Appleton Wastewater Treatment Facility

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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	х	Influent Monthly Average BOD Concentration mg/L	x	8.34	=	Influent Monthly Average BOD Loading, lbs/day
January	12.4197	Х	186	Х	8.34	=	19,214
February	11.8564	Х	232	Х	8.34	=	22,941
March	23.0642	Х	164	Х	8.34	=	31,546
April	21.0397	Х	134	Х	8.34	=	23,513
May	13.7232	Χ	162	Х	8.34	=	18,484
June	9.7060	Χ	339	Х	8.34	=	27,441
July	8.4748	Χ	373	Х	8.34	=	26,328
August	9.5365	Χ	316	Х	8.34	=	25,093
September	8.2893	Χ	388	Х	8.34	=	26,789
October	10.7871	Х	395	Х	8.34	=	35,536
November	11.2347	Х	333	Х	8.34	=	31,154
December	10.9977	Х	311	Х	8.34	=	28,525

- 2. Maximum Monthly Design Flow and Design BOD Loading
- 2.1 Verify the design flow and loading for your facility.

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

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

	of	flow was greater	Number of times flow was greater	BOD was greater	Number of times BOD was greater
	Influent		than 100% of		than 100% of design
January	1	0	0	0	0
February	1	0	0	0	0
March	1	1	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 ea	ach	2	1	3	2
Exceedances	5	1	0	0	0
Points		2	0	0	0
Total Numb	er of Po	oints			2

Yes

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		d in the last year? date (MM/DD/YYYY)		
excessive conventional industries, commercial • Yes • No If No, please explains NA 4.2 Was it necessary to • Yes • No If Yes, please explain Infractions occurred demonstrated a return upset as a result of An industry failed to	ey have a sewer use pollutants ((C)BOD users, hauled waste enforce the ordinate entocompliance for the discharges.		to the sewer fro	nce an
	eps were taken to p	prevent compliance issues in the f		.5 10001
Septic Tanks o Yes	Holding Tanks • Yes	Grease Traps o Yes		
5.2 Did you receive sep Septic Tanks ○ Yes • No Holding Tanks	O No ptage at your facility	Noy? If yes, indicate volume in gallogallonsgallons	ns.	
o Yes ● No	•	gallons xplain if plant performance is affe	ected when rece	iving
	s in the sewer system	I problems, permit violations, bio m or treatment plant that were a last year?		oncerns,

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No

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

NA

- 6.2 Did your facility accept hauled industrial wastes, landfill leachate, etc.?
- Yes
- o No

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.

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.

Total Points Generated	2
Score (100 - Total Points Generated)	98
Section Grade	Α

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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	5	1	0	0	
February	25	22.5	8	1	0	0	
March	25	22.5	8	1	0	0	
April	25	22.5	4	1	0	0	
May	25	22.5	5	1	0	0	
June	25	22.5	5	1	0	0	
July	25	22.5	4	1	0	0	
August	25	22.5	4	1	0	0	
September	25	22.5	5	1	0	0	
October	25	22.5	6	1	0	0	
November	25	22.5	7	1	0	0	
December	25	22.5	5	1	0	0	
		* Eq	uals limit if limit is	<= 10			
Months of d	ischarge/yr	12					
Points per e	ach exceedanc	7	3				
Exceedances 0						0	
Points	Points 0						
Total numb	per 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?

N	Α

- 2. Flow Meter Calibration
- 2.1 Was the effluent flow meter calibrated in the last year?

o 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?

o Yes

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No

If Yes, please explain:

NA

- 4.2 At any time in the past year was there a failure of an effluent acute or chronic whole effluent toxicity (WET) test?
- o Yes
- No

If Yes, please explain:

NA

- 4.3 If the biomonitoring (WET) test did not pass, were steps taken to identify and/or reduce source(s) of toxicity?
- Yes
- o No
- N/A

Please explain unless not applicable:

NA

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

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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.	Monthly	90% of	Effluent Monthly	Months of	Permit Limit	90% Permit
001	Average	Permit Limit	Average (mg/L)	Discharge	Exceedance	Limit
	Limit (mg/L)	>10 (mg/L)		with a Limit		Exceedance
January	30	27	2	1	0	0
February	30	27	4	1	0	0
March	30	27	4	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	1	1	0	0
August	30	27	2	1	0	0
September	30	27	3	1	0	0
October	30	27	4	1	0	0
November	30	27	5	1	0	0
December	30	27	3	1	0	0
		* Eq	uals limit if limit is	<= 10		
Months of D	ischarge/yr	•		12		
Points per	each exceed	7	3			
Exceedance	S	0	0			
Points		0	0			
Total Num	ber 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?

