,069	2,354	2,553	2,325
Effluent CBOD Load (Avg Daily lbs)	490	806	1,514	937
Effluent TSS Load (Avg Daily lbs)	236	419	826	494
Effluent Phosphorous Load (Avg Daily lbs)	10	15	29	18
Effluent Ammonia Load (Avg Daily lbs)	22	117	349	163
% Treatment Removal of CBOD	97.7	96.7	94.2	96.2
% Treatment Removal of TSS	99.5	99.2	98.4	99.0
% Treatment Removal of Phosphorous	97.6	96.5	93.5	95.9
% Treatment Removal of Ammonia	98.9	95.0	86.3	93.4

Project Updates

- Appleton Wastewater Treatment Plant Sludge Storage Building Addition: The construction contract with Miron Construction in the amount of \$5,330,989 was approved by Common Council on July 20, 2022. The contract was subsequently fully executed with a formal notice to proceed issued by Applied Technologies, Inc. on August 2, 2022. The construction submittal process immediately pursued with active construction beginning in April 2023. Final completion is projected to occur in late February 2024.
- 2022 Phase I Appleton Wastewater Plant Belt Filter Press Equipment Upgrades: McMahon Associates, Inc. (McMahon) continued engineering services as part of the Solids Dewatering Equipment Upgrades project. The AWWTP will be replacing all three exiting Belt Filter Press (BFP) units and add one additional BFP. The additional BFP will provide the required dewatering capacity based on future growth projections and

redundancy to facilitate critical maintenance events. The public bidding phase was initiated October 20, 2022, and closed on November 10, 2022, with Staab Construction as the least cost bidder at \$5,063,000. Contract award subsequently occurred at Common Council December 7, 2022 with the Notice to Award issued thereafter. Contract execution and formal Notice to Proceed occurred in January 2023. The construction submittal process immediately pursued because of the lengthy lead time (up to 52 weeks) associated with HVAC, electrical, and BFP equipment. Active onsite construction is not anticipated to occur until September 2023. Final completion is currently identified in late February 2024 but will likely need to be extended because of the previously mentioned lead times.

Regulatory Summary

- Monthly Discharge Monitoring reports for January, February, and March were filed electronically on time for regulatory compliance.
- The AWWTP Wisconsin Pollution Discharge Elimination System (WPDES) electronic permit application was submitted on October 2, 2021, as part of reissuance. The current WPDES permit expired on March 31, 2022. The AWWTP continues to operate under the expired permit limits until DNR reissues a permit. Procedurally, the DNR has yet to submit a draft permit for review and public comment. The exact timeline is not yet known for when that step will occur, but the DNR is anticipating that the reissued permit will be administered sometime in 2023.

Laboratory

- All sampling and laboratory testing procedures were performed in accordance with requirements outlined in the AWWTP WPDES permit, which included analysis of double-blind proficiency samples for laboratory recertification.
- Discharge Monitoring Report (DMR) and Health Department testing program objectives associated with sampling and analysis were met during the reporting period.
- Sampling of influent in support of Wisconsin State Lab of Hygiene COVID Sewage Surveillance continued during the reporting period.

Staffing & Training

- Staffing levels remain reduced following the resignation of a Relief Operator in December 2022. The search to find a qualified candidate continues.
- Maintained operations schedules with overtime and deferred maintenance work assignments as a result of the ongoing Relief Operator vacancy.

YEAR 2023 RECEIVING STATION REVENUE

Hauler	January	February	March	April	May	June	July	August	September	October	November	December	Y-T-D Total
A & B Leist Trucking	\$ 24,775.04	\$ 87,845.97	\$ 135,520.54										\$ 248,141.55
Hickory Meadows	\$ 16,496.13	\$ 39,715.07	\$ 86,342.34										\$ 142,553.54
Jeff Waldvogel Trkg.	\$ 3,550.74	\$ 6,998.07	\$ 13,327.59										\$ 23,876.40
Nate Waldvogel Trkg.	\$ 3,737.20	\$ 14,627.86	\$ 16,611.32										\$ 34,976.38
Waldvogel Trucking	\$ 1,073.70	\$ 2,169.20	\$ 2,106.81										\$ 5,349.71
2023 Total	\$ 49,632.81	\$ 151,356.17	\$ 253,908.60	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 454,897.58
2022 Total	\$216,311.75	\$187,091.71	\$229,126.20	\$265,240.25	\$218,399.46	\$234,422.19	\$247,854.73	\$217,396.10	\$165,697.73	\$197,486.74	\$190,481.28	\$ 142,568.74	\$2,512,076.88

