



City of Appleton

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

Meeting Agenda - Final Utilities Committee

Tuesday, July 21, 2020

5:00 PM

Council Chambers, 6th Floor

1. Call meeting to order

2. Roll call of membership

3. Approval of minutes from previous meeting

[20-0932](#) Approval of the June 23, 2020 Utilities Committee Meeting minutes.

Attachments: [June 23, 2020 Utilities Committee Meeting minutes.pdf](#)

4. **Public Hearings/Apearances**

5. **Action Items**

[20-0933](#) Request to award three-year contract for City Service invoice printing and mailing services to Primadata LLC.

Attachments: [Memo Invoice Printing Contract.pdf](#)

[20-0951](#) Approve amending temporary Ordinance 94-20 extending the suspension of Sewer Service, Stormwater Utility, and Solid Waste Collection late charges to November 16, 2020 as recommended by staff.

Attachments: [Late Fee COVID-19 Waiver Memo and Proposed Amendment.pdf](#)

[20-0935](#)

Request Approval of the Electronic Compliance Maintenance Annual Report (eCMAR) for 2019 and Request the following Resolution be presented to the Common Council for approval:

Whereas, the City of Appleton has successfully been operating a biosolids compost program in cooperation with the Outagamie Department of Solid Waste; and

Whereas, Outagamie County has committed to continue to allowing biosolids composting on over five acres of County property; and

Whereas, the City of Appleton had applied for and now has been re-issued a Wisconsin Pollution Discharge Elimination System (WPDES) permit; and

Whereas, the WPDES permit application requested and the facility was approved for a biosolids compost program and outfall; and

Whereas, the City of Appleton now meets requirements of NR 204 for biosolids storage due to the reissuance of the WPDES permit as of April 1, 2017;

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

Article 1. Continues supporting the current biosolids compost program

Article 2. Continue planning for long term biosolids solutions, such as biosolids composting as the County site is limited to the next two years.

Attachments: [2019 eCMAR Final Council Memo .pdf](#)
[2019 eCMAR Final.pdf](#)

6. Information Items

[20-0934](#)

Change Order 1 to Great Lakes Mechanical Contract for OCCT Project decreases contract costs from \$121,340 to \$119,637.39 and Extends Contract Completion Date to August 21, 2020.

Attachments: [Change Order No 1.pdf](#)

[20-0936](#)

Biosolids Presentation #2

[20-0939](#)

Monthly Reports for April, May, and June 2020:

- Wastewater Treatment Plant Synopsis and Receiving Station Revenue Report
- Water Treatment Facility Synopsis
- Water Distribution and Meter Team Monthly Report - June

Attachments: [2020 Q2 Wastewater Synopsis.pdf](#)

[2020 Q2 Effluent Quality Summary.pdf](#)[Receiving Station Revenue Report.pdf](#)[2020 Q2 Water Synopsis.pdf](#)[Water Main Breaks June 2020.pdf](#)[20-0940](#)

Cancellation of the August 11, 2020 Utilities Committee Meeting.

7. 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.

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



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Meeting Minutes - Final Utilities Committee

Tuesday, June 23, 2020

5:00 PM

Council Chambers, 6th Floor

1. Call meeting to order

Chairperson Meltzer called the Utilities Committee meeting to order at 5:00 p.m.

2. Roll call of membership

Present: 5 - Meltzer, Fenton, Otis, Prohaska and Smith

3. Approval of minutes from previous meeting

[20-0755](#)

Approval of the June 9, 2020 Utilities Committee Meeting Minutes.

Attachments: [June 9, 2020 Utilities Committee Meeting Minutes](#)

Smith moved, seconded by Prohaska, that the be approved. Roll Call. Motion carried by the following vote:

Aye: 5 - Meltzer, Fenton, Otis, Prohaska and Smith

4. Public Hearings/Appearances

5. Action Items

[20-0756](#)

Award the Ridgeway Tower Project to TMI Inc., in the amount of \$174,000 with a 10% contingency of \$17,400 for a project total not to exceed \$191,400.

Attachments: [Ridgeway Tower Project 06-16-20.pdf](#)

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

Aye: 5 - Meltzer, Fenton, Otis, Prohaska and Smith

[20-0757](#)

Request to sole source contract to Patrick Engineering for professional services needed to complete the Wastewater Electrical Distribution Upgrades Phase 4, for a contract fee of \$195,000 and a contingency of 5% to not exceed a total contract of \$204,750.

Attachments: [2020 Electrical Distribution System Upgrades Design for Substations and 5kv cabling.pdf](#)

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

Aye: 5 - Meltzer, Fenton, Otis, Prohaska and Smith

6. Information Items

[20-0778](#)

Discussion on Service Lines Warranty of America recent mailing

This item was discussed.

[20-0787](#)

Biosolids Compost discussion

This item was discussed.

[20-0758](#)

Monthly Reports - May 2020
-Water Distribution and Meter Team Monthly Report

Attachments: [Water Main Breaks May 2020.pdf](#)

The report was reviewed.

7. Adjournment

Smith moved, seconded by Prohaska, that the Utilities Committee be adjourned at 5:47 p.m. Roll Call. Motion carried by the following vote:

Aye: 5 - Meltzer, Fenton, Otis, Prohaska and Smith



"...meeting community needs...enhancing quality of life."

Finance Department
100 N. Appleton Street
Appleton, WI 54912
920-832-6442

TO: Chairperson Vered Meltzer and Members of the Utilities Committee

FROM: Kelli Rindt, Enterprise Fund Accounting Manager

DATE: July 10, 2020

RE: *Request to award three- year contract for City Service invoice printing and mailing services to Primadata LLC.*

The City prints and mails over 100,000 invoices and approximately 50,000 reminder notices annually for water, wastewater, stormwater and residential refuse service. Finance Department staff currently print all invoices and reminder notices on a high-speed printer located in the Clerk's Office. The inserting and mailing functions were outsourced to a vendor a few years back when the high-speed folding and inserting machine was failing and in need of replacement.

