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	MOG220146
Owner: Address:	Green Meadows Farm 5983 Hwy CC Salem, MO 65560
Continuing Authority:	Green Meadows Farm LLC 5983 Hwy CC Salem, MO 65560
Facility Name: Facility Address:	Green Meadows Farm 5983 Hwy CC Salem, MO 65560
Legal Description:	See Page 2
UTM Coordinates:	See Page 2
Receiving Stream:	See Page 2
First Classified Stream - ID#:	See Page 2
USGS# and Sub Watershed#:	See Page 2

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 #0751

All Outfalls - Wastewater, Stormwater, Surface Land Irrigation, and Subsurface Soil Dispersal from the following industries including but not limited to meat first processing (slaughterhouses), meat further processing, renderers, poultry first processors, poultry further processing with SIC Codes #0751, 2011, 2013, 2015, and 2077. These permit conditions incorporate provisions in 40 CFR 432.

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.

May 01, 2025
Issue Date

John Hoke, Director
Water Protection Program

June 30, 2027
Expiration Date

Outfall Number:	001
Legal Description:	Sec. 06, T33N, R07W, Dent County
UTM Coordinates:	610280.478/4160672.483
Receiving Stream:	Tributary to Kissock Creek
First Classified Stream - ID#:	Presumed Use Streams (C) 5027.00
USGS# and Sub Watershed#:	07140102 - 0101

Outfall Number:	002
Legal Description:	Sec. 06, T33N, R07W, Dent County
UTM Coordinates:	610266.508/4160637.876
Receiving Stream:	Tributary to Kissock Creek
First Classified Stream - ID#:	Presumed Use Streams (C) 5027.00
USGS# and Sub Watershed#:	07140102 - 0101

Outfall Number:	003
Legal Description:	Sec. 06, T33N, R07W, Dent County
UTM Coordinates:	610155.065/4160771.544
Receiving Stream:	Tributary to Kissock Creek
First Classified Stream - ID#:	Presumed Use Streams (C) 5027.00
USGS# and Sub Watershed#:	07140102 - 0101

APPLICABILITY

1. This Missouri State Operating Permit (permit) authorizes the discharge of treated process wastewater to waters of the State of Missouri meeting effluent limits, underground injection (UI) of treated wastewater, the discharge of stormwater to waters of the State of Missouri, and land application of wastewater from the Meat Processing industry, including, but not limited to, facilities with the primary Standard Industrial Classification (SIC) Codes or facilities that the Missouri Department of Natural Resources (Department) determines are fundamentally similar to facilities that are under the below SIC Codes:

SIC Code	NAICS Code	Activity
0751	311611	Livestock Services-Slaughtering, Custom (only)
2011	311612	Meat Packing Plants
2013	311613	Sausages and Other Prepared Meat Products
2015	311615	Poultry Slaughtering and Processing
2077	311999	Animal Fats and Oils

