STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

General Operating Permit

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

Permit No	MOG823263
Owner: Address:	MDNR, Division of State Parks PO Box 176 Jefferson City, MO 65102
Continuing Authority:	MDNR, Division of State Parks PO Box 176 Jefferson City, MO 65102
Facility Name: Facility Address:	MDNR, Big Lake State Park WWTF 204 Lake Shore Drive CRAIG, MO 64437
Legal Description:	Sec. 19, T61N, R39W, Holt County
UTM Coordinates:	300250.872/4439259.525
Receiving Stream:	Tributary to Big Lake
First Classified Stream - ID#:	Big Lake (L3) 303(d) 7059.00
USGS# and Sub Watershed#:	10240005 - 0904

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

FACILITY DESCRIPTION

All Outfalls SIC #4952

All Outfalls - SIC 4952, 6515, 8641

No discharge, private domestic wastewater treatment facilities with design flows of less than 50,000 gallons per day and/or pumping and hauling of domestic wastewater.

This permit authorizes activities pursuant to the terms and conditions of this permit in the Missouri Clean Water Law and/or the National Pollutant Discharge Elimination System; it does not apply to other regulated activities.

June 01, 2025
Issue Date

John Hoke, Director
Water Protection Program

August 24, 2027
Expiration Date

Missouri Department of Natural Resources

NOTIFICATION OF PERMIT REMOVAL

Date removed: June 2, 2025

Facility Name: MDNR, Big Lake State Park

Permit Number: MO-0129259

County: Holt

Reason for removal: The department has terminated Permit # MO-0129259. This facility is now operating under Missouri State Operating Permit # MO-G823263. The Master General Permit template can be found on the department's website at: https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/wastewater/land-application-domestic-wastewater-mo-g823000.

There are no sampling requirements for the new LPP soil absorption system

If you have any questions about this permit please contact the Operating Permit Section at 573-522-4502 or by email at cleanwaterpermits@dnr.mo.gov.

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-G823000
Owner:	< name >
Address:	< address >
Continuing Authority:	< name, or Same as above >
Address:	< address, or Same as above >
Facility Name:	< name >
Facility Address:	< physical address >
Legal Description:	¼, ¼, ¼, Sec. xx, TxxN, RxxW, < county > County
UTM Coordinates:	X = , Y =
Receiving Stream:	< receiving stream > < (C, P, L1, L2, L3) >
First Classified Stream and ID:	< 1st classified stream > <(C, P, etc.)> <(WBID #number)> 303(d) List
USGS Basin and Sub-watershed No.:	< (USGS HUC12 #) >

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

FACILITY DESCRIPTION

No-Discharge Facility – SIC Codes 4952, 6515, 8641

Land Application or subsurface dispersal system of wastes from the following private domestic wastewater treatment facilities with design flows of less than 50,000 gallons per day onto grass land, crop land, or timber land for use as fertilizer and soil amendment..

This permit authorizes only wastewater management under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. For Class V wells, this permit is issued under the authority of the Safe Drinking Water Act, authorized by the EPA for State of Missouri administration at 40 CFR 147.1301 which incorporates portions of RSMo 644, 10 CSR 20-6, and 10 CSR 20-7 by reference.

August 25, 2022
Effective Date

August 24, 2027
Expiration Date

Chris Wieberg, Director, Water Protection Program

PART I. APPLICABILITY

1. This Missouri State Operating Permit (permit) authorizes land application and subsurface dispersal of treated domestic wastewaters and sludges from no-discharge domestic wastewater treatment facilities with no industrial contributions within the State of Missouri. Domestic wastewater originates from sanitary conveniences of residences, commercial buildings, factories, and institutions, including any stormwater which may have infiltrated into the sewers. This includes multiple industries, including, but not limited to, facilities with the primary Standard Industrial Classification (SIC) Codes below or facilities the Missouri Department of Natural Resources (Department) determines are fundamentally similar to facilities that are under the below SIC Codes:

SIC Code	Activity
4952	Sewerage systems
6515	Residential Mobile Home Parks
8641	Home Owners Associations

2. Some publicly owned treatment works (POTWs), including, but not limited to, schools, churches, nursing homes, airports, ports, training centers, correctional centers, and other institutional facilities may be eligible for coverage under this permit if they do not finance upgrades, operation, or maintenance of their wastewater treatment facility based on residential sewer rates.
   (a) Applicants will need to waive the finding of affordability requirement pursuant to Section 644.145, RSMo. Applicants may waive the finding of affordability requirement on 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.

3. This permit does not cover land disturbance activities or construction of earthen basins.
   (a) Land disturbance activities disturbing one or more acres of total area for the entire project or less than one acre for sites that are part of a common promotional plan of development may require a land disturbance permit. Instructions on how to apply for and receive the online land disturbance permit are located at www.dnr.mo.gov/env/wpp/epermit/help.htm. Questions regarding permit requirements may be directed to the Department's Land Disturbance phone line at 573-526-2082 or toll free at 855-789-3889.
   (b) Construction of an earthen basin or holding structure may require a construction permit. Instructions on how to apply for and receive a construction permit are located at https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/wastewater/construction-engineering. Questions regarding permit requirements may be directed to Department's Water Protection Program phone line at 573-751-1300, or toll free at 800-361-4827.

4. For the purposes of this permit, land application shall mean any surface application of wastes or wastewater, including materials that are incorporated into the soil or "knifed in." Subsurface dispersal shall mean systems with primary treatment prior to wastewater entering stationary subsurface distribution lines in the soil. The distribution lines may be pressurized or non-pressurized.

5. For the purpose of this permit, a land application facility is a facility where process wastes or wastewater are land applied or stored for subsequent land application, including, but not limited to, earthen basins. The term land application facility also applies to contract haulers who land apply wastewater.

6. For the purpose of this permit, permitted land application sites shall be defined as sites that are owned, rented, or leased by the permittee. These sites must be listed in the facility description portion of the permit. Land application by contract haulers to sites with a spreading agreement that are not owned, rented, or leased by the facility producing or the contract hauler spreading the wastewater are not required to be listed in this permit. However, the contract hauler shall maintain a list of addresses, county plat numbers, or a marked map of these sites as part of their record keeping outlined in the Land Application Management Plan.

7. All owners of new (since January 12, 2015) no-discharge facilities that receive more than 3,000 gallons per day of domestic wastewater and have their waste pumped and hauled by a contract hauler are required to obtain construction and operating permits from the Department.

8. This general permit only authorizes Department-approved subsurface dispersal systems as treatment for domestic wastewater. Per 40 CFR 144.81, septic system wells used to inject the waste or effluent from a multiple dwelling, business establishment, community, or regional business establishment septic tank is considered a Class V injection well. This general permit does not authorize Class V injection wells other than shallow subsurface dispersal systems. If wastewater is to be injected into a traditional well structure, a site specific permit must be obtained in order to conduct the underground injection activity. A traditional well structure is defined as a bored, drilled, or driven shaft whose depth is greater than the largest surface dimension; a dug hole whose depth is greater than the largest surface dimension; or an improved sinkhole [40 CFR 144.3].

9. This permit does not apply to facilities employing direct reuse of treated wastewater. Such facilities must disinfect year-round and may be required by the Department to obtain the services of a certified operator in order to ensure protection of public health.

10. Each land application facility as defined by this permit shall have its own general permit. If wastes are being land applied in more than one Department region, then a permit must be acquired for each region represented. Contact any Department office for a regional boundary determination.

11. This permit does not apply to rapid infiltration wastewater irrigation systems where groundwater monitoring may be required.

12. Domestic wastewater shall have undergone at least primary treatment before surface wastewater irrigation or subsurface dispersal. Secondary treatment is recommended for subsurface dispersal systems to extend the functional life span of the system. The following facilities are excluded from this permit:
    (a) Municipal wastewater treatment facilities or other POTWs per 10 CSR 20-2.010(65) that do not meet applicability #2 (these facilities must obtain a site-specific permit); or
    (b) Facilities with industrial wastewater contributions. Industrial wastewater includes any water that comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product. This includes effluent from car washes and similar industrial wastewater as well as both contact and non-contact cooling water. Any water that would otherwise have been considered domestic wastewater, but is contaminated with industrial materials, becomes industrial wastewater.

13. The following setbacks apply to both surface land application and subsurface dispersal. For additional setbacks specific to surface land application facilities only, see #14 below. For additional setbacks specific to subsurface dispersal facilities only, see #15 below. This permit does not authorize land application or subsurface dispersal:
    (a) Within 300 feet of a Class W wetland;
    (b) Within 300 feet upstream of streams, lakes, or reservoirs with the designated use of drinking water supply, any public or privately owned well, or other drinking water supply;
    (c) Within 100 feet of any classified perennial or intermittent streams or tributaries, public or privately owned ponds or lakes;
    (d) Within 300 feet of sinkholes or other direct conduits to groundwater;
    (e) Within 500 feet of an Outstanding State Resource Water (OSRW) or Outstanding National Resource Water (ONRW);
    (f) Within 1,000 feet upstream of streams, lakes, or reservoirs identified as critical habitat for endangered species;
    (g) Within 1,000 feet upstream of biocriteria reference locations; or
    (h) Within the 10 year floodplain.

14. In addition to the required setbacks above, surface land application shall not occur:
    (a) Within 150 feet of an occupied residence, public building, or public use area; or
    (b) Within 50 feet of the property line, public road, or drainage ditch.

15. In addition to the required setbacks above, subsurface dispersal shall not occur:
    (a) Within 10 feet of the property line.

16. For facilities operating within the watershed of ONRW, which includes the Ozark National Riverways and the National Wild and Scenic Rivers System:
    (a) This permit authorizes only no-discharge facilities [as defined in 10 CSR 20-6.015(1)(B)7.] to operate. Discharges from sources that existed on or before June 29, 1974, will be allowed to continue to discharge under this permit.
    (b) Any discharge from a no-discharge facility, including stormwater, will be considered a violation of this permit unless a catastrophic or chronic storm event [as defined in 10 CSR 20-6.015(1)(B)2.-3.] occurs. In the event of a catastrophic or chronic storm event, the no-discharge facility is authorized to release only the amount of stormwater required to prevent damage to the facility or established Best Management Practices (BMPs). Impacts to the receiving stream shall be assessed after the event.

17. Facilities located within the watershed of an impaired water as designated in the 305(b) Report must be evaluated on a case-by-case basis for inclusion under this permit. Facilities found to be discharging the listed pollutant(s) of concern for any impaired water may be required to obtain a site-specific permit.