NA

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

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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.	,	Weekly	Effluent	Monthly	Effluent	Effluent	Effluent	Effluent	Weekly
001	Average	Average	Monthly	Permit	Weekly	Weekly	Weekly	Weekly	Permit
	NH3	NH3	Average	Limit	Average	Average	Average	Average	Limit
	Limit	Limit	NH3	Exceed	_			for Week	Exceed
	(mg/L)	(mg/L)	(mg/L)	ance	1	2	3	4	ance
January	10	28	.215	0	.224	.131	.227	.227	0
February	10	28	1.107	0	.629	.753	1.653	1.394	0
March	10	28	1.755	0	1.346	2.119	2.026	1.544	0
April	11	29	.527	0	.494	.721	.629	.384	0
May	11		.99	0					0
June	4.4	11	1.654	0	3.034	2.02	1.741	.246	0
July	4.4	11	.661	0	.283	.409	.426	1.626	0
August	4.4	11	1.068	0	1.767	1.8	.501	.554	0
September	4.4	11	.785	0	.527	.921	.426	1.306	0
October	18		.946	0					0
November	18		1.183	0					0
December	18		2.265	0					0
Points per e	ach excee	dance of N	1onthly av	erage:					10
Exceedances, Monthly:									0
Points:								0	
Points per each exceedance of weekly average (when there is no monthly average):								e):	2.5
Exceedance	s, Weekly	!							0
Points:									0
Total Num	ber of Po	ints							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?

NA

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

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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	Effluent Monthly	Months of	Permit Limit
	phosphorus Limit	Average phosphorus	Discharge with a	Exceedance
	(mg/L)	(mg/L)	Limit	
January	1	0.098	1	0
February	1	0.139	1	0
March	1	0.133	1	0
April	1	0.122	1	0
May	1	0.153	1	0
June	1	0.227	1	0
July	1	0.273	1	0
August	1	0.308	1	0
September	1	0.396	1	0
October	1	0.268	1	0
November	1	0.233	1	0
December	1	0.286	1	0
Months of Discharg				
Points per each e	10			
Exceedances	0			
Total Number of	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?

NA

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

Appleton Wastewater Treatment Facility

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Biosolids Quality and Management

1. Biosolids Use/Disposal 1.1 How did you use or dispose of your biosolids? (Check all that apply) ☑ Land applied under your permit ☐ Publicly Distributed Exceptional Quality Biosolids ☐ Hauled to another permitted facility ☐ Landfilled ☐ Incinerated	
○ Other NOTE: If you did not remove biosolids from your system, please describe your system type such as lagoons, reed beds, recirculating sand filters, etc. 1.1.1 If you checked Other, please describe: Utilized the Appleton Composting Facility at Outagamie County Landfill.	
2. Land Application Site 2.1 Last Year's Approved and Active Land Application Sites 2.1.1 How many acres did you have? 12928.6 acres 2.1.2 How many acres did you use? 932 acres 2.2 If you did not have enough acres for your land application needs, what action was taken? NA 2.3 Did you overapply nitrogen on any of your approved land application sites you used last year? o Yes (30 points) No 2.4 Have all the sites you used last year for land application been soil tested in the previous 4 years? Yes No (10 points) No N/A	D
3. Biosolids Metals Number of biosolids outfalls in your WPDES permit: 3.1 For each outfall tested, verify the biosolids metal quality values for your facility during the last calendar year. Outfall No. 009 - Biosolids- Compost Class B Parameter 80% H.Q. Ceiling Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec 80% High Value Quality Arsenic 41 75 0 0 0 Cadmium 39 85 0 0 0 Cadmium 39 85 0 0 0 Lead 300 840 0 0 0 Mercury 17 57 0 0 0 Molybdenum 60 75 0 0 0 Nickel 336 420 0 0 0 Selenium 80 100 0	

