### **VILLAGE OF MUKWONAGO** WAUKESHA AND WALWORTH COUNTIES

#### **RESOLUTION NO. 2023-24**

### A RESOLUTION CONFIRMING APPROVAL AND SUBMITTAL OF THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES NR208-2022 COMPLIANCE MAINTENANCE **ANNUAL REPORT**

**WHEREAS**, the Village of Mukwonago operates a wastewater treatment facility as a sewer utility. and

WHEREAS, Chapter NR208 of the Wisconsin Administrative Code requires that each owner or municipality file a Compliance Maintenance Annual report with the Department of Natural Resources.

NOW, THEREFORE, BE IT RESOLVED, that the Village of Mukwonago Board of Trustees, as owner of such wastewater treatment facility, that it has reviewed the Compliance Maintenance Report herewith attached and approves of the same at the June 21, 2023 Village Board meeting; and

BE IT FURTHER RESOLVED, that the Village Board of Trustees of the Village of Mukwonago finds no corrective activities are presently needed to maintain such facility within the terms of its WPDES permit.

Adopted and Approved this 21st day of June 2023.

APPROVED:

Fred H. Winchowky, Village President

Diana Dykstra, MMC

Village Clerk-Treasurer

### **Mukwonago Wastewater Treatment Plant**

Last Updated: Reporting For:

5/8/2023

2022

### **Influent Flow and Loading**

1. Monthly Average Flows and BOD Loadings

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

Influent No. 701	Influent Monthly Average Flow, MGD	X	Influent Monthly Average BOD Concentration mg/L	X	8.34	=	Influent Monthly Average BOD Loading, lbs/day
January	0.7310	Х	279	Х	8.34	=	1,702
February	0.7425	Х	296	Х	8.34	=	1,836
March	0.8539	Х	280	Х	8.34	=	1,991
April	1.1277	Х	230	Х	8.34	=	2,167
May	0.9987	Х	247	Х	8.34	=	2,059
June	0.8317	Х	293	Х	8.34	=	2,032
July	0.8006	Х	304	Х	8.34	=	2,029
August	0.7894	Х	303	Х	8.34	=	1,992
September	0.9247	Х	267	Х	8.34	=	2,059
October	0.8010	Х	298	Х	8.34	=	1,987
November	0.8467	Х	297	Х	8.34	=	2,097
December	0.9116	Х	265	Х	8.34	=	2,011

2. Maximum Monthly Design Flow and Design BOD Loading

2.1 Verify the design flow and loading for your facility.

Design	Design Factor	×	%	=	% of Design
Max Month Design Flow, MGD	1.5	X	90	=	1.35
		X	100	=	1.5
Design BOD, lbs/day	2502	х	90	=	2251.8
		Х	100	=	2502

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

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

0

### Last Updated: Reporting For: Mukwonago Wastewater Treatment Plant 5/8/2023 2022 3. Flow Meter 3.1 Was the influent flow meter calibrated in the last year? Enter last calibration date (MM/DD/YYYY) 2022-07-11 o No If No, please explain: N/A 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 O No If No, please explain: N/A 4.2 Was it necessary to enforce the ordinance? Yes No If Yes, please explain: N/A 5. Septage Receiving 5.1 Did you have requests to receive septage at your facility? Septic Tanks Holding Tanks **Grease Traps** Yes Yes Yes o No o No O No 5.2 Did you receive septage at your facility? If yes, indicate volume in gallons. Septic Tanks Yes gallons 1,189,317 O No Holding Tanks Yes 11,781,926 gallons O No Grease Traps gallons o Yes No 5.2.1 If yes to any of the above, please explain if plant performance is affected when receiving any of these wastes. Yes, we could handle the septage and holding tank waste pretty well until we started using the PAC product with polymer to remove Phosphorus. At that point we were still able to take holding tank waste all year without any limits on quantity. Septage on the other hand we had to cut back to M,W,F and limit the loads per each hauler each of those days foe septage. The limiting

factor at the end of the day is we can not dry the sludge as fast as we needed to with the

equipment we had. We purchased a midsized frontend loader and replaced the skid steer we had which allowed us to move much larger quantities of sludge and pile it higher in our storage bed giving us more storage capacity. This in turn allowed us to open up unlimited septage intake on a trial run in the fall and we have been able to continue on so far but it is a tedious nonstop task

6. Pretreatment

but worth the revenue gains.

### **Mukwonago Wastewater Treatment Plant**

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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?

o Yes

No

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

N/A

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

o 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.

