

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 RSMo, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.: MO-0099252

Owner: Northeast Public Sewer District
Address: 1041 Gravois Road, Fenton, MO 63026

Continuing Authority: Same as above
Address: Same as above

Facility Name: NPSD Antire Springs WWTP
Facility Address: 1411 Horseshoe Bend, High Ridge, MO 63049

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 only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas.

October 1, 2022
Effective Date

September 30, 2027
Expiration Date

Chris Wieberg, Director, Water Production Program

FACILITY DESCRIPTION (continued):

Outfall #001 – POTW

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

Bar screen / extended aeration / 2 final clarifiers (in series) / chlorination / dechlorination / sludge is hauled by District to NPSD Saline Creek WWTP for disposal

Design population equivalent is 200.

Design flow is 20,000 gallons per day.

Actual flow is 14,575 gallons per day.

Design sludge production is 4.2 dry tons/year.

Legal Description:	Sec. 03, T43N, R04E, Jefferson County
UTM Coordinates:	X=712522, Y=4264265
Receiving Stream:	Antire Creek (C)
First Classified Stream and ID:	100K Extent-Remaining Streams (C) (3960)
USGS Basin & Sub-watershed No.:	(07140102-1001)

Permitted Feature INF – Influent Monitoring Location – Influent manhole

Legal Description:	Sec. 3, T43N, R04E, Jefferson County
UTM Coordinates:	X=712546, Y=4264254

OUTFALL #001	TABLE A-1. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					
	The permittee is authorized to discharge from outfall number(s) as specified in the application for this permit. The final effluent limitations in Table A-1 shall become effective on October 1, 2022 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:					
EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Limit Set: Q						
Flow	MGD	*		*	once/quarter****	24 hr. estimate
Biochemical Oxygen Demand ₅	mg/L		45	30	once/quarter****	composite**
Total Suspended Solids	mg/L		45	30	once/quarter****	composite**
<i>E. coli</i> (Note 1, Page 4)	#/100mL		630	126	once/quarter****	grab
Ammonia as N (Jan 1 – Mar 31)	mg/L	12.1		3.1	once/quarter****	composite**
Ammonia as N (Apr 1 – Jun 30)	mg/L	12.1		2.0	once/quarter****	composite**
Ammonia as N (Jul 1 – Sep 30)	mg/L	12.1		1.5	once/quarter****	composite**
Ammonia as N (Oct 1 – Dec 31)	mg/L	12.1		2.9	once/quarter****	composite**
Total Residual Chlorine (Note 2, Page 4)	µg/L	< 130		< 130	once/quarter****	grab
EFFLUENT PARAMETER(S)	UNITS	MINIMUM		MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH – Units***	SU	6.5		9.0	once/quarter****	grab
EFFLUENT PARAMETER(S)	UNITS	DAILY MINIMUM		MONTHLY AVERAGE MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Dissolved Oxygen (Note 2, Page 4)	mg/L	5.0		5.0	once/quarter****	grab
EFFLUENT PARAMETER(S)			UNITS	MONTHLY AVERAGE MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Biochemical Oxygen Demand ₅ – Percent Removal (Note 3, Page 4)			%	85	once/quarter****	calculated
Total Suspended Solids – Percent Removal (Note 3, Page 4)			%	85	once/quarter****	calculated
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY ; THE FIRST REPORT IS DUE JANUARY 28, 2023 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

- * Monitoring requirement only.
- ** A composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.
- *** pH is measured in pH units and is not to be averaged.
- **** See table below for quarterly sampling.

Quarterly Minimum Sampling Requirements				
Quarter	Months	<i>E. coli</i> , Total Residual Chlorine (TRC), and Dissolved Oxygen	All Other Parameters	Report is Due
First	January, February, March	Not required to sample.	Sample at least once during any month of the quarter	April 28 th
Second	April, May, June	Sample at least once during any month of the quarter	Sample at least once during any month of the quarter	July 28 th
Third	July, August, September	Sample at least once during any month of the quarter	Sample at least once during any month of the quarter	October 28 th
Fourth	October	Sample once during <u>October</u>	Sample at least once during any month of the quarter	January 28 th
	November & December	Not required to sample.		

PARAMETER(S)	UNITS	MONITORING REQUIREMENTS				
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Limit Set: IQ						
Biochemical Oxygen Demand ₅ (Note 3)	mg/L			*	once/quarter***	composite**
Total Suspended Solids (Note 3)	mg/L			*	once/quarter***	composite**

MONITORING REPORTS SHALL BE SUBMITTED **QUARTERLY**; THE FIRST REPORT IS DUE JANUARY 28, 2023.

- * Monitoring requirement only.
- ** A composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.
- *** See table below for quarterly sampling requirements.

Quarterly Minimum Sampling Requirements			
Quarter	Months	Quarterly Influent Parameters	Report is Due
First	January, February, March	Sample at least once during any month of the quarter	April 28 th
Second	April, May, June	Sample at least once during any month of the quarter	July 28 th
Third	July, August, September	Sample at least once during any month of the quarter	October 28 th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 th

Note 1 – Effluent limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for *E. coli* is expressed as a geometric mean. The Weekly Average for *E. coli* will be expressed as a geometric mean if more than one (1) sample is collected during a calendar week (Sunday through Saturday).

Note 2 – This permit contains a Total Residual Chlorine (TRC) limit.

- (a) The Water Quality Based Effluent Limit for Total Residual Chlorine was calculated to be **14.9 µg/L** (daily maximum limit) and **10.0 µg/L** (monthly average limit). These limits are below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The Department has determined the current acceptable ML for total residual chlorine to be 130 µg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit. Measured values greater than or equal to the minimum quantification level of 130 µg/L will be considered violations of the permit and values less than the minimum quantification level of 130 µg/L will be considered to be in compliance with the permit limitation.
- (b) Disinfection is required during the recreational season from April 1 through October 31. Do not chlorinate during the non-recreational months and an actual analysis for TRC and Dissolved Oxygen (DO) is not necessary.
- (c) Do not chemically de-chlorinate **if it is not needed to meet the limits in your permit**.
- (d) If no chlorine was used in a given sampling period, an actual analysis for TRC and Dissolved Oxygen (DO) is not necessary. Simply report as “AG – Conditional Monitoring Not Required This Period” for TRC and DO in the eDMR system.

Note 3 – Influent sampling for BOD₅ and TSS is not required when the facility does not discharge effluent during the reporting period. Samples are to be collected prior to any treatment process. Calculate Percent Removal by using the following formula: [(Average Influent – Average Effluent) / Average Influent] x 100% = Percent Removal. Influent and effluent samples are to be taken during the same month. The Average Influent and Average Effluent values are to be calculated by adding the respective values together and dividing by the number of samples taken during the month. Influent samples are to be collected as a composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.

C. 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 August 1, 2019, and hereby incorporated as though fully set forth herein. Annual reports required per Standard Conditions Part III Section K shall be submitted online to the Department via the Department's eDMR system as an attachment. This supersedes Standard Conditions Part III Section K #4. EPA reports shall continue to be submitted online via the Central Data Exchange system.

D. SPECIAL CONDITIONS

1. Electronic Discharge Monitoring Report (eDMR) Submission System. Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent monitoring data and any report required by the permit (unless specifically directed otherwise by the permit) shall be submitted by the permittee via an electronic system to ensure timely, complete, accurate, and nationally consistent set of data about the NPDES program. All reports uploaded into the system shall be reasonably named so they are easily identifiable, such as "WET Test Chronic Outfall 002 Jan 2023," or "Outfall 004 Daily Data Mar 2025."
 - (a) eDMR Registration Requirements. The permittee must register with the Department's eDMR system through the Missouri Gateway for Environmental Management (MoGEM) before the first report is due. Registration and other information regarding MoGEM can be found at <https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem>. Information about the eDMR system can be found at <https://dnr.mo.gov/water/business-industry-other-entities/reporting/electronic-discharge-monitoring-reporting-system-edmr>. The first user shall register as an Organization Official and the association to the facility must be approved by the Department. Regarding Standard Conditions Part I, Section B, #7, the eDMR system is currently the only Department approved reporting method for this permit unless a waiver is granted by the Department. See paragraph (c) below.
 - (b) Electronic Submissions. To access the eDMR system, use the following link in your web browser: <https://apps5.mo.gov/mogems/welcome.action>. If you experience difficulties with using the eDMR system you may contact edmr@dnr.mo.gov or call 855-789-3889 or 573-526-2082 for assistance.
 - (c) 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: <https://dnr.mo.gov/document-search/electronic-discharge-monitoring-report-waiver-request-form-mo-780-2692>. The Department will either approve or deny this electronic reporting waiver request within 120 calendar days.
2. 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 or modification thereto pursuant to 40 CFR 403.8(c) or 40 CFR 403.18(e), respectively.
3. All outfalls must be clearly marked in the field.
4. Report as no-discharge when a discharge does not occur during the report period.
5. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).
6. The permittee shall comply with any applicable requirements listed in 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. To request a modification of the operational control testing requirements listed in 10 CSR 20-9, the permittee shall submit a permit modification application and fee to the Department requesting a deviation from the operational control monitoring requirements. Upon approval of the request, the Department will modify the permit.

D. SPECIAL CONDITIONS (continued)

7. 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) See sufficiently sensitive test method requirements in Standard Conditions Part I, Section A, No. 4 regarding proper testing and method minimum levels used for sample analysis.
 - (c) The permittee shall not report a sample result as “Non-Detect” without also reporting the method minimum level of the test. Reporting as “Non Detect” without also including the method minimum level, will be considered failure to report, which is a violation of this permit.
 - (d) The permittee shall provide the “Non-Detect” sample result using the less than symbol and the method minimum level (e.g., <50 µg/L, if the method minimum level for the parameter is 50 µg/L).
 - (e) Where the permit contains a Department determined Minimum Quantification 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.
 - (f) For the daily maximum, the facility shall report the highest value. If the highest value was a non-detect, use the less than “<” symbol and the laboratory’s highest method minimum level.
 - (g) For reporting an average based on all non-detected values, remove the “<” sign from the values, average the values, and then add the “<” symbol back to the resulting average.
 - (h) For reporting an average based on a mix of detected and non-detected values (not including *E. coli*), assign a value of “0” for all non-detects for that reporting period and report the average of all the results.
 - (i) When *E. coli* is not detected above the method minimum level, the permittee must report the data qualifier signifying less than detection limit for that parameter (e.g., <1 #/100mL, if the method minimum level is 1 #/100mL). For reporting a geometric mean based on a mix of detected and non-detected values, use one-half of the detection limit (instead of zero) for non-detects when calculating geometric means.
 - (j) See the Fact Sheet Appendix - Non-Detect Example Calculations for further guidance.
8. The permittee shall develop and implement a program for maintenance and repair of its collection system. The permittee may compare collection system performance results and other data with the benchmarks used in the Departments’ Capacity, Management, Operation, And Maintenance (CMOM) Model located at <https://dnr.mo.gov/document-search/capacity-management-operations-maintenance-plan-editable-template>. Additional information regarding the Departments’ CMOM Model is available at <https://dnr.mo.gov/print/document-search/pub2574>.
- The permittee shall also submit a report via the Electronic Discharge Monitoring Report (eDMR) Submission System annually, by January 28th, for the previous calendar year. The report shall contain the following information:
- (a) A summary of the efforts to locate and eliminate specific 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.
9. 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 St. Louis Regional Office during normal business hours or by using the online Sanitary Sewer Overflow/Facility Bypass Application located at: <https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem> 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.
10. The facility must be sufficiently secured to restrict entry by children, livestock and unauthorized persons as well as to protect the facility from vandalism.
11. An Operation and Maintenance (O & M) manual shall be maintained by the permittee and made available to the operator. The O & M manual shall include key operating procedures and a brief summary of the operation of the facility.
12. An all-weather access road to the treatment facility shall be maintained.

F. SPECIAL CONDITIONS (continued)

13. The outfall sewer shall be protected and maintained against the effects of floodwater, ice, or other hazards as to reasonably ensure its structural stability, freedom from stoppage, and that a sample of the effluent can be obtained at a point after the final treatment process and before the discharge mixes with the receiving waters.

G. NOTICE OF RIGHT TO APPEAL

If you were adversely affected by this decision, you may be entitled to pursue an appeal before the administrative hearing commission (AHC) pursuant to Sections 621.250 and 644.051.6 RSMo. To appeal, you must file a petition with the AHC within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC. Any appeal should be directed to:

Administrative Hearing Commission
U.S. Post Office Building, Third Floor
131 West High Street, P.O. Box 1557
Jefferson City, MO 65102-1557
Phone: 573-751-2422
Fax: 573-751-5018
Website: <https://ahc.mo.gov>

**MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0099252
NPDS ANTIRE SPRINGS WWTP**

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.

Part I – Facility Information

Application Date: 03/14/22
Expiration Date: 09/30/22

Facility Type and Description: POTW - Bar screen / extended aeration / 2 final clarifiers (in series) / chlorination / dechlorination / sludge is hauled by District to NPSD Saline Creek WWTP for disposal

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.031	Secondary	Domestic

Comments:

Changes to Outfall #001 include the change in Facility Description to include the use of two final clarifiers in series, the revision of dissolved oxygen limits from monitoring only to final effluent limits, the revision of final effluent limits for Ammonia using new ecoregional pH and Temperature data, the revision in sampling type for Ammonia from grab to composite samples, and the revision of final limits for Total Residual Chlorine (TRC). Changes in permit include the addition of Permitted Feature INF. This permitted feature is added to reflect influent monitoring for BOD₅ and TSS to calculate percent removal. See Part II of the Fact Sheet for further information regarding the addition, revision, and removal of effluent parameters.

Special Conditions were updated to include the revision of the Electronic Discharge Monitoring Report (eDMR) Submission System, the revision of reporting Non-Detects, the revision of the operational monitoring special condition, and the revision of the special condition requiring the protection and maintenance against floodwater, ice, or other hazards. Special Conditions were updated to include the requirement to develop and implement a program for maintenance and repair, the removal of the requirement to cease discharge and connect to a facility with an area-wide management plan due to the facility not currently being located within the jurisdiction of a higher continuing authority, the removal of the requirement to report addition or changes in pollutants entering into the treatment facility, and the removal of special conditions requiring gates and warning signs, but the facility must remain sufficiently secured to restrict access per special condition 9.

Part II – Effluent Limitations and Monitoring Requirements

OUTFALL #001 – MAIN FACILITY OUTFALL

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

OUTFALL #001 - RECEIVING STREAM INFORMATION

RECEIVING STREAM(S) TABLE:

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
100K Extent-Remaining Streams (Antire Creek)	C	3690	AHP(WWH), IRR, LWP, SCR, WBC-B, HHP	071401021001	0
Antire Creek	P	2188	AHP(WWH), IRR, LWP, SCR, WBC-B, HHP		0.14
Meramec River	P	2185	AHP(WWH, CLH), DWS, IND, IRR LWP, SCR, WBC-A, HHP		2.0

*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 1st 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 found in the receiving streams table, above:

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

AHP = Aquatic Habitat Protection - To ensure the protection and propagation of fish, shellfish, and wildlife. AHP is further subcategorized as:

WWH = Warm Water Habitat;

CLH = Cool Water Habitat;

CDH = Cold Water Habitat;

EAH = Ephemeral Aquatic Habitat;

MAH = Modified Aquatic Habitat;

LAH = Limited Aquatic Habitat.

This permit uses Aquatic Life Protection effluent limitations in 10 CSR 20-7.031 Table A for all aquatic 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 is further subcategorized as:

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 = Human Health Protection as it relates to the consumption of fish;

IRR = Irrigation - Application of water to cropland or directly to cultivated plants that may be used for human or livestock consumption;

LWP = Livestock and wildlife protection - Maintenance of conditions in waters to support health in livestock and wildlife;

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(S) LOW-FLOW VALUES:

RECEIVING STREAM	LOW-FLOW VALUES (CFS)*		
	1Q10	7Q10	30Q10
100K Extent-Remaining Streams (Antire Creek)	0.011	0.017	0.023

* Low flow values obtained from USGS StreamStats. <https://streamstats.usgs.gov/ss/>. See **APPENDIX: RECEIVING STREAM LOW-FLOW VALUES.**

MIXING CONSIDERATIONS

Mixing Zone: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(a)].

Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(b)].

Receiving Water Body's Water Quality

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

- ✓ This facility discharges 0.14 miles ahead of a 303(d) listed stream. Antire Creek (P) (2188) is listed on the most current 2022 Missouri 303(d) List for *Escherichia coli*.
 - It is unknown at this time if the facility is a source of the above listed pollutant(s) or considered to contribute to the impairment of Antire Creek (P) (2188). Once a TMDL is developed, the permit may be modified to include WLAs from the TMDL.

CHANGES TO EFFLUENT LIMITATIONS TABLE:

PARAMETER	Unit	Basis for Limits	Daily Maximum	Weekly Average	Monthly Average	Previous Permit Limit	Sampling Frequency	Reporting Frequency	Sample Type ****
Ammonia as N (Jan – Mar)	mg/L	2, 3	12.1		3.1	11.7/2.6	1/quarter	quarterly	C
Ammonia as N (Apr – Jun)	mg/L	2, 3	12.1		2.0	6.0/1.2	1/quarter	quarterly	C
Ammonia as N (Jul – Sep)	mg/L	2, 3	12.1		1.5	6.0/1.2	1/quarter	quarterly	C
Ammonia as N (Oct – Dec)	mg/L	2, 3	12.1		2.9	11.7/2.6	1/quarter	quarterly	C
PARAMETER	Unit	Basis for Limits	Daily Minimum		Monthly Avg. Min	Previous Permit Limit	Sampling Frequency	Reporting Frequency	Sample Type
Dissolved Oxygen (DO)	mg/L	3, 7	5.0		5.0	*	1/quarter	quarterly	G

* - Monitoring requirement only.

** - #/100mL; the Monthly Average for *E. coli* is a geometric mean.

*** - Parameter not previously established in previous state operating permit.

**** - C = 24-hour composite

G = Grab

T = 24-hr. total

E = 24-hr. estimate

M = Measured/calculated

Basis for Limitations Codes:

- | | | |
|--|-----------------------------------|---|
| 1. State or Federal Regulation/Law | 5. Antidegradation Policy | 9. WET Test Policy |
| 2. Water Quality Standard (includes RPA) | 6. Water Quality Model | 10. Multiple Discharger Variance |
| 3. Water Quality Based Effluent Limits | 7. Best Professional Judgment | 11. Nutrient Criteria Implementation Plan |
| 4. Antidegradation Review | 8. TMDL or Permit in lieu of TMDL | |

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **Biochemical Oxygen Demand (BOD₅).** Operating permit retains 45 mg/L as a Weekly Average and 30 mg/L as a Monthly Average from the previous permit. Effluent limits were established in accordance with 10 CSR 20-7.015(8) for discharges to All Other Waters.
- **Total Suspended Solids (TSS).** Operating permit retains 45 mg/L as a Weekly Average and 30 mg/L as a Monthly Average from the previous permit. Effluent limits were established in accordance with 10 CSR 20-7.015(8) for discharges to All Other Waters.

- ***Escherichia coli (E. coli)***. Monthly average of 126 per 100 mL as a geometric mean and Weekly Average/Daily Maximum of 630 per 100 mL as a geometric mean during the recreational season (April 1 – October 31), for discharges within two miles upstream of segments or lakes with Whole Body Contact Recreation (A) designated use of the receiving stream, as per 10 CSR 20-7.015(9)(B). An effluent limit for both monthly average and weekly average is required by 40 CFR 122.45(d). The Geometric Mean is calculated by multiplying all of the data points and then taking the nth root of this product, where n = # of samples collected. For example: Five *E. coli* samples were collected with results of 1, 4, 6, 10, and 5 (#/100mL). Geometric Mean = 5th root of (1)(4)(6)(10)(5) = 5th root of 1,200 = 4.1 #/100mL.
- **Total Ammonia Nitrogen**. Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(5)(B)7.C. & Table B3]. Background total ammonia nitrogen = 0.01 mg/L.

