

Manitowoc Wastewater Treatment Facility

Last Updated: Reporting For:

6/1/2016

2015

0

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.

Outfall No. 701	Influent Monthly Average Flow, MGD	×	Influent Monthly Average (C)BOD Concentration mg/L	×	8.34	H	Influent Monthly Average (C)BOD Loading, lbs/day
January	4.8603	Х	360	х	8.34	=	14,582
February	4.4519	Х	467	Х	8.34	=	17,330
March	5.0296	х	434	Х	8.34	=	18,213
April	6.2741	Х	331	х	8.34	=	17,330
May	5.4771	Х	380	Х	8.34	=	17,370
June	7.3341	Х	330	Х	8.34	=	20,206
July	6.2124	х	406	Х	8.34	=	21,037
August	6.3922	Х	425	Х	8.34	11	22,657
September	6.7551	Х	399	Х	8.34	=	22,496
October	6.1504	Х	525	Х	8.34	=	26,949
November	7.3124	Х	434	Х	8.34	=	26,463
December	9.0090	Х	249	Х	8.34	=	18,672

2. Maximum Month Design Flow and Design (C)BOD Loading

2.1 Verify the design flow and loading for your facility.

Design	Design Factor	Х	%	=	% of Design
Max Month Design Flow, MGD	19	х	90	=	17.1
		Х	100	=	19
Design (C)BOD, lbs/day	37500	х	90	=	33750
		×	100	=	37500

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

Points		0	l 0	0	0	
Exceedance	S	0	0	0	0	
Points per e	ach	2	1	3	2	
December	1	0	0	0	0	
November	1	0	0 .	0	0	
October	1	0	0	0	0	
September	1	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	
	Influent		flow was greater than 100% of		than 100% of design	
	Months of		Number of times		Number of times	

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Last Updated: Reporting For: 6/1/2016 2015 3. Flow Meter 3.1 Was the influent flow meter calibrated in the last year? Enter last calibration date (MM/DD/YYYY) 2015-06-05 Yes 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 \circ No No 5.2 Did you receive septage at your facility? If yes, indicate volume in gallons. Septic Tanks Yes gallons 1,989,400 o No **Holding Tanks** Yes gallons 2,125,365 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 WWTF operates well under hydraulic and organic loading rates. Acceptance of hauled waste is limited or cut off during storm or high flow periods. Grease trap waste is not accepted as there are no means for handling this type of waste. 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.

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- 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.

Landfill leachate is accepted provided analytical data does not exceed local limits in Chapter 25 of the City of Manitowoc Municipal Code. In 2015, a total of 14,203,311 gallons of leachate were accepted and treated.

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

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Effluent Quality and Plant Performance (BOD/CBOD)

1. Effluent (C)BOD Results

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

Outfall No.	Monthly Average	90% of Permit Limit	Effluent Monthly Average (mg/L)	Months of Discharge	Permit Limit Exceedance	90% Permit Limit
001	Limit (mg/L)	> 10 (mg/L)	Average (mg/L)	with a Limit	LXCEEdance	Exceedance
January	30	27	22	1	0	0
February	30	27	42	1	1	1
March	30	27	39	1	1	1
April	30	27	29 ·	1	0	1
May	30	27	25	1	0	0
June	30	27	15	1	0	0
July	30	27	15	1	0	0
August	30	27	14	1	0	0
September	30	27	10	1	0	0
October	30	27	18	1	0	0
November	30	27	17	1	0	0
December	30	27	12	1	0	0
		* Eq	uals limit if limit is	<= 10		
Months of d	ischarge/yr			12		
Points per e	ach exceedanc	e with 12 mor	nths of discharge		7	3
Exceedance	S				2	3
Points					14	9
Total numb	per of points		-			23

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?

The trickling filter biomass tends to become sluggish during the cold weather months which is normal for this type of system. Prior to winter the stack filter boom speeds are sped up to avoid shear and maintain the highest level of biomass inventory possible. Tricking filter recirculation rates are maximized during winter months with limited results because some heat is lost in the process. In all three months where points are assessed the BOD removal efficiency was 91% for the month.

