Compliance Maintenance Annual Report

Watertown Wastewater Treatment Facility

Last Updated: 5/2/2023 Reporting For: **2022**

Influent Flow and Loading

1. Monthly Average Flows and BOD Loadings

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

Influent No. 701	Influent Monthly Average Flow, MGD	x	Influent Monthly Average BOD Concentration mg/L	x	8.34	=	Influent Monthly Average BOD Loading, lbs/day
January	2.3962	x	383	x	8.34	=	7,658
February	2.2715	x	302	x	8.34	=	5,717
March	3.1976	x	233	x	8.34	=	6,215
April	4.7796	x	154	x	8.34	=	6,121
May	3.5657	x	235	x	8.34	=	6,977
June	4.6130	x	199	x	8.34	=	7,661
July	3.0749	x	279	x	8.34	=	7,146
August	2.8248	x	303	x	8.34	=	7,136
September	4.0113	x	223	x	8.34	=	7,456
October	2.7924	x	299	x	8.34	=	6,955
November	3.1309	x	268	x	8.34	=	6,992
December	3.0506	x	269	x	8.34	=	6,845

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	8.8	x	90	=	7.92
		x	100	=	8.8
Design BOD, lbs/day	6600	x	90	=	5940
		x	100	=	6600

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	1	1
February	1	0	0	0	0
March	1	0	0	1	0
April	1	0	0	1	0
May	1	0	0	1	1
June	1	0	0	1	1
July	1	0	0	1	1
August	1	0	0	1	1
September	1	0	0	1	1
October	1	0	0	1	1
November	1	0	0	1	1
December	1	0	0	1	1
Points per each		2	1	3	2
Exceedances		0	0	11	9
Points		0	0	33	18
Total Number of Points					**51**

51

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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): 2022-10-04

○ 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:

The city of Watertown Wastewater has four (4) active industrial pre-treatment permits issued to industrial facilities with target limits in place. One (1) of which has a federal pre-treatment program requirement and must meet all limits listed in the discharge permit.

5. Septage Receiving

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

Septic Tanks	Holding Tanks	Grease Traps
● Yes	● Yes	● Yes
○ No	○ No	○ No

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

Septic Tanks

○ Yes gallons

● No

Holding Tanks

● Yes 1,079,543 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.

The plant performance does not appear to be negatively impacted, however we are unable to verify with certainty as the plant operations are adjusted daily by operators due to the waste stream fluxuations.

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

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

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

- ○ 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.

Total Points Generated	51
Score (100 - Total Points Generated)	49
Section Grade	**F**

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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	5	1	0	0
February	30	27	4	1	0	0
March	30	27	4	1	0	0
April	30	27	4	1	0	0
May	30	27	4	1	0	0
June	16	14.4	5	1	0	0
July	12	10.8	4	1	0	0
August	10	10	5	1	0	0
September	10	10	4	1	0	0
October	12	10.8	5	1	0	0
November	25	22.5	5	1	0	0
December	29	26.1	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**

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)

2022-10-04

○ No

If No, please explain:

3. Treatment Problems

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

Daphnia Magna

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	4	1	0	0	
February	30	27	4	1	0	0	
March	30	27	4	1	0	0	
April	30	27	4	1	0	0	
May	30	27	4	1	0	0	
June	16	14.4	9	1	0	0	
July	12	10.8	7	1	0	0	
August	10	10	8	1	0	0	
September	10	10	7	1	0	0	
October	12	10.8	4	1	0	0	
November	25	22.5	6	1	0	0	**0**
December	29	26.1	4	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	20		.114	0					
February	20		.054	0					
March	20		.047	0					
April									
May									
June	17		.133	0					
July	9		.071	0					
August	6.4		.118	0					
September	8.9		.083	0					
October	9.3		.065	0					
November	20		.064	0					
December	20		.067	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	.8	0.347	1	0
February	.8	0.277	1	0
March	.8	0.315	1	0
April	.8	0.418	1	0
May	.8	0.346	1	0
June	.8	0.502	1	0
July	.8	0.298	1	0
August	.8	0.395	1	0
September	.8	0.329	1	0
October	1	0.413	1	0
November	1	0.345	1	0
December	1	0.254	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**

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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?

