City of Waukesha

DEPARTMENT OF PUBLIC WORKS

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July 9, 2015

Board of Public Works
Dr. Fred Abadi, Director of Public Works

Subject: Compliance Maintenance Annual Report

Attached is a copy of the Compliance Maintenance Annual Report for the 2014 operating year. In the report we acquired "A" scores in all ten categories, achieving a grade of 4.00 for the entire report. The ten categories that we are evaluated on are: Influent Loading; Effluent BOD Quality; Effluent TSS Quality; Effluent Ammonia Quality; Effluent Phosphorus Quality; Bio-solids Management; Preventive Maintenance and Staffing; Operator Certification; Financial Management; Collection Systems.

Effluent BOD averaged zero mg/l for all 12 months. Our total suspended solids were zero for 10 of the twelve months, with the other two being 1 mg/l, well under our permit limit of 10 mg/l. Ammonia for all 12 months was well under the required limits. And our highest monthly average for phosphorus was 0.3 mg/l. We had one minor dissolved oxygen violation (6.8 w/limit 7.0) during high flows in May.

We had four reported SSO's in 2014; three were due to valve failures at lift stations, and one force main break. Three of these sites are scheduled for upgrades in our CIP and the fourth will be addressed separately. The City continues to put forth effort and expense to improve the collection system.

We are in the middle of construction upgrades to the Wastewater Treatment Facility and we hope to maintain this level of performance. The upcoming months will be causing disruptions to our sand filtration process.

The support of all City Department's and this Board of Public Works is greatly appreciated in our efforts to achieve this "A" rating.

Sincerely,

Jeff Harenda
Plant Manager

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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. 702	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	8.2905	x	241	x	8.34	=	16,693
February	8.6832	x	174	x	8.34	=	12,564
March	9.9094	x	162	x	8.34	=	13,410
April	11.2671	x	152	x	8.34	=	14,252
May	12.3698	x	256	x	8.34	=	26,380
June	10.9212	x	232	x	8.34	=	21,119
July	9.4827	x	267	x	8.34	=	21,141
August	9.5347	x	289	x	8.34	=	22,989
September	7.7633	x	267	x	8.34	=	17,291
October	7.8435	x	333	x	8.34	=	21,813
November	7.6488	x	258	x	8.34	=	16,486
December	7.9828	x	322	x	8.34	=	21,423

2. Maximum Month 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	18.5	x	90	=	16.65
		x	100	=	18.5
Design (C)BOD, lbs/day	29653	x	90	=	26687.7
		x	100	=	29653

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

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3. Flow Meter

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

● Yes Enter last calibration date (MM/DD/YYYY) 09/25/2014

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?

● Yes

o No

If Yes, please explain:

Five Notices of Violation were issued.

5. Septage Receiving

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

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

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

Septic Tanks

● Yes 9,060,702 gallons

o No

Holding Tanks

● Yes 11,401,179 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.

Plant performance is not affected.

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.

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

● Yes

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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.

Hauled industrial waste is subject to our Pretreatment Program, including permitting, site inspections, testing and monitoring. Some leachate is accepted, and some brine from city and county salt barns.

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

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Effluent Quality and Plant Performance (BOD/CBOD)

1. Effluent (C)BOD Results

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

Outfall No. 001	Monthly Average Limit (mg/L)	90% of Permit Limit > 10 (mg/L)	Effluent Monthly Average (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance	90% Permit Limit Exceedance
January	10	10	0	1	0	0
February	10	10	0	1	0	0
March	10	10	0	1	0	0
April	10	10	0	1	0	0
May	10	10	0	1	0	0
June	10	10	0	1	0	0
July	8.5	8.5	0	1	0	0
August	8.5	8.5	0	1	0	0
September	8.2	8.2	0	1	0	0
October	10	10	0	1	0	0
November	10	10	0	1	0	0
December	10	10	0	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) 09/25/2014

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?