Flow Meter Calibration	۷.	FIOW	Meter	Cai	ıbra	tion

- 2.1 Was the effluent flow meter calibrated in the last year?
- Enter last calibration date (MM/DD/YYYY) o Yes

Ν	0

If No, please explain:

There is no effluent flow meter since 2009.

- 3. Treatment Problems
- 3.1 What problems, if any, were experienced over the last year that threatened treatment?

As discussed in 1.2 above winter operations and low influent temperatures present operational challenges.

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4	OH-	NA Ib la -		111
4.	Other	Monitorina	and L	ımıts

- 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

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
- o No

If Yes, please explain:

The 4th quarter acute test failed.

- 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:

Two toxicity tests were performed in accordance with the discharge permit under normal plant conditions. The original 4th quarter test was scheduled and samples collected over a high sewage flow rain event and atypical plant operations. Two follow up toxicity tests were performed the week of 1/6/16 and 1/20/16 under normal conditions and both passed.

Total Points Generated	23
Score (100 - Total Points Generated)	77
Section Grade	С

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Effluent Quality and Plant Performance (Total Suspended Solids)

1. Effluent Total Suspended Solids Results

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

Outfall No. Monthly		90% of	Effluent Monthly	Months of	Permit Limit	90% Permit
001	Average Limit (mg/L)	Permit Limit >10 (mg/L)	Average (mg/L)	Discharge with a Limit	Exceedance	Limit Exceedance
	<u> </u>			Wich a Littlic		
January	30	27	7	1	0	0
February	30	27	10	1	0	0
March	30	27	13	1	0	0
April	30 27 9 1		1	0	0	
May	30 27 10 1		0	. 0 .		
June	30	27 7 1		0	0	
July	30	27	6	6 1		0
August	30	27	6	1	0	0
September	30	27	5	1	0	0
October	30	27	5	1	0	0
November	30	27	6	1	0	0
December	30	27	6	1	0	0
		* Eqi	uals limit if limit is	<= 10		
Months of D	ischarge/yr	· ·		12		
Points per	each exceed	ance with 12	months of disch	arge:	7	3
Exceedance	S				0	0
Points					0	0
Total Numl	ber of Points					0

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

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

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

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

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Biosolids Quality and Management

1.1 How or Land a Public Hauled Landfill Incine Other	 Biosolids Use/Disposal 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. 																		
as lagoo 1.1.1 If									etc.										
	,								•										
2. Land Ap 2.1 Last Y 2.1.1 Ho 7422.7(2.1.2 Ho 760 2.2 If you 2.3 Did yo o Yes (3) • No 2.4 Have years? • Yes o No (10 o N/A 3 Biosolid	Year's we man and or our over our over our over our our our our our our our our our ou	Appropriate Approp	cres di cres di cres di acre ave en	d you d you es ough	u hav u use n acre	re? ? es for	· you	r land	d app	olicat ed lar	nd ap	plica	tion	sites	you	used l	ast ye	ar?	0
3. Biosolida Number of 3.1 For eacalendar y Outfall No Parameter	of bios ach ou year. . 003 80% of	solids utfall - Cal	tested	, ver	•				etal q	Jul	y valı	ues f	or yo	ur fa Nov	cility	80%		Ceiling	
Arsenic	Limit	41	75	0		0		0		0		0		0			0	0	
Cadmium		39	85	0		0		0		0		0		0			0	0	
Copper		1500	4300	0		0		0		0		0		0			0	0	
Lead		300	840	0		0		0		0		0		0			0	0	
Mercury		17	57	0		0		0		0		0		0			0	0	
Molybdenum			75	0		0		0		0		0	-	0		0		0	
Nickel	336		420	0		0		0		0		0		0		0		0	
Selenium	80		100	0		0		0		0		0		0		0		0	
Zinc	I	12800	7500	0	I	0		0	Ī	0	1	0		0	1 1		0	l o l	1

