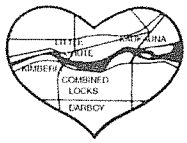
DISTRICT DIRECTOR:
Brian M. Helminger

SERVING:
Combined Locks
Kaukauna
Kimberly
Little Chute
Darboy S.D.



Heart of the Valley

METROPOLITAN SEWERAGE DISTRICT

801 THILMANY ROAD
KAUKAUNA, WISCONSIN 54130
(920) 766-5731 FAX (920) 766-5733
www.hvmsd.org

July 7, 2020

District Commissioners & District Director
Heart of the Valley Metropolitan Sewerage District

Gentlemen;

The State of Wisconsin Department of Natural Resources 2019 "Compliance Maintenance Annual Report" (CMAR) preparation has been completed. Please review the document, ask any questions, and be prepared to accept the document, by resolution, at the July Commission meeting.

In summary, regulatory compliance in 2019 was very good. The District received a grade "A" in all sections of the CMAR except the Bio-solids which was a B. Copper and Zinc were above the high quality limit and Molybdenum was above the eighty percent limit. There are no corrective actions or operational/maintenance changes required of the District.

The District has maintained, and must continue to maintain adequate funds to cover the amount required for the Replacement Fund Account.

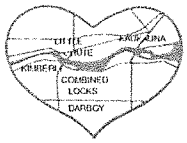
Adoption of the CMAR Resolution #188 and final submittal of the completed forms and signed resolution to the DNR will complete the CMAR compliance process for 2019.

Respectfully Submitted,

Kevin Skogman
Director of Operations & Maintenance

DISTRICT DIRECTOR:
Brian M. Helminger

SERVING:
Combined Locks
Kaukauna
Kimberly
Little Chute
Darboy S.D.



Heart of the Valley
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RESOLUTION NO. 188

BE IT RESOLVED, that the Heart of the Valley Metropolitan Sewerage District Commission has reviewed and understands the 2019 Compliance Maintenance Annual Report that is attached to this Resolution and will be submitted to the Wisconsin DNR.

APPROVED _____
David J. Casper
President

ATTEST _____
Patrick E. Hennessey
Secretary

The above Resolution was approved and adopted by the Heart of the Valley Metropolitan Sewerage District Commission on **July 14, 2020** by unanimous roll call vote.

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 7/7/2020 Reporting For: **2019**

Influent Flow and Loading

1. Monthly Average Flows and BOD Loadings

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

Influent No. 701	Influent Monthly Average Flow, MGD	x	Influent Monthly Average BOD Concentration mg/L	x	8.34	=	Influent Monthly Average BOD Loading, lbs/day
January	5.8399	x	249	x	8.34	=	12,143
February	4.7307	x	269	x	8.34	=	10,616
March	7.3194	x	209	x	8.34	=	12,733
April	7.9716	x	172	x	8.34	=	11,428
May	8.2197	x	165	x	8.34	=	11,280
June	6.5218	x	213	x	8.34	=	11,575
July	5.5779	x	205	x	8.34	=	9,531
August	5.1914	x	220	x	8.34	=	9,535
September	7.7011	x	169	x	8.34	=	10,833
October	7.5625	x	184	x	8.34	=	11,585
November	6.6341	x	194	x	8.34	=	10,706
December	7.0354	x	198	x	8.34	=	11,608

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	11.9	x	90	=	10.71
		x	100	=	11.9
Design BOD, lbs/day	14651	x	90	=	13185.9
		x	100	=	14651

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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Heart Of The Valley Metro Sewerage District

Last Updated: 7/7/2020 Reporting For: **2019**

3. Flow Meter

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

● Yes Enter last calibration date (MM/DD/YYYY) 2019-12-16

o 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

o No

If No, please explain:

4.2 Was it necessary to enforce the ordinance?

o 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	o Yes
o No	o No	● No

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

Septic Tanks

● Yes 603,985 gallons

o No

Holding Tanks

● Yes 5,494,240 gallons

o No

Grease Traps

o 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 Heart of the Valley MSD seen no impact on plant performance due to the receiving station having a holding tank that enables the District to pump the waste at a controlled rate to the influent channel of the head works building controlling the impact to the treatment process.