- 3% Rate Increase effective 1/1/18
- 1% Rate Increase effective 1/1/19
- 5% Rate Increase effective 10/1/20
- 4% Rate Increase effective 01/01/22
- 7% Rate Increase effective 01/01/23

*Nate Waldvogel Trucking - new hauler in 2023

Date: April 17, 2023
Copies: K. Rindt (via email)
C. Shaw (via email)
B. Kreski
Utilities Committee

**Appleton Water Treatment Plant
Operations Synopsis
January, February, and March 2023**

Performance Summary

The table below presents selected water production and quality performance metrics for the current and previous reporting period.

Treated Water Quality. All compliance parameters met or exceeded regulatory requirements.

Water Production. Compared with Q1 of 2022 (Y/Y) average production decreased by nearly 6%.

Raw Water Quality. Average Q/Q lake turbidity decreased nearly 91% from Q4 2022. Y/Y levels also decreased by just less than 41% from Q1 2022.

Energy Efficiency. Applied electrical energy efficiency Y/Y increased by almost 5% from Q1 2022.

WATER PLANT PARAMETERS	Previous (Q4 2022)			Current (Q1 2023)		
	October	November	December	January	February	March
Water Treated						
Finished (million gallons), total	264.5	246.5	262.3	260.8	235.8	257.6
Finished (million gallons / day), average	8.5	8.2	8.5	8.4	8.4	8.3
Electrical Energy (WTF)						
Consumption (Megawatt-hours)	443.9	424.7	457.9	453.4	410.9	451.3
MWH / million gallons produced	1.7	1.7	1.7	1.7	1.7	1.8
Lake Turbidity (NTU), average	8.17	18.76	14.81	1.53	1.15	1.16
Water System Microbial Quality						
Total Coliform Samples	81	81	81	81	81	81
Compliance with Standard	100%	100%	100%	100%	100%	100%
Finished Water Quality						
Water Temperature (Degrees F)	53.5	43.16	33.51	33.8	35.15	37.29
Turbidity (NTU), average	0.05	0.05	0.05	0.04	0.05	0.05
%<0.15 NTU standard	100	100	100	100	100	100
pH (SU), average	8.7	8.8	8.8	8.8	8.8	8.8
Total Chlorine (mg/L)	1.77	1.85	1.89	2.07	2.19	2.19
Fluoride (mg/L)	0.70	0.69	0.69	0.69	0.73	0.71
Orthophosphate (mg/L)	0.69	0.61	0.65	0.62	0.63	0.65

Laboratory

- In support of plant operations, staff conducted analyses according to method protocols for pH, turbidity, alkalinity, hardness, free/total chlorine, ammonia, phosphorus, potassium permanganate, and fluoride.
- In support of distribution operations, staff performed required 81+ monthly Coliform bacteria analyses along with heterotrophic plate count (HPC) testing.
- Quarterly disinfection by-product rule monitoring with wholesale water customers (DBPR-2) was completed.

Safety

- Maintained Water Treatment Facility Safety programs by completing scheduled safety inspections, fire prevention inspections, and monthly meetings. No significant incidents to report.

Operations

- Operated two UV Disinfection Reactors continuously during the quarter.
- Maintained Main Pressure Zone pressure increases as recommended by Water Distribution System Master Plan.
- North Pretreatment Basin and North Softener Inlet channel out of service for cleaning and inspection.
- Harrison sanitary meter calibration successfully completed at Water Plant.
- #2 Softener out of service for cleaning and inspection.
- Faith Technologies worked on fire alarm system upgrade.
- #1 Sodium Hypochlorite Tank successfully repaired and returned to service.
- Air compressor replacement project ongoing.
- 2nd Raw water line piping project started.