18. This permit does not allow placement of fill material into any stream or wetland, alteration of a stream channel, or obstruction of stream flow unless the appropriate Clean Water Act (CWA) Section 404 permitting authority provides approval for such actions or determines such actions are exempt from Section 404 jurisdiction. Additionally, this permit does not authorize placement of fill in floodplains unless approved or determined exempt by appropriate federal and/or state floodplain development authorities.

19. The Department may require any facility authorized by a general permit to apply for a site-specific permit [10 CSR 20-6.010(13)(C)]. Cases where a site-specific permit may be required include, but are not limited to, the following:
    (a) The discharge(s) is a significant contributor of a pollutant(s) which impairs the designated uses of the receiving stream;
    (b) The discharger is not in compliance with the conditions of the general permit; or
    (c) A Total Maximum Daily Load (TMDL) containing requirements applicable to the discharge(s) is approved.

20. If a facility covered under a current general permit desires to apply for a site-specific permit, the facility may do so by contacting the Department for application requirements and procedures.

21. Facilities covered under a current site-specific permit who desire to apply for inclusion under this general permit may contact the Department for application requirements and procedures.

22. This operating permit does not affect, remove, or replace any requirement of the National Environmental Policy Act; the Endangered Species Act; the National Historic Preservation Act; the Comprehensive Environmental Response, Compensation, and Liability Act; the Resource Conservation and Recovery Act; or any other relevant acts. Determination of applicability to the above mentioned acts is the responsibility of the permittee. Additionally, this permit does not establish terms and conditions for runoff resulting from silvicultural activities listed in Section 402(l)(3)(a) of the Clean Water Act.

23. This permit does not authorize the discharge of process wastewaters, treated or otherwise, including contact and non-contact cooling waters; boiler blowdown; or water used to wash machinery, equipment, buildings, or pavement.

24. The following are allowable non-stormwater discharges authorized under this permit:
    (a) Discharges from emergency/unplanned fire-fighting activities;
    (b) De-chlorinated fire hydrant or water line flushing (testing) so long as the discharged water is managed to avoid instream water quality impacts;
    (c) Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;
    (d) Landscape watering, provided all pesticides, herbicides, and fertilizers have been applied in accordance with manufacturer's instructions;
    (e) Uncontaminated groundwater or spring water which has not contacted industrial materials or processes;
    (f) Foundation or footing drains where flows are not contaminated with process materials; and
    (g) Incidental windblown mist from cooling towers which collects on rooftops or adjacent portions of your facility but not intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

    This permit does not authorize water quality impacts from the above discharges.

25. Any non-stormwater discharges other than those explicitly authorized in condition #24 above are prohibited. For clarity, a number of prohibited discharges will be listed here as a reminder. The list is not all inclusive, but it contains common prohibited discharges:
    (a) Water from testing and maintenance of fire protection systems that have foam;
    (b) Water from washout of concrete;
    (c) Water from the washing of vehicles and equipment, with or without detergents;
    (d) Water from the washout of form release oils, curing compounds, or other construction materials;
    (e) Water containing soaps, solvents, or detergents from any source; and
    (f) Water containing substances from a spill on site, hazardous or otherwise.

26. Any discharges not expressly authorized in this permit and not clearly disclosed in the permit application cannot become authorized or shielded from liability under CWA section 402(k) or Section 644.051.16, RSMo by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including any other permit applications, funding applications, the SWPPP, discharge monitoring reporting, or during an inspection. Discharges at the facility not expressly authorized by this permit must be covered by another permit, be exempt from permitting, or be authorized through some other method.

PART II. EXEMPTIONS

1. No-discharge land application facilities that generate less than 3,000 gallons per day and that are in compliance with Missouri Water Quality Standards (10 CSR 20-7.031) are exempted from the requirement to obtain an operating permit. This exemption applies only to the types of facilities described in this permit and only to those facilities applying wastewater to land surface. Construction of an earthen storage basin is still subject to construction permitting requirements.

2. A single-family lagoon serving an individual residence on an individual lot is the jurisdictional responsibility of the Missouri Department of Health and Senior Services, Onsite Wastewater Treatment Program, or the local onsite wastewater authority and does not qualify for the no-discharge lagoon exemption or this operating permit.

3. Per 10 CSR 20-6.015(3)(B)13 contract haulers are not required to have a permit under this rule if all waste is hauled to a permitted facility.

4. One time or short-term land application events during clean-up of spills or environmental emergencies are exempted with prior approval from the Department.

5. No-discharge process waste facilities are exempt from having a permit for their waste holding structures if:
   (a) The contents are hauled to a permitted treatment or disposal facility; and
   (b) The owner has a written contract with the hauler and approval from the receiving facility.

PART III. LAND APPLICATION MONITORING

TABLE A	LAND APPLICATION OPERATIONAL MONITORING REQUIREMENTS					
The facility is authorized to conduct land application of domestic wastewater, sludges and stormwater as specified in this permit. The land application of domestic wastewater, sludges and stormwater shall be controlled, limited, and monitored by the facility as specified below:						
PARAMETER(S)	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS**	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	SAMPLING FREQUENCY	SAMPLE TYPE
LIMIT SET: LA						
Irrigation Period	hours	*			once/day	total
Volume Irrigated	gallons	*			once/day	total
Application Area	acres	*			once/day	total
Application Rate	inches	1.0			once/day	measured
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE MONTH 28, 2022. IT IS A VIOLATION OF THIS PERMIT TO FAIL TO SAMPLE.						

* Sample as required and report resulting value monthly.

** Facilities shall report required parameters when land application occurs during the reporting period. Daily reporting is required only for days when land application occurs. If irrigation does not occur during the reporting period, no reporting is required.

TABLE B	STORAGE BASIN MONITORING REQUIREMENTS					
The facility is authorized to store and land apply domestic wastewater, sludges and stormwater as specified in this permit. The storage basin for domestic wastewater, sludges and stormwater shall be controlled, limited, and monitored by the facility as specified below:						
PARAMETER(S)	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MINIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	SAMPLING FREQUENCY	SAMPLE TYPE
LIMIT SET: SB						
Storage Basin Freeboard †	Feet	2			once/month	measured
Precipitation	Inches	*		*	daily	total
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE MONTH 28, 2022. IT IS A VIOLATION OF THIS PERMIT TO FAIL TO SAMPLE.						

† Storage basin freeboard shall be reported as storage basin water level in feet below the overflow level.

* Monitoring requirement only.

Note: Bypasses are not authorized at this facility and are subject to 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3)(i), and with Standard Condition Part I, Section B, subsection 2. Bypasses are to be reported to the appropriate Regional Office. Any discharge from storage basins shall be reported to the Department as a bypass as soon as possible but always within 24 hours of the facility becoming aware of the discharge, whether or not the permittee believes such discharges reach waters of the state.

PART IV. EMERGENCY BYPASS

1. An emergency discharge from wastewater storage structures may only occur if rainfall exceeds the 10-year 365-day rainfall event (chronic) or the 25-year 24-hour rainfall event (catastrophic) according to National Weather Service data. Design Storm Maps and Tables can be found at http://ag3.agebb.missouri.edu/design_storm/.

2. The facility shall make all reasonable attempts to return the water level in the basin to below the maximum operating level.

3. Monitoring: Any emergency discharge shall be monitored daily for five consecutive days beginning within six (6) hours of discovery. Sampling shall then occur once per week until the discharge ceases. The facility shall submit test results, along with the number of days the storage basin(s) has discharged during the month, to the appropriate Regional Office or via the Electronic Discharge Monitoring Report (eDMR) Submission System by the 28th day of the month after the discharge ceases. Permittee shall monitor for the following constituents:

Table C: Emergency Bypass Monitoring Requirements		
Constituent (Limit Set: EB)	Units	Sample Type
Flow	mgd	Measured
Biochemical Oxygen Demand$_5$	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Total Ammonia Nitrogen	mg/L	Grab
pH	Standard Units	Grab
*E. coli**	#/100 mL	Grab

* Sampling for *E. coli* is only required during the recreational months of April – October and reported as a daily maximum and monthly geometric mean.

PART IV. LAND APPLICATION REQUIREMENTS

1. Land application of wastewater and/or sludge materials listed in the Facility Description and Applicability section of this permit is authorized and shall be conducted according to the following conditions. These land application conditions do not apply to fertilizer products receiving a current exemption under the Missouri Clean Water Law and regulations in 10 CSR 20-6.015(3)(B)8., and which are land applied in accordance with the exemption.

2. Land application (surface) rates shall not exceed any of the following limitations:
   (a) Sludge shall not exceed 10 dry tons per acre per year.
   (b) Wastewater shall not exceed 0.5 inch/hour; 1.0 inch per day; 3.0 inches per week; and 24 inches per calendar year;
   (c) Application rates shall not exceed the following:

TABLE D	**LAND APPLICATION RATE CRITERIA**
Parameter	**Maximum Annual Loading**
Kjeldahl Nitrogen, Total	150 lbs./acre/year
Oil and Grease	1000 lbs./acre/year
pH, Standard Units	6.0 – 9.0 in applied wastes

3. When applying for coverage under this permit, the development and implementation of a Land Application Management Plan (LAMP) is required. The LAMP must be reviewed at least annually but more frequently if site conditions impacting stormwater or the nature and condition of stormwater discharges change. The LAMP must be updated as necessary to reflect the most current and accurate conditions on site. The LAMP must be kept at the facility (either electronically or paper copy) and be made readily available to the Department upon request and within 24 hours, unless explicitly granted more time in writing. The LAMP should not be sent to the Department unless specifically requested. The Department has created a LAMP template to provide guidance on developing and implementing the plan. Land Application Management Plan Template MO 780-2945 can be found at: https://dnr.mo.gov/document-search/land-application-management-plan-template-mo-780-2945.
   (a) New Facilities: The new LAMP must be prepared and implemented before land application occurs.
   (b) Existing Facilities: The existing LAMP must be reviewed, revised as necessary, and implemented upon reissuance of permit coverage. This review can run concurrently with the required annual review.
   (c) Expanding Facilities: The existing LAMP must be reviewed and revised as necessary.

