

STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**

MISSOURI CLEAN WATER COMMISSION



## MISSOURI STATE OPERATING PERMIT

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

Permit No. MO-G920000

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: <1/4, 1/4, 1/4, Sec. xx, TxxN, RxxW <county>County  
UTM Coordinates: X= Y=

Receiving Stream: <receiving stream> <C, P, L1, L2, L3>  
First Classified Stream and ID: <1<sup>st</sup> classified stream> <C, P, etc.> <ID number> 303(d) List  
USGS Basin & Sub-watershed No.: <USGS HUC 12#>

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

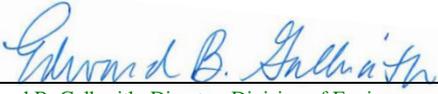
### FACILITY DESCRIPTION

All Outfalls: Standard Industrial Classification (SIC) Code: # 2875 (Fertilizers, Mixing Only)

Composting operations covering less than 20 acres using mixed feedstock which may consist of any combination of animal manure, animal litter, agricultural products and residuals, biosolids, septage, domestic waste, yard waste, wood waste, food products and food residuals. The operation is to be designed and operated as a no-discharge facility.

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

January 25, 2018  
Effective Date

  
Edward B. Galbraith, Director, Division of Environmental Quality

January 24, 2023  
Expiration Date

  
Chris Wieberg, Director, Water Protection Program

APPLICABILITY

1. This permit authorizes the operation of no-discharge active composting operations that are less than 20 acres in size. The acreage is measured by calculating the area that is within the composting perimeter, including unloading, storage, and handling of composting materials and finished compost. It does not include buffer zones, parking lots, maintenance facilities and stormwater control basins.

<u>SIC</u>	<u>Activity</u>
2875	Compost, Fertilizers (mixing only)

2. The stormwater provisions of this permit are applicable to facilities with materials exposed to stormwater. For the purpose of this permit, stormwater is defined as precipitation from rain or melting snow/ice in sufficient quantities that it runs off over land and impervious surfaces and discharges to waters of the state instead of seeping into the ground.
3. For the purpose of this permit, compost wastewater is any liquid (i.e., process water, wash water, leachate, and/or comingled stormwater) that ponds, flows laterally from the base of the compost pile, or collects in an under-drainage system. Leachate or “compost tea” is water that has moved through the compost pile and exits the bottom of the pile. Stormwater that has been allowed to comingle with compost wastewater, as defined, is considered compost wastewater.
4. This permit applies to composting operations whose feedstocks include any combination of animal manure, animal litter, agricultural products and residuals, yard waste, paper waste, wood waste, food products and food residuals, and biosolids. Other industrial wastes (such as water treatment residuals, pharmaceutical residuals, biodegradable plastics, and charcoal) must receive prior approval from the Department. Approval may be obtained by writing to the Water Protection Program, P.O. Box 176, Jefferson City, MO 65102.
5. This permit does not apply to landfill composting operations or composting done as a part of a site-specific landfill permit.
6. This permit may apply to composting operations that are on landfill property if the composting operations are kept wholly separate from landfill operations, and the composting facility does not receive any discharge water (run-on) from the landfill.
7. This permit applies to stockpiling of raw materials as necessary for the active production of compost. This permit also applies to the stockpiling of finished composts.
8. This permit does not apply to the compost quality, distribution, or use of the finished compost, except for pathogen reduction terms found in the REQUIREMENTS section below.
9. Vehicle and equipment wash water with added detergents, acids, caustics, solvents, or other washing additives is authorized only if the total volume of water used is less than 500 gallons per day and the wash water is not discharged. This means that the wash water with said additives must enter settling basins or other treatment devices designed and operated to be no-discharge. It must soak into the ground, evaporate, or be contained in a tank or basin on site.
10. If at any time, the Missouri Department of Natural Resources determines that the quality of waters of the state may be better protected by requiring the owner of the composting operations to apply for an individual National Pollutant Discharge Elimination System (NPDES) permit, the Department may do so.
11. If at any time the owner of a composting operation should desire to apply for an individual NPDES permit, the owner may do so.
12. In accordance with 40 CFR 122.26(g), if a facility has no materials exposed to stormwater (all materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt and/or runoff), the facility may apply for No Exposure Certification in lieu of coverage under this permit. A No Exposure certification [https://www.epa.gov/sites/production/files/2015-10/documents/msgp2015\\_appendixk.pdf](https://www.epa.gov/sites/production/files/2015-10/documents/msgp2015_appendixk.pdf) must be submitted with the application for permit coverage. Some examples of the no exposure requirements are:
  - (a) Drums, barrels, tanks, and similar containers are tightly sealed, provided those containers are not deteriorated and do not leak (sealed means banded or otherwise secured and without operational taps or valves);
  - (b) Adequately maintained vehicles are used in material handling; and

- (c) All industrial materials consist of final products other than products that would be mobilized by stormwater [10 CSR 20-6.200(1)(B)16].
13. This permit **does not authorize** composting operations located within:
- (a) 100 feet of a Class W<sup>1</sup> or mitigated wetland;
  - (b) 100 feet of any Class C<sup>1</sup> or Class P<sup>1</sup> stream or any Class L2<sup>1</sup> and Class L3<sup>1</sup> lake; 300 feet upstream of streams, lakes or reservoirs (Class L1<sup>1</sup>) with designated use of drinking water supply, any public or privately owned well or other drinking water supply;
  - (c) 500 feet of an Outstanding State Resource Water<sup>1</sup> (OSRW) or Outstanding National Resource Water<sup>1</sup> (ONRW);
  - (d) 1,000 feet of a sinkhole or other direct conduit to groundwater,
  - (e) 1,000 feet upstream of streams, lakes, or reservoirs identified as critical habitat for endangered species; or
  - (f) 1,000 feet upstream of biocriteria reference locations<sup>1</sup>.
14. As a compliance alternative, a thirty-five (35) foot vegetative buffer that is permanently covered with perennial vegetation may be substituted for this 100 foot set-back requirement.
15. For facilities within the watershed of an ONRW, which includes the Ozark National Riverways and the National Wild and Scenic Rivers System, this permit authorizes no-discharge facilities [as defined in 10 CSR 20-6.015(1)(B)7.] to operate. Any discharge from a no-discharge facility, including all waste flows and associated 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)] 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). This includes precipitation that exceeds the twenty-five (25) year, twenty-four (24) hour storm event which can be found at: [http://ag3.agebb.missouri.edu/design\\_storm/](http://ag3.agebb.missouri.edu/design_storm/) or the ten (10) year, twenty-four (24) hour storm event which can be found at: <http://hdsc.nws.noaa.gov/hdsc/pfds/>.
16. The following are allowable non-stormwater discharges authorized under this permit:
- (a) Discharges from fire-fighting activities;
  - (b) Landscape watering, provided all pesticides, herbicides and fertilizers have been applied in accordance with manufacturer's instructions and water does not come in contact with compost feedstock;
  - (c) Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials, or process materials have occurred (unless all spilled material has been removed);
  - (d) Routine external building wash down that does not use detergents.