Staffing & Training

- Staffing levels temporarily reduced by resignation of one Water Plant Operator.
- Maintained operations schedules with overtime and deferred maintenance work assignments.

WATER MAIN BREAK/ JOINT LEAK REPORT - MARCH 2023

YEARLY WATER MAIN BREAK COMPARISON

MONTH 22	MONTH 23	YTD 22	YTD 23
15	1	60	21

LOCATION	BREAK DATE	WORK ORDER	TYPE OF PIPE	SIZE	YEAR	BREAK	ESTIMATED DURATION	ESTIMATED WATER LOSS IN GALLONS	DOLLAR VALUE OF WATER REVENUE LOSS**	TOTAL DOLLAR VALUE FOR BREAK* <small>(Water Costs + Repair Costs)</small>
N. Racine St. & E. Park Ridge Av.	3/15/2023	309269	DIP	8"	1974	4" Split, 1/64" Wide	74 Days	1,176,210	\$7,151.36	\$16,151.36

NOTES: The break was found while correlating. The duration was caclulated by the noise while correlating and the soil saturation.

Total Cost =	\$16,151.36
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*In addition to the dollar value of water revenue lost, there is an average cost of \$9,000 to repair each water main break (including final restoration) and an average cost of \$630 to produce the lost water for each main break.

**Water Loss is calculated at the residential rate of \$6.08 per 1000 gallons.

WATER MAIN BREAK/ JOINT LEAK REPORT - APRIL 2023

YEARLY WATER MAIN BREAK COMPARISON

<u>MONTH 22</u>	<u>MONTH 23</u>	<u>YTD 22</u>	<u>YTD 23</u>
6	5	66	26

LOCATION	BREAK DATE	WORK ORDER	TYPE OF PIPE	SIZE	YEAR	BREAK	ESTIMATED DURATION	ESTIMATED WATER LOSS IN GALLONS	DOLLAR VALUE OF WATER REVENUE LOSS**	TOTAL DOLLAR VALUE FOR BREAK* (Water Costs + Repair Costs)
3401 E. Edgemere Dr.	4/4/2023	309269	CIP	8"	1964	1/16" Crack	7 Hours	125,000	\$760.00	\$9,760.00
NOTES: The break was found due to a call in when water was surfacing. The duration was calculated by the time the break was called in.										
201 S. Matthias St.	4/11/2023	309269	CIP	8"	1963	1/32" Crack	55 days	10,028,475	\$60,973.13	\$69,973.13
NOTES: The break was found while correlating. The duration was calculated by the last known hydrant test date.										
1115 E. Sunset Av.	4/26/2023	309269	DIP	8"	1974	3" Hole	6 Hours	609,900	\$3,708.19	\$12,708.19
NOTES: The break was found due to water running on the road. The duration was calculated by the time of the call in and the soil saturation.										
3609 E. Crestview Dr.	4/27/2023	309269	CIP	8"	1966	8" Split	70 Days	4,229,613	\$25,716.05	\$34,716.05
NOTES: The break was found while correlating and testing hydrants. The duration was calculated by the area saturation and the last time hydrants were tested.										

**Water Loss is calculated at the residential rate of \$6.08 per 1000 gallons.

LOCATION	BREAK DATE	WORK ORDER	TYPE OF PIPE	SIZE	YEAR	BREAK	ESTIMATED DURATION	ESTIMATED WATER LOSS IN GALLONS	DOLLAR VALUE OF WATER REVENUE LOSS**	TOTAL DOLLAR VALUE FOR BREAK* (Water Costs + Repair Costs)
940 E. Windfield Pl.	4/30/2023	309269	DIP	8"	1977	4" Hole	4 Hours	710,183	\$4,317.91	\$13,317.91

NOTES: The break was found due to water bubbling. The duration was calculated by the time of the call and the soil saturation.

Total Cost = \$140,475.28

*In addition to the dollar value of water revenue lost, there is an average cost of \$9,000 to repair each water main break (including final restoration) and an average cost of \$630 to produce the lost water for each main break.

**Water Loss is calculated at the residential rate of \$6.08 per 1000 gallons.