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Outfall No	o. 00	2 - L	iquid	Slud	lge													
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	LIIIIL	41	75	19.2		6.25		10.5		20		13.9		10.5			0	0
Cadmium		39	85	.961		1.24		.99		.84		.567		1.3	_		0	0
Copper		1500	4300	625		570		561		613	,	623		627			0	0
Lead		300	840	24		29.7		28.3		33		27.4		29			0	0
Mercury		17	57	5.28		.496		66،		.84		.567		1.6			0	0
Molybdenum	60		75	5.21		9.42		8.25		11		.45		9.4		0		0
Nickel	336		420	93.8		76.9		66		125		6.4		110		0		0
Selenium	80		100	2.5		2.5		4.12		2.12		.061		8.339		0		0
Zinc		2800	7500	2836		1885		1650		2479		85		2539.	185		1	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 = 1

Exceedence Points

- (0 Points) 00
- 1-2 (10 Points)
- \circ > 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
- No (10 points)
- N/A Did not exceed limits or no HQ limit applies (0 points)
- N/A Did not land apply biosolids until limit was met (0 points)
- 3.1.3 Number of times any of the metals exceeded the ceiling limits = 0

Exceedence Points

- (0 Points) • 0
- (10 Points)
- \circ > 1 (15 Points)
- 3.1.4 Were biosolids land applied which exceeded the ceiling limit?
- Yes (20 Points)
- No (0 Points)
- 3.1.5 If any metal limit (high quality or ceiling) was exceeded at any time, what action was taken? Has the source of the metals been identified?

The HQ zinc result was a single result that was just barely over the HQ limit. No official action was taken.

4. Pathogen Control (per outfall):

4.1 Verify the following information. If any information is incorrect, Contact Us.

Outfall Number:	002	
Biosolids Class:	В	
Bacteria Type and Limit:	F	
Sample Dates:	01/01/2015 - 02/28/2015	-
Density:	129	
Sample Concentration Amount:	CFU/G TS	
Requirement Met:	Yes	
Land Applied:	No	
Process:		
Process Description:		

Process Description:

anitowoc Wastewater Treatment	Facility	Last Updated:	Reporting Fo
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Outfall Number:	002		
Biosolids Class:	В		
Bacteria Type and Limit:	F		
Sample Dates:	07/01/2015 - 08/31/2015		
Density:	225		
Sample Concentration Amount:	CFU/G TS		
Requirement Met:	Yes		
Land Applied:	No		
Process:			
Process Description:			
Outfall Number:	003		
Biosolids Class:	В		
Bacteria Type and Limit:	F		
Sample Dates:	03/01/2015 - 04/30/2015		
Density:	142		
Sample Concentration Amount:	CFU/G TS		7
Requirement Met:	Yes		
and Applied:	No		
Process:			
Process Description:			
Outfall Number:	003		
Biosolids Class:	В		
Bacteria Type and Limit:	F		
Sample Dates:	05/01/2015 - 06/30/2015		
Density:	687		
Sample Concentration Amount:	CFU/G TS		
Requirement Met:	Yes		
Land Applied:	Yes		
Process:			
Process Description:			
Outfall Number:	003		
Biosolids Class:	В		_
Bacteria Type and Limit:	F		
Sample Dates:	09/01/2015 - 10/31/2015		
Density:	1,003		
Sample Concentration Amount:	CFU/G TS		
Requirement Met:	Yes		
Land Applied:	Yes		
Process:			
5 111			1

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	0/1/2010		
Outfall Number:	003		
Biosolids Class:	В		
Bacteria Type and Limit:	F		
Sample Dates:	11/01/2015 - 12/31/2015		
Density:	574		
Sample Concentration Amount:	CFU/G TS		
Requirement Met:	Yes		
Land Applied:	Yes		
Process:			0
Process Description:			
	neet the process criteria at the time of land application? cess criteria not met at the time of land application?	on.	
5. Vector Attraction Reduction (per outfall 5.1 Verify the following information. If a): ny of the information is incorrect, Contact Us.		
Outfall Number:	002		
Method Date:	02/28/2015		
Option Used To Satisfy Requirement:	INJ		
Requirement Met:	Yes		
Land Applied:	No	i	
Limit (if applicable):			
Results (if applicable):			
Outfall Number:	002		
Method Date:	08/31/2015		
Option Used To Satisfy Requirement:	INJ		
Requirement Met:	Yes		
Land Applied:	No		
Limit (if applicable):	IVO		
Results (if applicable):			
ixesures (ii applicable).	<u> </u>		
Outfall Number:	003		
Method Date:	04/30/2015		
Option Used To Satisfy Requirement:	INJ		
Requirement Met:	Yes		
Land Applied:	No		
Limit (if applicable):			
Results (if applicable):			