### EXEMPTIONS

1. Distribution or marketing of composts are exempt from NPDES permitting. The Missouri Fertilizer Law (266.291, RSMo) and the Soil Conditioner Law (266.361, RSMo) may apply to these practices.
2. Uncomposted waste materials that are land applied as a part of normal farming operations are exempt from NPDES permitting requirements. This exemption does not apply to stock piles of materials that exceed two (2) acres in size at an operating location.
3. Compost sites which include less than 5% biosolids (by volume), septage, or any other form of domestic sewage, are under two (2) acres in size, and are operated so as not to discharge are exempt from permitting requirements of the Missouri Clean Water Law [10 CSR 20-6.015(3)(B)7.]. However, exemption from NPDES permitting does not imply an exemption from Solid Waste Management Program construction and operating permit requirements or Air Pollution Control Program requirements.

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<sup>1</sup> Identified or described in 10 CSR 20-7. These regulations are available at many libraries and online at [www.sos.mo.gov/adrules/csr/current/10csr/10csr.asp](http://www.sos.mo.gov/adrules/csr/current/10csr/10csr.asp), or may be purchased from the Department by calling the Department's Water Protection Program.

## REQUIREMENTS

1. Electronic Discharge Monitoring Report (eDMR) Submission System. Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent limits and monitoring shall be submitted by the permittee via an electronic system to ensure timely, complete, accurate, and nationally-consistent set of data about the NPDES program. All general permit covered facilities under this master general permit that have required discharge monitoring and reporting shall comply with the Department's requirements for electronic reporting.
  - (a) Discharge Monitoring Reporting Requirements.
    - (1) Registration to participate in the Department's eDMR system is required as part of the application for general permit coverage in order to constitute a complete permit application and may be accessed at <http://dnr.mo.gov/forms/780-2204-f.pdf>. General information may be found at [dnr.mo.gov/env/wpp/edmr.htm](http://dnr.mo.gov/env/wpp/edmr.htm).
    - (2) The permittee must electronically submit compliance monitoring data via the eDMR system. In regards to Standard Conditions Part I, Section B, #7, the eDMR system is currently the only Department approved reporting method for this permit.
  - (b) Other actions. The following shall be submitted electronically after such a system has been made available by the Department:
    - (1) General Permit Applications/Notices of Intent to discharge (NOIs);
    - (2) Notices of Termination (NOTs);
    - (3) No Exposure Certifications (NOEs); and
    - (4) Low Erosivity Waivers and Other Waivers from Stormwater Controls (LEWs).
  - (c) Electronic Submissions. To access the eDMR system, use the following link in your web browser: <https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx>.
  - (d) Waivers from Electronic Reporting.
    - (1) The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the Department in compliance with 40 CFR Part 127.
    - (2) The permittee may obtain a temporary or permanent electronic reporting waiver by first submitting an eDMR Waiver Request Form (Form 780-2692): <http://dnr.mo.gov/forms/780-2692-f.pdf>, by contacting the appropriate permitting office or emailing [edmr@dnr.mo.gov](mailto:edmr@dnr.mo.gov). The Department will either approve or deny this electronic reporting waiver request within 120 calendar days of receipt.
    - (3) Only permittees with an approved waiver request may submit monitoring data and reports on paper to the Department for the period that the approved electronic reporting waiver is effective.
2. The permittee shall not stockpile any raw materials for a period to exceed five (5) calendar days before mixing unless the stockpile location has a stormwater collection system or is roofed.
3. The permittee shall not allow painted or treated wood products to be placed in the compost. Untreated wood is defined as lumber and other wooden materials that have not been chemically treated for resistance to moisture, fire, fungi, insects and other pests, has not otherwise been treated or manufactured with chemicals, and does not contain adhesives or resins. Untreated wood does not include plywood, particleboard, chipboard, and wood with other than insignificant quantities of paint, coating, glue, or finish.
4. In order to operate as a no-discharge facility, the permittee may land apply wastewater and stormwater, reuse the water as part of the composting process, or haul the contents of the basin to a permitted treatment or disposal facility with written approval from the facility that receives the water.
5. The composting area shall have a base, which may be made of asphalt, concrete, compacted earth, or other materials and shall comply with the permeability limitations under 10 CSR 20-8.020(13)(A)4.
6. If the compost includes biosolids, septage, or any other form of domestic sewage, the production of compost, land application, and/or distribution of the finished product shall follow the requirements of 40 CFR Part 503, Standards for the Use or Disposal of Sewage Sludge. If the compost is to be distributed to the public, it shall have undergone at least one (1) of the processes to further reduce pathogens found in 40 CFR Part 503, Appendix B. Composting may be carried out by any of the methods approved by the United States Environmental Protection Agency (USEPA), including approved alternative or equivalent methods as long as all requirements of 40 CFR Part 503 are met. Detailed records of temperature monitoring related to pathogen reduction requirements shall be maintained and made available to the Department upon request.
7. All storage basin and production area outfalls must be clearly marked in the field. On classified waters of the state, signs should be visible from both land and water perspectives.

8. Facilities that use feedstocks composed of only yard waste, tree trimmings, cardboard, paper waste, sawdust, vegetable waste, food waste and food residuals, animal litter, animal manure and agricultural products and residuals are exempt from metals testing of feedstocks unless specifically directed to do so by the Department.
9. The permittee shall notify the Department within 24 hours of any discharge and shall submit a written report detailing the cause of the discharge and what steps have been taken to prevent such a discharge from recurring. The written report shall be submitted to the Department within 5 days of the cessation of the discharge.
10. The permittee shall adhere to the following Best Management Practices (BMPs):
  - (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehousing activities and prevent the contamination of stormwater from these substances;
  - (b) Provide for the collection and proper disposal of waste products including, but not limited to, petroleum waste products and solvents. All fueling facilities present onsite shall adhere to underground storage, aboveground storage, and dispenser best management practices, which shall include spill prevention, control and countermeasures;
  - (c) Store all paint, solvents, petroleum products, and petroleum waste products in appropriate storage containers (such as drums, cans, or cartons) so that these materials are safely contained and not exposed to stormwater;
  - (d) Provide good housekeeping practices onsite to keep trash, loose feedstock materials, or other solid waste from entering waters of the state; and
  - (e) Designate an individual as responsible for environmental matters. Inspect, once per month on workdays, any structure that functions to prevent pollution from stormwater or to remove pollutants from stormwater. In addition, inspect these structures within 24 hours of each rainfall event of one inch (1") or more. Inspect the facility in general to ensure that any BMPs are continually implemented and remain effective. Documentation of inspection must be retained on site for a period of five (5) years and made available to the Department upon request.
11. Quantity and types of feedstocks accepted for delivery at the facility shall be managed so as to avoid delivery of more feedstock (of any type) than the facility can effectively handle.
12. These requirements do not supersede nor remove liability for compliance with other federal, state, county or local statutes, regulations, or ordinances.