● Yes

o No

If Yes, please explain:

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On May 13th 2014 we had a dissolved oxygen (D.O.) violation. Our permit limit is 7.0 mg/L and we reported 6.8 mg/L that day. We attributed that result to the elevated flows(26-27MGD)from the heavy rains the day before. The sample on the 14th was 8.7 mg/L with flows just under 20 MGD. Our post aeration system is being upgraded with the UV upgrade project.

4.2 At any time in the past year was there a failure of an effluent acute or chronic whole effluent toxicity (WET) test?

- o 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?

- o Yes
- o No
- ● N/A

Please explain unless not applicable:

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

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Effluent Quality and Plant Performance (Total Suspended Solids)

1. Effluent Total Suspended Solids Results

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

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

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

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Effluent Quality and Plant Performance (Ammonia - NH3)

1. Effluent Ammonia Results

1.1 Verify the following monthly and weekly average effluent values, exceedances and points for NH3

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	5		.05032258	1 0					
February	5.2		.41392857	1 0					
March	6		.05354838	7 0					
April	5.6		.223	0					
May	4.9		.03258064	5 0					
June	3.1		.04033333	3 0					
July	2		.02096774	2 0					
August	2.1		.00967741	9 0					
September	2.9		.24433333	3 0					
October	4.5		.10806451	6 0					
November	5.4		.02233333	3 0					
December	5.1		.09225806	5 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 detect 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 detect exceedances and gernate points.

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

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

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Effluent Quality and Plant Performance (Phosphorus)

1. Effluent Phosphorus Results

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

Outfall No. 001	Monthly Average phosphorus Limit (mg/L)	Effluent Monthly Average phosphorus (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance
January	.7	0.1	1	0
February	.7	0.0	1	0
March	.7	0.0	1	0
April	.7	0.0	1	0
May	.7	0.1	1	0
June	.7	0.1	1	0
July	.7	0.3	1	0
August	.7	0.1	1	0
September	.7	0.1	1	0
October	.7	0.1	1	0
November	.7	0.1	1	0
December	.7	0.1	1	0
Months of Discharge/yr			12	
Points per each exceedance with 12 months of discharge:				**10**
Exceedances				0
Total Number of Points				**0**

0

NOTE: For systems that discharge intermittently to waters of the state, the points per monthly exceedance for this section shall be based upon a multiplication factor of 12 months divided by the number of months of discharge.
Example: For a wastewater facility discharging only 6 months of the year, the multiplication factor is 12/6 = 2.0

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

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

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Biosolids Quality and Management

1. Biosolids Use/Disposal

1.1 How did you use or dispose of your biosolids? (Check all that apply)

- ☒ Land applied under your permit
- ☐ Publicly Distributed Exceptional Quality Biosolids
- ☐ Hauled to another permitted facility
- ☐ Landfilled
- ☐ Incinerated
- ☐ Other

NOTE: If you did not remove biosolids from your system, please describe your system type such as lagoons, reed beds, recirculating sand filters, etc.

1.1.1 If you checked Other, please describe:

2. Land Application Site

2.1 Last Year's Approved and Active Land Application Sites

2.1.1 How many acres did you have?

3073 acres

2.1.2 How many acres did you use?

229.5 acres

2.2 If you did not have enough acres for your land application needs, what action was taken?

2.3 Did you overapply nitrogen on any of your approved land application sites you used last year? **0**

- o Yes (30 points)
- ● No

2.4 Have all the sites you used last year for land application been soil tested in the previous 4 years?

- ● Yes
- o No (10 points)
- o N/A

3. Biosolids Metals

Number of biosolids outfalls in your WPDES permit:

3.1 For each outfall tested, verify the biosolids metal quality values for your facility during the last calendar year.

Outfall No. 005 - 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

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Outfall No. 002 - Anaerobic Belt Pressed 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	6.2		5.5		5		7.6		8.6		6			0	0
Cadmium		39	85	2.3		2		2		1		1		1.1			0	0
Copper		1500	4300	612		600		665		730		849		766			0	0
Lead		300	840	47.7		32.7		28.5		33.3		38		32.3			0	0
Mercury		17	57	.36		.45		.29		.4		.48		.31			0	0
Molybdenum	60		75	15.2		17.1		19.5		16.1		14.5		16.8		0		0
Nickel	336		420	73.1		55.1		52.1		52.4		52.6		70.2		0		0
Selenium	80		100	6.9		4.7		7		9.8		6.3		5.6		0		0
Zinc		2800	7500	1230		1010		964		1280		1410		1340			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)

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, Contact Us.

Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	F
Sample Dates:	01/01/2014 - 12/31/2014
Density:	110,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	ANAER
Process Description:	Belt press samples. Lab Certification Number: 721026460

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Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	F
Sample Dates:	01/01/2014 - 02/28/2014
Density:	110,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	No
Process:	ANAER
Process Description:	Belt press samples. Lab Certification Number: 721026460

Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	F
Sample Dates:	01/01/2014 - 03/31/2014
Density:	110,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	No
Process:	ANAER
Process Description:	Belt press samples. Lab Certification Number: 721026460

Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	F
Sample Dates:	03/01/2014 - 04/30/2014
Density:	1,500
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	No
Process:	ANAER
Process Description:	Belt press samples. Lab Certification Number: 721026460

Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	F
Sample Dates:	04/01/2014 - 06/30/2014
Density:	1,500
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	ANAER
Process Description:	Belt press samples. Lab Certification Number: 721026460

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Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	F
Sample Dates:	05/01/2014 - 06/30/2014
Density:	930
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	ANAER
Process Description:	Storage pile samples. Lab Certification Number: 721026460

Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	F
Sample Dates:	07/01/2014 - 08/31/2014
Density:	17,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	No
Process:	ANAER
Process Description:	Belt press samples. Lab Certification Number: 721026460

Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	F
Sample Dates:	07/01/2014 - 09/30/2014
Density:	17,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	No
Process:	ANAER
Process Description:	Belt press samples

Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	F
Sample Dates:	10/01/2014 - 12/31/2014
Density:	15,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	ANAER
Process Description:	Storage pile samples. Lab Certification Number: 721026460

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Outfall Number:	**002**
Biosolids Class:	B
Bacteria Type and Limit:	F
Sample Dates:	11/01/2014 - 12/31/2014
Density:	15,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	ANAER
Process Description:	Storage pile samples. Lab Certification Number: 721026460

Outfall Number:	**005**
Biosolids Class:	B
Bacteria Type and Limit:	F
Sample Dates:	09/01/2014 - 10/31/2014
Density:	15,000
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	ANAER
Process Description:	Storage pile samples. Lab Certification Number: 721026460

Outfall Number:	**005**
Biosolids Class:	B
Bacteria Type and Limit:	F
Sample Dates:	09/01/2014 - 10/31/2014
Density:	2,700
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	ANAER
Process Description:	Belt press samples. Lab Certification Number: 721026460

Outfall Number:	**005**
Biosolids Class:	B
Bacteria Type and Limit:	F
Sample Dates:	09/01/2014 - 10/31/2014
Density:	2,700
Sample Concentration Amount:	CFU/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	ANAER
Process Description:	Digester liquid sludge samples. Lab Certification Number: 721026460

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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?

0

5. Vector Attraction Reduction (per outfall):
5.1 Verify the following information. If any of the information is incorrect, Contact Us.

Outfall Number:	**002**
Method Date:	01/08/2014
Option Used To Satisfy Requirement:	VSR
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	38
Results (if applicable):	61.50

Outfall Number:	**002**
Method Date:	03/31/2014
Option Used To Satisfy Requirement:	INC
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	**002**
Method Date:	02/28/2014
Option Used To Satisfy Requirement:	INC
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	**002**
Method Date:	01/08/2014
Option Used To Satisfy Requirement:	VSR
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	38
Results (if applicable):	61.50

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Outfall Number:	**002**
Method Date:	01/08/2014
Option Used To Satisfy Requirement:	VSR
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	38
Results (if applicable):	61.50

Outfall Number:	**002**
Method Date:	12/31/2014
Option Used To Satisfy Requirement:	INC
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	**002**
Method Date:	04/16/2014
Option Used To Satisfy Requirement:	VSR
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	38
Results (if applicable):	45.20

