

WASTEWATER TREATMENT SYSTEM  
TECHNICAL MEMORANDUM

CITY OF STURGEON, MISSOURI  
SEPTEMBER, 2021

PREPARED FOR BOONE COUNTY REGIONAL SEWER DISTRICT



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	<p>I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Missouri.</p> <hr/> <p>Michael M. Hall, P.E. No. 30044 (Date)</p> <p>My license renewal date is December 31, 2021.</p>
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WASTEWATER TREATMENT SYSTEM TECHNICAL MEMORANDUM  
CITY OF STURGEON, MISSOURI

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## 1.0 INTRODUCTION

### 1.1 BACKGROUND & PURPOSE

The City of Sturgeon, Missouri has historically had operational issues with their wastewater treatment facility. Part of the issues are related to the capacity of the City to effectively operate and maintain the overall sewer system. The City has made some improvements to the system treatment in the recent past, but there are still additional known needs within the treatment and collection system.

As a result of the ongoing issues related to the operation of the sewer system, the City of Sturgeon entered into an agreement with the Boone County Regional Sewer District (BCRSD) to perform the operation of the sewer system. This agreement enables BCRSD to operate the system, perform the required testing, and other operational and maintenance activities for the sewer system. The City currently retains the overall fiscal responsibility of the sewer system including billing, collections and all other monetary expenditures. A copy of the agreement is included as Appendix A of this Technical Memorandum.

As part of the due diligence and being forward looking for the Sturgeon wastewater system, BCRSD has engaged the services of McClure Engineering Company to provide the following:

- Discussion of the Existing, including the constraints and issues with the land application system as the land application area is not owned by the City.
- Short-term (immediate, less than one year) improvements needed.
- Cost of a full engineering study for the treatment system (facility plan). This will include evaluation of modifications to the treatment system to include a partial discharging system (controlled discharge in conjunction with land application). This will also include an anti-degradation report and application to the Missouri DNR.
- Cost to perform a full SSES of the collection system, so that a long-term collection system CIP can be developed

The original proposal also included the preparation of an anti-degradation report and application to the Missouri Department of Natural Resources (MoDNR), but this has been completed and approved since the original agreement was drafted for this Technical Memorandum.

## 2.0 EXISTING SYSTEM

### 2.1 EXISTING SYSTEM - OVERVIEW

In general, the City of Sturgeon Wastewater System consists of a network of gravity sewers and four duplex pump stations. The City currently has approximately 1065 residents per the 2020 Census. There are some small businesses and two schools connected to the system. The city has seen some growth over the past 10 years and some additional growth is expected into the future. The treatment system consists of a primary two Cell facultative lagoon and one holding Cell for land application. The effluent is land applied through a center-pivot systems. The land for application is NOT owned by the City of Sturgeon.

## 2.2 OPERATING PERMIT

Since the treatment system is a lagoon with land application system (no discharge), there is no NPDES discharge permit associated with the operating permit. The permit summarizes the facilities and land application areas as well as other operational requirements and constraints on the facility. The operating permit can be found in Appendix B.

In summary, the utility is permitted for a dry weather design flow of 77,700 gallons per day with a 1 in 10 flow of 155,600 gallons per day. This max design flow does not account for inflow and infiltration. This corresponds to a population equivalent of 1,037 (75 gallons per equivalent per day). The permit indicates the actual daily flow is 100,000 gallons per day. The land application area is outlined by location, size and allowable irrigation volumes. The current permit outlines one land application area.

The current operating permit issued by the MoDNR will expire on June 30, 2022. The operating permit renewal must be submitted to the MoDNR in December of 2021.

The irrigation area is summarized below

**Table 2.2.1 – Permitted Irrigation Area**

Area – Landowner	Size	Rate
#1 – Keil	112.7 acres	24"/year max.

Overall, the system has a theoretical available irrigation capacity of 74,446,913 gallons per year with a required amount of 56,794,000 gallons. Issues with the current land application arrangements will be discussed later in this report.

## 2.3 HISTORICAL/BACKGROUND DATA AND INFORMATION

This Technical Memorandum reviewed historical data and information provided to McClure by BCRSD. This included a summary report prepared by Gary Cunningham, P.E. and site inspections by BCRSD Staff. In addition, McClure staff made a site visit to the treatment facility and spoke with Mr. Cunningham about the facility and the report he prepared.

Review of the report reveals that there have been issues in the past where the landowner has not irrigated from the lagoon due to wet conditions, etc. This has required the city to perform emergency discharges from the holding basin to ensure it does not overflow. This is allowed by permit, but is strongly discouraged. In addition, the overall treatment system appears to be within 80% of its design flow rate. From the report:

- The City is currently averaging approximately 44,750 gallons per day in potable water sales.
  - Since there are no water consuming industries in town, theoretically most of this water should return to the wastewater system (less water for irrigation, etc.).
- The current population of the community is 1065 persons.
  - This is in excess of the design population equivalent.
  - This equates to a design flow of 77,875 gallons per day without other (school, business, etc) discharges at 75 gpcd and 106,500 gallons per day at 100 gpcd.

- The average discharge from the facility reported is 100,000 gallons per day.
- The report recommended consideration for conversion to a combined land application and controlled discharge lagoon.
- The report recommended possibly adding aeration to Cell #1 to increase BOD removal.
- The report suggested investigation into inflow and infiltration
- The report noted that there could be sludge buildup in the primary lagoon Cell.

Conversations with MoDNR and Mr. Cunningham have revealed that the antidegradation report to allow the system to go to a controlled discharge system were approved in August of 2021. As of the writing of this report, the permit renewal has not been submitted (due by December of 2021).

## 3.0 EXISTING COLLECTION SYSTEM

### 3.1 COLLECTION SYSTEM

Detailed collection system maps were not provided for the purposes of this Technical Memorandum, but as part of the maintenance agreement with the City, BCRSD will be providing quarterly degreasing of up to 8 manholes. Part of the reason for this is that the influent sewer line to the primary lagoon Cell is hydraulically submerged. This is an undesirable design in that it allows for the deposition of sludge, debris and other material in the sewer line due to low flows, allows for the congealing of grease in the manholes. Long-term this should be rectified to allow the free-flow of sewage through the collection system and into the lagoon.

### 3.2 LIFT STATIONS

As mentioned earlier in this memo, there are four lift stations. One of these stations is at the lagoon site and will be discussed in the treatment section of this memo. BCRSD performed an inspection of all of the stations and found the following:

- All only had audio/visual alarms – no dialer/SCADA or other remote alarms.
- The station at the fairgrounds are 2 horsepower pumps.
- There is a station across from the fairgrounds that is a 3 horsepower station.
- There is a station at the mobile home park that is a 5 horsepower station.

The mobile home park station appears to be in the most deteriorated condition. The railings have rusted (for pump extraction). An overall map indicating the facilities can be found as exhibit 3.2.1 on the following page.





NORTH



## 4.0 EXISTING TREATMENT PLANT

### 4.1 LOCATION AND DESCRIPTION

The City's WWTP is split between two locations. Cell #1 and Cell #2 are located by an access road off of Missouri Route V/Audrain Road. The newer irrigation Cell is located to the east of Cells #1 & #2 is located southwest of town off of East Keil Road. Cells 1 and 2 are older and the third Cell has been constructed within the last 10 years. These lagoons were originally designed and permitted as a land application system. The City continues to operate the lagoons in this matter.

Influent wastewater enters via a gravity sewer line into Cell #1. As mentioned earlier in this memo, the influent sewer main is submerged for several hundred feet upstream of the lagoon. There is no screening or other treatment prior to the lagoon. The water flows by gravity from Cell 1 to 2 and then is transferred to the holding basin via the 7.5 horsepower lift station at the lagoon.

From the holding basin, the water is land applied via a vertical turbine pump at the basin to the center pivot east of the basin. The center pivot is controlled by a Reinke controller at the location of the center pivot.

In the past, the City has had issues with Mr. Keil, who operates the center pivot, in that the system has not been operated as much as it could be operated. As of the time of this memo, BCRSD has communicated more with Mr. Keil and more land application of wastewater has occurred.

In addition to the irrigation issues, the facility is in need of additional maintenance/upgrades. These include the following:

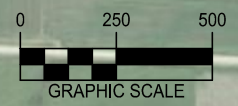
- The City desires to upgrade the lift station at the lagoon to three phase
- With the additional land application, the levels in Cells 1 and 2 have lowered and it is evident that Cell 1 has a substantial amount of sludge accumulation.
- As mentioned, the influent sewer line to the lagoons is submerged

An overall map indicating the treatment facilities can be found as exhibit 4.1.1 on the following page.





NORTH



HIGHWAY 22

IRRIGATION PUMP

HOLDING CELL

EXISTING CELL #2

LAGOON PUMP STATION  
(TO HOLDING CELL)

LAND APP SITE #1  
112.7 ACRES  
CENTER PIVOT  
24"/YEAR MAX.  
(KEIL)

EXISTING CELL #1  
(PRIMARY CELL)

BELIEVED  
FORCEMAIN  
ROUTE

CENTER  
PIVOT

ACCESS ROAD  
(TO AUDRAIN ST/HIGHWAY V)

NORFOLK SOUTHERN RAILWAY

E. KEIL ROAD

## 5.0 RECOMMENDATIONS

### 5.1 SUMMARY

Although the sewer utility has contracted operations and maintenance to BCRSD, there is limited to no capacity for growth within its existing permit. The city has submitted an antidegradation study for conversion to a controlled discharge system with irrigation. This study was approved by MoDNR in August of 2021. A prior report suggested that this be completed as well as possibly adding aeration to the first Cell.

- Per the report and the population vs. theoretical capacity, flow is more of a concern than organic loadings.
- True flows into the lagoon are unknown as well as the possible quantity of inflow and infiltration impacting the treatment system.
- The function of the primary cell is severely limited due to the large quantity of sludge in the lagoon.
- The trailer park lift station is in need of immediate repairs.
- The lift stations need remote monitoring
- The influent sewer main is submerged, allowing the deposition of solids, debris and grease accumulation in the mains and manholes.

It is recommended that the improvements be split into a short, intermediate and long-term phases. They are described in more detail in the following subsections.

### 5.2 SHORT-TERM IMPROVEMENTS

The short-term improvements should be implemented as soon as possible. All of these can be done without a DNR permit or engineering design (unless desired by the City or BCRSD). These are:

- Upgrade lagoon lift station to three phase:
  - Power: \$8,000
  - Pumps (new Homa): \$20,000
  - Control panel (with remote controller): \$12,000
  - Total: \$40,000
- Repair Trailer Park lift Station:
  - Pumps: \$12,000
  - Remote Controller: \$6,000
- Additional remote controllers for 2 Lift Stations: \$12,000

Total short term improvements: \$70,000

These improvements are seen as necessary and independent of any improvements to the land application/final disposal of the effluent from the facility.

### 5.3 INTERMEDIATE IMPROVEMENTS



There are three intermediate needs with that should be addressed. First is the sludge in Cell #1, and the second would be to do a flow monitoring study to determine the actual flows into the treatment lagoons as well as the impacts of I&I in the system. This study can then be utilized to develop a capital improvement plan for the system. The final need would be to install the conversions to allow for the system to be operated as a controlled discharge system with land application.

Per the previously prepared report, Cell #1 has approximately 266,500 square feet of surface area. For conservative estimating purposes, a depth of 4 feet and a percent solids of 5% is being utilized. This would yield a volume of 53,300 cubic feet (ignoring side slopes) and a weight of 1,750 dry tons. At a cost of \$350 per dry ton for removal and disposal, the total cost would be approximately \$612,500.

The cost for the flow monitoring study and development of recommended improvements would be approximately \$75,000.00.

The cost for the implementation of the controlled discharge conversion is as outlined in Table 5.3.1 below:

Table 5.3.1 – Controlled Discharge Conversion Estimate

TECHNICAL MEMORANDUM <i>City of Sturgeon, MO</i>		 <b>BCRSD</b> Boone County Regional Sewer District <i>Clean water for your future</i>		 <b>McCLURE</b> <sup>TM</sup>	
Engineer's Opinion of Probable Cost - Modification of Lagoon to Controlled Discharge					
OPTION 3.0 - DISCHARGE FLOWS TO UPPER CELL, ENHANCED COLLECTION & STORAGE					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENSION
1	Mobilization and Bonding	1	LS	\$ 11,300	\$ 11,300
2	New Outfall with Flow Metering Device	1	LS	\$ 35,000	\$ 35,000
3	Piping Modifications for Discharge	1	LS	\$ 50,000	\$ 50,000
4	New UV System at Outfall for Emergency Discharges	1	LS	\$ 105,000	\$ 105,000
5	Rip-Rap	1	LS	\$ 15,000	\$ 15,000
6	Lagoon Sitework Allowance	1	LS	\$ 20,000	\$ 20,000
<b>Subtotal of Probable Construction Cost</b>				<b>\$</b>	<b>236,300</b>
Contingency Allowance (10%)				\$	23,630
Wastewater Permitting & Coordination (incl permitting fees)				\$	8,500
Engineering				\$	31,192
Resident Project Representative				\$	23,394
Operation and Maintenance Manual				\$	4,500
Topo Survey				\$	3,500
<b>Total Project</b>				<b>\$</b>	<b>331,015</b>

### 5.4 LONG-TERM IMPROVEMENTS

The final long-term improvements will be determined by the results of the flow monitoring study. This may include installation of an influent pump station at the lagoon, collection system repairs, lining, replacements as well as other identified needs.



# APPENDIX A – BCRSD O&M AGREEMENT

**WASTEWATER OPERATIONS AND MAINTENANCE AGREEMENT**

**THIS AGREEMENT** dated the 9<sup>th</sup> day of August, 2021, by and between the City of Sturgeon, Missouri, a municipal corporation, hereinafter "City" and Boone County Regional Sewer District, a sewer district organized pursuant to the provisions of Chapter 204 RSMo, hereinafter "District."

**WITNESSETH:**

**WHEREAS**, City desires to enter into an agreement with the District under which District will provide for the operation and maintenance of City's wastewater collection and treatment system consisting of 4 duplex pump stations along with Permitted Feature #002, the two-cell storage lagoon, Permitted Feature #003, the Center Pivot Irrigation Field, and Permitted Feature #004, the single-cell storage basin, all the Permitted Features as described by Missouri State Operating Permit MO-0052027, hereinafter "wastewater collection and treatment system", together with necessary testing, regulatory compliance and emergency services.

**WHEREAS**, District is agreeable to provide the above services in accordance with the terms and conditions set forth in this agreement; and

**WHEREAS**, both parties are empowered to contract for the common services provided for herein and desire to memorialize their agreement.

**NOW, THEREFORE**, in consideration of the performance of the mutual agreements and promises hereinafter contained, the parties agree to the following:

1. **DISTRICT SERVICES:** District agrees to provide the following services to City under the terms and conditions of this agreement:

1.1 ***Wastewater Treatment Facility Operation and Maintenance*** - District agrees to operate and maintain City's wastewater collection and treatment system in accordance with

Exhibit A which is attached hereto and made a part hereof by reference. In exchange for District's operation and maintenance of City's wastewater collection and treatment system, City shall pay District the sum of \$41,783.15 annually, in equal monthly payments of \$3,481.93.

1.2 **Other Work** - District agrees to provide other work not described in the attached Exhibit A as is necessary to operate and maintain City's wastewater collection and treatment system in accordance with the rates shown on Exhibit B which is attached hereto and made a part hereof by reference.

2. **RECORDS:** District agrees to maintain written records of all services, activities, analyses, repairs, reports and other materials compiled by it for or in connection with performance of the terms and conditions of this agreement. All such records shall be made available to City upon advance notice and request for inspection and copying for the use and information of City.

3. **REGULATORY COMPLIANCE:** District agrees to provide all testing services necessary for determination of compliance with the terms and conditions of City's Missouri Department of Natural Resources issued operating permit associated with its wastewater collection and treatment system, except that District shall not be responsible for non-compliance with such permit for reasons outside of District's performance of its obligations under this agreement, such as non-compliance due to degeneration of or damage to materials and equipment from normal wear and tear or other cause beyond the control of District, design errors and omissions in the facilities and other conditions which were not or are not within the control of District. District agrees only to provide required sampling, testing, analysis and reporting to satisfy the terms and conditions of the permit associated with the lagoon. Any remedial work

made necessary due to noncompliance with the requirements of such permit shall be either contracted for by City without participation of the District or performed or subcontracted by the District on a time and materials or direct cost basis. All such remedial work shall be performed only at the direction of City; District assumes no responsibility for performance of remedial work after reporting the necessity of such remedial measures to City unless or until so directed by City.

4. **SUBCONTRACTS:** It is agreed District may contract or subcontract with any persons, firms, corporations, partnerships, political subdivisions or other organizations to carry out its responsibilities under this agreement and that City may, upon notification to District, contract with any persons, firms, corporations, partnerships, political subdivisions or other organizations for performance of any work to be performed by District under this agreement, other than operations and maintenance services provided to City for the monthly lump sum amount specified herein.

6. **INSURANCE:** City agrees it shall purchase or maintain existing comprehensive general liability insurance at its own expense naming both the City and the District as insureds; such insurance shall be in such amounts as are mutually agreed upon by City and District. City agrees to provide written evidence of such insurance to District within five days advance written notice by District.

7. **INDEMNITY:** District agrees that it shall indemnify, defend and hold City harmless from any and all liability, damage, expense, cause of action, claim, suit or judgment arising from injury or damage to persons or property directly or indirectly caused by or arising from any acts or omissions of District, its subcontractors, agents or employees in relation to

District's obligations under this agreement to the extent that such liability, damage, expense, claim, suit or judgment is not covered by insurance. City agrees it shall indemnify, defend and hold District harmless from any and all liability, damage, expense, cause of action, claim or judgment arising from injury or damage to persons or property, directly or indirectly caused by or arising from any acts or omissions of City, its subcontractors, agents or employees, in relation to City's obligations under this agreement, to the extent such liability, damage, expense, cause of action, claim, suit or judgment is not covered by insurance.

8. **TERM OF AGREEMENT AND RENEWAL:** This agreement shall be for a term of one year beginning August 9<sup>th</sup>, 2021 and ending August 9<sup>th</sup>, 2022, and may be renewed for additional one-year terms by mutual agreement of the parties; provided, however, that the parties to this agreement may renegotiate any additional terms, duties, responsibilities or compensation amounts for any renewal term. In the event this agreement is not renewed upon the expiration of any one-year term, the agreement shall continue on a month-to-month basis under the same terms and conditions contained in this agreement or the then current agreement, unless notice of termination is given as specified below.

9. **TERMINATION:** This agreement may be terminated by either party by providing written notice to the non-terminating party at least thirty days prior to the end of the initial term of this agreement or any renewal term or for material breach of any term or condition of this agreement; otherwise, this agreement may be terminated for any reason upon one party giving the other party at least ninety (90) days advance written notice of termination.

10. **ENTIRE AGREEMENT AND MODIFICATION:** This agreement is the entire agreement between the parties and supersedes and cancels any and all prior agreements,

negotiations, understandings, whether verbal or written in form, which predate this agreement. This agreement may be modified by written amendment signed by both parties hereto; no oral modification of this agreement shall be enforceable unless and until such modification is confirmed in writing and signed by authorized representatives for each party to this agreement who obtain such authorization by ordinance or official resolution of the governmental entity which they represent.

11. **BINDING EFFECT:** This agreement shall be binding upon and enure to the benefit of the parties hereto and their respective successors and assigns and no benefit or obligation of any term or condition of this agreement may be assigned or delegated except as specifically authorized herein.