The Department previously followed the 2007 Ammonia Guidance method for derivation of ammonia limits. However, the EPA’s Technical Support Document for Water Quality-based Toxic Controls (TSD) establishes other alternatives to limit derivation. The Department has determined that the approach established in Section 5.4.2 of the TSD, which allows for direct application of both the acute and chronic wasteload allocations (WLA) as permit limits for toxic pollutants, is more appropriate limit derivation approach. Using this method for a discharge to a waterbody where mixing is not allowed, the criterion continuous concentration (CCC) and the criterion maximum concentration (CMC) will equal the chronic and acute WLA respectively. The WLAs are then applied as effluent limits, per Section 5.4.2 of the TSD, where the CMC is the Daily Maximum and the CCC is the Monthly Average. The direct application of both acute and chronic criteria as WLA is also applicable for facilities that discharge into receiving waterbodies with mixing considerations. The CCC and CMC will need to be calculated into WLA with mixing considerations using the mass-balance equation:

$$C_e = \frac{(Q_e + Q_s)C - (Q_s \times C_s)}{Q_e}$$

Where C = downstream concentration C_e = effluent concentration
 C_s = upstream concentration Q_e = effluent flow
 Q_s = upstream flow

In the event that mixing considerations derive an AML less stringent than the MDL, the AML and MDL will be equal and based on the MDL.

Quarter	Temp (°C)*	pH (SU)*	Total Ammonia Nitrogen CCC (mg/L)	Total Ammonia Nitrogen CMC (mg/L)
1 st	11.0	7.8	3.1	12.1
2 nd	21.2	7.8	2.0	12.1
3 rd	26.0	7.8	1.5	12.1
4 th	15.5	7.8	2.9	12.1

* Ecoregion Data (Ozark Highlands)

1st Quarter

Chronic WLA:

$$C_e = ((0.031 + 0)3.1 - (0 * 0.01)) / 0.031$$

$$C_e = 3.1$$

Acute WLA:

$$C_e = ((0.031 + 0)12.1 - (0 * 0.01)) / 0.031$$

$$C_e = 12.1$$

$$AML = WLA_c = 3.1 \text{ mg/L}$$

$$MDL = WLA_a = 12.1 \text{ mg/L}$$

3rd Quarter

Chronic WLA:

$$C_e = ((0.031 + 0)1.5 - (0 * 0.01)) / 0.031$$

$$C_e = 1.5$$

Acute WLA:

$$C_e = ((0.031 + 0)12.1 - (0 * 0.01)) / 0.031$$

$$C_e = 12.1$$

$$AML = WLA_c = 1.5 \text{ mg/L}$$

$$MDL = WLA_a = 12.1 \text{ mg/L}$$

2nd Quarter

Chronic WLA:

$$C_e = ((0.031 + 0)2 - (0 * 0.01)) / 0.031$$

$$C_e = 2$$

Acute WLA:

$$C_e = ((0.031 + 0)12.1 - (0 * 0.01)) / 0.031$$

$$C_e = 12.1$$

$$AML = WLA_c = 2 \text{ mg/L}$$

$$MDL = WLA_a = 12.1 \text{ mg/L}$$

4th Quarter

Chronic WLA:

$$C_e = ((0.031 + 0)2.9 - (0 * 0.01)) / 0.031$$

$$C_e = 2.9$$

Acute WLA:

$$C_e = ((0.031 + 0)12.1 - (0 * 0.01)) / 0.031$$

$$C_e = 12.1$$

$$AML = WLA_c = 2.9 \text{ mg/L}$$

$$MDL = WLA_a = 12.1 \text{ mg/L}$$

- **Total Residual Chlorine (TRC).** Warm-water Protection of Aquatic Life CCC = 11 µg/L, CMC = 19 µg/L [10 CSR 20-7.031, Table A]. Background TRC = 0.0 µg/L.

Chronic WLA: $C_e = ((0.031 + 0) * 11 - (0 * 0)) / 0.031 = 11 \mu\text{g/L}$

Acute WLA: $C_e = ((0.031 + 0) * 19 - (0 * 0)) / 0.031 = 19 \mu\text{g/L}$

LTA_c = 11 * 0.72 = 7.89 µg/L [CV: 0.30, 99th Percentile]

LTA_a = 19 * 0.53 = 10.08 µg/L [CV: 0.30, 99th Percentile]

Use most protective number of LTA: 7.89 µg/L

MDL = 7.89 * 1.89 = 14.9 µg/L [CV: 0.30, 99th Percentile]

AML = 7.89 * 1.26 = 10.0 µg/L [CV: 0.30, 95th Percentile, n=4]

The Water Quality Based Effluent Limit for Total Residual Chlorine was calculated to be 14.9 µg/L (daily maximum limit) and 10.0 µg/L (monthly average limit). These limits are below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The Department has determined the current acceptable ML for total residual chlorine to be 130 µg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 130 µg/L will be considered violations of the permit and values less than the minimum quantification level of 130 µg/L will be considered to be in compliance with the permit limitation.

- **pH.** 6.5-9.0 SU. pH limitations of 6.0-9.0 SU [10 CSR 20-7.015] are not protective of the in-stream Water Quality Standard, which states that water contaminants shall not cause pH to be outside the range of 6.5-9.0 SU.
- **Dissolved Oxygen.** This facility utilizes dechlorination chemicals in order to reduce the amount of total residual chlorine that is discharged in the effluent. Dechlorination chemicals are known to exhibit an oxygen demand on the effluent and if not properly managed the effects on the effluent DO concentrations can be significant. The permit writer reviewed DMR data and made a reasonable potential determination that the discharge has a reasonable potential to cause or contribute to an excursion of the water quality standards. This Operating Permit requires limits of 5.0 mg/L as a Daily Minimum and 5.0 mg/L as a Monthly Average Minimum.
- **Biochemical Oxygen Demand (BOD₅) Percent Removal.** In accordance with 40 CFR Part 133, removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to BOD₅ and TSS for Publicly Owned Treatment Works (POTWs)/municipals. This facility is required to meet 85% removal efficiency for BOD₅.
- **Total Suspended Solids (TSS) Percent Removal.** In accordance with 40 CFR Part 133, removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to BOD₅ and TSS for Publicly Owned Treatment Works (POTWs)/municipals. This facility is required to meet 85% removal efficiency for TSS.

Sampling Frequency Justification: The Department has determined that previously established sampling and reporting frequency is sufficient to characterize the facility's effluent and be protective of water quality. Sampling for *E. coli* is set at quarterly per 10 CSR 20-7.015(9)(D)7.C.

Sampling Type Justification: As per 10 CSR 20-7.015, samples collected for mechanical plants shall be a 24 hour modified composite sample. Grab samples, however, must be collected for pH, *E. coli*, TRC, and Dissolved Oxygen in accordance with recommended analytical methods. For further information on sampling and testing methods please review 10 CSR 20-7.015(9)(D) 2.

PERMITTED FEATURE INF – INFLUENT MONITORING

The monitoring requirements established in the below Monitoring Requirements Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including the monitoring requirements listed in this table.

Influent Parameters

- **Biochemical Oxygen Demand (BOD₅) and Total Suspended Solids (TSS)**. An influent sample is required to determine the removal efficiency. In accordance with 40 CFR Part 133, removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to BOD₅ and TSS for Publicly Owned Treatment Works (POTWs)/municipals.

Sampling Frequency Justification: The sampling and reporting frequencies for influent BOD₅ and TSS have been established to match the required sampling frequency of these parameters in the effluent.

Sampling Type Justification: Sample types for influent parameters were established to match the required sampling type of these parameters in the effluent. Samples should be analyzed as soon as possible after collection and/or properly preserved according to method requirements.

OUTFALL #001 – 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. The discharge from this facility is made up of treated domestic wastewater. Based upon review of the Report of Compliance Inspection for the inspection conducted on July 24, 2017, 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, this facility utilizes secondary treatment technology and is currently in compliance with the secondary treatment technology based effluent limits established in 40 CFR 133 and there has been no indication to the Department that the stream has had issues maintaining beneficial uses as a result of this discharge. Based on the information reviewed during the drafting of this permit, these final effluent limitations appear to have protected against the excursion of this criterion in the past. Therefore, the discharge does not have the reasonable potential to cause or contribute to an excursion of this criterion.
- (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. This permit contains final effluent limitations which are protective of both acute and chronic toxicity for various pollutants that are either expected to be discharged by domestic wastewater facilities or that were disclosed by this facility on the application for permit coverage. Based on the information reviewed during the drafting of this permit, it has been determined if the facility meets final effluent limitations established in this permit, there is no reasonable potential for the discharge to cause an excursion of this criterion.
- (E) Waters shall provide for the attainment and maintenance of water quality standards downstream including waters of another state. Please see (D) above as justification is the same.
- (F) There shall be no significant human health hazard from incidental contact with the water. Please see (D) above as justification is the same.
- (G) There shall be no acute toxicity to livestock or wildlife watering. Please see (D) above as justification is the same.
- (H) 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.
- (I) 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 III – 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 does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(40)] & [10 CSR 20-7.031(1)(O)].

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.

- ✓ 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.
 - Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.
 - **Ammonia as N.** Effluent limitations were re-calculated for Ammonia using new DMR data and new ecoregional pH and Temperature data. The Department previously followed the 2007 Ammonia Guidance method for derivation of ammonia limits. However, the EPA's Technical Support Document for Water Quality-based Toxic Controls (TSD) establishes other alternatives to limit derivation. The Department has determined that the approach established in Section 5.4.2 of the TSD, which allows for direct application of both the acute and chronic wasteload allocations (WLA) as permit limits for toxic pollutants, is more appropriate limit derivation approach. Using this method for a discharge to a waterbody where mixing is not allowed, the criterion continuous concentration (CCC) and the criterion maximum concentration (CMC) will equal the chronic and acute WLA respectively. The WLAs are then applied as effluent limits, per Section 5.4.2 of the TSD, where the CMC is the Daily Maximum and the CCC is the Monthly Average. The direct application of both acute and chronic criteria as WLA is also applicable for facilities that discharge into receiving waterbodies with mixing considerations. The CCC and CMC will need to be calculated into WLA with mixing considerations using the mass-balance equation. The newly established limitations are still protective of water quality.

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 <https://dnr.mo.gov/document-search/antidegradation-implementation-procedure>.

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

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:

As per [10 CSR 20-6.010(2)(C)], an applicant may utilize a lower preference continuing authority when a higher level authority is available by submitting information as part of the application to the Department for review and approval, provided it 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.

- ✓ Permittee is not authorized to land apply biosolids. Sludge/biosolids are hauled by the District to the NPSD Interim Saline Creek Regional WWTP

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.

Facility Performance History:

- ✓ The facility is not currently under Water Protection Program enforcement action. This facility was last inspected on July 24, 2017. The inspection showed the following unsatisfactory features: failure to comply with effluent limits for Ammonia.

CONTINUING AUTHORITY:

Each application for an operating permit shall identify the person, as that term is defined in section 644.016(15), RSMo, that is the owner of, operator of, or area-wide management authority for a water contaminant source, point source, wastewater treatment facility, or sewer collection system. This person shall be designated as the continuing authority and shall sign the application. By doing so, the person designated as the continuing authority acknowledges responsibility for compliance with all permit conditions.

10 CSR 20-6.010(2) establishes preferential levels for continuing authorities: Levels 1 through 5 (with Level 1 as the highest level), and requires a higher preference continuing authority be utilized if available. A Level 3, 4, or 5 applicant may constitute a continuing authority by showing that the authorities listed under paragraphs (B)1.-2. of 10 CSR 20-6.010(2) are not available; do not have jurisdiction; are forbidden by state statute or local ordinance from providing service to the person; or that it has met one of the requirements listed in paragraphs (2)(C)1.-7. of 10 CSR 20-6.010(2). The seven options in paragraphs (2)(C)1.-7. for a lower-level authority to demonstrate that it is the valid continuing authority are:

1. A waiver from the existing higher authority declining the offer to accept management of the additional wastewater or stormwater;
2. A written statement or a demonstration of non-response from the higher authority;
3. A to-scale map showing all parts of the legal boundary of the facility's property are beyond 2000 feet from the collection (sewer) system operated by the higher preference authority;
4. A proposed connection or adoption charge by the higher authority that would equal or exceed what is economically feasible for the applicant, which may be in the range of one hundred twenty percent (120%) of the applicant's cost for constructing or operating a wastewater treatment system;
5. A proposed service fee on the users of the system by the higher authority that is above what is affordable for existing homeowners in that area;
6. Terms for connection or adoption by the higher authority that would require more than two (2) years to achieve full sewer service; or
7. A demonstration that the terms for connection or adoption by the higher authority are not viable or feasible to homeowners in the area.

Permit applicants that are Levels 3, 4, and 5 must, as part of their application, identify their method of compliance with this regulation. The following are the methods to comply.

- No higher level authorities are available to the facility;
- No higher level authorities have jurisdiction;
- Higher level authorities are forbidden by state statute or local ordinance from providing service to the person;
- The existing higher level authority is available to the facility, however the facility has proposed the use of a lower preference continuing authority and has submitted one of the following as part of their application (See Fact Sheet Appendix - Continuing Authority for more information on these options):

- A waiver from the existing higher authority;
 - A written statement or a demonstration of non-response from the higher authority;
 - A to-scale map showing all parts of the legal boundary of the facility's property are beyond 2000 feet from the collection (sewer) system operated by the higher preference authority;
 - Documentation that the proposed connection or adoption charge by the higher authority would equal or exceed what is economically feasible for the applicant, which may be in the range of one hundred twenty percent (120%) of the applicant's cost for constructing or operating a wastewater treatment system;
 - Documentation that the proposed service fee on the users of the system by the higher authority is above what is affordable for existing homeowners in that area;
 - Documentation that the terms for connection or adoption by the higher authority would require more than two (2) years to achieve full sewer service;
 - A demonstration that the terms for connection or adoption by the higher authority are not viable or feasible to homeowners in the area;
- ✓ The continuing authority listed on the application is a public sewer district. The continuing authority is a Level 2 Authority. East-West Gateway has an approved Clean Water Act Section 208 plan in Jefferson County. The applicant has shown that:
- A higher level authority is available to the facility, however the facility has proposed the use of a lower preference continuing authority. The facility has submitted as part of their application, the following information:
 - A waiver from the existing higher authority (See Fact Sheet Appendix - Continuing Authority 1991 Management Agreement).

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 optional and can be provided upon request to the Department.

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: <https://dnr.mo.gov/document-search/electronic-discharge-monitoring-report-waiver-request-form-mo-780-2692>. Each facility must make a request. If a single entity owns or operates more than one facility, 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.

NUMERIC LAKE NUTRIENT CRITERIA:

- ✓ This facility does not discharge into a lake watershed where numeric lake nutrient criteria are applicable.

OPERATOR CERTIFICATION REQUIREMENTS:

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], the permittee shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators 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 with population equivalents greater than 200 and are owned or operated by or for municipalities, public sewer districts, counties, public water supply districts, private sewer companies regulated by the Public Service Commission and state or federal agencies.

- ✓ This facility is required to have a certified operator as it has a population equivalent greater than 200 and is owned or operated by or for a municipality, public sewer district, county, public water supply district, private sewer company regulated by the PSC, state or federal agency.

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

Operator's Name: Joseph D. Richardson
 Certification Number: 4842
 Certification Level: WW-A

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.

OPERATIONAL CONTROL TESTING:

Missouri Clean Water Commission regulation 10 CSR 20-9.010 requires certain publicly 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 publicly owned treatment works and privately owned facilities regulated by the Public Service Commission has a calculated Population Equivalent greater than two hundred (200).

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

- ✓ As per [10 CSR 20-9.010(4)], the facility is required to conduct operational monitoring. These operational monitoring reports are to be submitted to the Department along with the MSOP discharge monitoring reports.
 - The facility is a mechanical plant and is required to conduct operational control monitoring as follows:

Operational Monitoring Parameter	Frequency
Precipitation	Daily (M-F)
Flow – Influent or Effluent	Daily (M-F)
pH – Influent	Daily (M-F)
Temperature (Aeration basin)	Daily (M-F)
TSS – Influent	Weekly
Settleability – Mixed Liquor	Daily (M-F)
Dissolved Oxygen – Mixed Liquor	Daily (M-F)
Temperature – Mixed Liquor (sample contact and reaeration basins for contact stabilization)	Daily (M-F)
Total Residual Chlorine	Daily (M-F)

PFAS VOLUNTARY SAMPLING:

The Department is implementing voluntary sampling of per- and polyfluoroalkyl substances, or PFAS. PFAS are a family of compounds common in industrial processes which degrade slowly in the environment and have suspected health effects such as cancer, decreased immune response, hepatotoxicity, and low infant birth rate at levels as low as parts per trillion. Domestic POTWs may receive wastewater from industries which utilize PFAS. EPA plans to require additional testing for facilities most at risk of discharging PFAS, promulgate Effluent Limitation Guidelines for these facilities, and designate PFAS as CERCLA hazardous substances prior to 2024, per their PFAS Strategic Roadmap. Removal technologies for PFAS remain both traditionally expensive and resource-intensive. As such, understanding this facility's reasonable potential to violate future effluent limitations prior to their implementation will inform required process improvements in the future.

- ✓ This facility has no known PFAS sources. However, CDC has been collecting data regarding PFAS exposure in humans since 1999. Nearly every person surveyed had measurable amounts of PFOS, PFOA, PFHxS, and PFNA in their blood serum, indicating widespread exposure. Despite this facility having no known PFAS sources, voluntary testing may still be prudent to ensure that unknown industries are not discharging to the POTW. If the facility wishes to test for PFAS, the Department recommends sampling using a modified Test Method 537.1, found here: https://cfpub.epa.gov/si/si_public_record_report.cfm?dirEntryId=348508&Lab=CESER&simpleSearch=0&showCriteria=2&searchAll=537.1&TIMSType=&dateBeginPublishedPresented=03%2F24%2F2018. It is advisable to test for all 40 analytes described in CWA Test Method 1633. Sample results may be submitted with this permit's renewal application.

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

✓ 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.

✓ An RPA was conducted on appropriate parameters. Please see **APPENDIX – RPA RESULTS**.

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 (BOD₅) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

✓ Secondary Treatment is 85% removal [40 CFR Part 133.102(a)(3) & (b)(3)].

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(12)] 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 <https://dnr.mo.gov/document-search/capacity-management-operations-maintenance-plan-editable-template>. For additional information regarding the Departments' CMOM Model, see the CMOM Plan Model Guidance document at <https://dnr.mo.gov/print/document-search/pub2574>. 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.

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 may include 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), 10 CSR 20-7.031(11), and 10 CSR 20-7.015(9), 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 that may result in site-specific criteria or alternative effluent limits. 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.

- ✓ This permit does not contain an 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 <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/wastewater/construction-engineering>.

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

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 not drafted under premises of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010(86)], 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_e = effluent concentration
 C_s = upstream concentration Q_e = effluent flow
 Q_s = 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.

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 was either not submitted or determined not applicable by Department staff.

WHOLE EFFLUENT TOXICITY (WET) TEST:

A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A) and the Water Quality Standards 10 CSR 20-7.031(4)(D),(F),(G),(J)2.A & B are being met. Under [10 CSR 20-6.010(8)(B)], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc...); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by facilities meeting the following criteria:

- Facility is a designated Major.
- Facility continuously or routinely exceeds its design flow.
- Facility that exceeds its design population equivalent (PE) for BOD₅ whether or not its design flow is being exceeded.
- Facility (whether primarily domestic or industrial) that alters its production process throughout the year.
- Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
- Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH₃)
- Facility is a municipality with a Design Flow ≥ 22,500 gpd.
- Other – please justify.

- ✓ At this time, the permittee is not required to conduct WET test for this facility. Due to the fact that the facility has passed previous Acute WET tests and has shown consistent compliance with final effluent limits, it has been determined by the permit writer that the discharge has no reasonable potential to exceed whole effluent toxicity, and the requirement to conduct an Acute WET test was not included in this permit. This permit still includes final effluent limitations for known toxic pollutants; therefore, it remains protective of water quality.

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.

- ✓ This facility does not anticipate bypassing.