### ANNUAL REPORT

1. Records shall be maintained and summarized into an annual operating report which shall be submitted by January 28th of each calendar year for the previous calendar year period. The report shall include the following:
  - (a) Record of BMP maintenance and repairs performed during the previous calendar year, documentation of required BMP inspections, and description of any unusual operating conditions encountered during the calendar year;
  - (b) Information on quantities and types of all raw materials stockpiled or composted during the calendar year; results of any testing performed; quantity of compost sold, disposed, or given away; and quantity onsite at the end of the calendar year.

### BIOSOLIDS FEEDSTOCK REQUIREMENTS

1. Facilities that include compost feedstocks containing any type of domestic waste, septage or biosolids in any amount shall test those feedstocks for metals **prior to its use in compost** unless the operator can provide information in order for the Department to make the determination that testing is not required.
2. Metals analysis provided by the domestic waste, septage or biosolids producer will be considered sufficient as long as it meets the requirements in Table A.
3. Annual testing is required for feedstock comprised of biosolids, sludge, etc. and additional testing is not required during the year unless changes occur that impact the feedstock. Testing is required for each feedstock **source**, not each discrete batch of feedstock. The feedstocks shall at a minimum be tested for the metals listed in Table A.
4. The Department may require testing of additional parameters for some feedstocks. If additional parameters are required to be tested, the permittee shall be notified in writing.

5. Feedstocks comprised of biosolids, sewerage, sludge, food waste, and any other materials with the potential to cause odor shall be mixed into the compost piles as soon as practicable, but within a maximum of 24 hours. All other feedstock shall be incorporated into the composting windrows or piles as soon as possible, but within a maximum of 5 days from receipt, except wood chips and dried leaves which may be stockpiled for extended periods-up to one year from date of delivery- for use as a bulking agent, so long as piles are rotated regularly and managed so as not to be a fire hazard.
6. Compost that contains feedstock that exceeds the Low Metals Concentration established by 40 CFR Part 503 in Table A shall not be distributed to the public and must be disposed of properly according to the above rule.

<b>TABLE A</b>		<b>BIOSOLIDS FEEDSTOCK MONITORING AND REPORTING</b>				
The permittee is authorized to incorporate biosolids, septage and sludge into compost as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
PARAMETER	UNITS*	FINAL LIMITATIONS			MONITORING REQUIREMENTS	
		Daily Maximum	Weekly Average	Annual Average	Sampling Frequency	Sample Type**
<b>Permitted Feature #</b>		<b>Feedstocks Containing Biosolids, Septage, or Sludge Limit Set BS<sup>♦</sup></b>				
Arsenic	mg/kg	41.0		41.0	once annually	composite
Cadmium	mg/kg	39.0		39.0	once annually	composite
Chromium	mg/kg	1,200.0		1,200.0	once annually	composite
Copper	mg/kg	1,500.0		1,500.0	once annually	composite
Lead	mg/kg	300.0		300.0	once annually	composite
Mercury	mg/kg	17.0		17.0	once annually	composite
Molybdenum	mg/kg	18.0		18.0	once annually	composite
Nickel	mg/kg	420.0		420.0	once annually	composite
Selenium	mg/kg	36.0		36.0	once annually	composite
Zinc	mg/kg	2,800.0		2,800.0	once annually	composite
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> VIA THE DEPARTMENT'S eDMR SYSTEM. SHOULD A WAIVER TO eDMR BE GRANTED BY THE DEPARTMENT, PAPER REPORTS SHALL BE SUBMITTED IN A TIMELY MANNER TO THE APPROPRIATE REGIONAL OFFICE. THE FIRST REPORT IS DUE <u>JANUARY 28, 20XX</u> .						

\* Dry weight basis.

\*\* For the purpose of this permit, a composite sample shall include at least 7 discrete subsamples combined.

♦ Limit set BS applies only to facilities using feedstocks that include domestic waste, septage, biosolids, or similar materials. Report maximum value per parameter amongst all feedstock sources and attach individual reports for each feedstock source.

### STORAGE BASIN REQUIREMENTS

1. Any earthen storage basin for compost wastewater is subject to construction permitting requirements under Missouri Clean Water Commission (MCWC) regulations 10 CSR 20-6.010 and 6.015. Basins must be sealed in accordance with MCWC design guide regulations in 10 CSR 20-8.
2. The minimum and maximum operating water levels for the storage basin shall be clearly marked. Each basin shall be operated so that storage basin freeboard shall be no less than two feet below the Emergency Spillway, or maximum operating level, except due to exceedances of the chronic and catastrophic storm events referenced above. Wastewater and/or stormwater shall be land applied or reused in the composting process whenever feasible based on soil and weather conditions, and permit requirements.
3. The storage basin berms shall be mowed and kept free of any trees, muskrat (and other animal) dens, or other potential sources of damage to the berms.
4. The permittee is required to record and maintain precipitation data as part of this permit. If the permittee fails to collect and record precipitation data, the Department will rely upon data from the nearest reliable weather data collection station when determining compliance with this permit. Storage basin freeboard and precipitation shall be reported according to the requirements in Table B.
5. 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 Department regional office during normal business hours, or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours.

TABLE B		STORAGE BASIN OPERATIONAL MONITORING AND REPORTING				
The facility is authorized to impound and store wastewater and stormwater as specified in this permit. All storage basins 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
<b>Permitted Feature # _____</b>		<b>Storage Basin Operational Monitoring</b>			<b>Limit Set SB</b>	
Storage Basin Freeboard **	feet	*		*	once/month	measured
Precipitation ***	inches	*		*	daily	24 hr. estimate
STORAGE BASIN OPERATIONAL MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE <u>DATE 28,20XX</u> FOR THE PREVIOUS CALENDAR MONTH. IT IS A VIOLATION OF THIS PERMIT TO FAIL TO MONITOR.						