12. **AUTHORITY OF SIGNATORIES:** The persons signing this agreement hereby represent that they are duly authorized to enter into this agreement and have taken all procedural measures required by law to bind the governmental entities which are parties to this agreement.

IN WITNESS WHEREOF, the parties have caused this agreement to be executed by their duly authorized representatives as of the date first above written.

**CITY OF STURGEON, MISSOURI**

**BOONE COUNTY REGIONAL  
SEWER DISTRICT**

By: Michael L. Butts  
Mayor

By: Randall Chann  
Randall Chann, Chairman

**ATTEST:**

Wendy Stacy  
City Clerk

**ATTEST:**

Lara Flores  
Lara Flores, Assistant Secretary

**City of Sturgeon – Boone County Regional Sewer District (BCRSD)**

**Exhibit A**

**Wastewater Operations and Maintenance Agreement**

**August 9, 2021**

**Irrigation Season**

**Task 1**

3 visits per week by Certified Operator - 3 hours per visit	rate = \$41.51 per hour	\$124.53
Service Truck 3 hours per visit	rate = \$37.55 per hour	\$112.65
	Per week rate	<u>\$711.54</u>
Irrigation season, April 1 through November 30	30 weeks	\$21,346.20

Task 1 includes measuring pH, dissolved oxygen, and water temperature at the primary cell and the secondary cell of the two-cell storage lagoon twice per month. Freeboard and rainfall will also be measured each visit and recorded. This task also includes conducting an amperage check on each pump at all 4 pump stations during each visit. Pump run times will also be checked at each pump station during each visit to verify that the alternating relay is operable. Alternating relay will be repaired if not operable.

Task 1 also includes checking the single-cell storage basin, measuring the freeboard three times per week or each visit and visually inspecting the center pivot. This task also includes a monthly download of the data from the center pivot for the required B-Discharge Monitoring Reports (e-DMRS) to be submitted to the Missouri Department of Natural Resources (MDNR). Visiting the single – cell storage basin and center pivot is conditional due to the access road.

These 3 hours include travel. One hour of travel is estimated for each visit.

**Non-Irrigation Season**

**Task 2**

3 visits per week by Certified Operator - 2 hours per visit	rate = \$41.51 per hour	\$83.02
Service Truck 2 hours per visit	rate = \$37.55 per hour	\$75.10
	Per week rate	<u>\$474.36</u>
Non-Irrigation Season, December 1 through March 30	22 weeks	\$10,435.92

Task 2 includes measuring pH, dissolved oxygen, and water temperature at the primary cell and the secondary cell of the two-cell storage lagoon twice per month. Freeboard and rainfall will also be measured each visit and recorded. This task also includes conducting an amperage check on each pump at all 4 pump stations during each visit. Pump run times will also be checked at each pump station during each visit to verify that the alternating relay is operable. Alternating relay will be repaired if not operable. A weekly visit to the single-cell storage basin to record freeboard will also be conducted.

These 2 hours include travel. One hour of travel is estimated for each visit.

**Quarterly Cleaning of 8 Manholes (MH)**

**Task 3**

Vacuum Truck and 2 Operators for 4 hours each service. Vacuum Truck – 4 hours	\$409.52
4 hours at 2 Operators	<u>\$301.12</u>
Total for Degreasing X 4	\$2,842.56

Task 3 includes 2 Operators and a vacuum truck cleaning 8 manholes quarterly. Debris from this cleaning will be disposed of in the primary cell of the two-cell storage lagoon.

<b>Management</b>	\$ 280 per month	\$3,360.00
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**Task 4**

Task 4 includes supervision of wastewater treatment plant operators and equipment operators, preparing e-DMRS and notifying the designated personnel of the City of Sturgeon with the submission of the e-DMRS to the MDNR.

If computed as a monthly average bill	Irrigation	\$21,346.20
	Non-Irrigation	\$10,435.92
	Quarterly MH Cleaning	\$2,842.56
	Management	\$3,360.00
	O&M Total	<u>\$37,984.68</u>
	10% Administrative Overhead (headquarters utilities, maintenance and telecommunications, continuing education and training, liability insurance, etc.)	\$3,798.47
	<b>Annual Total</b>	<b>\$41,783.15</b>



**Monthly Rate**                      **\$3,481.93**

**Locates Routine - \$22.00 per locate during routine visit.**

**Task 5**

Locates will be performed to the best of our ability with the information on City of Sturgeon maps.

No warranty or guaranty to the accuracy of the locate.

**Emergency Services or Spot Repair of Sewer Main or Force Main**

**Task 6**

Emergency services may include water in basement, manhole or pump station overflowing, audio / visual alarms at pump stations or broken force main. Will be billed according to the BCRSD 2021 Labor and Equipment Rates (see Exhibit B).

**Discharge Sampling**

**Task 7**

Any emergency discharge from either the two-cell storage lagoon or the single-cell storage basin shall be monitored for the parameters in the table below at least once during the discharge event according to the permit.

<b>Constituent</b>
<b>Effluent Flow</b>
<b>Biochemical Oxygen Demand<sub>5</sub> (BOD)</b>
<b>Total Suspended Solids (TSS)</b>
<b>Ammonia as N</b>
<b>pH</b>
<b>Oil and Grease</b>
<b><i>E. coli</i></b>
<b>Total Nitrogen</b>
<b>Total Phosphorus</b>

Effluent flow will be measured visually in the field along with pH by the use of a pH meter. BOD, TSS, and *E. Coli* will be measured in the BCRSD's laboratory. Ammonia, oil and grease, total nitrogen and total phosphorus will be measured in a contract laboratory. Also, the beginning time and ending time of the emergency discharge will be recorded.

**\$120.00 per sample plus laboratory costs from BCRSD 2021 Labor and Equipment Rates or contract laboratory invoice.**

**Other information**

**Tasks 1 and 2 will typically be performed by Russ Palmer, a Class A certified Wastewater Treatment Plant (WWTP) Operator. Russ has been with the BCRSD for about 26 years. A Class A certified WWTP Operator employed by the BCRSD is always available for consultation. Currently, the BCRSD employs 3 Class A certified WWTP Operators.**

**This scope of services does not include any mowing.**

**This scope of services includes making repairs up to \$100.00 in material costs without prior authorization from the City of Sturgeon. Material will be billed at cost and any additional labor time will be billed according to the BCRSD 2021 Labor and Equipment Rates. An example of this type of repair involves float switches at the 4 pump stations. We believe each pump station has 4 float switches – pumps off, Pump 1 on, Pump 2 on and High - level alarm. So, Sturgeon has 16 float switches. Our experience is that 2 switches will go bad per year.**

**The BCRSD will record in a log book the run times of each pump station. The log book will be available upon request.**

**The City Clerk will receive a notice that the e-DMR has been filed with MDNR.**

**A BCRSD representative will be available to consult with the Sturgeon Board of Aldermen upon request at no charge.**

**EXHIBIT B**

**BOONE COUNTY REGIONAL SEWER DISTRICT  
2021 LABOR AND EQUIPMENT RATES\***

<b>LABOR</b>	<b>RATE</b>	<b>UNIT</b>
OPERATIONS MANAGER	\$ 60.00	hour
OPERATIONS SUPERVISOR	\$ -	hour
WASTEWATER OPERATOR	\$ 33.90	hour
SENIOR WASTEWATER OPERATOR	\$ 41.51	hour
EQUIPMENT/WASTEWATER OPERATOR	\$ 37.64	hour
EQUIPMENT OPERATOR	\$ 33.58	hour
SENIOR EQUIPMENT OPERATOR	\$ 45.30	hour
MAINTENANCE WORKER	\$ 21.00	hour
PROJECT MANAGER/CONSTRUCTION INSPECTOR	\$ 56.91	hour
GENERAL MANAGER	\$ 86.15	hour

OVERTIME RATES FOR LABOR ARE 1.5 TIMES RATE SHOWN.

**EQUIPMENT**

VEHICLE - 1/2 TON SERVICE TRUCK	\$ 37.55	hour
VEHICLE - 1 TON 4WD FLATBED WITH CRANE/HOIST BED	\$ 45.45	hour
VEHICLE - DUMP TRUCK	\$ 146.15	hour
VACUUM TANK TRUCK (2,400 GALLON CAPACITY)	\$ 102.38	hour
SEWER JET/ROOT CUTTING TOOL	\$ 146.25	hour
TV INSPECTION TRAILER	\$ 146.25	hour
CENTRIFUGAL PUMP 6" w/suction/discharge hoses	\$ 54.60	hour
CENTRIFUGAL PUMP 3"	\$ 3.65	hour
CENTRIFUGAL PUMP 2"	\$ 26.35	hour
CENTRIFUGAL PUMP 1.5"	\$ 26.35	hour
DIAPHRAGM PUMP 3"	\$ 41.00	hour
1.5, 2.0 OR 3" SUCTION HOSE 20' SECTION	\$ 13.70	hour
1.5, 2.0 OR 3" DISCHARGE HOSE 20' SECTION	\$ 13.70	hour
BACKHOE/TRAILER (Excavator)	\$ 236.80	hour
UTILITY TRACTOR/TRAILER/MOWER/BLADE	\$ 143.20	hour
PORTABLE GENERATOR 8HP	\$ 41.00	hour
TRIPLE GAS DETECTOR	\$ 32.90	hour
SMOKE BLOWER	\$ 22.70	hour
SMOKE BOMBS " 3 MINUTE "	\$ 95.55	each
VENTILATION BLOWER PORTABLE	\$ 20.50	hour
SAFETY TRIPOD/WINCHER/HARNES	\$ 20.50	hour
CUTALL SAW 14" GAS POWERED	\$ 43.00	hour
CHAINSAW 18' GAS POWERED	\$ 43.10	hour

**LABORATORY TESTING**

BOD5	\$ 39.00	each
TSS	\$ 39.00	each
pH	\$ 7.00	each
<i>E. Coli</i>	\$ 28.00	each

PASS THROUGH OF ACTUAL COST IF TESTED BY AN OUTSIDE LAB

# **APPENDIX B – EXISTING OPERATING PERMIT**

STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**  
MISSOURI CLEAN WATER COMMISSION



## MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92<sup>nd</sup> Congress) as amended,

Permit No.	MO-0052027
Owner:	City of Sturgeon
Address:	303 Station Drive, Sturgeon, MO 65284
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Sturgeon WWTF
Facility Address:	0.1 miles east of Hwy V and Proctor Street intersection, Sturgeon, MO 65284
Legal Description:	See Page 2
UTM Coordinates:	See Page 2
Receiving Stream:	See Page 2
First Classified Stream and ID:	See Page 2
USGS Basin & Sub-watershed No.:	See Page 2

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

### FACILITY DESCRIPTION

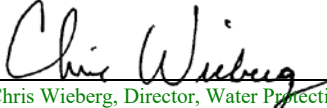
See Page 2

This permit authorizes irrigation and discharges of wastewater under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

November 1, 2018  
Effective Date

  
Edward B. Galbraith, Director, Division of Environmental Quality

June 30, 2022  
Expiration Date

  
Chris Wieberg, Director, Water Protection Program

**FACILITY DESCRIPTION (continued):**

**Permitted Feature #002** – POTW – SIC #4952

The use or operation of this facility shall be by or under the supervision of a Certified “D” Operator.

Two-cell storage lagoon / wastewater is irrigated to the surface / sludge retained in lagoon

Design population equivalent is 1,307.

Design Flow is 155,600 gallons per day (Design Flow plus 10-year rainfall minus evaporation, does not account for inflow and infiltration)

Average design flow is 77,800 gallons per day (dry weather flows).

Actual flow is 100,000 gallons per day.

Design sludge production is 19 dry tons per year.

Legal Description: Sec. 4, T51N, R12W, Boone County  
UTM Coordinates: X=562768, Y=4343493  
Receiving Stream: Tributary to Saling Creek (C)  
First Classified Stream and ID: 8-20-13 MUDD V1.0 (C) (3960)  
USGS Basin & Sub-watershed No.: (07110006-0303)

**Permitted Feature #003**– Center Pivot Irrigation Field

Legal Description: Sec. 3, T51N, R12W, Boone County  
UTM Coordinates: X=564794, Y=4343259  
Receiving Stream: Tributary to Saling Creek  
First Classified Stream and ID: 8-20-13 MUDD V1.0 (C) (3960)  
USGS Basin & Sub-watershed No.: (07110006-0303)

**Wastewater Irrigation Design Parameters:**

Irrigation volume per year: 74,446,913 gallons (based on annual irrigation rate)

Minimum irrigation volume per year at Design Flow: 56,794,000 gallons

Irrigation area: 112.7 acres

Irrigation rates: 0.012 inch/hour; 0.28 inch/day; 1.95 inches/week; 24 inches/year

Field slopes: less than 2 percent

Equipment type: Center pivot

Vegetation: Row crops

Irrigation rate is based on: Hydraulic loading rate

**Permitted Feature #004** – Single-cell storage basin

Legal Description: Sec. 4, T51N, R12W, Boone County  
UTM Coordinates: X=563916, Y=4343435  
Receiving Stream: Tributary to Saling Creek  
First Classified Stream and ID: 8-20-13 MUDD V1.0 (C) (3960)  
USGS Basin & Sub-watershed No.: (07110006-0303)

**Storage Basin:**

Maximum Operating Level: 2 feet of freeboard (storage basin water level in feet below the overflow level)

Storage volume (min to max water levels, in gallons): Cell #1  
34,100,000

**Storage Capacity (in Days):**

Design for Dry weather flows: 423 days

Design with 1-in 10 year flows: 212 days

<b>PERMITTED FEATURE #002</b>	<b>TABLE A-1 IRRIGATION SYSTEM LIMITATIONS AND MONITORING REQUIREMENTS</b>
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The permittee is authorized to conduct storage of wastewater as specified in the application for this permit. The final limitations shall become effective on **November 1, 2018** and remain in effect until expiration of the permit. The storage of wastewater shall be controlled, limited and monitored by the permittee as specified below:

STORAGE BASIN PARAMETER(S)	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY TOTAL	WEEKLY TOTAL	MONTHLY TOTAL	MEASUREMENT FREQUENCY	SAMPLE TYPE
Storage Basin/Lagoon Freeboard $\Omega$	feet	*			once/week	measured
Precipitation	inches	*		*	daily	total

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE DECEMBER 28, 2018.

<b>PERMITTED FEATURE #003</b>	<b>TABLE B-1 IRRIGATION SYSTEM LIMITATIONS AND MONITORING REQUIREMENTS</b>
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The permittee is authorized to conduct irrigation of wastewater as specified in the application for this permit. The final limitations shall become effective on **November 1, 2018** and remain in effect until expiration of the permit. The irrigation of wastewater shall be controlled, limited and monitored by the permittee as specified below:

IRRIGATION OPERATIONAL MONITORING PARAMETER(S)	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY TOTAL	WEEKLY TOTAL	MONTHLY TOTAL	MEASUREMENT FREQUENCY	SAMPLE TYPE
Irrigation Period	hours	*		*	daily	total
Volume Irrigated	gallons	*		*	daily	total
Irrigation Area	acres	*		*	daily	total
Irrigation Rate	inches	*		*	daily	total

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE DECEMBER 28, 2018.

<b>PERMITTED FEATURES #004</b>	<b>TABLE C-1 IRRIGATION SYSTEM LIMITATIONS AND MONITORING REQUIREMENTS</b>
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The permittee is authorized to conduct storage of wastewater as specified in the application for this permit. The final limitations shall become effective on **November 1, 2018** and remain in effect until expiration of the permit. The storage of wastewater shall be controlled, limited and monitored by the permittee as specified below:

STORAGE BASIN PARAMETER(S)	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY TOTAL	WEEKLY TOTAL	MONTHLY TOTAL	MEASUREMENT FREQUENCY	SAMPLE TYPE
Storage Basin Freeboard $\Omega$	feet	*			once/week	measured
Precipitation	inches	*		*	daily	total

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE DECEMBER 28, 2018.

\* Monitoring requirement only.

$\Omega$  Storage Basin Freeboard shall be reported as storage basin water level in feet below the overflow level.

**D. STANDARD CONDITIONS**

In addition to specified conditions stated herein, this permit is subject to the attached Parts I, II, & III standard conditions dated August 1, 2014, May 1, 2013, and March 1, 2015, and hereby incorporated as though fully set forth herein.

**E. SPECIAL CONDITIONS**

1. Emergency Discharges.

- (a) Monitoring. Any emergency discharge from Permitted Features #002 or #004 shall be monitored for the parameters in the table below at least once during the discharge event. Additional monitoring may be required by the Department on a case-by-case basis. The facility shall submit test results, along with the number of days the storage basin or lagoon has discharged during the month via the Electronic Discharge Monitoring Report (eDMR) Submission System by the 28<sup>th</sup> day of the month after the discharge ceases. Permittee shall monitor for the following constituents:

Constituent	Units	Constituent	Units
Effluent Flow	MGD	Oil & Grease	mg/L
Biochemical Oxygen Demand <sub>5</sub>	mg/L	<i>E. coli</i> *	#/100mL
Total Suspended Solids	mg/L	Total Nitrogen	mg/L
Ammonia as N	mg/L	Total Phosphorus	mg/L
pH – Units	SU		

\* Sampling for *E. coli* is only required during the recreational months of April – October.

- (b) Authorized Discharges. An emergency discharge from Permitted Feature #002 or #004 may only occur if rainfall exceeds the 10-year 365-day rainfall event (chronic) or the 25-year 24-hour rainfall event (catastrophic). The facility shall make all reasonable attempts to return the water level in the basin to below the maximum operating level. Design Storm Maps and Tables can be found at [http://ag3.agebb.missouri.edu/design\\_storm/](http://ag3.agebb.missouri.edu/design_storm/). For this facility:

Boone County	Data Collected: May 16, 2018
10-year 365-day rainfall event	49.5 inches
25-year 24-hour rainfall event	5.8 inches

- (c) Unauthorized Discharges. **Discharge from Permitted Features #002 or #004 for any other reason than what is stated in 1(b) of this Special Condition shall constitute a permit violation and shall be reported in accordance with Standard Conditions Part 1 Section B.2.** Unauthorized discharges are to be reported to the Northeast Regional Office during normal business hours or by using the online Sanitary Sewer Overflow/Facility Bypass Application located at: <http://dnr.mo.gov/modnrca/> or the Environmental Emergency Response spill-line at 573-634-2436 outside of normal business hours.

2. Wastewater Irrigation System.

- (a) No-discharge facility requirements. Wastewater shall be stored and irrigated during suitable conditions so that there is no discharge from the storage basins or irrigation sites.
- (b) Permitted Features #002 and #004 Operating Levels - No-discharge Systems. The minimum and maximum operating water levels for Permitted Features #002 and #004 shall be clearly marked in the storage basin and lagoon cells. Permitted Features #002 and #004 shall be operated so that the maximum water elevation does not exceed two feet below the top of the berm and Emergency Spillway respectively, except due to exceedances of the 10-year 365-day rainfall event or 25-year 24-hour rainfall event as detailed in Special Condition #1. Wastewater shall be irrigated whenever feasible based on soil, weather conditions, and permit requirements. To ensure maximum storage capacity for the winter months when soil conditions may not be suitable for wastewater irrigation, Permitted Feature #004 shall be lowered to the two-foot minimum operating level during the months of September through November unless the Department approves a specific deviation from this requirement.
- (c) Emergency Spillway. Lagoons and earthen storage basins should have an emergency spillway to protect the structural integrity of earthen structures during operation at near full water levels and in the event of overflow conditions. If a spillway is present, the spillway shall be at least one foot below top of berm.
- (d) General Irrigation Requirements. The wastewater irrigation system shall be operated so as to provide uniform distribution of irrigated wastewater over the entire irrigation site. A complete ground cover of vegetation shall be maintained on the irrigation site unless the system is approved for row crop irrigation. The wastewater irrigation system shall be capable of irrigating the annual design flow during an irrigation period of 100 days or less per year. If the facility determines that night time irrigation is needed, the facility shall submit a night time irrigation plan to the Department’s Water Protection Program for review and approval. Night time irrigation shall only occur when the Department has approved the night time irrigation plan.
- (e) Saturated/Frozen Conditions. There shall be no irrigation during ground frost; frozen, snow-covered, or saturated soil conditions; or when precipitation is imminent or occurring.
- (f) Slope Restrictions. Wastewater irrigation on slopes exceeding 10%, the hourly irrigation rate shall not exceed one-half (1/2) the design sustained permeability and in no case shall exceed one-half (1/2) inch per hour.