Part IV – 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 not required to determine Cost Analysis for Compliance because the permit contains no new conditions or requirements that convey a new cost to the facility.

Part V – 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.

WATER QUALITY STANDARD REVISION:

In accordance with section 644.058, RSMo, the Department is required to utilize an evaluation of the environmental and economic impacts of modifications to water quality standards of twenty-five percent or more when making individual site-specific permit decisions.

- ✓ This operating permit does not contain requirements for a water quality standard that has changed twenty-five percent or more since the previous operating permit.

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 June 10, 2022 and end July 11, 2022. No responses received.

DATE OF FACT SHEET: MAY 19, 2022

COMPLETED BY:

**OWEN GALLAGHER, ENVIRONMENTAL PROGRAM ASSISTANT
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT
(573) 751-7326
owen.gallagher@dnr.mo.gov**

Appendices

APPENDIX - CLASSIFICATION WORKSHEET:

Item	Points Possible	Points Assigned
Maximum Population Equivalent (P.E.) served , peak day	1 pt./10,000 PE or major fraction thereof. (Max 10 pts.)	
Design Flow (avg. day) or peak month's flow (avg. day) whichever is larger	1 pt. / MGD or major fraction thereof. (Max 10 pts.)	
Effluent Discharge		
Missouri or Mississippi River	0	
All other stream discharges except to losing streams and stream reaches supporting whole body contact recreation	1	
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	
Discharge to losing stream, lake or reservoir area supporting whole body contact recreation	3	
Direct reuse or recycle of effluent	6	
Land Application/Irrigation		
Drip Irrigation	3	
Land application/irrigation	5	
Overland flow	4	
Variation in Raw Wastes (highest level only)		
Variations do not exceed those normally or typically expected	0	
Reoccurring deviations or excessive variations of 100 to 200 percent in strength and/or flow	2	
Reoccurring deviations or excessive variations of more than 200 percent in strength and/or flow	4	4
Department-approved pretreatment program	6	
Preliminary Treatment		
STEP systems (operated by the permittee)	3	
Screening and/or comminution	3	3
Grit removal	3	
Plant pumping of main flow	3	
Flow equalization	5	
Primary Treatment		
Primary clarifiers	5	
Chemical addition (except chlorine, enzymes)	4	
Secondary Treatment		
Trickling filter and other fixed film media with or without secondary clarifiers	10	
Activated sludge (including aeration, oxidation ditches, sequencing batch reactors, membrane bioreactors, and contact stabilization)	15	15
Stabilization ponds without aeration	5	
Aerated lagoon	8	
Advanced Lagoon Treatment – Aerobic cells, anaerobic cells, covers, or fixed film	10	
Biological, physical, or chemical	12	
Carbon regeneration	4	
Total from page ONE (1)	----	22

APPENDIX - CLASSIFICATION WORKSHEET (CONTINUED):

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Solids Handling		
Sludge Holding	5	
Anaerobic digestion	10	
Aerobic digestion	6	
Evaporative sludge drying	2	
Mechanical dewatering	8	
Solids reduction (incineration, wet oxidation)	12	
Land application	6	
Disinfection		
Chlorination or comparable	5	5
On-site generation of disinfectant (except UV light)	5	
Dechlorination	2	2
UV light	4	
Required Laboratory Control Performed by Plant Personnel (highest level only)		
Lab work done outside the plant	0	
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	
More advanced determinations, such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	7	7
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	
Total from page TWO (2)	----	14
Total from page ONE (1)	---	22
Grand Total	---	36

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

APPENDIX – RPA RESULTS:

Parameter	CMC*	RWC Acute*	CCC*	RWC Chronic*	n**	Range max/min	CV***	MF	RP Yes/No
Ammonia as N – Summer (mg/L)	12.1	2.05	1.5	2.05	12.00	0.539/0.05	0.82	3.80	YES
Ammonia as N – Winter (mg/L)	12.1	20.01	2.9	20.01	10.00	6.67/0.085	1.53	3.00	YES
TRC – Warm (mg/L)	19.00	24.21	11.00	24.21	17	20/10	0.30	1.21	YES

N/A – Not Applicable

* - Units are (µg/L) unless otherwise noted.

** - If the number of samples is 10 or greater, then the CV value must be used in the WQBEL for the applicable constituent. If the number of samples is < 10, then the default CV value must be used in the WQBEL for the applicable constituent.

*** - Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the Mean of the same sample set.

RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).

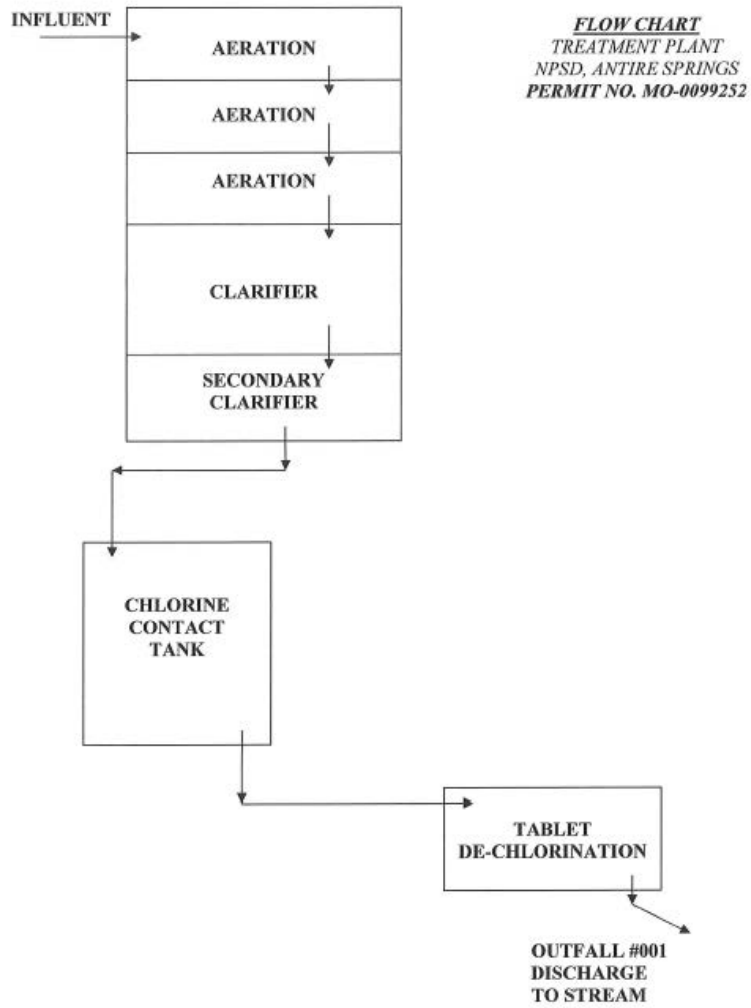
n – Is the number of samples.

MF – Multiplying Factor. 99% Confidence Level and 99% Probability Basis.

RP – Reasonable Potential. It is where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

Reasonable Potential Analysis is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of this RPA is available upon request.

APPENDIX – FLOW DIAGRAM



APPENDIX – Non-Detect Example Calculations:

Example: Permittee has four samples for Pollutant X which has a method minimum level of 5 mg/L and is to report a Daily Maximum and Monthly Average.

Week 1 = 11.4 mg/L
Week 2 = Non-Detect or <5.0 mg/L
Week 3 = 7.1 mg/L
Week 4 = Non-Detect or <5.0 mg/L

For this example, use subpart (h) - For reporting an average based on a mix of detected and non-detected values (not including *E. coli*), assign a value of “0” for all non-detects for that reporting period and report the average of all the results.

$$11.4 + 0 + 7.1 + 0 = 18.5 \div 4 \text{ (number of samples)} = 4.63 \text{ mg/L.}$$

The Permittee reports a Monthly Average of 4.63 mg/L and a Daily maximum of 11.4 mg/L (Note the < symbol was dropped in the answers).

Example: Permittee has five samples for Pollutant Y that has a method minimum level of 9 µg/L and is to report a Daily Maximum and Monthly Average.

Day 1 = Non-Detect or <9.0 µg/L
Day 2 = Non-Detect or <9.0 µg/L
Day 3 = Non-Detect or <9.0 µg/L
Day 4 = Non-Detect or <9.0 µg/L
Day 5 = Non-Detect or <9.0 µg/L

For this example, use subpart (g) - For reporting an average based on all non-detected values, remove the “<” sign from the values, average the values, and then add the “<” symbol back to the resulting average.

$$(9 + 9 + 9 + 9 + 9) \div 5 \text{ (number of samples)} = <9 \text{ µg/L.}$$

The Permittee reports a Monthly Average of <9.0 µg/L (retain the ‘less than’ symbol) and a Daily Maximum of <9.0 µg/L.

Example: Permittee has four samples for Pollutant Z where the first two tests were conducted using a method with a method minimum level of 4 µg/L and the remaining two tests were conducted using a different method that has a method minimum level of <6 µg/L and is to report a Monthly Average and a Weekly Average.

Week 1 = Non-Detect or <4.0 µg/L
Week 2 = Non-Detect or <4.0 µg/L
Week 3 = Non-Detect or <6.0 µg/L
Week 4 = Non-Detect or <6.0 µg/L

For this example, use subpart (g) - For reporting an average based on all non-detected values, remove the “<” sign from the values, average the values, and then add the “<” symbol back to the resulting average.

$$(4 + 4 + 6 + 6) \div 4 \text{ (number of samples)} = <5 \text{ µg/L. (Monthly)}$$

The facility reports a Monthly Average of <5.0 µg/L and a Weekly Average of <6.0 µg/L.

APPENDIX – Non-Detect Example Calculations (Continued):

Example: Permittee has five samples for Pollutant Z where the first two tests were conducted using a method with a method minimum level of 4 µg/L and the remaining three tests were conducted using a different method that has a method minimum level of <6 µg/L and is to report a Monthly Average and a Weekly Average.

Week 1 = Non-Detect or <4.0 µg/L
Week 2 = Non-Detect or <4.0 µg/L
Week 2 = Non-Detect or <6.0 µg/L
Week 3 = Non-Detect or <6.0 µg/L
Week 4 = Non-Detect or <6.0 µg/L

For this example, use subpart (g) - For reporting an average based on all non-detected values, remove the “<” sign from the values, average the values, and then add the “<” symbol back to the resulting average.

$(4 + 4 + 6 + 6 + 6) \div 5$ (number of samples) = <5.2 µg/L. (Monthly)
 $(4 + 6) \div 2$ (number of samples) = <5 µg/L. (Week 2)

The facility reports a Monthly Average of <5.2 µg/L and a Weekly Average of <6.0 µg/L (report highest Weekly Average value)

Example: Permittee has four samples for Pollutant Z where the tests were conducted using a method with a method minimum level of 10 µg/L and is to report a Monthly Average and Daily Maximum. The permit lists that Pollutant Z has a Department determined Minimum Quantification Level (ML) of 130 µg/L.

Week 1 = 12 µg/L
Week 2 = 52 µg/L
Week 3 = Non-Detect or <10 µg/L
Week 4 = 133 µg/L

For this example, use subpart (h) - For reporting an average based on a mix of detected and non-detected values (not including *E. coli*), assign a value of “0” for all non-detects for that reporting period and report the average of all the results.

For this example, $(12 + 52 + 0 + 133) \div 4$ (number of samples) = $197 \div 4 = 49.3$ µg/L.

The facility reports a Monthly Average of 49.3 µg/L and a Daily Maximum of 133 µg/L.

Example: Permittee has five samples for *E. coli* which has a method minimum level of 1 #/100mL and is to report a Weekly Average (seven (7) day geometric mean) and a Monthly Average (thirty (30) day geometric mean).

Week 1 = 102 #/100mL
Week 2 (Monday) = 400 #/100mL
Week 2 (Friday) = Non-Detect or <1 #/100mL
Week 3 = 15 #/100mL
Week 4 = Non-Detect or <1 #/100mL

For this example, use subpart (i) - When *E. coli* is not detected above the method minimum level, the permittee must report the data qualifier signifying less than detection limit for that parameter (e.g., <1 #/100mL, if the method minimum level is 1 #/100mL). For reporting a geometric mean based on a mix of detected and non-detected values, use one-half of the detection limit (instead of zero) for non-detects when calculating geometric means. The Geometric Mean is calculated by multiplying all of the data points and then taking the nth root of this product, where n = # of samples collected.

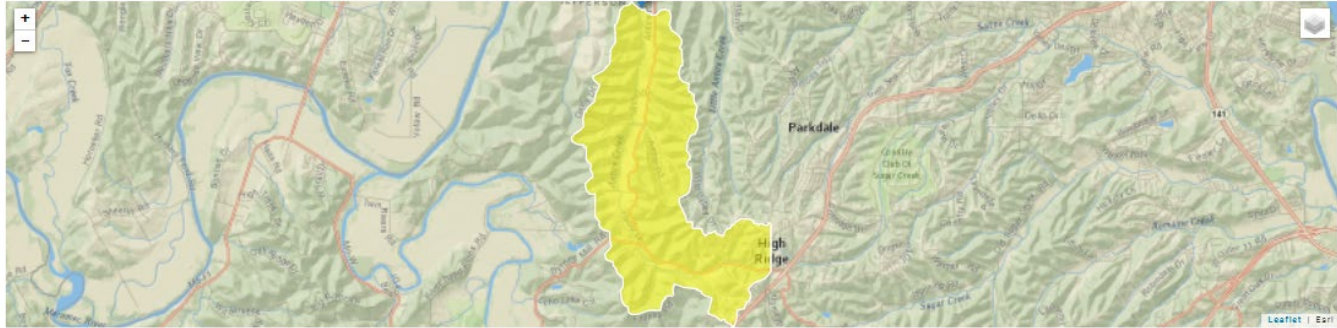
The Monthly Average (30 day Geometric Mean) = 5th root of $(102)(400)(0.5)(15)(0.5) = 5$ th root of 153,000 = 10.9 #/100mL.
The 7 day Geometric Mean = 2nd root of $(400)(0.5) = 2$ nd root of 200 = 14.1 #/100mL. (Week 2)

The Permittee reports a Monthly Average (30 day Geometric Mean) of 10.9 #/100mL and a Weekly Average (7 day geometric mean) of 102 #/100mL (report highest Weekly Average value)

APPENDIX - RECEIVING STREAM LOW-FLOW VALUE:

StreamStats Report

Region ID: MO
 Workspace ID: MO20220513181911072000
 Clicked Point (Latitude, Longitude): 38.49874, -90.56359
 Time: 2022-05-13 13:19:46 -0500



Basin Characteristics			
Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	4.02	square miles
STREAM_VARG	Streamflow variability index as defined in WRIR 02-4068, computed from regional grid	0.62	dimensionless

Low-Flow Statistics Parameters [LowFlow Region 2 SIR 2013 5090]					
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	4.02	square miles	0.21	7380
STREAM_VARG	Streamflow Variability Index from Grid	0.62	dimensionless	0.273	0.926

Low-Flow Statistics Flow Report [LowFlow Region 2 SIR 2013 5090]		
Statistic	Value	Unit
1 Day 10 Year Low Flow	0.0107	ft ³ /s
2 Day 10 Year Low Flow	0.0123	ft ³ /s
3 Day 10 Year Low Flow	0.0131	ft ³ /s
7 Day 10 Year Low Flow	0.0153	ft ³ /s
10 Day 10 Year Low Flow	0.0167	ft ³ /s
30 Day 10 Year Low Flow	0.0227	ft ³ /s
60 Day 10 Year Low Flow	0.0325	ft ³ /s

Low-Flow Statistics Citations
 Southard, R.E., 2013, Computed statistics at streamgages, and methods for estimating low-flow frequency statistics and development of regional regression equations for estimating low-flow frequency statistics at ungaged locations in Missouri: U.S. Geological Survey Scientific Investigations Report 2013-5090, 28 p.

APPENDIX – Continuing Authority 1991 Management Agreement:

MANAGEMENT AGREEMENT

Background Information

Pursuant to the goals of the Federal Water Pollution Control Act (P.L. 92-500), the Governor of the State of Missouri designated a Section 208 wastewater management planning area which contained Franklin, Jefferson, St. Charles, and St. Louis Counties, and the City of St. Louis. The East-West Gateway Coordinating Council (Gateway) was designated by the Governor of the State of Missouri as the agency responsible for the preparation of a water quality management plan for the above five-county area.

Section 208 of the Federal Water Pollution Control Act (P.L. 92-500) made money available to designated metropolitan areas and planning agencies to solve water pollution problems and to plan for measures to minimize pollution in the future.

As designated planning agency for the water quality management study, Gateway completed extensive studies of both the technical and the managerial aspects of this area's water pollution control system. As a part of these studies, recommendations which would bring the system into compliance with the federal treatment and management requirements of P.L. 92-500 were proposed.

On July 9, 1980, the Northeast Public Sewer District agreed to be the management agency for the Facility Planning Area (see attached map), and was hereinafter to be referred to as the "management agency". The Facility Planning Area roughly included the northern row of watersheds in Jefferson County that drain into

the lower Meramec River, and was conterminous with the existing sewer district boundaries.

East-West Gateway Coordinating Council, as part of its responsibilities as regional water quality coordinator, planner, and facilitator, agreed to aid and cooperate with the management agency to assure that its responsibilities under the St. Louis Water Quality Plan were implemented in a manner acceptable to all parties involved, and technically and financially feasible.

An important recommendation contained in the final St. Louis Water Quality Management Plan prepared by the East-West Gateway Coordinating Council was to develop, where possible, a regional sewer system which maximized the limited public financing available for constructing such systems. The management agency assumed the major responsibilities of planning, constructing, operating and maintaining any proposed facilities to serve the Northeast Public Sewer District.

During the facility planning process, the Northeast Public Sewer District considered other cost-effective alternatives which would provide sewer service on a watershed basis. The original recommendations of the 201 Facility Plan (1983) were for the phased construction of subregional collection and treatment system within four subwatersheds of the Facility Planning Area and, where more cost-effective, the upgrade of remote treatment facilities instead of connection to the subregional systems. Treatment facilities constructed would have a ten year service life. The long range

plan is for the district to connect via tunnel interceptors into the MSD Lower Meramec regional treatment facility.

Additional analysis of collection and treatment alternatives in the Greater Saline Creek watershed and the southeast Meramec watershed has resulted in amendments to the 201 Facility Plan in 1989 and 1990. The recommendations of the 1989 Creekwood Facilities Amendment were to construct a pump station in the Creekwood service area, in the southeast Meramec watershed, and to install 11,650 lineal feet of force main and gravity sewer to convey flow from the Creekwood service area to the Highway 141 Treatment Plant in the Greater Saline Creek watershed. The Highway 141 Treatment Plant would become the regional treatment facility for the eastern portion of the district. The 1990 Highway 141 Treatment Plant Amendment recommendation was for the capacity of the existing Highway 141 Treatment Plant, 0.25 MGD, be expanded through the assembly of a 1 MGD contact stabilization package plant and the construction of an overflow basin on the Highway 141 Treatment Plant site. The package plant would be used for dry weather flows and the existing plant and the overflow basin would be utilized when wet weather flows reach or exceed capacity of package plant. As a result of these amendments and treatment facility improvements, the original 201 Facility Plan recommendations for the construction of an interceptor segment and a new subregional treatment facility for the Greater Saline Creek watershed have been superseded.

Authorities of a Management Agency

Under the Revised Statutes of Missouri (R.S. Mo.), a management agency for a Facility Planning Area, such as the Northeast Public Sewer District, is given the following powers:

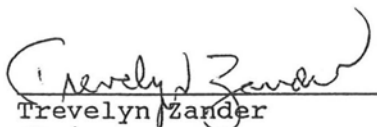
1. to design, construct, operate and maintain sewerage systems (204.330, 204.340, 204.350 R.S. Mo.).
2. to issue bonds to meet the costs of constructing, improving, or extending a sewerage system (204.360, 204.370, 204.375, 204.380 et seq. R.S. Mo.). Limitations on bonded indebtedness of sewer districts may be found in the Missouri Constitution of 1945, Article 6, Section 26.
3. to accept grants, loans and funds to meet the costs of acquiring, constructing, improving or extending a sewerage system (204.360, 204.460, 640.600, 644.026, 644.101, and 644.500 R.S. Mo.).
4. to incur both long- and short-term indebtedness for the purpose of acquiring, constructing, improving, or extending a sewerage system (108.170, 204.360 et seq. R.S. Mo.). Limitations on bonded indebtedness of sewer districts may be found in the Missouri Constitution of 1945, Article 6, Section 26.
5. to assess user charges with the purpose of reducing wastewater as these charges are just and reasonable (204.400, 204.440, 644.026 R.S. Mo.).

