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Racine Wastewater Utility

Last Updated: 5/26/2021 Reporting For: **2020**

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	25.1194	x	82	x	8.34	=	17,239
February	22.5448	x	105	x	8.34	=	19,658
March	29.1419	x	94	x	8.34	=	22,901
April	27.3057	x	101	x	8.34	=	23,061
May	36.6790	x	70	x	8.34	=	21,443
June	18.2833	x	121	x	8.34	=	18,395
July	22.4065	x	109	x	8.34	=	20,369
August	21.5968	x	107	x	8.34	=	19,284
September	16.4567	x	139	x	8.34	=	19,009
October	15.0355	x	149	x	8.34	=	18,716
November	15.9133	x	155	x	8.34	=	20,624
December	18.0226	x	138	x	8.34	=	20,733

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	48	x	90	=	43.2
		x	100	=	48
Design BOD, lbs/day	31591	x	90	=	28431.9
		x	100	=	31591

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

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

0

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3. Flow Meter

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

● Yes Enter last calibration date (MM/DD/YYYY)
2020-07-27

○ 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:

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 faclity? If yes, indicate volume in gallons.

Septic Tanks

○ Yes gallons

● No

Holding Tanks

● Yes 569,856 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 was not affected. All loads are logged, sampled and randomly analyzed.

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.

6.2 Did your facility accept hauled industrial wastes, landfill leachate, etc.?

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- ● Yes
- ○ 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.

We accept landfill leachate from the local landfill. It is a permitted discharge, not hauled.

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

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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	30	27	10	1	0	0
February	30	27	12	1	0	0
March	30	27	12	1	0	0
April	30	27	13	1	0	0
May	30	27	9	1	0	0
June	30	27	7	1	0	0
July	30	27	10	1	0	0
August	30	27	8	1	0	0
September	30	27	10	1	0	0
October	30	27	12	1	0	0
November	30	27	9	1	0	0
December	30	27	9	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**

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)
2020-07-27

○ No

If No, please explain:

3. Treatment Problems

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

There were no problems that threatened treatment.

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

● No

If Yes, please explain:

4.2 At any time in the past year was there a failure of an effluent acute or chronic whole effluent toxicity (WET) test?

- ○ Yes
- ● No

If Yes, please explain:

4.3 If the biomonitoring (WET) test did not pass, were steps taken to identify and/or reduce source(s) of toxicity?

- ○ Yes
- ○ No
- ● N/A

Please explain unless not applicable:

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

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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. 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	4	1	0	0	
March	30	27	5	1	0	0	
April	30	27	5	1	0	0	
May	30	27	6	1	0	0	
June	30	27	3	1	0	0	
July	30	27	5	1	0	0	
August	30	27	5	1	0	0	
September	30	27	6	1	0	0	
October	30	27	7	1	0	0	
November	30	27	4	1	0	0	**0**
December	30	27	6	1	0	0	
* Equals limit if limit is <= 10							
Months of Discharge/yr				12			
Points per each exceedance with 12 months of discharge:					**7**	**3**	
Exceedances					0	0	
Points					0	0	
Total Number of Points						**0**	

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

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

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

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

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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. 001	Monthly Average NH3 Limit (mg/L)	Weekly Average NH3 Limit (mg/L)	Effluent Monthly Average NH3 (mg/L)	Monthly Permit Limit Exceedance	Effluent Weekly Average for Week 1	Effluent Weekly Average for Week 2	Effluent Weekly Average for Week 3	Effluent Weekly Average for Week 4	Weekly Permit Limit Exceedance
January	25		1.193548387	0					
February	25		1.757931034	0					
March	25		2.207419355	0					
April	25		2.583666667	0					
May									
June									
July									
August									
September									
October									
November	25		1.727333333	0					
December	25		1.480322581	0					

Points per each exceedance of Monthly average:	10
Exceedances, Monthly:	0
Points:	0
Points per each exceedance of weekly average (when there is no monthly average):	2.5
Exceedances, Weekly:	0
Points:	0
Total Number of Points	**0**