4. Storage Basin Minimum BMPs.
   (a) Per 10 CSR 20 8.200(4)(A), the basin shall have a minimum freeboard of two (2) feet maintained at all times.
   (b) To maintain structural integrity, wastewater storage basins shall be inspected at least monthly; the berms of the storage basin(s) shall be mowed and kept free of any deep-rooted vegetation; and animal dens, other potential sources of damage, and any leaks or issues shall be noted.
   (c) The facility shall ensure adequate provisions are provided to prevent surface water intrusion and run-in into the storage basin(s), to divert stormwater runoff from around the storage basin(s), and protect embankments from erosion.
   (d) The minimum and maximum operating water levels for the storage basin(s) shall be clearly marked.
   (e) Each storage basin shall be operated and maintained to achieve and maintain no discharge status, including maximum water elevations up to the operating level of the 1-in-10 year or 25-year, 24-hour storm events.
   (f) The minimum storage capacity for the basin shall be 75/90/105/120 days per 10 CSR 20-8.200(6)(C)1.A.B.C.D. See fact sheet for additional County information.
   (g) Storage basins shall be lowered to the minimum operating level prior to November 30 each year.
   (h) Storage basins shall have an emergency spillway to protect the structural integrity during operation at near full water levels and in the event of overflow conditions. The spillway must:
      (1) Prevent the overtopping and cutting of berms;
      (2) Be compacted and vegetated or otherwise constructed to prevent erosion; and
      (3) Have the ability for a representative sample to be collected if a discharge occurs.

      It is a violation of this permit to place material in the emergency spillway or otherwise cause it to function improperly, as this may result in a catastrophic failure of the storage basin.

5. Land Application Equipment Minimum Requirements.
   (a) Spray application equipment shall minimize the formation of aerosols.
   (b) Application equipment shall be visually inspected daily during land application to check for equipment malfunctions and leaks. The application system shall be operated so as to provide uniform distribution of wastes and wastewater over the entire land application site.
   (c) Equipment that requires calibration shall be calibrated at least once per calendar year to ensure even distribution of wastes and wastewater. Records of calibrations shall be kept for five years and made available to the Department upon request.

6. Land Application Field(s) Minimum Requirements.
   (a) Land application fields shall be checked daily during land application for runoff.
   (b) 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.
   (c) There shall be no application during a precipitation event or if a precipitation event likely to create runoff is forecasted to occur within 24 hours of a planned application.
   (d) Public Access Restrictions; this permit does not authorize application of wastewater to public use areas.
   (e) Grazing and Harvesting Deferment.
      (1) May 1 to October 31, the minimum grazing or forage harvest deferment shall be fourteen (14) days from application;
      (2) November 1 to April 30, the minimum grazing or forage harvest deferment shall be thirty (30) days from application;
      (3) If deferment period spans two timeframes, the minimum grazing or forage harvest deferment shall be thirty (30) days from most recent application.
      (4) Lactating dairy animal grazing is generally not recommended for application areas unless there has been a much longer deferment period.
   (f) Land application shall occur only during daylight hours unless night time irrigation is necessary and the Water Protection Program has approved a nighttime irrigation plan.
   (g) Sites utilizing spray irrigation shall monitor for the drifting of spray across property lines. Spray drift is not permissible.

7. Sludge may be land applied onto grassland, cropland, timber, or other similar agricultural or silvicultural lands at agronomic rates suitable for beneficial use as an organic fertilizer and soil conditioner as long as there are no public access sites receiving land applied sludge, and any root crops or vegetable crops that receive sludge application are not used for human consumption.

8. Application Rate(s) and Loading.
   (a) This permit does not authorize application of materials in concentrations known to cause, or having the potential to cause, phytotoxicity in plants per 10 CSR 20-6.015(4)1. If plant stress is observed, the facility shall reduce application of wastewaters and/or sludges until appropriate levels are reached to reduce plant stress. If phytotoxicity is observed, the facility shall cease land application activities and evaluate the applied substances to determine the cause of phytotoxicity. Land application may resume only when appropriate levels are determined to prevent phytotoxicity; or will remain ceased if the effluent is determined to cause phytotoxicity regardless of amount applied.
   (b) A LAMP shall be developed to address the Land Application Rate Criteria, Best Management Practices, and other requirements contained in this permit. Any facility requiring more information regarding the contents of the required annual Land Application Management Plan, the Department has placed the Land Application Management Plan Template MO 780-

2945 at https://dnr.mo.gov/document-search/land-application-management-plan-template-mo-780-2945. The permit contains conservative limits in order to reduce monitoring and reporting. If alternate limits are desired, a site-specific permit must be obtained.

(c) Annual application rates shall conform to the above mentioned LAMP but shall not exceed the rates specified under the Land Application Rate Limits in Table D above. The most stringent/conservative loading rates must be used.

(d) Wastes shall be land applied using a system that shall be operated so as to provide uniform distribution of waste materials over the entire application site. Dumping in batches or piles, or spreading of a pile using a blade, disc, or similar equipment, is not permitted.

(e) Land application sites shall be well vegetated during the application periods, or vegetation should be established as soon as practicable after waste incorporation within the normal crop planting and harvesting season.

(f) All land application facility personnel shall be trained regarding the land application procedures as outlined in this permit and documented in the LAMP. Proof of this training, such as a signed statement of material covered, date of training, attendees, etc., shall be made available to the Department if requested.

(g) The application rate shall not exceed any design hydraulic loading rate determined appropriate for the facility.

(h) Wastewater application on slopes exceeding 10% and up to 20%:
   (1) The hourly application rate shall not exceed one-half (1/2) the design sustained permeability;
   (2) In no case shall exceed one-half (1/2) inch per hour.

(i) Applications shall not exceed any agronomic rates determined for the facility to ensure plant use of nutrients and prevent contamination of surface and groundwater. The agronomic rate is the amount of wastewater applied to a field to meet the fertilization needs of the plants.

(j) Runoff and ponding of wastewater is prohibited.

(k) This permit does not authorize land disposal or the application of hazardous waste.

(l) The fertilizer recommendation shall be based on all of the following:
   (1) The nutrient recommendation (nitrogen or phosphorus) for each crop. Recommendations can be found in University of Missouri Extension Guide EQ202 or from publications by other land grant universities in adjoining states;
   (2) Realistic yield goal for each crop. Yield goals should be based on actual crop yield records from multiple years for each field. Good judgment should be used to counteract unusually high or low yields. If a field's yield history is not available the USDA county wide average or other approved source may be used; and
   (3) The most recent soil test.

9. Record Keeping. The following record keeping shall occur, be maintained for at least five years, and be made available to the Department upon request. Records may be maintained electronically per RSMo 432.255.
   (a) Daily land application log showing, at a minimum: date(s) of application, field identified, acres used, volume applied, weather condition (sunny, overcast, air temperature, etc), soil moisture condition, days since last precipitation event, and application method;
   (b) Monthly visual storage structure inspections (if applicable);
   (c) Equipment inspections and calibrations;
   (d) Land application field inspections, including runoff, saturation, and ponding;
   (e) Record of maintenance and repairs;
   (f) Description of any unusual operating conditions encountered, narrative summary of any problems or deficiencies identified, corrective action taken, or improvements planned;
   (g) The number of days the storage structure discharged during the year, the discharge flow, reason the discharge occurred, and effluent analysis performed including analytical result laboratory pages and any clean-up actions taken.
   (h) To ensure the soil does not exceed the cumulative loading rate, all records shall be maintained from the initial application date and for at least five years after application activities have ceased.
   (i) Annual summary for each field used for land application showing: number of days application occurred, crop grown and yield, and total amount of wastewater and/or sludge applied (gallons and/or tons per acre).

PART V. SUBSURFACE ABSORPTION OPERATIONAL REQUIREMENTS – CLASS V WELLS

1. In accordance with 40 CFR 144.26 and 144.83, subsurface systems dispersing industrial/process wastewater to a leach field are required to register as a Class V underground injection well with the Department. For each active, new, or modified Class V Well, submit a Class V Well Inventory Form to the Missouri Department of Natural Resources, Geological Survey Program, P.O. Box 250, Rolla, Missouri 65402. This form can be requested from the Geological Survey Program or can be found at the following website: https://dnr.mo.gov/document-search/class-v-well-inventory-form-mo-780-1774

2. New facilities proposing a Class V well for subsurface dispersal must apply for an operating permit 60 days before beginning construction.
3. For all new facilities, subsurface systems shall be designed and certified by a professional engineer registered in Missouri in accordance with all applicable design regulations [10 CSR 20-8]. The facility must be built in accordance with the professional design engineer's plans and specifications. The facility must be designed to treat the site's domestic wastewater flows and to reduce

such contaminants as Biochemical Oxygen Demand, Total Suspended Solids, and Fats, Oils, and Grease so as to prevent drain field clogging and system malfunctions. The design shall ensure that there will be no ponding or surfacing of wastewater and that all wastewater discharged is further treated by the soil in the soil treatment area. Septic tanks shall be designed to maintain structural integrity after domestic wastewater introduction and the system materials must be compatible with the pollutants of concern.

4. Facilities previously permitted under this permit for subsurface absorption or dispersal may maintain coverage under this permit provided there is no evidence of groundwater impacts, ponding, surfacing of wastewater, or other malfunction of the system. If system failure becomes evident, any new system to be installed shall meet the requirements for new facilities in #3 above.

5. All subsurface dischargers must comply with 40 CFR 144.82, which prohibits the movement of fluids containing any contaminant into underground sources of drinking water during the construction, maintenance, conversion, and plugging or closure of injection wells.

6. Per 40 CFR 144.12(c) and 40 CFR 144.82(a)(2) , if at any time the Department learns that a Class V well may cause a violation of primary drinking water regulations under 40 CFR 142, the permittee shall complete one of the following actions upon instruction of the Department:
   (a) Obtain an individual site specific permit;
   (b) Take such actions as may be necessary to prevent the violation; or
   (c) Comply with conditions imposed by the Department during enforcement action.

7. Subsurface absorption systems are allowed to operate during snow covered conditions as long as soil is not frozen at the depth of absorption. Subsurface systems shall be designed so that freezing potential is eliminated under normal local weather patterns.

8. Records of maintenance for subsurface systems must be maintained for at least 5 years. Examples include filer replacement, pumping (removal) of sludge from tanks, etc. These records shall be made available during inspection, or upon Department request.

9. Subsurface application rates shall be determined through the construction permit process, and shall not exceed the soil permeability and loading rate at the time of application. Subsurface application shall not cause surfacing of wastewater.

10. For subsurface systems, vegetation such as grasses or other non-food crops must be grown over the system.
    (a) The only equipment allowed on the area with the subsurface system is equipment used to maintain the vegetation.
    (b) Barriers may be required to protect the soil treatment area of the subsurface system.
    (c) No livestock shall be allowed to use the area where the subsurface system is installed.