6. to assure in implementation of an areawide wastewater treatment plan that each participating community pays its proportionate share of treatment costs (644.141(B) R.S. Mo.).
7. to enter into intrastate or interstate agreements for the planning, development, construction, acquisition, or operation of any public improvement or facility, or for a common service, provided that the subject and purposes of any such contract or cooperative action shall be within the powers of the management agency (70.220 R.S. Mo.).
8. to refuse to receive any wastes from any municipality or subdivision which does not comply with any provision of an approved plan under 644.141 applicable to that area (644.141 (B) R.S. Mo.).
9. to accept for treatment industrial wastes which meet appropriate pretreatment standards (644.141 (B) R.S. Mo.).

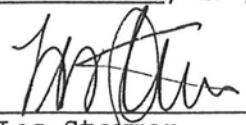
Reaffirmation

The Northeast Public Sewer District hereby reaffirms its designation as management agency for the Facility Planning Area as specified on the attached map and hereby agrees to continue to perform the responsibilities as specified in this agreement.

In witness whereof the parties have set their hands and seals this 20 day of Sept, 19 91.

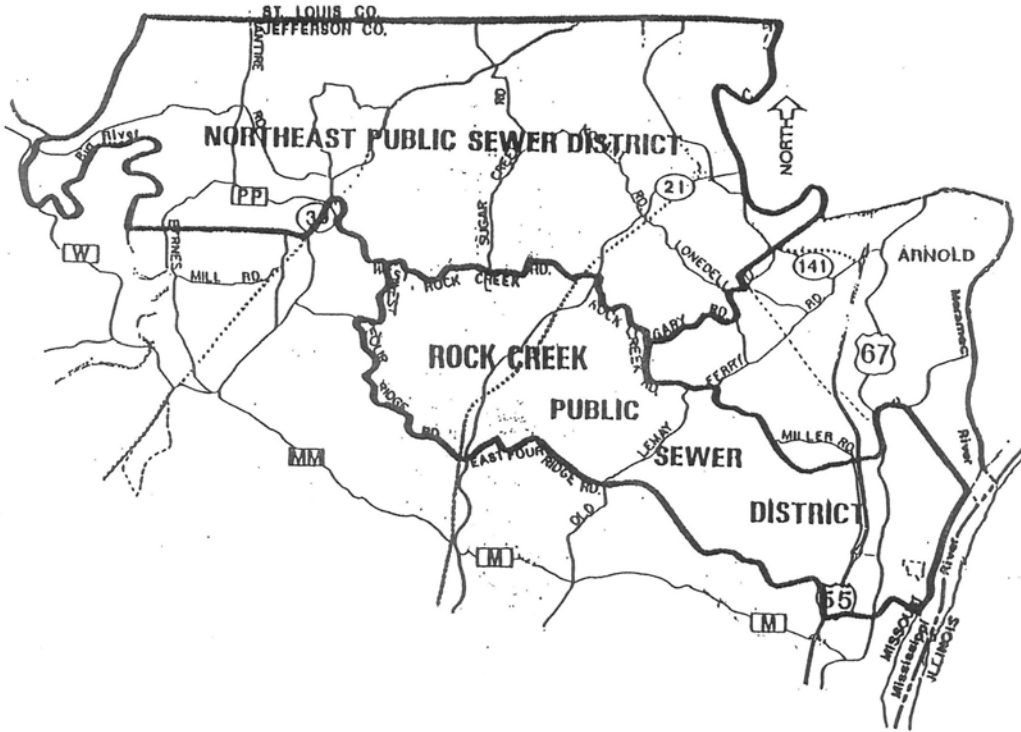


Trevelyn Zander
Chairman
Northeast Public Sewer
District Management Agency



Les Stekman
Executive Director
East-West Gateway
Coordinating Council







STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
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 28th 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 permittee 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.



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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.



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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
August 1, 2019**

PART III – BIOSOLIDS AND SLUDGE FROM DOMESTIC TREATMENT FACILITIES

SECTION A – GENERAL REQUIREMENTS

1. PART III Standard Conditions pertain to biosolids and sludge requirements under the Missouri Clean Water Law and regulations for domestic and municipal wastewater and also incorporates federal sludge disposal requirements under 40 CFR Part 503 for domestic wastewater. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFR Part 503 for domestic biosolids and sludge.
2. PART III Standard Conditions apply only to biosolids and sludge generated at domestic wastewater treatment facilities, including public owned treatment works (POTW) and privately owned facilities.
3. Biosolids and Sludge Use and Disposal Practices:
 - a. The permittee is authorized to operate the biosolids and sludge generating, treatment, storage, use, and disposal facilities listed in the facility description of this permit.
 - b. The permittee shall not exceed the design sludge/biosolids volume listed in the facility description and shall not use biosolids or sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
 - c. For facilities operating under general operating permits that incorporate Standard Conditions PART III, the facility is authorized to operate the biosolids and sludge generating, treatment, storage, use and disposal facilities identified in the original operating permit application, subsequent renewal applications or subsequent written approval by the department.
4. Biosolids or Sludge Received from other Facilities:
 - a. Permittees may accept domestic wastewater biosolids or sludge from other facilities as long as the permittee's design sludge capacity is not exceeded and the treatment facility performance is not impaired.
 - b. The permittee shall obtain a signed statement from the biosolids or sludge generator or hauler that certifies the type and source of the sludge
5. Nothing in this permit precludes the initiation of legal action under local laws, except to the extent local laws are preempted by state law.
6. This permit does not preclude the enforcement of other applicable 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 biosolids or sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act or under Chapter 644 RSMo.
8. In addition to Standard Conditions PART III, the Department may include biosolids and sludge limitations in the special conditions portion or other sections of a site specific permit.
9. Exceptions to Standard Conditions PART III may be authorized on a case-by-case basis by the Department, as follows:
 - a. The Department may modify a site-specific permit following permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR § 124.10, and 40 CFR § 501.15(a)(2)(ix)(E).
 - b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR Part 503.

SECTION B – DEFINITIONS

1. Best Management Practices are practices to prevent or reduce the pollution of waters of the state and include agronomic loading rates (nitrogen based), soil conservation practices, spill prevention and maintenance procedures 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, feed 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 Part 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 (PSRP) in accordance with 40 CFR Part 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. Feed crops are crops produced primarily for consumption by animals.
8. Fiber crops are crops such as flax and cotton.
9. Food crops are crops consumed by humans which include, but is not limited to, fruits, vegetables and tobacco.
10. Industrial wastewater means any wastewater, also known as process wastewater, not defined as domestic wastewater. Per 40 CFR Part 122.2, process wastewater 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. Land application of industrial wastewater, residuals or sludge is not authorized by Standard Conditions PART III.
11. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including, sand filters, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological contact systems, and other similar facilities. It does not include wastewater treatment lagoons or constructed wetlands for wastewater treatment.
12. Plant Available Nitrogen (PAN) is nitrogen that will be available to plants during the growing seasons after biosolids application.
13. 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.
14. 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), sewage sludge incinerator ash, or grit/screenings generated during preliminary treatment of domestic sewage.
15. Sludge lagoon is part of a mechanical wastewater treatment facility. A sludge lagoon is an earthen or concrete lined 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.
16. Septage is the sludge pumped from residential septic tanks, cesspools, portable toilets, Type III marine sanitation devices, or similar treatment works such as sludge holding structures from residential wastewater treatment facilities with design populations of less than 150 people. Septage does not include grease removed from grease traps at a restaurant or material removed from septic tanks and other similar treatment works that have received industrial wastewater. The standard for biosolids from septage is different from other sludges. See Section H for more information.

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

1. Biosolids or sludge shall be routinely removed from wastewater treatment facilities and handled according to the permit facility description and the requirements of Standard Conditions PART III or in accordance with Section A.3.c., above.
2. The permittee shall operate storage and treatment facilities, as defined by Section 644.016(23), RSMo, so that there is no biosolids or sludge discharged to waters of the state. Agricultural storm water discharges are exempt under the provisions of Section 644.059, RSMo.
3. Mechanical treatment plants shall have separate biosolids or sludge storage compartments in accordance with 10 CSR 20, Chapter 8. Failure to remove biosolids or sludge from these storage compartments on the required design schedule is a violation of this permit.

SECTION D – BIOSOLIDS OR SLUDGE DISPOSED AT OTHER TREATMENT FACILITY OR BY CONTRACT HAULER

1. Permittees that use contract haulers, under the authority of their operating permit, to dispose of biosolids or sludge, are responsible for compliance with all the terms of this permit. Contract haulers that assume the responsibility of the final disposal of biosolids or sludge, including biosolids land application, must obtain a Missouri State Operating Permit unless the hauler transports the biosolids or sludge to another permitted treatment facility.
2. Testing of biosolids or sludge, other than total solids content, is not required if biosolids or sludge are hauled to a permitted wastewater treatment facility, unless it is required by the accepting facility.

SECTION E – INCINERATION OF SLUDGE

1. Please be aware that sludge incineration facilities may be subject to the requirements of 40 CFR Part 503 Subpart E, Missouri Air Conservation Commission regulations under 10 CSR 10, and solid waste management regulations under 10 CSR 80, as applicable.
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, mass of sludge incinerated and mass of ash generated. Permittee shall also provide the name of the ash disposal facility and permit number if applicable.

SECTION F – SURFACE DISPOSAL SITES AND BIOSOLIDS AND SLUDGE LAGOONS

1. Please be aware that surface disposal sites of biosolids or sludge from wastewater treatment facilities may be subject to other laws including the requirements in 40 CFR Part 503 Subpart C, Missouri Air Conservation Commission regulations under 10 CSR 10, and solid waste management regulations under 10 CSR 80, as applicable.
2. Biosolids or 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 biosolids or sludge storage lagoons as storage facilities, accumulated biosolids or 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 biosolids or sludge removed will be dependent on biosolids or sludge generation and accumulation in the facility. Enough biosolids or 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 biosolids or sludge on the bottom of the lagoon, upon prior approval of the Department; or
 - b. Permittee shall close the lagoon in accordance with Section I.

SECTION G – LAND APPLICATION OF BIOSOLIDS

1. The permittee shall not land apply biosolids unless land application is authorized in the facility description, the special conditions of the issued NPDES permit, or in accordance with Section A.3.c., above.
2. This permit only authorizes “Class A” or “Class B” biosolids derived from domestic wastewater 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.
3. Class A Biosolids Requirements: Biosolids shall meet Class A requirements for application to public contact sites, residential lawns, home gardens or sold and/or given away in a bag or other container.
4. Class B biosolids that are land applied to agricultural and public contact sites shall comply with the following restrictions:
 - a. Food crops that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.
 - b. Food crops below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for four months or longer prior to incorporation into the soil.
 - c. Food crops below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than four months prior to incorporation into the soil.
 - d. Animal grazing shall not be allowed for 30 days after application of biosolids.
 - e. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.
 - f. Turf shall not be harvested for one year after application of biosolids if used for lawns or high public contact sites in close proximity to populated areas such as city parks or golf courses.
 - g. After Class B biosolids have been land applied to public contact sites with high potential for public exposure, as defined in 40 CFR § 503.31, such as city parks or golf courses, access must be restricted for 12 months.
 - h. After Class B biosolids have been land applied public contact sites with low potential for public exposure as defined in 40 CFR § 503.31, such as a rural land application or reclamation sites, access must be restricted for 30 days.
5. Pollutant limits
 - a. Biosolids shall be monitored to determine the quality for regulated pollutants listed in Table 1, below. Limits for any pollutants not listed below may be established in the permit.
 - b. The number of samples taken is directly related to the amount of biosolids or sludge produced by the facility (See Section J, below). 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 achieve pollutant concentration below those identified in Table 1, below.
 - c. Table 1 gives the ceiling concentration for biosolids. Biosolids which exceed the concentrations in Table 1 may not be land applied.

TABLE 1

Biosolids ceiling concentration	
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

- d. Table 2 below gives the low metal concentration for biosolids. Because of its higher quality, biosolids with pollutant concentrations below those listed in Table 2 can safely be applied to agricultural land, forest, public contact sites, lawns, home gardens or be given away without further analysis. Biosolids containing metals in concentrations above the low metals concentrations but below the ceiling concentration limits may be land applied but shall not exceed the annual loading rates in Table 3 and the cumulative loading rates in Table 4. The permittee is required to track pollutant loading onto application sites for parameters that have exceeded the low metal concentration limits.

TABLE 2

Biosolids Low Metal Concentration	
Pollutant	Milligrams per kilogram dry weight
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2,800

- e. Annual pollutant loading rate.

Table 3

Biosolids Annual Loading Rate	
Pollutant	Kg/ha (lbs./ac) per year
Arsenic	2.0 (1.79)
Cadmium	1.9 (1.70)
Copper	75 (66.94)
Lead	15 (13.39)
Mercury	0.85 (0.76)
Nickel	21 (18.74)
Selenium	5.0 (4.46)
Zinc	140 (124.96)

- f. Cumulative pollutant loading rates.

Table 4

Biosolids Cumulative Pollutant Loading Rate	
Pollutant	Kg/ha (lbs./ac)
Arsenic	41 (37)
Cadmium	39 (35)
Copper	1500 (1339)
Lead	300 (268)
Mercury	17 (15)
Nickel	420 (375)
Selenium	100 (89)
Zinc	2800 (2499)

6. Best Management Practices. The permittee shall use the following best management practices during land application activities to prevent the discharge of biosolids to waters of the state.
- Biosolids shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under § 4 of the Endangered Species Act or its designated critical habitat.
 - Apply biosolids only at the agronomic rate of nitrogen needed (see 5.c. of this section).
 - The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil, and crop

nitrogen removal when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kgTN; 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:
(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor¹).
¹ Volatilization factor is 0.7 for surface application and 1 for subsurface application. Alternative volatilization factors and mineralization rates can be utilized on a case-by-case basis.
 - ii. Crop nutrient production/removal to be based on crop specific nitrogen needs and realistic yield goals. **NOTE:** There are a number of reference documents on the Missouri Department of Natural Resources website that are informative to implement best management practices in the proper management of biosolids, including crop specific nitrogen needs, realistic yields on a county by county basis and other supporting references.
 - iii. Biosolids that are applied at agronomic rates shall not cause the annual pollutant loading rates identified in Table 3 to be exceeded.
- d. Buffer zones are as follows:
- i. 300 feet of a water supply well, sinkhole, 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 of dwellings or public use areas;
 - iv. 100 feet (35 feet if biosolids application is down-gradient or the buffer zone is entirely vegetated) of lake, pond, wetlands or gaining streams (perennial or intermittent);
 - v. 50 feet of a property line. Buffer distances from property lines may be waived with written permission from neighboring property owner.
 - vi. For the application of dry, cake or liquid biosolids that are subsurface injected, buffer zones identified in 5.d.i. through 5.d.iii above, may be reduced to 100 feet. The buffer zone may be reduced to 35 feet if the buffer zone is permanently vegetated. Subsurface injection does not include methods or technology reflective of combination surface/shallow soil incorporation.
- e. Slope limitation for application sites are as follows:
- i. For slopes less than or equal to 6 percent, 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.
 - iv. Dry, cake or liquid biosolids that are subsurface injected, may be applied on slopes not to exceed 20 percent. Subsurface injection does not include the use of methods or technology reflective of combination surface/shallow soil incorporation.
- f. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.
- g. Biosolids may be land applied to sites with soil that are snow covered, frozen, or saturated with liquid when site restrictions or other controls are provided to prevent pollutants from being discharged to waters of the state during snowmelt or stormwater runoff. During inclement weather or unfavorable soil conditions use the following management practices:
- i. A maximum field slope of 6% and a minimum 300 feet grass buffer between the application site and waters of the state. A 35 feet grass buffer may be utilized for the application of dry, cake or liquid biosolids that are subsurface injected. Subsurface injection does not include the use of methods or technology reflective of combination surface/shallow soil incorporation;
 - ii. A maximum field slope of 2% and 100 feet grass buffer between the application site and waters of the state. A 35 feet grass buffer may be used for the application of dry, cake or liquid biosolids that are subsurface injected. Subsurface injection does not include the use of methods or technology reflective of combination surface/shallow soil incorporation;
 - iii. Other best management practices approved by the Department.

SECTION H – SEPTAGE

1. Haulers that land apply septage must obtain a state permit. An operating permit is not required for septage haulers who transport septage to another permitted treatment facility for disposal.
2. Do not apply more than 30,000 gallons of septage per acre per year or the volume otherwise stipulated in the operating permit.
3. Septic 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 mechanical treatment facilities.
4. Septage must comply with Class B biosolids regarding pathogen and vector attraction reduction requirements before it may be applied to crops, pastures or timberland. To meet required pathogen and vector reduction requirements, mix 50 pounds of hydrated lime for every 1,000 gallons of septage and maintain a septage pH of at least 12 pH standard units for 30 minutes or more prior to application.
5. 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.
6. As residential septage contains relatively low levels of metals, the testing of metals in septage is not required.

SECTION I – CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical and lagoons) and sludge or biosolids storage and treatment facilities. 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 sludges and/or biosolids. 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. Biosolids or sludge 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. Biosolids and sludge shall meet the monitoring and land application limits for agricultural rates as referenced in Section G, above.
 - 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. Alternative, site-specific application rates may be included in the closure plan for department consideration.
 - i. PAN can be determined as follows:
(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor¹).
¹ Volatilization factor is 0.7 for surface application and 1 for subsurface application. Alternative volatilization factors and mineralization rates can be utilized on a case-by-case basis
4. Domestic wastewater treatment lagoons with a design treatment capacity less than or equal to 150 persons, are “similar treatment works” under the definition of septage. Therefore the sludge within the lagoons may be treated as septage during closure activities. See Section B, above. 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. Biosolids or sludge left within the domestic lagoon shall be mixed with soil on at least a 1 to 1 ratio, and unless otherwise approved, 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. Alternative biosolids or sludge and soil mixing ratios may be included in the closure plan for department consideration.
6. Lagoon and earthen structure 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 plant, all biosolids or 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. Hazardous Waste shall not be land applied or disposed during mechanical plant closures unless in accordance with Missouri Hazardous Waste Management Law and Regulations pursuant to 10 CSR 25.
 - c. After demolition of the mechanical plant, the site must only contain clean fill defined in Section 260.200.1(6) RSMo 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, reclamation, or other beneficial use. Other solid wastes must be removed.
8. If biosolids or sludge from the domestic lagoon or mechanical treatment plant exceeds agricultural rates under Section G and/or I, 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 Part 503, Subpart C.

SECTION J – MONITORING FREQUENCY

1. At a minimum, biosolids or sludge 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

Biosolids or Sludge produced and disposed (Dry Tons per Year)	Monitoring Frequency (See Notes 1, and 2)		
	Metals, Pathogens and Vectors, Total Phosphorus, Total Potassium	Nitrogen TKN, Nitrogen PAN ¹	Priority Pollutants ²
319 or less	1/year	1 per month	1/year
320 to 1650	4/year	1 per month	1/year
1651 to 16,500	6/year	1 per month	1/year
16,501+	12/year	1 per month	1/year

¹Calculate 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.

² Priority pollutants (40 CFR 122.21, Appendix D, Tables II and III) are required only for permit holders that must have a pre-treatment program. Monitoring requirements may be modified and incorporated into the operating permit by the Department on a case-by-case basis.

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

- 2. Permittees that operate wastewater treatment lagoons, peak flow equalization basins, combined sewer overflow basins or biosolids or sludge lagoons that are cleaned out once a year or less, may choose to sample only when the biosolids or sludge is removed or the lagoon is closed. Test one composite sample for each 319 dry tons of biosolids or sludge removed from the lagoon during the reporting year or during lagoon closure. Composite sample must represent various areas at one-foot depth.
- 3. Additional testing may be required in the special conditions or other sections of the permit.
- 4. Biosolids and sludge monitoring shall be conducted in accordance with federal regulation 40 CFR § 503.8, Sampling and analysis.

