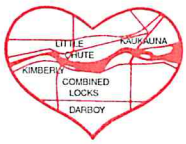
DISTRICT DIRECTOR:
Brian M. Helminger

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

May 25, 2018

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

Gentlemen;

The State of Wisconsin Department of Natural Resources 2017 "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 June Commission meeting.

In summary, regulatory compliance in year 2017 was very good. The District received a grade "A" in all sections of the CMAR except for the suspended solids section which was graded a "B". In September of 2017 the plant received a high concentration of ammonia which affected our secondary treatment. With these grades, no corrective actions or operational/maintenance changes are 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.

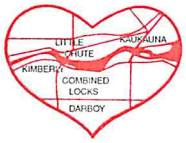
Adoption of the CMAR Resolution #179 by the Commission at the June meeting, and final submittal of completed forms and Resolution to the DNR will complete the CMAR compliance process for 2017.

Respectfully Submitted,

Kevin Skogman
Director of Operations & Maintenance

DISTRICT DIRECTOR:
Brian M. Helminger

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



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RESOLUTION NO. 179

BE IT RESOLVED, that the Heart of the Valley Metropolitan Sewerage District Commission has reviewed and understands the 2017 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 June 12, 2018 by unanimous roll call vote.

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 5/25/2018 Reporting For: **2017**

Influent Flow and Loading

1. Monthly Average Flows and (C)BOD Loadings

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

Influent No. 701	Influent Monthly Average Flow, MGD	x	Influent Monthly Average (C)BOD Concentration mg/L	x	8.34	=	Influent Monthly Average (C)BOD Loading, lbs/day
January	5.9191	x	200	x	8.34	=	9,870
February	5.5140	x	191	x	8.34	=	8,790
March	7.2516	x	167	x	8.34	=	10,078
April	7.9776	x	144	x	8.34	=	9,552
May	6.6620	x	195	x	8.34	=	10,816
June	7.7465	x	187	x	8.34	=	12,092
July	6.0691	x	180	x	8.34	=	9,101
August	4.6683	x	222	x	8.34	=	8,641
September	4.3534	x	221	x	8.34	=	8,032
October	4.6134	x	206	x	8.34	=	7,931
November	4.1553	x	225	x	8.34	=	7,807
December	3.9399	x	267	x	8.34	=	8,768

2. Maximum Monthly Design Flow and Design (C)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 (C)BOD, lbs/day	14651	x	90	=	13185.9
		x	100	=	14651

2.2 Verify the number of times the flow and (C)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 (C)BOD was greater than 90% of design	Number of times (C)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

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 5/25/2018 Reporting For: **2017**

3. Flow Meter

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

● Yes Enter last calibration date (MM/DD/YYYY): 2017-10-26

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 651,830 gallons

o No

Holding Tanks

● Yes 5,252,256 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 septage receiving station has a holding tank that allows the District to pump the septage at a controlled rate to the influent channel of the head works to limit the impacts to treatment. With this ability the septage has no impact on performance.

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

o No

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

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 5/25/2018 Reporting For: **2017**

During the month of September the District received a sustained high concentration of influent ammonia that was traced to the Outagamie landfill, whose leachate collection and pumping system is tied directly into the Little Chute's sanitary collection system. Investigation led to the discovery that a contractor tasked with collection of leachate samples inadvertently left a leachate pump off after sampling that wasn't caught until several days later. Upon discovery it was placed into the auto position resulting in the pump running continuously for 22 hours or more to reach its set point. The District was on the receiving end of this high concentration of influent ammonia compromising secondary treatment (Biostyr) resulting in high TSS in the effluent. The shock load overwhelmed Biostyr and its biological growth which took time to recover and caused the District to exceed TSS permitted monthly average.
A meeting had been previously scheduled with the landfill to discuss more detailed flow and rainfall data for the Antecedent Moisture Model to reduce the I&I impacts to the District. The ammonia load became the main topic of discussion where it was determined what had happened in the landfill operation.
A meeting followed a week later with Little Chute where it was decided to conduct flow monitoring and sampling to verify all discharge points and volumes into the sewer system. The District continues to monitor the ammonia strengths and continues to meet with landfill officials to discuss findings and options for controlled delivery to the Little Chute's sanitary system. The District has suggested implementation of SOP's and the creation of a leachate management plan to avoid similar issues in the future.