**E. SPECIAL CONDITIONS (continued)**

- (g) Set Backs. There shall be no irrigation within:
    - (1) 300 feet of any sinkhole, losing stream, or any other feature that may provide a connection to the ground water table and the surface;
    - (2) 300 feet from any existing potable water supply well not located on the property;
    - (3) 150 feet of dwelling or public use areas;
    - (4) 100 feet of any gaining perennial or intermittent streams or tributaries or any publicly or privately owned ponds or lakes. As a compliance alternative a 35-foot vegetative buffer that is permanently covered with perennial vegetation may be substituted for the 100 foot set-back requirement;
    - (5) 50 feet of the property line or public road.
  - (h) Public Access Restrictions. Public access shall not be allowed to public-use-area irrigation sites when irrigation is occurring.
  - (i) Grazing and Harvesting of Forage Crops Restrictions. Grazing of animals shall be deferred as per the following:
    - (1) From May 1 to October 30, the minimum deferment from grazing or forage harvesting shall be 14 days.
    - (2) From November 1 to April 30, the minimum deferment from grazing or forage harvesting shall be 30 days.
  - (j) Irrigated Wastewater Disinfection. Wastewater shall be disinfected prior to irrigation (not storage) to public-use-areas.
  - (k) Agronomic Irrigation Rates. Wastewater irrigation shall not exceed agronomic rates to ensure agricultural use of nutrients and prevent contamination of surface and groundwater. The agronomic rate is the amount of wastewater applied to a field to meet the fertilizer recommendation.
  - (l) Equipment Checks during Irrigation. The irrigation system and irrigation site shall be visually inspected at least once/day during wastewater irrigation to check for equipment malfunctions and runoff from the irrigation site.
3. Wastewater irrigation records shall be maintained and summarized into an annual operating report, which shall be submitted by January 28th of each year for the previous calendar year period, via the Electronic Discharge Monitoring Report (eDMR) Submission System. The summarized annual report is in addition to the reporting requirements listed in Table A. The summarized annual report shall include the following:
- (a) Record of maintenance and repairs performed during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year;
  - (b) The number of days the storage basin(s) has discharged during the year, the discharge flow, and the reasons discharge occurred; and
  - (c) A summary of the irrigation operations for the year including: the number of days of irrigation, the total gallons irrigated, the total acres used, the irrigation rate in inches for the year, and the annual precipitation received at the facility.
4. Electronic Discharge Monitoring Report (eDMR) Submission System.
- (a) Discharge Monitoring Reporting Requirements. The permittee must electronically submit compliance monitoring data via the eDMR system. In regards to Standard Conditions Part I, Section B, #7, the eDMR system is currently the only Department approved reporting method for this permit.
  - (b) Programmatic Reporting Requirements. The following reports (if required by this permit) must be electronically submitted as an attachment to the eDMR system until such a time when the current or a new system is available to allow direct input of the data:
    - (1) Collection System Maintenance Annual Reports;
    - (2) Wastewater Irrigation Annual Reports;
    - (3) Sludge/Biosolids Annual Reports; and
    - (4) Any additional report required by the permit excluding bypass reporting.After such a system has been made available by the Department, required data shall be directly input into the system by the next report due date.
  - (c) Other actions. The following shall be submitted electronically after such a system has been made available by the Department:
    - (1) Notices of Intent to discharge (NOIs);
    - (2) Notices of Termination (NOTs); and
    - (3) Bypass reporting, See Special Condition #14 for 24-hr. bypass reporting requirements.
  - (d) Electronic Submissions. To access the eDMR system, use the following link in your web browser: <https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx>.
  - (e) Waivers from Electronic Reporting. The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the Department in compliance with 40 CFR Part 127. The permittee may obtain an electronic reporting waiver by first submitting an eDMR Waiver Request Form: <http://dnr.mo.gov/forms/780-2692-f.pdf>. The Department will either approve or deny this electronic reporting waiver request within 120 calendar days. Only permittees with an approved waiver request may submit monitoring data and reports on paper to the Department for the period that the approved electronic reporting waiver is effective.

**E. SPECIAL CONDITIONS (continued)**

5. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with §644.051.16, RSMo, and the Clean Water Act (CWA) section 402(k); however, this permit may be reopened and modified, or alternatively revoked and reissued:
  - (a) To comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.
  - (b) To incorporate an approved pretreatment program pursuant to 40 CFR 403.8(a).
6. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.
7. Report as no-discharge when irrigation does not occur during the report period.
8. Changes in existing pollutants or the addition of new pollutants to the treatment facility  
The permittee must provide adequate notice to the Director of the following:
  - (a) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; and
  - (b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
  - (c) For purposes of this paragraph, adequate notice shall include information on:
    - (1) the quality and quantity of effluent introduced into the POTW, and
    - (2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
9. The permittee shall comply with any applicable requirements listed in 10 CSR 20-9. The monitoring frequencies of all applicable parameters have been reduced to twice a month. The monitoring frequencies contained in Table A of this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. To request further modification of the operational control testing requirements, the permittee shall submit a permit modification application and fee to the Department requesting a deviation from the operational control monitoring requirements. If the request is approved, the Department will modify the permit.
10. The permittee shall develop and implement a program for maintenance and repair of the collection system. The recommended guidance is the US EPA's Guide For Evaluating Capacity, Management, Operation, And Maintenance (CMOM) Programs At Sanitary Sewer Collection Systems (Document number EPA 305-B-05-002) or the Departments' CMOM Model located at <http://dnr.mo.gov/env/wpp/permits/docs/cmom-template.doc>. For additional information regarding the Departments' CMOM Model, see the CMOM Plan Model Guidance document at <http://dnr.mo.gov/pubs/pub2574.htm>.  
The permittee shall also submit a report via the Electronic Discharge Monitoring Report (eDMR) Submission System annually, by January 28<sup>th</sup>, for the previous calendar year. The report shall contain the following information:
  - (a) A summary of the efforts to locate and eliminate sources of excessive infiltration and inflow into the collection system serving the facility for the previous year.
  - (b) A summary of the general maintenance and repairs to the collection system serving the facility for the previous year.
  - (c) A summary of any planned maintenance and repairs to the collection system serving the facility for the upcoming calendar year. This list shall include locations (GPS, 911 address, manhole number, etc.) and actions to be taken.
11. All outfalls must be clearly marked in the field.
12. The permittee shall develop, maintain and implement an Operation and Maintenance (O&M) Manual. The manual shall include all necessary items to ensure the operation and integrity of the waste handling and wastewater irrigation systems, including key operating procedures, an aerial or topographic site map with the permitted features (including storage basins and irrigation sites) and irrigation buffer zones marked, and a brief summary of the operation of the facility. The O&M manual shall be made available to the operator and shall be reviewed and updated at least every five years or when there is a change in equipment or irrigation sites.

**E. SPECIAL CONDITIONS (continued)**

13. Reporting of Non-Detects:
  - (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
  - (b) The permittee shall not report a sample result as “Non-Detect” without also reporting the detection limit of the test. Reporting as “Non Detect” without also including the detection limit will be considered failure to report, which is a violation of this permit.
  - (c) The permittee shall provide the “Non-Detect” sample result using the less than sign and the minimum detection limit (e.g. <10).
  - (d) Where the permit contains a Minimum Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter (conventional, priority pollutants, metals, etc.), then zero (0) is to be reported for that parameter.
  - (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
  - (f) When calculating monthly averages, one-half of the method detection limit (MDL) should be used instead of a zero. Where all data are below the MDL, the “<MDL” shall be reported as indicated in item (c).
14. Bypasses are not authorized at this facility unless they meet the criteria in 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3), and with Standard Condition Part I, Section B, subsection 2. Bypasses are to be reported to the Northeast Regional Office during normal business hours or by using the online Sanitary Sewer Overflow/Facility Bypass Application located at: <http://dnr.mo.gov/modnrcag/> or the Environmental Emergency Response spill-line at 573-634-2436 outside of normal business hours. Once an electronic reporting system compliant with 40 CFR Part 127, the National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, is available all bypasses must be reported electronically via the new system. Blending, which is the practice of combining a partially-treated wastewater process stream with a fully-treated wastewater process stream prior to discharge, is not considered a form of bypass. If the permittee wishes to utilize blending, the permittee shall file an application to modify this permit to facilitate the inclusion of appropriate monitoring conditions.
15. The City’s lagoon system, Permitted Feature #002, must be sufficiently secured to restrict entry by children, livestock and unauthorized persons as well as to protect the facility from vandalism.
16. At least one gate must be provided to access the City’s lagoon system, Permitted Feature #002, and provide for maintenance and mowing. The gate shall remain closed except when temporarily opened by the permittee to access the facility to perform operational monitoring, sampling, maintenance, or mowing. The gates shall also be temporarily opened for inspections by the Department. The gate shall be closed and locked when the facility is not staffed.
17. At least one (1) warning sign shall be placed on each side of the City’s lagoon system (Permitted Feature #002) enclosure in such positions as to be clearly visible from all directions of approach. There shall also be one (1) sign placed for every five hundred feet (500') (150 m) of the perimeter fence. A sign shall also be placed on each gate. Minimum wording shall be SEWAGE TREATMENT FACILITY—KEEP OUT. Signs shall be made of durable materials with characters at least two inches (2") high and shall be securely fastened to the fence, equipment or other suitable locations.
18. An all-weather access road shall be provided to the City’s lagoon system, Permitted Feature #002.
19. Sludge treatment storage and disposal practices shall be conducted in accordance with Standard Conditions Part III. The permittee shall receive approval for any sludge treatment, storage, or disposal practices not identified in the facility description of the operating permit.
20. The berms of the lagoon and storage basin (Permitted Features #002 and #004) shall be mowed and kept free of any deep-rooted vegetation, animal dens, or other potential sources of damage to the berms.
21. The facility shall ensure that adequate provisions are provided to prevent surface water intrusion into the lagoon and storage basin (Permitted Features #002 and #004) and to divert stormwater runoff around the lagoon and storage basin and protect embankments from erosion.
22. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).
23. Wastewater Irrigation Sites. To add additional irrigation sites or to convert any of the land to public-use-areas, a construction permit, geohydrological evaluation, soils report, and permit modification may be required. The facility shall contact the Department for a written determination.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES**  
**FACT SHEET**  
**FOR THE PURPOSE OF RENEWAL**  
**OF**  
**MO-0052027**  
**STURGEON WWTF**

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollutant Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)(A)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for a Minor.

**Part I – Facility Information**

Facility Type: POTW - SIC #4952

Facility Description: Two-cell storage lagoon / single cell storage basin / wastewater is irrigated to the surface / sludge retained in lagoon

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?

- Yes

- No.

Application Date: 01/18/2017

Expiration Date: 06/30/2017

**PERMITTED FEATURE(S) TABLE:**

PERMITTED FEATURE	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#002	0.2	Equivalent to Secondary	Domestic
#003	Irrigation Field		
#004	NA	Storage Basin	Domestic

Facility Performance History:

The facility has not reported an effluent violation within the last permit renewal cycle. This facility was last inspected on October 14, 2015. The inspection showed the following unsatisfactory features: failure to submit an interim progress report and failure to provide adequate fencing to prevent unauthorized access. The Department received an adequate response to the inspection report from the facility on November 23, 2015. The Department returned the facility to compliance with a December 11, 2015 letter.

Comments:

Special conditions were updated to include the addition of inflow and infiltration reporting requirements, reporting of Non-detects, and bypass reporting requirements.

## **Part II – Operator Certification Requirements**

- This facility is required to have a certified operator.

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators or supervisors of operations at regulated wastewater treatment facilities shall be certified in accordance with [10 CSR 20-9.020(2)] and any other applicable state law or regulation. As per [10 CSR 20-9.020(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Owned or operated by or for a

- Municipalities

- Federal agency

- County

- Public Sewer District

- State agency

- Private Sewer Company regulated by the Public Service Commission

- Public Water Supply Districts

Each of the above entities are only applicable if they have a Population Equivalent greater than two hundred (200) or fifty (50) or more service connections.

This facility currently requires an operator with a D Certification Level. Please see **Appendix - Classification Worksheet**. Modifications made to the wastewater treatment facility may cause the classification to be modified.

Operator's Name: John J. Gingerich  
Certification Number: 9988  
Certification Level: WW-D

The listing of the operator above only signifies that staff drafting this operating permit have reviewed appropriate Department records and determined that the name listed on the operating permit application has the correct and applicable Certification Level.

- This facility is not required to have a certified operator.

## **Part III– Operational Control Testing Requirements**

Missouri Clean Water Commission regulation 10 CSR 20-9.010 requires certain publically owned treatment works and privately owned facilities regulated by the Public Service Commission to conduct internal operational control monitoring to further ensure proper operation of the facility and to be a safeguard or early warning for potential plant upsets that could affect effluent quality. This requirement is only applicable if the publically owned treatment works and privately owned facilities regulated by the Public Service Commission has a Population Equivalent greater than two hundred (200) or twenty five (25) or more service connections.

10 CSR 20-9.010(3) allows the Department to modify the monitoring frequency required in the rule based upon the Department' judgement of monitoring needs for process control at the specified facility

- As per [10 CSR 20-9.010(4)], the facility is not required to conduct operational monitoring.

- As per [10 CSR 20-9.010(4)], the facility is required to conduct operational monitoring.

- The facility has a Department approved modification to the Operational Control Testing requirements.

- The Department has approved alternative monitoring frequencies for the requirements in 10 CSR 20-9.010(5)(A) for the facility. For lagoon systems that are designed as no-discharge systems followed by wastewater irrigation the monitoring frequencies of all applicable parameters have been reduced to twice a month.

**Part IV – Receiving Stream Information**

While this facility is no discharge, a receiving stream is listed for the purposes of showing what stream would be affected in the event of an emergency release due to an acute or chronic rain event.

**RECEIVING STREAM(S) TABLE: PERMITTED FEATURE #002**

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Tributary to Saling Creek (8-20-13 MUDD V1.0)	C	3960	AQL, WBC-B, SCR, HHP, IRR, LWW	07110006-0303	0

**RECEIVING STREAM(S) TABLE: PERMITTED FEATURES #003 & #004**

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC
Tributary to Saling Creek	NA	NA	General Criteria	07110006-0303
8-20-13 MUDD V1.0	C	3960	AQL, WBC-B, SCR, HHP, IRR, LWW	

\*As per 10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission’s water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and 1<sup>st</sup> classified receiving stream’s beneficial water uses to be maintained are in the receiving stream table in accordance with [10 CSR 20-7.031(1)(C)].

Uses which may be found in the receiving streams table, above:

10 CSR 20-7.031(1)(C)1.:

**AQL** = Protection of aquatic life (Current narrative use(s) are defined to ensure the protection and propagation of fish shellfish and wildlife, which is further subcategorized as: **WWH** = Warm Water Habitat; **CDF** = Cold-water fishery (Current narrative use is cold-water habitat.); **CLF** = Cool-water fishery (Current narrative use is cool-water habitat); **EAH** = Ephemeral Aquatic Habitat; **MAH** = Modified Aquatic Habitat; **LAH** = Limited Aquatic Habitat. This permit uses AQL effluent limitations in 10 CSR 20-7.031 Table A for all habitat designations unless otherwise specified.)

10 CSR 20-7.031(1)(C)2.: Recreation in and on the water

**WBC** = Whole Body Contact recreation where the entire body is capable of being submerged;

**WBC-A** = Whole body contact recreation that supports swimming uses and has public access;

**WBC-B** = Whole body contact recreation that supports swimming;

**SCR** = Secondary Contact Recreation (like fishing, wading, and boating).

10 CSR 20-7.031(1)(C)3. to 7.:

**HHP** (formerly HHP) = Human Health Protection as it relates to the consumption of fish;

**IRR** = Irrigation for use on crops utilized for human or livestock consumption;

**LWW** = Livestock and wildlife watering (Current narrative use is defined as **LWP** = Livestock and Wildlife Protection);

**DWS** = Drinking Water Supply;

**IND** = Industrial water supply

10 CSR 20-7.031(1)(C)8-11.: Wetlands (10 CSR 20-7.031 Table A currently does not have corresponding habitat use criteria for these defined uses)

**WSA** = Storm- and flood-water storage and attenuation; **WHP** = Habitat for resident and migratory wildlife species;

**WRC** = Recreational, cultural, educational, scientific, and natural aesthetic values and uses; **WHC** = Hydrologic cycle maintenance.

10 CSR 20-7.031(6): **GRW** = Groundwater

**RECEIVING STREAM MONITORING REQUIREMENTS:**

No receiving water monitoring requirements recommended at this time.

## **Part V – Rationale and Derivation of Effluent Limitations & Permit Conditions**

### **ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:**

As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

- The facility discharges to a Losing Stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], or is an existing facility, and has submitted an alternative evaluation.

- The facility does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], or is an existing facility.

### **ANTI-BACKSLIDING:**

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(o); 40 CFR Part 122.44(l)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

- All limits in this operating permit are at least as protective as those previously established; therefore, backsliding does not apply.

- Limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.

- The Department determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).

- **General Criteria**. The previous permit contained a special condition which described a specific set of prohibitions related to general criteria found in 10 CSR 20-7.031(4). In order to comply with 40 CFR 122.44(d)(1), the permit writer has conducted reasonable potential determinations for each general criterion and established numeric effluent limitations where reasonable potential exists. While the removal of the previous permit special condition creates the appearance of backsliding, since this permit establishes numeric limitations where reasonable potential to cause or contribute to an excursion of the general criteria exists the permit maintains sufficient effluent limitations and monitoring requirements in order to protect water quality, this permit is equally protective as compared to the previous permit. Therefore, given this new information, and the fact that the previous permit special condition was not consistent with 40 CFR 122.44(d)(1), an error occurred in the establishment of the general criteria as a special condition of the previous permit. Please see Part VI – Effluent Limits Determination for more information regarding the reasonable potential determinations for each general criterion related to this facility.

### **ANTIDegradation:**

In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(3)], for domestic wastewater discharge with new, altered, or expanding discharges, the Department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. In accordance with Missouri's water quality regulations for antidegradation [10 CSR 20-7.031(3)], degradation may be justified by documenting the socio-economic importance of a discharge after determining the necessity of the discharge. Facilities must submit the antidegradation review request to the Department prior to establishing, altering, or expanding discharges. See <http://dnr.mo.gov/env/wpp/permits/antideg-implementation.htm>

- No degradation proposed and no further review necessary. Facility did not apply for authorization to increase pollutant loading or to add additional pollutants to their discharge.

- This permit contains new and/or expanded discharge; please see **APPENDIX FOR ANTIDegradation ANALYSIS**.

### **AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:**

As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the Department.



**BIOSOLIDS & SEWAGE SLUDGE:**

Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address:

<http://extension.missouri.edu/main/DisplayCategory.aspx?C=74>, items WQ422 through WQ449.