One staff member currently spends between 8-16 hours a month in the mail and copier room located in the Clerk's Office printing the invoices or notices and preparing them to be picked up by the mailing vendor. During this time the staff member is away from her desk and cannot easily or quickly respond to any customer service needs during this time.

There is no secondary high-speed printer available at City Hall if the machine is need of repair, staff either needs to print bills on a much slower machine within the Finance Department or wait until the machine is fixed. While most months multiple days are available to complete the printing process and mail invoices within Public Service Commission guidelines, many months there is only a short window of one or two days to complete the printing process and thus some overtime has been needed to complete the printing process on-time due to the high-speed printer not being in working condition.

The intent of this RFP is to select a vendor that could print, mail and combine multiple meter account mailings. The City received proposals from three companies with previous printing and mailing experience for municipalities. The responses were reviewed by staff from the Finance and Information Technology Departments. The following table identifies the proposal scores and estimated annual costs.

COMPANY	Proposal Score	Value Score	Total Score	Estimated Annual Cost
Mail Haus	61.5	22.8	84.3	\$82,495
Primadata	72	24.5	96.5	\$77,065
United Mailing Services	67.5	25	92.5	\$75,515

The evaluation team found that Primadata LLC had the highest total score and met the City's needs for this service. References were also reviewed for all proposals. The 2019 costs for paper, copier rental charges, envelopes, mailing services and postages was \$93,000.

Fees for envelopes, paper and printing costs will be fixed with the three-year contract. Actual postage costs will fluctuate during the contract period based on current USPS costs.

Based on the total score staff recommends awarding the contract for Printing and Mailing services to Primadata LLC. Should you have any questions regarding this project please contact me at phone: 832-6316.



"...meeting community needs...enhancing quality of life."

Finance Department
100 N. Appleton Street
Appleton, WI 54912
920-832-6442

TO: Chairperson Vered Meltzer and Members of the Utilities Committee

FROM: Kelli Rindt, Enterprise Fund Accounting Manager

DATE: July 15, 2020

RE: *Update on the suspension of the late payment charges for Water, Wastewater, Stormwater and Refuse that are billed on the City Service Invoice and amendment to temporary ordinance.*

In late March of this year the Wisconsin Public Service Commission (PSC) and the City acted to temporarily suspend late fees on services billed on the City Service Invoice. On June 26, 2020 the PSC issued a Supplemental Order that allowed for the late fee suspension to be lifted.

This order required that late fees could be assessed again starting on or after July 15, 2020, but no later than December 31, 2020. Further direction from the PSC also required that no late fees be assessed on charges incurred between March 24 and July 15, 2020. The City's billing system would require extensive programming and testing to meet the PSC requirement of not assessing late fees on charges incurred between March 24 and July 15, 2020.

The City has given notice to the PSC that water utility late fees will continue to be waived until November 16, 2020 after the tax roll transfer of the past due balances is complete. The City's temporary suspension of late fees for Wastewater, Stormwater & Refuse will also continue until November 16, 2020 and it is necessary to amend temporary ordinance 94-20 to reflect this date. Accordingly, staff recommends the following action:

Approve an amendment to temporary ordinance 94-20 to reflect that late charges for sewer service, Stormwater Utility and solid waste collection remain suspended until November 16, 2020 at which time the ordinance shall automatically be repealed.

Should you have questions please contact me at phone: 832-6316.



"...meeting community needs...enhancing quality of life."

Department of Utilities
Wastewater Treatment Plant
2006 E Newberry Street
Appleton, WI 54915
920-832-5945 tel.
920-832-5949 fax

To: Chairperson Vered Meltzer and Members of the Utilities Committee

From: Ryan Rice, AWWTP Operations Supervisor

Cc: Chris Shaw, Director of Utilities
Paula Vandehey, Director of Public Works
Dean Gazza, Director of Parks, Recreation and Facilities Management
Mayor Jacob Woodford

Date: July 14, 2020

Re: *Request Approval of the electronic Compliance Maintenance Annual Report (eCMAR) for 2019 and Request Action Item be Presented to Common Council for Approval*

State of Wisconsin Code NR 208 mandates an annual assessment of the wastewater utility. Requirements under NR 208 are enforceable through the facility's Wisconsin Pollutant Discharge Elimination System (WPDES) permit. The 2019 eCMAR is required to be submitted to the Department of Natural Resources (DNR) by August 31, 2020.

After approval from the Utilities Committee and Common Council, the 2019 eCMAR will be submitted to the Wisconsin Department of Natural Resources. Each eCMAR category was letter graded (A, B, C, D, or F) based on regulatory criteria. The categories are then combined, and an overall treatment works grade point average was determined for 2019. Responses are required for categories with grades at or below a "C" or for an overall grade point average less than 3.0.

The overall letter grade for the 2019 eCMAR is an A with a grade point average of 3.86. All but one of the categorical grades for the facility were graded as excellent or A. The lone B grade was Effluent Quality & Plant Performance (Ammonia), which was a result of needed maintenance in March 2019 to descale and modify piping that allows for efficient ammonia removal. During the scale removal and construction, the monthly effluent ammonia average was 11 mg/L, which exceeded the permit limit of 10 mg/L. Since the project and subsequent projects to improve associated piping, all WPDES permit limits for effluent ammonia have been met.