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

- ● Yes
- o No

If yes, describe the types of wastes received and any procedures or other restrictions that were in place to protect the facility from the discharge of hauled industrial wastes.

The District accepts hauled in leachate from permitted sights, 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: 5/25/2018 Reporting For: **2017**

Effluent Quality and Plant Performance (BOD/CBOD)

1. Effluent (C)BOD Results

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

Outfall No. 001	Monthly Average Limit (mg/L)	90% of Permit Limit > 10 (mg/L)	Effluent Monthly Average (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance	90% Permit Limit Exceedance
January	25	22.5	5	1	0	0
February	25	22.5	5	1	0	0
March	25	22.5	4	1	0	0
April	25	22.5	6	1	0	0
May	25	22.5	5	1	0	0
June	25	22.5	5	1	0	0
July	25	22.5	3	1	0	0
August	25	22.5	6	1	0	0
September	25	22.5	7	1	0	0
October	25	22.5	5	1	0	0
November	25	22.5	6	1	0	0
December	25	22.5	7	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)

2017-08-26

o 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?

o Yes

● No

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 5/25/2018 Reporting For: **2017**

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: 5/25/2018 Reporting For: **2017**

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	10	1	0	0
February	30	27	9	1	0	0
March	30	27	7	1	0	0
April	30	27	10	1	0	0
May	30	27	9	1	0	0
June	30	27	11	1	0	0
July	30	27	12	1	0	0
August	30	27	29	1	0	1
September	30	27	31	1	1	1
October	30	27	17	1	0	0
November	30	27	26	1	0	0
December	30	27	25	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					1	2
Points					7	6
Total Number of Points						**13**

13

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?

An ammonia discharge incident is discussed in 6.1 compromising treatment due to excessive ammonia discharge.

Total Points Generated	13
Score (100 - Total Points Generated)	87
Section Grade	**B**

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 5/25/2018 Reporting For: **2017**

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		.27826087	0					
February	10		.255	0					
March	10		.227272727	0					
April	11		.171428571	0					
May	11		.339130435	0					
June	4.4		.247619048	0					
July	4.4		.281818182	0					
August	4.4		.908695652	0					
September	4.4		1.1	0					
October	18		.513043478	0					
November	18		.904545455	0					
December	18		.747619048	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 averge):	2.5
Exceedances, Weekly:	0
Points:	0
Total Number of Points	**0**

0

NOTE: Limit exceedances are considered for mothly 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**

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 5/25/2018 Reporting For: **2017**

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	0.277	1	0
February	1	0.224	1	0
March	1	0.146	1	0
April	1	0.208	1	0
May	1	0.323	1	0
June	1	0.308	1	0
July	1	0.252	1	0
August	1	0.594	1	0
September	1	0.590	1	0
October	1	0.378	1	0
November	1	0.573	1	0
December	1	0.625	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**

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District | Last Updated: 5/25/2018 | Reporting For: **2017**

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 - 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	<9			<10.8			6.2			2.8				0	0
Cadmium		39	85	<1.1			<1.4			<.64			<.31				0	0
Copper		1500	4300	602			586			609			119				0	0
Lead		300	840	21.6			23			22			5				0	0
Mercury		17	57	.49			.39			.61			.41				0	0
Molybdenum	60		75	15.1			15.9			13.5			10.8			0		0
Nickel	336		420	34.4			26.6			27.7			6.5			0		0
Selenium	80		100	<9.5			3.5			<5.4			<2.6			0		0
Zinc		2800	7500	975			926			957			187				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)
- o 1-2 (10 Points)
- o > 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)
- o 1 (10 Points)
- o > 1 (15 Points)

3.1.4 Were biosolids land applied which exceeded the ceiling limit?

- o Yes (20 Points)
- ● No (0 Points)

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 5/25/2018 Reporting For: **2017**