- Permittee land applies biosolids in accordance with Standard Conditions III and a Department approved biosolids management plan.

- Permittee is not authorized to land apply biosolids. Sludge/biosolids are stored in the lagoon. The permittee must receive approval for any treatment, removal, and disposal of sludge or biosolids that is not identified in the facility description of the operating permit.

**COMPLIANCE AND ENFORCEMENT:**

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

- The permittee/facility is currently under enforcement action.

- The permittee/facility is not currently under Water Protection Program enforcement action.

**ELECTRONIC DISCHARGE MONITORING REPORT (EDMR) SUBMISSION SYSTEM:**

The U.S. Environmental Protection Agency (EPA) promulgated a final rule on October 22, 2015, to modernize Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. This final rule requires regulated entities and state and federal regulators to use information technology to electronically report data required by the National Pollutant Discharge Elimination System (NPDES) permit program instead of filing paper reports. To comply with the federal rule, the Department is requiring all permittees to begin submitting discharge monitoring data and reports online. In an effort to aid facilities in the reporting of applicable information electronically, the Department has created several new forms including operational control monitoring forms and an I&I location and reduction form. These forms are for optional use and can be found on the Department's website at the following locations:

Operational Monitoring Lagoon: <http://dnr.mo.gov/forms/780-2801-f.pdf>

Operational Monitoring Mechanical: <http://dnr.mo.gov/forms/780-2800-f.pdf>

I&I Report: <http://dnr.mo.gov/forms/780-2690-f.pdf>

Per 40 CFR 127.15 and 127.24, permitted facilities may request a temporary waiver for up to 5 years or a permanent waiver from electronic reporting from the Department. To obtain an electronic reporting waiver, a permittee must first submit an eDMR Waiver Request Form: <http://dnr.mo.gov/forms/780-2692-f.pdf>. A request must be made for each facility. If more than one facility is owned or operated by a single entity, then the entity must submit a separate request for each facility based on its specific circumstances. An approved waiver is non-transferable.

The Department must review and notify the facility within 120 calendar days of receipt if the waiver request has been approved or rejected [40 CFR 124.27(a)]. During the Department review period as well as after a waiver is granted, the facility must continue submitting a hard-copy of any reports required by their permit. The Department will enter data submitted in hard-copy from those facilities allowed to do so and electronically submit the data to the EPA on behalf of the facility.

- The permittee/facility is currently using the eDMR data reporting system.

- The facility has obtained a Department approved waiver from reporting electronically.

**PRETREATMENT PROGRAM:**

The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR Part 403.3(q)].



Pretreatment programs are required at any POTW (or combination of POTW operated by the same authority) and/or municipality with a total design flow greater than 5.0 MGD and receiving industrial wastes that interfere with or pass through the treatment works or are otherwise subject to the pretreatment standards. Pretreatment programs can also be required at POTWs/municipals with a design flow less than 5.0 MGD if needed to prevent interference with operations or pass through.

Several special conditions pertaining to the permittee's pretreatment program may be included in the permit, and are as follows:

- Implementation and enforcement of the program,
- Annual pretreatment report submittal,
- Submittal of list of industrial users,
- Technical evaluation of need to establish local limitations, and
- Submittal of the results of the evaluation

- This permittee has an approved pretreatment program in accordance with the requirements of [40 CFR Part 403] and [10 CSR 20-6.100] and is expected to implement and enforce its approved program.

- The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program.

**REASONABLE POTENTIAL ANALYSIS (RPA):**

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(1)(iii)] if the permit writer determines that any given pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

- A RPA was conducted on appropriate parameters. Please see **APPENDIX – RPA RESULTS**.

- A RPA was not conducted for this facility.

**REMOVAL EFFICIENCY:**

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD<sub>5</sub>) and Total Suspended Solids (TSS), for publically owned treatment works (POTW). See 40 CFR Part 133.102(a)(3) & (b)(3) and 40 CFR 133.105(a)(3)&(b)(3). This is a no-discharge facility and is not a POTW, therefore removal efficiency is 100% and influent monitoring is not required.

**SANITARY SEWER OVERFLOWS (SSO) AND INFLOW AND INFILTRATION (I&I):**

Sanitary Sewer Overflows (SSOs) are defined as untreated sewage releases and are considered bypassing under state regulation [10 CSR 20-2.010(11)] and should not be confused with the federal definition of bypass. SSOs result from a variety of causes including blockages, line breaks, and sewer defects that can either allow wastewater to backup within the collection system during dry weather conditions or allow excess stormwater and groundwater to enter and overload the collection system during wet weather conditions. SSOs can also result from lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. SSOs include overflows out of manholes, cleanouts, broken pipes, and other into waters of the state and onto city streets, sidewalks, and other terrestrial locations.

Inflow and Infiltration (I&I) is defined as unwanted intrusion of stormwater or groundwater into a collection system. This can occur from points of direct connection such as sump pumps, roof drain downspouts, foundation drains, and storm drain cross-connections or through cracks, holes, joint failures, faulty line connections, damaged manholes, and other openings in the collection system itself. I&I results from a variety of causes including line breaks, improperly sealed connections, cracks caused by soil erosion/settling, penetration of vegetative roots, and other sewer defects. In addition, excess stormwater and groundwater entering the collection system from line breaks and sewer defects have the potential to negatively impact the treatment facility.

Missouri RSMo §644.026.1.(13) mandates that the Department issue permits for discharges of water contaminants into the waters of this state, and also for the operation of sewer systems. Such permit conditions shall ensure compliance with all requirements as established by sections 644.006 to 644.141. Standard Conditions Part I, referenced in the permit, contains provisions requiring proper operation and maintenance of all facilities and systems of treatment and control. Missouri RSMo §644.026.1.(15) instructs the Department to require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities. To ensure that public health and the environment are protected, any noncompliance which may endanger public health or the environment must be reported to the Department within 24 hours of the time the permittee becomes aware of the noncompliance. Standard Conditions Part I, referenced in the permit, contains the reporting requirements for the permittee when bypasses and upsets occur. The permit also contains requirements for permittees to develop and implement a program for maintenance and repair of the collection system. The permit requires that the permittee submit an annual report to the Department

for the previous calendar year that contains a summary of efforts taken by the permittee to locate and eliminate sources of excess I & I, a summary of general maintenance and repairs to the collection system, and a summary of any planned maintenance and repairs to the collection system for the upcoming calendar year.

- At this time, the Department recommends the US EPA's Guide for Evaluating Capacity, Management, Operation and Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems (Document # EPA 305-B-05-002) or the Departments' CMOM Model located at <http://dnr.mo.gov/env/wpp/permits/docs/cmom-template.doc>. For additional information regarding the Departments' CMOM Model, see the CMOM Plan Model Guidance document at <http://dnr.mo.gov/pubs/pub2574.htm>. The CMOM identifies some of the criteria used to evaluate a collection system's management, operation, and maintenance and was intended for use by the EPA, state, regulated community, and/or third party entities. The CMOM is applicable to small, medium, and large systems; both public and privately owned; and both regional and satellite collection systems. The CMOM does not substitute for the Clean Water Act, the Missouri Clean Water Law, and both federal and state regulations, as it is not a regulation.

- This facility is not required to develop or implement a program for maintenance and repair of the collection system; however, it is a violation of Missouri State Environmental Laws and Regulations to allow untreated wastewater to discharge to waters of the state.

**SCHEDULE OF COMPLIANCE (SOC):**

Per 644.051.4 RSMo, a permit may be issued with a Schedule of Compliance (SOC) to provide time for a facility to come into compliance with new state or federal effluent regulations, water quality standards, or other requirements. Such a schedule is not allowed if the facility is already in compliance with the new requirement, or if prohibited by other statute or regulation. A SOC includes an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. *See also* Section 502(17) of the Clean Water Act, and 40 CFR §122.2. For new effluent limitations, the permit includes interim monitoring for the specific parameter to demonstrate the facility is not already in compliance with the new requirement. Per 40 CFR § 122.47(a)(1) and 10 CSR 20-7.031(10), compliance must occur as soon as possible. If the permit provides a schedule for meeting new water quality based effluent limits, a SOC must include an enforceable, final effluent limitation in the permit even if the SOC extends beyond the life of the permit.

A SOC is not allowed:

- For effluent limitations based on technology-based standards established in accordance with federal requirements, if the deadline for compliance established in federal regulations has passed. 40 CFR § 125.3.
- For a newly constructed facility in most cases. Newly constructed facilities must meet applicable effluent limitations when discharge begins, because the facility has installed the appropriate control technology as specified in a permit or antidegradation review. A SOC is allowed for a new water quality based effluent limit that was not included in a previously public noticed permit or antidegradation review, which may occur if a regulation changes during construction.
- To develop a TMDL, UAA, or other study associated with development of a site specific criterion. A facility is not prohibited from conducting these activities, but a SOC may not be granted for conducting these activities.

In order to provide guidance to Permit Writers in developing SOCs, and attain a greater level of consistency, on April 9, 2015 the Department issued an updated policy on development of SOCs. This policy provides guidance to Permit Writers on the standard time frames for schedules for common activities, and guidance on factors that may modify the length of the schedule such as a Cost Analysis for Compliance.

- The time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations were established in accordance with [10 CSR 20-7.031(10)].

- This permit does not contain a SOC.

**SEWER EXTENSION AUTHORITY SUPERVISED PROGRAM:**

In accordance with [10 CSR 20-6.010(6)(A)], the Department may grant approval of a permittee's Sewer Extension Authority Supervised Program. These approved permittees regulate and approve construction of sanitary sewers and pump stations, which are tributary to this wastewater treatment facility. The permittee shall act as the continuing authority for the operation, maintenance, and modernization of the constructed collection system. See <http://dnr.mo.gov/env/wpp/permits/sewer-extension.htm>.

- The permittee's Sewer Extension Authority Supervised Program has been reauthorized. Please see **Appendix – Sewer Extension Authority Supervised Program Reauthorization Letter** for applicable conditions.

- The permittee does not have a Department approved Sewer Extension Authority Supervised Program.

**STORMWATER POLLUTION PREVENTION PLAN (SWPPP):**

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

- 10 CSR 20-6.200 and 40 CFR 122.26 includes treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that is located within the confines of the facility, with a design flow of 1.0 mgd or more, or are required to have an approved pretreatment program under 40 CFR part 403, as an industrial activity in which permit coverage is required.

- At this time, the permittee is not required to develop and implement a SWPPP. As the permittee is a no-discharge facility, the use of best management practices to reduce stormwater flows into the treatment basin or into the application fields should be considered and employed.

**VARIANCE:**

As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

- This operating permit is drafted under premises of a petition for variance.

- This operating permit is not drafted under premises of a petition for variance.

**WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:**

As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined total amount of pollutant that may be discharged into that stream without endangering its water quality.

- Wasteload allocations were calculated where applicable using water quality criteria or water quality model results and the dilution equation below:

$$C_e = \frac{(Q_e + Q_s)C - (Q_s \times C_s)}{(Q_e)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where C = downstream concentration      C<sub>e</sub> = effluent concentration  
Cs = upstream concentration              Q<sub>e</sub> = effluent flow  
Q<sub>s</sub> = upstream flow

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

**Number of Samples "n":**

Additionally, in accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying distribution or treatment performance, which should be, at a minimum, be targeted to comply with the values dictated by the WLA. Therefore, it is recommended that the actual planned frequency of monitoring normally be used to determine the value of "n" for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for "n" must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is "n = 4" at a minimum. For Total Ammonia as Nitrogen, "n = 30" is used.

- Wasteload allocations were not calculated.

**WLA MODELING:**

There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

- A WLA study including model was submitted to the Department.
- A WLA study was either not submitted or determined not applicable by Department staff.

**WATER QUALITY STANDARDS:**

Per [10 CSR 20-7.031(4)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

**WHOLE EFFLUENT TOXICITY (WET) TEST:**

- The permittee is required to conduct WET test for this facility.
- At this time, the permittee is not required to conduct WET test for this facility.

**40 CFR 122.41(M) - BYPASSES:**

The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from “bypassing” untreated or partially treated sewage (wastewater) beyond the headworks. A bypass is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-7.015(9)(G) states a bypass means the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending, to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri’s Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

- Bypasses occur or have occurred at this facility.
- This facility does not anticipate bypassing.

**Part VI – Permit Limits Determination**

**PERMITTED FEATURE #002 – LAGOON**

- **Freeboard.** Monitoring requirement to verify adequate freeboard is maintained, so as to avoid and overflow of the lagoon.
- **Precipitation.** Monitoring requirement to ensure appropriate irrigation is conducted to account for accumulated water in the lagoon.
- **EMERGENCY DISCHARGE PARAMETERS** – BOD<sub>5</sub>, TSS, Ammonia, pH, Oil & Grease, *E. coli*, Total Phosphorus, and Total Nitrogen are conventional pollutants found in domestic wastewater. These parameters shall be monitored at least once during the discharge event. Additional monitoring may be required by the Department on a case-by-case basis. All samples shall be collected as grab samples. pH samples cannot be preserved and must be sampled in the field.

**PERMITTED FEATURE #003 – IRRIGATION FIELD**

- **Irrigation Period.** Monitoring requirement only. Monitoring for the Irrigation Period is included to determine if proper irrigation is occurring on the irrigation fields.
- **Volume Irrigated.** Monitoring requirement only. Monitoring for the Volume Irrigated is included to determine if proper irrigation is occurring on the irrigation fields.
- **Irrigation Area.** Monitoring requirement only. Monitoring for the Irrigation Area is included to determine if proper irrigation is occurring on the irrigation fields.
- **Irrigation Rate.** Monitoring requirement only. Monitoring for the Irrigation Rate is included to determine if proper irrigation is occurring on the irrigation fields.

**PERMITTED FEATURE #004 – STORAGE BASIN**

- **Freeboard.** Monitoring requirement to verify adequate freeboard is maintained, so as to avoid and overflow of the storage basin.
- **Precipitation.** Monitoring requirement to ensure appropriate irrigation is conducted to account for accumulated water in the storage basin.
- **EMERGENCY DISCHARGE PARAMETERS – BOD<sub>5</sub>, TSS, Ammonia, pH, Oil & Grease, *E. coli*, Total Phosphorus, and Total Nitrogen** are conventional pollutants found in domestic wastewater. These parameters shall be monitored at least once during the discharge event. Additional monitoring may be required by the Department on a case-by-case basis. All samples shall be collected as grab samples. pH samples cannot be preserved and must be sampled in the field.

**Sampling Frequency Justification:** Sampling frequency has been determined to be appropriate to ensure proper operations.

**OUTFALL #002 – GENERAL CRITERIA CONSIDERATIONS:**

In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into the permit for those pollutants which have been determined to cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. The rule further states that pollutants which have been determined to cause, have the reasonable potential to cause, or contribute to an excursion above a narrative criterion within an applicable State water quality standard, the permit shall contain a numeric effluent limitation to protect that narrative criterion. In order to comply with this regulation, the permit writer will complete reasonable potential determinations on whether the discharge will violate any of the general criteria listed in 10 CSR 20-7.031(4). These specific requirements are listed below followed by derivation and discussion (the lettering matches that of the rule itself, under 10 CSR 20-7.031(4)). It should also be noted that Section 644.076.1, RSMo as well as Section D – Administrative Requirements of Standard Conditions Part I of this permit states that it shall be unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri that is in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law or any standard, rule or regulation promulgated by the commission.

- (A) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses. This facility utilizes irrigation of domestic wastewater to the land surface and therefore does not discharge. Based upon a review of a recent Report of Compliance Inspection for the inspection conducted on October 14, 2015, no evidence of an excursion of this criterion has been observed by the Department in the past and the facility has not disclosed any other information their permit application which has the potential to cause or contribute to an excursion of this narrative criterion. Additionally, there had been no indication to the Department that the stream has had issued maintaining beneficial uses as a result of the wastewater irrigation. Therefore, based on the information reviewed during the drafting of this permit, and the fact that the facility does not discharge, no reasonable potential to cause or contribute to an excursion of this criterion exists.
- (B) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses. Please see (A) above as justification is the same.
- (C) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses. Please see (A) above as justification is the same.
- (D) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life. Please see (A) above as justification is the same.
- (E) There shall be no significant human health hazard from incidental contact with the water. Please see (A) above as justification is the same.
- (F) There shall be no acute toxicity to livestock or wildlife watering. Please see (A) above as justification is the same.
- (G) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community. Please see (A) above as justification is the same.

Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247. The discharge from this facility is made up of treated domestic wastewater. No evidence of an excursion of this criterion has been observed by the Department in the past and the facility has not disclosed any other information related to the characteristics of the discharge on their permit application which has the potential to cause or contribute to an excursion of this narrative criterion. Additionally, any solid wastes received or produced at this facility are wholly contained in appropriate storage facilities, are not discharged, and are disposed of offsite. This discharge is subject to Standard Conditions Part III, which contains requirements for the management and disposal of sludge to prevent its discharge. Therefore, this discharge does not have reasonable potential to cause or contribute to an excursion of this criterion.

## **Part VII – Cost Analysis for Compliance**

Pursuant to Section 644.145, RSMo, when issuing permits under this chapter that incorporate a new requirement for discharges from publicly owned combined or separate sanitary or storm sewer systems or publicly owned treatment works, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned combined or separate sanitary or storm sewer system or [publicly owned] treatment works, the Department of Natural Resources shall make a “finding of affordability” on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the Federal Water Pollution Control Act. This process is completed through a cost analysis for compliance. Permits that do not include new requirements may be deemed affordable.

- The Department is required to determine “findings of affordability” because the permit applies to a combined or separate sanitary sewer system for a publically-owned treatment works.

- The Department is required to make a “finding of affordability” on the new environmental requirement(s) within the permit. However, due to no costs associated with the new requirement(s) the Department has determined the permit to be affordable based on the eight requirements listed in Section 644.145.4, RSMo.

**Cost Analysis for Compliance** - The Department has made a reasonable search for empirical data indicating the permit is affordable. The search consisted of a review of Department records that might contain economic data on the community, a review of information provided by the applicant as part of the application, and public comments received in response to public notices of this draft permit. If the empirical cost data was used by the permit writer, this data may consist of median household income, any other ongoing projects that the Department has knowledge, and other demographic financial information that the community provided as contemplated by Section 644.145.3. See **Appendix –Cost Analysis for Compliance**

- Not Applicable; The Department is not required to complete a cost analysis for compliance because the permit contains no new conditions or requirements that convey a new cost to the facility.



## **Part VIII – Administrative Requirements**

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

### **PERMIT SYNCHRONIZATION:**

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the Department to explore a watershed based permitting effort at some point in the future. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than 4 years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit. With permit synchronization, this permit will expire in the 2<sup>nd</sup> Quarter of calendar year 2022.

### **PUBLIC NOTICE:**

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing. The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit. For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- The Public Notice period for this operating permit was from August 3, 2018 to September 3, 2018. No responses received.