Overall, the 2019 Compliance Maintenance Annual Report reflects sound utility planning and operations. I would like to credit the Utilities Committee and Council for continued investment in our wastewater facilities, Wastewater Staff for their work in achieving a fine maintenance and compliance record, the Department of Public Works for collection system engineering and maintenance, and Facilities Management for maintaining our buildings and grounds.

I recommend approving the 2019 eCMAR in support thereof. If you have any questions concerning the 2019 eCMAR please contact Ryan Rice at 832-2349.

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:

6/15/2020

2019

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	12.3265	x	284	x	8.34	=	29,145
February	9.1025	x	310	x	8.34	=	23,534
March	16.7932	x	282	x	8.34	=	39,496
April	18.4947	x	190	x	8.34	=	29,307
May	17.7303	x	154	x	8.34	=	22,723
June	13.9250	x	222	x	8.34	=	25,782
July	11.1923	x	200	x	8.34	=	18,669
August	9.0926	x	300	x	8.34	=	22,750
September	14.5013	x	325	x	8.34	=	39,245
October	15.8355	x	102	x	8.34	=	13,471
November	13.9123	x	242	x	8.34	=	28,079
December	14.5626	x	116	x	8.34	=	14,088

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	24.4	x	90	=	21.96
		x	100	=	24.4
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	1	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	1	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	2	0
Points		0	0	6	0
Total Number of Points					6

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/15/2020 2019

3. Flow Meter

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

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

2019-07-10

☐ 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 and chromium. 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 214,640 gallons

☐ No

Holding Tanks

☒ Yes 960,172 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:
6/15/2020 **2019**

<div></div> <p>6.2 Did your facility accept hauled industrial wastes, landfill leachate, etc.?</p> <ul style="list-style-type: none">● Yes○ 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>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.</div>	
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Total Points Generated	6
Score (100 - Total Points Generated)	94
Section Grade	A

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:

6/15/2020

2019

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	8	1	0	0
February	25	22.5	13	1	0	0
March	25	22.5	13	1	0	0
April	25	22.5	7	1	0	0
May	25	22.5	5	1	0	0
June	25	22.5	4	1	0	0
July	25	22.5	5	1	0	0
August	25	22.5	4	1	0	0
September	25	22.5	5	1	0	0
October	25	22.5	5	1	0	0
November	25	22.5	7	1	0	0
December	25	22.5	5	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:
6/15/2020 **2019**

<p>● No</p> <p>If Yes, please explain:</p> <div></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>○ Yes</p> <p>● No</p> <p>If Yes, please explain:</p> <div></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>○ Yes</p> <p>○ No</p> <p>● N/A</p> <p>Please explain unless not applicable:</p> <div></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:

6/15/2020

2019

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	5	1	0	0
February	30	27	16	1	0	0
March	30	27	6	1	0	0
April	30	27	3	1	0	0
May	30	27	2	1	0	0
June	30	27	2	1	0	0
July	30	27	2	1	0	0
August	30	27	1	1	0	0
September	30	27	3	1	0	0
October	30	27	3	1	0	0
November	30	27	3	1	0	0
December	30	27	3	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?

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:
6/15/2020 **2019**

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 Exceed ance	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 Exceed ance
January	10		1.371935	484 0					
February	10		3.575	0					
March	10		11.124838	71 1					
April	11		5.109	0					
May	11		2.874516	129 0					
June	4.4		1.459	0					
July	4.4		1.854516	129 0					
August	4.4		1.607419	355 0					
September	4.4		2.337333	333 0					
October	18		1.977741	935 0					
November	18		2.906	0					
December	18		3.646774	194 0					
Points per each exceedance of Monthly average:									10
Exceedances, Monthly:									1
Points:									10
Points per each exceedance of weekly average (when there is no monthly average):									2.5
Exceedances, Weekly:									0
Points:									0
Total Number of Points									10

10

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?

- Effluent ammonia monthly average limit of 10 mg/l was exceeded in March with an average concentration of 11.12 mg/l reported. A temporary shutdown of the BFP filtrate line was required in March to facilitate piping modifications. This work was necessitated by excessive struvite formation (hard mineral scale) that restricted flow through the pipe. Ammonia rich (average 450 mg/l) filtrate flow was redirected to a point in the liquids process that is not as effective at removing ammonia. BFP filtrate flow was redirected back to the normal process addition point following the successful completion of the piping work on April 10, 2019.

Total Points Generated	10
Score (100 - Total Points Generated)	90
Section Grade	B

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/15/2020 **2019**

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	0.232	1	0
February	1	0.458	1	0
March	1	0.248	1	0
April	1	0.155	1	0
May	1	0.127	1	0
June	1	0.150	1	0
July	1	0.144	1	0
August	1	0.176	1	0
September	1	0.167	1	0
October	1	0.157	1	0
November	1	0.130	1	0
December	1	0.128	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

Last Updated: 6/15/2020 Reporting For: **2019**

[illegible]

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:

6/15/2020

2019

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	2.57		<3.36		<3.57		5.73		2.3		<7.45			0	0
Cadmium		39	85	<.13		<.388		<.414		<.498		<.129		<.352			0	0
Copper		1500	4300	30		72.5		72.8		67.6		71.2		71			0	0
Lead		300	840	2.2		3.83		3.7		5.02		3.93		5.74			0	0
Mercury		17	57	.03		<.116		<.153		<.107		<.136		.194			0	0
Molybdenum	60		75	1.1		6.7		2.95		2.24		4		2.77		0		0
Nickel	336		420	1.3		6.49		6.9		7.22		<.112		8.94		0		0
Selenium	80		100	2.5		<7.3		<7.78		<9.36		<2.4		<6.58		0		0
Zinc		2800	7500	48		116		157		132		129		135			0	0

Outfall No. 009 - Biosolids- Compost Class B

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						4.1								0	0
Cadmium		39	85						<.482								0	0
Copper		1500	4300						61.3								0	0
Lead		300	840						14.2								0	0
Mercury		17	57						<.57								0	0
Molybdenum	60		75						1.76							0		0
Nickel	336		420						9.14							0		0
Selenium	80		100						1.23							0		0
Zinc		2800	7500						132								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?