- \* Monitor as required and report the resulting value monthly.
- \*\* Basin freeboard shall be reported as storage basin water level in feet below the overflow level and shall be reported as the daily minimum and monthly average.
- \*\*\* Precipitation shall be reported as a daily total and monthly total.

**EMERGENCY BYPASS REQUIREMENTS**

1. 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 per Standard Condition Part 1, whether or not the permittee believes such discharges are likely to reach waters of the state.
2. 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. During an emergency discharge, the permittee shall monitor for the constituents listed in Table C.
3. The facility shall submit test results, along with the number of days the storage basin(s) has discharged during the month via the eDMR System. Test results are due the 28<sup>th</sup> day of the month after the cessation of the discharge.

TABLE C		EMERGENCY BYPASS MONITORING***	
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 BMPs. All emergency discharges shall be reported to the Department and shall be controlled, limited and monitored by the facility as specified below.			
CONSTITUENT	UNITS	Daily Maximum	
<b>Permitted Feature # _____</b>		<b>Emergency Bypass Limit Set EB</b>	
Flow	mgd	*	
Biochemical Oxygen Demand <sub>5</sub>	mg/L	45	
Total Suspended Solids	mg/L	100	
Oil and Grease	mg/L	15	
<i>Enchiridia coli</i> ( <i>E. coli</i> )**	#/100 mL	*	
pH	SU	6.5 – 9.0	
Ammonia as N	mg/L	*	
Nitrate + Nitrite as N	mg/L	*	
Duration of Discharge	# days	*	
EMERGENCY BYPASS MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE <u>THE 28<sup>TH</sup> DAY OF THE MONTH AFTER THE CESSATION OF THE DISCHARGE</u> . NO REPORT IS DUE IF A BYPASS DOES NOT OCCUR. IT IS A VIOLATION OF THIS PERMIT TO FAIL TO MONITOR.			

- \* Monitoring requirement only
- \*\* If using less than 5% biosolids sampling for *E. coli* is only required during the recreational months of April – October. Facilities using more than 5% biosolids must sample for *E. coli* year round if a discharge occurs.
- \*\*\* An emergency discharge may occur when excess water has accumulated due to precipitation exceeding the 1 in 10-year, 365-day rainfall (chronic event) or the 25-year, 24-hour storm (catastrophic event). Monitor only when discharging. If no discharge occurs, no monitoring or reporting is required.

LAND APPLICATION AND WASTEWATER IRRIGATION REQUIREMENTS

1. Land application of compost solids or irrigation of process wastewater:
  - (a) Shall not result in a discharge of process wastewater from irrigation fields;
  - (b) Shall not occur during frozen, snow covered, or saturated soil conditions, or when a forecasted precipitation event is likely to produce runoff within 24 hours of wastewater irrigation or land application;
  - (c) Shall occur during daylight hours;
  - (d) Shall not be applied within thirty (30) days prior to crop harvesting or grazing by cattle;
  - (e) Shall not occur on slopes exceeding 20 percent (%);
  - (f) Shall not cause surface ponding or runoff of process wastewater from the treatment site during irrigation.
  - (g) Shall not exceed 24 inches per acre per year.
  - (h) Shall not occur within:
    - (1) 50 feet of the property line or public road;
    - (2) 300 feet up gradient of a public or privately owned drinking water impoundment or intake, or water supply well per 10 CSR 20-8.010(15)(B);
    - (3) 150 feet of an occupied residence, public building, or public use area; and
    - (4) 300 feet of a sinkhole, losing stream, or other direct conduit to groundwater.
2. During process wastewater irrigation or land application of compost solids, the distribution system shall be operated so as to provide uniform distribution of waste over the entire treatment site.
3. For row crop irrigation, a complete ground cover of vegetation shall be maintained on the treatment site unless the crop field has erosion control measures or a slope of 4 percent (%) or less.
4. There shall be no land application or wastewater irrigation of any pollutant in sufficient amounts to cause harm to the soil structure or productivity, or cause stress or toxicity to plant life. Wastewater irrigation or land application shall not exceed agronomic rates to ensure agricultural use of nutrients and prevent contamination of surface and groundwater. The agronomic rate is the amount of waste applied to a field to meet the fertilizer recommendation.
5. The treatment site and system shall be visually inspected at least hourly during process wastewater irrigation and compost solid land application to check for runoff and equipment malfunctions. A log of inspections shall be kept and made available to the Department in the annual report.
6. Monitoring and reporting shall occur on irrigated wastewater and/or compost land application for the parameters in Table D. If no land application or wastewater irrigation occurs, no reporting for Table D is required.
7. Wastewater that is to be irrigated onto a treatment area shall be sampled at the irrigation pump or wet well.

TABLE D		LAND APPLICATION AND WASTEWATER IRRIGATION OPERATIONAL MONITORING				
The facility is authorized to conduct land application of process wastewater and stormwater as specified in this permit. The land application of process wastewater and stormwater shall be controlled, limited, and monitored by the facility as specified below:						
<b>Permitted Feature #</b>		<b>Land Application/Wastewater Irrigation Operational Monitoring</b>			<b>Limit Set: LA**</b>	
PARAMETER	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS	
		Daily Maximum	Weekly Average	Monthly Average	Sampling Frequency	Sample Type
Irrigation/Application Period	hours	*		*	daily	measured
Volume Irrigated/Applied	gallons	*		*	daily	measured
Application Area	acres	*		*	daily	measured
Application Rate	inches	*		*	daily	measured
LAND APPLICATION AND/OR WASTEWATER IRRIGATION OPERATING REPORTS (LIMIT SET LA) SHALL BE SUBMITTED <u>MONTHLY</u> VIA THE DEPARTMENT'S eDMR SYSTEM. SHOULD A WAIVER TO eDMR BE GRANTED BY THE DEPARTMENT, PAPER REPORTS SHALL BE SUBMITTED IN A TIMELY MANNER TO THE APPROPRIATE REGIONAL OFFICE. THE REPORT IS DUE <u>DATE 28, 2017</u> FOR THE PREVIOUS MONTH. IT IS A VIOLATION OF THIS PERMIT TO FAIL TO REPORT IF LAND APPLICATION OCCURS.						
<b>Permitted Feature #</b>		<b>Land Applied Material/Wastewater Irrigant Monitoring</b>			<b>Limit Set IW**</b>	
Total Kjeldahl Nitrogen as N	mg/L	*		*	annual	grab
Ammonia Nitrogen as N	mg/L	*		*	annual	grab
Nitrate + Nitrite	mg/L	*		*	annual	grab
Total Phosphorus	mg/L	*		*	annual	grab
pH	SU	6.5 – 9.0		6.5 – 9.0	annual	grab
MONITORING AND REPORTING OF IRRIGATED WASTEWATER (LIMIT SET IW) SHALL BE SUBMITTED <u>ANNUALLY</u> VIA THE DEPARTMENT'S eDMR SYSTEM. SHOULD A WAIVER TO eDMR BE GRANTED BY THE DEPARTMENT, PAPER REPORTS SHALL BE SUBMITTED IN A TIMELY MANNER TO THE APPROPRIATE REGIONAL OFFISTOCE. THE REPORT IS DUE <u>JANUARY 28, 20XX</u> FOR THE PREVIOUS CALENDAR YEAR. IT IS A VIOLATION OF THIS PERMIT TO FAIL TO REPORT IF LAND APPLICATION OCCURS.						