   (a) This permit is intended to apply to facilities slaughtering and/or processing meat and meat products. Dog, cat, and other animal feed type manufacturing facilities may be covered if the facility processes primarily meat and the wastewater is fundamentally similar to the wastewater produced by the facilities explicitly listed above; however, this permit is not intended to apply to, and explicitly excludes the following under all circumstances: manufacturers of vegetable, cottonseed, or soybean fats and oils (covered under SIC Industry group 207X); grain product manufacturers; manufacturers of supplements or vitamins; manufacturers of feed concentrates or premixes; seafood production or processing (SIC codes #2091 and #2092); or other food or beverage preparations.
   (b) This permit applies to the following facilities (as defined in Applicability 3 below) discharging wastewater or land applying wastewater:
      (1) Simple and complex slaughterhouses;
      (2) Low-processing and high-processing packinghouses;
      (3) Small processor operations that produce less than 6,000 lbs (2,730 kg) per day of any type or combination of finished products;
      (4) Poultry First Processors slaughtering less than 100 million pounds per year; and
      (5) Poultry Further Processors of less than 7 million pounds per year.
   (c) This permit does not apply to the following facilities (as defined in #3 below) which are discharging wastewater: meat cutters, sausage and luncheon meat processors, ham processors, canned meat processors, or renderers.
   (d) This permit does not apply to poultry first processor facilities slaughtering greater than 100 million pounds per year, or poultry further processor facilities processing more than 7 million pounds per year, which are discharging wastewater.
   (e) This permit covers all SIC codes and sectors listed above, except where specifically excluded by (a), for the discharge of uncontaminated stormwater (see Applicability 4(u) and 4(v) below), regardless of amount of product processed, except facilities with SIC Code #0751, custom slaughtering for individuals, which are not required to obtain a stormwater permit unless the facility has an animal holding area with exposure to stormwater (see EXEMPTIONS AND EXCLUSIONS below).
   (f) This permit covers all SIC codes and sectors listed above for land application, except those specifically excluded by (a), regardless of amount of product processed.
   (g) Land application facilities with design flows greater than 50,000 gallons per day must obtain a site specific permit. Subsurface dispersal or absorption facilities with design flows greater than 1,000 gallons per day must obtain a site specific permit. Wastewater discharging facilities that discharge greater than 1,000 gallons per day to surface water must obtain a site specific permit.
   (h) This permit does not apply to facilities which cure animal hide or produce leather. Land application from these facilities is also not authorized under this permit.
   (i) This permit does not apply to facilities discharging wastewater from processing blood derived from animals slaughtered at locations off-site and then hauled to the permitted site (blood-only processing facilities). It also does not apply to facilities discharging wastewater from the dry, wet, or low-temperature rendering of material derived from animals slaughtered at locations off-site and hauled to the permitted site (rendering-only facilities). However, land application of these two wastewater streams is authorized under this permit; stormwater discharges from facilities processing off-site materials hauled to the permitted processing location are covered under this permit.
   (j) This permit authorizes up to 500 gallons per day of domestic wastewater mixed into the meat processing industrial wastewater.
   (k) This permit covers industrial stormwater associated with meat processing facilities, including, but not limited to, animal holding, animal transfer and transportation, maintenance and washing, and composting.

2. Off-site locations associated with the processing of hides, blood, or any other animal materials (including whole dead animals), must obtain a separate permit, and cannot be covered under one permit shared with another, non-contiguous facility; see the definition of "Operating Location" found in 10 CSR 20-2.010(52).