**DATE OF FACT SHEET:** OCTOBER 16, 2018

### **COMPLETED BY:**

**BRANT FARRIS, ENVIRONMENTAL SPECIALIST III  
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT  
(660) 385-8019  
brant.farris@dnr.mo.gov**

**Appendices**

**APPENDIX - CLASSIFICATION WORKSHEET:**

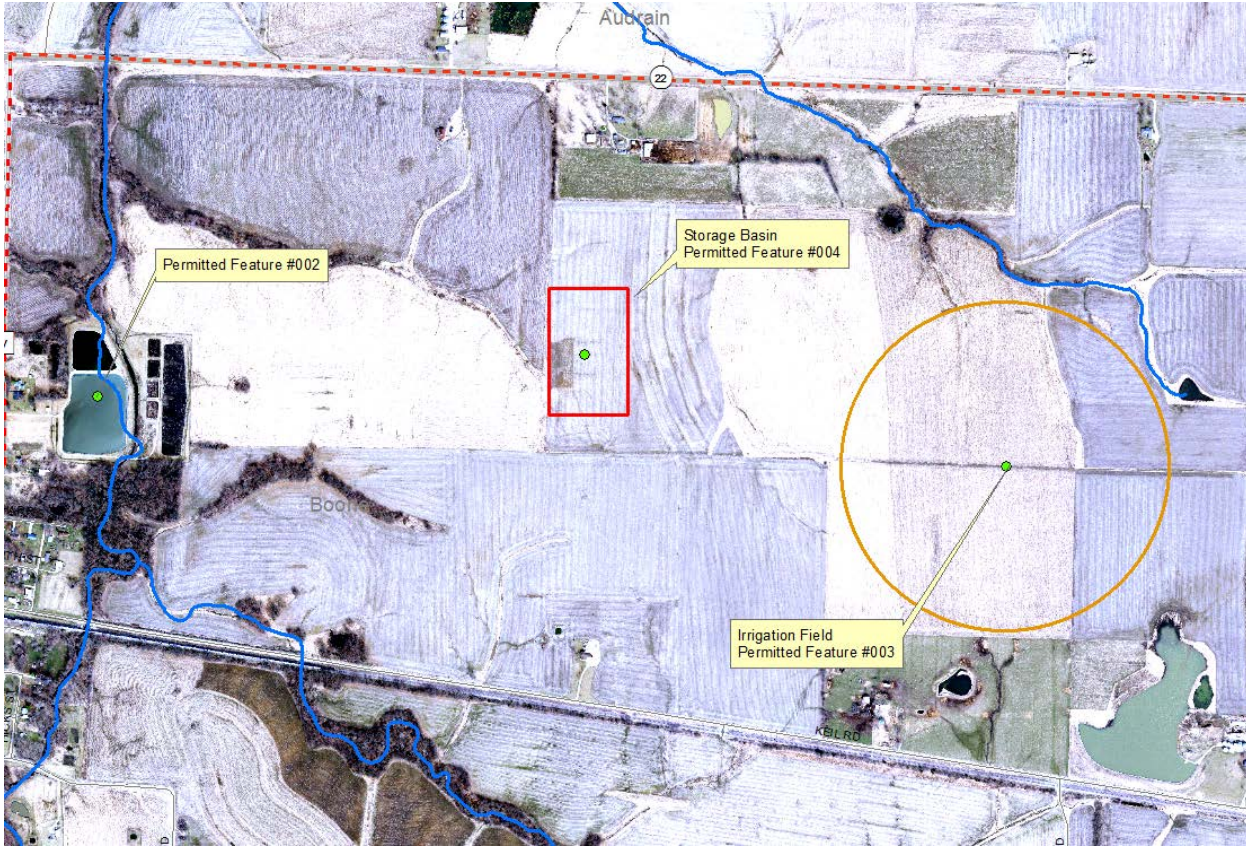
ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Maximum Population Equivalent (P.E.) served (Max 10 pts.)	1 pt./10,000 PE or major fraction thereof.	
Maximum: 10 pt Design Flow (avg. day) or peak month; use greater (Max 10 pts.)	1 pt. / MGD or major fraction thereof.	
<b>EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY:</b>		
Missouri or Mississippi River	0	
All other stream discharges except to losing streams and stream reaches supporting whole body contact	1	
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	
Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation	3	
<b>PRELIMINARY TREATMENT - Headworks</b>		
Screening and/or comminution	3	
Grit removal	3	
Plant pumping of main flow (lift station at the headworks)	3	
<b>PRIMARY TREATMENT</b>		
Primary clarifiers	5	
Combined sedimentation/digestion	5	
Chemical addition (except chlorine, enzymes)	4	
<b>REQUIRED LABORATORY CONTROL – performed by plant personnel (highest level only)</b>		
Push – button or visual methods for simple test such as pH, Settleable solids	3	
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	5
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	7	
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	
<b>ALTERNATIVE FATE OF EFFLUENT</b>		
Direct reuse or recycle of effluent	6	
Land Disposal – low rate	3	3
High rate	5	
Overland flow	4	
<b>Total from page ONE (1)</b>	----	<b>8</b>

**APPENDIX - CLASSIFICATION WORKSHEET (CONTINUED):**

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
<b>VARIATION IN RAW WASTE (highest level only) (DMR exceedances and Design Flow exceedances)</b>		
Variation do not exceed those normally or typically expected	0	0
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow	2	
Recurring deviations or excessive variations of more than 200 % in strength and/or flow	4	
Raw wastes subject to toxic waste discharge	6	
<b>SECONDARY TREATMENT</b>		
Trickling filter and other fixed film media with secondary clarifiers	10	
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	
Stabilization ponds without aeration	5	5
Aerated lagoon	8	
Advanced Waste Treatment Polishing Pond	2	
Chemical/physical – without secondary	15	
Chemical/physical – following secondary	10	
Biological or chemical/biological	12	
Carbon regeneration	4	
<b>DISINFECTION</b>		
Chlorination or comparable	5	
Dechlorination	2	
On-site generation of disinfectant (except UV light)	5	
UV light	4	
<b>SOLIDS HANDLING - SLUDGE</b>		
Solids Handling Thickening	5	
Anaerobic digestion	10	
Aerobic digestion	6	
Evaporative sludge drying	2	
Mechanical dewatering	8	
Solids reduction (incineration, wet oxidation)	12	
Land application	6	
Total from page <b>TWO (2)</b>	----	5
Total from page <b>ONE (1)</b>	---	8
<b>Grand Total</b>	---	13

- A: 71 points and greater
- B: 51 points – 70 points
- C: 26 points – 50 points
- D: 0 points – 25 points

**APPENDIX – ALTERNATIVE: AERIAL MAP**





STANDARD CONDITIONS FOR NPDES PERMITS  
ISSUED BY  
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MISSOURI CLEAN WATER COMMISSION  
REVISED  
AUGUST 1, 2014

These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

## Part I – General Conditions

### Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
  - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
  - b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
2. **Monitoring Requirements.**
  - a. Records of monitoring information shall include:
    - i. The date, exact place, and time of sampling or measurements;
    - ii. The individual(s) who performed the sampling or measurements;
    - iii. The date(s) analyses were performed;
    - iv. The individual(s) who performed the analyses;
    - v. The analytical techniques or methods used; and
    - vi. The results of such analyses.
  - b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.
3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.
4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.
5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. **Illegal Activities.**
  - a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
  - b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

### Section B – Reporting Requirements

1. **Planned Changes.**
  - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
    - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
    - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42;
    - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
  - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Non-compliance Reporting.**
  - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.





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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
    - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
    - ii. Any upset which exceeds any effluent limitation in the permit.
    - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
  - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
  4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
  5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
  6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
  7. **Discharge Monitoring Reports.**
    - a. Monitoring results shall be reported at the intervals specified in the permit.
    - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
    - c. Monitoring results shall be reported to the Department no later than the 28<sup>th</sup> day of the month following the end of the reporting period.
- b. Notice.
    - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
    - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
  - c. Prohibition of bypass.
    - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
      1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
      2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
      3. The permittee submitted notices as required under paragraph 2. b. of this section.
    - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
    - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
    - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
      - ii. The permitted facility was at the time being properly operated; and
      - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
      - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
    - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

## Section C – Bypass/Upset Requirements

1. **Definitions.**
  - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending.
  - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
  - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
  - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.

## Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
  - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
  - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement



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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.





STANDARD CONDITIONS FOR NPDES PERMITS  
ISSUED BY  
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION  
REVISED  
AUGUST 1, 2014

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
  - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
  - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
  - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
  - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
  - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
  - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.



STANDARD CONDITIONS FOR NPDES PERMITS  
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MISSOURI CLEAN WATER COMMISSION  
REVISED  
MAY 1, 2013

PART II - SPECIAL CONDITIONS – PUBLICLY OWNED  
TREATMENT WORKS  
SECTION A – INDUSTRIAL USERS

**1. Definitions**

Definitions as set forth in the Missouri Clean Water Laws and approved by the Missouri Clean Water Commission shall apply to terms used herein.

Significant Industrial User (SIU). Except as provided in the *General Pretreatment Regulation* 10 CSR 20-6.100, the term Significant Industrial User means:

1. All Industrial Users subject to Categorical Pretreatment Standards; and
2. Any other Industrial User that: discharges an average of 25,000 gallons per day or more of process wastewater to the Publicly-Owned Treatment Works (POTW) (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority on the basis that the Industrial User has a reasonable potential for adversely affecting the POTW's or for violating any Pretreatment Standard or requirement.

Clean Water Act (CWA) is the the federal Clean Water Act of 1972, 33 U.S.C. § 1251 et seq. (2002).

**2. Identification of Industrial Discharges**

Pursuant to 40 CFR 122.44(j)(1), all POTWs shall identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging to the POTW subject to Pretreatment Standards under section 307(b) of the CWA and 40 CFR 403.

**3. Application Information**

Applications for renewal or modification of this permit must contain the information about industrial discharges to the POTW pursuant to 40 CFR 122.21(j)(6)

**4. Notice to the Department**

Pursuant to 40 CFR 122.42(b), all POTWs must provide adequate notice of the following:

1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging these pollutants; and
2. Any substantial change into the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
3. For purposes of this paragraph, adequate notice shall include information on:
  - i. the quality and quantity of effluent introduced into the POTW, and
  - ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

For POTWs without an approved pretreatment program, the notice of industrial discharges which was not included in the permit application shall be made as soon as practicable. For POTWs with an approved pretreatment program, notice is to be included in the annual pretreatment report required in the special conditions of this permit. Notice may be sent to:

Missouri Department of Natural Resources  
Water Protection Program  
Attn: Pretreatment Coordinator  
P.O. Box 176  
Jefferson City, MO 65102

**STANDARD CONDITIONS FOR NPDES PERMITS**  
**ISSUED BY**  
**THE MISSOURI DEPARTMENT OF NATURAL RESOURCES**  
**MISSOURI CLEAN WATER COMMISSION**  
**March 1, 2015**

**PART III – SLUDGE AND BIOSOLIDS FROM DOMESTIC AND INDUSTRIAL WASTEWATER  
TREATMENT FACILITIES**

**SECTION A – GENERAL REQUIREMENTS**

1. This permit pertains to sludge requirements under the Missouri Clean Water Law and regulation for domestic wastewater and industrial process wastewater. This permit also incorporates applicable federal sludge disposal requirements under 40 CFR 503 for domestic wastewater. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFR 503 for domestic wastewater. EPA has reviewed and accepted these standard sludge conditions. EPA may choose to issue a separate sludge addendum to this permit or a separate federal sludge permit at their discretion to further address the federal requirements.
2. These PART III Standard Conditions apply only to sludge and biosolids generated at domestic wastewater treatment facilities, including public owned treatment works (POTW), privately owned facilities and sludge or biosolids generated at industrial facilities.
3. Sludge and Biosolids Use and Disposal Practices:
  - a. The permittee is authorized to operate the sludge and biosolids treatment, storage, use, and disposal facilities listed in the facility description of this permit.
  - b. The permittee shall not exceed the design sludge volume listed in the facility description and shall not use sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
  - c. The permittee is authorized to operate the storage, treatment or generating sites listed in the Facility Description section of this permit.
4. Sludge Received from other Facilities:
  - a. Permittees may accept domestic wastewater sludge from other facilities including septic tank pumpings from residential sources as long as the design sludge volume is not exceeded and the treatment facility performance is not impaired.
  - b. The permittee shall obtain a signed statement from the sludge generator or hauler that certifies the type and source of the sludge
5. These permit requirements do not supersede nor remove liability for compliance with county and other local ordinances.
6. These permit requirements do not supersede nor remove liability for compliance with other environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after due process) be modified, or alternatively revoked and reissued, to comply with any applicable sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act under Chapter 644 RSMo.
8. In addition to STANDARD CONDITIONS, the Department may include sludge limitations in the special conditions portion or other sections of a site specific permit.
9. Alternate Limits in the Site Specific Permit.

Where deemed appropriate, the Department may require an individual site specific permit in order to authorize alternate limitations:

  - a. A site specific permit must be obtained for each operating location, including application sites.
  - b. To request a site specific permit, an individual permit application, permit fee, and supporting documents shall be submitted for each operating location. This shall include a detailed sludge/biosolids management plan or engineering report.
10. Exceptions to these Standard Conditions may be authorized on a case-by-case basis by the Department, as follows:
  - a. The Department will prepare a permit modification and follow permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owner of the property located adjacent to each land application site, where appropriate.
  - b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.

## **SECTION B – DEFINITIONS**

1. Best Management Practices include agronomic loading rates, soil conservation practices and other site restrictions.
2. Biosolids means organic fertilizer or soil amendment produced by the treatment of domestic wastewater sludge.
3. Biosolids land application facility is a facility where biosolids are spread onto the land at agronomic rates for production of food or fiber. The facility includes any structures necessary to store the biosolids until soil, weather, and crop conditions are favorable for land application.
4. Class A biosolids means a material that has met the Class A pathogen reduction requirements or equivalent treatment by a Process to Further Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
5. Class B biosolids means a material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
6. Domestic wastewater means wastewater originating from the sanitary conveniences of residences, commercial buildings, factories and institutions; or co-mingled sanitary and industrial wastewater processed by a (POTW) or a privately owned facility.
7. Industrial wastewater means any wastewater, also known as process water, not defined as domestic wastewater. Per 40 CFR Part 122, process water means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.
8. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including septic tanks, sand filters, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological discs, and other similar facilities. It does not include wastewater treatment lagoons and constructed wetlands for wastewater treatment.
9. Operating location as defined in 10 CSR 20-2.010 is all contiguous lands owned, operated or controlled by one (1) person or by two (2) or more persons jointly or as tenants in common.
10. Plant Available Nitrogen (PAN) is the nitrogen that will be available to plants during the growing seasons after biosolids application.
11. Public contact site is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.
12. Sludge is the solid, semisolid, or liquid residue removed during the treatment of wastewater. Sludge includes septage removed from septic tanks or equivalent facilities. Sludge does not include carbon coal byproducts (CCBs)
13. Sludge lagoon is part of a mechanical wastewater treatment facility. A sludge lagoon is an earthen basin that receives sludge that has been removed from a wastewater treatment facility. It does not include a wastewater treatment lagoon or sludge treatment units that are not a part of a mechanical wastewater treatment facility.
14. Septage is the material pumped from residential septic tanks and similar treatment works (with a design population of less than 150 people). The standard for biosolids from septage is different from other sludges.

## **SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES**

1. Sludge shall be routinely removed from wastewater treatment facilities and handled according to the permit facility description and sludge conditions of this permit.
2. The permittee shall operate the facility so that there is no sludge discharged to waters of the state.
3. Mechanical treatment plants shall have separate sludge storage compartments in accordance with 10 CSR 20, Chapter 8. Failure to remove sludge from these storage compartments on the required design schedule is a violation of this permit.

## **SECTION D – SLUDGE DISPOSED AT OTHER TREATMENT FACILITY OR CONTRACT HAULER**

1. This section applies to permittees that haul sludge to another treatment facility for disposal or use contract haulers to remove and dispose of sludge.
2. Permittees that use contract haulers are responsible for compliance with all the terms of this permit including final disposal, unless the hauler has a separate permit for sludge or biosolids disposal issued by the Department; or the hauler transports the sludge to another permitted treatment facility.
3. Haulers who land apply septage must obtain a state permit.
4. Testing of sludge, other than total solids content, is not required if sludge is hauled to a municipal wastewater treatment facility or other permitted wastewater treatment facility, unless it is required by the accepting facility.

## **SECTION E – INCINERATION OF SLUDGE**

1. Sludge incineration facilities shall comply with the requirements of 40 CFR 503 Subpart E; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Permittee may be authorized under the facility description of this permit to store incineration ash in lagoons or ash ponds. This permit does not authorize the disposal of incineration ash. Incineration ash shall be disposed in accordance with 10 CSR 80; or if the ash is determined to be hazardous with 10 CSR 25.
3. In addition to normal sludge monitoring, incineration facilities shall report the following as part of the annual report, quantity of sludge incinerated, quantity of ash generated, quantity of ash stored, and ash used or disposal method, quantity, and location. Permittee shall also provide the name of the disposal facility and the applicable permit number.

## **SECTION F – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS**

1. Surface disposal sites of domestic facilities shall comply with the requirements in 40 CFR 503 Subpart C; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Sludge storage lagoons are temporary facilities and are not required to obtain a permit as a solid waste management facility under 10 CSR 80. In order to maintain sludge storage lagoons as storage facilities, accumulated sludge must be removed routinely, but not less than once every two years unless an alternate schedule is approved in the permit. The amount of sludge removed will be dependent on sludge generation and accumulation in the facility. Enough sludge must be removed to maintain adequate storage capacity in the facility.
  - a. In order to avoid damage to the lagoon seal during cleaning, the permittee may leave a layer of sludge on the bottom of the lagoon, upon prior approval of the Department; or
  - b. Permittee shall close the lagoon in accordance with Section H.

## **SECTION G – LAND APPLICATION**

1. The permittee shall not land apply sludge or biosolids unless land application is authorized in the facility description or the special conditions of the issued NPDES permit.
2. Land application sites within a 20 miles radius of the wastewater treatment facility are authorized under this permit when biosolids are applied for beneficial use in accordance with these standard conditions unless otherwise specified in a site specific permit. If the permittee's land application site is greater than a 20 mile radius of the wastewater treatment facility, approval must be granted from the Department.
3. Land application shall not adversely affect a threatened or endangered species or its designated critical habitat.
4. Biosolids shall not be applied unless authorized in this permit or exempted under 10 CSR 20, Chapter 6.
  - a. This permit does not authorize the land application of domestic sludge except for when sludge meets the definition of biosolids.
  - b. This permit authorizes "Class A or B" biosolids derived from domestic wastewater and/or process water sludge to be land applied onto grass land, crop land, timber or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
5. Public Contact Sites:

Permittees who wish to apply Class A biosolids to public contact sites must obtain approval from the Department after two years of proper operation with acceptable testing documentation that shows the biosolids meet Class A criteria. A shorter length of testing will be allowed with prior approval from the Department. Authorization for land applications must be provided in the special conditions section of this permit or in a separate site specific permit.

  - a. After Class B biosolids have been land applied, public access must be restricted for 12 months.
  - b. Class B biosolids are only land applied to root crops, home gardens or vegetable crops whose edible parts will not be for human consumption.
6. Agricultural and Silvicultural Sites:

Septage – Based on Water Quality guide 422 (WQ422) published by the University of Missouri

  - a. Haulers that land apply septage must obtain a state permit
  - b. Do not apply more than 30,000 gallons of septage per acre per year.
  - c. Septage tanks are designed to retain sludge for one to three years which will allow for a larger reduction in pathogens and vectors, as compared to other mechanical type treatment facilities.
  - d. To meet Class B sludge requirements, maintain septage at 12 pH for at least thirty (30) minutes before land application. 50 pounds of hydrated lime shall be added to each 1,000 gallons of septage in order to meet pathogen and vector stabilization for septage biosolids applied to crops, pastures or timberland.
  - e. Lime is to be added to the pump truck and not directly to the septic tanks, as lime would harm the beneficial bacteria of the septic tank.