N/A

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

**Mukwonago Wastewater Treatment Plant** 

Last Updated: Reporting For: 5/8/2023 **2022** 

### Effluent Quality and Plant Performance (BOD/CBOD)

- 1. Effluent (C)BOD Results
- 1.1 Verify the following monthly average effluent values, exceedances, and points for BOD or CBOD

Outfall No.	Monthly	90% of	Effluent Monthly	Months of	Permit Limit	90% Permit
001	Average	Permit Limit	Average (mg/L)	Discharge	Exceedance	Limit
001	Limit (mg/L)	> 10 (mg/L)	Average (mg/L)	with a Limit	LACCEUGIICE	Exceedance
January	25	22.5	3	1	0	0
				1		
February	25	22.5	1	1	0	0
March	25	22.5	4	1	0	0
April	25	22.5	3	1	0	0
May	25	22.5	2	1	0	0
June	25	22.5	2	1	0	0
July	25	22.5	4	1	0	0
August	25	22.5	4	1	0	0
September	25	22.5	2	1	0	0
October	25	22.5	2	1	0	0
November	25	22.5	4	1	0	0
December	25	22.5	3	1	0	0
		* Equ	uals limit if limit is	<= 10		
Months of di	ischarge/yr			12		
Points per e	ach exceedanc		7	3		
Exceedances	S				0	0
Points					0	0
Total numb	er 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/A

2.	Flow	Meter	Calibration
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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:

We do not have an effluent meter and assume the effluent going out is the same as the influent.

- 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
- No

### **Mukwonago Wastewater Treatment Plant**

N/A

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3,0,2023	
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:	
N/A	
4.3 If the biomonitoring (WET) test did not pass, were steps taken to identify and/or reduce source(s) of toxicity?	
o Yes	
o No	
● N/A	
Please explain unless not applicable:	

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

**Mukwonago Wastewater Treatment Plant** 

Last Updated: Reporting For:

5/8/2023 2022

### **Effluent Quality and Plant Performance (Total Suspended Solids)**

1. Effluent Total Suspended Solids Results

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

30 30 charge/yr		10 9 uals limit if limit is months of disch	12	7 0	3 0 0
30 30 charge/yr	27 * Eq.	9 uals limit if limit is	1 <= 10	7 0	3 0
30 30 charge/yr	27 * Eq.	9 uals limit if limit is	1 <= 10	7	3
30 30 charge/yr	27 * Eq.	9 uals limit if limit is	1 <= 10	0	0
30 30	27	9	1 <= 10		
30	27	9	1		
30	27	9	1		
30		10	1	0	0
30					
30	27	11	1	0	0
30	27	9	1	0	0
30	27	12	1	0	0
30	27	9	1	0	0
30	27	9	1	0	0
30	27	8	1	0	0
30	27	16	1	0	0
30	27	8	1	0	0
30	27	5	1	0	0
30	27	20	1	0	0
imit (mg/L)	>10 (mg/L)	/ (verage (mg/ z)	with a Limit	Exceedance	Exceedance
, ,					90% Permit Limit
	30 30 30 30 30 30 30 30 30	Average mit (mg/L)	Average mit (mg/L)     Permit Limit >10 (mg/L)     Average (mg/L)       30     27     20       30     27     5       30     27     8       30     27     16       30     27     8       30     27     9       30     27     9       30     27     9       30     27     9       30     27     9       30     27     9       30     27     9       30     27     9       30     27     9	Average mit (mg/L)         Permit Limit >10 (mg/L)         Average (mg/L)         Discharge with a Limit           30         27         20         1           30         27         5         1           30         27         8         1           30         27         16         1           30         27         8         1           30         27         9         1           30         27         9         1           30         27         9         1           30         27         12         1           30         27         9         1           30         27         9         1	Average mit (mg/L)         Permit Limit >10 (mg/L)         Average (mg/L)         Discharge with a Limit         Exceedance           30         27         20         1         0           30         27         5         1         0           30         27         8         1         0           30         27         16         1         0           30         27         8         1         0           30         27         9         1         0           30         27         9         1         0           30         27         9         1         0           30         27         12         1         0           30         27         9         1         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/A

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

0

**Mukwonago Wastewater Treatment Plant** 

Last Updated: Reporting For:

0

5/8/2023 2022

### **Effluent Quality and Plant Performance (Ammonia - NH3)**

1. Effluent Ammonia Results

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

0 10 11 11			= 661		F.CC	E.C.C	E.C	ECCI .	144 11
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	20		2.843	0					
February	20		.968	0					
March	20		1.478	0					
April	20		1.865	0					
May									
June									
July									
August									
September									
October									
November	20		1.287	0					
December	20		1.697	0					
Points per e	ach excee	dance of N	onthly av	erage:					10
Exceedance	s, Monthly	<b>'</b> :							0
Points:									0
Points per e	ach excee	dance of v	veekly ave	erage (wh	en there is	no month	nly averag	e):	2.5
Exceedance	s, Weekly					į.			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?