11. Participation in the department's eDMR system is required for Form S reporting, as an attachment when reporting a limit set requirement or if no other limit sets are required, once Form S becomes available for online entry. For facilities that have no other reporting, eDMR is not required until Form S becomes available for online entry.

PART VI. PUMP AND HAUL OPERATIONAL REQUIREMENTS

In accordance with 10 CSR 20-6.015(3)(B)12, "an operating permit is not required for process waste holding structures from which the contents are hauled to a permitted treatment or disposal facility, if the owner has a written contract with the hauler and approval from the receiving facility.

TABLE E	PUMP AND HAUL SYSTEM LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to store domestic wastewater for pump and haul as specified in the application for this permit. The storage and disposal of domestic wastewater shall be controlled, limited and monitored by the permittee as specified below:

Holding Tank Operational Monitoring (Note 1)
Limit Set: PH

EFFLUENT PARAMETER(S)	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MINIMUM		DAILY MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Volume Pumped	gallons			*	daily	total
Freeboard in Tank (Note 2)	feet	*			daily	total

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY VIA THE DEPARTMENT'S EDMR SYSTEM. SHOULD A WAIVER TO EDMR BE GRANTED BY THE DEPARTMENT, PAPER REPORTS SHALL BE SUBMITTED TO THE APPROPRIATE REGIONAL OFFICE. REPORTS ARE DUE DATE 28, 20XX FOR THE PREVIOUS MONTH. IT IS A VIOLATION OF THIS PERMIT TO FAIL TO REPORT AS REQUIRED.

* Monitoring requirement only. Monitor as required in this table and report the resulting value monthly.

Note 1 – If pumping did not occur during the report period, report as zero (0) gallons. By reporting zero gallons, the permittee is certifying that pumping did not occur.

Note 2 – Freeboard is the difference in elevation between the static liquid level and the level where accumulated liquid would discharge from the holding tank.

1. If the facility does not have an earthen storage basin, existing storage tanks possessing an effluent discharge port shall be permanently plugged at the tank within 30 days of the effective date of this permit.

2. At least one facility staff member familiar with the Operation and Maintenance Manual shall be present on site when the facility is being pumped.

3. High-level alarms and associated telemetry equipment on wastewater storage structures shall be installed within 180 days of the effective date of this permit and must be maintained in good working order. High-level alarms shall be positioned in a location to allow adequate time for the operator of the facility to have the accumulated liquid removed before an unpermitted discharge would occur. The alarms and telemetry system shall be manually tested at least once per quarter.

4. Annual Operating Report: Records shall be maintained and summarized into an annual operating report, which shall be submitted by January 28th of each year for the previous calendar year period using report forms provided by or approved by the department. The summarized annual operating report is in addition to the reporting requirements listed in Table D. The summarized annual operating report shall include the following:
   (a) Record of maintenance and repairs performed during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year;
   (b) If illegal discharges from the holding tank/storage basin occurred during the year, provide how many days the discharges occurred, the discharge flows, the reasons discharges occurred; and cleanup activities related to the discharges;
   (c) A summary of the operations including number of times pumped, dates pumped, and total volume pumped;
   (d) Name, business address, and phone number of the contract hauler; and
   (e) Documentation that high-level alarms and telemetry system have been tested.

PART VII. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Standard Conditions Part I, and Standard Conditions Part III dated August 01, 2014 and August 1, 2019, and hereby incorporated as though fully set forth herein. https://dnr.mo.gov/document-search/standard-conditions-npdes-permits-aug-1-2014-part-i

PART VIII. PERMIT REQUIREMENTS

1. Spills, Overflows, and Other Unauthorized Discharges.
   (a) Any spill, overflow, or other discharge(s) not specifically authorized in the permit above are unauthorized discharges.
   (b) Should an unauthorized discharge cause or permit any contaminants to discharge or enter waters of the state, the unauthorized discharge must be reported to the regional office as soon as practicable but no more than 24 hours after the discovery of the discharge. If the spill or overflow needs to be reported after normal business hours or on the weekend, the facility must call the Department's 24 hour spill line at 573-634-2436.
   (c) If the unauthorized discharge was from an overflow from a no-discharge wastewater basin, the report must include all records confirming operation and maintenance records documenting proper maintenance in accordance with condition (d) below.
   (d) The facility shall adhere to the following minimum BMPs for no-discharge wastewater holding structures:
      (1) To prevent unauthorized discharges, the no-discharge wastewater basin must be properly operated and maintained to contain all wastewater plus run-in and direct precipitation.
      During normal weather conditions, the liquid level in the storage structure shall be maintained below the upper operating level, so adequate storage capacity is available for use during adverse weather periods. The liquid level in the storage structure should be lowered on a routine schedule based on the design storage period. Typically this should be accomplished prior to expected seasonal wet and winter climate periods. Maintain liquid level in the no-discharge wastewater structure at least 2.0 feet from the bottom of the discharge pipe, top of the basin, or the bottom of the overflow canal, whichever is lower.
      (2) Monthly inspection of no-discharge wastewater basins shall occur. Inspection notes will be kept at the facility and made available to the Department upon request.
      (3) The inspections will note any issues with the no-discharge structure and will record the level of liquid as indicated by the depth marker.

2. 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 via an electronic system to ensure timely, complete, accurate, and nationally consistent set of data for the NPDES program. The eDMR system is currently the only Department-approved reporting method for this permit unless specified elsewhere in this permit, or a waiver is granted by the Department. The facility must register in the Department's eDMR system through the Missouri Gateway for Environmental Management (MoGEM) before the first report is due.

3. The permittee shall develop, maintain, and implement an Operation and Maintenance (O&M) Manual that includes all necessary items to ensure the operation and integrity of the waste handling and wastewater systems. The O&M manual shall be made available to the operator and to Department personnel on request and shall be reviewed and updated at least every five (5) years or whenever there is a change in equipment or irrigation sites. The Department has published a No-discharge Operation and Maintenance Manual Checklist - PUB2704 available at https://dnr.mo.gov/document-search/no-discharge-operation-maintenance-manual-checklist-pub2704/pub2704.

4. All surface wastewater irrigation and subsurface dispersal locations must be displayed on a map and made available to the Department upon request. Access to the storage basin(s), tank(s), and any associated wastewater irrigation equipment must be sufficiently restricted or secured to prevent entry by children, livestock, and unauthorized persons. Any subsurface dispersion field should have controlled access to prevent damage to the system. Any applicable access hatches and alarm control panels shall remain locked at all times unless undergoing maintenance or pumping activities.

5. All surface wastewater irrigation systems that land apply shall submit *Form I-Permit Application for Operation of Wastewater Irrigation Systems* https://dnr.mo.gov/document-search/form-i-permit-application-operation-wastewater-irrigation-systems-mo-780-1686 with 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.

6. If fenced, at least one gate must be provided to access the wastewater treatment facility and provide for maintenance and mowing. The gate shall remain locked except when opened by the permittee to perform operational monitoring, sampling, maintenance, mowing, or for inspections by the Department.

7. At least one (1) warning sign shall be placed on each side of the facility (does not pertain to irrigation fields) in such positions as

to be clearly visible from all directions of approach. There shall also be one (1) sign placed for every five hundred feet (500') (150 m) of the perimeter fence, if area is fenced. A sign shall also be placed on each gate, if applicable. Minimum wording shall be WASTEWATER TREATMENT FACILITY—KEEP OUT. Signs shall be made of durable materials with characters at least two inches (2") high and shall be securely fastened to the fence, equipment or other suitable locations.

8. An all-weather access road shall be provided and maintained for access to the treatment facility.

9. The permittee will cease operation/pumping and hauling by connection to a facility with an area-wide management plan per 10 CSR 20-6.010 within the timeframe allotted by the continuing authority with its notice of availability unless such facility does not have sufficient capacity, jurisdiction, or is forbidden by statute or ordinance from providing service and has provided a written waiver of preferential status.

10. Wastewater treatment systems owned or operated by a private sewer company regulated by the Public Service Commission shall comply with any applicable requirements listed in 10 CSR 20-9, including the requirement to obtain a certified operator, unless the facility has received written notification that the Department has approved a modification to the requirements. The conditions contained in this permit shall not be construed by the facility as a modification of the requirements listed in 10 CSR 20-9.

11. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (Section 644.055, RSMo). The fee structure can be found at 10 CSR 20-6.011.

12. Compliance with all requirements in this permit does not supersede nor remove liability for compliance with county or other local ordinances.

13. The permittee shall furnish to the Department, upon request and within 24 hours unless explicitly granted more time in writing, copies of records required to be kept according to the terms and conditions of this permit. All records required by this permit may be maintained electronically per 432.255 RSMo. These records should be maintained in a searchable format.

14. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
    (a) The alteration or addition could significantly change the nature or increase the quantity of pollutants in the discharge. This notification applies to pollutants subject to the effluent limitations of this permit as well as new pollutants different from pollutants listed in this permit; or
    (b) The alteration or addition results in a significant change in discharge practices and may justify the application of permit conditions different from or absent in the current permit.

15. 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 RSMo 644.051.16 and the CWA section 402(k); however, this permit may be reopened and modified or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Clean Water Act Sections 301(b)(2)(C) and (D), §304(b)(2), and §307(a) (2) if the effluent standard or limitation so issued or approved contains different conditions or is otherwise more stringent than any effluent limitation in the permit or controls any pollutant not limited in the permit. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, termination, notice of planned changes, or anticipated non-compliance does not stay any permit condition.

PART IX. PERMIT RENEWAL

1. Unless terminated, the permittee shall submit an application for the renewal of this permit by submitting *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* https://dnr.mo.gov/document-search/form-b-application-operating-permit-facilities-receive-primarily-domestic-waste-have-design-flow-less-or-equal-100000-gallons-day-mo-780-1512 no later than thirty (30) days prior to the permit's expiration date.

2. When a facility submits a timely and complete application in accordance with 10 CSR 20-6.010(10)(C)1, and the Department is unable through no fault of the permittee to issue a renewed permit prior to expiration of the previous permit, the terms and conditions of the expired permit are administratively continued and will remain fully effective and enforceable until such time when a permit action is taken. Failure to submit a renewal application is a violation of the Missouri Clean Water Law.

Failure to apply for renewal of a permit may result in termination of this permit and enforcement action to compel compliance with this condition and the Missouri Clean Water Law.