\* Monitoring requirement only.

\*\* Monitor only when land application or irrigation occurs. No reporting is required for limit set LA if no land application or irrigation occurs during the monitoring period. No reporting for limit set IW is required if no irrigation occurs.

### STANDARD CONDITIONS

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

### SPECIAL CONDITIONS

1. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with §644.051.16, RSMo, and the 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 Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
  - (a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
  - (b) Controls any pollutant not limited in the permit.
  
2. Changes in Discharges of Toxic Substances. In addition to the reporting requirements under §122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:
  - (a) That an activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
    - (1) One hundred micrograms per liter (100 µg/L);
    - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
    - (3) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
    - (4) One milligram per liter (1 mg/L) for antimony;
    - (5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or

- (6) The notification level established by the Department in accordance with 40 CFR 122.44(f).
- (b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - (1) Five hundred micrograms per liter (500 µg/l);
  - (2) One milligram per liter (1 mg/l) for antimony;
  - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with §122.21(g)(7).
  - (4) The level established by the Director in accordance with §122.44(f).

### PERMIT TRANSFER

This permit may not be transferred to a new owner in any fashion except by submitting an Application for Transfer of Operating Permit <http://dnr.mo.gov/forms/780-1517-f.pdf> signed by the seller and 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.

### PERMIT RENEWAL

Unless terminated, the permittee shall submit an application for the renewal of this permit by submitting *Form E-Application for General Permit* <http://dnr.mo.gov/forms/780-0795-f.pdf> no later than thirty (30) days prior to the permit’s expiration date. If a facility submits a timely and complete application in accordance with 10 CSR 20-6.010(5)(B), (5)(C), and (10)(E)1, as well as §644.051.10 RSMo 2015, if the Department is unable, through no fault of the permittee, to issue a renewal 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 for a facility that is still in operation is a violation of the Missouri Clean Water Law. 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: <http://dnr.mo.gov/env/wpp/edmr.htm>. 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.

### PERMIT TERMINATION

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)(C)27.) remain on the property or if on the property, are stored in such a way as to have no potential for pollution. Proper closure of any waste storage structure as described in 10 CSR 20-6.015(5) is required prior to permit termination. In order to terminate this permit, the permittee shall notify the Department’s appropriate regional office by completing and submitting Form H-Request for Termination of a General Permit <http://dnr.mo.gov/forms/780-1409-f.pdf>. The regional office may require inspection of the premises prior to granting termination of a permit.

**Missouri Department of Natural Resources**  
**FACT SHEET**  
**FOR THE PURPOSE OF RENEWAL**  
**OF**  
**MO-G920000 MASTER GENERAL PERMIT**

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 (permits) 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 a permit.

This Fact Sheet is for a:

Master General Permit

**PART I – FACILITY INFORMATION**

Facility Type: No-discharge composting operations covering less than 20 acres using mixed feedstock which may consist of any combination of animal manure, animal litter, agricultural products and residuals, biosolids, septage, domestic waste, yard waste, wood waste, food products and food residuals.

Facility SIC Code(s): 2875

**Facility Description:**

This permit authorizes the operation of no-discharge active composting operations that are less than 20 acres in size. The acreage is measured by calculating the area that is within the composting perimeter, including unloading, storage, and handling of composting materials and finished compost. It does not include buffer zones, parking lots, maintenance facilities and stormwater control basins. Any organic materials suitable for composting may be used as a feedstock except hazardous waste.

**CHANGES AND CLARIFICATION:**

Composting facilities under this permit are designed to be no-discharge facilities and must capture all stormwater runoff and compost process wastewater from the facility. No discharge to waters of the state is allowed with the exception of the chronic and catastrophic rainfall events as defined in 10 CSR 20-6.015(1)(B). The facility is defined as the composting perimeter, including unloading, storage and handling of raw materials and finished compost. Captured stormwater may be held onsite for reuse in adding moisture to the compost or it may be land applied and/or pumped and hauled to a wastewater treatment facility. In the event of a discharge, the facility must demonstrate that the discharge was due to the referenced storms and that proper land application or other means of disposing of excess stormwater has occurred during the previous year.

Changes to this permit include:

- MO-G920000 has been combined with MO-G090000. Both permits were similar in that they were no-discharge composting permits. The previous MO-G090000 was for agricultural waste, wood products and food waste composting and did not include a provision for more than 5% biosolids by volume, while MO-G920000 allowed biosolids, wastewater and septage to be composted. The two permits are combined to allow facilities the flexibility to use a variety of organic materials without choosing one permit over the other. Facilities that choose to compost biosolids or other types of domestic waste are directed to test for metals to make sure they are within acceptable limits prior to adding those materials to the compost mixture and to comply with the provisions in 40 CFR Part 503.
- This permit includes the added requirement for electronic reporting per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule. Reporting of effluent limits and monitoring shall be submitted by the permittee via an electronic system to ensure timely, complete, accurate, and nationally-consistent set of data about the NPDES program. eDMR reporting has been added to this permit. All general covered permitted facilities under this master general permit shall comply with the Department's

requirements for electronic permitting if they have reporting requirements. Registering to participate in the eDMR system is required as part of the application for general permit coverage in order to constitute a complete permit application. More information may be found at <http://dnr.mo.gov/env/wpp/edmr.htm> with the registration form at <http://dnr.mo.gov/forms/780-2204-f.pdf>. The facility may, under certain circumstances, apply for a temporary or permanent waiver from electronic reporting by submitting eDMR Waiver Request form (Form 780-2692, <http://dnr.mo.gov/forms/780-2692-f.pdf>) to the appropriate permitting office. You may access the eDMR system using the following link:

<https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx>.