0

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

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

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

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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 phosphorus Limit (mg/L)	Effluent Monthly Average phosphorus (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance	
January	.86	0.659	1	0	
February	.86	0.721	1	0	
March	.86	0.702	1	0	
April	.86	0.708	1	0	
May	.86	0.612	1	0	
June	.86	0.729	1	0	
July	.86	0.694	1	0	
August	.86	0.675	1	0	
September	.86	0.739	1	0	
October	.86	0.738	1	0	**0**
November	.86	0.683	1	0	
December	.86	0.738	1	0	
Months of Discharge/yr			12		
Points per each exceedance with 12 months of discharge:				**10**	
Exceedances				0	
Total Number of Points				**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**

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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:

2. Land Application Site

2.1 Last Year's Approved and Active Land Application Sites

2.1.1 How many acres did you have?

9096.70 acres

2.1.2 How many acres did you use?

658.7 acres

2.2 If you did not have enough acres for your land application needs, what action was taken?

2.3 Did you overapply nitrogen on any of your approved land application sites you used last year? **0**

- ○ 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)
- ○ N/A

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. 002 - ANAEROBIC 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	<15		<16		<15		<15		<14		<13			0	0
Cadmium		39	85	3.3		<3.1		<3		<2.9		<2.8		<2.7			0	0
Copper		1500	4300	530		500		530		550		530		520			0	0
Lead		300	840	34		28		38		39		45		34			0	0
Mercury		17	57	.68		.27		.41		.47		.57		.39			0	0
Molybdenum	60		75	23		<21		<20		<20		19		22		0		0
Nickel	336		420	28		27		28		29		30		33		0		0
Selenium	80		100	<15		<16		<15		<15		<14		<13		0		0
Zinc		2800	7500	740		680		730		780		830		800			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?	**0**

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.

Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	01/01/2020 - 02/29/2020
Density:	208,400
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	No
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion: 30 - 45 day MCRT at 95 degrees F; 3/day temperature reading Requirement met.

Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	03/01/2020 - 04/30/2020
Density:	302,100
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion: 30 - 45 day MCRT at 95 degrees F; 3/day temperature reading Requirement met.

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Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	05/01/2020 - 06/30/2020
Density:	416,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion: 30 - 45 day MCRT at 95 degrees F; 3/day temperature reading Requirement met.

Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	07/01/2020 - 08/31/2020
Density:	191,300
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion: 30 - 45 day MCRT at 95 degrees F; 3/day temperature reading Requirement met.

Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	09/01/2020 - 10/31/2020
Density:	261,400
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion: 30 - 45 day MCRT at 95 degrees F; 3/day temperature reading Requirement met.

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Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	11/01/2020 - 12/31/2020
Density:	140,900
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion: 30 - 45 day MCRT at 95 degrees F; 3/day temperature reading Requirement met.

0

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):

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:	**002**
Method Date:	02/29/2020
Option Used To Satisfy Requirement:	Incorporation when land apply
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	**002**
Method Date:	04/30/2020
Option Used To Satisfy Requirement:	Incorporation when land apply
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	**002**
Method Date:	06/30/2020
Option Used To Satisfy Requirement:	Incorporation when land apply
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

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Outfall Number:	**002**
Method Date:	08/31/2020
Option Used To Satisfy Requirement:	Incorporation when land apply
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	**002**
Method Date:	10/31/2020
Option Used To Satisfy Requirement:	Incorporation when land apply
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	**002**
Method Date:	12/31/2020
Option Used To Satisfy Requirement:	Incorporation when land apply
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

0

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

- ○ Yes (40 Points)
- ● No

If yes, what action was taken?

6. Biosolids Storage

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

- ● >= 180 days (0 Points)
- ○ 150 - 179 days (10 Points)
- ○ 120 - 149 days (20 Points)
- ○ 90 - 119 days (30 Points)
- ○ < 90 days (40 Points)
- ○ N/A (0 Points)

0

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

7. Issues

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

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

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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
- ○ 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) ☐☐
- ○ 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
- ○ 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
  - ○ Paper file system
  - ○ Computer system
  - ● Both paper and computer system
- ○ No (10 points)

0

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?