3. As part of the complete application and as required by the federal NPDES eReporting rule, participation in the Department's Electronic Discharge Monitoring Report Submission System (eDMR) will be required. Facilities already participating in eDMR need not re-apply upon renewal. More information can be found at: https://dnr.mo.gov/water/business-industry-other-entities/reporting/electronic-discharge-monitoring-reporting-system-edmr.

PART X. PERMIT TRANSFER

1. This permit may not be transferred to a new owner in any fashion except by submitting an *Application for Transfer of Operating Permit* https://dnr.mo.gov/sites/dnr/files/vfc/2018/10/main/780-1517-f.pdf signed by the seller and the buyer of the facility along with the appropriate modification fee. In some cases, revocation and reissuance may be necessary. Standard Condition Part 1, Subsection D.7 applies.

2. Facilities that undergo transfers of ownership without notice to the Department are considered to be operating without a permit.

PART XI. PERMIT TERMINATION

1. The permittee shall apply for permit termination when activities covered by this permit have ceased and no significant materials as defined by 10 CSR 20-6.200(1)(D)27 remain on the property or if on the property are stored in such a way as to have no potential for pollution. Whenever a release or a potential for release from a permitted facility is permanently eliminated, the existing permit may be terminated.

2. Proper closure of any effluent storage structure is required prior to permit termination. See https://dnr.mo.gov/document-search/wastewater-treatment-plant-closure-pub2568/pub2568 for more information on closure.

3. Permits do not terminate automatically upon expiration. In order to terminate this permit, the permittee shall notify the Department's appropriate regional office by completing and submitting *Request for Termination of Operating Permit* https://dnr.mo.gov/document-search/request-termination-operating-permit-mo-780-2814. The Department may require inspection of the premises prior to granting termination of a permit.

PART XII. 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 MASTER GENERAL PERMIT
MO-G823000

The Federal Water Pollution Control Act [Clean Water Act (CWA)] Section 402 of Public Law 92-500 (as amended) established the National Pollution 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 CWA). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (permit) are issued by the Missouri Department of Natural Resources (Department) under an approved program operated in accordance with federal and state laws (Federal CWA and Missouri Clean Water Law Section 644 as amended). Permits are issued for a period of five (5) years unless otherwise specified.

Per 40 CFR 124.56, 40 CFR 124.8, and 10 CSR 20-6.020(1)(A)2, a Fact Sheet 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 permit. A Fact Sheet is not an enforceable part of an MSOP.

For Class V wells, this permit is issued under the authority of the Safe Drinking Water Act, authorized by the U.S. Environmental Protection Agency (EPA) for State of Missouri administration at 40 CFR 147.1301 which incorporates portions of RSMo 644, 10 CSR 20-6, and 10 CSR 20-7 by reference.

Part I – Facility Information

Facility Type: Wastewater irrigation, subsurface dispersal, storage, and hauling of domestic wastewater
Facility SIC Code(s): SIC 4952- Sewerage Systems, 6515- Residential Mobile Home Parks, 8641- Home Owners Associations and any other SIC code so long as the discharge is limited to the facility type listed in applicability.

No-discharge domestic wastewater treatment facilities under 50,000 gallons per day of design flow. Separate general permits may be made available for discharging facilities. This permit does not apply to:

(a) Municipal wastewater treatment facilities;
(b) Any other facility required by the Department to obtain the services of a certified operator per 10 CSR 20-9.020(2)(A);
(c) Facilities which apply more than 24 inches of wastewater per year; or
(d) Facilities with industrial wastewater contributions.

Domestic wastewater means wastewater originating from the sanitary conveniences of residences, commercial buildings, restaurants, factories, institutions, etc. including food preparation areas. It does not include industrial process wastewater, industrial stormwater, or other non-domestic flows. Wastewater that would normally be considered as domestic wastewater but becomes commingled with industrial process wastewater is considered to be all process wastewater.

CLARIFICATION:
Some publicly owned treatment works (POTWs) may be eligible for coverage under this general permit if they meet the criteria in applicability #2.

CHANGES TO THE RENEWAL OF THIS PERMIT INCLUDE:

- Updated language throughout the permit to current permit language used by the Department.
- Added and updated setback requirements
- Clarified conditions which were ambiguous, etc.
- Added eligibility for specific POTWs to be covered under the permit.

Part II – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:
Per Missouri Effluent Regulations (10 CSR 20-7.015), the waters of the state are divided into seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall's Effluent Limitation Table and further discussed in the Derivation & Discussion of Effluent Limitations section. This permit applies to facilities discharging to the following water body categories:

☐ Missouri or Mississippi River [10 CSR 20-7.015(2)]
☐ Lakes or Reservoirs [10 CSR 20-7.015(3)]
☐ Losing Streams [10 CSR 20-7.015(4)]
☐ Metropolitan No-Discharge Streams [10 CSR 20-7.015(5)]
☐ Special Streams [10 CSR 20-7.015(6)]
☐ Subsurface Waters [10 CSR 20-7.015(7)]
☐ All Other Waters [10 CSR 20-7.015(8)]
☒ No Discharge Permit- may be issued statewide in all receiving stream settings [10 CSR 20-6.015]

Missouri Water Quality Standards (10 CSR 20-7.031) defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1st classified receiving stream's designated water uses shall be maintained in accordance with 10 CSR 20-7.031(4). A general permit does not take into consideration site-specific conditions.

MIXING CONSIDERATIONS:
This permit applies to receiving streams of varying low-flow conditions. Therefore, the effluent limitations must be based on the smallest low-flow streams considered, which includes waters without designated uses. As such, no mixing is allowed [10 CSR 20-7.031(5)(A)4.B.(I)(a)]. No Zone of Initial Dilution is allowed. [10 CSR 20-7.031(5)(A)4.B.(I)(b)].

RECEIVING STREAM MONITORING REQUIREMENTS:
There are no receiving water monitoring requirements recommended at this time.

Part III – Rationale and Derivation of Effluent Limitations & Permit Conditions

305(B) REPORT, 303(d) LIST, & TOTAL MAXIMUM DAILY LOAD (TMDL):
Section 305(b) of the Federal CWA requires each state identify waters 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, 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 which are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed which shall include the TMDL calculation. For facilities with an existing general permit before a TMDL is written on their receiving stream, the Department will evaluate the permit and may require any facility authorized by this general permit to apply for and obtain a site-specific operating permit. Requests for coverage of a new facility under this general permit will be evaluated on a case-by-case basis for facilities located within the watershed of an impaired water as designated on the 305(b) Report.

ANTI-BACKSLIDING:
A provision in the Federal Regulations [CWA Section 303(d)(4); CWA Section 402(c); 40 CFR Part 122.44(I)] requires a reissued permit to be as stringent as the previous permit with some exceptions.

- ✓ Applicable: Limitations in this operating permit for the reissuance conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.
  - ✓ The Department determined technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).
    - The previous permit special conditions contained a specific set of prohibitions related to general criteria (GC) found in 10 CSR 20-7.031(4); however, there was no determination as to whether the discharges have reasonable potential to cause or contribute to excursion of those general water quality criteria in the previous permit. This permit assesses each general criteria as listed in the previous permit's special conditions. Federal regulations 40 CFR 122.44(d)(1)(iii) requires instances where reasonable potential (RP) to cause or contribute to an exceedance of a water quality standard exists, a numeric limitation must be included in the permit. Rather than conducting the appropriate RP determination, the previous permit simply placed the prohibitions in the permit. These conditions were removed from the permit. Appropriate RP determinations were conducted for each general criterion listed in 10 CSR 20-7.031(4)(A) through (I) and effluent limitations were placed in the permit for those general criteria where it was determined the discharge had RP to cause or contribute to excursions of the general criteria. Specific effluent limitations were not included for those general criteria where it was determined the discharges will not cause or contribute to excursions of general criteria.

- Removal of the prohibitions does not reduce the protections of the permit or allow for impairment of the receiving stream. The permit maintains sufficient effluent limitations, monitoring requirements, and best management practices to protect water quality while maintaining permit conditions applicable to permittee disclosures and in accordance with 10 CSR 20-7.031(4) where no water contaminant by itself or in combination with other substances shall prevent the water of the state from meeting the following conditions:
  (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.
    - ✓ For all outfalls, there is no RP for putrescent bottom deposits preventing full maintenance of beneficial uses because nothing in the research done by the permit writer on the industry indicates putrescent wastewater would be discharged from the facility in stormwater.
  (B) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses.
    - ✓ For all outfalls, there is no RP for oil in sufficient amounts to be unsightly preventing full maintenance of beneficial uses because nothing in the research done by the permit writer on the industry indicates oil will be present in sufficient amounts to impair beneficial uses.
    - ✓ For all outfalls, there is no RP for scum and floating debris in sufficient amounts to be unsightly preventing full maintenance of beneficial uses because nothing in the research the permit writer did on the industry indicates scum and floating debris will be present in sufficient amounts to impair beneficial uses.
  (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.
    - ✓ For all outfalls, there is no RP for unsightly color or turbidity in sufficient amounts preventing full maintenance of beneficial uses because nothing in the research done by the permit writer indicates unsightly color or turbidity will be present in sufficient amounts to impair beneficial uses if the facility implements and enforces the SWPPP required by this permit.
    - ✓ For all outfalls, there is no RP for offensive odor in sufficient amounts preventing full maintenance of beneficial uses because nothing discovered in the research of the permit writer indicates offensive odor will be present in sufficient amounts to impair beneficial uses. Odor is not expected in stormwater discharges from this industry.
  (D) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life.
    - ✓ The permit writer considered specific toxic pollutants when writing this permit. Numeric effluent limitations are included for those pollutants could be discharged in toxic amounts. These effluent limitations are protective of human health, animals, and aquatic life.
  (E) Waters shall maintain a level of water quality at their confluences to downstream waters that provides for the attainment and maintenance of the water quality standards of those downstream waters, including waters of another state.
    - This criterion was not assessed for antibacksliding as this is a new requirement, approved by the EPA on July 30, 2019.
  (F) There shall be no significant human health hazard from incidental contact with the water.
    - ✓ There is no RP for effluent/stormwater from this industry to cause a significant health hazard from incidental contact with the water.
  (G) There shall be no acute toxicity to livestock or wildlife watering.
    - ✓ The permit writer considered specific toxic pollutants when writing this permit. Numeric effluent limitations are included for those pollutants could be discharged in toxic amounts. These effluent limitations are protective of livestock and wildlife watering.
  (H) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community.
    - ✓ For all outfalls, there is no RP for physical changes impairing the natural biological community because nothing found in research by the permit writer on the industry indicates discharges would cause physical changes to the receiving stream.
    - ✓ It has been established any chemical changes are covered by the specific numeric effluent limitations established in the permit.
    - ✓ For all outfalls, there is no RP for hydrologic changes impairing the natural biological community because nothing found in research by the permit writer on the industry indicates discharges would cause hydrological changes.
  (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.
    - ✓ There are no solid waste disposal activities or any operation found in this industry which has reasonable potential to cause or contribute to the materials listed above being discharged through any outfall.