SECTION K – RECORD KEEPING AND REPORTING REQUIREMENTS

- 1. The permittee shall maintain records on file at the facility for at least five years for the items listed in Standard Conditions PART III and any additional items in the Special Conditions section of this permit. This shall include dates when the biosolids or sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
- 2. Reporting period
 - a. By February 19th of each year, applicable facilities shall submit an annual report for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and biosolids or sludge disposal facilities.
 - b. Permittees with wastewater treatment lagoons shall submit the above annual report only when biosolids or sludge are removed from the lagoon during the report period or when the lagoon is closed.
- 3. Report Form. The annual report shall be prepared on report forms provided by the Department or equivalent forms approved by the Department.
- 4. Reports shall be submitted as follows:
Major facilities, which are those serving 10,000 persons or more or with a design flow equal to or greater than 1 million gallons per day or that are required to have an approved pretreatment program, shall report to both the Department and EPA if the facility land applied, disposed of biosolids by surface disposal, or operated a sewage sludge incinerator. All other facilities shall maintain their biosolids or sludge records and keep them available to Department personnel upon request. State reports shall be submitted to the address listed as follows:

DNR regional or other applicable office listed in the permit (see cover letter of permit)

ATTN: Sludge Coordinator

Reports to EPA must be electronically submitted online via the Central Data Exchange at: <https://cdx.epa.gov/> Additional information is available at: <https://www.epa.gov/biosolids/compliance-and-annual-reporting-guidance-about-clean-water-act-laws>

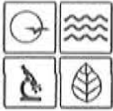
5. Annual report contents. The annual report shall include the following:
 - a. Biosolids and sludge testing performed. If testing was conducted at a greater frequency than what is required by the permit, all test results must be included in the report.
 - b. Biosolids or sludge quantity shall be reported as dry tons for the quantity produced and/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 and 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 using a 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 biosolids or sludge 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 and phosphorus. If no soil was tested during the year, report the last date when tested and the results.

RECEIVED

MAR 14 2022

38502



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM
FORM B: APPLICATION FOR OPERATING PERMIT FOR FACILITIES THAT RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW LESS THAN OR EQUAL TO 100,000 GALLONS PER DAY

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED
3/14/22	SA
JETPAY CONFIRMATION NUMBER	

READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM

1. THIS APPLICATION IS FOR:

- An operating permit for a new or unpermitted facility. Construction Permit # _____
(Include completed antidegradation review or request for antidegradation review, see instructions)
- A new site-specific operating permit formerly general permit #MOG _____
- A site-specific operating permit renewal: Permit #MO- 0099252 Expiration Date 09/30/2022
- A site-specific operating permit modification: Permit #MO- _____ Reason: _____
- General permit (NON-POTWs) (MOGD –discharging < 50,000 GPD or MOG823 – Land Application of Domestic Wastewater):
Permit #MO- _____ Expiration Date _____

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

2. FACILITY

NAME NPSD, ANTIRE SPRINGS WASTEWATER TREATMENT PLANT		TELEPHONE NUMBER WITH AREA CODE (636)343-5090	
ADDRESS (PHYSICAL) 1411 HOESHOE BEND	CITY HIGH RIDGE	STATE MO	ZIP CODE 63049

2.1 Legal description: Sec. 3 , T 43N , R 4E County JEFFERSON

2.2 UTM Coordinates Easting (X): 712522 Northing (Y): 426465
 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

2.3 Name of receiving stream: ANTIRE CREEK

2.4 Number of outfalls: 1 Wastewater outfalls: 1 Stormwater outfalls: 0 Instream monitoring sites: 0

3. OWNER:

NAME NORTHEAST PUBLIC SEWER DISTRICT		EMAIL ADDRESS joer@northeastsewer.org	TELEPHONE NUMBER WITH AREA CODE (636)343-5090
ADDRESS 1041 GRAVOIS ROAD	CITY FENTON	STATE MO	ZIP CODE 63026

3.1 Request review of draft permit prior to public notice? YES NO

3.2 Are you a publicly owned treatment works? YES NO
 If yes, please attach the Financial Questionnaire. See: <https://dnr.mo.gov/forms/780-2511-f.pdf>

3.3 Are you a privately owned treatment works? YES NO

3.4 Are you a privately owned treatment facility regulated by the Public Service Commission? YES NO

4. CONTINUING AUTHORITY:

NAME NORTHEAST PUBLIC SEWER DISTRICT		EMAIL ADDRESS joer@northeastsewer.org	TELEPHONE NUMBER WITH AREA CODE (636)343-5090
ADDRESS 1041 GRAVOIS ROAD	CITY FENTON	STATE MO	ZIP CODE 63026

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 VARIOUS - SEE ATTACHED SHEET	TITLE SEE ATTACHED SHEET	CERTIFICATE NUMBER SEE ATTACHED SHEET
EMAIL ADDRESS joer@northeastsewer.org	TELEPHONE NUMBER WITH AREA CODE (636)717-6523 ext. 14	

6. FACILITY CONTACT

NAME JOSEPH D. RICHARDSON	TITLE OPERATIONS MANAGER		
EMAIL ADDRESS joer@northeastsewer.org	TELEPHONE NUMBER WITH AREA CODE (636)717-6523 ext. 14		
ADDRESS 555 13th STREET	CITY FENTON	STATE MO	ZIP CODE 63026

7. DESCRIPTION OF FACILITY

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.

REFER TO ATTACHED SHEETS

7.2 Attach an aerial photograph or USGS topographic map showing the location of the facility and outfall.

Please see the following website:

<https://modnr.maps.arcgis.com/apps/webappviewer/index.html?id=1d81212e0854478ca0dae87c33c8c5ce>

8. ADDITIONAL FACILITY INFORMATION		
8.1	Number of people presently connected or population equivalent (P.E.) 270	Design P.E. 200
8.2	Connections to the facility: 73 Number of units presently connected: Residential: 73 Commercial: 0 Industrial: 0	
8.3	Design flow: 20,000 GPD	Actual flow: 17,794 GPD
8.4	Will discharge be continuous through the year? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Discharge will occur during the following months: ENTIRE YEAR - ALL 12 MONTHS How many days of the week will discharge occur? ALL SEVEN (7) DAYS	
8.5	Is industrial wastewater discharged to the facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, attach a list of the industries that discharge to your facility	
8.6	Does the facility accept or process leachate from landfills? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
8.7	Is wastewater land applied? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, attach Form I. See: https://dnr.mo.gov/forms/780-1686-f.pdf	
8.8	Does the facility discharge to a losing stream or sinkhole? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
8.9	Has a wasteload allocation study been completed for this facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
9. LABORATORY CONTROL INFORMATION		
LABORATORY WORK CONDUCTED BY PLANT PERSONNEL		
Lab work conducted outside of plant.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Push-button or visual methods for simple test such as pH, settleable solids.		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Additional procedures such as dissolved oxygen, chemical oxygen demand, biological oxygen demand, titrations, solids, volatile content.		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
More advanced determinations, such as BOD seeding procedures, fecal coliform/ <i>E. coli</i> , nutrients (including Ammonia), Oil & Grease, \ total oils, phenols, etc.		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
10. COLLECTION SYSTEM		
10.1 Are there any municipal satellite collection systems connected to this facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, please list all connected to this facility, contact phone number and length of each collection system		
FACILITY NAME	CONTACT PHONE NUMBER	LENGTH OF SYSTEM (FEET OR MILES)
10.2 Length of pipe in the sewer collection system? (If available, include totals from satellite collection systems) 3,168 Feet, or 0.60 Miles (either unit is appropriate)		
10.3 Does significant infiltration occur in the collection system? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, briefly explain any steps underway or planned to minimize inflow and infiltration:		

11. BYPASSINGDoes any bypassing occur in the collection system or at the treatment facility? Yes No

If yes, explain:

12. SLUDGE HANDLING, USE AND DISPOSAL**12.1** Is the sludge a hazardous waste as defined by 10 CSR 25? Yes No**12.2** Sludge production, including sludge received from others: 4.2 ___ Design dry tons/year 6.811 ___ Actual dry tons/year**12.3** Capacity of sludge holding structures:

Sludge storage provided: ___ cubic feet; ___ days of storage; 0.66% average percent solids of sludge;

 No sludge storage is provided. Sludge is stored in lagoon.**12.4** Type of Storage: Holding tank Building
 Basin Lagoon
 Concrete Pad Other (Describe) NO SLUDGE STORAGE PROVIDED**12.5** Sludge Treatment:

-
- Anaerobic Digester
-
-
- Storage Tank
-
-
- Lime Stabilization

-
- Lagoon
-
-
- Aerobic Digester
-
-
- Air or Heat Drying

-
- Composting
-
-
- Other (Attach description)

*SLUDGE IS REMOVED
BY TANK TRUCK FROM
AERATION CELL***12.6** Sludge Use or Disposal:

-
- Land Application
-
- Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than two years)
-
-
- Contract Hauler
-
- Hauled to Another treatment facility
-
-
- Incineration
-
- Sludge Retained in Wastewater treatment lagoon
-
-
- Solid waste landfill

12.7 Person responsible for hauling sludge to disposal facility: By applicant By others (complete below)

NAME NORTHEAST PUBLIC SEWER DISTRICT		EMAIL ADDRESS joer@northeastsewer.org	
ADDRESS 1041 GRAVOIS ROAD	CITY FENTON	STATE MO	ZIP CODE 63026
CONTACT PERSON JOSEPH D. RICHARDSON	TELEPHONE NUMBER WITH AREA CODE (636)717-6523 ext. 14	PERMIT NO. MO-	

12.8 Sludge use or disposal facility By applicant By others (Complete below.)

NAME NPSD, INTERIM SALINE CREEK REGIONAL WWTF		EMAIL ADDRESS joer@northeastsewer.org	
ADDRESS 555 13th STREET	CITY FENTON	STATE MO	ZIP CODE 63026
CONTACT PERSON JOSEPH D. RICHARDSON	TELEPHONE NUMBER WITH AREA CODE (636)717-6523 ext. 14	PERMIT NO. MO- 0128490	

12.9 Does the sludge or biosolids disposal comply with federal sludge regulations under 40 CFR 503? Yes No (Explain)

13. 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 a timely, complete, accurate, and nationally-consistent set of data. One of the following options must be checked in order for this application to be considered complete. Visit <https://dnr.mo.gov/env/wpp/edmr.htm> to for information on the Department's eDMR system and how to register.

- I will register an account online to participate in the Department's eDMR system through the Missouri Gateway for Environmental Management (MoGEM) before any reporting is due, in compliance with the Electronic Reporting Rule.
- I have already registered an account online to participate in the Department's eDMR system through MoGEM.
- I have submitted a written request for a waiver from electronic reporting. See instructions for further information regarding waivers.
- The permit I am applying for does not require the submission of discharge monitoring reports.

14. JETPAY

Permit fees may be payed online by credit card or eCheck through a system called JetPay. Use the URL provided to access JetPay and make an online payment.

New Site Specific Permit: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/591/>


Construction Permits: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/592/>

Modification Fee: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/596/>

New General Domestic WW: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/772/>

15. 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 submitted 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.

NAME (TYPE OR PRINT) JOSEPH D. RICHARDSON	OFFICIAL TITLE OPERATIONS MANAGER	TELEPHONE NUMBER WITH AREA CODE (636)717-6523 ext. 14
SIGNATURE 		DATE SIGNED 03/09/2022

INSTRUCTIONS FOR COMPLETING FORM B: APPLICATION FOR OPERATING PERMIT FOR FACILITIES THAT RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW LESS THAN OR EQUAL TO 100,000 GALLONS PER DAY
(Facilities over 100,000 gallons per day of domestic waste must use FORM B2)
(Facilities that receive wastes other than domestic contact the department)

1. Check the appropriate box. **Do not check more than one item.** Operating permit refers to a permit 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.

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 2% 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 that charge a service connection fee). 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. Operating permits that charge a service connection fee - \$200 each.
- b. All other permits
 - (1) \$100 each for a minor modification (name changes, address changes, other non-substantive changes) or
 - (2) A fee equal to 25% 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 at the outfall pipe 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 <https://modnr.maps.arcgis.com/apps/webappviewer/index.html?id=1d81212e0854478ca0dae87c33c8c5ce>.

2.3-2.4 Self-explanatory

3. Owner – Provide the legal name, mailing address, phone number, and email address of the owner. The owner identified in this section and subsequently reflected on the certificate page of the operating permit, is the owner of the regulated activity/discharge being applied for and is not necessarily the owner of the real property on which the activity or discharge is occurring.

Prior to submitting a permit to public notice, the Department of Natural Resources shall provide the permit applicant 10 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. The Financial Questionnaire is available at: <https://dnr.mo.gov/forms/780-2511-f.pdf>

4. Continuing Authority - A continuing authority is a company, business, entity or person(s) that will be operating the facility and/or ensuring compliance with the permit requirements. A continuing authority is not, however, an entity or individual that is contractually hired by the permittee to sample or operate and maintain the system for a defined time period, such as a certified operator or analytical laboratory. To access the regulatory requirement regarding continuing authority, 10 CSR 20-6.010(2), please visit <http://s1.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-6.pdf>. If the continuing authority is not an individual(s), government, or otherwise required to register with the Missouri Secretary of State (SoS), then the business name must be listed exactly as it appears on the SoS's webpage: <https://bsd.sos.mo.gov/BusinessEntity/BESearch.aspx?SearchType=0>

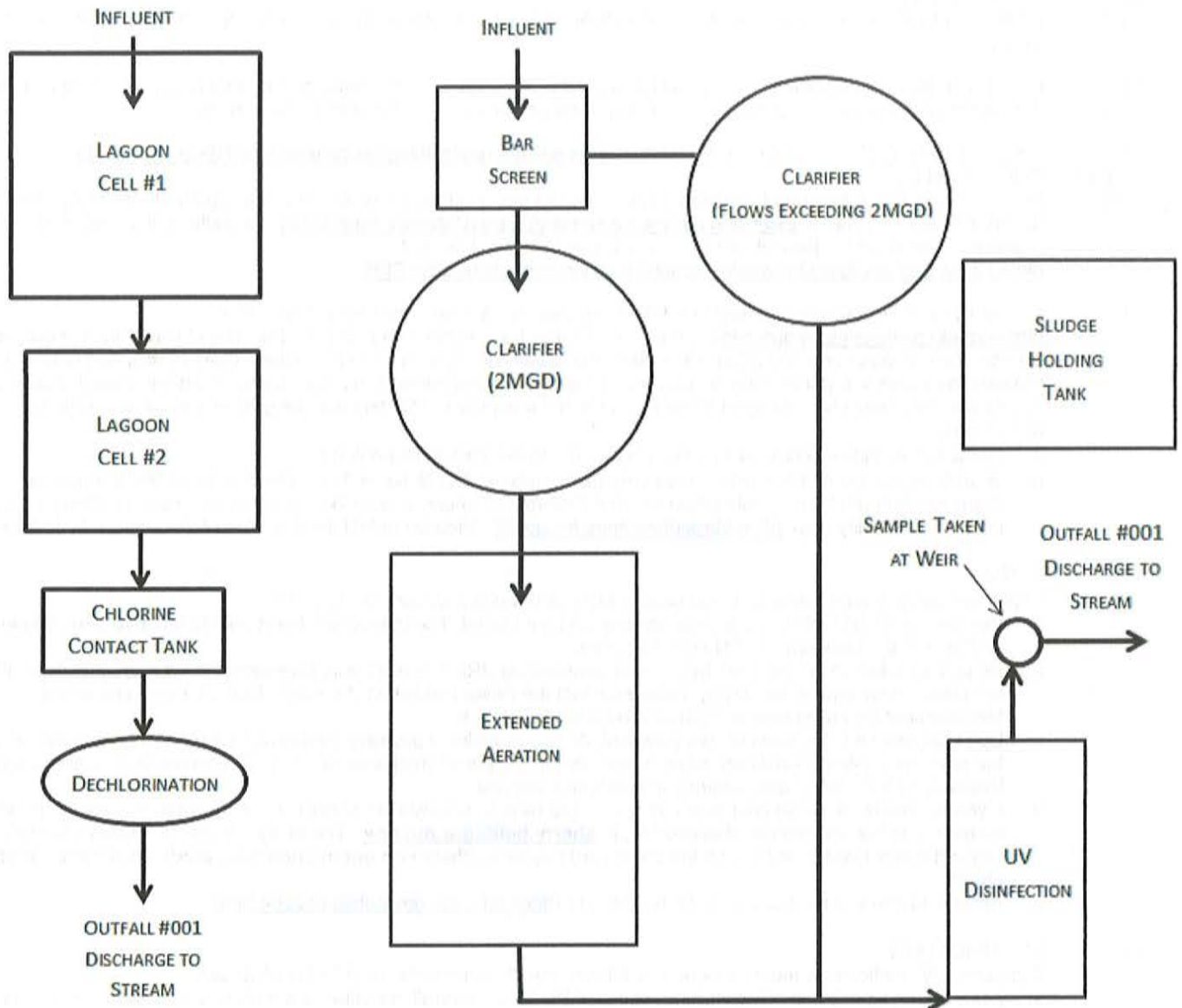
5. Operator – Provide the name, certificate number, title, mailing address, primary phone number, and e-mail address of the operator of the facility.

6. Provide the name, title, mailing address, primary phone number, and e-mail 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 <https://modnr.maps.arcgis.com/apps/webappviewer/index.html?id=1d81212e0854478ca0dae87c33c8c5ce> or from the Department of Natural Resources' Geological Survey Division in Rolla at 573-368-2125.

8.1-8.6 Self-explanatory.

8.7 If wastewater is land applied submit Form I: www.dnr.mo.gov/forms/780-1686-f.pdf.

8.9-8.9 Self-explanatory

**INSTRUCTIONS FOR COMPLETING FORM B: APPLICATION FOR OPERATING PERMIT FOR FACILITIES
THAT RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW
LESS THAN OR EQUAL TO 100,000 GALLONS PER DAY (continued)**

9. Self-explanatory.
- 10.1 Self-explanatory.
- 10.2 Self-explanatory.
- 10.3 If Inflow and Infiltration (I&I) is a problem at the facility, list possible actions to be taken to repair the collection and treatment facility.
11. Include overflows of combined sewers and lift stations or bypassing of the wastewater treatment facility. Provide a detailed description of the circumstances that sewage bypassing occurs and the frequency of occurrence.
12. A copy of 10 CSR 25 is available on the Web at www.sos.mo.gov/adrules/csr/current/10csr/10csr.asp#10-25.
- 12.1-12.8 Self-explanatory.
- 12.9 Refer to University of Missouri Extension Environmental Quality publications about biosolids (WQ420-WQ426). The documents are available at extension.missouri.edu/main/DisplayCategory.aspx?C=74. In addition, the federal sludge regulations are available through the U.S. Government Printing Office at <https://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR>.
13. 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:
- members of religious communities that choose not to use certain technologies.
 - 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: <https://broadbandmap.fcc.gov/#/>. Please contact the department if you need assistance.
14. JETPAY
- Applicants can pay fees online by credit card or eCheck through a system called JetPay.
- Per Section 37.001, RSMo, a transaction fee will be included. The transaction fee is paid to the third party vendor JetPay, not the Department of Natural Resources.
 - Be sure to select the correct fee type and corresponding URL to ensure your payment is applied appropriately. If you are unsure what type of fee to pay, please contact the Water Protection Program's Budget, Fees, and Grants Management Unit by phone at (573) 522-1485 for assistance.
 - Upon successful completion of your payment, JetPay provides a payment confirmation. Submit this form with a copy of the payment confirmation if requesting a new permit or a permit modification. For permit renewals of active permits, the Department will invoice fees annually in a separate request.
 - If you are unable to make your payment online, but want to pay with credit card, you may email your name, phone number, and invoice number, if applicable, to sherry.bell@dnr.mo.gov. The Budget, Fees, and Grants Management Unit will contact you to assist with the credit card payment. **Please do not include your credit card information in the email.**
 - Applicants can find fee rates in 10 CSR 20-6.011 (<https://dnr.mo.gov/pubs/pub2564.htm>).
15. CERTIFICATION
- Signature - All applications must be signed as follows and the signatures must be **handwritten**:
- For a corporation, by an officer having responsibility for the overall operation of the regulated facility or activity or for environmental matters.
 - For a partnership or sole proprietorship, by a general partner or the proprietor.
 - 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.