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Outfall Number:	003	
Method Date:	06/30/2015	
Option Used To Satisfy Requirement:	INJ	
Requirement Met:	Yes	
Land Applied:	Yes	
Limit (if applicable):		
Results (if applicable):		
Outfall Number:	003	
Method Date:	10/31/2015	
Option Used To Satisfy Requirement:	INJ	
Requirement Met:	Yes	
Land Applied:	Yes	
Limit (if applicable):		
Results (if applicable):		
		0
Outfall Number:	003	
Method Date:	12/31/2015	
Option Used To Satisfy Requirement:	INJ	
Requirement Met:	Yes	
Land Applied:	Yes	
Limit (if applicable):		
Results (if applicable):		
5.2 Was the limit exceeded or the proce○ Yes (40 Points)● NoIf yes, what action was taken?	ess criteria not met at the time of land application?	
6. Biosolids Storage 6.1 How many days of actual, current by 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 we have a single or contact the contact t	iosolids storage capacity did your wastewater treatment	0
7. I Describe any outstanding biosolids i	squag with treatment, use or everall management.	

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

The land application program remains solid with no shortage of approved application acreage. More land is certified than needed as crop rotations does make some fields unavailable for a few years when alfalfa is planted.

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Total Points Generated		10
Score (100 - Total Points Generate	ed)	90
Section Grade		В

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Staffing and Preventative Maintenance (All Treatment Plants)

 Plant Staffing Was your wastewater treatment plant adequately staffed last year? Yes 	
o No	
If No, please explain:	
Could use more help/staff for:	
1.3. Did your wastowater staff hove adequate time to manager and an interior the value of	
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 paints) 	0
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	
Computer system	
Both paper and computer system	
O No (10 points)	
 3. O&M Manual 3.1 Does your plant have a detailed O&M Manual 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.	
Very good	
O Good	
o Fair	
o Poor	
Describe your rating:	
The computerized preventative maintenance work order system is updated and followed each month. All work orders are completed and unscheduled repairs are documented.	

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Section Grade	Α

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Operator Certification and Education

1. Operator-In-Charge	Τ
1.1 Did you have a designated operator-in-charge during the report year?	
• Yes (0 points)	
o No (20 points)	0
Name BRIAN M HELMINGER	
Certification No: 28032	ì

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	SubClass Description	WWTP		OIC	
Class		Advanced	OIT	Basic	Advanced
A1	Suspended Growth Processes				X
A2	Attached Growth Processes	Χ			X
АЗ	Recirculating Media Filters				
A4	Ponds, Lagoons and Natural		Х		
A5	Anaerobic Treatment Of Liquid				
В	Solids Separation	Х			Х
C	Biological Solids/Sludges	Χ			Х
Р	Total Phosphorus	Х			X
N	Total Nitrogen				
D	Disinfection	Х			Х
L	Laboratory	Х			Х
U	Unique Treatment Systems				
SS	Sanitary Sewage Collection	Х	NA	NA	NA
C P N D L U	Solids Separation Biological Solids/Sludges Total Phosphorus Total Nitrogen Disinfection Laboratory Unique Treatment Systems	X 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 2015 - 2016; subclass SS is basic level only.)
- Yes (0 points)
- o No (20 points)
- 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:
- 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?

OIT and Basic Certification:

• Averaging less than 8 CECs per year.