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.

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Outfall Number:	003
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	01/01/2019 - 02/28/2019
Density:	15,529
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	No
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion with a 38-day HRT as verified by the Van Kleeck Method

Outfall Number:	003
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	03/01/2019 - 04/30/2019
Density:	11,299
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion with a 38-day HRT as verified by the Van Kleeck Method

Outfall Number:	003
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	05/01/2019 - 06/30/2019
Density:	21,242
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion with a 38-day HRT as verified by the Van Kleeck Method

Outfall Number:	003
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	07/01/2019 - 08/31/2019
Density:	16,318
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion with a 38-day HRT as verified by the Van Kleeck Method

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Outfall Number:	003
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	09/01/2019 - 10/31/2019
Density:	18,901
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion with a 38-day HRT as verified by the Van Kleeck Method

Outfall Number:	003
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	11/01/2019 - 12/31/2019
Density:	13,230
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion with a 38-day HRT as verified by the Van Kleeck Method

Outfall Number:	009
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	04/01/2019 - 06/30/2019
Density:	0
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Composting
Process Description:	The composting material did not maintain a temperature of 55 degrees C or higher for 15 days or longer. Therefore, it is considered class B biosolids compost and will be used on capping projects for the Outagamie County Recycling and Solid Waste.

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?

5. Vector Attraction Reduction (per outfall):

0

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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:	01/14/2019
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	>=38
Results (if applicable):	49.10

Outfall Number:	003
Method Date:	03/11/2019
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	>=38
Results (if applicable):	49.90

Outfall Number:	003
Method Date:	05/13/2019
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	>=38
Results (if applicable):	45.40

Outfall Number:	003
Method Date:	07/15/2019
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	>=38
Results (if applicable):	47.90

Outfall Number:	003
Method Date:	09/16/2019
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	>=38
Results (if applicable):	39.30

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Outfall Number:	003		0
Method Date:	11/18/2019		
Option Used To Satisfy Requirement:	Volatile Solids Reduction		
Requirement Met:	Yes		
Land Applied:	Yes		
Limit (if applicable):	>=38		
Results (if applicable):	47.90		
Outfall Number:	009		0
Method Date:	06/30/2019		
Option Used To Satisfy Requirement:	Aerobic Composting Process		
Requirement Met:	Yes		
Land Applied:	Yes		
Limit (if applicable):			
Results (if applicable):			
<p>5.2 Was the limit exceeded or the process criteria not met at the time of land application?</p> <p>○ Yes (40 Points)</p> <p>● No</p> <p>If yes, what action was taken?</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>			
<p>6. Biosolids Storage</p> <p>6.1 How many days of actual, current biosolids storage capacity did your wastewater treatment facility have either on-site or off-site?</p> <p>● >= 180 days (0 Points)</p> <p>○ 150 - 179 days (10 Points)</p> <p>○ 120 - 149 days (20 Points)</p> <p>○ 90 - 119 days (30 Points)</p> <p>○ < 90 days (40 Points)</p> <p>○ N/A (0 Points)</p> <p>6.2 If you checked N/A above, explain why.</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>			0
<p>7. Issues</p> <p>7.1 Describe any outstanding biosolids issues with treatment, use or overall management:</p> <div style="border: 1px solid black; padding: 5px; min-height: 30px;"> <p>Land application sites were removed from inventory because of incompatible soil types and will no longer be used for spreading biosolids.</p> </div>			

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

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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></div> <p>Could use more help/staff for:</p> <div></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></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></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>	

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Operations/maintenance staff are knowledgeable and dedicated to repairing immediate needs, while also planning ahead for future maintenance and capital improvement projects.	
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Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

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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

2.2 Was the operator-in-charge certified at the appropriate level and subclass(es) to operate this plant? (Note: Certification in subclass SS, N and A5 not required in 2019; subclass SS is basic level only.)

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

0

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

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

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.

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

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Financial Management

1. Provider of Financial Information

Name:

Kelli Rindt

Telephone:

(920) 832-6316

(XXX) XXX-XXXX

E-Mail Address
(optional):

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) ☐

○ No (40 points)

If No, please explain:

2.2 When was the User Charge System or other revenue source(s) last reviewed and/or revised?
Year:

2019

● 0-2 years ago (0 points) ☐

○ 3 or more years ago (20 points) ☐

○ N/A (private facility)

2.3 Did you have a special account (e.g., CWP 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:

2019

● 1-2 years ago (0 points) ☐

○ 3 or more years ago (20 points) ☐

○ N/A

If N/A, please explain:

3.2 Equipment Replacement Fund Activity

3.2.1 Ending Balance Reported on Last Year's CMAR

\$ 3,672,491.95

3.2.2 Adjustments - if necessary (e.g. earned interest, audit correction, withdrawal of excess funds, increase making up previous shortfall, etc.)

\$ 0.00

3.2.3 Adjusted January 1st Beginning Balance

\$ 3,672,491.95

3.2.4 Additions to Fund (e.g. portion of User Fee, earned interest, etc.)

+ \$ 151,409.19

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

- \$ 0.00

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

\$ 3,823,901.14

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.