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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									1.81					0	0
Cadmium		39	85									.159					0	0
Copper		1500	4300									35.8					0	0
Lead		300	840									7.08					0	0
Mercury		17	57									.049					0	0
Molybdenum	60		75									2.51				0		0
Nickel	336		420									9.98				0		0
Selenium	80		100									.863				0		0
Zinc		2800	7500									89.6					0	0
Outfall No. 00	03 - Ca	ake Slu	ıdge															
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	<7.82		<4.22		<6.53		2.07		5.95		<9.28			0	0
Cadmium		39	85	<.185		.172		.341		.096		<.194		<.219			0	0
Copper		1500	4300	58		63		57		46		59		83			0	0
Lead		300	840	6.18		4.31		3.56		2.15		4.221		4.82			0	0
Mercury		17	57	<.121		<.109		.269		<.116		<.138		.144			0	0
Molybdenum	60		75	2.62		5.26		4.4		4.81		7.09		5.4		0		0
Nickel	336		420	9.67		11		11		10		12		14		0		0
Selenium	80		100	<6.88		<3.71		<5.75		1.64		<7.3		<8.17		0		0
Zinc		2800	7500	112		112		114		110		121		173			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)
- \circ > 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)
- 0 1 (10 Points)
- $\circ > 1$ (15 Points)
- 3.1.4 Were biosolids land applied which exceeded the ceiling limit?
- O 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?

NA

- 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:	В
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	01/01/2023 - 02/28/2023
Density:	35,646
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	No
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion with a 21-day HRT. *The higher than normal fecals are related to the polymer release to digestion and dewatering Raw and TWAS, this material was not anaerobically digested from 12/26/22 to 1/12/23. However, WDNR considers this a class B biosolids for land Application. All biosolids from this event has been separated, Land Applied, and tracked on nutrient management sheets and site maps.
Outfall Number:	003
Biosolids Class:	В
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	03/01/2023 - 04/30/2023
Density:	15,989
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:	В
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	05/01/2023 - 06/30/2023
Density:	14,494
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion with a 21-day HRT.

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Outfall Number:	003
Biosolids Class:	В
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	07/01/2023 - 08/31/2023
Density:	11,384
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:	В
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	09/01/2023 - 10/31/2023
Density:	12,938
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:	В
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	11/01/2023 - 12/31/2023
Density:	7,523
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:	010
Biosolids Class:	A
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	04/01/2023 - 06/30/2023
Density:	57
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 occured.

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Outfall Number:	010
Biosolids Class:	A
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	07/01/2023 - 09/30/2023
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 occured.

Outfall Number:	010
Biosolids Class:	A
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	10/01/2023 - 12/31/2023
Density:	2
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 occured.

- 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?

NA

- 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:	01/29/2023
Option Used To Satisfy Requirement:	Incorporation when land apply
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	
Results (if applicable):	

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Outfall Number:	003		
Method Date:	03/28/2023		
Option Used To Satisfy Requirement:	Volatile Solids Reduction	n	
Requirement Met:	Yes		
Land Applied:	Yes		
Limit (if applicable):	>=38		
Results (if applicable):	47.2		
Outfall Number:	003		\neg
Method Date:	05/30/2023		
Option Used To Satisfy Requirement:	Volatile Solids Reduction	n	
Requirement Met:	Yes		
Land Applied:	Yes		
Limit (if applicable):	>=38		
Results (if applicable):	44.5		
Outfall Number:	003		\neg
Method Date:	07/25/2023		
Option Used To Satisfy Requirement:	Volatile Solids Reduction	n	
Requirement Met:	Yes		
Land Applied:	Yes		
Limit (if applicable):	>=38		
Results (if applicable):	45.1		
Outfall Number:	003		
Method Date:	09/26/2023		
Option Used To Satisfy Requirement:	Volatile Solids Reduction	n	
Requirement Met:	Yes		
Land Applied:	Yes		
Limit (if applicable):	>=38		
Results (if applicable):	39.1		
Outfall Number:	003		
Method Date:	11/28/2023		
Option Used To Satisfy Requirement:	Volatile Solids Reduction	n	
Requirement Met:	Yes		
Land Applied:	Yes		
Limit (if applicable):	>=38		
Results (if applicable):	41.7		

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Last Updated: Reporting For: 6/5/2024 2023 Outfall Number: 010 Method Date: 06/30/2023 Option Used To Satisfy Requirement: Aerobic Composting Process Requirement Met: Yes Land Applied: Yes Limit (if applicable): Results (if applicable): Outfall Number: 010 09/30/2023 Method Date: Option Used To Satisfy Requirement: Aerobic Composting Process Requirement Met: Yes Land Applied: Yes Limit (if applicable): Results (if applicable): 0 Outfall Number: 010 12/31/2023 Method Date: 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? O 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? ● >= 180 days (0 Points) o 150 - 179 days (10 Points) o 120 - 149 days (20 Points) 0 90 - 119 days (30 Points) 0 < 90 days (40 Points)</p> N/A (0 Points)

7. Issues

NA

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

7.1 Describe any outstanding biosolids issues with treatment, use or overall management:

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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.