Biosolids - Based on Water Quality guide 423, 424, and 425 (WQ423, WQ424, WQ425) published by the University of Missouri;

- a. Biosolids shall be monitored to determine the quality for regulated pollutants
- b. The number of samples taken is directly related to the amount of sludge produced by the facility (See Section I of these Standard Conditions). Report as dry weight unless otherwise specified in the site specific permit. Samples should be taken only during land application periods. When necessary, it is permissible to mix biosolids with lower concentrations of biosolids as well as other suitable Department approved material to reach the maximum concentration of pollutants allowed.
- c. Table 1 gives the maximum concentration allowable to protect water quality standards

**TABLE 1**

Biosolids ceiling concentration <sup>1</sup>	
Pollutant	Milligrams per kilogram dry weight
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

<sup>1</sup> Land application is not allowed if the sludge concentration exceeds the maximum limits for any of these pollutants

- d. The low metal concentration biosolids has reduced requirements because of its higher quality and can safely be applied for 100 years or longer at typical agronomic loading rates. (See Table 2)

**TABLE 2**

Biosolids Low Metal Concentration <sup>1</sup>	
Pollutant	Milligrams per kilogram dry weight
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	36
Zinc	2,800

<sup>1</sup> You may apply low metal biosolids without tracking cumulative metal limits, provided the cumulative application of biosolids does not exceed 500 dry tons per acre.

- e. Each pollutant in Table 3 has an annual and a total cumulative loading limit, based on the allowable pounds per acre for various soil categories.

**TABLE 3**

Pollutant	CEC 15+		CEC 5 to 15		CEC 0 to 5	
	Annual	Total <sup>1</sup>	Annual	Total <sup>1</sup>	Annual	Total <sup>1</sup>
Arsenic	1.8	36.0	1.8	36.0	1.8	36.0
Cadmium	1.7	35.0	0.9	9.0	0.4	4.5
Copper	66.0	1,335.0	25.0	250.0	12.0	125.0
Lead	13.0	267.0	13.0	267.0	13.0	133.0
Mercury	0.7	15.0	0.7	15.0	0.7	15.0
Nickel	19.0	347.0	19.0	250.0	12.0	125.0
Selenium	4.5	89.0	4.5	44.0	1.6	16.0
Zinc	124.0	2,492.0	50.0	500.0	25.0	250.0

<sup>1</sup> Total cumulative loading limits for soils with equal or greater than 6.0 pH (salt based test) or 6.5 pH (water based test)

**TABLE 4** - Guidelines for land application of other trace substances <sup>1</sup>

Cumulative Loading	
Pollutant	Pounds per acre
Aluminum	4,000 <sup>2</sup>
Beryllium	100
Cobalt	50
Fluoride	800
Manganese	500
Silver	200
Tin	1,000
Dioxin	(10 ppt in soil) <sup>3</sup>
Other	<sup>4</sup>

<sup>1</sup> Design of land treatment systems for Industrial Waste, 1979. Michael Ray Overcash, North Carolina State University and Land Treatment of Municipal Wastewater, EPA 1981.)

<sup>2</sup> This applies for a soil with a pH between 6.0 and 7.0 (salt based test) or a pH between 6.5 to 7.5 (water based test). Case-by-case review is required for higher pH soils.

<sup>3</sup> Total Dioxin Toxicity Equivalents (TEQ) in soils, based on a risk assessment under 40 CFR 744, May 1998.

<sup>4</sup> Case by case review. Concentrations in sludge should not exceed the 95<sup>th</sup> percentile of the National Sewage Sludge Survey, EPA, January 2009.

Best Management Practices – Based on Water Quality guide 426 (WQ426) published by the University of Missouri

- a. Use best management practices when applying biosolids.
- b. Biosolids cannot discharge from the land application site
- c. Biosolid application is subject to the Missouri Department of Agriculture State Milk Board concerning grazing restrictions of lactating dairy cattle.
- d. Biosolid application must be in accordance with section 4 of the Endangered Species Act.
- e. Do not apply more than the agronomic rate of nitrogen needed.
- f. The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil, and crop removal when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) When biosolids are land applied at an application rate greater than two dry tons per acre per year.
  - i. PAN can be determined as follows and is in accordance with WQ426  
 $(\text{Nitrate} + \text{nitrite nitrogen}) + (\text{organic nitrogen} \times 0.2) + (\text{ammonia nitrogen} \times \text{volatilization factor}^1)$   
<sup>1</sup>Volatilization factor is 0.7 for surface application and 1 for subsurface application.
- g. Buffer zones are as follows:
  - i. 300 feet of a water supply well, sinkhole, lake, pond, water supply reservoir or water supply intake in a stream;
  - ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstanding state resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;
  - iii. 150 feet if dwellings;
  - iv. 100 feet of wetlands or permanent flowing streams;
  - v. 50 feet of a property line or other waters of the state, including intermittent flowing streams.
- h. Slope limitation for application sites are as follows;
  - i. A slope 0 to 6 percent has no rate limitation
  - ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels
  - iii. Slopes > 12 percent, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.
- i. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.
- j. Do not apply biosolids to sites with soil that is snow covered, frozen or saturated with liquid without prior approval by the Department.
- k. Biosolids / sludge applicators must keep detailed records up to five years.



## SECTION H – CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical, industrial, and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees of a domestic wastewater facility who plan to cease operation must obtain Department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids. Mechanical plants, sludge lagoons, ash ponds and other storage structures must obtain approval of a closure plan from the Department. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6. 010 and 10 CSR 20 – 6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:
  - a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
  - b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
  - c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre.
    - i. PAN can be determined as follows:
$$(\text{Nitrate} + \text{nitrite nitrogen}) + (\text{organic nitrogen} \times 0.2) + (\text{ammonia nitrogen} \times \text{volatilization factor}^1).$$

<sup>1</sup> Volatilization factor is 0.7 for surface application and 1 for subsurface application.
4. When closing a domestic wastewater treatment lagoon with a design treatment capacity equal or less than 150 persons, the residuals are considered “septage” under the similar treatment works definition. See Section B of these standard conditions. Under the septage category, residuals may be left in place as follows:
  - a. Testing for metals or fecal coliform is not required
  - b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at a rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
  - c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If 100 dry tons/acre or more will be left in the lagoon, test for nitrogen and determine the PAN using the calculation above. Allowable PAN loading is 300 pounds/acre.
5. Residuals left within the domestic lagoon shall be mixed with soil on at least a 1 to 1 ratio, the lagoon berm shall be demolished, and the site shall be graded and contain  $\geq 70\%$  vegetative density over 100% of the site so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
6. Lagoons and/or earthen structure and/or ash pond closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed one acre in accordance with 10 CSR 20-6.200
7. When closing a mechanical wastewater and/or industrial process wastewater plant; all sludge must be cleaned out and disposed of in accordance with the Department approved closure plan before the permit for the facility can be terminated.
  - a. Land must be stabilized which includes any grading, alternate use or fate upon approval by the Department, remediation, or other work that exposes sediment to stormwater per 10 CSR 20-6.200. The site shall be graded and contain  $\geq 70\%$  vegetative density over 100% of the site, so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
  - b. Per 10 CSR 20-6.015(4)(B)6, Hazardous Waste shall not be land applied or disposed during industrial and mechanical plant closures unless in accordance with Missouri Hazardous Waste Management Law and Regulations under 10 CSR 25.
  - c. After demolition of the mechanical plant / industrial plant, the site must only contain clean fill defined in RSMo 260.200 (5) as uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinderblocks, brick, minimal amounts of wood and metal, and inert solids as approved by rule or policy of the Department for fill or other beneficial use. Other solid wastes must be removed.
8. If sludge from the domestic lagoon or mechanical treatment plant exceeds agricultural rates under Section G and/or H, a landfill permit or solid waste disposal permit must be obtained if the permittee chooses to seek authorization for on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR 503, Subpart C.

## SECTION I – MONITORING FREQUENCY

- At a minimum, sludge or biosolids shall be tested for volume and percent total solids on a frequency that will accurately represent sludge quantities produced and disposed. Please see the table below.

**TABLE 5**

Design Sludge Production (dry tons per year)	Monitoring Frequency (See Notes 1, 2, and 3)			
	Metals, Pathogens and Vectors	Nitrogen TKN <sup>1</sup>	Nitrogen PAN <sup>2</sup>	Priority Pollutants and TCLP <sup>3</sup>
0 to 100	1 per year	1 per year	1 per month	1 per year
101 to 200	biannual	biannual	1 per month	1 per year
201 to 1,000	quarterly	quarterly	1 per month	1 per year
1,001 to 10,000	1 per month	1 per month	1 per week	-- <sup>4</sup>
10,001 +	1 per week	1 per week	1 per day	-- <sup>4</sup>

<sup>1</sup> Test total Kjeldahl nitrogen, if biosolids application is 2 dry tons per acre per year or less.

<sup>2</sup> Calculate plant available nitrogen (PAN) when either of the following occurs: 1) when biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.

<sup>3</sup> Priority pollutants (40 CFR 122.21, Appendix D, Tables II and III) and toxicity characteristic leaching procedure (40 CFR 261.24) is required only for permit holders that must have a pre-treatment program.

<sup>4</sup> One sample for each 1,000 dry tons of sludge.

Note 1: Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids.

This data shall be used to calculate the dry tons of sludge applied per acre.

Note 2: Total Phosphorus: Total phosphorus and total potassium shall be tested at the same monitoring frequency as metals.

Note 3: Table 5 is not applicable for incineration and permit holders that landfill their sludge.

- If you own a wastewater treatment lagoon or sludge lagoon that is cleaned out once a year or less, you may choose to sample only when the sludge is removed or the lagoon is closed. Test one composite sample for each 100 dry tons of sludge or biosolids removed from the lagoon during the year within the lagoon at closing. Composite sample must represent various areas at one-foot depth.
- Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the Department.
- At this time, the Department recommends monitoring requirements shall be performed in accordance with, "POTW Sludge Sampling and Analysis Guidance Document," United States Environmental Protection Agency, August 1989, and the subsequent revisions.

## SECTION J – RECORD KEEPING AND REPORTING REQUIREMENTS

- The permittee shall maintain records on file at the facility for at least five years for the items listed in these standard conditions and any additional items in the Special Conditions section of this permit. This shall include dates when the sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
- Reporting period
  - By January 28<sup>th</sup> of each year, an annual report shall be submitted for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and sludge or biosolids disposal facilities.
  - Permittees with wastewater treatment lagoons shall submit the above annual report only when sludge or biosolids are removed from the lagoon during the report period or when the lagoon is closed.
- Report Forms. The annual report shall be submitted on report forms provided by the Department or equivalent forms approved by the Department.
- Reports shall be submitted as follows:

Major facilities (those serving 10,000 persons or 1 million gallons per day) shall report to both the Department and EPA. Other facilities need to report only to the Department. Reports shall be submitted to the addresses listed as follows:

DNR regional office listed in your permit  
(see cover letter of permit)  
ATTN: Sludge Coordinator

EPA Region VII  
Water Compliance Branch (WACM)  
Sludge Coordinator  
11201 Renner Blvd.  
Lenexa, KS 66219

5. Annual report contents. The annual report shall include the following:
- a. Sludge and biosolids testing performed. Include a copy or summary of all test results, even if not required by the permit.
  - b. Sludge or biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at the end of the year, and the quantity used or disposed.
  - c. Gallons and % solids data used to calculate the dry ton amounts.
  - d. Description of any unusual operating conditions.
  - e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
    - i. This must include the name, address for the hauler and sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name of that facility.
    - ii. Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
  - f. Contract Hauler Activities:

If contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate sludge or biosolids use permit.
  - g. Land Application Sites:
    - i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest ¼, ¼, Section, Township, Range, and county, or UTM coordinates. The facility shall report PAN when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.
    - ii. If the “Low Metals” criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.
    - iii. Report the method used for compliance with pathogen and vector attraction requirements.
    - iv. Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
**FORM B2 – APPLICATION FOR OPERATING PERMIT FOR FACILITIES THAT  
RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW MORE THAN  
100,000 GALLONS PER DAY**

FACILITY NAME <i>Sturgeon Wastewater Treatment Facility</i>	
PERMIT NO. <i>MO-0052027</i>	COUNTY <i>Boone</i>
<b>APPLICATION OVERVIEW</b>	
Form B2 has been developed in a modular format and consists of Parts A, B and C and a Supplemental Application Information (Parts D, E, F and G) packet. All applicants must complete Parts A, B and C. Some applicants must also complete parts of the Supplemental Application Information packet. The following items explain which parts of Form B2 you must complete. Submittal of an incomplete application may result in the application being returned.	
<b>BASIC APPLICATION INFORMATION</b>	
A. Basic application information for all applicants. All applicants must complete Part A. B. Additional application information for all applicants. All applicants must complete Part B. C. Certification. All applicants must complete Part C.	
<b>SUPPLEMENTAL APPLICATION INFORMATION</b>	
D. Expanded Effluent Testing Data. A treatment works that discharges effluent to surface water of the United States and meets one or more of the following criteria must complete <i>Part D - Expanded Effluent Testing Data</i> : 1. Has a design flow rate greater than or equal to 1 million gallons per day. 2. Is required to have or currently has a pretreatment program. 3. Is otherwise required by the permitting authority to provide the information.	
E. Toxicity Testing Data. A treatment works that meets one or more of the following criteria must complete <i>Part E - Toxicity Testing Data</i> : 1. Has a design flow rate greater than or equal to 1 million gallons per day. 2. Is required to have or currently has a pretreatment program. 3. Is otherwise required by the permitting authority to provide the information.	
F. Industrial User Discharges and Resource Conservation and Recovery Act / Comprehensive Environmental Response, Compensation and Liability Act Wastes. A treatment works that accepts process wastewater from any significant industrial users, also known as SIUs, or receives a Resource Conservation and Recovery Act or CERCLA wastes must complete <i>Part F - Industrial User Discharges and Resource Conservation and Recovery Act /CERCLA Wastes</i> . SIUs are defined as: 1. All Categorical Industrial Users, or CIUs, subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations 403.6 and 40 Code of Federal Regulations 403.6 and 40 CFR Chapter 1, Subchapter N. 2. Any other industrial user that meets one or more of the following: i. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions). ii. Contributes a process waste stream that makes up five percent or more of the average dry weather hydraulic or organic capacity of the treatment plant. iii. Is designated as an SIU by the control authority. iv. Is otherwise required by the permitting authority to provide the information.	
G. Combined Sewer Systems. A treatment works that has a combined sewer system must complete <i>Part G - Combined Sewer Systems</i> .	
<b>ALL APPLICANTS MUST COMPLETE PARTS A, B and C</b>	

JAN 18 2017





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM  
**FORM B2 – APPLICATION FOR AN OPERATING PERMIT FOR FACILITIES THAT RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW MORE THAN 100,000 GALLONS PER DAY**

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED
1-18-17	ASB

**PART A – BASIC APPLICATION INFORMATION**

**1. THIS APPLICATION IS FOR:**

An operating permit for a new or unpermitted facility. Construction Permit # \_\_\_\_\_  
 (Include completed Antidegradation Review or request to conduct an Antidegradation Review, see instructions)

An operating permit renewal: Permit #MO-0052027 Expiration Date 06/30/2017

An operating permit modification: Permit #MO-\_\_\_\_\_ Reason: \_\_\_\_\_

1.1 Is the appropriate fee included with the application (see instructions for appropriate fee)?  YES  NO

**2. FACILITY**

NAME: Sturgeon Wastewater Treatment Facility TELEPHONE NUMBER WITH AREA CODE: 573-687-3321

ADDRESS (PHYSICAL): N. Audrain St. or Rt. V CITY: Sturgeon STATE: Mo ZIP CODE: 65284

2.1 LEGAL DESCRIPTION (Facility Site): SW 1/4, NW 1/4, 1/4, Sec. 4, T51N, R 12W COUNTY: Boone

2.2 UTM Coordinates Easting (X): 5762804 Northing (Y): 4343410  
 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

2.3 Name of receiving stream: Unnamed tributary to Sailing Creek

2.4 Number of Outfalls: 2 wastewater outfalls, 2 stormwater outfalls, 0 instream monitoring sites 0

**3. OWNER**

NAME: City of Sturgeon EMAIL ADDRESS: City@sturgeon-mo.org TELEPHONE NUMBER WITH AREA CODE: 573-687-3321

ADDRESS: 303 Station Drive CITY: Sturgeon STATE: Mo ZIP CODE: 65284

3.1 Request review of draft permit prior to Public Notice?  YES  NO

3.2 Are you a Publically Owned Treatment Works (POTW)?  YES  NO  
 If yes, is the Financial Questionnaire attached?  YES  NO

3.3 Are you a Privately Owned Treatment Facility?  YES  NO

3.4 Are you a Privately Owned Treatment Facility regulated by the Public Service Commission (PSC)?  YES  NO

**4. CONTINUING AUTHORITY: Permanent organization which will serve as the continuing authority for the operation, maintenance and modernization of the facility.**

NAME: City of Sturgeon EMAIL ADDRESS: City@sturgeon-mo.org TELEPHONE NUMBER WITH AREA CODE: 573-687-3321

ADDRESS: 303 Station Drive CITY: Sturgeon STATE: Mo ZIP CODE: 65284

If the Continuing Authority is different than the Owner, include a copy of the contract agreement between the two parties and a description of the responsibilities of both parties within the agreement.