Outfall Number:	**002**
Method Date:	04/30/2014
Option Used To Satisfy Requirement:	INC
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	**002**
Method Date:	06/30/2014
Option Used To Satisfy Requirement:	INC
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

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Outfall Number:	**002**
Method Date:	04/16/2014
Option Used To Satisfy Requirement:	VSR
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	38
Results (if applicable):	45.20

Outfall Number:	**002**
Method Date:	04/16/2014
Option Used To Satisfy Requirement:	VSR
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	38
Results (if applicable):	45.20

Outfall Number:	**002**
Method Date:	06/30/2014
Option Used To Satisfy Requirement:	INC
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	**002**
Method Date:	08/31/2014
Option Used To Satisfy Requirement:	INC
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	**002**
Method Date:	09/30/2014
Option Used To Satisfy Requirement:	INC
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	
Results (if applicable):	

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Outfall Number:	**002**
Method Date:	07/22/2014
Option Used To Satisfy Requirement:	VSR
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	38
Results (if applicable):	51.70

Outfall Number:	**002**
Method Date:	07/22/2014
Option Used To Satisfy Requirement:	VSR
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	38
Results (if applicable):	51.70

Outfall Number:	**002**
Method Date:	12/31/2014
Option Used To Satisfy Requirement:	INC
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	**002**
Method Date:	12/31/2014
Option Used To Satisfy Requirement:	INC
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	**005**
Method Date:	10/31/2014
Option Used To Satisfy Requirement:	INC
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

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Last Updated: 7/1/2015 Reporting For: **2014**

Outfall Number:	**005**
Method Date:	10/31/2014
Option Used To Satisfy Requirement:	INJ
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:

Weather in 2014 was not very cooperative with short windows of application in spring and fall.

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

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Staffing and Preventative Maintenance (All Treatment Plants)

1. Plant Staffing 1.1 Was your wastewater treatment plant adequately staffed last year? ● Yes 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 Manual 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:	

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We are undergoing a major upgrade. Most of this equipment is over 20 years old, it has lasted due to being cared for. Some equioment that is being replaced is being repaired with used parts to make it last until it is replaced.

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

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Operator Certification and Education

1. Operator-In-Charge

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

- ● Yes (0 points)
- o No (20 points)

Name: Jeff Harenda

Certification No: 31618

0

2. Certification Requirements

2.1 In accordance with Chapter NR 114.08 and 114.09, Wisconsin Administrative Code, what grade and subclass(es) were required for the operator-in-charge to operate the wastewater treatment plant and what grade and subclass(es) were held by the operator-in-charge?

Required:

4 - ACEFGHIJ; A - PRIMARY SETTLING; C - ACTIVATED SLUDGE; E - DISINFECTION; F - ANAEROBIC DIGESTION; G - MECHANICAL SLUDGE; H - FILTRATION; I - PHOSPHORUS REMOVAL; J - LABORATORY

Held:

Gade 4 in ABCEFGHIJ; grade T in D. A=Primary settling grade4; B=Trickling filters/RBC grade 4; C=Activated sludge grade 4; D=ponds/lagoons grade T; E=Disinfection grade 4; F=Anaerobic digestion grade 4; G=Mechanical sludge grade 4; H=Filtration grade 4; I=Phosphorus grade 4; J=Laboratory grade 4.

0

2.2 Was the operator-in-charge certified at the appropriate level to operate this plant?

- ● 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:

0

4. Continuing Education Credits

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

Grades T, 1, and 2:

- o Averaging 6 or more CECs per year.
- o Averaging less than 6 CECs per year.

Grades 3 and 4:

- ● 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: Rich Abbott

Telephone: (262)-524-3556 (XXX) XXX-XXXX

E-Mail Address (optional): rabbott@ci.waukesha.wi.us

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: 2014

- ● 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: 2014

- ● 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		$	3,792,177.94
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		$	3,792,177.94
3.2.4 Additions to Fund (e.g. portion of User Fee, earned interest, etc.)	+	$	692,400.00
3.2.5 Subtractions from Fund (e.g., equipment replacement, major repairs - use description box 3.2.6.1 below*)	-	$	168,487.65
3.2.6 Ending Balance as of December 31st for CMAR Reporting Year		$	4,316,090.29

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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.