3. Definitions. This permit incorporates requirements and associated definitions from the Missouri Clean Water Law and associated regulations, as well as the Meat and Poultry Products Effluent Limitation Guideline (ELG) found in 40 CFR 432.
   (a) *Animal Holding Area* means a short or long term, indoor or outdoor, paved or unpaved, live animal holding or handling area, "pen," or cage. Fully-vegetated pastures are not considered animal holding areas.
   (b) *Animal Transfer or Transportation Area* means a live-animal temporary parking or unloading area, including animal comfort parking locations, docks, or off-loading bays.
   (c) *Canned Meat Processor* means an operation which prepares and cans meats (stew, sandwich spreads, or similar products), alone or in combination with other finished products, at rates greater than 6,000 lb (2,730 kg) per day.
   (d) *Complex Slaughterhouse* means a slaughterhouse that provides extensive processing of the by-products of meat slaughtering. A complex slaughterhouse would usually include at least three processing operations such as rendering, paunch and viscera handling, or processing of blood, hide, or hair.
   (e) *Contaminated stormwater* means stormwater, which has been exposed to process wastewater or animal waste. Locations which are considered to discharge contaminated wastewater include areas where unwashed live haul trailers are stored, areas where refrigerator trailers with the potential for drainage of water contaminated with animal blood (red water) are stored, and areas where animal loading and unloading occurs. Track-out from indoor facilities constitutes contamination. This permit does not cover the discharge of contaminated stormwater.
   (f) *Finished Product* means the final fresh or frozen products resulting from the further processing as defined below of either whole or cut-up meat or poultry carcasses.
   (g) *Further Processing* means operations that utilize whole carcasses or cut-up meat or poultry products for the production of fresh or frozen products and may include the following types of processing: cutting and deboning, cooking, seasoning, smoking, canning, grinding, chopping, dicing, forming, breading, breaking, trimming, skinning, tenderizing, marinating, curing, pickling, extruding, or linking.
   (h) *Ham Processor* means an operation producing hams (steaks, roasts, chops, boneless meat, smoked or cured hams, etc.), alone or in combination with other finished products, at rates greater than 6,000 (2,730 kg) per day.
   (i) *High-Processing Packinghouse* means a packinghouse which processes both animals slaughtered at the site and additional carcasses from other sites.
   (j) *Low-processing Packinghouse* means a packinghouse that processes no more, and usually fewer than, the total number of animals slaughtered at that plant.
   (k) *LWK (live weight killed)* means the total weight of animals slaughtered.
   (l) *Meat cutter* means an operation which cuts or otherwise produces fresh meat cuts and related finished products from larger pieces of meat (carcasses or not carcasses) at rates greater than 6,000 lbs (2,370 kg) per day.
   (m) *Meat* means products derived from the slaughter and processing of cattle, calves, hogs, sheep, deer, elk, buffalo, and any meat not listed under the definition of "poultry" below.
   (n) *Packinghouse* means a plant that both slaughters animals and subsequently processes carcasses into cured, smoked, canned, or other prepared meat products.
   (o) *Poultry First Processing* means slaughtering of poultry and producing whole, halved, quarter, or smaller meat cuts.
   (p) *Poultry Further Processing* means further processing of poultry meat cuts into final product as defined in "*Further Processing"* above.
   (q) *Poultry* means products derived from the slaughter and processing of broilers; other young chickens; mature chickens; hens; turkeys; capons; geese; ducks; small game fowl, such as quail, pheasants, or doves; and small game, such as rabbits.
   (r) *Raw material* means the basic input materials to a renderer composed of animal and poultry trimmings, bones, blood, meat scraps, dead animals, feathers, and related usable by-products.
   (s) *Renderer* means an independent or off-site rendering operation, which is conducted separately from a slaughterhouse, packinghouse, or poultry dressing or processing operation, that produces greater than or equal to 10 million pounds a day meat meal; tankage; animal fats or oils; grease; and tallow, but excludes marine oils, fish meal, and fish oils.
   (t) *Sausage and Luncheon Meat Processor* means an operations which cuts fresh meats, grinds, mixes, seasons, smokes, or otherwise produces finished products such as sausage, bologna, luncheon meats, and/or jerky at rates greater than 6,000 lbs (2370 kg) per day.
   (u) *Simple Slaughterhouse* means a slaughterhouse that provides only minimal, if any, processing of the by-products of meat slaughtering. A simple slaughterhouse would include usually no more than two by-product processing operations such as rendering, paunch and viscera handling, or processing of blood, hide, or hair.
   (v) *Slaughterhouse* means a facility that slaughters animals and has as its main product fresh meat as a whole, half, or quarter carcass or small meat cut.
   (w) *Small Processor* means an operation that produces no more than 6,000 lbs (2,370 kg) per day of any type or combination of finished products, such as fresh meat cuts, hams, bacon or other smoked meats, sausage, luncheon meats, stew, canned meats, jerky and/or related products.
   (x) *Tallow* means a product made from beef cattle or sheep fat that has a melting point of 40ºC or greater
   (y) *Tankage* means dried animal by-product residues used in feedstuffs
   (z) *Uncontaminated Stormwater* means stormwater, which has not been exposed directly to process wastewater, raw material, or animal waste.
   (aa) Waterbody Classification 10 CSR 20-7.031(1)(C)2.: Recreation in and on the water.
   WBC = Whole Body Contact recreation where the entire body is capable of being submerged;

WBC-A = Whole body contact recreation that supports swimming uses and has public access;
WBC-B = Whole body contact recreation that supports swimming;
SCR = Secondary Contact Recreation (like fishing, wading, and boating).