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:

cleanwaterpermits@dnr.mo.gov

OR

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

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 573-522-4502.



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
FINANCIAL QUESTIONNAIRE

NOTE ► FINANCIAL INFORMATION THAT IS NOT PROVIDED THROUGH THIS FORM WILL BE OBTAINED BY THE DEPARTMENT FROM READILY AVAILABLE SOURCES.

1. GENERAL INFORMATION

FACILITY NAME <i>ANTIRE SPRINGS WWTP</i>	PERMIT NUMBER #MO- <i>0099252</i>
CITY <i>HIGH RIDGE</i>	COUNTY <i>JEFFERSON</i>

2. GENERAL FINANCIAL INFORMATION (ALL FACILITIES)

2.1 Number of connections to the facility: Residential <u>73</u> Commercial <u>0</u> Industrial <u>0</u>	
2.2 Current sewer user rate (Based on a 5,000 gallon per month usage):	<i>\$ 47.58</i>
2.3 Current annual operating costs for the facility (excludes depreciation):	<i>\$ 4,565,425 ENTIRE DISTRICT</i>
2.4 Bond rating (if applicable):	<i>A+</i>
2.5 Bonding capacity:	<i>\$ 8,145,135.50</i>
2.6 Current outstanding debt relating to wastewater collection and treatment:	<i>\$ 16,273,000.00</i>
2.7 Amount within the current user rate used toward payments on outstanding debt related to the current wastewater infrastructure:	<i>\$ 13.53</i>
2.8 Attach any relevant financial statements.	

3. FINANCIAL INFORMATION REQUIRED FROM MUNICIPALITIES

3.1 Municipality's Full Market Property Value:	
3.2 Municipality's Overall Net Debt:	
3.3 Municipality's Property Tax Revenues (levied) [A]:	
3.4 Municipality's Property Tax Revenues (collected) [B]:	
3.5 Municipality's Property Tax Collection Rate ([B]/[A]):	

4. FINANCIAL INFORMATION REQUIRED FROM SEWER DISTRICTS

4.1 Total connections to the sewer district: Residential <u>12,736</u> Commercial <u>406</u> Industrial <u>COMBINED</u>	
4.2 When facilities require upgrades, how are the costs divided? Will the homes connected to the upgraded facility bear the costs? Will the costs be divided across the sewer district? <i>COST DIVIDED ACROSS DISTRICT</i>	

5. ADDITIONAL CONSIDERATIONS (ALL FACILITIES)

5.1 Provide a list of major infrastructure or other investments in environmental projects. Include project timing and costs and indicate any possible overlap or complications (attach sheets as necessary): <i>SEE ATTACHED</i>	
5.2 Provide a list of any other relevant local community economic conditions that may impact the ability to afford new permit requirements (attach sheets as necessary): <i>INFLATION AND GLOBAL CONFLICTS</i>	

6. CERTIFICATION

FINANCIAL CONTACT ROBERT A. HEMBROCK, P.E.	OFFICIAL TITLE EXECUTIVE DIRECTOR
EMAIL ADDRESS bobh@northeastsewer.org	TELEPHONE NUMBER WITH AREA CODE (636) 343-5090 ext. 226

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 submitted 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.

OWNER OR AUTHORIZED REPRESENTATIVE ROBERT A. HEMBROCK, P.E.	OFFICIAL TITLE EXECUTIVE DIRECTOR
SIGNATURE <i>Robert A. Hembrock</i>	DATE SIGNED 3-9-22

INSTRUCTIONS FOR COMPLETING THE FINANCIAL QUESTIONNAIRE

The Financial Questionnaire is to be completed by municipalities, sewer districts, and water supply districts when filing for renewal of their Missouri State Operating Permit. The Financial Questionnaire is to be submitted as an attachment to **FORM B: APPLICATION FOR OPERATING PERMIT FOR FACILITIES THAT RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW LESS THAN OR EQUAL TO 100,000 GALLONS PER DAY** and **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**.

1. GENERAL INFORMATION – Provide the name by which the facility is locally known, the Missouri State Operating Permit number, and the city and county where the facility is located.
2. GENERAL FINANCIAL INFORMATION (ALL FACILITIES) – Municipalities, sewer districts, and water supply districts are to complete.
 - 2.1 Self-explanatory.
 - 2.2 Provide the rate that a household would be charged for sewer service if they use 5,000 gallons per month.
 - 2.3 Provide the cost to operate and maintain the wastewater facility annually.
 - 2.4 Bond ratings can be found here: <https://emma.msrb.org/IssuerHomePage/HomepagesForC6?cusip6=795169>.
 - 2.5 General obligation bond capacity allowed by constitution: Cities = up to 20% of taxable tangible property; Sewer districts = up to 5% of taxable tangible property.
 - 2.6 Provide the amount of debt owed on wastewater collection and treatment. Debt information is typically available from your community's annual financial statements
 - 2.7 Provide the amount of a user's monthly sewer bill that is used toward debt owed on wastewater collection and treatment. This may be a percentage or dollar amount.
 - 2.8 Self-explanatory.
3. FINANCIAL INFORMATION REQUIRED FROM MUNICIPALITIES – Municipalities are to complete.
 - 3.1 Full Market Property Value is typically available through your community or state assessor's office.
 - 3.2 Debt information is typically available from your community's annual financial statements.
 - 3.3 Property tax revenues are typically available from your community's annual financial statements. Property tax rates for Missouri communities can be found in the annual auditor's report: <https://app.auditor.mo.gov/AuditReports/AudRpt2.aspx?id=31>.
 - 3.4 Property Taxes Levied = (Real Property Assessed Value) * (Property Tax Rate). This information is typically available through your community or state assessor's office and your community's annual financial statements. Property tax rates for Missouri communities can be found in the annual auditor's report: <https://app.auditor.mo.gov/AuditReports/AudRpt2.aspx?id=31>.
 - 3.5 Property tax collection rate = (Property Tax Revenues) ÷ (Property Taxes Levied).
4. FINANCIAL INFORMATION REQUIRED FROM SEWER DISTRICTS – Sewer Districts and Water Supply Districts are to complete.
 - 4.1-4.2 Self-explanatory.
5. ADDITIONAL CONSIDERATIONS (ALL FACILITIES) – Municipalities, sewer districts, and water supply districts are to complete.
 - 5.1-5.2 Self-explanatory.
6. CERTIFICATION – Provide the name and contact information for the individual who can respond to financial information requests for your community. This form must be signed by your community's "owner" or "authorized representative". The owner for a municipality is either the principal executive officer or ranking elected official.

If there are any questions concerning this form or your Missouri State Operating Permit, contact the Department of Natural Resources, Water Protection Program, Operating Permits Section at 800-361-4827 or 573-751-6825.

NORTHEAST PUBLIC SEWER DISTRICT

Fiscal Year 2022 Budget

7235 NPSD CONSTRUCTION

Description	Amount
1 2022 Misc. Sewer Main Reconstructions	1,120,000.00
2 Winter Valley PS Improvements - Flood Mitigation	500,000.00
3 Pere Cliff Pump Station & Force Main (Easements & Construction)	180,000.00
4 CIPP Lining	610,000.00
5 Engineering Design for Antire Valley Phases 2 & 3	573,000.00
6 Harbor View Force Main Relocation	160,000.00
Total	\$ 3,143,000
FY 2022 Budget	\$ 3,143,000

NORTHEAST PUBLIC SEWER DISTRICT

Fiscal Year 2022 Budget

CAPITAL PROJECT NEEDS LIST

	Raw Estimate	Estimate Year	CIP Year
1 Vehicles		SEE FLEET MANAGEMENT PLA	
2 Lower Saline Interceptor phase 7 & High Ridge Consolidation Phase 1	1,490,000	2021	2023
3 Antire Valley Phase 1	1,150,000	2021	2024
Easements		2019	2023
4 Antire Valley Phase 2	2,560,000	2021	2024
Easements	68,068	2019	2023
5 Antire Valley Phase 3	3,170,000	2021	2024
Easements		2019	2023
6 CIP 2018-04 Harter Farms Extension	221,996	2018	2027
7 CIP 2018-02 Dutch Mill Farms Seer Extension & PS Decommissioning	250,000	2018	2027
8 CIP 2018-03 Williams Creek Watershed Upgrades - Gravity Sewer	610,000	2021	2028
9 CIP 2018-03 Williams Creek Watershed Upgrades - Pump Station & Force Main	1,070,000	2018	2028
10 Kohnen Pump Station Relocation	*		
11 Saline Creek Farms Pump Station Reconstruction	*		
12 Arkansas Drive Sewer Extension (Arkansas PS Decmmissioning)	*		
13 Sue Lynn #4 Pump Station Sewer Extension	*		
14 Sue Lynn #5 Pump Station Sewer Extension	*		
15 Sugar Creek Interceptor Extension Phase 1 (to Terry Jean WWTP)	*		
16 High Ridge Consolidation Phase 2	*		
17 High Ridge Consolidation Phase 3	*		
18 Creekwood #2 Pump Station Sewer Extension & Decommissioning	*		
19 Lonedell Sewer Extension & Pump Station Decommissioning	*		
	10,590,064		

* These projects are know as needs, but opinions of cost have not been prepared at this time.

NORTHEAST PUBLIC SEWER DISTRICT
OF JEFFERSON COUNTY
Fenton, Missouri

For the Year Ended December 31, 2020

ANNUAL FINANCIAL REPORT

BEUSSINK, HEY, ROE & STRODER, L.L.C.

Certified Public Accountants

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BEUSSINK, HEY, ROE & STRODER, L.L.C.

Certified Public Accountants

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INDEPENDENT AUDITORS' REPORT

To the Board of Trustees
Northeast Public Sewer District of
Jefferson County
Fenton, Missouri

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities of the Northeast Public Sewer District of Jefferson County, as of and for the year ended December 31, 2020, and the related notes to the financial statements, which comprise the District's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the business-type activities of the Northeast Public Sewer District of Jefferson County as of December 31, 2020, and the changes in financial position and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 5 through 12 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Government Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operation, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated June 21, 2021, on our consideration of the Northeast Public Sewer District of Jefferson County's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Northeast Public Sewer District of Jefferson County's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Northeast Public Sewer District of Jefferson County's internal control over financial reporting and compliance.

BEUSSINK, HEY, ROE & STRODER, L.L.C.

Beussink, Hey, Roe & Stroder, L.L.C.

Cape Girardeau, Missouri
June 21, 2021

BEUSSINK, HEY, ROE & STRODER, L.L.C.

Certified Public Accountants

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INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS

To the Board of Trustees
Northeast Public Sewer District of
Jefferson County
Fenton, Missouri

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the business-type activities of the Northeast Public Sewer District of Jefferson County as of and for the year ended December 31, 2020, and the related notes to the financial statements, which comprise the Northeast Public Sewer District of Jefferson County's basic financial statements, and have issued our report thereon dated June 21, 2021.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Northeast Public Sewer District of Jefferson County's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Northeast Public Sewer District of Jefferson County's internal control. Accordingly, we do not express an opinion on the effectiveness of the Northeast Public Sewer District of Jefferson County's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Northeast Public Sewer District of Jefferson County's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

BEUSSINK, HEY, ROE & STRODER, L.L.C.

Beussink, Hey, Roe & Stroder, L.L.C.

Cape Girardeau, Missouri
June 21, 2021

REQUIRED SUPPLEMENTAL INFORMATION

NORTHEAST PUBLIC SEWER DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)

The Northeast Public Sewer District is presenting the following discussion and analysis in order to provide an overall review of the District's financial activities for the fiscal year ending December 31, 2020. The readers should consider the information presented with the District's financial statements and footnotes to the basic financial statements to form an understanding of the District's financial position.

FINANCIAL HIGHLIGHTS

- The District continues to work to improve operating efficiencies by a focus on system reliability maintenance and improvements. Future construction planning efforts include gravity system consolidation to eliminate a number of pump stations which will further improve efficiencies and have a positive impact on operating expenses. The Board has decided to apply for a loan through the State Revolving Fund (SRF) program to fund the Antire Valley projects which will eliminate two (2) of the District's three (3) remaining satellite treatment facilities.
- The District's Total Liabilities increased by \$2.52 million, or 17.1 percent. Long-term debt outstanding increased as a result of the Biosolids Project at the Saline Creek WWTF. While the District plans to fund the Antire Valley projects with a SRF loan, this will not result in higher annual debt payment obligations due to the structure of the current debt which will see a reduction over the next two (2) years and a significant reduction in FY 2027.
- The District's Total Operating Expenses in 2020 increased (29.1%) as compared to 2019. This is due to the increased costs of repairs to the system as part of the District's system reliability improvement program. The District's average winter average for sewer billing slightly increased in FY 2021, but is relatively stable.
- The District's Net Position increased by 2.8 percent over 2019 due to increased construction in progress due to the Biosolids project at the Saline Creek WWTF.

OVERVIEW OF THE FINANCIAL STATEMENTS

This annual report consists of three parts, the Management's Discussion and Analysis, the independent auditor's report and the basic financial statements of the District. The financial statements also include footnotes that explain in more detail some of the information in the financial statements.

REQUIRED FINANCIAL STATEMENTS

The financial statements of the District report information of the District using accounting methods similar to those used by private sector companies. These statements offer short and long-term financial information about its activities.

The *Statement of Net Position (Balance Sheet)* includes all of the District's assets and liabilities and provides information about the nature and amount of investments in resources (assets) and the obligations to District creditors (liabilities). It also provides the basis for evaluating the capital structure of the District and assessing the liquidity and financial flexibility of the District.

All of the current year's revenues and expenses are accounted for in the *Statement of Revenues, Expenses, and Changes in Net Position*. This statement measures the results of the District's operations over the year and can be used to determine whether the District has successfully covered all its costs through its user fees and other charges, its profitability and its credit-worthiness.

The final requirement is the *Statement of Cash Flows*. The primary purpose of this statement is to provide information about the District's cash receipts and payments. The statement reports cash receipts, cash payments, and net changes in cash resulting from operations, investing, and financing activities and provides answers to questions such as: where did cash come from, what was cash used for, and what was the change in the cash balance during the reporting period.

FINANCIAL ANALYSIS OF THE DISTRICT

The most common financial question posed to the District is "Are we (the District) as a whole better off or worse off as a result of the year's activities?" The *Statement of Net Position* and the *Statement of Revenues, Expenses and Changes in Net Position* report information about the District's activities in a way that will help answer this question. These two statements report the net position of the District and the changes during the year. One can think of the District's net position, the difference between assets and liabilities, as one way to measure financial health or financial position. Over time, increases or decreases in the District's net position is one indicator of whether its financial health is improving or deteriorating. The reader will need to consider other non-financial factors such as changes in economic conditions, population growth, and new or changed government legislation.

NET POSITION

To begin our analysis, a summary of the District's *Statement of Net Position* is presented in Table A.1. As is apparent from the Table, the Total Net Position increased \$1.11 million to \$40.51 million in 2020, up from \$36.51 million at the end of 2019.

Table A.1
Condensed Statements of Net Assets (Balance Sheet)

	<u>FY 2019</u>	<u>FY 2020</u>	<u>Dollar Change</u>	<u>Total Percent Change</u>
Current Assets	7,172,714	6,777,783	(394,931)	(5.5)
Other Assets	<u>1,085,261</u>	<u>1,161,301</u>	<u>76,040</u>	<u>7.0</u>
Total Current & Other Assets	8,257,975	7,939,084	(318,891)	(3.9)
Capital Assets	56,277,238	59,189,502	2,912,264	5.2
Construction in Progress	2,936,332	4,899,857	1,963,525	66.9
Accumulated Depreciation	<u>(13,317,865)</u>	<u>(14,244,708)</u>	<u>(926,843)</u>	<u>7.0</u>
Total Capital Assets	<u>45,895,705</u>	<u>49,844,651</u>	<u>3,948,946</u>	<u>8.6</u>
Total Assets	54,153,680	57,783,735	3,630,055	6.7
Long-Term Debt Outstanding	12,650,007	14,178,123	1,528,116	12.1
Other Liabilities	<u>2,108,274</u>	<u>3,098,815</u>	<u>990,541</u>	<u>46.9</u>
Total Liabilities	14,758,281	17,276,938	2,518,657	17.1
Invested In Capital Assets, Net of Related Debt	32,028,705	34,604,175	2,575,470	8.0
Restricted for Replacements	1,085,261	1,161,301	76,040	7.0
Unrestricted	<u>6,281,433</u>	<u>4,741,321</u>	<u>(1,540,112)</u>	<u>(24.5)</u>
Total Net Position	39,395,399	40,506,797	1,111,398	2.8

In examining Table A.1, much of the Change in Net Position was realized in the category titled *Capital Assets*. This is reflective of the increase in the District's Construction in Progress from the Biosolids project at the Saline Creek Regional WRRF which began in 2020 and will be completed in 2021. This project is being funded partially with a State Revolving Fund (SRF) loan and partially with cash from the District's Capital Improvement Fund. Long-Term Debt Outstanding increased in 2020 due to this SRF loan.

While the *Statement of Net Position (Balance Sheet)* depicts the change in net position, the *Statement of Revenues, Expenses and Changes in Net Position*, provides answers as to the nature and source of these changes. As can be seen in Table A.2, the *Income Before Capital Contributions* of -\$1.91 million is significantly different than last year. This is due to the increased cost for repairs in the collection system as part of the District's system reliability program to reduce Infiltration & Inflow and correct other system defects which affect service

reliability. While the District has been increasing this work in the recent past, the program was far more extensive in 2020. It is anticipated that this level of expense will continue over the next five (5) years. In addition to this additional expense, connection fees were lower, sewer charges were slightly less and late fees were less due to the COVID-19 pandemic than in 2019.

2020's Capital Contributions are an increase over 2019. The District had more in-kind construction of sewer main extensions in 2020 than 2019. The economic effects of COVID19 make it difficult to estimate or predict the amount of in-kind construction for the next few years.

Table A.2
Condensed Statements of Revenues,
Expenses, and Changes in Net Assets

	<u>FY 2019</u>	<u>FY 2020</u>	<u>Dollar</u> <u>Change</u>	<u>Total</u> <u>Percent</u> <u>Change</u>
Operating Revenues	7,414,674	7,137,886	(276,788)	(3.7)
Other Revenues	135,497	123,557	(11,940)	(8.8)
Other Expenses	<u>(461,251)</u>	<u>(763,131)</u>	<u>(301,880)</u>	<u>65.4</u>
Total Revenues	7,088,920	6,498,312	(590,608)	(8.3)
Depreciation Expense	1,115,539	1,171,432	55,893	5.0
Operating Expense	<u>3,411,412</u>	<u>4,671,304</u>	<u>1,259,892</u>	<u>36.8</u>
Total Expenses	4,526,951	5,842,736	1,315,785	29.1
Income (Loss) Before Capital Contributions	2,561,966	655,576	(1,906,390)	(74.4)
Capital Contributions (net of related depreciation)	321,440	455,822	134,382	41.8
Capitalized Labor & Material	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	321,440	455,822	134,382	41.8
Change in Net Assets	2,883,406	1,111,398	(1,772,008)	(61.5)
Beginning Net Assets	36,511,993	39,395,399	2,883,406	7.9
Prior Period Adjustment	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Ending Net Assets	39,395,399	40,506,797	1,111,398	2.8

BUDGETARY HIGHLIGHTS

The District adopts an annual Operating Budget before the start of the fiscal year as required by law. The Operating Budget includes proposed expenses and the means of financing them. A 2020 budget comparison and analysis is presented in Table A.3.