- Other changes include the general restructuring of the permit to match current Departmental templates and the use of the most up-to-date language available for use by the Department.
- Setbacks have been added to the permit in order to prevent water quality degradation of sensitive resources and include: 500 feet of an Outstanding State Resource Water (OSRW) or Outstanding National Resource Water (ONRW); 1,000 feet upstream of streams, lakes, or reservoirs identified as critical habitat for endangered species; and 1,000 feet upstream of biocriteria reference locations.

### **Definitions**

**Compost:** Compost is organic material that can be used as a soil amendment or as a medium to grow plants. Mature compost is a stable material containing humus that is dark brown or black and has a soil-like, earthy smell. It is created by: combining organic wastes in proper ratios into piles, rows, or vessels; adding bulking agents (e.g., wood chips) as necessary to accelerate the breakdown of organic materials; and allowing the finished material to fully stabilize and mature through a curing process.

## **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. 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)]

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 beneficial water uses shall be maintained in accordance with 10 CSR 20-7.031(4). The requirements established by this permit are intended to be protective of all streams that fall within the categories of receiving water bodies indicated above. 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.

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

### **RECEIVING STREAM MONITORING REQUIREMENTS:**

- Not Applicable: No receiving water monitoring requirements recommended at this time. Land application facilities have no reasonable potential to impact waters of the state when land application is properly conducted.

## **PART III – RATIONALE AND DERIVATION OF EFFLUENT LIMITATIONS & PERMIT CONDITIONS**

### **303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):**

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

A TMDL is a calculation of the maximum amount of a given pollutant that 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 that shall include the TMDL calculation

- Not Applicable: At renewal, facilities in the watershed of a 303(d) listed stream will be evaluated as to the continuing applicability of the facility to this permit.

**ANTI-BACKSLIDING:**

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

- Applicable: The Department has determined that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).
- **General Criteria.** The previous permit contained a special condition which described a specific set of prohibitions related to general criteria found in 10 CSR 20-7.031(4). In order to comply with 40 CFR 122.44(d)(1), the permit writer has conducted reasonable potential determinations for each general criterion and established numeric effluent limitations where reasonable potential exists. While the removal of the previous permit special condition creates the appearance of backsliding and since this permit establishes numeric limitations where reasonable potential to cause or contribute to an excursion of the general criteria exists, the permit maintains sufficient effluent limitations and monitoring requirements in order to protect water quality. This permit is equally protective as compared to the previous permit. Therefore, given this new information, and the fact that the previous permit special condition was not consistent with 40 CFR 122.44(d)(1), an error occurred in the establishment of the general criteria as a special condition of the previous permit. Please see the reasonable potential analysis subsection below for more information regarding the reasonable potential determinations for each general criterion related to this facility.

**ANTIDEGRADATION:**

Antidegradation policies ensure protection of water quality for a particular water body on a pollutant by pollutant basis to ensure Water Quality Standards are maintained to support beneficial uses such as fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as an Outstanding National Resource Water or Outstanding State Resource Water [10 CSR 20-7.031(3)(C)]. Antidegradation policies are adopted to minimize adverse effects on water.

As this permit does not allow discharges of any wastewater, the terms and conditions of this permit will serve to maintain water quality of surrounding waters in the watershed and protect their designated uses. Because this permit applies only to no-discharge facilities, no degradation is proposed. Antidegradation review does not apply to facilities which cause no degradation.

- Not Applicable: Facilities covered under this general permit are no-discharge facilities. The only discharges resulting from the activities allowed under this no-discharge permit are short term, intermittent, and are expected to be non-degrading or minimally degrading. Compliance with the requirements established in this permit, along with the evaluation and implementation of BMPs, meets the requirements of Missouri's Antidegradation Review in accordance with 10 CSR 20-7.031(3), 10 CSR 20-7.031 Table A, and 10 CSR 20-7.015(9)(A)5.

**APPLICABLE PERMIT PARAMETERS:**

Effluent parameters contained in Fact Sheets and Missouri State Operating Permits are obtained from Technology Based Effluent Limit (TBEL), Missouri's Effluent Regulations [10 CSR 20-7.015], Missouri's Water Quality Standards [10 CSR 20-7.031], previous Missouri State Operating Permits, and from Operating Permit Applications.

**BIO-SOLIDS, SLUDGE, & SEWAGE SLUDGE:**

Bio-solids are solid materials resulting from wastewater treatment that meet federal and state criteria for beneficial uses (i.e., fertilizer). Sludge is any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works.

- Applicable: These facilities are allowed to receive sewage sludges or biosolids from domestic wastewater treatment facilities. All facilities that use biosolids, or sludge are required to comply with 40 CFR Part 503.

**PUBLIC NOTICE OF COVERAGE FOR AN INDIVIDUAL FACILITY:**

Public Notice of reissuance of coverage is not required unless the facility has been found to be in significant noncompliance [10 CSR 20-6.020(1)(C)4.]. The need for an individual public notification process shall be determined and identified in the permit [10 CSR 20-6.020(1)(C)5.].

- 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):**

Limitations must control all pollutants or pollutant parameters that are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above the Missouri Water Quality Standards.

- Not Applicable: A formal reasonable potential analysis is beyond the scope of this general permit and was not conducted. In addition, as a no-discharge facility, the only discharges resulting from the activities allowed under this permit are short term and intermittent, and are expected to be non-degrading or minimally degrading

**GENERAL CRITERIA CONSIDERATIONS:**

In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into the permit for those pollutants which have been determined to cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. The rule further states that pollutants which have been determined to cause, have the reasonable potential to cause, or contribute to an excursion above a narrative criterion within an applicable State water quality standard, the permit shall contain a numeric effluent limitation to protect that narrative criterion.

In order to comply with this regulation, the permit writer will complete reasonable potential determinations on whether the discharge will violate any of the general criteria listed in 10 CSR 20-7.031(4). These specific requirements are listed below followed by derivation and discussion (the lettering matches that of the rule itself, under 10 CSR 20-7.031(4)). It should also be noted that Section 644.076.1, RSMo as well as Section D – Administrative Requirements of Standard Conditions Part I of this permit states that it shall be unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri that is in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law or any standard, rule or regulation promulgated by the commission.