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

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Staffing and Preventative Maintenance (All Treatment Plants)

1. Plant Staffing	
1.1 Was your wastewater treatment plant adequately staffed last year?	
• Yes	
O No	
If No, please explain:	
Could use more help/staff for:	
1.2 Did your wastewater staff have adequate time to properly operate and maintain the plant and	
fulfill all wastewater management tasks including recordkeeping?	
• Yes	
○ No	
If No, please explain:	
2. Preventative Maintenance	
2.1 Did your plant have a documented AND implemented plan for preventative maintenance on	
major equipment items?	
Yes (Continue with question 2) □□	
o No (40 points)□□	
If No, please explain, then go to question 3:	
2.2 Did this preventative maintenance program depict frequency of intervals, types of lubrication,	
and other tasks necessary for each piece of equipment?	
• Yes	0
○ No (10 points)	
2.3 Were these preventative maintenance tasks, as well as major equipment repairs, recorded and	
filed so future maintenance problems can be assessed properly?	
• Yes	
O Paper file system	
Computer system	
Both paper and computer system	
○ No (10 points)	
3. O&M Manual	
3.1 Does your plant have a detailed O&M and Manufacturer Equipment Manuals that can be used	
as a reference when needed?	
YesNo	
	_
4. Overall Maintenance /Repairs4.1 Rate the overall maintenance of your wastewater plant.	
• Excellent	
• Very good	
o Good	
o Fair	
o Poor	
Describe your rating:	
-	

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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	Α

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Last Updated: Reporting For: 6/5/2024

2023

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)
- O 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	SubClass Description	WWTP	OIC		
Class	Advanced		OIT	Basic	Advanced
A1	Suspended Growth Processes	Χ			X
A2	Attached Growth Processes				
А3	Recirculating Media Filters				
A4	Ponds, Lagoons and Natural				
A5	Anaerobic Treatment Of Liquid				
В	Solids Separation	Χ			X
С	Biological Solids/Sludges	Χ			X
Р	Total Phosphorus	Χ			X
N	Total Nitrogen				
D	Disinfection	Χ			X
L	Laboratory	Χ			X
U	Unique Treatment Systems				
SS	Sanitary Sewage Collection	Х	NA	Х	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 is required 5 years after permit reissuance.)
- Yes (0 points)
- No (20 points)
- 2.3 For wastewater treatment facilities with a registered or certified laboratory, is at least one operator that works in the laboratory certified at the basic level in the laboratory (L) subclass?
- Yes
- O N/A Wastewater treatment facility does not have a registered or certified laboratory
- 2.4 For wastewater treatment facilities that own and operate a sanitary sewage collection system, has at least one operator been designated the OIC for sanitary sewage collection system and certified at the basic level in the sanitary sewage collection system (SS) subclass?
- Yes
- O No
- o N/A Owner of the Wastewater treatment facility does not own and operate a sanitary sewage collection system
- 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

Compliance Maintenance Annual Report Appleton Wastewater Treatment Facility

Appleton Wastewater Treatment Facility	6/5/2024	2023
 □ 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 you 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: 	ır plant and is exp	pected to
4. Continuing Education Credits 4.1 If you had a designated operator-in-charge, was the operator-in-char Education Credits at the following rates? OIT and Basic Certification: O Averaging 6 or more CECs per year. O Averaging less than 6 CECs per year. Advanced Certification:	ge earning Contir	nuing
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	Α

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earned interest, etc.)

6/5/2024 Financial Management 1. Provider of Financial Information Name: Kelli Rindt Telephone: (XXX) XXX-XXXX (920) 832-6316 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: 0 2023 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., CWFP 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) 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: 2023 1-2 years ago (0 points)□□ \circ 3 or more years ago (20 points) \square O N/A If N/A, please explain: NA 3.2 Equipment Replacement Fund Activity 3.2.1 Ending Balance Reported on Last Year's CMAR 3,609,022.60 3.2.2 Adjustments - if necessary (e.g. earned interest, 0.00 audit correction, withdrawal of excess funds, increase making up previous shortfall, etc.) 3,609,022.60 3.2.3 Adjusted January 1st Beginning Balance 3.2.4 Additions to Fund (e.g. portion of User Fee,

Last Updated:

156,275.48

Reporting For:

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3.2.5 Subtractions from Fund (e.g., equipmen	t
replacement, major repairs - use description be	ХC
3.2.6.1 below*)	

\$ 0.00

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

3,765,298.08

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.