**Table A.3
Budget vs. Actual**

	FY 2020 <u>Budget</u>	FY 2020 <u>Actual</u>	<u>Variance</u>
REVENUES			
Operating Revenues	7,012,309	7,137,886	125,577
Non-Operating Revenues	<u>70,949</u>	<u>123,557</u>	<u>52,608</u>
Total Revenues	7,083,258	7,261,443	178,185
EXPENSES			
Employment Costs	1,970,120	1,948,929	(21,191)
Repair & Maintenance	203,920	1,503,729	1,299,809
Operating Supplies	60,730	70,463	9,733
Vehicle Costs	77,800	67,431	(10,369)
Utilities & Trash	254,730	236,136	(18,594)
Administrative Costs	402,380	393,807	(8,573)
Depreciation & Amortization	1,012,080	1,171,432	159,352
Interest Expenses	305,855	264,156	(41,699)
Outside Services	<u>283,330</u>	<u>450,177</u>	<u>166,847</u>
<i>Total Operating Expenses</i>	<i>4,570,945</i>	<i>6,106,260</i>	<i>1,535,315</i>
<i>Total Non-Operating Expenses</i>	<i><u>36,538</u></i>	<i><u>499,607</u></i>	<i><u>463,069</u></i>
Total Expenses	4,607,483	6,605,867	1,998,384
Net Revenue (Expense)	2,475,775	655,576	(1,820,199)

The increase in budgeted operating revenue is reflective of an increase over the budget amount of tap-on fees and sewer charges, as well as late fees which are not budgeted. Non-operating expense was higher than budgeted due to a bond refunding issue in the second half of 2020. It is anticipated that non-operating revenue will decrease in 2021 due to lower interest income from investing the District’s reserves. Conservative estimates will predominate into the foreseeable future.

CAPITAL ASSETS

At the end of 2020, the District had \$49.8 million invested in capital assets, net of depreciation, including wastewater treatment plants, collector sewers and interceptors as shown in Table A.4. This is an increase of \$3.9 million over 2019 due to the biosolids project at the Saline Creek WWTF.

Table A.4
Capital Assets

	<u>FY 2019</u>	<u>FY 2020</u>	<u>Variance</u>	<u>Total Percent Change</u>
Land & Land Improvements	1,735,544	1,743,074	7,530	0.4
Structures & Treatment Facilities	49,580,494	52,620,792	3,040,298	6.1
Administrative & Maintenance Building	2,614,200	2,614,200	0	0
Vehicles	1,291,026	1,144,712	(146,314)	(11.3)
Equipment	833,832	844,582	10,750	1.3
Furniture & Fixtures	218,203	218,203	0	0
Leasehold Improvements	<u>3,939</u>	<u>3,939</u>	<u>0</u>	<u>0</u>
	56,277,238	59,189,502	2,912,264	5.2
Less: Accumulated Depreciation	(13,317,865)	(14,244,708)	(926,843)	7.0
Construction in Progress	<u>2,936,332</u>	<u>4,899,857</u>	<u>1,963,525</u>	<u>66.9</u>
Net Capital Assets	45,895,705	49,844,651	3,948,946	8.6

DEBT ADMINISTRATION

At year-end, the District had \$15.2 million in long-term outstanding debt. More detailed information concerning the District's long-term liabilities is presented in the Notes to Financial Statements section of the audit report.

**Table A.5
Debt Coverage Ratio**

	<u>FY 2019</u>	<u>FY 2020</u>
REVENUES		
Operating Revenues	7,075,774	6,874,486
Interest & Other Income	131,914	102,350
Tap-On Fees	<u>338,900</u>	<u>263,400</u>
Total Revenues	7,546,588	7,240,236
Total Operating Expenses (less depreciation)	<u>3,411,412</u>	<u>4,671,304</u>
Net Earnings	<u>4,135,176</u>	<u>2,568,932</u>
Annual Debt Service	1,941,808	2,247,210
Debt Coverage Ratio	2.13	1.14

One area that demonstrates the District’s borrowing capacity is seen in its debt coverage ratio. We currently have earnings coverage of 1.14 times debt, above that required by covenant. The major difference from FY 2019, as seen in table A.5 above, is increased operating expenses reflective of more activity in the inspection and repair of the collection system. This resulted in a lower Debt Coverage Ratio.

ECONOMIC FACTORS AND NEXT YEAR'S BUDGET AND RATES

Since the completion of major consolidation efforts in 2015 funded by a \$9.26 million State Revolving Fund (SRF) bond issue, the District has been completing smaller scale system improvements on a pay-as-you-go basis. The District’s revenue allows for this improvement program at the current rate structure. A large project (\$6.5 million) at the Saline Creek Regional WRRF was awarded in 2019 and started in 2020. This project is being funded with a \$5 million SRF bond issue and cash from the District’s capital improvement account. The District plans to fund improvements in the Antire Valley, including pumping system consolidation and decommissioning of two (2) treatment facilities with an SRF loan. The District does not expect a rate increase in the foreseeable future.

DISTRICT CONTACT INFORMATION

This financial report is designed to provide our customers and creditors with a general overview of the District's finances and to demonstrate the District's accountability for the funds it receives. Anyone having questions regarding this report or desiring additional information may contact Bob Hembrock, P.E., Executive Director of Northeast Public Sewer District, 1041 Gravois Road, Fenton, MO 63026 or by phone at (636) 343-5090 extension 226 or by email at bobh@northeastsewer.org

BASIC FINANCIAL STATEMENTS

NORTHEAST PUBLIC SEWER DISTRICT OF JEFFERSON COUNTY
Fenton, Missouri

STATEMENT OF NET POSITION

December 31, 2020

ASSETS

CURRENT ASSETS:

Cash and Cash Equivalents	\$ 4,248,009	
Investments	1,600,000	
Accounts Receivable - Net	906,484	
Prepaid Expenses	<u>23,290</u>	
Total Current Assets		\$ 6,777,783

CAPITAL ASSETS:

Sewer System and Buildings	\$ 55,234,992	
Equipment	844,582	
Vehicles	1,144,712	
Office Furniture and Equipment	218,203	
Leasehold Improvements	3,939	
Accumulated Depreciation	<u>(14,244,708)</u>	
	43,201,720	
Construction Work in Progress	4,899,857	
Land and Land Rights	1,743,074	
Total Capital Assets, Net		49,844,651

OTHER ASSETS:

Restricted Cash and Cash Equivalents	\$ 116,250	
Restricted Investments	<u>1,045,051</u>	
		<u>1,161,301</u>

TOTAL ASSETS \$ 57,783,735

See Accompanying Notes to Basic Financial Statements.

LIABILITIES

CURRENT LIABILITIES:

Accounts Payable	\$ 752,724	
Accrued Wages and Salaries	60,005	
Accrued Payroll Taxes	4,186	
Prepaid Tap-On Fees	376,900	
Bonds Payable	<u>1,905,000</u>	
Total Current Liabilities		\$ 3,098,815

LONG-TERM LIABILITIES:

Bonds Payable	\$ 13,335,476	
Discount on Bonds Payable	<u>842,647</u>	
Total Long-Term Liabilities		<u>14,178,123</u>

TOTAL LIABILITIES		<u>\$ 17,276,938</u>
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NET POSITION

Net Investment in Capital Assets	\$ 34,604,175	
Restricted for System Replacement	1,161,301	
Unrestricted	<u>4,741,321</u>	
TOTAL NET POSITION		<u>\$ 40,506,797</u>

See Accompanying Notes to Basic Financial Statements.

NORTHEAST PUBLIC SEWER DISTRICT OF JEFFERSON COUNTY
Fenton, Missouri

STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

For the Year Ended December 31, 2020

OPERATING REVENUES:

Sewer Charges	\$ 6,786,679	
Tap On Fees	263,400	
Late Fees	84,698	
Miscellaneous Income	3,109	
	<hr/>	
Total Operating Revenues		\$ 7,137,886

OPERATING EXPENSES:

Salaries	\$ 1,394,324	
Payroll Taxes	105,325	
Employee Benefits	338,813	
Payroll Expenses	4,472	
Pension Contributions	79,999	
Depreciation	1,171,432	
Utilities	232,958	
Legal/Accounting	55,460	
Sludge Disposal	228,919	
Safety Equipment	8,865	
Chemicals	11,990	
Workers' Compensation Insurance	30,468	
Office Expense	64,272	
Telephone	40,945	
Vehicle Expense	67,431	
Equipment Rental	4,654	
Bad Debt Expense	632	
Fees/Assessments/Permits	67,039	
Equipment and Plant Repairs	1,528,306	
Dues and Subscriptions	20,158	
Licenses and Training	2,935	
Travel/Meals	(493)	
Lab Supplies	19,762	
Tools	15,861	
Uniform/Clothing	9,330	
Outside Services	167,579	
Insurance	95,272	
Miscellaneous Expense	76,028	
	<hr/>	
Total Operating Expenses		<hr/> 5,842,736

OPERATING INCOME, Carried Forward		\$ 1,295,150
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See Accompanying Notes to Basic Financial Statements.

NORTHEAST PUBLIC SEWER DISTRICT OF JEFFERSON COUNTY
Fenton, Missouri

STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

For the Year Ended December 31, 2020

OPERATING INCOME, Brought Forward		\$ 1,295,150
<u>OTHER REVENUES (EXPENSES):</u>		
Interest and Dividend Income	\$ 102,350	
Gain on Sale of Assets	21,207	
Interest Expense	(264,156)	
Bond Account Expenses	<u>(498,975)</u>	
Total Other Revenues (Expenses)		<u>(639,574)</u>
INCOME BEFORE CONTRIBUTIONS		\$ 655,576
CAPITAL CONTRIBUTIONS		<u>455,822</u>
INCREASE IN NET POSITION		\$ 1,111,398
NET POSITION, January 1, 2020		<u>39,395,399</u>
NET POSITION, December 31, 2020		<u>\$ 40,506,797</u>

See Accompanying Notes to Basic Financial Statements.

NORTHEAST PUBLIC SEWER DISTRICT OF JEFFERSON COUNTY
Fenton, Missouri

STATEMENT OF CASH FLOWS

For the Year Ended December 31, 2020

CASH FLOWS FROM OPERATING ACTIVITIES:

Received from Customers	\$	7,090,115
Paid to Suppliers for Goods and Services		(2,432,740)
Paid to Employees for Services		<u>(1,916,270)</u>

NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES \$ 2,741,105

CASH FLOWS FROM INVESTING ACTIVITIES:

Interest	\$	102,350
Purchase of Investments		(2,649,007)
Maturity of Investments		4,649,000
Bond Account Expenses		<u>(124,260)</u>

NET CASH PROVIDED (USED) BY INVESTING ACTIVITIES 1,978,083

CASH FLOWS FROM CAPITAL AND RELATED
FINANCING ACTIVITIES:

Debt Retirement	\$	(12,852,000)
Debt Proceeds		14,225,476
Interest Paid		(348,176)
Proceeds from Disposal of Assets		21,207
Acquisition and Construction of Capital Assets		<u>(4,175,377)</u>

NET CASH PROVIDED (USED) BY FINANCING ACTIVITIES (3,128,870)

NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS \$ 1,590,318

CASH AND CASH EQUIVALENTS, January 1, 2020 2,657,691

CASH AND CASH EQUIVALENTS, December 31, 2020 \$ 4,248,009

See Accompanying Notes to Basic Financial Statements.

RECONCILIATION OF OPERATING INCOME TO NET

CASH FLOWS FROM OPERATING ACTIVITIES:

Operating Income	\$ 1,295,150
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:	
Depreciation	1,171,432
Bad Debt Expense	632
(Increase) Decrease in Accounts Receivable	(33,821)
(Increase) Decrease in Prepaid Expenses	27,262
Increase (Decrease) in Accounts Payable	287,737
Increase (Decrease) in Accrued Wages and Salaries	6,617
Increase (Decrease) in Accrued Payroll Taxes	46
Increase (Decrease) in Deferred Income	<u>(13,950)</u>

NET CASH PROVIDED BY OPERATING ACTIVITIES

\$ 2,741,105

NONCASH CAPITAL FINANCING ACTIVITIES:

Capital assets of \$455,822 were acquired through contributions from developers and landowners.

See Accompanying Notes to Basic Financial Statements.

NORTHEAST PUBLIC SEWER DISTRICT OF JEFFERSON COUNTY
Fenton, Missouri

NOTES TO BASIC FINANCIAL STATEMENTS

December 31, 2020

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Northeast Public Sewer District of Jefferson County supplies sewer services to customers in the Jefferson County, Missouri area.

A. The Reporting Entity:

The District's reporting entity includes the District's governing board and the operations of all related organizations for which the District exercises financial oversight. Oversight responsibility is derived from the District's authority and includes, but is not limited to, financial interdependency, selection of governing authority, designation of management, ability to significantly influence operations, and accountability for fiscal matters. Based on the foregoing criteria, no component units have been determined to be a part of the District's reporting entity.

B. Basis of Accounting:

The District's financial statements are reported on the accrual basis of accounting in conformity with generally accepted accounting principles (GAAP) as applied to government units. The financial transactions of the District are accounted for on a flow of economic resources measurement focus. The accounting objectives are a determination of net income, financial position, and changes in cash flows. Accordingly, revenues are recognized in the accounting period in which they become both available and measurable. Expenditures are recognized in the accounting period in which the liability is incurred.

C. Financial Statement Presentation:

The District's financial statements include a statement of net position; a statement of revenues, expenses, and changes in net position; and a statement of cash flows. The District classifies net position into three components: net investment in capital assets, restricted, and unrestricted. These classifications are defined as follows:

Net investment in capital assets – This component of net position consists of capital assets, including restricted capital assets, net of accumulated depreciation and reduced by the outstanding balances of any bonds or other borrowings that are attributable to the acquisition, construction, or improvement of those assets. If there are significant unspent related debt proceeds at year-end, the portion of the debt attributable to the unspent proceeds is not included in the calculation of net investment in capital assets. Rather, that portion of the debt is included in the same net assets component as the unspent proceeds.

Restricted – This component of net position consists of constraints placed on asset usage through external constraints imposed by creditors (such as through debt covenants), grantors, contributors, or laws or regulations of other governments or constraints imposed by law through constitutional provisions or enabling legislation.

Unrestricted net assets – This component of net position consists of assets that do not meet the definition of “restricted” or “net investment in capital assets.”

D. Use of Estimates:

Management uses estimates and assumptions in preparing financial statements in accordance with GAAP. Those estimates and assumptions affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported revenues and expenditures. Actual results could vary from the estimates that were assumed in preparing the financial statements.

E. Cash and Cash Equivalents:

For purposes of the statement of cash flows, the District considers all short-term debt securities purchased with an original maturity of three months or less to be cash equivalents. Cash equivalents are stated at cost plus accrued interest, which approximates fair value. The District does not believe it is exposed to any significant credit risk related to cash and cash equivalents.

F. Accounts Receivable:

The District uses the allowance method to account for uncollectible accounts receivable. Accounts receivable are presented net of an allowance for doubtful accounts of \$8,000 at December 31, 2020.

G. Capital Assets:

Property and equipment are recorded at cost. Systems donated to the District are recorded at their estimated cost at the time they are accepted by the District. Depreciation is computed using the straight-line method over the estimated useful lives of the respective assets. Maintenance and repairs are charged to expense as incurred, and major renewals and betterments are capitalized. Depreciation is recorded on a straight-line basis over the useful lives of the assets as follows:

Sewer System and Buildings	10-75 Years
Equipment	5-10 Years
Vehicles	5-10 Years
Office Furniture	5-10 Years
Leasehold Improvements	15 Years

H. Operating Revenues and Expenses:

Operating revenues and expenses result from providing services and producing and delivering services. They also include all revenues and expenses not related to capital and related financing, non-capital financing, or investing activities.

I. Tax Status:

The District is exempt from federal, state, and local income taxes. Therefore, no provision for income taxes is included in the financial statements.

J. Fair Value of Financial Instruments:

The District's financial instruments are cash and cash equivalents, accounts receivable, accounts payable, and long-term debt. The recorded values of cash and cash equivalents, accounts receivable, and accounts payable approximate their fair values based on their short-term nature. The recorded value of long-term debt approximates its fair values, as interest approximates market rates.

K. Vacation and Sick Pay:

The District permits employees to accumulate a limited amount of earned but unused vacation and personal leave. Vacation and personal leave are considered as expenditures in the year paid. Accumulated vacation time is paid if employment is terminated. Although the possibility that all employees will terminate in the coming year is remote, management estimates the potential liability at December 31, 2020 would have been \$55,149.

L. Subsequent Events:

In preparing these financial statements, the District has evaluated events and transactions for potential recognition of disclosure through June 21, 2021, the date the financial statements were available to be issued.

2. CASH AND CASH EQUIVALENTS

The District's cash and cash equivalents are segregated into restricted and non-restricted funds and held by Commerce Bank. The balances of these funds were as follows:

Operating Account (Unrestricted)	<u>\$4,248,009</u>
Bond Account (Restricted)	\$ 81,097
SRF Operation and Maintenance Account (Restricted)	16,178
SRF Replacement Account (Restricted)	<u>18,975</u>
Total Restricted Cash	<u>\$ 116,250</u>
Total Cash and Cash Equivalents	<u>\$4,364,259</u>

The District has classified as restricted certain cash and cash equivalents that are not available for use in its operations. At December 31, 2020, the District had restricted accounts set aside to meet sinking fund requirements of the outstanding bonds discussed in Note 4. At December 31, 2020, the reported amount of the District's deposits was \$4,364,259, and the bank balance was \$4,448,001. The total balance was covered by federal depository insurance or by collateral securities held by the bank's fiscal agent in the District's name.

3. INVESTMENTS

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. The District does not have a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates. Information about the exposure of the District's debt type investments to this risk, using the segmented time distribution model, is as follows:

Type of Investment	Fair Value	Investment Maturities (in Years)	
		Less Than 1 Year	1 – 5 Years
Certificates of Deposit	\$ 1,600,000	\$ 1,600,000	\$ -0-
Federal National Mortgage Assoc.	1,045,051	1,045,051	-0-
Total	<u>\$ 2,645,051</u>	<u>\$ 2,645,051</u>	<u>\$ -0-</u>

4. CAPITAL ASSETS

The following is a summary of property and equipment for the year ended December 31, 2020:

	Balance January 1, 2020	Additions	Deletions	Balance December 31, 2020
Sewer System and Buildings	\$49,580,495	\$3,040,298	\$ -0-	\$ 52,620,793
Administrative Building	2,614,199	-0-	-0-	2,614,199
Equipment	833,832	10,750	-0-	844,582
Vehicles	1,291,026	98,275	(244,589)	1,144,712
Office Furniture and Equipment	218,203	-0-	-0-	218,203
Leasehold Improvements	3,939	-0-	-0-	3,939
Accumulated Depreciation	<u>(13,317,865)</u>	<u>(1,171,432)</u>	<u>244,589</u>	<u>(14,244,708)</u>
Total	\$41,223,829	\$1,977,891	\$ -0-	\$ 43,201,720
Construction Work in Progress	2,936,332	4,437,197	(2,473,672)	4,899,857
Land and Land Rights	1,735,544	7,530	-0-	1,743,074
Net Capital Assets	<u>\$45,895,705</u>	<u>\$6,422,618</u>	<u>\$(2,473,672)</u>	<u>\$ 49,844,651</u>

5. LONG-TERM DEBT

A. Bond Issue:

The following is a summary of the District's long-term debt transactions for the year ended December 31, 2020:

	Revenue Bonds
Debt Outstanding, January 1, 2020	\$ 13,867,000
Additions	14,225,476
Reductions	<u>(12,852,000)</u>
Debt Outstanding, December 31, 2020	<u>\$ 15,240,476</u>

On April 1, 2007, the District issued Sewerage System Improvement and Refunding Revenue Bonds, Series 2007. Proceeds were used to pay off the remaining balances of the Series 1999 revenue bonds and to provide for additional improvements to the sewerage system. The bonds are special obligations of the District, payable solely from the net income and revenues derived by the District from the operation of its sewerage system after payment of costs of operation and maintenance. On January 23, 2014, the District issued Sewerage System Refunding Revenue Bonds, Series 2014. Proceeds were used to pay off the remaining balances of the Series 2007 revenue bonds. The bonds do not constitute a general obligation of the District. Interest rates vary from 3.00 to 5.00 percent. In October 2020, the District issued sewerage system revenue bonds and the proceeds were used to retire the remaining balance of the Series 2014 revenue bonds.