ANTIDEGRADATION:

✓ Not Applicable; Antidegradation reviews are performed at the time of construction. No degradation is proposed, and no further review is necessary.

BENCHMARKS:
✓ Not Applicable; this permit is not for stormwater, and benchmarks are not applied to wastewater discharges.

BEST MANAGEMENT PRACTICES:
Minimum site-wide best management practices (BMPs) are established in this permit to ensure all permittees are managing their sites equally to protect waters of the state from certain activities which could cause negative effects in receiving water bodies. While not all sites require a SWPPP because the SIC codes are specifically exempted in 40 CFR 122.26(b)(14), these BMPs are not specifically included for stormwater purposes. These practices are minimum requirements for all sites to protect waters of the state. If the minimum BMPs are not followed, the facility may violate general criteria [10 CSR 20-7.031(4)]. Statutes are applicable to all permitted facilities in the state; therefore, pollutants cannot be released unless in accordance with RSMo 644.011 and 644.016 (17).

CHANGES IN DISCHARGES OF TOXIC POLLUTANT:
This special condition reiterates the federal rules found in 40 CFR 122.44(f) and 122.42(a)(1). In these rules, the facility is required to report changes in amounts of toxic substances discharged. Toxic substances are defined in 40 CFR 122.2 as "…any pollutant listed as toxic under section 307(a)(1) or, in the case of "sludge use or disposal practices," any pollutant identified in regulations implementing section 405(d) of the CWA." Section 307 of the CWA then refers to those parameters found in 40 CFR 401.15. The permittee should also consider any other toxic pollutant in the discharge as reportable under this condition.

DOMESTIC WASTEWATER, SLUDGE, AND BIOSOLIDS:
Domestic wastewater is defined as wastewater (i.e., human sewage) originating primarily from the sanitary conveyances of bathrooms and kitchens. Domestic wastewater excludes stormwater, animal waste, process waste, and other similar waste.
✓ Applicable; this permit authorizes the discharge/land application of wastewater, sludge, and/or biosolids.

Sewage sludge is solid, semi-solid, 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 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. Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for productive use (i.e. fertilizer) and after having pathogens removed.
✓ Applicable; this permit authorizes surficial land application of biosolids in accordance with Standard Conditions III.

EFFLUENT LIMITATION GUIDELINE:
Effluent Limitation Guidelines, or ELGs, are found at 40 CFR 400-499. These are limitations established by the EPA based on the SIC code and the type of work a facility is conducting. Most ELGs are for process wastewater and some address stormwater. All are technology based limitations which must be met by the applicable facility at all times.
✓ The industries covered under this permit have an associated ELG (40 CFR 403) but are not authorized to discharge wastewater to waters of the state; stormwater discharges are not addressed by the ELG.

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. The 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.

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. A request must be made for each facility. If more than one facility is owned or operated by a single entity, then the entity must submit a separate request for each facility based on its specific circumstances. An approved waiver is not 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.

To assist the facility in entering data into the eDMR system, the permit describes limit sets in each table in Part A of the permit. The data entry personnel should use these identifiers to ensure data entry is being completed appropriately.

GENERAL CRITERIA CONSIDERATIONS:
In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into permits for pollutants determined to cause, have reasonable potential to cause, or to contribute to, an excursion above any water quality standard, including narrative water quality criteria. In order to comply with this regulation, the permit writer has completed a reasonable potential determination on whether discharges have reasonable potential to cause, or contribute to an excursion of the general criteria listed in 10 CSR 20-7.031(4). In instances where reasonable potential exists, the permit includes limitations within the permit to address the reasonable potential. In discharges where reasonable potential does not exist, the permit may include monitoring to later determine the discharge's potential to impact the narrative criteria. Additionally, RSMo 644.076.1, as well as Section D – Administrative Requirements of Standard Conditions Part I of this permit state it shall be unlawful for any person to cause or allow 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.

LAND APPLICATION:
Land application, or surficial dispersion of wastewater and/or sludge, is performed by facilities to maintain a basin as no-discharge. Requirements for these types of operations are found in 10 CSR 20-6.015; authority to regulate these activities is from RSMo 644.026.

- ✓ Applicable, the facility shall comply with all applicable land application requirements listed in this permit. These requirements incorporated into this permit pursuant to 10 CSR 20-6.015(4) ensure appropriate minimum operational controls of the no-discharge land application systems. When operated correctly these permit conditions will prevent unauthorized and illicit discharges to waters of the state and will protect soils, vegetation, surface water, groundwater, and public health. These requirements also ensure application activities fall within a productive use demonstration (agricultural use), prevent plant phytotoxicity, and prevent and protect soils loading of specified pollutants. The minimum requirements established in the permit are to meet, not only DNRs requirements, but to also ensure the exemptions for agricultural stormwater runoff in 10 CSR 20-6.200(1)(B)5 or 10 CSR 20-6.300(2)(D)2 continue to be met. When the facility follows all permit requirements, discharge monitoring requirements found at 10 CSR 20-6.200(2)(B)3.B. will be excused.
  - This permit authorizes applying stormwater using a spray from a water truck or spray with a hose.
  - Following is a list of helpful publications; while generally geared to biosolids and domestic sludge, these documents can show operators and permittees specific BMPs which may be important to their own operations.
    - Land Applications Considerations for Animal Manure (contains nutrient requirements for plant growth) https://extension2.missouri.edu/eq202
    - State and EPA Regulations for Domestic Wastewater Sludge and Biosolids https://extension2.missouri.edu/eq421
    - Land Application of Septage https://extension2.missouri.edu/eq422
    - Monitoring Requirements for Biosolids Land Application https://extension2.missouri.edu/wq423
    - Biosolids Standards for Pathogens and Vectors https://extension2.missouri.edu/wq424
    - Biosolids Standards for Metals and Other Trace Substances https://extension2.missouri.edu/wq425
    - Best Management Practices for Biosolids Land Application https://extension2.missouri.edu/wq426
    - Benefits and Risks of Biosolids https://extension2.missouri.edu/wq427
    - Activity and Movement of Plant Nutrients and Other Trace Substances https://extension2.missouri.edu/wq428
    - Interpretation of Laboratory Analysis of Biosolids Samples https://extension2.missouri.edu/wq429
    - Crop/Nutrient Considerations of Biosolids https://extension2.missouri.edu/eq430
    - Collection and Storage of Biosolids https://extension2.missouri.edu/eq431
    - Equipment for Off-Site Application of Biosolids https://extension2.missouri.edu/wq432
    - Equipment for On-Site Land Application of Biosolids https://extension2.missouri.edu/wq433
    - Operating Considerations for Biosolids Equipment https://extension2.missouri.edu/wq434
    - Biosolids Glossary of Terms https://extension2.missouri.edu/eq449

- ✓ The size of storage basins shall be based on the design wastewater flows and net rainfall minus evaporation expected for a one (1) in ten (10) year twenty-four (24) hour return frequency for the storage period selected and shall meet the minimum storage days listed below.

- Seventy-five (75) days for facilities located in Scott, Stoddard, Butler, Dunklin, New Madrid, Pemiscot, Mississippi, McDonald, Newton, Jasper, Lawrence, Barry, Stone, Taney, Christian, Greene, Webster, Douglas, Ozark, Howell, Texas, Dent, Shannon, Oregon, Ripley, Carter, Reynolds, Iron, Madison, Wayne, Cape Girardeau, Barton, Dade, Perry, and Bollinger counties.
- Ninety (90) days for facilities located in Vernon, Bates, Henry, St. Clair, Cedar, Dallas, Polk, Hickory, Benton, Cooper, Morgan, Moniteau, Miller, Cole, Camden, Laclede, Pulaski, Phelps, Maries, Osage, Gasconade, Franklin, Jefferson, St. Louis, Ste. Genevieve, St. Francois, St. Charles, and Crawford counties.
- One hundred five (105) days for facilities located in Cass, Johnson, Pettis, Platte, Jackson, Clay, Ray, Lafayette, Carroll, Saline, Chariton, Randolph, Howard, Boone, Callaway, Audrain, Monroe, Ralls, Pike, Lincoln, Warren, and Montgomery counties.
- One hundred twenty (120) days for facilities located in Atchison, Holt, Andrew, Nodaway, Worth, Gentry, DeKalb, Harrison, Daviess, Grundy, Mercer, Putnam, Sullivan, Linn, Macon, Adair, Schuyler, Scotland, Clark, Knox, Lewis, Shelby, Buchanan, Clinton, Caldwell, Livingston, and Marion counties
- Seasonal facilities. For facilities that operate and generate flows only from April through October season, a minimum storage capacity of forty-five (45) days shall be provided. For facilities that operate or generate flows only from November through March, the minimum storage listed in subsection (A)–(D) above is required.