3.3 What amount should be in your Replacement Fund?

\$ 2,433,362.00

0

Please note: If you had a CWFP 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	8,750,000	2023
2	Receiving Station Improvements	330,000	2021
3	Belt filter press upgrades	5,550,000	2021
4	Multi-Year Electrical Equipment Upgrade	7,233,777	2020
5	Multi-year HVAC Upgrades	2,680,482	2020
6	PLC & SCADA Upgrades	60,000	2021
7	Marshall Heights Lift Station Improvements	200,000	2022
8	Process Improvements - (Filtrate tank/piping, RAS pumps, WGB, Blended Sludge HEX, Effluent Pumps, Primary Clarifier Drives)	2,663,940	2020
9	Water Lateral Replacement	453,331	2020
10	Multi-year Lighting Upgrades	250,000	2022
11	Roof Replacements	400000	2022
12	Multi-Year Driveway and Walkway Replacements	1,163,788	2020
13	Glacier Ridge Lift Station	400,000	2023
14	#1 Aeration Tank Blower Replacement	535,000	2022
15	Radioactive Source Replacements	130,000	2023

5. Financial Management General Comments

ENERGY EFFICIENCY AND USE

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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	38,446	257
February	31,756	390
March	27,922	275
April	27,349	92
May	24,168	16
June	22,090	9
July	19,390	1
August	14,654	3
September	17,958	8
October	20,992	141
November	25,180	309
December	29,539	357
Total	299,444	1,858
Average	24,954	155

6.1.2 Comments:

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:

6.2.2 Comments:

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

☐ No

☒ Yes

Year:

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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 LS, Midways Rd LS, Spartan Dr LS, and Scarlet Oak LS. 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	841,347	382.12	2,202	903.50	931	41,764
February	812,276	254.87	3,187	658.95	1,233	43,167
March	928,491	520.59	1,784	1,224.38	758	30,949
April	898,586	554.84	1,620	879.21	1,022	18,279
May	931,934	549.64	1,696	704.41	1,323	18,279
June	791,423	417.75	1,894	773.46	1,023	13,961
July	886,177	346.96	2,554	578.74	1,531	10,252
August	655,825	281.87	2,327	705.25	930	10,730
September	819,954	435.04	1,885	1,177.35	696	13,764
October	921,153	490.90	1,876	417.60	2,206	15,408
November	919,212	417.37	2,202	842.37	1,091	23,437
December	886,602	451.44	1,964	436.73	2,030	7,662
Total	10,292,980	5,103.39		9,301.95		247,652
Average	857,748	425.28	2,099	775.16	1,231	20,638

7.1.2 Comments:

Biogas boiler and compression system start up in 4th quarter 2019.

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

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- ☒ 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 as 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

☒ Yes

☒ Entire facility

Year:

2004

By Whom:

Joe Cantwell - Focus on Energy

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Describe and Comment:

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. A project was completed in last quarter of 2019 to install a third biogas boiler. This boiler provides heat to the half of the plant not heated by two previously installed boilers.

☐ Part of the facility

Year:

By Whom:

Describe and Comment:

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

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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 2019, \$2,500,000 was budgeted for sewer reconstruction and \$480,000 was budgeted for maintenance.

Specific 2019 goals included: System cleaning: 50%; Defects to correct: 25; televising & root control: 11%; Spot repairs: 22; Trouble call responses: 30; Blockages removed: 3; Cross-connections identified: 55; Protruding taps removed: 5; General reduction in I/I through clear water inspection program. These goals are consistent with the 2019 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) 2011-03-08

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

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☐ Sewage flows satellite system and large private users are monitored and controlled, as necessary

☒ 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:

0

☒ 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:

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 % of system/year

Root removal % of system/year

Flow monitoring % of system/year

Smoke testing % of system/year

Sewer line televising % of system/year

Manhole inspections % of system/year

Compliance Maintenance Annual Report

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:

6/15/2020

2019

Lift station O&M	<input type="text" value="12"/>	# per L.S./year
Manhole rehabilitation	<input type="text" value=".46"/>	% of manholes rehabbed
Mainline rehabilitation	<input type="text" value=".73"/>	% of sewer lines rehabbed
Private sewer inspections	<input type="text" value="1.08"/>	% of system/year
Private sewer I/I removal	<input type="text" value="0.0001"/>	% of private services
River or water crossings	<input type="text" value="0"/>	% of pipe crossings evaluated or maintained
Please include additional comments about your sanitary sewer collection system below:		
<input type="text"/>		

3. Performance Indicators

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

<input type="text" value="43.78"/>	Total actual amount of precipitation last year in inches
<input type="text" value="31"/>	Annual average precipitation (for your location)
<input type="text" value="327"/>	Miles of sanitary sewer
<input type="text" value="13"/>	Number of lift stations
<input type="text" value="0"/>	Number of lift station failures
<input type="text" value="0"/>	Number of sewer pipe failures
<input type="text" value="25"/>	Number of basement backup occurrences
<input type="text" value="25"/>	Number of complaints
<input type="text" value="14.0"/>	Average daily flow in MGD (if available)
<input type="text" value="18.5"/>	Peak monthly flow in MGD (if available)
<input type="text" value="53.2"/>	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="0.08"/>	Basement backups (number/sewer mile)
<input type="text" value="0.08"/>	Complaints (number/sewer mile)
<input type="text" value="1.3"/>	Peaking factor ratio (Peak Monthly:Annual Daily Avg)
<input type="text" value="3.8"/>	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 (MG)	
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)

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Appleton Wastewater Treatment Facility

Last Updated: Reporting For:
6/15/2020 **2019**

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

- Yes
- No

If Yes, please describe:

Rain events combined with spring snow melt runoff resulted in higher than normal flows in the months of April and May.

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:

Average daily and monthly flows increased over 2018, due to rainfall of 43.78 inches in 2019.

