Compliance Maintenance Annual Report

Evansville Wastewater Treatment Facility

Last Updated: 5/22/2023 Reporting For: **2022**

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: Nitrogen: Grade = D

Groundwater: 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. = 3.45

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

None

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

We continue to televise and line any known problem areas

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

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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:

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	25	% of system/year
Root removal	25	% of system/year
Flow monitoring	0	% of system/year
Smoke testing	0	% of system/year
Sewer line televising	25	% of system/year
Manhole inspections	25	% of system/year
Lift station O&M	8	# 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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Section Grade	**A**

6.4 Future Energy Related Equipment

6.4.1 What energy efficient equipment or practices do you have planned for the future for your pump/lift stations?

None

7. Treatment Facility

7.1 Energy Usage

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

TREATMENT PLANT: Total Power Consumed/Month

	Electricity Consumed (kWh)	Total Influent Flow (MG)	Electricity Consumed/ Flow (kWh/MG)	Total Influent BOD (1000 lbs)	Electricity Consumed/ Total Influent BOD (kWh/1000lbs)	Natural Gas Consumed (therms)
January	39,744	9.97	3,986	18.69	2,126	1,464
February	33,408	8.98	3,720	17.22	1,940	1,089
March	36,288	10.61	3,420	16.09	2,255	714
April	37,440	11.92	3,141	18.96	1,975	228
May	37,728	11.55	3,266	17.73	2,128	8
June	38,016	10.39	3,659	22.11	1,719	2
July	38,864	10.57	3,677	14.57	2,667	6
August	39,744	10.05	3,955	18.79	2,115	12
September	39,744	10.98	3,620	15.12	2,629	161
October	41,472	9.89	4,193	16.86	2,460	406
November	38,880	10.33	3,764	16.86	2,306	1,134
December	39,744	11.18	3,555	30.81	1,290	1,176
Total	**461,072**	**126.42**		**223.81**		**6,400**
Average	**38,423**	**10.54**	**3,663**	**18.65**	**2,134**	**533**

7.1.2 Comments:

7.2 Energy Related Processes and Equipment

7.2.1 Indicate equipment and practices utilized at your treatment facility (Check all that apply):

- ☒ Aerobic Digestion
- ☐ Anaerobic Digestion
- ☐ Biological Phosphorus Removal
- ☒ Coarse Bubble Diffusers
- ☒ Dissolved O2 Monitoring and Aeration Control
- ☐ Effluent Pumping
- ☐ Fine Bubble Diffusers
- ☒ Influent Pumping
- ☒ Mechanical Sludge Processing
- ☒ Nitrification
- ☒ SCADA System
- ☐ UV Disinfection
- ☒ Variable Speed Drives
- ☐ Other:

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3.2.5 Subtractions from Fund (e.g., equipment replacement, major repairs - use description box 3.2.6.1 below*) - $ 0.00

3.2.6 Ending Balance as of December 31st for CMAR Reporting Year $ 999,234.67

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.

3.3 What amount should be in your Replacement Fund? $ 999,234.67

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 SectionInstructions link under Info header in the left-side menu.

3.3.1 Is the December 31 Ending Balance in your Replacement Fund above, (#3.2.6) equal to, or greater than the amount that should be in it (#3.3)?

- ● Yes
- ○ No

If No, please explain.

4. Future Planning

4.1 During the next ten years, will you be involved in formal planning for upgrading, rehabilitating, or new construction of your treatment facility or collection system?

- ● Yes - If Yes, please provide major project information, if not already listed below.☐☐
- ○ No

Project #	Project Description	Estimated Cost	Approximate Construction Year
1	10 Year Capital Plan - Sewer Main replacement and lining from 2021 to 2030.	$5,381,831	2028
2	6 Remaining Lift Station Rebuild/Repairs 2021-2030	$1,740,000	2028

5. Financial Management General Comments

ENERGY EFFICIENCY AND USE

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: 8

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OIT and Basic Certification:
- ○ Averaging 6 or more CECs per year.
- ○ Averaging less than 6 CECs per year.

Advanced Certification:
- ● Averaging 8 or more CECs per year.
- ○ Averaging less than 8 CECs per year.

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Section Grade	**A**

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We use JobCal for our maintenance scheduling, and we also perform a walk around inspection several times a day.

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

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Total Points Generated	0
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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:

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. 002 - LAGOON SLUDGE (Liquid)

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	0
Cadmium																	0	0
Copper		1500	4300						0								0	0
Lead		300	840						0								0	0
Mercury		17	57						0								0	0
Molybdenum	60		75						0							0		0
Nickel	336		420						0							0		0
Selenium	80		100						0							0		0
Zinc		2800	7500						0								0	0

Outfall No. 003 - Screw Press Sludge (Cake)

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						1.5916								0	0
Cadmium		39	85						<3.934								0	0
Copper		1500	4300						883								0	0
Lead		300	840						35								0	0
Mercury		17	57						<.4								0	0
Molybdenum	60		75						6.8							0		0
Nickel	336		420						12							0		0
Selenium	80		100						<16							0		0
Zinc		2800	7500						663								0	0

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Effluent Quality and Plant Performance (Total Nitrogen)

1. Effluent Total Nitrogen Results

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

Outfall No. 001	Monthly Average N Limit (mg/L)	Effluent Monthly Average N (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance	
January	10	11.271	1	1	
February	10	17.03	1	1	
March	10	12.005	1	1	
April	10	6.866	1	0	
May	10	8.124	1	0	
June	10	8.072	1	0	
July	10	5.72	1	0	
August	10	7.171	1	0	
September	10	7.941	1	0	
October	10	9.315	1	0	**30**
November	10	8.791	1	0	
December	10	9.097	1	0	
Months of Discharge/yr			12		
Points per each exceedance with 12 months of discharge:				**10**	
Exceedances				3	
Total Number of Points				**30**	

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?

We hauled 7 loads of mixed liquor from the Oregon WWTP on 3-24-22 and 3-25-22.

Total Points Generated	30
Score (100 - Total Points Generated)	70
Section Grade	**D**

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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	50	45	10	1	0	0
February	50	45	9	1	0	0
March	50	45	10	1	0	0
April	50	45	9	1	0	0
May	50	45	7	1	0	0
June	50	45	3	1	0	0
July	50	45	3	1	0	0
August	50	45	2	1	0	0
September	50	45	2	1	0	0
October	50	45	3	1	0	0
November	50	45	2	1	0	0
December	50	45	3	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)

● No

If No, please explain:

Effluent flow is calculated from measuring elevation and referring to the calibration chart

3. Treatment Problems

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

High effluent ammonia-slug load that killed bugs in VLR

4. Other Monitoring and Limits

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

○ Yes

● No

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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) 2022-03-28

○ 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

○ No

If No, please explain:

4.2 Was it necessary to enforce the ordinance?

○ 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	○ Yes
● No	● No	● No

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

Septic Tanks

○ Yes gallons

● No

Holding Tanks

○ Yes gallons

● No

Grease Traps

○ 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.

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

○ No

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

We had a slug load the last week of December 2021. We hauled 7 loads of mixed liquor from the Oregon on 3-24-22 and 3-25-22.