4. This permit does not cover lagoons, septic systems, leach fields, or other waste management systems which discharge solely domestic waste. This permit also does not cover land application of solely domestic waste or biosolids. The permittee must obtain a separate permit(s) for these structures and activities or obtain a site-specific permit covering all activities at the site. Discharge or land application of domestic waste up to 500 gallons per day is authorized under this permit if combined with the meat processing wastewater. Land application of this combined wastewater is subject to 40 CFR Part 503 requirements.

5. This permit authorizes the operation of Oil/Water Separators (OWS) for the treatment of process wastewater and stormwater in accordance with all applicable terms and conditions.

6. This permit is not applicable to facilities that discharge wastewater to cold water habitats as defined in 10 CSR 20-7.031(1)(C). Discharge of uncontaminated stormwater is authorized under this permit to cold water habitats. Pavement, truck, or building wash water (including potable, non-potable, with additives, or without additives) is not stormwater. Land application in cold water watersheds is authorized by this permit.

7. This permit does not cover land disturbance activities or the construction of earthen basins or lagoons for holding wastewater.
   (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 earthen 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.

8. This permit does not cover sites discharging or which would discharge wastewater into the watershed of a Metropolitan No-Discharge Stream (10 CSR 20-7.031 Table F).
   (a) Discharge to the watersheds of a Metropolitan No-Discharge Stream is prohibited except uncontaminated cooling water, uncontaminated stormwater flows, permitted stormwater discharges in compliance with permit conditions, and excess wet-weather bypass discharges not interfering with beneficial uses per 10 CSR 20-7.015(5) and 7.031(7). Existing interim discharges may be allowed until interceptors are available within 2,000 feet or a distance deemed feasible by the Department, or unless construction of outfalls to alternative receiving waters not listed in Table F is deemed feasible by the Department.
   (b) This permit authorizes the discharge of uncontaminated stormwater flows in compliance with permit conditions in Metropolitan No-Discharge watersheds.
   (c) This permit authorizes no-discharge land application of wastewater in Metropolitan No-Discharge watersheds.
   (d) This permit authorizes Underground Injection Control (UIC) and subsurface systems to operate in Metropolitan No-Discharge watersheds, as long as the system does not impact the water quality of the watershed and complies with the conditions found in this permit for UIC and subsurface systems.

9. This permit does not authorize wastewater or animal-impacted stormwater surface discharges which are located in a way to allow water to be released, directly or indirectly, into losing streams, sinkholes, caves, fissures, or other openings in the ground which could or do drain into aquifers directly or indirectly per 10 CSR 20-7.015(7). This permit does not authorize discharge of wastewater to a losing stream, sinkhole, or underground injection well, except permitted subsurface dispersal systems. Facility must use one of the alternative no-discharge options, like pump and haul, land application, or authorized discharge to a permitted wastewater treatment facility.

10. This permit does not authorize the *discharge* of industrial or domestic wastewater into the watersheds of lakes and reservoirs designated as L1 in 10 CSR 20-7.031, per 10 CSR 20-7.015(3)(C). This permit does not authorize the discharge of industrial or domestic wastewater (including animal holding area wastewater) within 5 miles of the lakes listed in 10 CSR 20-7.031 Table N, Site-Specific Nutrient Criteria (see Addendum 1, Fact Sheet). If other discharges are found to impact these lakes, a site-specific permit may be required. Discharges to Table Rock Lake are included in this permit, but permittees must first demonstrate that they do not have reasonable potential to exceed the nitrogen site-specific nutrient criteria in the lake; Total Phosphorus limits were established for discharges to Table Rock Lake.

11. This permit does not cover Animal Feeding Operations (AFOs) or Concentrated Animal Feeding Operations (CAFOs).

12. This general permit does not authorize discharges of wastewater within 100 feet up gradient or upstream of any drinking water well or drinking water supply structure, such as an intake.