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. 870 manhole inspections
- b. 28 manholes rehabilitated
- c. 48 miles of sanitary mains televised
- d. 2.38 miles of sewer pipe rehabilitated
- e. 56 sanitary manhole seals installed
- f. 235 laterals replaced
- g. 270 basement inspections in conjunction with plumbing inspections and waster meter maintenance, to identify and eliminate illegal clear water connections to the sanitary system. Two violations were found and 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:
6/15/2020 **2019**

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	B	3	5	15
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	143
GRADE POINT AVERAGE (GPA) = 3.86				

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:
6/15/2020 2019

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 = B

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. = 3.86

CONTRACT CHANGE ORDER (CCO)

☒ CHANGE ORDER

☐ WRITTEN AMENDMENT

CHANGE NO: 01

TO CONTRACTOR: Great Lakes Mechanical

PROJECT: City of Appleton Water Department – Corrosion Control Treatment Test Apparatus

OWNER: City of Appleton, 100 North Appleton Street, Appleton, WI 54911

The following modification(s) to the Contract are hereby ordered (use additional pages if required):

All materials substitutions proposed in the Great Lakes Mechanical bid (dated 5-8-2020) will be accepted except for the Stenner pipe loop apparatus chemical metering pumps. Five Stenner chemical metering pumps (Model No. E10LHM) will be substituted with six Blue-White peristaltic metering pumps (Model No. A1N10F-4T). One Blue-White pump will be used as a spare.

Reason for Modification(s):

Contractor materials substitutions proposal in Bid document and client pump manufacturer preference for a higher quality pump.

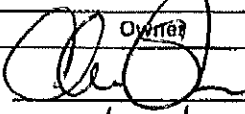
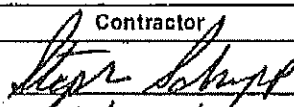
Attachments (List Supporting Documents):

1. Materials Substitution Table (Great Lakes Mechanical Bid, 5-8-2020)
2. Blue-White A100-NF Series Data Sheet
3. Chemical Feed Pump Pricing Documentation

Contract Amount or Price		Contract Times (Calculate Days)	
Original	\$121,340.00	Original Completion	July 10, 2020 Date
Previous Contract Modification(s) (Add)		Previous Contract Modification(s) (Add/Deduct)	0 Days
This Contract Modification (Deduct)	(\$1,702.61)	This Contract Modification (Add/Deduct)	42 Days
Revised Contract Amount	\$119,637.39		

The Revised Contract Completion Date is:

August 21, 20 20

Owner		Contractor	
By: 		By: 	
Date: 6/22/20		Date: 6/19/20	

**Appleton Wastewater Treatment Plant
Operations Synopsis
April 2020 – June 2020**

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 eight days. Dewatering processes functioned well and converted 18.5 Million Gallons (MG) of primary digested sludge to biosolids.
- Due to statewide shutdown of non-essential businesses in response to COVID-19, industrial and domestic flow decreased by 40% and 20% respectively compared to the second quarter of 2019.

Summary of Treatment

Parameter	April	May	June	Average
Industrial Flow (MG)	35.9	31.1	30.8	32.6
Domestic Flow (MG)	353.7	401.4	338.3	364.5
Total Flow (MG)	389.6	432.5	369.1	397.1
Influent CBOD Load (Avg Daily lbs)	19,680	24,755	24,735	23,057
Influent TSS Load (Avg Daily lbs)	38,505	49,369	43,051	43,642
Influent Phosphorous Load (Avg Daily lbs)	399	507	497	468
Influent Ammonia Load (Avg Daily lbs)	1,972	1,841	2,054	1,956
Effluent CBOD Load (Avg Daily lbs)	696	849	434	660
Effluent TSS Load (Avg Daily lbs)	218	414	190	274
Effluent Phosphorous Load (Avg Daily lbs)	12	20	16	16
Effluent Ammonia Load (Avg Daily lbs)	486	484	193	388
% Treatment Removal of CBOD	96.5	96.6	98.2	97.1
% Treatment Removal of TSS	99.4	99.2	99.6	99.4
% Treatment Removal of Phosphorous	97.0	96.1	96.8	96.6
% Treatment Removal of Ammonia	75.4	73.7	90.6	79.9

Work in Progress:

- **2020 Hypochlorite Fiberglass Reinforced Plastic Tank Relining Work:** Common Council approved a contract in January 2020 with Fiberglass Solutions for the relining of bulk storage fiberglass hypochlorite tanks. Fiberglass Solutions completed relining work in April.
- **2017 Appleton Wastewater Plant Improvement Projects:** (WAS Pumping System Replacement, High Pressure Blower #3 Replacement, Digester Biogas Mix Compressor Glycol Cooling System): The construction notice to proceed was authorized on March 4, 2019. Construction activities remained ongoing through the reporting period. The completion date of the project was authorized for extension to July 24th via change order to facilitate delivery of a new gas mix compressor. That includes the associated installation and start-up activities of the new gas mix compressor glycol cooling system.