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:	**003**
Biosolids Class:	A
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	04/01/2017 - 06/30/2017
Density:	15
Sample Concentration Amount:	MPN/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Thermophilic Aerobic Digestion
Process Description:	Autothermal Thermophilic aerobic digestion

Outfall Number:	**003**
Biosolids Class:	A
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	07/01/2017 - 09/30/2017
Density:	50
Sample Concentration Amount:	MPN/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Thermophilic Aerobic Digestion
Process Description:	Auto-Thermophilic Aerobic 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:	06/30/2017
Option Used To Satisfy Requirement:	Injection when land apply
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 5/25/2018 Reporting For: **2017**

Outfall Number:	**003**
Method Date:	09/30/2017
Option Used To Satisfy Requirement:	Injection when land apply
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

0

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

- o Yes (40 Points)
- ● No

If yes, what action was taken?

6. Biosolids Storage

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

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

0

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

7. Issues

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

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: 5/25/2018 Reporting For: **2017**

Staffing and Preventative Maintenance (All Treatment Plants)

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

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 5/25/2018

Reporting For: **2017**

The District uses Total Electronic Asset Management System (TEAMS)to track routine preventative maintenance and corrective maintenance task. The District continues to have a very aggressive maintenance program, all team members involved understand the reason for the preventative maintenance to keep equipment running and the plant operating efficiently. The team members involved in major equipment repairs and rebuilds take pride and are precise when doing there major repairs.

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: 5/25/2018 Reporting For: **2017**

Operator Certification and Education

1. Operator-In-Charge

1.1 Did you have a designated operator-in-charge during the report year?

- ● Yes (0 points)
- o No (20 points)

Name: Kevin D. Skogman

Certification No: 25554

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	NA	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 2016; subclass SS is basic level only.)

- ● Yes (0 points)
- o 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

Compliance Maintenance Annual Report

Heart Of The Valley Metro Sewerage District

Last Updated: 5/25/2018 Reporting For: **2017**

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**

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Financial Management

1. Provider of Financial Information

Name: Kevin D. Skogman

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)
- o 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: 2017

- ● 0-2 years ago (0 points)
- o 3 or more years ago (20 points)
- o 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)
- o 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: 2017

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

If N/A, please explain:

3.2 Equipment Replacement Fund Activity

3.2.1 Ending Balance Reported on Last Year's CMAR		$ 5,585,227.00
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		$ 5,585,227.00
3.2.4 Additions to Fund (e.g. portion of User Fee, earned interest, etc.)	+	$ 770,480.00

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3.2.5 Subtractions from Fund (e.g., equipment replacement, major repairs - use description box 3.2.6.1 below*) - $ 301,463.00

3.2.6 Ending Balance as of December 31st for CMAR Reporting Year $ 6,054,244.00

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.

Turbine pump rebuild, Aerzen blower replacements, SCADA Computer for plant, ACTI-FLO system SCADA, Hydro cyclone replacements, large Variable Frequency drive replacements,

3.3 What amount should be in your Replacement Fund? $ 6,054,244.00

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
- o 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.
- o 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.		2020
2	Explore the potential for adaptive management options to offset some of the phosphorus and solids limits.	40000	2017
3	Engineering Services for priority action plan to evaluate the condition of interceptor sewer based on a recent inspection of interceptor.	31000	2017
4	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.	5,000,000	2019

5. Financial Management General Comments

ENERGY EFFICIENCY AND USE

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6. Collection System

6.1 Energy Usage

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

COLLECTION SYSTEM PUMPAGE: Total Power Consumed

Number of Municipally Owned Pump/Lift Stations: 0

	Electricity Consumed (kWh)	Natural Gas Consumed (therms)
January	12,709	
February	12,788	
March	8,371	
April	6,761	
May	1,862	
June	1,025	
July	949	
August	1,095	
September	1,407	
October	1,341	
November	3,372	
December	7,130	
Total	**58,810**	**0**
Average	**4,901**	**0**

6.1.2 Comments:

The total collection system electricity consumed is from Meter Stations in the member communities that the District owns. plus two ventilation systems for removing H2S that are on the Districts interceptor.

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:

Ventilation fans, lighting, electric heaters, samplers,

6.2.2 Comments:

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

- ● No
- o 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?