- ● Yes
- ○ No

4. Overall Maintenance /Repairs

4.1 Rate the overall maintenance of your wastewater plant.

- ● Excellent
- ○ Very good
- ○ Good
- ○ Fair
- ○ Poor

Describe your rating:

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We have a qualified maintenance staff that is supervised by a Master Electrician. Staff is cross-trained and does an excellent job.

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: MARY FRANCES T KLIMEK

Certification No: 23898

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		X		
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 is required 5 years after permit reissuance and 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: Kenneth Scolaro

Telephone: 262-636-9433 (XXX) XXX-XXXX

E-Mail Address (optional): ken.scolaro@cityofracine.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: 2020

- ● 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)

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: 2020

- ● 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		$ 3,198,642.51
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		$ 3,198,642.51
3.2.4 Additions to Fund (e.g. portion of User Fee, earned interest, etc.)	+	$ 15,783.53

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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 $ 3,214,426.04

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? $ 1,759,146.32

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	6th Street Bridge Interceptor	1250000	2021
2	UV System Replacement	7,000,000	2022

5. Financial Management General Comments

In regard in 4.1 answer of yes, the utility currently has a Facility Plan that is submitted to DNR for approval.

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

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	Electricity Consumed (kWh)	Natural Gas Consumed (therms)
January	134,408	3,159
February	137,456	3,385
March	111,203	3,364
April	152,281	2,339
May	209,928	1,412
June	144,505	435
July	125,215	106
August	130,250	143
September	97,160	528
October	80,565	1,745
November	94,426	2,476
December	102,539	3,937
Total	**1,519,936**	**23,029**
Average	**126,661**	**1,919**

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:

By Whom:

Describe and Comment:

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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?

As equipment is replaced, energy use is considered in the decision making process.

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	234,668	778.70	301	534.41	439	36,870
February	632,778	653.80	968	570.08	1,110	39,270
March	542,216	903.40	600	709.93	764	32,030
April	670,071	819.17	818	691.83	969	24,190
May	758,582	1,137.05	667	664.73	1,141	17,910
June	590,239	548.50	1,076	551.85	1,070	10,210
July	653,363	694.60	941	631.44	1,035	7,440
August	635,990	669.50	950	597.80	1,064	10,570
September	610,032	493.70	1,236	570.27	1,070	17,580
October	553,016	466.10	1,186	580.20	953	28,500
November	535,434	477.40	1,122	618.72	865	31,500
December	579,535	558.70	1,037	642.72	902	42,590
Total	**6,995,924**	**8,200.62**		**7,363.98**		**298,660**
Average	**582,994**	**683.39**	**909**	**613.67**	**949**	**24,888**

7.1.2 Comments:

All kW and therm readings are from We Energies.

7.2 Energy Related Processes and Equipment

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

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

7.2.2 Comments:

Effluent pumping is for reuse in the plant.

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?

As part of replacement of deficient equipment, energy efficient replacements are planned. These include both the UV system and the aeration diffusers.

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:

Gas engines

9. Energy Efficiency Study

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

- ○ No
- ● Yes

☐ Entire facility

Year:

By Whom:

Describe and Comment:

☒ Part of the facility

Year: 2011

By Whom: Black & Veatch, ITT Sanitaire, Brown & Caldwell

Describe and Comment:

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2011 ITT Sanitaire
March 2011 Black & Veatch Co-Generation and Co-Digestion Evaluation
October 2012 Brown & Caldwell Evaluation of Existing Engine/Blower Study.
Energy usage was reviewed throughout the Facility Plan for those systems that are part of the project - UV, biogas, engines and blowers, aeration, etc.

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:

Due to COVID - no major projects. We continue to clean the sanitary sewer system on a 3-year schedule and have a Facility Plan that addresses areas that need improvement. The plan has been submitted to DNR for approval.