N/A

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

### **Mukwonago Wastewater Treatment Plant**

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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	1	0.564	1	0
February	1	0.182	1	0
March	1	0.296	1	0
April	1	0.488	1	0
May	1	0.451	1	0
June	1	0.445	1	0
July	1	0.471	1	0
August	1	0.589	1	0
September	1	0.473	1	0
October	1	0.526	1	0
November	1	0.453	1	0
December	1	0.397	1	0
Months of Discharg	ge/yr		12	
Points per each	10			
Exceedances				0
<b>Total Number of</b>	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?

N/A

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

0

### **Mukwonago Wastewater Treatment Plant**

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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:	
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.	. 003	- Cal	ce Slu	dge														
Parameter	80% of Limit	Limit	Ceiling Limit	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	80% Value	High Quality	Ceiling
Arsenic		41	75			<22											0	0
Cadmium		39	85			<2.8											0	0
Copper		1500	4300			440											0	0
Lead		300	840			<20											0	0
Mercury		17	57			<.97											0	0
Molybdenum	60		75			<50										0	*	0
Nickel	336		420			<18										0		0
Selenium	80		100			<56										0		0
Zinc		2800	7500			790											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)
- 0 1-2 (10 Points)
- 0 > 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)
- o Yes
- O No (10 points)
- N/A Did not exceed limits or no HQ limit applies (0 points)
- O 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)
- (10 Points)
- 0 > 1 (15 Points)
- 3.1.4 Were biosolids land applied which exceeded the ceiling limit?
- O Yes (20 Points)
- No (0 Points)

### **Mukwonago Wastewater Treatment Plant**

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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

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:	003
Biosolids Class:	В
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	01/01/2022 - 12/31/2022
Density:	350,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	No
Process:	Anaerobic Digestion
Process Description:	Mesophylic Digestion

- 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?
- O Yes (40 Points)
- No

If yes, what action was taken?

N/A

- 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:	12/31/2022
Option Used To Satisfy Requirement:	Incorporation when land apply
Requirement Met:	Yes
Land Applied:	No
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? o Yes (40 Points)

If yes, what action was taken?

N/A

- 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)
- o 90 119 days (30 Points)

# Mukwonago Wastewater Treatment Plant Last Updated: Reporting For: 5/8/2023 0 < 90 days (40 Points) N/A (0 Points) 1. Issues 7.1 Describe any outstanding biosolids issues with treatment, use or overall management: N/A

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

**Mukwonago Wastewater Treatment Plant** 

Last Updated: Reporting For: 5/8/2023 **2022** 

# **Staffing and Preventative Maintenance (All Treatment Plants)**

<ul> <li>1. Plant Staffing</li> <li>1.1 Was your wastewater treatment plant adequately staffed last year?</li> <li>Yes</li> <li>No</li> <li>If No, please explain:</li> <li>Could use more help/staff for:</li> <li>1.2 Did your wastewater staff have adequate time to properly operate and maintain the plant and fulfill all wastewater management tasks including recordkeeping?</li> <li>Yes</li> <li>No</li> <li>If No, please explain:</li> </ul>	
<ul> <li>2. Preventative Maintenance</li> <li>2.1 Did your plant have a documented AND implemented plan for preventative maintenance on major equipment items?</li> <li>Yes (Continue with question 2) □□</li> <li>No (40 points)□□</li> <li>If No, please explain, then go to question 3:</li> <li>2.2 Did this preventative maintenance program depict frequency of intervals, types of lubrication, and other tasks necessary for each piece of equipment?</li> <li>Yes</li> <li>No (10 points)</li> <li>2.3 Were these preventative maintenance tasks, as well as major equipment repairs, recorded and filed so future maintenance problems can be assessed properly?</li> <li>Yes</li> <li>Paper file system</li> <li>Computer system</li> <li>Both paper and computer system</li> <li>No (10 points)</li> </ul>	O
<ul> <li>3. O&amp;M Manual</li> <li>3.1 Does your plant have a detailed O&amp;M and Manufacturer Equipment Manuals that can be used as a reference when needed?</li> <li>Yes</li> <li>No</li> </ul>	
<ul> <li>4. Overall Maintenance /Repairs</li> <li>4.1 Rate the overall maintenance of your wastewater plant.</li> <li>Excellent</li> <li>Very good</li> <li>Good</li> <li>Fair</li> <li>Poor</li> <li>Describe your rating:</li> </ul>	