✓ The facility must follow the applicable application loading rates indicated in the permit's facility description and/or special conditions. Following are an explanation of the conditions in this permit.
- **Hydraulic Loading Rates** – wastewater needs to be land applied at rates to allow for proper soil absorption and plant uptake. In accordance with 10 CSR 20-8.200(6)(B), the hydraulic loading rate shall not exceed the soil permeability rate, resulting in a discharge of wastewater from the land application field.
- **Nitrogen Loading Rates** – wastewater application rates should not exceed a nitrogen application rate of 150 pounds total nitrogen per acre per year, and the applied wastewater should not exceed 10 mg/L of nitrate nitrogen as N at any time.
- Fertilizer recommendations can also be obtained by using one of the following tools:
  - The University of Missouri Extension online fertilizer recommendation calculator at http://soilplantlab.missouri.edu/soil/scripts/manualentry.aspx
  - University of Missouri Nutrient Management Home Page: http://nmplanner.missouri.edu/
  - United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Nutrient Management technical resources https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/ecoscience/mnm/?cid=stelprdb1044741
- **Trace Element Loading Rate** – specific parameters have maximum soil loading rates; limitations are established in this permit to protect sudden phytotoxicity for the short term, future soil use and plant fertility and fecundity over the long term. These requirements are authorized under 10 CSR 20-6.015(4)(A)1. Information used to develop parameter-specific conditions were based on *Design of Land Treatment Systems for Industrial Wastes – Theory and Practice*; by Pal and Overcash; 1981; and 40 CFR 503 Subpart B. See additional citations below for specific parameters.
  - Boron is a known toxicant to plant life; per the Land Treatment book (Pal and Overcash; p. 377-379), the permit writer has determined using 2 mg/L appropriate to the vegetation at this facility. A cap of 2 mg/L is established at this time to ensure acute plant toxicity is prevented. The Land Treatment book indicates commonly used application rates for crops are between 0.25 and 3 kg/ha/yr. However, it doesn't reference slight crop injury (corn and another unspecified crop) until 5-20 kg/ha. Therefore the annual loading applied to this facility is 5 kg/ha or 4.5 lbs/ac. This will be reevaluated at the next renewal.
  - Chloride is limited at 125 mg/L to prevent sudden phytotoxicity. (Pal and Overcash; p. 379)
  - Cobalt is limited at 1 ppm to prevent heavy metal toxicity. (Pal and Overcash; p. 406)
  - Copper dosing was limited to 10 mg/L per application event to prevent abrupt plant phytotoxicity. (Pal and Overcash; p. 418)
  - Lead, considered a heavy metal which will show injurious effects at levels above 1 mg/L (Pal and Overcash; p. 406)
  - Selenium (Pal and Overcash; P. 384) Selenium does not degrade in soil, water, or sunlight. Selenium can be a plant toxicant and in the form of selenate (SeO_4^{2-}) can be taken up by plants, and bioaccumulate. See also: Kristen R. Hladun, David R. Parker, Khoa D. Tran, and John T. Trumble. *Effects of selenium accumulation on phytotoxicity, herbivory, and pollination ecology in radish (Raphanus sativus L.).* Environmental Pollution 172 (2013) 70-75.

✓ Soils testing. The permit's special conditions stipulate soil testing for this facility. Soil testing is performed to ensure soil accumulation rates of the specified parameters are below established soil loading rates.

✓ Sludge testing. 40 CFR 503.16 indicates sludge testing frequency should be based on the amount of sludge applied annually. The Program has determined these frequencies to be a suitable guideline to other sludges or high-strength wastewater as well. Sludge and/or wastewater sampling frequency for this permit was based on the following:

Amount of sewage sludge (metric tons)	US Tons	Liquid Gallons	Frequency
Greater than zero but < 290	+0 to 319.6	+0 to 76,609.9	once per year
≥ 290 but < 1,500	319.7 to 1653.4	76,610.0 to 396,258.1	once per quarter
≥ 1,500 but < 15,000	1653.5 to 16534.6	396,258.2 to 3,962,580.7	six times per year
≥ 15,000	≥ 16534.7	≥ 3,962,580.7	once per month

- ✓ Definitions used in the land application section of the permit can be found at RSMo 644.016, 10 CSR 20-2, and 40 CFR 503.11.
- ✓ This permit does not authorize land disposal or the application of hazardous waste.

LAND DISTURBANCE:

- ✓ Not applicable; this permit does not provide coverage for land disturbance activities. The facility may obtain a separate land disturbance permit (MORA) online at https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/stormwater/construction-land-disturbance. MORA permits do not cover disturbance of contaminated soils; however, site specific permits can be modified to include appropriate controls for land disturbance of contaminated soils by adding site-specific BMP requirements and additional outfalls.

MAJOR WATER USER:

Any surface or groundwater user with a water source and the equipment necessary to withdraw or divert 100,000 gallons (or 70 gallons per minute) or more per day combined from all sources from any stream, river, lake, well, spring, or other water source is considered a major water user in Missouri. All major water users are required by law to register water use annually (Missouri Revised Statutes Chapter 256.400 Geology, Water Resources and Geodetic Survey Section). https://dnr.mo.gov/document-search/frequently-asked-major-water-user-questions-pub2236/pub2236

- ✓ Applicable; Facilities meeting this definition must register with the Water Resources Center as soon as possible. https://apps5.mo.gov/MWU/

NUTRIENT MONITORING:

Nutrient monitoring is required for facilities characteristically or expected to discharge nutrients (nitrogenous compounds and/or phosphorus) when the design flow is equal to or greater than 0.1 MGD per 10 CSR 20-7.015(9)(D)8.

- ✓ Applicable; general permits must include the most protective requirements. As the flow of the facilities covered under this permit may vary, this permit requires sampling monthly for the nutrients required under 10 CSR 20-7.015(9)(D).

OIL/WATER SEPARATORS:

- ✓ Not applicable; this permit does not authorize the operation of OWS for the treatment of stormwater without the requirement to obtain a separate permit.

OPERATOR CERTIFICATION REQUIREMENTS:

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

- ✓ Applicable; certain facilities covered under this permit are required to have a certified operator.

PERMIT SHIELD:

The permit shield provision of the Clean Water Act (Section 402(k)) and Missouri Clean Water Law (644.051.16 RSMo) provides that when a permit holder is in compliance with its NPDES permit or MSOP, they are effectively in compliance with certain sections of the Clean Water Act, and equivalent sections of the Missouri Clean Water Law. In general, the permit shield is a legal defense against certain enforcement actions, but is only available when the facility is in compliance with its permit and satisfies other specific conditions, including having completely disclosed all discharges and all facility processes and activities to the Department at time of application. It is the facility's responsibility to ensure that all potential pollutants, waste streams, discharges, and activities, as well as wastewater land application, storage, and treatment areas, are all fully disclosed to the Department at the time of application or during the draft permit review process. Subsequent requests for authorization to discharge additional pollutants or expanded or newly disclosed flows, or for authorization for previously unpermitted and undisclosed activities or discharges, will likely require permit modification, or may require the facility be covered under a site specific permit.

PRETREATMENT PROGRAM:
This permit does not regulate pretreatment requirements for facilities discharging to an accepting permitted wastewater treatment facility. If applicable, the receiving entity (the publicly owned treatment works - POTW) must ensure compliance with any effluent limitation guidelines for pretreatment listed in 40 CFR Subchapter N per 10 CSR 20-6.100. Pretreatment regulations per RSMo 644.016 are limitations on the introduction of pollutants or water contaminants into publicly owned treatment works or facilities.

- ✓ Applicable; this industry is subject to the pretreatment guidelines found at 40 CFR 403

PUBLIC NOTICE OF COVERAGE FOR AN INDIVIDUAL FACILITY:

- ✓ Not applicable; public notice is not required for issuance of coverage under this permit to individual facilities for the first time.

REASONABLE POTENTIAL ANALYSIS (RPA):
Federal regulation 40 CFR Part 122.44(d)(1)(i) requires effluent limitations for all pollutants which are or may be discharged at a level which 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)(iii) if the permit writer determines any given pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the water quality standard, the permit must contain effluent limits for the pollutant.

- ✓ Conservative assumption; a traditional statistical Reasonable Potential Analysis has not been conducted for this master general permit; instead the Department has made a reasonable potential determination based on sources of pollutants related to water quality standards. Activities performed by facilities covered under this master general permit were evaluated as to whether discharges have reasonable potential to cause or contribute to excursions of general criteria listed in 10 CSR 20-7.031(4).
- ✓ The permit writer reviewed industry materials, available DMR data, available past inspections, and other documents and research to evaluate general and narrative water quality reasonable potential for this permit. Permit writers also use the Department's permit writer's manual (https://dnr.mo.gov/water/business-industry-other-entities/technical-assistance-guidance/wastewater-permit-writers-manual), the EPA's permit writer's manual (https://www.epa.gov/npdes/npdes-permit-writers-manual), program policies, and best professional judgment. For each parameter in each permit, the permit writer carefully considers all applicable information regarding technology based effluent limitations, effluent limitation guidelines, and water quality standards. Best professional judgment is based on the experience of the permit writer, cohorts in the Department and resources at the EPA, research, and maintaining continuity of permits if necessary.

SCHEDULE OF COMPLIANCE (SOC):

- ✓ Not Applicable: This permit does not contain a SOC.

SETBACKS:
Setbacks are common elements of permits and are established to provide a margin of safety in order to protect the receiving water from accidents, spills, unusual events, etc.

- ✓ No discharge to the watersheds of a Metropolitan No-Discharge Stream (10 CSR 20-7.031 Table F) are authorized by this permit. Discharges to these watersheds are authorized for uncontaminated stormwater discharges only. Certain non-stormwater discharges are authorized under this permit; many are not allowed to discharge to these watersheds; see Applicability #24 and #25 in the permit for more information.
- ✓ This permit does not authorize discharges which are located in a way to allow water to be released into sinkholes, caves, fissures, or other openings in the ground which could drain into aquifers (except losing streams) per 10 CSR 20-7.015(7). The previous permit did not authorize discharges to losing streams; however, this was reassessed by the permit writer and found to have no support in regulation for stormwater discharges. It is the best professional judgment of the permit writer to allow discharges to losing streams as the effluent is stormwater only. This permit continues to prohibit the discharge of effluent to sinkholes or other ground openings which empty directly to groundwater. The issuing authority will assess whether a discharge from a facility is eligible for this permit based on the distance from a sinkhole and the likelihood of effluent having reasonable potential to enter and affect groundwater.
- ✓ This permit authorizes stormwater discharge in Outstanding State Resource Waters (OSRW) so long as no degradation of water quality occurs in the OSRW due to discharges from the permitted facility per 10 CSR 20-7.015(6)(B) and 10 CSR 20-7.031(3)(C). The previous permit did not authorize these discharges; however, the permit writer has determined these discharges are acceptable as long as they do not cause degradation to the receiving stream. The Antidegradation Analysis performed by the facility for the SWPPP should include the determination of no degradation. Additionally, if the facility is found to be causing degradation during an inspection or through complaint investigations, they will be required to become a no discharge facility or obtain a site specific permit with more stringent monitoring and SWPPP requirements.
- ✓ For facilities operating within the watershed of Outstanding National Resource Water, which includes the Ozark National Riverways and the National Wild and Scenic Rivers System, no discharge facilities are authorized. This includes no discharge of stormwater. The previous permit included a clause where the Department may authorize the facility to release stormwater under this permit in these watersheds; however, the permit writer has determined no discharge was protective of the sensitive nature of these receiving streams.
  Facilities already discharging to these watersheds under this permit may receive interim authorization from the Department to continue these discharges until a non-discharging solution is determined and implemented.