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?

o Yes

● No

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

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 7/7/2020 Reporting For: **2019**

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.

The District does accept hauled in leachate from permitted sites, this is received at the septage receiving station which gives the district the same protections described in section 5.2.1

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

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 7/7/2020 Reporting For: **2019**

Effluent Quality and Plant Performance (BOD/CBOD)

1. Effluent (C)BOD Results

1.1 Verify the following monthly average effluent values, exceedances, and points for BOD or CBOD

Outfall No. 001	Monthly Average Limit (mg/L)	90% of Permit Limit > 10 (mg/L)	Effluent Monthly Average (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance	90% Permit Limit Exceedance
January	30	27	8	1	0	0
February	30	27	9	1	0	0
March	30	27	9	1	0	0
April	30	27	12	1	0	0
May	30	27	9	1	0	0
June	30	27	11	1	0	0
July	30	27	7	1	0	0
August	30	27	8	1	0	0
September	30	27	8	1	0	0
October	30	27	10	1	0	0
November	30	27	10	1	0	0
December	30	27	11	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?

No Violations.

2. Flow Meter Calibration

2.1 Was the effluent flow meter calibrated in the last year?

- ● Yes — Enter last calibration date (MM/DD/YYYY): 2019-12-16
- ○ No

If No, please explain:

3. Treatment Problems

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

None

4. Other Monitoring and Limits

4.1 At any time in the past year was there an exceedance of a permit limit for any other pollutants such as chlorides, pH, residual chlorine, fecal coliform, or metals?

- ○ Yes
- ● No

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 7/7/2020 Reporting For: **2019**

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**

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 7/7/2020 Reporting For: **2019**

Effluent Quality and Plant Performance (Total Suspended Solids)

1. Effluent Total Suspended Solids Results

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

Outfall No. 001	Monthly Average Limit (mg/L)	90% of Permit Limit >10 (mg/L)	Effluent Monthly Average (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance	90% Permit Limit Exceedance
January	30	27	11	1	0	0
February	30	27	11	1	0	0
March	30	27	11	1	0	0
April	30	27	11	1	0	0
May	30	27	6	1	0	0
June	30	27	8	1	0	0
July	30	27	11	1	0	0
August	30	27	15	1	0	0
September	30	27	21	1	0	0
October	30	27	23	1	0	0
November	30	27	17	1	0	0
December	30	27	14	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?

No Violations.

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

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 7/7/2020 Reporting For: **2019**

Effluent Quality and Plant Performance (Ammonia - NH3)

1. Effluent Ammonia Results

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

Outfall No. 001	Monthly Average NH3 Limit (mg/L)	Weekly Average NH3 Limit (mg/L)	Effluent Monthly Average NH3 (mg/L)	Monthly Permit Limit 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	10		.34347826	0					
February	10		.515	0					
March	10		.46761904	0					
April	11		1.1363636	0					
May	11		1.3727273	0					
June	4.4		2.1190476	0					
July	4.4		.2782608	0					
August	4.4		.4809523	0					
September	4.4		.2777273	0					
October	18		.3652173	0					
November	18		.42	0					
December	18		1.2173913	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?

No Violations.

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

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 7/7/2020 Reporting For: **2019**

Effluent Quality and Plant Performance (Phosphorus)

1. Effluent Phosphorus Results

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

Outfall No. 001	Monthly Average phosphorus Limit (mg/L)	Effluent Monthly Average phosphorus (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance
January	1	0.250	1	0
February	1	0.228	1	0
March	1	0.292	1	0
April	1	0.384	1	0
May	1	0.155	1	0
June	1	0.214	1	0
July	1	0.283	1	0
August	1	0.292	1	0
September	1	0.391	1	0
October	1	0.337	1	0
November	1	0.319	1	0
December	1	0.249	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?