1960.1 acres

2.1.2 How many acres did you use?

137.4 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?

- ○ Yes (30 points)
- ● No

0

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. 004 - 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	18			25				37		25				0	0
Cadmium		39	85	.27			.4				.51		.52				0	0
Copper		1500	4300	300			300				330		330				0	0
Lead		300	840	17			20				27		28				0	0
Mercury		17	57	<.26			.39				.3		<.23				0	0
Molybdenum	60		75	6.3			7.3				8.6		9.6			0		0
Nickel	336		420	39			35				46		55			0		0
Selenium	80		100	<11			<16				<22		<18			0		0
Zinc		2800	7500	470			530				620		580				0	0

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Outfall No. 002 - LIQUID 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														0	0
Cadmium		39	85														0	0
Copper		1500	4300														0	0
Lead		300	840														0	0
Mercury		17	57														0	0
Molybdenum	60		75													0		0
Nickel	336		420													0		0
Selenium	80		100													0		0
Zinc		2800	7500														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:	10/01/2022 - 12/31/2022
Density:	76,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion is utilized to meet list 3 requirements prior to land application. Operated mesophilic 95 to 98 degrees Fahrenheit, sample origin is on conveyor after the centrifuge.

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Outfall Number:	**004**
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	01/01/2022 - 12/31/2022
Density:	76,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion is utilized to meet list 3 requirements prior to land application. Operated mesophilic 95 to 98 degrees Fahrenheit, sample origin is on conveyor after the centrifuge.

Outfall Number:	**004**
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	01/01/2022 - 12/31/2022
Density:	79,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion is utilized to meet list 3 requirements prior to land application. Operated mesophilic 95 to 98 degrees Fahrenheit, sample origin is on conveyor after the centrifuge.

Outfall Number:	**004**
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	01/01/2022 - 12/31/2022
Density:	100,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion is utilized to meet list 3 requirements prior to land application. Operated mesophilic 95 to 98 degrees Fahrenheit, sample origin is on conveyor after the centrifuge.

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Outfall Number:	**004**
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	01/01/2022 - 12/31/2022
Density:	37,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion is utilized to meet list 3 requirements prior to land application. Operated mesophilic 95 to 98 degrees Fahrenheit, sample origin is on conveyor after the centrifuge.

Outfall Number:	**004**
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	01/01/2022 - 03/31/2022
Density:	79,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	No
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion is utilized to meet list 3 requirements prior to land application. Operated mesophilic 95 to 98 degrees Fahrenheit, sample origin is on conveyor after the centrifuge.

Outfall Number:	**004**
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	04/01/2022 - 06/30/2022
Density:	100,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion is utilized to meet list 3 requirements prior to land application. Operated mesophilic 95-98 degrees Fahrenheit, sample origin is on conveyor after the centrifuge.

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Outfall Number:	**004**
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	07/01/2022 - 09/30/2022
Density:	37,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	No
Process:	Anaerobic Digestion
Process Description:	Anaerobic digestion is utilized to meet list 3 requirements prior to land application. Operated mesophilic 95 to 98 degrees Fahrenheit, sample origin is on conveyor after centrifuge.

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:	10/11/2022
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	>=38
Results (if applicable):	55.7

Outfall Number:	**004**
Method Date:	10/11/2022
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	>=38
Results (if applicable):	55.7

Outfall Number:	**004**
Method Date:	01/04/2022
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	>=38
Results (if applicable):	53.2

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Outfall Number:	**004**
Method Date:	06/07/2022
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	>=38
Results (if applicable):	40

Outfall Number:	**004**
Method Date:	08/17/2022
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	>=38
Results (if applicable):	45.4

Outfall Number:	**004**
Method Date:	01/04/2022
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	>=38
Results (if applicable):	53.2

Outfall Number:	**004**
Method Date:	06/07/2022
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	>=38
Results (if applicable):	40.4

Outfall Number:	**004**
Method Date:	08/17/2022
Option Used To Satisfy Requirement:	Volatile Solids Reduction
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	>=38
Results (if applicable):	45.4

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?