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Score (100 - Total Points Generated)	100
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3.2.6.1 below*)

Reporting Year

3.2.6 Ending Balance as of December 31st for CMAR

Last Updated: Reporting For: **Manitowoc Wastewater Treatment Facility** 6/1/2016 2015 **Financial Management** 1. Provider of Financial Information Brian Helminger Name: (XXX) XXX-XXXX (920) 686-3550 Telephone: E-Mail Address bhelminger@manitowoc.org (optional): 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: 2015 0 • 0-2 years ago (0 points) o 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) O No (40 points) 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: 2015 • 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 \$ 9,362,731.00 3.2.2 Adjustments - if necessary (e.g. earned interest, + 409,905.00 audit correction, withdrawal of excess funds, increase making up previous shortfall, etc.) 9,772,636.00 3.2.3 Adjusted January 1st Beginning Balance 3.2.4 Additions to Fund (e.g. portion of User Fee, earned interest, etc.) 0.00 3.2.5 Subtractions from Fund (e.g., equipment replacement, major repairs - use description box

0.00

9,772,636.00

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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.

There were no withdrawals or additional deposits in 2015. All capital projects and equipment were funded in the 2015 Sewer User Charges.

3.3 What amount should be in your Replacement Fund?

8,224,617.00

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 HELP link under Info in the left-side

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.

- 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	Lakeside Blvd liftstation upgrade- replace liftstation and relocate the existing forcemain	373536.7	2006
	2006 Sewer relay projects Sewer relay - Holly Drive - E. Magnolia to East Cedar Ave.	413660	2006
	Sewer relay - E. Magnolia Ave - to Memorial Drive - to Holly Drive Project total 2194 ft.		
3	North 40th and Archer liftstation/forcemain/discharge reroute - Complete replacement of existing liftstation, replacement and upsize of under river forcemain, reroute of sewage flow via forcemain and gravity line.	2304764.6	2009
1	2006 Relining of Sewers WU-06-7 Reline of sanitary sewers consisting of: 4735 LF of 8" sanitary sewer, 210 LF of 10" sanitary sewer, 1255 LF of 18" sanitary sewer, and 1262 LF of 20" sanitary sewer.	295897	2006
	2007 Relining of Sewers WU-07-7 Reline of sanitary sewers consiting of 3551 LF of 8" sanitary sewer and 1706 LF of 10" sanitary sewer.	118135	2007
	2007 Sewer Relay projects - South 18th Street from Grand Ave to Dewey Street, Rankin from N 18th Street to North 21st, and North 11th from Waldo Blvd to School Street	244754	2007
7	WWTF SCADA upgrade - replacement computers and update of control software. Custom programming and addition of historical trending.	25573	2007
8	Replacement WWTF Utility/Plow truck	24349	2007
	Chlorination system improvments - vacuum chlorine withdrawl manifold added and replacement gas leak detection equipment	6361	2007
	Tertiary Filter Improvements - removal and disposal of existing media, remove and clean air scour laterals, repair and ancohor air scour piping, replace main air supply connections, install new filtration media	172250	2008

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Compliance Maintenance Annual Report Manitowoc Wastewater Treatment Facility