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?

Racine City Code of Ordinances, Chapter 98

If you have a Sewer Use Ordinance or other similar document, when was it last reviewed and revised? (MM/DD/YYYY) 2021-01-28

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

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

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☒A management system (computer database and/or file system) for collection system information for O&M activities, investigation and rehabilitation
☒ A description of routine operation and maintenance activities (see question 2 below)
☒ Capacity assessment program
☒ Basement back assessment and correction
☒ Regular O&M training
☒ Design and Performance Provisions [NR 210.23 (4) (e)]☐☐
What standards and procedures are established for the design, construction, and inspection of the sewer collection system, including building sewers and interceptor sewers on private property?
☒ State Plumbing Code, DNR NR 110 Standards and/or local Municipal Code Requirements
☒ Construction, Inspection, and Testing
☐ Others:

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

0

2. Operation and Maintenance

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

Cleaning	26.98	% of system/year
Root removal	4	% of system/year
Flow monitoring	1.96	% of system/year
Smoke testing	0	% of system/year
Sewer line televising	6.55	% of system/year
Manhole inspections	12.93	% of system/year
Lift station O&M	55.0	# per L.S./year
Manhole rehabilitation	0.16	% of manholes rehabbed
Mainline rehabilitation	0.43	% of sewer lines rehabbed
Private sewer inspections	0.39	% of system/year

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Private sewer I/I removal	0.39	% of private services
River or water crossings	40	% of pipe crossings evaluated or maintained

Please include additional comments about your sanitary sewer collection system below:

Due to restrictions required by the COVID-19 pandemic, only 40% of siphons were cleaned in 2020.

3. Performance Indicators

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

40.52	Total actual amount of precipitation last year in inches
35	Annual average precipitation (for your location)
254.7	Miles of sanitary sewer
14	Number of lift stations
0	Number of lift station failures
0	Number of sewer pipe failures
10	Number of basement backup occurrences
10	Number of complaints
22.56	Average daily flow in MGD (if available)
40.45	Peak monthly flow in MGD (if available)
148.8	Peak hourly flow in MGD (if available)

3.2 Performance ratios for the past year:

0.00	Lift station failures (failures/year)
0.00	Sewer pipe failures (pipe failures/sewer mile/yr)
0.08	Sanitary sewer overflows (number/sewer mile/yr)
0.04	Basement backups (number/sewer mile)
0.04	Complaints (number/sewer mile)
1.8	Peaking factor ratio (Peak Monthly:Annual Daily Avg)
6.6	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
0	5/17/2020 8:00:00 PM - 5/17/2020 11:00:00 PM	Lift Station #6 (Maryland and Drexel)	Rain	3,714
1	5/17/2020 5:00:00 PM - 5/17/2020 11:25:00 PM	Lift Station #9 (3908 Frances Drive	Rain	12,870
2	5/17/2020 5:25:00 PM - 5/18/2020 2:50:00 AM	Safety Site #2 (3225 Michigan Blvd)	Rain	652,860
3	5/17/2020 10:50:00 PM - 5/17/2020 11:10:00 PM	Safety Site #3 (Carlton Drive and LaSalle Street)	Rain	38,412
4	5/17/2020 7:45:00 PM - 5/17/2020 10:50:00 PM	Safety Site #5 (21st Street and Grove Avenue)	Rain	76,445