- **Compost Site Evaluation:** Work by Coker Composting and Consulting (Coker) placed on hold until more information is known regarding pending WDNR regulations which could affect the beneficial use of biosolids and biosolids compost.
- **2019 Midway Road Lift Station Phase II Improvements Project:** The project includes replacement of the existing pumps, deteriorated pump rails, and electrical control panel (nearly 30 years old). Construction activities began in November 2019, with substantial completion achieved in December. Final construction completion occurred May 2020 with the installation of permanent concrete.
- **2019 Appleton Wastewater Plant Improvement Projects:** McMahon under professional engineering service contract for the multi-process improvements project. The project includes replacement of the Return Activated Sludge (RAS) pumps, process piping modifications (e.g. blended sludge, waste gas, and filtrate tank), primary clarifier concrete recoating, and outside secondary containment repairs for iron salt chemical offloading. McMahon continued preliminary engineering phase efforts during the reporting period. Contracts were approved by Common Council in early March with Great Lakes Mechanical and R-Industries. The repair contracts were separated into two categories based on the discipline of work, filtrate tank piping modifications and filtrate tank concrete joint leak repairs. That work was successfully completed by early May. The balance of the 2019 AWWTP Improvements Project scope will be publically bid in August or early September.
- **Primary Clarifiers #3 and #4 Cured In Place Piping (CIPP) Work:** Visu-Sewer initiated work on March 12, 2020 under the contract which was approved by Common Council in November 2019. Final completion occurred in May.

Regulatory Summary

- Monthly Discharge Monitoring reports for April, May and June were filed electronically on time for regulatory compliance.
- An effluent chlorine residual result greater than 0.038 mg/L was recorded on May 29th. After investigation, this WPDES permit exceedance was attributed to contaminated laboratory water and documentation error. Actions have been taken to resolve the laboratory water quality and training of documentation requirements.

Laboratory

- All sampling and laboratory testing procedures were performed in accordance with requirements outlined in the AWWTP Wisconsin Pollutant Discharge Elimination System (WPDES) permit.
- Discharge Monitoring Report (DMR) and Health Department testing program objectives associated with sampling and analysis were met during the reporting period.
- Successful Analysis of Double-Blind Proficiency samples for laboratory recertification occurred during the reporting period.

Staffing & Training

- In response to COVID-19, adjustments have been made to staff schedules and work areas to limit group sizes and face-to-face contact among employees.

EFFLUENT QUALITY SUMMARY

April 2019/2020 – June 2019/2020

Table 1 – 2019 Monthly Permit Summary

Month	CBOD (mg/L)	TSS (mg/L)	TSS (lbs/day)	P (mg/L)	P ⁽³⁾ (lbs/day)	NH3-N ⁽¹⁾ (mg/L)	Fecal ⁽²⁾ Coliform Colonies/ (100 ml)	Chlorine ⁽²⁾ Residual (mg/L)	pH (s.u.)
<i>Permit Limit</i>	<i>25</i>	<i>30</i>	<i>1,322 ⁽³⁾</i>	<i>1</i>	<i>23 ⁽³⁾</i>	<i>10, 11, 4.4, 18</i>	<i>400 col/100ml Geo.Mean</i>	<i>0.038 mg/L daily</i>	<i>6.0 - 9.0 daily limit</i>
January 2019	8	5	480.00	0.23	24.0	1.37	NA	NA	6.8/7.1
February 2019	10	16	1,253.00	0.46	35.0	3.58	NA	NA	6.8/7.2
March 2019	13	6	1,169.00	0.25	38.0	11.12	NA	NA	7.0/7.4
April 2019	7	3	408.00	0.16	24.0	5.11	NA	NA	7.1/8.1
May 2019	5	2	257.00	0.13	19.0	2.88	5	<0.032	6.9/7.2
June 2019	4	2	224.00	0.15	18.0	1.46	3	<0.032	6.7/7.1

Table 2 – 2020 Monthly Permit Summary

Month	CBOD (mg/L)	TSS (mg/L)	TSS (lbs/day)	P (mg/L)	P ⁽³⁾ (lbs/day)	NH3-N ⁽¹⁾ (mg/L)	Fecal ⁽²⁾ Coliform Colonies/ (100 ml)	Chlorine ⁽²⁾ Residual (mg/L)	pH (s.u.)
January 2020	8	3	256	0.11	11	4.41	NA	NA	6.9/7.5
February 2020	5	3	229	0.11	9	7.53	NA	NA	6.9/7.1
March 2020	9	3	586	0.11	19	5.45	NA	NA	6.9/7.2
April 2020	6	2	218	0.11	12	4.51	NA	NA	6.9/7.1
May 2020	6	3	413	0.16	20	4.33	4	<0.100	6.7/7.1
June 2020	9	3	586	0.11	19	5.45	1.6	<0.032	6.9/7.2

NOTES:

- 1) Seasonal NH3-N limits: 10 mg/L Jan. 1 – Mar. 31, 11 mg/L Apr. 1 – May 31, 4.4 mg/L June 1 – Sep 30, 18 mg/L Oct 1 – Dec 31.
- 2) Seasonal fecal and residual chlorine limits are in effect May 1st through September 30th. Limit of Detection 0.032 mg/L.
- 3) April 1, 2017 WPDES Reissuance with new TSS limits expressed as monthly concentration limit (mg/L) and loading limit (lbs).
The future TMDL phosphorus limit will be 23 lbs/day expressed as a 6-month average.

YEAR 2020 RECEIVING STATION REVENUE

Hauler	January	February	March	April	May	June	July	August	September	October	November	December	Y-T-D Total
A & B Leist Trucking	\$ 78,336.68	\$ 78,457.11	\$ 88,498.49	\$ 92,808.40	\$ 99,535.11	\$ 100,563.41							\$ 538,199.20
Buttles Custom Ag *	\$ 4,350.46	\$ -	\$ -	\$ -	\$ -	\$ -							\$ 4,350.46
Dean Foods	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -							\$ -
Hickory Meadows	\$ 36,386.43	\$ 26,652.57	\$ 52,134.86	\$ 47,032.79	\$ 37,834.45	\$ 47,374.78							\$ 247,415.88
Holland Sanitary Dist. 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -							\$ -
Jeff Waldvogel Trkg.	\$ 32,158.85	\$ 30,912.64	\$ 33,131.12	\$ 37,695.30	\$ 41,634.20	\$ 51,895.76							\$ 227,427.87
Movin Materials	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -							\$ -
Waldvogel Trucking	\$ 2,194.20	\$ 1,954.49	\$ 2,113.56	\$ 2,350.76	\$ 2,554.51	\$ 2,295.43							\$ 13,462.95
2020 Total	\$ 153,426.62	\$137,976.81	\$ 175,878.03	\$ 179,887.25	\$ 181,558.27	\$ 202,129.38	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,030,856.36
2019 Total	\$271,217.51	\$240,466.77	\$301,788.32	\$301,125.30	\$327,779.40	\$311,857.27	\$354,997.19	\$328,472.17	\$307,790.57	\$292,411.49	\$256,462.25	\$ 188,614.75	\$ 3,482,982.99