No Violations.

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

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 7/7/2020 Reporting For: **2019**

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:

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 - Class A 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	8.5			<9.1			<8.2			40.1				0	0
Cadmium		39	85	<.97			1.4			<1			5.8				0	0
Copper		1500	4300	312			467			620			2100				1	0
Lead		300	840	17			16			25.1			124				0	0
Mercury		17	57	.2			.27			.24			1.1				0	0
Molybdenum	60		75	11.6			13.2			19.8			73.5			1		0
Nickel	336		420	21.9			22.8			29.3			119			0		0
Selenium	80		100	2			4.8			<10.3			<13.6			0		0
Zinc		2800	7500	753			886			1280			4540				1	0

Outfall No. 008 - Class B 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 = 3

Exceedence Points

- o 0 (0 Points)
- o 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)

- o Yes

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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)

o 1 (10 Points)

o > 1 (15 Points)

0

3.1.4 Were biosolids land applied which exceeded the ceiling limit?

o Yes (20 Points)

● No (0 Points)

3.1.5 If any metal limit (high quality or ceiling) was exceeded at any time, what action was taken? Has the source of the metals been identified?

No action had been taken.

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:	A
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	07/01/2019 - 09/30/2019
Density:	0
Sample Concentration Amount:	MPN/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Thermophilic Aerobic Digestion
Process Description:	Auto-Thermophilic Digestion

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?

o 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:	**003**
Method Date:	09/30/2019
Option Used To Satisfy Requirement:	Injection when land apply
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

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

o Yes (40 Points)

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 7/7/2020 Reporting For: **2019**

● No If yes, what action was taken?	**0**
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) 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: None.	

Total Points Generated	15
Score (100 - Total Points Generated)	85
Section Grade	**B**

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 7/7/2020 Reporting For: **2019**

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:

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 7/7/2020

Reporting For: **2019**

The District continues to have a very aggressive maintenance program, with the Total Electronic Asset Management System (Teams) all equipment is tracked. All team members involved are diligent in doing preventative maintenance, major equipment repairs and take pride in keeping the plant operating efficiently.

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

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 7/7/2020 Reporting For: **2019**

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: BRIAN M HELMINGER

Certification No: 28032

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, N and A5 not required in 2019; subclass SS is basic level only.)

- ● Yes (0 points)
- ○ No (20 points)

0

3. Succession Planning

3.1 In the event of the loss of your designated operator-in-charge, did you have a contingency plan to ensure the continued proper operation and maintenance of the plant that includes one or more of the following options (check all that apply)?

- ☒ One or more additional certified operators on staff
- ☐ An arrangement with another certified operator
- ☐ An arrangement with another community with a certified operator
- ☐ An operator on staff who has an operator-in-training certificate for your plant and is expected to be certified within one year
- ☐ A consultant to serve as your certified operator
- ☐ None of the above (20 points)

If "None of the above" is selected, please explain:

0

4. Continuing Education Credits

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Heart Of The Valley Metro Sewerage District

Last Updated: 7/7/2020 Reporting For: **2019**

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

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 7/7/2020 Reporting For: **2019**

Financial Management

1. Provider of Financial Information

Name: Kevin Skogman (Provided by Erickson & Associates)

Telephone: (920) 766-5731 (XXX) XXX-XXXX

E-Mail Address (optional): kevin.skogman@hvmsd.org

2. Treatment Works Operating Revenues

2.1 Are User Charges or other revenues sufficient to cover O&M expenses for your wastewater treatment plant AND/OR collection system ?