**5. OPERATOR**

NAME: John J. Gingerich TITLE: Maintenance Superintendent CERTIFICATE NUMBER (IF APPLICABLE): 9988

EMAIL ADDRESS: City@sturgeon-mo.org TELEPHONE NUMBER WITH AREA CODE: 573-687-1259

**6. FACILITY CONTACT**

NAME: John J. Gingerich TITLE: Maintenance Superintendent

EMAIL ADDRESS: City@sturgeon-mo.org TELEPHONE NUMBER WITH AREA CODE: 573-687-3321

ADDRESS: 303 Station Drive CITY: Sturgeon STATE: Mo ZIP CODE: 65284

RECEIVED Page 2

JAN 18 2017

FACILITY NAME <i>Sturgeon Wastewater treatment facility</i>	PERMIT NO. <i>MO-0057027</i>	OUTFALL NO. <i>#001 + #002</i>
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**PART A - BASIC APPLICATION INFORMATION**

**7. FACILITY INFORMATION**

**7.1 Process Flow Diagram or Schematic.** Provide a diagram showing the processes of the treatment plant. Show all of the treatment units, including disinfection (e.g. - Chlorination and Dechlorination), influents, and outfalls. Specify where samples are taken. Indicate any treatment process changes in the routing of wastewater during dry weather and peak wet weather. Include a brief narrative description of the diagram.  
Attach sheets as necessary. *two cell lagoon, overland flow, four constructed wetland cells, sludge retained in lagoon, outfall #001 and outfall #002 emergency*  
  
*diagram on seperate page*





Imagery ©2017 Google, Map data ©2017 Google 200 ft

- 1+2 Influent
- 3 Cell #1 to Cell #2
- 4 Lift Station
- 5 Overland flow
- 6-7-8-9 Wet Cells
- 10 Out fall 001
- 11 Out fall 002



FACILITY NAME <u>Sturgeon Wastewater treatment facility</u>	PERMIT NO. <u>MO-0052027</u>	OUTFALL NO. <u>#001 &amp; #002</u>
<b>PART A - BASIC APPLICATION INFORMATION</b>		
<b>7. FACILITY INFORMATION (continued)</b>		
<p><b>7.2 Topographic Map.</b> Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information.</p> <ol style="list-style-type: none"> <li>The area surrounding the treatment plant, including all unit processes.</li> <li>The location of the downstream landowner(s). (See Item 10.)</li> <li>The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.</li> <li>The actual point of discharge.</li> <li>Wells, springs, other surface water bodies and drinking water wells that are: 1) within ¼ mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.</li> <li>Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.</li> <li>If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, or disposed.</li> </ol>		
7.3 Facility SIC Code: <u>4952</u>	Discharge SIC Code: <u>4952</u>	
7.4 Number of people presently connected or population equivalent (P.E.): _____	Design P.E. <u>1272</u>	
7.5 Connections to the facility:		
Number of units presently connected:		
Homes <u>279</u>	Trailers <u>49</u>	Apartments <u>39</u> Other (including industrial) <u>12</u>
Number of Commercial Establishments: <u>18</u>		
7.6 Design Flow <u>127,200 gpd</u>	Actual Flow <u>100,000 gpd</u>	
7.7 Will discharge be continuous through the year? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Discharge will occur during the following months: _____ How many days of the week will discharge occur? <u>N/A</u>		
7.8 Is industrial wastewater discharged to the facility? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
If yes, describe the number and types of industries that discharge to your facility. Attach sheets as necessary		
Refer to the APPLICATION OVERVIEW to determine whether additional information is needed for Part F.		
7.9 Does the facility accept or process leachate from landfills?:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
7.10 Is wastewater land applied? If yes, is Form I attached?	Yes <input type="checkbox"/> Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/> No <input type="checkbox"/>
7.11 Does the facility discharge to a losing stream or sinkhole?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
7.12 Has a wasteload allocation study been completed for this facility?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<b>8. LABORATORY CONTROL INFORMATION</b>		
<b>LABORATORY WORK CONDUCTED BY PLANT PERSONNEL</b>		
Lab work conducted outside of plant.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Push-button or visual methods for simple test such as pH, settleable solids.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Additional procedures such as Dissolved Oxygen, Chemical Oxygen Demand, Biological Oxygen Demand, titrations, solids, volatile content.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph.	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

FACILITY NAME <u>Sturgeon Wastewater Treatment Facility</u>		PERMIT NO. <u>MO-0052627</u>	OUTFALL NO. <u>#001 + #002</u>	
<b>PART A - BASIC APPLICATION INFORMATION</b>				
<b>9. SLUDGE HANDLING, USE AND DISPOSAL</b>				
9.1 Is the sludge a hazardous waste as defined by 10 CSR 25?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
9.2 Sludge production (including sludge received from others): Design Dry Tons/Year <u>19</u> Actual Dry Tons/Year <u>5</u>				
9.3 Sludge storage provided: _____ Cubic feet; _____ Days of storage; _____ Average percent solids of sludge; <input type="checkbox"/> No sludge storage is provided. <input checked="" type="checkbox"/> Sludge is stored in lagoon.				
9.4 Type of storage: <input type="checkbox"/> Holding Tank <input type="checkbox"/> Building <input type="checkbox"/> Basin <input checked="" type="checkbox"/> Lagoon <input type="checkbox"/> Concrete Pad <input type="checkbox"/> Other (Describe) _____				
9.5 Sludge Treatment: <input type="checkbox"/> Anaerobic Digester <input type="checkbox"/> Storage Tank <input type="checkbox"/> Lime Stabilization <input checked="" type="checkbox"/> Lagoon <input type="checkbox"/> Aerobic Digester <input type="checkbox"/> Air or Heat Drying <input type="checkbox"/> Composting <input type="checkbox"/> Other (Attach Description)				
9.6 Sludge use or disposal: <input type="checkbox"/> Land Application <input type="checkbox"/> Contract Hauler <input type="checkbox"/> Hauled to Another Treatment Facility <input type="checkbox"/> Solid Waste Landfill <input type="checkbox"/> Surface Disposal (Sludge Disposal Lagoon, Sludge Held For More Than Two Years) <input type="checkbox"/> Incineration <input checked="" type="checkbox"/> Other (Attach Explanation Sheet) <u>lagoon</u>				
9.7 Person responsible for hauling sludge to disposal facility: <input type="checkbox"/> By Applicant <input type="checkbox"/> By Others (complete below)				
NAME			EMAIL ADDRESS	
ADDRESS		CITY	STATE	ZIP CODE
CONTACT PERSON		TELEPHONE NUMBER WITH AREA CODE	PERMIT NO. <u>MO-</u>	
9.8 Sludge use or disposal facility: <input type="checkbox"/> By Applicant <input type="checkbox"/> By Others (Complete below)				
NAME			EMAIL ADDRESS	
ADDRESS		CITY	STATE	ZIP CODE
CONTACT PERSON		TELEPHONE NUMBER WITH AREA CODE	PERMIT NO. <u>MO-</u>	
9.9 Does the sludge or biosolids disposal comply with Federal Sludge Regulation 40 CFR 503? <input type="checkbox"/> Yes <input type="checkbox"/> No (Explain)				
<b>END OF PART A</b>				

FACILITY NAME <u>Sturgeon wastewater treatment facility</u>	PERMIT NO. <u>MO-0052027</u>	OUTFALL NO. <u>#001 + #002</u>
<b>PART B - ADDITIONAL APPLICATION INFORMATION</b>		
<b>10. COLLECTION SYSTEM</b>		
10.1 Length of sanitary sewer collection system in miles <u>— unknown at this time, approximately 20 miles</u>		
10.2 Does significant infiltration occur in the collection system? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, briefly explain any steps underway or planned to minimize inflow and infiltration: <u>manhole lining, camera work, repairing or replacing pipes, replaced manhole</u>		
<b>11. BYPASSING</b>		
Does any bypassing occur anywhere in the collection system or at the treatment facility? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, explain: <u>occasional sewer block, reports sent out</u>		
<b>12. OPERATION AND MAINTENANCE PERFORMED BY CONTRACTOR(S)</b>		
Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of the contractor? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, list the name, address, telephone number and status of each contractor and describe the contractor's responsibilities. (Attach additional pages if necessary.)		
NAME		
MAILING ADDRESS		
TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS	
RESPONSIBILITIES OF CONTRACTOR		
<b>13. SCHEDULED IMPROVEMENTS AND SCHEDULES OF IMPLEMENTATION</b>		
Provide information about any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses for each. <u>Sturgeon treatment facility is going to a new discharge facility. Construction permit has been obtained &amp; construction is underway.</u>		

FACILITY NAME <i>Sturgeon Wastewater treatment facility</i>	PERMIT NO. MO- <i>0052027</i>	OUTFALL NO. <i># 001 &amp; # 002</i>
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**PART B - ADDITIONAL APPLICATION INFORMATION**

**14. EFFLUENT TESTING DATA**

Applicants must provide effluent testing data for the following parameters. Provide the indicated effluent data for each outfall through which effluent is discharged. Do not include information of combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least **three samples** and must be no more than four and one-half years apart.

Outfall Number

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	<i>6.95</i>	S.U.	<i>7.27</i>	S.U.	<i>9</i>
pH (Maximum)	<i>7.80</i>	S.U.	<i>7.27</i>	S.U.	<i>9</i>
Flow Rate	<i>0.2577100</i>	MGD	<i>0.188155</i>	MGD	<i>59</i>

\*For pH report a minimum and a maximum daily value

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Conc.	Units	Number of Samples		

Conventional and Nonconventional Compounds

BIOCHEMICAL OXYGEN DEMAND (Report One)	BOD <sub>5</sub>	<i>17</i>	mg/L	<i>10.6</i>	mg/L	<i>10</i>	<i>5210 B</i>	
	CBOD <sub>5</sub>		mg/L		mg/L			
E. COLI			#/100 mL		#/100 mL			
TOTAL SUSPENDED SOLIDS (TSS)		<i>44</i>	mg/L	<i>16.4</i>	mg/L	<i>10</i>	<i>2540 D</i>	
AMMONIA (as N)		<i>5.3</i>	mg/L	<i>1.93</i>	mg/L	<i>10</i>	<i>4500 NA3B C</i>	
CHLORINE* (TOTAL RESIDUAL, TRC)			mg/L		mg/L			
DISSOLVED OXYGEN			mg/L		mg/L			
OIL and GREASE		<i>&lt;2.0</i>	mg/L	<i>&lt;2.0</i>	mg/L	<i>10</i>	<i>EPA 1664</i>	
OTHER			mg/L		mg/L			

\*Report only if facility chlorinates

**END OF PART B**

FACILITY NAME <i>Sturgeon Wastewater treatment facility</i>	PERMIT NO. <i>MO-0052027</i>	OUTFALL NO. <i>#001 + #002</i>
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**PART C - CERTIFICATION**

**15. ELECTRONIC DISCHARGE MONITORING REPORT (eDMR) SUBMISSION SYSTEM**

Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent limits and monitoring shall be submitted by the permittee via an electronic system to ensure timely, complete, accurate, and nationally-consistent set of data. **One of the following must be checked in order for this application to be considered complete.** Please visit <http://dnr.mo.gov/env/wpp/edmr.htm> to access the Facility Participation Package.

- You have completed and submitted with this permit application the required documentation to participate in the eDMR system.
- You have previously submitted the required documentation to participate in the eDMR system and/or you are currently using the eDMR system.
- You have submitted a written request for a waiver from electronic reporting. See instructions for further information regarding waivers.

**16. CERTIFICATION**

All applicants must complete the Certification Section. This certification must be signed by an officer of the company or city official. All applicants must complete all applicable sections as explained in the Application Overview. By signing this certification statement, applicants confirm that they have reviewed the entire form and have completed all sections that apply to the facility for which this application is submitted.

**ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

PRINTED NAME <i>John J. Gingerich</i>	OFFICIAL TITLE (MUST BE AN OFFICER OF THE COMPANY OR CITY OFFICIAL) <i>Maintenance Superintendent</i>
--	--

SIGNATURE <i>John J. Gingerich</i>
---------------------------------------

TELEPHONE NUMBER WITH AREA CODE <i>(523) 687-1259</i>
--

DATE SIGNED <i>1/4/17</i>
------------------------------

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

Send Completed Form to:

Department of Natural Resources  
Water Protection Program  
ATTN: NPDES Permits and Engineering Section  
P.O. Box 176  
Jefferson City, MO 65102-0176

**END OF PART C**  
**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH PARTS OF FORM B2 YOU MUST COMPLETE.**

- Do not complete the remainder of this application, unless at least one of the following statements applies to your facility:
1. Your facility design flow is equal to or greater than 1,000,000 gallons per day.
  2. Your facility is a pretreatment treatment works.
  3. Your facility is a combined sewer system.

Submittal of an incomplete application may result in the application being returned. Permit fees for returned applications shall be forfeited. Permit fees for applications being processed by the department that are withdrawn by the applicant shall be forfeited.

**MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL**

FACILITY NAME Sturgeon Wastewater treatment facility PERMIT NO. MO-0052027 OUTFALL NO. #001 & #002

**PART D – EXPANDED EFFLUENT TESTING DATA**

**17. EXPANDED EFFLUENT TESTING DATA**

Refer to the APPLICATION OVERVIEW to determine whether Part D applies to the treatment works.

If the treatment works has a design flow greater than or equal to 1 million gallons per day or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information for each outfall through which effluent is discharged. Do not include information of combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least **three pollutant scans** and must be no more than four and one-half years apart.

Outfall Number (Complete Once for Each Outfall Discharging Effluent to Waters of the State.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	No. of Samples		

**METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS AND HARDNESS**

ALUMINUM											
ANTIMONY											
ARSENIC											
BERYLLIUM											
CADMIUM											
CHROMIUM III											
CHROMIUM VI											
COPPER											
IRON											
LEAD											
MERCURY											
NICKEL											
SELENIUM											
SILVER											
THALLIUM											
ZINC											
CYANIDE											
TOTAL PHENOLIC COMPOUNDS											
HARDNESS (as CaCO <sub>3</sub> )											

**VOLATILE ORGANIC COMPOUNDS**

ACROLEIN											
ACRYLONITRILE											
BENZENE											
BROMOFORM											
CARBON TETRACHLORIDE											

FACILITY NAME <u>Sturgeon Wastewater treatment Facility</u>	PERMIT NO. <u>MO-0052027</u>	OUTFALL NO. <u>#001 &amp; #002</u>
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**PART D - EXPANDED EFFLUENT TESTING DATA**

**17. EXPANDED EFFLUENT TESTING DATA**

Complete Once for Each Outfall Discharging Effluent to Waters of the State

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	No. of Samples		
CHLOROBENZENE											
CHLORODIBROMO-METHANE											
CHLOROETHANE											
2-CHLORO-ETHYL VINYL ETHER											
CHLOROFORM											
DICHLOROBROMO-METHANE											
1,1-DICHLORO-ETHANE											
1,2-DICHLORO-ETHANE											
TRANS-1,2-DICHLOROETHYLENE											
1,1-DICHLORO-ETHYLENE											
1,2-DICHLORO-PROPANE											
1,3-DICHLORO-PROPYLENE											
ETHYLBENZENE											
METHYL BROMIDE											
METHYL CHLORIDE											
METHYLENE CHLORIDE											
1,1,2-TETRA-CHLOROETHANE											
TETRACHLORO-ETHANE											
TOLUENE											
1,1,1-TRICHLORO-ETHANE											
1,1,2-TRICHLORO-ETHANE											
TRICHLOROETHYLENE											
VINYL CHLORIDE											

**ACID-EXTRACTABLE COMPOUNDS**

P-CHLORO-M-CRESOL											
2-CHLOROPHENOL											
2,4-DICHLOROPHENOL											
2,4-DIMETHYLPHENOL											
4,6-DINITRO-O-CRESOL											
2,4-DINITROPHENOL											
2-NITROPHENOL											
4-NITROPHENOL											



FACILITY NAME Sturgeon Waste water treatment facility PERMIT NO. MO-052027 OUTFALL NO. # 001 & # 002

**PART D – EXPANDED EFFLUENT TESTING DATA**

**17. EXPANDED EFFLUENT TESTING DATA**

Complete Once for Each Outfall Discharging Effluent to Waters of the State.

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	No. of Samples		
PENTACHLOROPHENOL											
PHENOL											
2,4,6-TRICHLOROPHENOL											
<b>BASE-NEUTRAL COMPOUNDS</b>											
ACENAPHTHENE											
ACENAPHTHYLENE											
ANTHRACENE											
BENZIDINE											
BENZO(A)ANTHRACENE											
BENZO(A)PYRENE											
3,4-BENZO-FLUORANTHENE											
BENZO(GH) PHERYLENE											
BENZO(K) FLUORANTHENE											
BIS (2-CHLOROTHOXY) METHANE											
BIS (2-CHLOROETHYL) – ETHER											
BIS (2-CHLOROISO-PROPYL) ETHER											
BIS (2-ETHYLHEXYL) PHTHALATE											
4-BROMOPHENYL PHENYL ETHER											
BUTYL BENZYL PHTHALATE											
2-CHLORONAPH-THALENE											
4-CHLORPHENYL PHENYL ETHER											
CHRYSENE											
DI-N-BUTYL PHTHALATE											
DI-N-OCTYL PHTHALATE											
DIBENZO (A,H) ANTHRACENE											
1,2-DICHLORO-BENZENE											
1,3-DICHLORO-BENZENE											
1,4-DICHLORO-BENZENE											
3,3-DICHLORO-BENZIDINE											
DIETHYL PHTHALATE											
DIMETHYL PHTHALATE											



FACILITY NAME <u>Sturgeon Wastewater Treatment Facility</u>	PERMIT NO. <u>MO-0052027</u>	OUTFALL NO. <u>#001 + #002</u>
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**PART D - EXPANDED EFFLUENT TESTING DATA**

**17. EXPANDED EFFLUENT TESTING DATA**

Complete Once for Each Outfall Discharging Effluent to Waters of the State.

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	No. of Samples		
2,4-DINITRO-TOLUENE											
2,6-DINITRO-TOLUENE											
1,2-DIPHENYL-HYDRAZINE											
FLUORANTHENE											
FLUORENE											
HEXACHLOROBENZENE											
HEXACHLOROBUTADIENE											
HEXACHLOROCYCLO-PENTADIENE											
HEXACHLOROETHANE											
INDENO (1,2,3-CD) PYRENE											
ISOPHORONE											
NAPHTHALENE											
NITROBENZENE											
N-NITROSODI-PROPYLAMINE											
N-NITROSODI-METHYLAMINE											
N-NITROSODI-PHENYLAMINE											
PHENANTHRENE											
PYRENE											
1,2,4-TRICHLOROBENZENE											

Use this space (or a separate sheet) to provide information on other pollutants not specifically listed in this form.


END OF PART D

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM B2 YOU MUST COMPLETE.

**MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL**

FACILITY NAME <i>Sturgeon Wastewater treatment facility</i>	PERMIT NO. <i>MO-0052027</i>	OUTFALL NO. <i>#001 d #002</i>
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**PART E - TOXICITY TESTING DATA**

**18. TOXICITY TESTING DATA**

Refer to the APPLICATION OVERVIEW to determine whether Part E applies to the treatment works.

Publicly owned treatment works, or POTWs, meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points.

- A. POTWs with a design flow rate greater than or equal to 1 million gallons per day
- B. POTWs with a pretreatment program (or those that are required to have one under 40 CFR Part 403)
- C. POTWs required by the permitting authority to submit data for these parameters
  - At a minimum, these results must include quarterly testing for a 12-month period within the past one year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute or chronic toxicity, depending on the range of receiving water dilution. Do not include information about combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136.
  - If EPA methods were not used, report the reason for using alternative methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E. If no biomonitoring data is required, do not complete Part E. Refer to the application overview for directions on which other sections of the form to complete.

Indicate the number of whole effluent toxicity tests conducted in the past four and one-half years: \_\_\_\_\_ chronic 1 acute

Complete the following chart for the last three whole effluent toxicity tests. Allow one column per test. Copy this page if more than three tests are being reported.

	Most Recent	2 <sup>ND</sup> Most Recent	3 <sup>RD</sup> Most Recent
<b>A. Test Information</b>			
Test Method Number			
Final Report Number			
Outfall Number	<i>#001</i>		
Dates Sample Collected	<i>06/06/11 - 06/07/11</i>		
Date Test Started	<i>06/08/11</i>		
Duration	<i>2 days</i>		
<b>B. Toxicity Test Methods Followed</b>			
Manual Title	<i>Standard Methods</i>		
Edition Number and Year of Publication	<i>18 most current edition at time of test</i>		<i>1992</i>
Page Number(s)			
<b>C. Sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used</b>			
24-Hour Composite	<i>+</i>		
Grab			
<b>D. Indicate where the sample was taken in relation to disinfection (Check all that apply for each)</b>			
Before Disinfection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After Disinfection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After Dechlorination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>E. Describe the point in the treatment process at which the sample was collected</b>			
Sample Was Collected:	<i>#001 outfall</i>		
<b>F. Indicate whether the test was intended to assess chronic toxicity, acute toxicity, or both</b>			
Chronic Toxicity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acute Toxicity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>G. Provide the type of test performed</b>			
Static	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Static-renewal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flow-through	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>H. Source of dilution water. If laboratory water, specify type; if receiving water, specify source</b>			
Laboratory Water	<input type="checkbox"/> <i>none on report</i>	<input type="checkbox"/>	<input type="checkbox"/>
Receiving Water	<input type="checkbox"/> <i>none on report</i>	<input type="checkbox"/>	<input type="checkbox"/>

FACILITY NAME <i>Sturgeon Wastewater treatment facility</i>	PERMIT NO. <i>MO-0052027</i>	OUTFALL NO. <i>#001 + #002</i>
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**PART E - TOXICITY TESTING DATA**

**18. TOXICITY TESTING DATA (continued)**

	Most Recent	Second Most Recent	Third Most Recent
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I. Type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.