### **Mukwonago Wastewater Treatment Plant**

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2022

Pumps Blowers and all mechanical maintenance was completed. Aeration basins were all overhauled including of IFAS Curtains replaced. Slide gates on inlet ends replacement had to be postponed to spring of 2023 due to weather but have now been installed in early May of 2023. Final Clarifiers were drained cleaned and inspected with no issues found at this time.

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

**Mukwonago Wastewater Treatment Plant** 

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### Operator Certification and Education

Operato	r Certification and Educa	tion				
1.1 Did y  ● Yes (0  ○ No (2  Name:	or-In-Charge ou have a designated operator-in points) O points) VAYNE A CASTLE tion No:	n-charge during the	e report year?	,		O
2.1 In ac and subc	ation Requirements cordance with Chapter NR 114.5 lass(es) were required for the op t plant and what level and subcla	erator-in-charge (C	OIC) to operat	te the waste	water	
Sub	SubClass Description	WWTP		OIC		
Class		Advanced	OIT	Basic	Advanced	
A1	Suspended Growth Processes	X			X	
A2	Attached Growth Processes		X			
А3	Recirculating Media Filters		X			
A4	Ponds, Lagoons and Natural				X	
A5	Anaerobic Treatment Of Liquid		X			
В	Solids Separation	X			X	0
С	Biological Solids/Sludges	X			X	0
Р	Total Phosphorus	X			X	
N	Total Nitrogen		X			
D	Disinfection	Χ			X	
L	Laboratory	Χ			X	
U	Unique Treatment Systems					
SS	Sanitary Sewage Collection	X	NA	X	NA	
plant? (N ● Yes (0	the operator-in-charge certified a ote: Certification in subclass SS i points) 0 points)				perate this	
3.1 In the to ensure of the foll   One o   An arr   An ope be cert   A cons	sion Planning e event of the loss of your design the continued proper operation lowing options (check all that app or more additional certified operate rangement with another certified rangement with another commune erator on staff who has an operate tified within one year sultant to serve as your certified of the above (20 points) of the above" is selected, please	and maintenance o oly)? tors on staff operator nity with a certified tor-in-training certif operator	f the plant th	at includes o	one or more	•
4 C	in a Education Condita					+

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?

# Mukwonago Wastewater Treatment Plant Last Updated: Reporting For: 5/8/2023 OIT and Basic Certification: O Averaging 6 or more CECs per year. O Averaging less than 6 CECs per year.

Advanced Certification:

• Averaging 8 or more CECs per year.

o Averaging less than 8 CECs per year.

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

# Mukwonago Wastewater Treatment PlantLast Updated: Reporting For:5/8/20232022

F	n	a	n	ci	a	ı	M	a	n	a	a	e	n	n	e	n	t
				•	-			-		-	-	-			•		•

Provider of Financial Information     Name:	
Diana Doherty/Wayne Castle	
Telephone: 262-363-6416	(XXX) XXX-XXXX
E-Mail Address	
(optional): wcastle@villageofmukwonago.gov	
<ul> <li>2. Treatment Works Operating Revenues</li> <li>2.1 Are User Charges or other revenues sufficient to cover O&amp;M expense treatment plant AND/OR collection system?</li> <li>Yes (0 points) □□</li> <li>No (40 points)</li> <li>If No, please explain:</li> <li>N/A</li> <li>2.2 When was the User Charge System or other revenue source(s) last rear:</li> </ul>	
2021  • 0-2 years ago (0 points) □□  • 3 or more years ago (20 points)□□  • N/A (private facility)	0
<ul> <li>2.3 Did you have a special account (e.g., CWFP required segregated Rep financial resources available for repairing or replacing equipment for your plant and/or collection system?</li> <li>Yes (0 points)</li> </ul>	
<ul> <li>No (40 points)</li> <li>REPLACEMENT FUNDS [PUBLIC MUNICIPAL FACILITIES SHALL COMPLET</li> </ul>	F OUESTION 31
3. Equipment Replacement Funds 3.1 When was the Equipment Replacement Fund last reviewed and/or revear:  2021  1-2 years ago (0 points)□□  0 3 or more years ago (20 points)□□  0 N/A  If N/A, please explain:	
N/A	
3.2 Equipment Replacement Fund Activity	
3.2.1 Ending Balance Reported on Last Year's CMAR \$	728,599.02
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 \$	728,599.02
3.2.4 Additions to Fund (e.g. portion of User Fee, earned interest, etc.) + \$	8,151.30

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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

736,750.32

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.