Manitowoc Wastewater Treatment Facility			Reporting For: 2015	
11	South 35th & Meadow Lane Reroute of the 40th and Archer liftstation discharge flow. Installation of 1649 feet of 16 inch PVC forcemain and 1876 feet of 18 inch PVC sewer pipe with manholes and steel casing for rail road crossing.	229283	2008	
12	2008 Sanitary Sewer Relay Project - Madison St to South 10th Street, South 8th Street to Madison Street Abandon existing and install a total of 1830 feet of 6" sanitary building sewer, 173 feet of 8" sanitary sewer, 90 feet of 10" sanitary sewer, and 833 feet of 15" sanitary sewer pipe.	84131.52	2008	
13	2008 New and Relay Sanitary Sewer Wisconsin Ave, Hecker Road, and South 6th and Jay street projects Abandon and replace various sewers, replace manholes and casting and covers	77914.68	2008	
14	2008 Re-lining of Sanitary Sewers Reline of 3079 feet of 8" sanitary sewer, 1554 feet of 12" sanitary sewer, and 2126 feet of 15" sanitary sewer	222302.25	2008	
15	Replacement of Wastewater Utility passenger vehicle	17267	2009	
16	2009 Relining sanitary sewers - Furnish and install 1234 feet CIPP 8" sewer, 3144 feet CIPP 10" sewer, and 279 feet of CIPP 12" sewer	124303	2009	
17	South 10th Street Sanitary Sewer Relay - Remove, Supply, Install, Relay of 2658 feet 8" sewer, 1063 feet 10" sewer, 293 feet of 15" sewer and 45 feet of 18" sewer.	395787.81	2009	
18	2009 New & Relay Sanitary Sewers - Reed Avenue - E. Crescent Drive - MacAurther Drive - E. Linden Avenue - Arden Lane - S. 15th Street	285715.57	2009	
19	Step Screens and Washer Compactors - removal of existing coarse bar screens(2) and replacement with Vulcan 1/8" fine step screens(2) each mated with Vulcan screenings washer/compactors	678715	2010	
20	2010 Relining Sanitary Sewers - furnish and install CIPP for 4359 feet of 8" sanitary sewer and 2090 feet of 10" sanitary sewer	155456.5	2010	
21	2010 Relay Sanitary Sewers - Macarther Drive, Iris Drive, E. Linden Avenue - Remove, replace, and restore 1556 feet of 8" sanitary sewer line	409346.4	2010	
22	Sanitary sewer capacity study	128200	2010	
23	2011 Relining of Sanitary Sewers - Furnish and install CIPP for 5028 feet of 8 inch lines, 921 feet of 10 inch sewer, 1398 feet of 15 inch sewer, and 622 feet of 20 inch sewer lines.	238180	2011	
24	2012 Relining of Sanitary Sewers - Furnish and Install CIPP for 2077 feet of 8 Inch lines, 961 feet of 10 inch sewer, 696 feet of 12 Inch sewer, 870 feet of 15 inch sewer. Includes mobilization, traffic control, and lateral reinstatment.	138527	2012	
25	WWTF Operational Needs Review - Consultant to be hired to evaluate the existing facility and make recommendations for future capital projects based on current and aniticpated future NPDES permit requirements. The RFP's from prospective consultants are due 7/3/12	54500	2012	
26	Hot water pipe replacement - WWTF	196777	2011	
	Piping failed requiring replacement. Complete design, purchase, excavation, and replacement of supply and return underground hydronic piping from Building 800 to Building 100 and Building 930.			
27	Remove leaking existing membrane roof and insulation and replace with new insulation and built up asphaltic roofing system on the mid level roof of building 500 - Stack Filter building.	57000	2013	
28	2013 Relining of Sanitary Sewers - Furnish and install CIPP for 3324 feet of 8 inch lines, 101 feet of 10 inch lines, 1674 feet of 12 inch lines, 396 feet of 15 inch lines, and 722 feet of 21 inch sewer lines. Includes mobilization, traffic control, and lateral reinstatment.	242742	2013	
29	2013 Sanitary Sewer Construction Furnish and relay 737 ft of 8" sewer, 53 ft of 10" sewer, 24 ft of 12" sewer and 31 ft of 15" sewer.	146365.87	2013	
30	2014 Relining of Sanitary Sewers - Furnish and install CIPP for 9086 feet of 8 inch, 867 feet of 10 inch, 365 feet of 12 inch, to include mobilization, traffic control, and lateral reinstatement.	284057	2014	
31	Influent Screw Pump Improvements - Project removes existing aluminum covers to expose corroded pump deflector plates. New stainless steel deflector plates to be installed with stainless steel anchors in off set hole pattern. Concrete pour joints and areas of degradation to be cleaned and repaired. Aluminum covers to be reinstalled at completion.	101675	2015	