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5	5/17/2020 3:15:00 PM - 5/18/2020 1:25:00 AM	Safety Site #6 (Washington Avenue and Grove Avenue)	Rain	1,463,974
6	5/17/2020 5:10:00 PM - 5/18/2020 5:05:00 PM	Safety site #8 (East 6th Street/East Siphon)	Rain	768,138
7	5/17/2020 5:05:00 PM - 5/18/2020 6:00:00 AM	Safety Site #9 Ontario Street/West Siphon)	Rain	66,911
8	5/17/2020 5:20:00 PM - 5/17/2020 11:40:00 PM	Safety Site #10 (spruce Street/Brentwood Drive)	Rain	126,523
9	5/17/2020 11:40:00 AM - 5/18/2020 5:55:00 AM	Safety Site #11 (knoll Place/Norwood Drive)	Rain	793,456
10	7/9/2020 10:05:00 PM - 7/9/2020 11:40:00 PM	Lift Station #9 (3908 Frances Drive)	Rain	3,168
11	7/9/2020 10:35:00 PM - 7/9/2020 11:35:00 PM	Safety Site #1 (Augusta St. and Michigan Blvd)	Rain	80,400
12	7/9/2020 10:25:00 PM - 7/10/2020 2:00:00 AM	Safety site #2 (3225 Michigan Clvd)	Rain	245,700
13	7/9/2020 10:55:00 PM - 7/9/2020 11:10:00 PM	Safety Site #3 (Carlton Drive and LaSalle Street)	Rain	27,742
14	7/9/2020 10:30:00 PM - 7/9/2020 10:50:00 PM	Safety Site #6 (Washington Avenue and Grove Avenue)	Rain	1,601
15	8/10/2020 5:20:00 PM - 8/10/2020 7:10:00 PM	Lift Station #9 (3908 Frances Drive)	Rain	13,440
16	8/10/2020 5:30:00 PM - 8/10/2020 9:45:00 PM	Safety Site #2 (3225 Michigan Blvd)	Rain	403,540
17	8/10/2020 5:15:00 PM - 8/10/2020 8:10:00 PM	Safety Site #3 (Carlton Drive and LaSalle Street)	Rain	2,836
18	8/10/2020 5:55:00 PM - 8/10/2020 10:40:00 PM	Safety Site #8 (East 6th Street/East Siphon)	Rain	282,225
19	8/10/2020 5:40:00 PM - 8/10/2020 11:20:00 PM	Safety Site #9 (Ontario Street/West Siphon)	Rain	39,486

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

What actions were taken, or are underway, to reduce or eliminate SSO or TFO occurences in the future?

The communities that contribute flow to the system are evaluating the need for additional storage. Portions of the Facility Plan address some of these issues. Televising and lining is ongoing.

5. Infiltration / Inflow (I/I)

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

- ● Yes
- ○ No

If Yes, please describe:

I/I continues to be a problem in the collection system. There were three significant rain events in 2020. The Facility Plan considers additional holding tanks to mitigate this issue.

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:

The flows increased significantly during heavy rains. The May 2020 rain event resulted in 3.976 MG in overflows, the July 2020 rain event resulted in 0.359 MG and the August 2020 rain event resulted in 0.742 MG in overflows.

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

The intensity of the rainfall in the past several years has increased.

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

The Utility continues to evaluate and correct deficiencies within the interceptor system. The 2.4 MG storage tank at lift station #2 was completed in 2020. The communities that contribute flow are evaluating the need for additional storage. The interceptor system is looked at using CCTV. Lining and relaying of pipe is completed to address deficiencies. Additionally, these issues are addressed in the Facility Plan that has been submitted to DNR for approval.

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

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Grading Summary

WPDES No: 0025194

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

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

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Resolution or Owner's Statement

Name of Governing Body or Owner: Racine Wastewater Utility

Date of Resolution or Action Taken: 2021-06-01

Resolution Number: 001

Date of Submittal:

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

Influent Flow and Loadings: Grade = A

Effluent Quality: BOD: Grade = A

Effluent Quality: TSS: Grade = A

Effluent Quality: Ammonia: Grade = A

Effluent Quality: Phosphorus: Grade = A

Biosolids Quality and Management: Grade = A

Staffing: Grade = A

Operator Certification: Grade = A

Financial Management: Grade = A

Collection Systems: Grade = A

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

The Utility continues to evaluate and correct deficiencies within the interceptor system. In an attempt to eliminate basement back-ups and SSOs in the LS #2 basin, a 2.4 MG storage tank was completed. The outlying communities continue to address I/I in their collection systems. Additionally, deficiencies are being addressed in the Facilities Plan that is submitted to DNR for approval.

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