13. For facilities which would discharge directly to Outstanding State Resource Waters:
    (a) Outstanding State Resource Waters are protected against any degradation in quality as defined in 10 CSR 20-7.015(6)(B) and 7.031(3)(C).
    (b) This permit does not authorize wastewater or animal-impacted stormwater discharges to Outstanding State Resource Waters.
    (c) This permit authorizes non-animal-impacted stormwater discharge facilities to operate and continue to discharge only stormwater so long as no degradation of water quality occurs.
    (d) This permit authorizes no-discharge land application and subsurface systems in the watersheds of Outstanding State Resource Waters, so long as no degradation of water quality occurs and the land application provisions of this permit are followed.

13. 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:
    (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 BMPs.

14. 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.

15. This permit does not authorize the placement of fill materials in floodplains, placement of solid materials into any waterway, the obstruction of stream flow, or changing the channel of a defined drainage course. The facility must contact the U.S. Army Corps of Engineers to determine if a CWA §404 Department of Army permit or §401 water quality certification is required for a project. Facilities shall take precautions to ensure activities do not cause or contribute to an alteration of the stream channel.

16. 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 beneficial uses of the receiving stream;
    (b) The discharger is not in compliance with the conditions of the general permit;
    (c) A Total Maximum Daily Load (TMDL) containing requirements applicable to the discharge(s) is approved.

17. 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.

18. 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.

19. 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; or the Resource Conservation and Recovery Act. Determination of applicability to the above mentioned acts is the responsibility of the permittee.

EXEMPTIONS AND EXCLUSIONS

1. Facilities discharging all effluent (stormwater and wastewater) directly to a combined sewer system (as defined in 40 CFR 122.26 and 40 CFR 35.2005) connecting to a publicly owned treatment works, which has consented to receive such a discharge are exempt from permit requirements.

2. Facilities under SIC Code #0751, custom slaughtering for individuals, are not required to obtain a *stormwater* permit; however, they may still be subject to other permitting requirements contained herein. If these facilities do not discharge or land apply wastewater, a permit is not required. If wastewater is discharged from the site or wastewater is land applied (surface or subsurface), this permit is appropriate for the facility.

3. The land application conditions in this permit 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 are land applied in accordance with the exemption.

4. A facility may be covered for stormwater only or wastewater only under this permit, if the facility is exempted from wastewater permitting or, for a site that has a SIC Code which requires a stormwater permit (see #3 above), has obtained a No Exposure Certification (see next) for stormwater.

5. For stormwater only facilities (no discharge or land application of wastewater or animal-impacted stormwater):
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 that is enclosed on all sides to prevent exposure to rain, snow, snowmelt and/or runoff), the facility may apply for No Exposure Certification in lieu of stormwater permit coverage. If applicable, the facility must submit a No Exposure Certification form (https://dnr.mo.gov/document-search/no-exposure-certification-exclusion-npdes-stormwater-permitting-under-missouri-clean-water-law-mo-780-2828) with the application for permit coverage. No Exposure Certification Guidance may be found at https://dnr.mo.gov/document-search/guidance-no-exposure-certification-exclusion-stormwater-permit-requirements-pub2729/pub2729. Some examples of the no exposure requirements are:
   (a) No animal holding area outside or in areas with exposure to stormwater;
   (b) No outdoor, uncovered composting or animal carcass management areas;
   (c) No land application of wastewater, unless properly exempted from permitting as a fertilizer in accordance with 10 CSR 20-6.015(3)(B)8.
   (d) 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);
   (e) Adequately maintained vehicles are used in material handling; and
   (f) All industrial materials exposed to stormwater consist of final products; other than products that would be mobilized by stormwater [10 CSR 20-6.200(1)(B)16].

7. Facilities may apply for a site-specific permit exemption, including pump and haul and *de minimis* permit exemptions. A *de minims* permit exemption may be appropriate for a no-discharge facility that land applies less than 3,000 gallons of wastewater per year.

EFFLUENT LIMITATIONS, MONITORING AND CONDITIONS- ALL FACILITIES

These Standard and Special Conditions apply to all facilities covered by this permit.

STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Standard Conditions Part I dated August 01, 2014, 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 contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or controls any pollutant not limited in the permit.

2. 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 appropriate 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 Best Management Practices (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) Weekly 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.