- ● Yes (0 points) ☐☐
- ○ No (40 points)

If No, please explain:

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

Year: 2019

- ● 0-2 years ago (0 points) ☐☐
- ○ 3 or more years ago (20 points)☐☐
- ○ N/A (private facility)

2.3 Did you have a special account (e.g., 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: 2019

- ● 1-2 years ago (0 points)☐☐
- ○ 3 or more years ago (20 points)☐☐
- ○ N/A

If N/A, please explain:

3.2 Equipment Replacement Fund Activity

3.2.1 Ending Balance Reported on Last Year's CMAR		$ 6,535,127.00
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		$ 6,535,127.00
3.2.4 Additions to Fund (e.g. portion of User Fee, earned interest, etc.)	+	$ 810,107.00

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3.2.5 Subtractions from Fund (e.g., equipment replacement, major repairs - use description box 3.2.6.1 below*) - $ 497,112.00

3.2.6 Ending Balance as of December 31st for CMAR Reporting Year $ 6,848,122.00

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.

Equipment replaced during the year was $497,112. Proceeds on equipment sold was $-0-. Turbine pump rebuild, biostyr blower replacements and or rebuilds, ATAD jet mix pump replacements, Frequency drive replacements, Meter station flow meters updated, PLC upgrades.

3.3 What amount should be in your Replacement Fund? $ 6,848,122.00

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.

0

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	WPDES permit compliance - with permit re issuance and TMDL limits HOV will have a compliance schedule for phosphorus. Planning, engineering, design, and rehabilitation is anticipated, which may be new construction or rehabilitation to existing infrastructure at the treatment facility to meet effluent quality requirements for the proposed TMDL changes to the effluent phosphorus limits.	10,000,000	2025
2	Explore the potential for water quality trading for the TDML proposed limits for phosphorus.		2023
3	Capital improvements to the HOV main interceptor sewer and its marine manholes identified and prioritized by the Interceptor action plan. Work is in progress and the final scope of the projects are not yet fully known.	20000000	2020

5. Financial Management General Comments

ENERGY EFFICIENCY AND USE

6. Collection System

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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: 0

	Electricity Consumed (kWh)	Natural Gas Consumed (therms)
January	8,535	
February	13,793	
March	11,913	
April	7,398	
May	2,669	
June	830	
July	812	
August	1,214	
September	1,029	
October	850	
November	4,450	
December	7,827	
Total	**61,320**	**0**
Average	**5,110**	**0**

6.1.2 Comments:

Electricity consumed from member communities meter stations that the District owns, these are not pump or lift stations. Also the District has two ventilation systems located on the Districts interceptor for removing H2S.

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:

The energy use at the district meter stations is minimal, There is the typical lighting, electric heat, exhaust fans and metering equipment. Is not a pump or lift station.

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

- ● No
- ○ Yes

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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?

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	682,649	181.04	3,771	376.43	1,813	
February	585,512	132.46	4,420	297.25	1,970	
March	685,432	226.90	3,021	394.72	1,737	
April	640,292	239.15	2,677	342.84	1,868	
May	652,249	254.81	2,560	349.68	1,865	
June	633,368	195.65	3,237	347.25	1,824	
July	733,152	172.91	4,240	295.46	2,481	
August	716,210	160.93	4,450	295.59	2,423	
September	676,887	231.03	2,930	324.99	2,083	
October	674,834	234.44	2,878	359.14	1,879	
November	641,445	199.02	3,223	321.18	1,997	
December	668,087	218.10	3,063	359.85	1,857	
Total	**7,990,117**	**2,446.44**		**4,064.38**		**0**
Average	**665,843**	**203.87**	**3,373**	**338.70**	**1,983**	**0**

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:

Biostyr, bio-solids pumping of high rate clarifiers in ACTI-FLO. ATAD digestion of bio-solids, peak flow head works, peak flow pumping to ACTI-FLO.

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?

The Heart of the Valley MSD already has many energy efficient equipment practices in place. The plant will continue to monitor pumping efficiency of all pumps, using premium efficient motors. To continue the replace all lighting with LED.