N/A

3.3 What amount should be in your Replacement Fund?

728,876.34

7

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.

	-
N I	/ A
1/1	/ /

- 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?
- $\bullet$  Yes  $\,$   $\,$  If Yes, please provide major project information, if not already listed below.  $\Box\,\Box$
- o No

Project #	Project Description		Approximate Construction Year
	Facilty planning for Phosphorus treatment limit. This is ongoing and pursuing adaptive management practices.	\$2,000,000	2020
	With current and projected growth of the Village I would not be surprised to see the facility in the process of facility planning in the next 7-10 years.	\$30,000,000	2033
	Aeration Basins were both drained, cleaned and inspected in May 2021, The IFAS system will be replaced, aerators replaced new automatic gates installed all metal parts of structured recoated and any needed concrete repairs will all be made in 2022. Cost analysis has not yet been determined.  * This project has been bid and awarded. Alot of the equipment has arrived and now waiting on rest so the contractor can install and make needed repairs.	\$600,000	2022
4	Bio-solids handling project to address the production and storage of solids.	\$8,350,000	2027

### 5. Financial Management General Comments

Budgeting and setting aside funds to repair and bring equipment up to peak performance is on going.

### **ENERGY EFFICIENCY AND USE**

- 6. Collection System
- 6.1 Energy Usage
- 6.1.1 Enter the monthly energy usage from the different energy sources:

**Mukwonago Wastewater Treatment Plant** 

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10000		
/2023	202	2

COLLECTION	SYSTEM	PUMPAGE: Total	Power Consumed

Number of Municipally Owned Pump/Lift Stations:

	Electricity Consumed (kWh)	Natural Gas Consumed (therms)
January	6,778	25
February	6,388	21
March	5,568	22
April	6,250	31
May	5,702	23
June	4,254	22
July	4,780	17
August	2,116	20
September	3,860	17
October	4,293	24
November	5,142	46
December	5,692	26
Total	60,823	294
Average	5,069	25

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

6 1 2	Comments:	
0.1.2	Comments.	

None

No o Yes Year:

By Whom:

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	Describe and Comment:	
		1
6	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?	
	None	

- 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	118,274	22.66	5,220	52.76	2,242	3,018
February	102,775	20.79	4,943	51.41	1,999	575
March	99,618	26.47	3,763	61.72	1,614	399
April	102,202	33.83	3,021	65.01	1,572	283
May	104,799	30.96	3,385	63.83	1,642	3
June	99,755	24.95	3,998	60.96	1,636	0
July	77,924	24.82	3,140	62.90	1,239	0
August	99,409	24.47	4,062	61.75	1,610	2,697
September	73,468	27.74	2,648	61.77	1,189	1,713
October	72,751	24.83	2,930	61.60	1,181	2,253
November	89,618	25.40	3,528	62.91	1,425	2,623
December	82,914	28.26	2,934	62.34	1,330	2,534
Total	1,123,507	315.18		728.96		16,098
Average	93,626	26.27	3,631	60.75	1,557	1,610

### 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
  - □ Fine Bubble Diffusers
  - ☑ Influent Pumping
  - ☐ Mechanical Sludge Processing

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	5/8/2023	2022
<ul><li>SCADA System</li><li>UV Disinfection</li><li>✓ Variable Speed Drives</li><li>✓ Other:</li></ul>		
Primary Clarification and grit removal.		
7.2.2 Comments:		
Most all of our pumps have VFDs installed on them and we are continue lighting to LED each year.	ally upgrading our	
7.3 Future Energy Related Equipment		
7.3.1 What energy efficient equipment or practices do you have planned treatment facility?	for the future for yo	our
Continue on with more LED lighting upgrades.		
8. Biogas Generation		
<ul> <li>8.1 Do you generate/produce biogas at your facility?</li> <li>No</li> <li>Yes</li> <li>If Yes, how is the biogas used (Check all that apply):</li> <li>☑ Flared Off</li> <li>☐ Building Heat</li> </ul>		
☐ Process Heat ☐ Generate Electricity ☐ Other:		
9. Energy Efficiency Study		
<ul><li>9.1 Has an Energy Study been performed for your treatment facility?</li><li>No</li></ul>		
o Yes		
☐ Entire facility		
Year:		
By Whom:		
Describe and Comment:		
☐ Part of the facility		
Year:		
Dr. Whans		
By Whom:		