*Buttles Custom Ag new customer in November 2019

Holland Sanitary District 1 new customer in March 2018

Dean Foods new customer in April 2018

3% Rate Increase effective 1/1/18

1% Rate Increase effective 1/1/19

Effective 5/1/19 Dean Foods is billed with Jeff Waldvogel Trucking

Date: July 16, 2020
Copies: K. Rindt (via email)
C. Shaw (via email)
B. Kreski
Utilities Committee

**Appleton Water Treatment Plant
Operations Synopsis
April, May, and June 2020**

Performance Summary

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

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

Water Production. Compared with Q1 of 2020 (quarter over quarter or Q/Q), average water production did not significantly change. Compared with Q2 of 2019 (year over year or Y/Y), average water production decreased by about 2.3%. Some significant portion of this quarterly decrease can be attributed to economic contraction from statewide pandemic countermeasures begun in the latter half of March 2020.

Raw Water Quality. Q/Q and Y/Y average raw water turbidity data were consistent with late spring and early summer lake conditions.

Energy Efficiency. In terms of applied electrical energy, Q/Q efficiency improved by approximately 6% likely due to improved water transmissivity. However, Y/Y efficiencies declined slightly by less than 2%.

WATER PLANT PARAMETERS	Previous (Q1 2020)			Current (Q2 2020)		
	January	February	March	April	May	June
Water Treated						
Finished (million gallons), total	266.3	249.9	257.0	236.6	271.2	271.2
Finished (million gallons / day), average	8.6	8.6	8.3	7.9	8.7	9.0
Electrical Energy (WTF)						
Consumption (Megawatt-hours)	470.2	450.5	482.0	422.2	439.0	470.0
MWH / million gallons produced	1.77	1.80	1.88	1.78	1.62	1.73
Lake Turbidity (NTU), average	2.4	1.4	1.9	7.4	5.4	8.6
Water System Microbial Quality						
Total Coliform Samples	82	81	85	81	81	81
Compliance with Standard	100%	100%	100%	100%	100%	100%
Finished Water Quality						
Water Temperature (Degrees F)	33.8	33.8	36.1	43.2	55.6	71.5
Turbidity (NTU), average	0.02	0.02	0.02	0.02	0.02	0.02
%<0.15 NTU standard	100	100	100	100	100	100
pH (SU), average	9.0	8.9	8.9	8.9	8.8	8.8
Total Chlorine (mg/L)	2.01	2.0	1.95	1.98	1.98	1.94
Fluoride (mg/L)	0.72	0.68	0.70	0.68	0.75	0.73
Orthophosphate (mg/L)	0.88	0.85	0.75	0.73	0.84	0.84

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.
- Staff collected and processed raw and finished water samples to comply with Disinfection By-Products Rule (DBPR) sampling requirements. Provided support to consecutive customers with shipping of DBPR2 samples.
- Received WDNR approval for Lead & Copper Rule (LCR) sampling sites.

Safety

- Maintained WTF Safety programs by completing scheduled safety inspections, fire prevention inspections, and monthly meetings. No significant incidents to report.
- Implemented appropriate COVID-19 countermeasures as directed by city policy.

Operations

- Operated two UV Disinfection reactors continuously during the quarter.
- Awarded construction phase for the Lake Station mechanical/electrical rehabilitation.
- Completed asbestos removal at the Lake Station.
- Awarded maintenance and required upgrades project for the Ridgeway Tower.
- Awarded contract for Optimized Corrosion Control Treatment (OCCT) pipe loop testing apparatus and related plant sampling and supply water modifications.
- Resumed gradual Main Pressure Zone pressure increase as recommended by Water Distribution System Master Plan.
- Successfully completed confirming WPPI electrical generator capacity test.
- Participated in first workshop of compliance project for America's Water Infrastructure Act (AWIA).

Staffing & Training

- Adjusted staff schedules and work areas to limit group sizes and face-to-face contact among employees.

WATER MAIN BREAK/ JOINT LEAK REPORT - JUNE

YEARLY WATER MAIN BREAK COMPARISON

<u>MONTH 19</u>	<u>MONTH 20</u>	<u>YTD 19</u>	<u>YTD 20</u>
3	4	49	44

LOCATION	WORK ORDER	TYPE OF PIPE	SIZE	YEAR	BREAK	ESTIMATED DURATION	ESTIMATED WATER LOSS IN GALLONS	DOLLAR VALUE OF WATER REVENUE LOSS**
1701 W. Homestead Dr.	272146	DIP	8"	1975	4" Hole	4 Hours	757,944	\$4,608.30
2300 N. Linwood Av.	272369	CIP	8"	1979	1/32" Crack 10" Split	30 Days	2,176,475	\$13,232.97
3115 N. Ballard Rd.	272401	DIP	12"	1974	4" Hole	6 Hours	891,273	\$5,418.94
2626 N. Oneida St.	272736	DIP	12"	1979	1" x 3" Hole	5 Hours	847,769	\$5,154.44

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