- ✓ Facilities located within the watershed of an impaired water as designated in the 305(b) Report must be evaluated on a case-by-case basis for inclusion under this permit. Facilities found to be discharging the listed pollutant(s) of concern for any impaired water may be required to obtain a site-specific permit. Missouri's impaired waters can be found at https://dnr.mo.gov/water/what-were-doing/water-planning/quality-standards-impaired-waters-total-maximum-daily-loads/impaired-waters . The Department will assess the pollutants of concern for impaired waters on the 305(b) report and evaluate the reasonable potential for the facility to cause further impairment to the receiving stream. If the facility is not expected to cause further impairment to the receiving stream, this general permit may be issued to the facility.

SLUDGE – INDUSTRIAL:

- ✓ Not applicable; this permit does not authorize land application of industrial sludge. Sludge must be removed by contract hauler, incinerated, stored in the lagoon, etc.

SPILL REPORTING:

Any emergency involving a hazardous substance must be reported to the Department's 24 hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. The Department may require the submittal of a written report detailing measures taken to clean up a spill. These reporting requirements apply when the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the noncompliance reporting requirement found in Standard Conditions Part I. https://revisor.mo.gov/main/OneSection.aspx?section=260.500&bid=13989&hl=

Underground and above ground storage devices for petroleum products, vegetable oils, and animal fats may be subject to control under SPCC and are expected to be managed under those provisions, if applicable. Substances regulated by federal law under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) which are transported, stored, or used for maintenance, cleaning or repair shall be managed according to the provisions of RCRA and CERCLA.

STANDARD CONDITIONS:

The standard conditions Part I attached to this permit incorporate all sections of 40 CFR 122.41(a) through (n) by reference as required by law. These conditions, in addition to the conditions enumerated within the standard conditions should be reviewed by the permittee to ascertain compliance with this permit, state regulations, state statutes, federal regulations, and the Clean Water Act. Standard Conditions Part III, if attached to this permit, incorporate requirements dealing with domestic wastewater, sludge, and land application.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

- ✓ Not Applicable: At this time, the facility is not required to develop and implement a SWPPP.

UNDERGROUND INJECTION CONTROL (UIC):

The UIC program for all classes of wells in the state of Missouri is administered by the Missouri Department of Natural Resources and approved by EPA pursuant to section 1422 and 1425 of the Safe Drinking Water Act (SDWA) and 40 CFR 147 Subpart AA. Injection wells are classified based on the liquids which are being injected. Class I wells are hazardous waste wells which are banned by RSMo 577.155; Class II wells are established for oil and natural gas production; Class III wells are used to inject fluids to extract minerals; Class IV wells are also banned by Missouri in RSMo 577.155; Class V wells are shallow injection wells; some examples are heat pump wells and groundwater remediation wells. Domestic wastewater being disposed of sub-surface is also considered a Class V well. In accordance with 40 CFR 144.82, construction, operation, maintenance, conversion, plugging, or closure of injection wells shall not cause movement of fluids containing any contaminant into Underground Sources of Drinking Water (USDW) if the presence of any contaminant may cause a violation of drinking water standards or groundwater standards under 10 CSR 20-7.031, or other health based standards, or may otherwise adversely affect human health. If the Department finds the injection activity may endanger USDWs, the Department may require closure of the injection wells or other actions listed in 40 CFR 144.12(c), (d), or (e). In accordance with 40 CFR 144.26, the permittee shall submit a Class V Well Inventory Form for each active or new underground injection well drilled, or when the status of a well changes, to the Missouri Department of Natural Resources, Geological Survey Program, P.O. Box 250, Rolla, Missouri 65402. The Class V Well Inventory Form can be requested from the Geological Survey Program or can be found at the following web address: https://dnr.mo.gov/document-search/class-v-well-inventory-form-mo-780-1774. Single family residential septic systems and non-residential septic systems used solely for sanitary waste and having the capacity to serve fewer than 20 persons a day are excluded from the UIC requirements (40 CFR 144.81(9)).

- ✓ Applicable; this permit authorizes sub-surface domestic wastewater systems. Industrial waste is not authorized for subsurface injection. The domestic systems must be designed and approved by a registered engineer in the state of Missouri, are subject to the requirements detailed above, and must be registered with the Geological Survey Program.

VARIANCE:

- ✓ Not Applicable: This permit is not drafted under premises of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITATIONS:

✓ Not Applicable; mixing is not authorized by this general permit.

WATER QUALITY STANDARDS:

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

WHOLE EFFLUENT TOXICITY (WET) TEST:

✓ Not Applicable: At this time, permittees are not required to conduct a WET test. This permit is for land application or subsurface dispersal.

Part IV– Sampling and Reporting Requirements

SAMPLING FREQUENCY:

Sampling frequency is established in accordance with Department policy. In the case of an accidental discharge, daily monitoring is required unless discharge ceases for parameters listed in Earthen Basin Storage Requirements under the heading "Emergency Bypass." If no emergency discharges occur during a sampling period, report as "no discharge" for discharge parameters listed or "Conditional Monitoring not required this monitoring period" if no land application occurs.

SAMPLING TYPE JUSTIFICATION:

Sampling type was continued from the previous permit. The sampling types are representative of the discharges and are protective of water quality. Discharges with altering effluent should have composite sampling; discharges with uniform effluent can have grab samples. Grab samples are usually appropriate for stormwater. Parameters which must have grab sampling are: pH, ammonia, *E. coli*, total residual chlorine, free available chlorine, hexavalent chromium, dissolved oxygen, total phosphorus, volatile organic compounds, and others.

SUFFICIENTLY SENSITIVE ANALYTICAL METHODS:

Please review Standard Conditions Part 1, section A, number 4. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 and/or 40 CFR 136 unless alternates are approved by the Department and incorporated within this permit. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations 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 quantifies the pollutant below the level of the applicable water quality criterion 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 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 and or 40 CFR 136. These methods are also required for parameters listed as monitoring only, as the data collected may be used to determine if numeric limitations need to be established. A permittee is responsible for working with their contractors to ensure the analysis performed is sufficiently sensitive.

Part V – Land Application & Subsurface Rate Criteria

This permit does not authorize discharges. This permit authorizes land application and subsurface injection of certain wastewaters and sludges for beneficial reuse as soil conditioners or fertilizers. Limits on quantity and quality of land applied materials have been established to protect soil health and productivity, as well as prevent water pollution from stormwater runoff. If land application causes damage to crop yields or decreases in year-to-year plant productivity, it can no longer be classified as a beneficial reuse and would instead be a disposal practice. A permit from the Solid Waste Management Program may be required.

- **Oil & Grease** - Conservative application rate limit of 1000 lbs/acre/year. Excessive application of oil and grease has the potential to kill or prevent the growth of vegetation, as well as become a source of pollutants in stormwater. Oil & grease from restaurants can also contain other potential pollutants of concern, such as chlorides and nitrogen. This conservative limit ensures that beneficial use of the land is maintained. Facilities applying oily wastewater to the surface must ensure the oily water is not entrained in stormwater and must not runoff the field. If a discharge of oily sheen is observed, the permittee is in violation of the general criteria pursuant to 10 CSR 20-7.031(4).
  Facilities may opt to pretreat any oily wastewater prior to application with adsorbent pads or booms and remove the sheen.
- **Kjeldahl Nitrogen** - Conservative application rate limit of 150 lbs/acre/year established for protection of groundwater. Missouri's Water Quality standards limit Nitrate to 10 mg/L in groundwater to protect for the drinking water use. Higher application rates for individual facilities can be approved in a site specific permit as part of a Plant Available Nitrogen calculation.
- **pH** - Limited to the range of 6.0-9.0 to protect soil health and condition, plant growth and reproduction, as well as groundwater

and surface water. Causing soil to move outside this pH range not only has the potential to damage crop production, it will also cause naturally occurring elements in the soil to become soluble or mobile, thereby creating the potential to pollute stormwater runoff and groundwater. Under this permit, acidic or caustic materials that fall outside this pH range must have their pH adjusted before land application.

Part VI – Administrative Requirements

On the basis of preliminary staff review and 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 permit. The proposed determinations are tentative pending public comment.

PUBLIC MEETING:
A public meeting is required for general permits with more than 50 General Permit Covered Facilities (GPCFs). MOG823000 covers 142 GPCFs. A public meeting was held on 3/14/2022.

PUBLIC NOTICE:
The Department shall give public notice when 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 or because of 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 facility must be notified of the denial in writing.

The Department must give public notice of a pending permit or of a new or reissued Missouri State Operating Permit. The public comment period is a length of time not less than thirty (30) days following the date of the public notice, during which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed permit, please refer to the Public Notice page located at the front of this draft permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- ✓ The Public Notice period for this permit was from May 18, 2022 to June 18, 2022. No responses received or responses to the Public Notice of this permit do not warrant the modification of effluent limitations and/or the terms and conditions of this permit.

DATE OF FACT SHEET: 4/28/2022

COMPLETED BY:

JUDD CODY GARNER
ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - STORMWATER AND CERTIFICATION UNIT
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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(a)(1);
      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.

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.

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.
   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 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

imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed $10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than $50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

2. **Duty to Reapply.**
   a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
   b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
   c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. **Proper Operation and Maintenance**. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

6. **Permit Actions.**
   a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
      i. Violations of any terms or conditions of this permit or the law;
      ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
      iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
      iv. Any reason set forth in the Law or Regulations.
   b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. **Permit Transfer.**
   a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
   b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
   c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.

8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
    a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
    d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.

12. **Closure of Treatment Facilities.**
    a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
    b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.

13. **Signatory Requirement.**
    a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
    b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
    c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.

14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

STANDARD CONDITIONS FOR NPDES PERMITS
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 limted 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 polluntant 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.
   a. 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.
   b. Apply biosolids only at the agronomic rate of nitrogen needed (see 5.c. of this section).
   c. 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 factor[1]).

[1] Volatilization factor is 0.7 for surface application and 1 for subsurface application. Alternative volitalization 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 outstandingstate 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 mthods or technology refletive 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 included the use of methods or technology refletive 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 factor[1]).
        [1] Volatilization factor is 0.7 for surface application and 1 for subsurface application. Alternative volitalization 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 ≥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 ≥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

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

[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.