Fresh Water			
Salt Water			

J. Percentage of effluent used for all concentrations in the test series

	<i>AEC 100%</i>		

K. Parameters measured during the test (State whether parameter meets test method specifications)

pH	<i>7.64</i>		
Salinity			
Temperature	<i>6°C</i>		
Ammonia	<i>&lt;0.050</i>		
Dissolved Oxygen	<i>4.9</i>		

L. Test Results

Acute:

Percent Survival in 100% Effluent	<i>100%</i>		
LC <sub>50</sub>	<i>promelas 1.071g/L dubia 0.467g/l</i>		
95% C.I.	<i>(0.736-1.405g/L) (0.303-0.631g/l)</i>		
Control Percent Survival	<i>&lt; 90%</i>		
Other (Describe)			

Chronic:

NOEC			
IC <sub>25</sub>			
Control Percent Survival			
Other (Describe)			

M. Quality Control/ Quality Assurance

Is reference toxicant data available?			
Was reference toxicant test within acceptable bounds?			
What date was reference toxicant test run (MM/DD/YYYY)?			
Other (Describe)			

Is the treatment works involved in a toxicity reduction evaluation?     Yes     No

If yes, describe:

If you have submitted biomonitoring test information, or information regarding the cause of toxicity, within the past four and one-half years, provide the dates the information was submitted to the permitting authority and a summary of the results.

Date Submitted (MM/DD/YYYY)

Summary of Results (See Instructions)

**END OF PART E**

**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM B2 YOU MUST COMPLETE.**

**MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL**

FACILITY NAME Sturgeon Wastewater treatment facility

PERMIT NO. MO-0052027

OUTFALL NO. #001 + #002

**PART F – INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES**

Refer to the APPLICATION OVERVIEW to determine whether Part F applies to the treatment works.

**19. GENERAL INFORMATION**

19.1 Does the treatment works have, or is it subject to, an approved pretreatment program?  
 Yes  No

19.2 Number of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs). Provide the number of each of the following types of industrial users that discharge to the treatment works:  
 Number of non-categorical SIUs 0  
 Number of CIUs 0

**20. INDUSTRIES CONTRIBUTING MORE THAN 5 PERCENT OF THE ACTUAL FLOW TO THE FACILITY OR OTHER SIGNIFICANT INDUSTRIAL USERS INFORMATION**

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, provide the information requested for each. Submit additional pages as necessary.

NAME			
MAILING ADDRESS	CITY	STATE	ZIP CODE

20.1 Describe all of the industrial processes that affect or contribute to the SIU's discharge

20.2 Describe all of the principle processes and raw materials that affect or contribute to the SIU's discharge.

Principal Product(s):

Raw Material(s):

**20.3 Flow Rate**

a. PROCESS WASTEWATER FLOW RATE. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day, or gpd, and whether the discharge is continuous or intermittent.  
 gpd  Continuous  Intermittent

b. NON-PROCESS WASTEWATER FLOW RATE. Indicate the average daily volume of non-process wastewater discharged into the collection system in gallons per day, or gpd, and whether the discharge is continuous or intermittent.  
 gpd  Continuous  Intermittent

20.4 Pretreatment Standards. Indicate whether the SIU is subject to the following:

a. Local Limits  Yes  No

b. Categorical Pretreatment Standards  Yes  No

If subject to categorical pretreatment standards, which category and subcategory?

20.5 Problems at the treatment works attributed to waste discharged by the SIU. Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years?

Yes  No

If Yes, describe each episode

**MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL**

FACILITY NAME <u>Sturgeon Wastewater treatment facility</u>	PERMIT NO. <u>MO-0052027</u>	OUTFALL NO. <u>#001 + #002</u>
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**PART F - INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES**

**21. RCRA HAZARDOUS WASTE RECEIVED BY TRUCK, RAIL, OR DEDICATED PIPELINE**

**21.1** Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail or dedicated pipe?  Yes  No

**21.2** Method by which RCRA waste is received. (Check all that apply)  
 Truck  Rail  Dedicated Pipe

**21.3** Waste Description

EPA Hazardous Waste Number	Amount (volume or mass)	Units

**22. CERCLA (SUPERFUND) WASTEWATER, RCRA REMEDIATION/CORRECTIVE ACTION WASTEWATER, AND OTHER REMEDIAL ACTIVITY WASTEWATER**

**22.1** Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?  Yes  No

Provide a list of sites and the requested information for each current and future site.

**22.2** Waste Origin. Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

**22.3** List the hazardous constituents that are received (or are expected to be received). Included data on volume and concentration, if known. (Attach additional sheets if necessary)

**22.4** Waste Treatment

a. Is this waste treated (or will it be treated) prior to entering the treatment works?  
 Yes  No

If Yes, describe the treatment (provide information about the removal efficiency):

b. Is the discharge (or will the discharge be) continuous or intermittent?  
 Continuous  Intermittent

If intermittent, describe the discharge schedule:

**END OF PART F**

**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM B2 YOU MUST COMPLETE.**

**MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL**

FACILITY NAME <i>Sturgeon waste water treatment facility</i>	PERMIT NO. <i>MO-0052027</i>	OUTFALL NO. <i># 001 + # 002</i>
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**PART G - COMBINED SEWER SYSTEMS**

Refer to the APPLICATION OVERVIEW to determine whether Part G applies to the treatment works.

**23. GENERAL INFORMATION**

**23.1 System Map.** Provide a map indicating the following: (May be included with basic application information.)

- A. All CSO Discharges.
- B. Sensitive Use Areas Potentially Affected by CSOs. (e.g., beaches, drinking water supplies, shellfish beds, sensitive aquatic ecosystems and Outstanding Natural Resource Waters.)
- C. Waters that Support Threatened and Endangered Species Potentially Affected by CSOs.

**23.2 System Diagram.** Provide a diagram, either in the map provided above or on a separate drawing, of the Combined Sewer Collection System that includes the following information:

- A. Locations of Major Sewer Trunk Lines, Both Combined and Separate Sanitary.
- B. Locations of Points where Separate Sanitary Sewers Feed into the Combined Sewer System.
- C. Locations of In-Line or Off-Line Storage Structures.
- D. Locations of Flow-Regulating Devices.
- E. Locations of Pump Stations.

**23.3** Percent of collection system that is combined sewer

**23.4** Population served by combined sewer collection system

**23.5** Name of any satellite community with combined sewer collection system

**24. CSO OUTFALLS. COMPLETE THE FOLLOWING ONCE FOR EACH CSO DISCHARGE POINT**

**24.1** Description of Outfall

- a. Outfall Number
- b. Location
- c. Distance from Shore (if applicable) \_\_\_\_\_ ft
- d. Depth Below Surface (if applicable) \_\_\_\_\_ ft
- e. Which of the following were monitored during the last year for this CSO?  
 Rainfall                       CSO Pollutant Concentrations                       CSO  
 CSO Flow Volume                       Receiving Water Quality
- f. How many storm events were monitored last year?

**24.2** CSO Events

- a. Give the Number of CSO Events in the Last Year                      Events                       Actual                       Approximate
- b.                      Hours                      Give the Average Duration Per CSO Event  
 Actual                       Approximate
- c.                      Million Gallons                      Give the Average Volume Per CSO Event  
 Actual                       Approximate
- d. Give the minimum rainfall that caused a CSO event in the last year \_\_\_\_\_ inches of rainfall

**24.3** Description of Receiving Waters

- a. Name of Receiving Water
- b. Name of Watershed/River/Stream System
- c. U.S. Soil Conservation Service 14-Digit Watershed Code (If Known)
- d. Name of State Management/River Basin
- e. U.S. Geological Survey 8- Digit Hydrologic Cataloging Unit Code (If Known)

**24.4** CSO Operations

Describe any known water quality impacts on the receiving water caused by this CSO (e.g., permanent or intermittent beach closings, permanent or intermittent shellfish bed closings, fish kills, fish advisories, other recreational loss, or violation of any applicable state water quality standard.)

**END OF PART G**

**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM B2 YOU MUST COMPLETE.**



**INSTRUCTIONS FOR COMPLETING FORM B2**  
**APPLICATION FOR OPERATING PERMIT FOR FACILITIES THAT RECEIVE PRIMARILY DOMESTIC WASTE AND**  
**HAVE A DESIGN FLOW MORE THAN 100,000 GALLONS PER DAY, Form 780-1805**  
(Facilities less than or equal to 100,000 gallons per day of domestic waste must use Form B, 780-1512.)

**PART A – BASIC APPLICATION INFORMATION**

1. Check the appropriate box. **Do not check more than one item.** Operating permits refer to permits issued by the Department of Natural Resources, Water Protection Program. If an Antidegradation Review has not been conducted, submit the application located at the following link, to the Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, MO 65102: [dnr.mo.gov/forms/780-1893-f.pdf](http://dnr.mo.gov/forms/780-1893-f.pdf).

1.1 **Fees Information:**

**DOMESTIC OPERATING PERMIT FEES – PRIVATE**

Annual operating permit fees are based on flow.

Annual fee/Design flow	Annual fee/Design flow	Annual fee/Design flow
\$150..... <5,000 gpd	\$1,000..... 15,000-24,999 gpd	\$4,000..... 100,000-249,999 gpd
\$300..... 5,000-9,999 gpd	\$1,500..... 25,000-29,999 gpd	\$5,000..... ≥250,000 gpd
\$600..... 10,000-14,999 gpd	\$3,000..... 30,000-99,999 gpd	

New domestic wastewater treatment facilities must submit the annual fee with the original application.

**If the application is for a site-specific permit re-issuance, send no fees.** You will be invoiced separately by the department on the anniversary date of the original permit. Permit fees must be current for the department to reissue the operating permit. Late fees of two percent per month are charged and added to outstanding annual fees.

**PUBLIC SEWER SYSTEM OPERATING PERMIT FEES** (City, public sewer district, public water district, or other publicly owned treatment works) Annual fee is based on number of service connections. Fees listings are found in 10 CSR 20-6.011 which is available at <http://s1.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-6.pdf>. New public sewer system facilities should not submit any fee as the department will invoice the permittee.

**OPERATING PERMIT MODIFICATIONS**, including transfers, are subject to the following fees:

- a. Publicly Owned Treatment Works (POTWs) - \$200 each.
- b. Non-POTWs – \$100 each for a minor modification (name changes, address changes, other non-substantive changes) or a fee equal to 25 percent of the facility's annual operating fee for a major modification.

2. Name of Facility – Include the name by which this facility is locally known. Example: Southwest Sewage Treatment Plant, Country Club Mobile Home Park, etc. Provide the street address or location of the facility. If the facility lacks a street name or route number, provide the names of the closest intersection, highway, country road, etc.

2.1 Self-explanatory.

2.2 Global Positioning System, or GPS, is a satellite-based navigation system. The department prefers that a GPS receiver is used and the displayed coordinates submitted. If access to a GPS receiver is not available, use a mapping system to approximate the coordinates; the department's mapping system is available at [www.dnr.mo.gov/internetmapviewer/](http://www.dnr.mo.gov/internetmapviewer/).

2.3-2.4 Self-explanatory.

3. Owner – Provide the legal name, mailing address, phone number, and email address of the owner.

3.1 Prior to submitting a permit to public notice, the Department of Natural Resources shall provide the permit applicant 15 days to review the draft permit for nonsubstantive drafting errors. In the interest of expediting permit issuance, permit applicants may waive the opportunity to review draft permits prior to public notice.

3.2-3.4 Self-explanatory.

4. Continuing Authority – Provide information for the permanent organization which will serve as the continuing authority for the operation, maintenance, and modernization of the facility. The regulatory requirement regarding continuing authority is available at <http://s1.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-6.pdf> or contact the Department of Natural Resources Water Protection Program (see contact information below).

5. Operator – Provide the name, certificate number, title, mailing address, phone number, and email address of the operator of the facility.

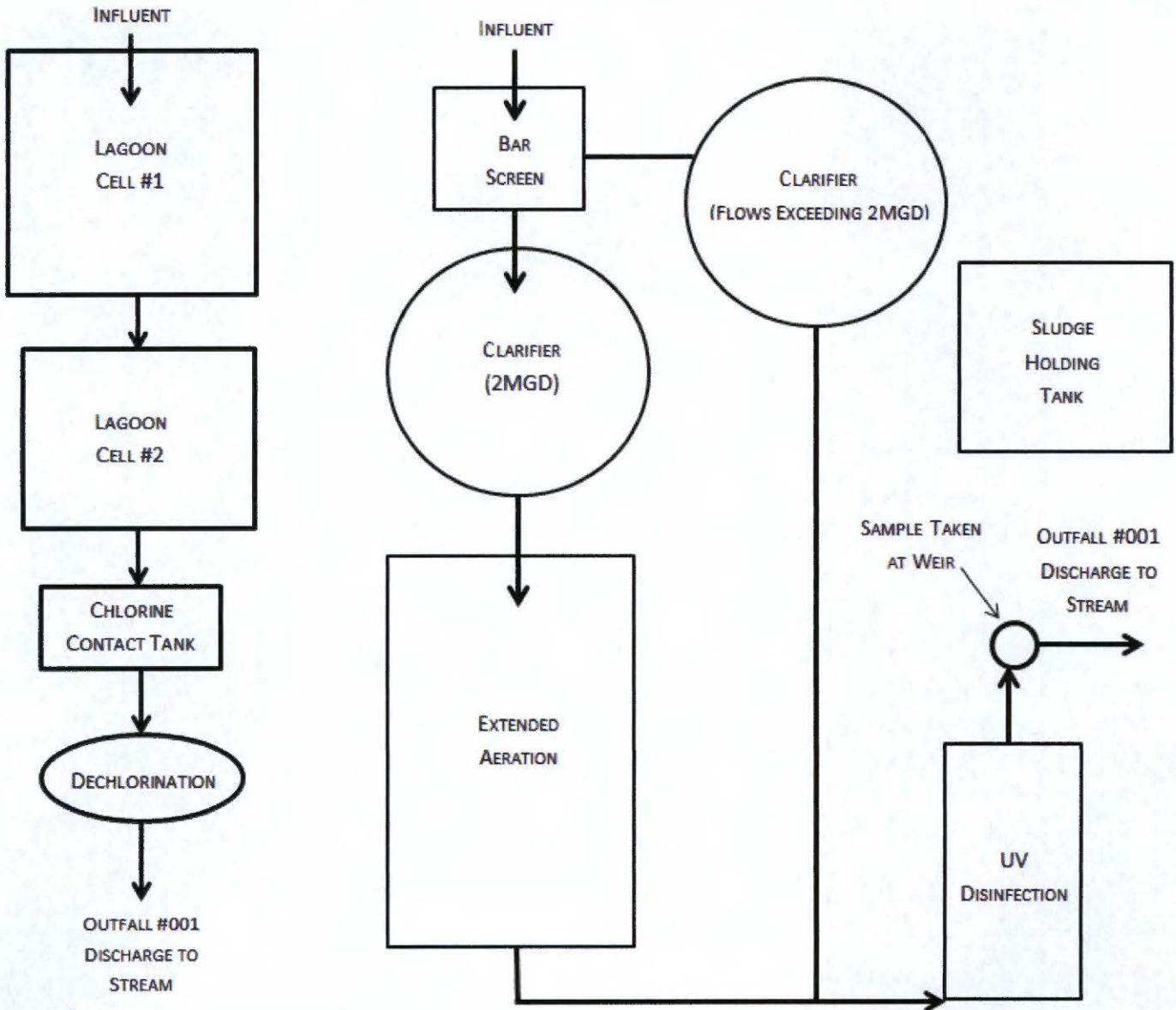
6. Provide the name, title, mailing address, work phone number, and email address of a person who is thoroughly familiar with the operation of the facility and with the facts reported in this application and who can be contacted by the department.



7.1 Process Flow Diagram Examples

WASTEWATER TREATMENT LAGOON

WASTEWATER TREATMENT FACILITY



- 7.2 A topographic map is available on the web at [www.dnr.mo.gov/internetmapviewer/](http://www.dnr.mo.gov/internetmapviewer/) or from the Department of Natural Resources' Geological Survey in Rolla at 573-368-2125.
- 7.3 For Standard Industrial Codes visit [www.osha.gov/pls/imis/sicsearch.html](http://www.osha.gov/pls/imis/sicsearch.html) and for the North American Industry Classification System, visit [www.census.gov/naics](http://www.census.gov/naics) or contact the Department of Natural Resources' Water Protection Program.
- 7.4-7.8 Self – explanatory.
- 7.9 If wastewater is land-applied submit form I: [www.dnr.mo.gov/forms/780-1686-f.pdf](http://www.dnr.mo.gov/forms/780-1686-f.pdf).
- 7.10-8. Self-explanatory
- 9.1 A copy of 10 CSR 25 is available at [www.sos.mo.gov/adrules/csr/current/10csr/10csr.asp#10-25](http://www.sos.mo.gov/adrules/csr/current/10csr/10csr.asp#10-25).
- 9.2-9.9 Self – explanatory.



**INSTRUCTIONS FOR COMPLETING FORM B2  
APPLICATION FOR OPERATING PERMIT FOR FACILITIES THAT RECEIVE PRIMARILY DOMESTIC WASTE AND  
HAVE A DESIGN FLOW MORE THAN 100,000 GALLONS PER DAY  
(continued)**

**PART B – ADDITIONAL APPLICATION INFORMATION**

10.-14. Self-explanatory

**PART C – CERTIFICATION**

15. Electronic Discharge Monitoring Report (eDMR) Submission System – Visit the eDMR site at <http://dnr.mo.gov/env/wpp/edmr.htm> and click on the "Facility Participation Package" link. The eDMR Permit Holder and Certifier Registration Form and information about the eDMR system can be found in the Facility Participation Package.

Waivers to electronic reporting may be granted by the Department per 40 CFR 127.15 under certain, special circumstances. A written request must be submitted to the Department for approval. Waivers may be granted to facilities owned or operated by:

- a. members of religious communities that choose not to use certain technologies or
  - b. permittees located in areas with limited broadband access. The National Telecommunications and Information Administration (NTIA) in collaboration with the Federal Communications Commission (FCC) have created a broadband internet availability map: <http://www.broadbandmap.gov/>. Please contact the Department if you need assistance.
16. Signature – All applications must be signed as follows and the signatures must be original:
- a. For a corporation, by an officer having responsibility for the overall operation of the regulated facility or activity or for environmental matters.
  - b. For a partnership or sole proprietorship, by a general partner or the proprietor.
  - c. For a municipal, state, federal or other public facility, by either a principal executive officer or by an individual having overall responsibility for environmental matters at the facility.

**PART D – EXPANDED EFFLUENT TESTING DATA**

17. Self-explanatory. ML/MDL means minimum limit or minimum detection limit.

**PART E – TOXICITY TESTING DATA**

18. Self-explanatory.

**PART F – INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES**

19. Federal regulations are available through the U.S. Government Printing Office at <https://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR>.

19.1 Self-explanatory

19.2 A noncategorical significant industrial user is an industrial user that is not a CIU and meets one or more of the following:

- i. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions).
- ii. Contributes a process waste stream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant.
- iii. Is designated as an SIU by the control authority.

20.-22.4 Self-explanatory.

**PART G – COMBINED SEWER SYSTEMS**

23.-24.4 Self-explanatory.

**Submittal of an incomplete application may result in the application being returned.**

This completed form and any attachments along with the applicable permit fees, should be submitted to:

Department of Natural Resources  
Water Protection Program  
ATTN: NPDES Permits and Engineering Section  
P.O. Box 176  
Jefferson City, MO 65102-0176

Map of regional offices with addresses and phone numbers are available on the web at <http://dnr.mo.gov/regions/>. If there are any questions concerning this form, contact the appropriate regional office or the Department of Natural Resources, Water Protection Program, Operating Permits Section at 800-361-4827 or 573-751-6825.