Last Updated: Reporting For: **Manitowoc Wastewater Treatment Facility** 6/1/2016 2015 Horseshoe Drive Pump Station Rehabilitation - Provision and construction of 30900d 2016 replacement submersible pump station and emergency generator, new electrical service, and SCADA modifications and integration. Update: Budgeted for in 2015 but constructed in 5/2016. 2015 Re-lining of Sanitary Sewers 257505 2015 Project includes mobilization and traffic control. Furnish and reline with CIPP of 11,073 feet of 8 inch sewers lines. Furnish and install CIPP of 774 feet of 15 inch sewer lines plus all lateral reinstatement. 2015 Sanitary Sewer construction -143849 2015 Various tasks to include removal and rebury of 98 feet of 8" sewer and 62 feet of 12" sewer lines. Provision of manholes, reconnection of 7 laterals, with restoration of site with specified base materials, concrete pavement, and televised completed repairs. 35 2016 Re-lining of Sanitary Sewers - Project 4214135 304,093 2016 Project includes mobilization and traffic control. Furnish and reline with CIPP of 7211 feet of 8 inch sewers lines. Furnish and install 3667 feet of 10 inch sewer lines. Furnish and install 1051 feet of 12 inch sewer lines. Furnish and install install 466 feet of 20 inch sewer lines plus all lateral reinstatement. Financial Management General Comments

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

Manitowoc Wastewater Treatment Facility

Last Updated: Reporting For:

6/1/2016

2015

Sanitary Sewer Collection Systems

1.1 Do you have a Capacity, Management, Operation & Maintenance (CMOM) requirement in your WPDES permit? o Yes No No No 1.2 Did you have a documented (written records/files, computer files, video tapes, etc.) sanitary sewer collection system operation & maintenance (O&M) or CMOM program last calendar year? Yes (Continue with question 1) No (30 points) (Go to question 2) 1.3 Check the elements listed below that are included in your O&M or CMOM program. Goals Describe the specific goals you have for your collection system: ✓ Organization Do you have the following written organizational elements (check only those that apply)? ✓ Ownership and governing body description ✓ Organizational chart ✓ Personnel and position descriptions ☐ Internal communication procedures				
 Yes No 1.2 Did you have a documented (written records/files, computer files, video tapes, etc.) sanitary sewer collection system operation & maintenance (O&M) or CMOM program last calendar year? Yes (Continue with question 1) No (30 points) (Go to question 2) 1.3 Check the elements listed below that are included in your O&M or CMOM program. Goals Describe the specific goals you have for your collection system: ✓ Organization Do you have the following written organizational elements (check only those that apply)? ✓ Ownership and governing body description ✓ Organizational chart ✓ Personnel and position descriptions ☐ Internal communication procedures 				
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· ·				
☐ Public information and education program				
□ Legal Authority				
Do you have the legal authority for the following (check only those that apply)? ☑ Sewer use ordinance Last Revised Date (MM/DD/YYYY) 2015-12-21				
☑ Pretreatment/industrial control Programs				
☐ Fat, oil and grease control				
☑ Illicit discharges (commercial, industrial)				
☑ Private property clear water (sump pumps, roof or foundation drains, etc.)				
☐ Private lateral inspections/repairs				
☐ Service and management agreements				
☐ Design and Performance Provisions				
How do you ensure that your sewer system is designed and constructed properly? ☑ State plumbing code				
☑ DNR NR 110 standards				
☑ Local municipal code requirements				
☐ Construction, inspection, and testing				
☑ Others:				
Wisconsin Sewer and Water Standard Specifications				
☐ Overflow Emergency Response Plan:				
Does your emergency response capability include (check only those that apply)?				
☐ Alarm system and routine testing				
☐ Emergency equipment				
☐ Emergency procedures				
☐ Communications/notifications (DNR, internal, public, media, etc.)				
☐ Capacity Assurance:				
How well do you know your sewer system? Do you have the following?				
☑ Current and up-to-date sewer map				
☐ Sewer system plans and specifications				