0

6. Biosolids Storage

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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) 6.2 If you checked N/A above, explain why.	**0**
7. Issues 7.1 Describe any outstanding biosolids issues with treatment, use or overall management: Concerns with undetermined future use due PFOS/PFAS	

Total Points Generated	0
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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I visit and tour other wastewater facilities, when I am on tours I talk to other plant operators and I find that our maintenance program is better than most. I think that most others are good, some are fair, a few are poor, and a couple may be better than ours.

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: PETER A HARTZ

Certification No: 32167

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				X
A3	Recirculating Media Filters				
A4	Ponds, Lagoons and Natural				X
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	X	NA	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)

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

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

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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: Peter Hartz

Telephone: 920-262-4085 (XXX) XXX-XXXX

E-Mail Address (optional): phartz@watertownwi.gov

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: 2022

- ● 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: 2022

- ● 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		$ 1,478,300.07
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		$ 1,478,300.07
3.2.4 Additions to Fund (e.g. portion of User Fee, earned interest, etc.)	+	$ 378,350.00

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3.2.5 Subtractions from Fund (e.g., equipment replacement, major repairs - use description box 3.2.6.1 below*) - $ 280,401.25

3.2.6 Ending Balance as of December 31st for CMAR Reporting Year $ 1,576,248.82

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.

New sludge dewatering pump, rebuild of sludge dewatering pump, RAS pump rebuilds, Grit pump rebuilds, new multi-purpose tractor, new air compressor and dryer for primary sludge pumps, new flow meter installation for primary sludge to digester line, sanitary sewer engineering design, CIPP pipe lining, new emergency standby generator for Spaulding lift station, new sludge dewatering conveyor liners, dewatering control electrical upgrades

0

3.3 What amount should be in your Replacement Fund? $ 1,567,248.82

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	Install new interceptor sewer for highway 26 bypass - west side interceptor	$25,000,000	2026
2	Add control through Scada at 2nd of 5 lift station panels.	$35,000	2023
3	Annual CIPP and sewer rehab work on collection System	$250,000	2023
4	GIS enhancements	$30,000	2023
5	Continuance of hydraulic study for the sanitary sewer service area. Model updates anticipated in 2023.	$15,000	2023
6	Bio-gas utilization study - review dryer technologies.	$2,225,000	2025
7	Alerman lift station rehab - controls and pumps	$55,000	2024

5. Financial Management General Comments

ENERGY EFFICIENCY AND USE

6. Collection System

6.1 Energy Usage

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

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COLLECTION SYSTEM PUMPAGE: Total Power Consumed

Number of Municipally Owned Pump/Lift Stations: 18

	Electricity Consumed (kWh)	Natural Gas Consumed (therms)
January	13,949	
February	14,069	
March	12,054	
April	13,183	
May	13,677	
June	11,964	
July	13,298	
August	10,031	
September	9,497	
October	11,014	
November	10,519	
December	12,676	
Total	**145,931**	**0**
Average	**12,161**	**0**

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:

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?

New stand-by emergency generator for the Spaulding LS.

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	256,233	74.28	3,450	237.40	1,079	8,226
February	221,618	63.60	3,485	160.08	1,384	9,858
March	210,873	99.13	2,127	192.67	1,094	11,608
April	236,898	143.39	1,652	183.63	1,290	2,074
May	259,229	110.54	2,345	216.29	1,199	3,604
June	299,390	138.39	2,163	229.83	1,303	1,128
July	311,709	95.32	3,270	221.53	1,407	1,000
August	286,801	87.57	3,275	221.22	1,296	1,140
September	272,212	120.34	2,262	223.68	1,217	2,403
October	288,618	86.56	3,334	215.61	1,339	4,078
November	227,733	93.93	2,424	209.76	1,086	3,611
December	221,928	94.57	2,347	212.20	1,046	4,654
Total	**3,093,242**	**1,207.62**		**2,523.90**		**53,384**
Average	**257,770**	**100.64**	**2,678**	**210.33**	**1,228**	**4,449**

7.1.2 Comments:

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:

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?