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: 2016

By Whom: University of Wisconsin-Milwaukee Industrial Assessment Center

Describe and Comment:

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The District has implemented several of there recommended measures, the plant is still in the process of switching over to all LED lighting.

☐ Part of the facility

Year:

By Whom:

Describe and Comment:

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

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Sanitary Sewer Collection Systems

1. Capacity, Management, Operation, and Maintenance (CMOM) Program

1.1 Do you have a CMOM program that is being implemented?

- ● Yes
- ○ No

If No, explain:

1.2 Do you have a CMOM program that contains all the applicable components and items according to Wisc. Adm Code NR 210.23 (4)?

- ● Yes
- ○ No (30 points)
- ○ N/A

If No or N/A, explain:

1.3 Does your CMOM program contain the following components and items? (check the components and items that apply)

☒ Goals [NR 210.23 (4)(a)]

Describe the major goals you had for your collection system last year:

Inspection of all land based manhole structures, H2S study and ammonia study to find out the cause of Microbial Induced Corrosion (MIC).

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?

2006-1

If you have a Sewer Use Ordinance or other similar document, when was it last reviewed and revised? (MM/DD/YYYY) 2017-04-11

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:
Continuation of Anticedent Moisture Modeling for I/I analysis.

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	2	% of system/year
Root removal	0	% of system/year
Flow monitoring	100	% of system/year
Smoke testing	0	% of system/year
Sewer line televising	5	% of system/year
Manhole inspections	100	% of system/year
Lift station O&M	0	# per L.S./year
Manhole rehabilitation	0	% of manholes rehabbed
Mainline rehabilitation	0	% of sewer lines rehabbed
Private sewer inspections	0	% of system/year

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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.

40.14	Total actual amount of precipitation last year in inches
31.73	Annual average precipitation (for your location)
5.54	Miles of sanitary sewer
1	Number of lift stations
0	Number of lift station failures
0	Number of sewer pipe failures
0	Number of basement backup occurrences
0	Number of complaints
6.692	Average daily flow in MGD (if available)
8.220	Peak monthly flow in MGD (if available)
26.057	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)
1.2	Peaking factor ratio (Peak Monthly:Annual Daily Avg)
3.9	Peaking factor ratio (Peak Hourly:Annual Daily Avg)

4. Overflows

LIST OF SANITARY SEWER (SSO) AND TREATMENT FACILITY (TFO) OVERFLOWS REPORTED **

Date	Location	Cause	Estimated Volume (MG)
None reported			

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

5. Infiltration / Inflow (I/I)

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

- ● Yes
- ○ No

If Yes, please describe:

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Rainfall was 8.4 inches over the annual average in 2019. Anytime the plant goes into a wet weather event and a small amount of partially treated waste water is diverted around secondary treatment to blend with fully treated effluent, I/I continues to be a concern for the district. The district had four major rainfall events which put the district into a high flow situation. This shows that with major rainfall events the district has significant increase in flow due to I/I

5.2 Has infiltration/inflow and resultant high flows affected performance or created problems in your collection system, lift stations, or treatment plant at any time in the past year?

o Yes

• No

If Yes, please describe:

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

The District continues with the Anticedent moisture modeling so the member communities can see if there efforts are helping in the reduction of I/I. The modeling does show that they are continuing efforts in reduction of I/I but yet it shows that during a rain event that the flow in each member community can increase significantly in a very short period of time. This shows that there is still significant work that has to be accomplished.

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

Every Five years the District has the interceptor televised for defects and possible I/I. The District continues to inspect all manholes related to the interceptor for defects and I/I. If any defects are noticed causing I/I the District takes measures to immediately remedy the I/I.

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

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Grading Summary

WPDES No: 0031232

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	B	3	5	15
Staffing/PM	A	4	1	4
OpCert	A	4	1	4
Financial	A	4	1	4
Collection	A	4	3	12
TOTALS			**37**	**143**
GRADE POINT AVERAGE (GPA) = 3.86				

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