NA

3.3 What amount should be in your Replacement Fund?

2,898,917.00

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
- O No

If No, please explain.

NA

- 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		Approximate Construction Year
1	Lift Station Upgrades	\$1,657,500	2024
2	Sludge Storage Building Addition	\$2,060,284	2024
3	Grit System And Raw Sludge Pump	\$618,021	2024
4	Heat Exchanger	\$4,133,358	2024
5	Belt Filter Press Upgrades And Replacement	\$9,238,894	2024
6	Chemical System Upgrades	\$225,000	2024
7	Final Clarifier Underdrain Replacement	\$433,473	2024
8	Aeration Process Upgrades	\$600,000	2024
9	Primary Clarifier #1-4 Rebuild	\$1,000,000	2024
10	SCADA Instrumentation	\$30,000	2024
11	IT Wireless Access/Network Upgrades	\$1,700,000	2024
12	HVAC Upgrades-Current Year	\$3,447,242	2024
13	Lighting Upgrades-Current Year	\$162,121	2024
14	Electrical Distribution Upgrades	\$273,634	2024
15	Green Energy Electrical Upgrades	\$863,123	2024
16	MCC Controls Upgrades-Current Year	\$159,420	2024
17	Elevator Replacement	\$350,000	2024
18	Building Renovations	\$54,790	2024
19	Administrative Building Improvements	\$130,836	2024
20	Hardscape Replacements-Current Year	\$332,273	2024

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21	Lift Station Upgrades	\$1,700,000	2025
22	Multi-year Roof Replacement	\$525,000	2025
23	Multi-year HVAC Upgrades	\$2,650,000	2025
24	Multi-year MCC Controls Upgrades	\$7,700,000	2025
25	Multi-year F1 Building Renovations	\$1,250,000	2025
26	Receiving Station Upgrades	\$900,000	2026
27	Bisulfite Bulk Tank Replacement	\$160,000	2026
28	Multi-year Lighting Upgrades	\$150,000	2026
29	Elevator Replacement	\$400,000	2026
30	Multi-year Hardscape Replacements	\$600,000	2026
31	Elevator Replacement	\$350,000	2027
32	M-Building Equipment Upgrades	\$1,600,000	2028
33	Elevator Replacement	\$350,000	2028

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: 14

	Electricity Consumed (kWh)	Natural Gas Consumed (therms)
January	27,709	315
February	26,867	151
March	33,770	113
April	29,062	29
May	17,497	12
June	13,439	5
July	12,775	14
August	12,562	8
September	12,529	7
October	13,569	32
November	23,207	31
December	22,058	262
Total	245,044	979
Average	20,420	82

6.1.2 Comments:

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- 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

Appleton Wastewater Treatment Facility Last Updated: Reporting For: 6/5/2024 2023 ☐ Pneumatic Pumping ☐ SCADA System □ Variable Speed Drives ☐ Other: 6.2.2 Comments: None 6.3 Has an Energy Study been performed for your pump/lift stations? o 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:

Appleton Wastewater Treatment Facility

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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	852,267	385.01	2,214	595.63	1,431	29,228
February	815,733	331.98	2,457	642.35	1,270	33,981
March	914,249	714.99	1,279	977.93	935	6,173
April	859,984	631.19	1,362	705.39	1,219	3,043
May	802,752	425.42	1,887	573.00	1,401	8,119
June	817,797	291.18	2,809	823.23	993	2,399
July	853,199	262.72	3,248	816.17	1,045	1,726
August	982,858	295.63	3,325	777.88	1,264	185
September	868,800	248.68	3,494	803.67	1,081	43
October	917,390	334.40	2,743	1,101.62	833	8,480
November	902,695	337.04	2,678	934.62	966	1,004
December	899,200	340.93	2,637	884.28	1,017	1,641
Total	10,486,924	4,599.17		9,635.77		96,022
Average	873,910	383.26	2,511	802.98	1,121	8,002

7.1.2 Comments:

None

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

☐ Influent Pumping

☐ UV Disinfection

☑ Variable Speed Drives

☐ Other:

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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?