UV disinfection upgrade design $42,550.00
Primary influent pump rebuild $18,657.60
Primary effluent pump rebuild $18,657.60
Replaced digester feed grinder $10,314.00
RAS/WAS pump rebuild parts $63,250.66
Thickened sludge pump rebuild $4,920.52
Phosphorus feasibility study $10,137.27

3.3 What amount should be in your Replacement Fund? $ 1,558,369.00 **0**

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 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.

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	Major upgrade-to continue into 2016	41800000	2014
2	Construction Administration and post design services. To continue into 2016.	1207745	2014
3	UV disinfection upgrade-to continue into 2016.	3700000	2015
4	Primary influent building slide gate repair	30,000	2015
5	Replace thickener feed pumps	60,000	2015
6	6-10 year faciltity plan upgrades, to include phosphorus treatment,cogeneration, and electrical upgrades.	10,500,000	2019

5. Financial Management General Comments

Due to cost changes we may only be rehabilitating two final clarifiers in current upgrade and would add the other two to the next phase of facility upgrade or do as a stand alone replacement fund project.

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

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Sanitary Sewer Collection Systems

1. CMOM Program

1.1 Do you have a Capacity, Management, Operation & Maintenance (CMOM) requirement in your WPDES permit?

- ● Yes
- o 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)
- o 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:

Follow the SSES prepared by Donohue for the City, replacing ferrous force mains, inspection and rehabilitation of manholes and sewer lines to reduce I&I. Follow 20 year CIP for upgading lift stations, trying to reduce the number of them also.

☒ 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
- ☒ 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) 12/02/14
- ☒ 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

☒ Maintenance Activities (provide details in question 2)

☒ 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:

☒ 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?

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☒ Current and up-to-date sewer map
☒ Sewer system plans and specifications
☒ Manhole location map
☒ Lift station pump and wet well capacity information
☒ Lift station O&M manuals

Within your sewer system have you identified the following?

☒ Areas with flat sewers
☒ Areas with surcharging
☒ Areas with bottlenecks or constrictions
☒ Areas with chronic basement backups or SSOs
☒ Areas with excess debris, solids, or grease accumulation
☒ Areas with heavy root growth
☒ Areas with excessive infiltration/inflow (I/I)
☒ Sewers with severe defects that affect flow capacity
☒ Adequacy of capacity for new connections
☒ Lift station capacity and/or pumping problems

0

☒ Annual Self-Auditing of your O&M/CMOM Program to ensure above components are being implemented, evaluated, and re-prioritized as needed

☒ Special Studies Last Year (check only those that apply):

☒ Infiltration/Inflow (I/I) Analysis
☐ Sewer System Evaluation Survey (SSES)
☐ Sewer Evaluation and Capacity Managment Plan (SECAP)
☒ Lift Station Evaluation Report
☐ Others:

2. Operation and Maintenance

2.1 Did your sanitary sewer collection system maintenance program include the following maintenance activities? Complete all that apply and indicate the amount maintained.

Cleaning	72	% of system/year
Root removal	0	% of system/year
Flow monitoring	1	% of system/year
Smoke testing	1	% of system/year
Sewer line televising	8	% of system/year
Manhole inspections	22	% of system/year
Lift station O&M	50	# per L.S./year
Manhole rehabilitation	2.3	% of manholes rehabbed
Mainline rehabilitation	0.4	% of sewer lines rehabbed
Private sewer inspections	1	% of system/year
Private sewer I/I removal	1	% of private services

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

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Lift station O&M above includes weekly inspections to test equipment and pump down wetwells. We had three lift station failures as defined, and one sewer pipe failure. There were 58 after hours call-ins for lift station alarms. Of that 38 were simple communication failures. The other 20 were for some other reason such as a power outage or pump failure. The City recieved 56 complaints which upon inspection all turned out to all be a problem with the residents own lateral and not the City's system. We had four complaints of odor; one of which was recently discovered to be the result of unsanitary conditions at a nieghboring home; one was resolved with the replacement of odor control media at a nearby manhole; One we were testing a different chemical at a lift station for odor control; one is unresolved as we have not been able to pinpoint the source.