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Describe and Comment:		

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

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# **Sanitary Sewer Collection Systems**

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				
O 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:				
To ensure reliable service, complete scheduled cleaning maintenance, televising and manhole inspections per CMOM. Devise a repair plan for the following year/future to correct issues found above during inspections.				
Did you accomplish them?				
• Yes				
O No				
If No, explain:				
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐				
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?				
Municipal Code of Ordinances				
If you have a Sewer Use Ordinance or other similar document, when was it last reviewed and revised? (MM/DD/YYYY) 2022-02-16				
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				

### **Mukwonago Wastewater Treatment Plant**

☑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  $\boxtimes$  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 ☐ Others: ☑ Overflow Emergency Response Plan [NR 210.23 (4) (f)]
☐ ☐ 0 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. % of system/year 10 Cleaning 100 % of system/year Root removal % of system/year Flow monitoring % of system/year Smoke testing Sewer line 10 % of system/year televising Manhole 10 % of system/year inspections # per L.S./year Lift station O&M Manhole % of manholes rehabbed rehabilitation Mainline % of sewer lines rehabbed rehabilitation Private sewer % of system/year inspections

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2022

### **Mukwonago Wastewater Treatment Plant** Last Updated: Reporting For: 5/8/2023 2022 Private sewer I/I 0 % of private services removal River or water % of pipe crossings evaluated or maintained crossings 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. 30.1 Total actual amount of precipitation last year in inches 30.9 Annual average precipitation (for your location) 45 Miles of sanitary sewer 4 Number of lift stations Number of lift station failures 0 Number of sewer pipe failures 0 Number of basement backup occurrences 0 Number of complaints 0.868 Average daily flow in MGD (if available) 1.128 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) 0.00 Sanitary sewer overflows (number/sewer mile/yr) 0.00 Basement backups (number/sewer mile) 0.00 Complaints (number/sewer mile) 1.3 Peaking factor ratio (Peak Monthly: Annual Daily Avg) 0.0 Peaking factor ratio (Peak Hourly: Annual Daily Avg) Overflows LIST OF SANITARY SEWER (SSO) AND TREATMENT FACILITY (TFO) OVERFLOWS REPORTED \*\* Date Location Cause Estimated Volume None reported \*\* If there were any SSOs or TFOs that are not listed above, please contact the DNR and stop work on this section until corrected. 5. Infiltration / Inflow (I/I) 5.1 Was infiltration/inflow (I/I) significant in your community last year? o Yes No If Yes, please describe: 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

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	• No		
	If Yes, please describe:		
5	3.3 Explain any infiltration/inflow (I/I) changes this year from previous years:		
	None		
5	i.4 What is being done to address infiltration/inflow in your collection system?		
	Review manhole inspection and televising reports and make repairs accordingly.		

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

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### **Grading Summary**

WPDES No: 0020265

SECTIONS	LETTER GRADE	GRADE POINTS	WEIGHTING FACTORS	SECTION POINTS
Influent	Α	4	3	12
BOD/CBOD	Α	4	10	40
TSS	Α	4	5	20
Ammonia	A	4	5	20
Phosphorus	Α	4	3	12
Biosolids	Α	4	5	20
Staffing/PM	Α	4	1	4
OpCert	Α	4	1	4
Financial	A	4	1	4
Collection	А	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)

G.P.A. = 4.00

None

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Last Updated: Reporting For: 5/8/2023 2022 **Resolution or Owner's Statement** Name of Governing Body or Owner: Village of Mukwonago 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 None Effluent Quality: BOD: Grade = None Effluent Quality: TSS: Grade = None Effluent Quality: Ammonia: Grade = A None Effluent Quality: Phosphorus: Grade = A None Biosolids Quality and Management: Grade = None Staffing: Grade = A None Operator Certification: Grade = None Financial Management: Grade = None Collection Systems: Grade = A (Regardless of grade, response required for Collection Systems if SSOs were reported) None 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)