Appleton Wastewater 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.	3. 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 1 Has an Energy Study been performed for your treatment facility? No Yes Entire facility Year: 2004 By Whom: Joe Cantwell - Focus on Energy 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. As part of the plant electrical distribution project, two buildings currently heated by electricity will be converted to hot water heating.		
	Year: By Whom: Describe and Comment:		

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

Appleton Wastewater Treatment Facility

Last Updated: Reporting For:

6/5/2024 2023

Sanitary Sewer Collection Systems

 Capacity, Management, Operation, and Maintenance (CMOM) Program Do you have a CMOM program that is being implemented? Yes 		
o No		
If No, explain:		
12.5		
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 2023, \$1,532,995 was budgeted for sewer reconstruction and \$1,057,550 was budgeted for maintenance.		
Specific 2023 goals included System cleaning: 30.25%; televising and root control: 10.32%; Spot Repairs/Defect Corrections: 13; Trouble call responses: 32; Blockages removed: 3; Cross connections identified: 18; protruding taps removed: 0; General reduction in I/I through clear water inspection program. These goals are consistent with the 2023 budget for the collection system.		
Did you accomplish them?		
• Yes		
O 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		

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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 \square Design and Performance Provisions [NR 210.23 (4) (e)] \square 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 0 ☐ Others: \boxtimes Overflow Emergency Response Plan [NR 210.23 (4) (f)] \square Does your emergency response capability include: ☑ Responsible personnel communication procedures Response order, timing and clean-up ☑ Public notification protocols ☑ 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 Managment 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 30.25 % of system/year % of system/year 0.10Root removal Flow monitoring 0.00% of system/year % of system/year Smoke testing 0.00 Sewer line televising 10.20 % of system/year Manhole 11.70 % of system/year inspections

Last Updated: Reporting For:

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Appleton Wastewater Tro	eatment Facility		Last Updated: 6/5/2024	Reporting For 2023
Lift station O&M	12.00	# per L.S./year		
Manhole rehabilitation	0.13	% of manholes rehabbed	i	
Mainline rehabilitation	0.21	% of sewer lines rehabbe	ed	
Private sewer inspections	0.74	% of system/year		
Private sewer I/I removal	0.04	% of private services		
River or water crossings	0.00	% of pipe crossings evalu		ned
		sanitary sewer collection	system below:	
No additional commen	ts. 			
21.60 Total 32.00 An 334.00 Mil 14.00 Nu 1.00 Nu 0.00 Nu 32.00 Nu 32.00 Nu 12.60 Av 23.10 Pea 63.41 Pea 63.41 Pea 3.2 Performance ratios fo 0.07 Lift 0.00 Se 0.00 Sa 0.10 Bas 0.10 Co 1.8 Pea	collection system and fital actual amount of presental actual amount of presental actual amount of presental actual amount of presental actual amount of presentations and actual	ares aures aup occurrences (if available) (if available) if available) es/year) failures/sewer mile/yr) (number/sewer mile/yr) er/sewer mile)	nes É	
4. Overflows				
Date	WER (SSO) AND TREATI Locatio	MENT FACILITY (TFO) OVE	Cause E	stimated Volume
	None	reported		
** If there were any SSO on this section until corre		isted above, please contac	ct the DNR and s	stop work
5. Infiltration / Inflow (I/I				

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- 5.1 Was infiltration/inflow (I/I) significant in your community last year?
- Yes
- o No

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?

 O 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. 738 manhole Inspections
- b. 8 manholes rehabilitated
- c. 34.1 miles of sanitary mains televised
- d. 0.70 miles of sewer pipe rehabilitated
- e. 60 sanitary manhole seals installed
- f. 11 laterals replaced
- g. 18 basement inspections in conjunction with plumbing inspections and water meter maintenance, to identify and eliminate illegal clear water connections to the sanitary system. 18 violations were found or corrected.

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

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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	Α	4	3	12
Biosolids	А	4	5	20
Staffing/PM	Α	4	1	4
OpCert	Α	4	1	4
Financial	Α	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)

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Resolution or Owner's Statement	
Resolution of 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
Inhadic Flow and Educating Florade Fig.
Effluent Quality: BOD: Grade = A
Effluent Quality: TSS: Grade = A
Effluent Quality: Ammonia: Grade = A
Efficient Overling Dheemhower Crede
Effluent Quality: Phosphorus: Grade = A
Biosolids Quality and Management: Grade = A
Staffing: Grade = A
Operator Certification: 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