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Manitowoc Wastewater 1	reatment Facility		Last Updated: 6/1/2016	Reporting Fo
	d wet well capacity informulas Im have you identified the Important information in the Important information in	the following? SOs accumulation capacity ms gram to ensure above core needed hat apply): Plan (SECAP) e ISCO flow meters that	nponents are bein are used to collec	o t data
2. Operation and Maintena 2.1 Did your sanitary sew maintenance activities? Co	ence ver collection system m complete all that apply a 100	and indicate the amount and of system/year	ude the following	stem.
Root removal Flow monitoring Smoke testing	5 10 0	% of system/year % of system/year % of system/year		
Sewer line televising Manhole	7.5	% of system/year % of system/year		
inspections Lift station O&M	100	# per L.S./year		
Manhole rehabilitation	0	% of manholes rehabbe	ed .	
Mainline rehabilitation	1	% of sewer lines rehabl	ped	
Private sewer inspections	0	% of system/year		
Private sewer I/I removal	Comments about your	% of private services sanitary sewer collection	a system bolowy	
The 100% reported fig	ure above for cleaning a	applies to sewer lines that eved each year but rather	t are 12 inches in	

Manitowoc Wastewater Treatment Facility

Last Updated: Reporting For:

6/1/2016	
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2015

	Ψ,	7172010	
3. Performance Indica			
	wing collection system and flow information for the past your Total actual amount of precipitation last year in inches	ear.	
	Annual average precipitation (for your location)		
189.66	Miles of sanitary sewer		
14	Number of lift stations		
(Number of lift station failures		
	Number of sewer pipe failures		
9	Number of basement backup occurrences		
4!	Number of complaints		
6.279	Average daily flow in MGD (if available)		
9.009	Peak monthly flow in MGD (if available)		:
19.210	Peak hourly flow in MGD (if available)		
3.2 Performance ratio	os for the past year:		
0.00	Lift station failures (failures/year)		
0.0	Sewer pipe failures (pipe failures/sewer mile/yr)		
0.00	Sanitary sewer overflows (number/sewer mile/yr)		
0.0	Basement backups (number/sewer mile)		
0.24	Complaints (number/sewer mile)		
1.4	Peaking factor ratio (Peak Monthly:Annual Daily Avg)		
3.:	Peaking factor ratio (Peak Hourly:Annual Daily Avg)		

4. Overflows

LIST OF SANITARY SEWER (SSO) AND TREATMENT FACILITY (TFO) OFERFLOWS REPORTED **						
Date	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?
- o Yes
- No

If Yes, please describe:

Manitowoc like most communities has a mixed bag in the age and condition of the sewers. I/I is certainly present in the sanitary system but there were no incidents in 2015 that caused the WWTF flow to exceed peak hourly or peak monthly engineering design values.

- 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:

Manitowoc Wastewater Treatment Facility

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No changes in 2015. Cleaning, televising, and slip lining contracts were all bid out and work completed as in previous years.

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

The City is in the process of developing a CMOM program to be completed by August 2016.

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

Manitowoc Wastewater Treatment Facility

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2015

Grading Summary

WPDES No: 0024601

SECTIONS	LETTER GRADE	GRADE POINTS	WEIGHTING FACTORS	SECTION POINTS
Influent	Α	4	3	12
BOD/CBOD	С	2	10	20
TSS	Α	4	5	20
Biosolids	В	3	5	15
Staffing/PM	Α	4	1	4
OpCert	Α	4	1	4
Financial	Α	4	1	4
Collection	Α	4	3	12
TOTALS			29	91
GRADE POINT AVERAGE (GPA) = 3.14				

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)

Manitowoc Wastewater Treatment Facility	Last Updated: Reporting For 6/1/2016 2015
Resolution or Owner's Statement	
Name of Governing Body or Owner: City of Manitwoc Common Council	
Date of Resolution or Action Taken:	
Resolution Number:	
Date of Submittal:	
ACTIONS SET FORTH BY THE GOVERNING BODY OR OWNER SECTIONS (Optional for grade A or B. Required for grade C, Influent Flow and Loadings: Grade = A	
Effluent Quality: BOD: Grade = C	
As discussing in the BOD/CBOD section, cold weather operations attached growth biological treatment system. Effluent quality wa within permit limits.	
Effluent Quality: TSS: Grade = A	
Biosolids Quality and Management: Grade = B	
Staffing: Grade = A	
Operator Certification: Grade = A	
operator certification, drade = 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 GRADE POINT AVERAGE AND ANY GENERAL COMMENTS (Optional for G.P.A. greater than or equal to 3.00, required for G.P.A. = 3.14	