- (a) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses. This facility utilizes irrigation of compost wastewater to the land surface and therefore does not discharge. No evidence of an excursion of this criterion has been observed by the Department in the past and the facilities have not disclosed any other information their permit applications which has the potential to cause or contribute to an excursion of this narrative criterion. Additionally, there had been no indication to the Department that streams have had issues maintaining beneficial uses as a result of the wastewater irrigation. Therefore, based on the information reviewed during the drafting of this permit, and the fact that the facility does not discharge, no reasonable potential to cause or contribute to an excursion of this criterion exists.
- (b) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses. Please see (a) above as justification is the same.
- (c) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses. Please see (a) above as justification is the same.
- (d) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life. Please see (a) above as justification is the same.
- (e) There shall be no significant human health hazard from incidental contact with the water. Please see (a) above as justification is the same.
- (f) There shall be no acute toxicity to livestock or wildlife watering. Please see (a) above as justification is the same.
- (g) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community. Please see (a) above as justification is the same.
- (h) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247. The discharge from this facility is made up of compost wastewater. No evidence of an excursion of this criterion has been observed by the Department in the past and a facility has not disclosed any other information related to the characteristics of the discharge on their permit application which has the potential to cause or contribute to an excursion of this narrative criterion. Additionally, any solid

wastes received or produced at this facility are wholly contained in appropriate storage facilities, are incorporated for composting promptly and are not discharged. For facilities composting biosolids/sludge, any discharge is subject to Standard Conditions Part III, which contains requirements for the management and disposal of sludge to prevent its discharge. Therefore, this discharge does not have reasonable potential to cause or contribute to an excursion of this criterion.

**SCHEDULE OF COMPLIANCE (SOC):**

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

Not Applicable: This permit does not contain a Schedule of Compliance.

**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.

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

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

A SWPPP identifies BMPs that are reasonable and effective, taking into account environmental impacts and costs. BMPs are measures or practices used to reduce the amount of pollution entering waters of the state. BMPs may take the form of a process, activity, or physical structure. EPA developed fact sheets on the pollutants of concern for specific industries along with the BMPs to control and minimize stormwater (<https://www.epa.gov/npdes/industrial-stormwater-fact-sheet-series>.) Along with EPA's fact sheets, the International Stormwater BMP database ([www.bmpdatabase.org/index.htm](http://www.bmpdatabase.org/index.htm)) may provide guidance on BMPs appropriate for specific industries.

The plan may include, but is not limited to, treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Not Applicable: At this time, the permittee is not required to develop and implement a SWPPP. However, minimum BMPs are prescribed in the REQUIREMENTS section of this permit.

**VARIANCE:**

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

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

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

Per 10 CSR 20-7.031(1)(FF), a toxicity test conducted under specified laboratory conditions on specific indicator organism; and per 40 CFR Section 122.2, the aggregate toxic effect of an effluent measured directly by a toxicity test. A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with, or through synergistic responses when mixed with receiving stream water.

Not Applicable: At this time, the facility is not required to conduct a WET test.

**PART IV – MONITORING AND REPORTING**

Monitoring is included to demonstrate the proper operation of the facility. Low-rate compost land application or wastewater irrigation does not have the potential to cause violations of water quality standards in surface or groundwater. However, daily visual inspection while in operation is required to assure that there are no malfunctions that would cause wastewater to be discharged to waters of the state.

**BIOSOLIDS FEEDSTOCK EFFLUENT LIMITATIONS FOR TABLE A**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	ANNUAL AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Arsenic	mg/kg	1	41.0		41.0	NO	
Cadmium	mg/kg	1	39.0		39.0	NO	
Chromium	mg/kg	1	1,200.0		1,200.0	NO	
Copper	mg/kg	1	1,500.0		1,500.0	NO	
Lead	mg/kg	1	300.0		300.0	NO	
Mercury	mg/kg	1	17.0		17.0	NO	
Molybdenum	mg/kg	1	18.0		18.0	NO	
Nickel	mg/kg	1	420.0		420.0	NO	
Selenium	mg/kg	1	36.0		36.0	NO	
Zinc	mg/kg	1	2,800.0		2,800.0	NO	

**STORAGE BASIN OPERATIONAL MONITORING FOR TABLE B**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	ANNUAL AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Freeboard	feet	1	*		*	NO	
Precipitation	inches	1	*		*	NO	

\* Monitoring requirement only

**EMERGENCY BYPASS EFFLUENT LIMITATIONS FOR TABLE C**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	gpd	1	*	NO	
Biochemical oxygen Demand (BOD <sub>5</sub> )	mg/L	1	45	NO	
Total Suspended Solids (TSS)	mg/L	1	100	NO	
pH	SU	1	6.5 – 9.0	NO	
Ammonia as N	mg/L	2, 3, 5	*	NO	
<i>Escherichia coli</i> ( <i>E. coli</i> )**	#/100 mL	1, 2	*	NO	
Nitrate + Nitrite as N	mg/L	1, 2	*	NO	
Oil & Grease	mg/L	1	15	NO	

\* Monitoring requirement only

**LAND APPLICATION OPERATIONAL MONITORING AND EFFLUENT LIMITATIONS FOR TABLE D**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Total Kjeldahl Nitrogen as N	mg/L	1, 2	*		*	NO	
Ammonia Nitrogen as N	mg/L	2, 3, 5	*		*	NO	
Nitrate + Nitrite	mg/L	1, 2	*		*	NO	
Total Phosphorus	mg/L	1, 2	*		*	NO	
pH	SU	1, 2	6.5 – 9.0		6.5 – 9.0	NO	

Basis for Limitations Codes:

- |  |                                |                                   |
|--|--------------------------------|-----------------------------------|
| 1. State or Federal Regulation/Law     | 5. Ammonia Policy              | 9. TMDL or permit in lieu of TMDL |
| 2. Water Quality Standard              | 6. Antidegradation Policy      | 10. WET Test Policy               |
| 3. Water Quality Based Effluent Limits | 7. Water Quality Model         |                                   |
| 4. Lagoon Policy                       | 8. Best Professional Judgement |                                   |

## **DERIVATION AND DISCUSSION OF LIMITS:**

### **BIOSOLIDS FEEDSTOCK EFFLUENT LIMITATIONS**

All Parameters: For facilities using biosolids, septage or sludge in any amount, metals are limited to the low metals concentration in 40 CFR Part 503. The low metals concentration biosolids have reduced requirements because the feedstock is higher quality, which makes them appropriate for inclusion in a general permit. These biosolids may be safely applied at agronomic rates for 100 years or longer provided the cumulative application of biosolids does not exceed 500 dry tons per acre per Standard Conditions Part III, Section G, Table 2, dated March 1, 2015 and 40 CFR Part 503.

### **LAND APPLICATION OPERATIONAL MONITORING**

This permit authorizes land application/wastewater irrigation of compost wastewaters for beneficial reuse, as soil conditioners and fertilizers. Limits on quantity and quality of land applied/irrigated materials may be established to protect soil health and productivity, as well as prevent water pollution from stormwater runoff. If land application/wastewater irrigation 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 site-specific permit is required for any proposed disposal site, and a permit (or modification of an applicable permit) from the Solid Waste Management Program may be required.