LED lighting, energy efficient motors on ventilation fans

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	669,057	183.49	3,646	305.97	2,187	
February	572,959	154.39	3,711	246.12	2,328	
March	668,798	224.80	2,975	312.42	2,141	
April	643,716	239.33	2,690	286.56	2,246	
May	671,995	206.52	3,254	335.30	2,004	
June	667,929	232.40	2,874	362.76	1,841	
July	669,106	188.14	3,556	282.13	2,372	
August	662,359	144.72	4,577	267.87	2,473	
September	566,114	130.60	4,335	240.96	2,349	
October	635,980	143.02	4,447	245.86	2,587	
November	504,660	124.66	4,048	234.21	2,155	
December	535,528	122.14	4,385	271.81	1,970	
Total	**7,468,201**	**2,094.21**		**3,391.97**		**0**
Average	**622,350**	**174.52**	**3,708**	**282.66**	**2,221**	**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

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- ☐ Fine Bubble Diffusers
- ☒ Influent Pumping
- ☒ Mechanical Sludge Processing
- ☒ Nitrification
- ☒ SCADA System
- ☐ UV Disinfection
- ☒ Variable Speed Drives
- ☒ Other:

Influent pumping, Secondary treatment (Biostyr) aeration for nitrification. Bio-solids pumping of high rate clarifiers in ACTI-FLO process. Peak flow pumping to ACTI-FLO process.

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?

Premium efficient motors when replacing electric motors.
Replace all lighting with LED lighting

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 energy assessment came up with several recommended measures. The District did implement several of these, synthetic grease for electric motors, LED lighting, bio-solids transfer during off peak time, and lower air compressor tank pressures.

☐ 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
- o 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)
- o 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:

The inspection of all land based manhole structures.

Did you accomplish them?

- ● Yes
- o No

If No, explain:

☒ Organization [NR 210.23 (4) (b)]

Does this chapter of your CMOM include:

- ☒ Organizational structure and positions (eg. organizational chart and position descriptions)
- ☒ Internal and external lines of communication responsibilities
- ☒ Person(s) responsible for reporting overflow events to the department and the public

☒ Legal Authority [NR 210.23 (4) (c)]

What is the legally binding document that regulates the use of your sewer system?

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
- ☐ A management system (computer database and/or file system) for collection system information for O&M activities, investigation and rehabilitation

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☒ 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	0	% of system/year
Root removal	0	% of system/year
Flow monitoring	100	% of system/year
Smoke testing	0	% of system/year
Sewer line televising	0	% of system/year
Manhole inspections	100	% of system/year
Lift station O&M	12	# per L.S./year
Manhole rehabilitation	0	% of manholes rehabbed
Mainline rehabilitation	0	% of sewer lines rehabbed
Private sewer inspections	0	% of system/year
Private sewer I/I removal	0	% of private services

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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.

26.89	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
5.739	Average daily flow in MGD (if available)
7.98	Peak monthly flow in MGD (if available)
21.87	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)
1.4	Peaking factor ratio (Peak Monthly:Annual Daily Avg)
3.8	Peaking factor ratio (Peak Hourly:Annual Daily Avg)

4. Overflows

LIST OF SANITARY SEWER (SSO) AND TREATMENT FACILITY (TFO) OFERFLOWS 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:

I/I continue to be a concern for the District, the rainfall was not above average the past year but during some 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?

- ○ Yes
- ● No

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If Yes, please describe:

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

With the Anticedent moisture modeling the member communities can see that their efforts are helping in the reduction of I/I. The District continues to see the effects when there are significant rainfall events the influent flow may rise some but not like it had in years past.

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. On a yearly bases the District inspects all manholes related to the interceptor for defects and I/I. If there is any I/I noted the District takes measures to immediately to 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	B	3	5	15
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**	**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)

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Resolution or Owner's Statement

Name of Governing Body or Owner:

Date of Resolution or Action Taken:

Resolution Number:

Date of Submittal:

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

Influent Flow and Loadings: Grade = A

Effluent Quality: BOD: Grade = A

Effluent Quality: TSS: Grade = B

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)

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. = 3.86