On June 5, 2012, the District issued Sewerage System Revenue Bonds (State of Missouri-Direct Loan Program), Series 2012. Proceeds were used to provide for extensions and improvements to the District's sewerage system. The bonds are also special obligations of the District, payable solely from the net income and revenues derived by the District from the operation of its sewerage system after payment of costs of operation and maintenance. The bonds do not constitute a general obligation of the District. Interest accrues at 1.42 percent. In October 2020, the District issued sewerage system revenue bonds and the proceeds were used to retire the remaining balance of the Series 2012 revenue bonds.

On January 30, 2020, the District issued Sewerage System Revenue Bonds, Series 2020 in the amount of \$5 million. Proceeds were used to provide for extensions and improvements to the District's sewerage system. The bonds are special obligations of the District, payable solely from the net income and revenues derived by the District from the operation of its sewerage system after payment of costs of operation and maintenance. The bonds do not constitute a general obligation of the District. Interest accrues at 0.92 percent annually, and the bonds mature July 1, 2040.

On October 27, 2020, the District issued Sewerage System Refunding Revenue Bonds, Series 2020A and Series 2020B. Series 2020A was issued for \$4,930,000 and Series 2020B was issued for \$6,115,000. The proceeds from both series were used to pay off the remaining balances of the Series 2014 and Series 2012 revenue bonds described above. The bonds are special obligations of the District, payable solely from the net income and revenues derived by the District from the operation of its sewerage system after payment of costs of operations and maintenance. The bonds do not constitute a general obligation of the District. The interest rate for Series 2020A is 2.00 percent and the bonds mature on January 1, 2025. The interest rates for Series 2020B range from 1.50 to 3.00 percent and the bonds mature on January 1, 2034.

At December 31, 2020, the District's total future debt service requirements are summarized below:

<u>Fiscal Year</u> <u>Ended</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2021	\$ 1,905,000	\$ 342,210	\$ 2,247,210
2022	1,847,000	270,535	2,117,535
2023	1,601,000	236,038	1,837,038
2024	1,509,000	206,503	1,715,503
2025	312,000	178,846	490,846
2026-2030	5,488,000	518,047	6,006,047
2031-2035	<u>2,578,476</u>	<u>115,192</u>	<u>2,693,668</u>
Totals	<u>\$ 15,240,476</u>	<u>\$ 1,867,371</u>	<u>\$17,107,847</u>

The bond covenants require that all monies be segregated and restricted in separate accounts within the revenue fund, in the sequence indicated by the following:

<u>Account</u>	<u>Amount</u>	<u>Nature of Expenditures</u>
Operation and Maintenance Account	Amount sufficient to pay the estimated cost of operating and maintaining the sewerage system for one month.	All disbursements for operations and maintenance of the system.
Bond Account	Amount sufficient to pay the current bond and interest maturities.	Payment of principal and interest on bonds.
Bond Replacement Account	Amount sufficient for the purpose of making replacements and repairs to the system.	To keep the system in good repair or working order and to assure the continued effective and efficient operation of the system.

6. CONSTRUCTION COMMITMENTS

As of December 31, 2020, the District was in various stages of several separate construction projects. At December 31, 2020, the construction contract for manhole rehabilitation had a remaining balance due of \$243,425. The contract for the project at the plant had a remaining balance due of \$2,703,145. Both projects are expected to be paid during the next fiscal year.

7. RISK OF LOSS

The District is exposed to risks of loss through their property ownership, employee injury, and liability of employees' actions. The District purchases commercial insurance policies to overcome these risks. There have been no significant reductions in insurance coverage from the prior year. Insurance settlements have not exceeded insurance coverage in any of the past three years.

The District is insured under a retrospectively-rated policy for workers' compensation coverage. The initial premium may be adjusted based on actual experience. Adjustments in premiums are recorded when paid or received. During the year ended December 31, 2020, there were no significant adjustments in premiums based on actual experience.

8. PENSION PLAN

The District provides pension benefits for all of its employees through two defined contribution plans. In a defined contribution plan, benefits depend solely on amounts contributed to the plan plus investment earnings.

The District's first plan is established in accordance with Internal Revenue Service (IRS) section 457 requirements. Employees are eligible to participate 90 days after employment. Employees are able to contribute either a fixed dollar amount or a percentage up to 15 percent of his/her gross compensation. The District makes no matching payments to this plan. Contributions and interest allocated to the employee's account are fully vested immediately. During the year ended December 31, 2020, employees contributed \$59,815 to this plan.

The District's second plan is established in accordance with Internal Revenue Service (IRS) section 401(a) requirements. Full-time employees are eligible to participate 90 days after employment. Employees are considered full-time if they have 1,000 hours of creditable service per year. Employees do not make contributions to this plan. The District contributes 6 percent of the total compensation of all participants. The District's compensation is allocated to participants based on each participant's compensation in relation to the total of all compensation of all eligible participants. During the year ended December 31, 2020, the District contributed \$76,926 to this plan.



Northeast Public Sewer District

P. 636 343-5090 · F. 636 343-7904

Section: 5

*Missouri Department of Natural Resources
Clean Water Commission
Certificate of Competency engineering*

WASTEWATER

OPERATOR	TITLE	CERTIFICATE LEVEL	NUMBER	EMAIL	PHONE #
Joseph D. Richardson	Operations Manager	A	4842	joer@northeastsewer.org	636-717-6523 x14
Kyle C. Ward	Operations Supervisor / Pretreatment Coordinator	A	12688	kylew@northeastsewer.org	636-717-6523 x15
William J. Paul	Pump Station Crew Leader	C	9299	williep@northeastsewer.org	636-343-8838 x257
Charles W. Drinen	Engineering Technician	C	9314	chuckd@northeastsewer.org	636-343-5090 x229
Kyle J. Daniel	Operator 2	C	15230	kyled@northeastsewer.org	636-717-6523 x12
Kyle C. Allbright	Operator 2	D	16539	kylea@northeastsewer.org	636-717-6523 x13



Northeast Public Sewer District

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***NPSD, ANTIRE SPRINGS WASTEWATER TREATMENT PLANT
PERMIT NUMBER MO - 0099252
Northeast Public Sewer District***

FORM B: APPLICATION FOR OPERATING PERMIT FOR FACILITIES THAT RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW LESS THAN OR EQUAL TO 100,000 GALLONS PER DAY

Section 7.1 Description of Facilities

Influent Bar Screen (Basket)

Extended Aeration

Clarification

Secondary Clarification

Seasonal Chlorination and Contact Tank

Effluent Flow Measurement

Seasonal De-chlorination

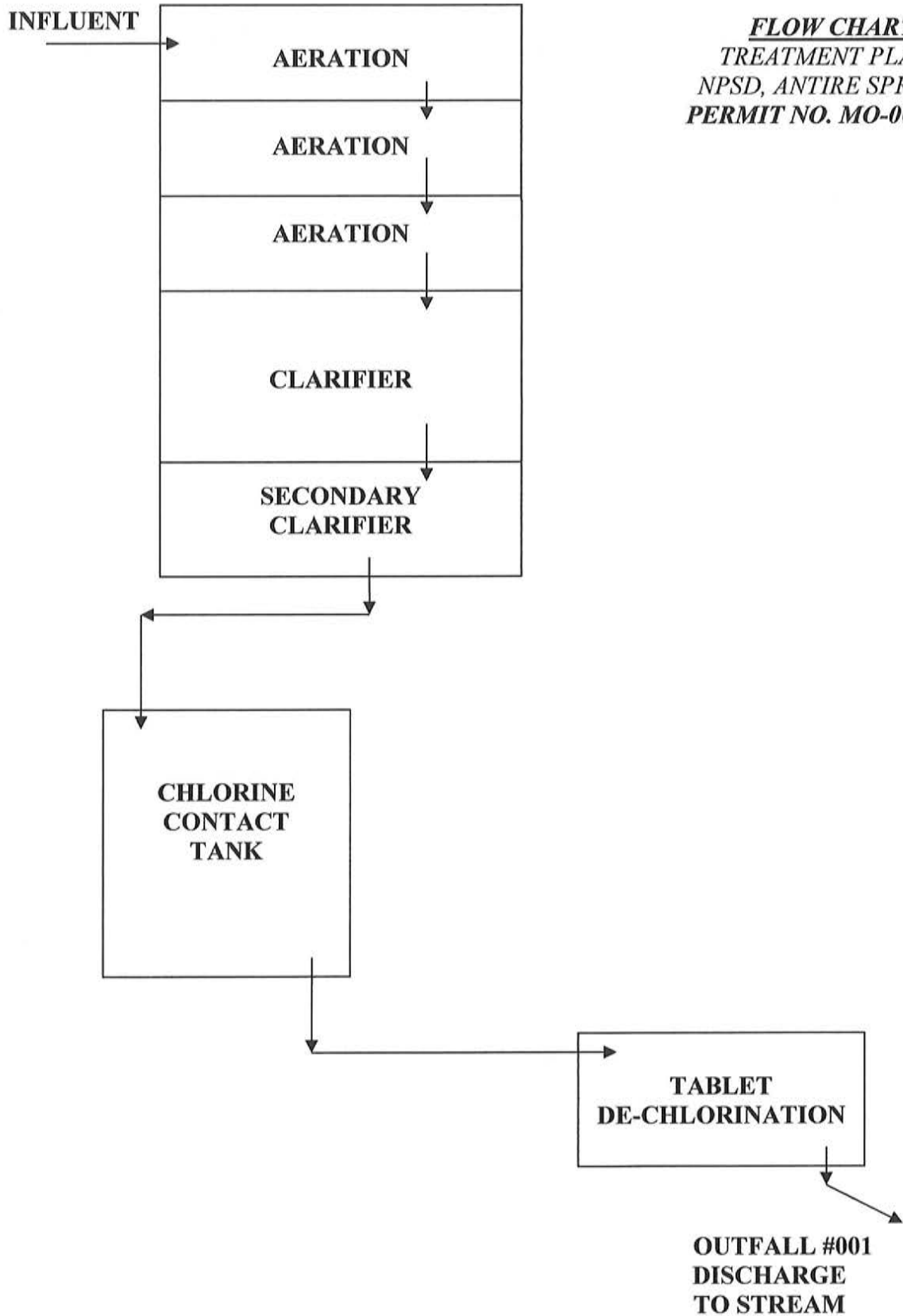
Sludge hauled by District to NPSD Interim Saline Creek Regional WWTF Permit #MO-0128490 - (Saline Creek Wastewater Treatment Plant) for final disposal.

Final sludge disposal is hauled and land applied by Oros & Busch Application Technologies, Inc. from NPSD Interim Saline Creek Regional WWTF (Saline Creek Treatment Plant).



Northeast Public Sewer District

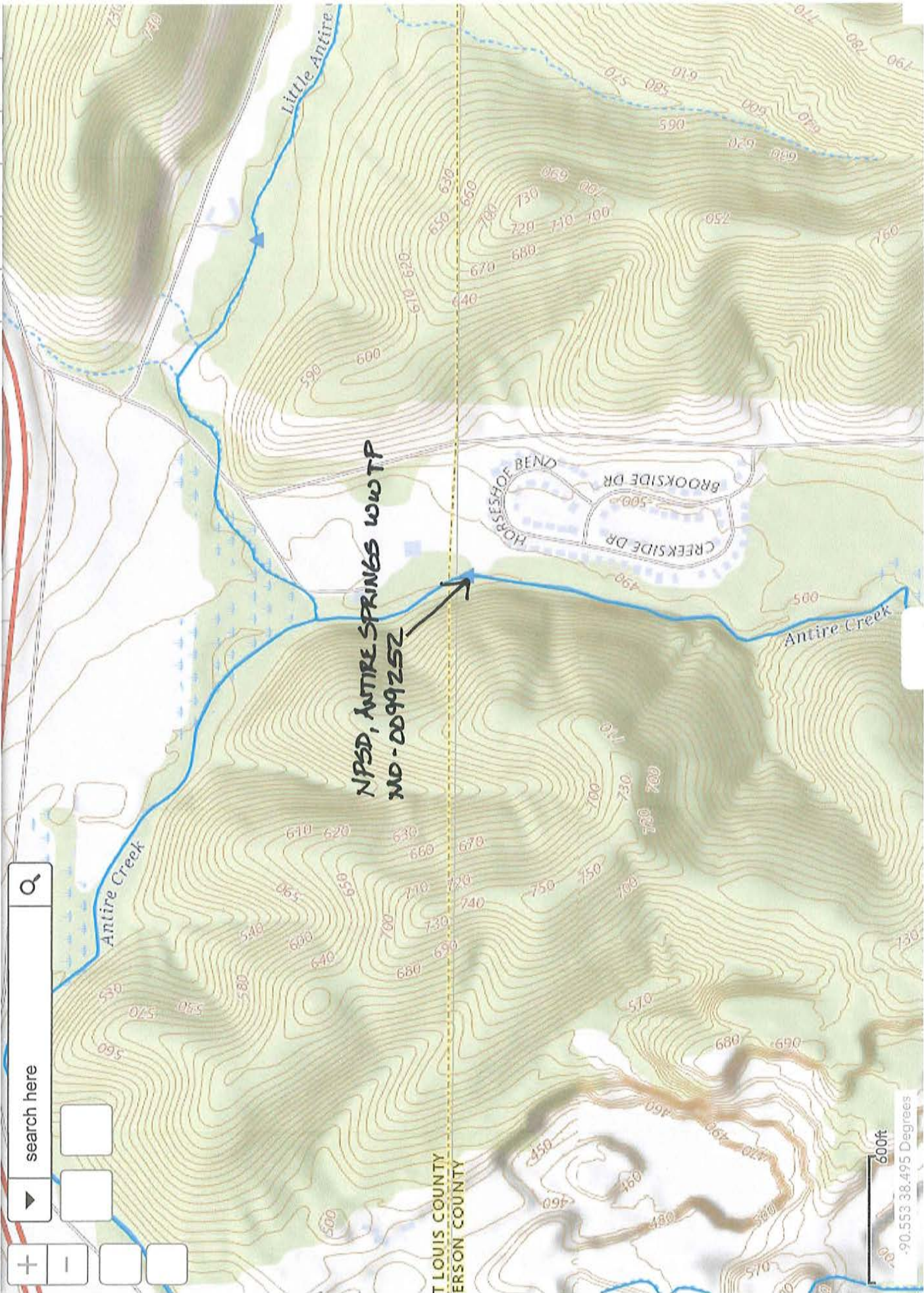
P. 636 343-5090 • F. 636 343-7904



FLOW CHART
TREATMENT PLANT
NPSD, ANTIRE SPRINGS
PERMIT NO. MO-0099252



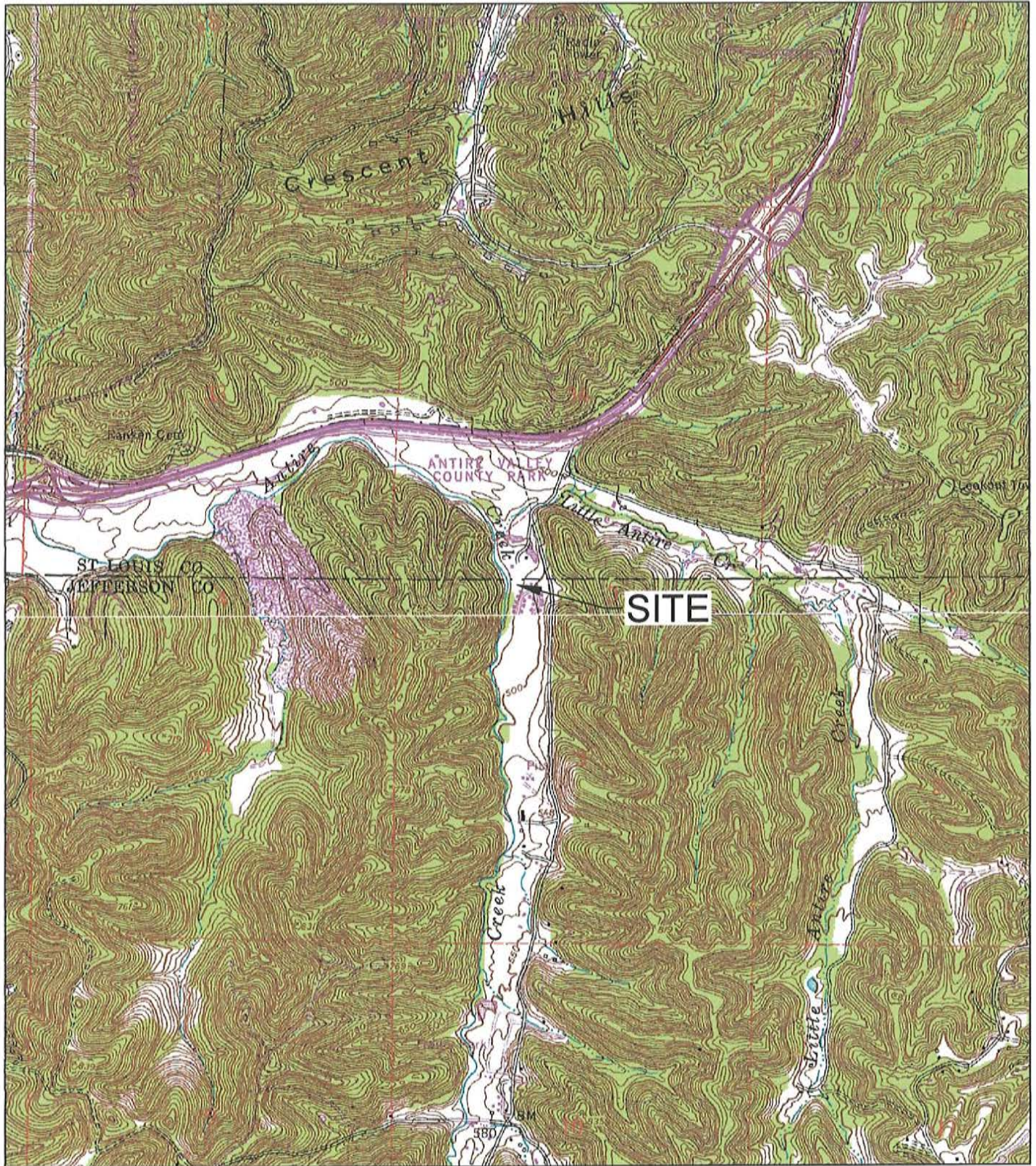
search here



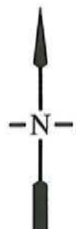
**NPSD, ANTIRE SPRINGS WWTP
MD-009925Z**

ST. LOUIS COUNTY
ERSON COUNTY

600ft
-90.553 38.495 Degrees



ANTIRE WWTP
NORTHEAST PUBLIC SEWER DISTRICT
SCALE: 1" = 2000'



Northeast Public Sewer District



St Louis

Outfall #001
NPSD, Antire Springs WWTP MO-0099252

1 in. = 100ft.



This Cadastral Map is for informational purposes only. It does not purport to represent a property boundary survey of the parcels shown and shall not be used for conveyances or the establishment of property boundaries.
 THIS MAP IS NOT TO BE USED FOR NAVIGATION



Legend

- Active Work Orders**
 <all other values>
- Emergency - Do it now.
 - Urgent - Complete within 24 hours
 - Important - Complete within 1 week
 - Necessary - Complete when time a
 - Needed - Complete whenever
- Air Release Valve
 - Force Main Cleanout
 - Force Main GP
 - Force Main TW
 - Lamp Hole
 - Manhole
 - Manhole Buried
 - Lateral Cleanout
 - Lift Station Storage Cleanout
 - Lift Station
 - Lift Station Storage Manhole
 - Outfall
 - Repair Point
 - Lift Station Storage Line
 - Gravity Main
 - Sewer Lateral
 - Force Main
- No Yes
— —

Notes

2022
 NPSD, Antire Springs WWTP
 MO-0099252