Operational monitoring is required to demonstrate proper operation of a no-discharge facility, and to document that excessive nutrients are not land applied. Excessive nutrients are nutrients applied at greater than the agronomic rate. Excessive metals are predicated by the application of metals-containing effluent that exceed the pound per acre limits in Table 3 of the Water Quality Guide Sheet 425 found at: <http://extension.missouri.edu/p/WQ425>. For facilities covered under this permit, excessive nutrients and metals are not anticipated due to the dilute nature of stormwater entering the basin.

**Total Kjeldahl Nitrogen as N.** Monitoring requirement only. Monitoring required to ensure that agronomic rates are not exceeded and for the protection of groundwater.

**Total Ammonia Nitrogen.** Monitoring requirement only. Monitoring for ammonia are included to determine whether reasonable potential to exceed water quality standards exists.

**Nitrate + Nitrite.** Monitoring requirement only. Monitoring required to ensure that agronomic rates are not exceeded.

**Total Phosphorus.** Monitoring requirement only. Monitoring required to ensure that agronomic rates are not exceeded.

**pH.** Limited to the range of 6.5-9.0 to protect soil health and condition, 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, 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.

### **WASTEWATER IRRIGATION**

Operational monitoring is necessary to demonstrate compliance with permit requirements.

**Application Rate.** Per 10 CSR 20-8.020(15)(F)6., hourly application rates shall not exceed one half (1/2) inch per hour. Surface application rates shall not exceed 1.0 inch per day, 3.0 inches per week, or 24 inches per year

**Application Area.** Monitoring requirement only. Area in acres is included to determine if proper irrigation is occurring on irrigation fields.

**Volume Irrigated.** Monitoring requirement only. The number of gallons of wastewater irrigated is included to determine if proper irrigation is occurring on irrigated fields. Wastewater shall be irrigated during suitable conditions so that there is no discharge from the storage basin, holding tanks, or irrigation site. The permittee is expected to take all necessary steps to ensure wastewater is applied in accordance with the requirements of this permit.

**Irrigation Period.** Monitoring requirement only. Monitoring of the irrigation period is included to determine if proper irrigation is occurring on the irrigation fields.

**STORAGE BASINS**

**Freeboard.** Measured as a margin of safety expressed in number of feet the wastewater surface is below the emergency spillway. A proper amount of freeboard may compensate for unanticipated factors that would otherwise lead to an emergency bypass.

**Precipitation.** Monitoring is required to ensure appropriate irrigation is conducted to account for accumulated water in the storage basin.

**EMERGENCY BYPASS MONITORING**

Emergency bypass monitoring is required daily when a facility has a bypass for the amount of flow, Biochemical Oxygen Demand<sub>5</sub>, Total Suspended Solids, pH, Total Ammonia Nitrogen; *E. coli*, Nitrate + Nitrite, and Oil and Grease. These parameters 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. All samples shall be collected as grab samples. pH samples cannot be preserved and must be sampled in the field. Monitoring shall be reported using the eDMR system where applicable and results are due on the 28<sup>th</sup> day of the month after the cessation of the discharge. No reports are due if an emergency bypass has not occurred.

Any unanticipated bypass may endanger public health or the environment. If a bypass occurs, the permittee shall report to the appropriate Department regional office in accordance with 40 CFR 122.41(m)(3) and Standard Conditions Part I as soon as possible but always within 24 hours of the bypass commencement. An emergency bypass may occur only when ambient rainfall exceeds the 10-year, 365-day rainfall event or the 25-year, 24-hour rainfall event according to National Weather Service data. Design Storm Maps and Tables can be found at

[http://ag3.agebb.missouri.edu/design\\_storm/](http://ag3.agebb.missouri.edu/design_storm/) or [http://hdsc.nws.noaa.gov/hdsc/pfds/pfds\\_map\\_cont.html?bkmrk=mo](http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=mo).

Facilities are expected to make all reasonable attempts to return the water level in the basin to below the maximum capacity to halt or avoid a bypass.

**Flow.** In accordance with 40 CFR Part 122.44(i)(1)(ii), the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the facility is unable to obtain effluent flow, then it is the responsibility of the facility to inform the Department, which may require the submittal of a permit modification.

**Biochemical Oxygen Demand (BOD<sub>5</sub>).** Effluent limitations have been established consistent with other industrial stormwater facilities. These limits are considered protective of water quality standards, particularly since these facilities are only authorized to discharge as a result of catastrophic or chronic rainfall event.

**Total Suspended Solids (TSS).** Effluent limitations have been established consistent with other industrial stormwater facilities. These limits are considered protective of water quality standards, particularly since these facilities are only authorized to discharge as a result of catastrophic or chronic rainfall event.

**pH.** Water contaminants shall not cause pH to be outside the range of 6.5-9.0 standard pH units. [10 CSR 20-7.031(4)(E)].

**Total Ammonia Nitrogen.** Monitoring requirement only. Monitoring for ammonia are included to determine whether reasonable potential to exceed water quality standards exists after the discharge begins.

***Escherichia coli (E. coli).*** Discharge shall not contain more than a monthly geometric mean of colonies/100 mL and a daily maximum of colonies/100 mL as set forth in 10 CSR 20-7.031 Table A.

**Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.

**SAMPLING FREQUENCY:**

Sampling frequency is established in accordance with Department policy. Effluent limitations are expressed in a daily maximum and a monthly or annual average. Monthly or yearly monitoring is required depending on the parameter. Results from samples may be submitted as both the daily maximum and the monthly average. If the facility collects multiple samples during any month, the permit requires the facility to submit a monthly average. If no emergency discharges occur during a sampling period, no reporting is necessary. If no land application or wastewater irrigation occurs monitoring and reporting for those parameters is not required. However, storage basin monitoring and reporting is required if a storage basin is present. Only facilities that are composting biosolids, sludge or other domestic waste are required to test for metal parameters in Table A.

**SAMPLING TYPE JUSTIFICATION:**

Due to the discharge being from irrigation from a storage basin, a grab sample is a representative and appropriate sample type. Variation in nutrient concentration is not expected over a 24 hour period.

Metals testing of feedstock comprised of biosolids, sewerage, or sludge, etc. requires a composite sample made up of seven (7) discrete sub-samples in order to gather a representative sample for analysis.

Sampling type has been determined to be appropriate so it has been retained from the previous state operating permit.

**PART V – ADMINISTRATIVE REQUIREMENTS**

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

**PUBLIC NOTICE:**

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

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

- The Public Notice period for this operating permit was held October 27, 2017 – November 26, 2017. No comments were received.

**DATE OF FACT SHEET:** DECEMBER 4, 2017

**COMPLETED BY:**

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