3. Performance Indicators

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

33.91	Total actual amount of precipitation last year in inches
34.61	Annual average precipitation (for your location)
274	Miles of sanitary sewer
39	Number of lift stations
3	Number of lift station failures
1	Number of sewer pipe failures
0	Number of basement backup occurrences
0	Number of complaints
9.312	Average daily flow in MGD (if available)
12.370	Peak monthly flow in MGD (if available)
32.040	Peak hourly flow in MGD (if available)

3.2 Performance ratios for the past year:

0.08	Lift station failures (failures/year)
0.00	Sewer pipe failures (pipe failures/sewer mile/yr)
0.01	Sanitary sewer overflows (number/sewer mile/yr)
0.00	Basement backups (number/sewer mile)
0.00	Complaints (number/sewer mile)
1.3	Peaking factor ratio (Peak Monthly:Annual Daily Avg)
3.4	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)
0	12/26/2014 11:30:00 AM - 12/29/2014 11:45:00 AM	Lift Station at 1101 STH 164	Equipment Failure	0.0228 - 0.0228
1	6/24/2014 10:15:00 PM - 6/25/2014 8:00:00 AM	Lift Station at 2210 Springbrook North	Equipment Failure	0.0005 - 0.0005
2	11/25/2014 3:10:00 PM - 11/25/2014 9:20:00 PM	!940 Oakdale Drive	Broken Sewer, Broken Sewer	0.0228 - 0.0228
3	12/26/2014 2:00:00 PM - 12/30/2014 11:20:00 AM	Lift Station at 1101 Meadowbrook Rd, intermittent pump time.	Equipment Failure	0.0376 - 0.0376

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

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What actions were taken, or are underway, to reduce or eliminate SSO or TFO occurences in the future?

The lift station at STH164 is being completely upgraded and will include a drain from the valve vault to wetwell. The Springbrook lift station we are getting quotes to install a valve vault drain, (the faulty valve was replaced). Oakdale Drive lift station is part of a future CIP project to eliminate and consolidate 4 stations into one larger station. The Meadowbrook station is currently under study to also eliminate and consolidate 4 stations on that side of town.

5. Infiltration / Inflow (I/I)

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

o Yes

● No

If Yes, please describe:

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

o Yes

● No

If Yes, please describe:

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

The City continues to rehabilitate the collection system (relay/line mainline, chimney replacements, chimney seals, grouting, etc.) Reviewing our flow rates at the plant appears to indicate a reduction in overall level of I/I. There are many variables to consider however. In 2015, we plan to monitor a specific area of the City to determine the level of I/I reduction due to recent rehabilitation work.

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

Continued flow monitoring in target areas to help plan capitol improvment projects, to include repairs, relining. We are also looking into lift station consolidation in two areas of the City.

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

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Grading Summary

WPDES No: 0029971

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	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**	**148**
GRADE POINT AVERAGE (GPA) = 4				

Notes:

A = Voluntary Range (Response Optional)

B = Voluntary Range (Response Optional)

C = Recommendation Range (Response Required)

D = Action Range (Response Required)

F = Action Range (Response Required)

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Resolution or Owner's Statement

Name of Governing Body or Owner: City of Waukesha

Date of Resolution or Action Taken:

Resolution Number:

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. Regardless of grade, required for Collection Systems if SSOs were reported):

Influent Flow and Loadings: Grade = A

Effluent Quality: BOD: Grade = A

Effluent Quality: TSS: Grade = A

Effluent Quality: Ammonia: Grade = A

Effluent Quality: Phosphorus: Grade = A

Biosolids Quality and Management: Grade = A

Staffing: Grade = A

Operator Certification: Grade = A

Financial Management: Grade = A

Collection Systems: Grade = A

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. = 4