New Turbo Blowers for aeration, biogas use for sludge dryer upgrade

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:
By Whom:
Describe and Comment:

☐ Part of the facility
Year:
By Whom:
Describe and Comment:

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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:

Attempts to pass a private lateral replacement program to pair with our annual streets and utilities projects received moderate success. We did not pass a new ordinance but we did convince the city to replace the sanitary laterals within the street right of way with new projects. It's not a new lateral up to home, but only the portion in the road - it's a start so a win.

Did you accomplish them?

- ○ Yes
- ● No

If No, explain:

We continue to struggle with a comprehensive program that will address all the issues, funding is an issue - if we remove the foundation tiles from the sanitary sewer the homes will need a sump pump in addition to perhaps an entirely new lateral. The water then may flood neighbors or low lying areas and inundate the undersized storm water conveyance system.

☒ 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?

Watertown Municipal Code 508

If you have a Sewer Use Ordinance or other similar document, when was it last reviewed and revised? (MM/DD/YYYY) 2015-06-05

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

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☒ 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 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	32.6	% of system/year
Root removal	5	% of system/year
Flow monitoring	10	% of system/year
Smoke testing	0	% of system/year
Sewer line televising	7.5	% of system/year
Manhole inspections	32.6	% of system/year
Lift station O&M	18	# per L.S./year
Manhole rehabilitation	0.5	% of manholes rehabbed
Mainline rehabilitation		

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	1.3	% of sewer lines rehabbed
Private sewer inspections	1	% of system/year
Private sewer I/I removal	0	% of private services
River or water crossings	100	% of pipe crossings evaluated or maintained

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

3. Performance Indicators

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

41.17	Total actual amount of precipitation last year in inches
36.02	Annual average precipitation (for your location)
120	Miles of sanitary sewer
18	Number of lift stations
0	Number of lift station failures
0	Number of sewer pipe failures
0	Number of basement backup occurrences
12	Number of complaints
3.3086	Average daily flow in MGD (if available)
13.118	Peak monthly flow in MGD (if available)
	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)
0.01	Sanitary sewer overflows (number/sewer mile/yr)
0.00	Basement backups (number/sewer mile)
0.10	Complaints (number/sewer mile)
4.0	Peaking factor ratio (Peak Monthly:Annual Daily Avg)
0.0	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	6/16/2022 12:15:00 AM - 6/16/2022 12:45:00 AM	800 Hoffmann Drive	Rain, Flooding	41,400

** 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?

Treatment Plant control training to better understand the blending operation setpoints.

Praying to GOD for less intense precipitation events.

5. Infiltration / Inflow (I/I)

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

- ● Yes
- ○ No

If Yes, please describe:

During normal or dry times of the year we average approximately 1,000,000 gallons per day of clear water infiltration into the sanitary sewer system. This number is derived from the daily drinking water pump records vs the daily wastewater treated recorded from the influent flow meter.

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 sanitary sewer overflow this past year was a direct result of clear water entering the sanitary sewer system and overwhelming the ability of the plant to pump and treat all the wastewater. Clear water also dilutes the wastewater strength and makes operational corrections necessary to balance the F:M ratio for optimal plant performance.

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

No changes - discussions continue internally as to best approach the drain tile disconnections from the sanitary sewer system.

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

Not much other than discussion on the drain tile connections within the city on homes constructed prior to 1970. There are concerns that this groundwater may overwhelm the storm water conveyance system or neighbors yards and cause more surface flooding.

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

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Grading Summary

WPDES No: 0028541

SECTIONS	LETTER GRADE	GRADE POINTS	WEIGHTING FACTORS	SECTION POINTS
Influent	F	0	3	0
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**	**136**
GRADE POINT AVERAGE (GPA) = 3.68				

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: City of Watertown Public Works Commission

Date of Resolution or Action Taken: 2023-05-16

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 = F

We will reach out to our engineering consultant and review the plant design parameters for BOD. We do not believe this is an issue for permit compliance as the effluent plant performance has been very good. We tend to look at the quality of the BOD in the effluent as an indicator of the wastewater treatment plant. With our trained staff and dedicated employees, we do not believe this is an issue - the plant effluent is very good.

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)

To continue supporting the wastewater treatment facility staff with equipment and infrastructure improvements when and where necessary; pending available funding.

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. = 3.68

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