3. OWSs covered under this permit must be appropriately operated and sized per manufacturer's or engineering specifications. The facility must maintain OWS sludge removal records for a period of at least five years and provide them to the Department if requested. These records may be maintained in a searchable electronic format. Sludge from the OWS is considered used oil per 10 CSR 25-11.279 and must be disposed of accordingly.

4. 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 appropriate Regional Office as soon as they know or have reason to believe:
   (a) 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 the 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) An 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 the 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 the pollutant in the permit application in accordance with §122.21(g)(7).
      4) The level established by the Department in accordance with §122.44(f).

5. Reporting of Non-Detects:
   (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way the precision and accuracy of the analyzed result can be enumerated.
   (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non-Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
   (c) The permittee shall report the "Non-Detect" result using the less than sign and the minimum detection limit (e.g., <10).
   (d) Where the permit contains a Minimum Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter (conventional, priority pollutants, metals, etc.), then zero (0) is to be reported for the parameter.
   (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
   (f) When calculating monthly averages, one-half of the minimum detection limit (MDL) should be used instead of a zero. Where all data are below the MDL, the "<MDL" shall be reported as indicated in item (C).

6. 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. All reports uploaded into the system shall be reasonably named so they are easily identifiable.

7. The laboratory results of all samples from a discharge collected and analyzed must be retained on site for five years and made available to the Department upon request. Electronic versions of the documents are acceptable.

8. All records required by this permit may be maintained electronically per 432.255 RSMo. These records should be maintained in a searchable format.

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

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

11. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for permit modification or termination or notice of planned changes or anticipated non-compliance does not stay any permit condition.

12. The permittee shall furnish to the Department, within 24 hours unless explicitly granted more time in writing (typically via email), any information which the Department requests to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit; or to determine if the permittee is in compliance with this permit. The permittee shall also furnish to the Department upon request copies of records required to be kept by this permit.

13. This permit does not authorize the facility to accept, treat, or discharge wastewater from other off-site sources or other types of wastewater not covered within this permit.

14. Washing of trucks and trailers is authorized when it meets the following:
    (a) Meandering and sheet drainage is prohibited; and
    (b) Soap, solvent and other chemicals are not used and the washwater is land applied to agricultural fields or pastures without runoff; or
    (c) Washwater is routed to the wastewater treatment system, so long as the system is designed to process this flow, for both volume and pollutants.

15. 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. 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 disposal practices and may justify the application of permit conditions different from or absent in the current permit.

EFFLUENT LIMITATIONS, MONITORING AND CONDITIONS- SELECT FACILITIES

This operating permit includes requirements for different aspects of meat processing facilities. The permittee must comply with all applicable requirements for all areas and activities present at the meat processing facility. The permittee will only receive the applicable Subdivisions to their facilities. For the ease of implementation and comprehension, this permit is separated into the following Subdivisions:

Wastewater Discharges	Subdivision A	Pages 9-13
Earthen Basins/Lagoons	Subdivision B	Pages 14
Subsurface Dispersal (Leach Fields)	Subdivision C	Page 15
Land Application (Surface)	Subdivision D	Pages 16-19
Stormwater (non-animal impacted)	Subdivision E	Pages 20-23
Animal Holding Areas	Subdivision F	Pages 24-26
Animal Transfer, Transportation and Waste Areas	Subdivision G	Pages 27-28
Composting	Subdivision H	Pages 29

If a facility has an applicable subdivision but all impacted stormwater runoff from the applicable subdivision either commingles or mixes with other areas before reaching a single outfall, a single sample may be taken, and the most stringent limit set will apply. The facility is not required to take multiple samples from the same stormwater outfall for different subdivisions. Facilities that are designed in a way that all impacted stormwater run-off is directed to either an earthen basin/lagoon or a subsurface dispersal system (leach fields) will not have to sample for benchmarks. This does not apply to animal holding areas that are subject to an ELG. Animal holding areas have requirements in Subdivision F that must be met for exemption from limit sets MH and PH.

SUBDIVISION A – WASTEWATER DISCHARGING FACILITIES

This subdivision applies to facilities that discharge 1,000 gallons of wastewater or less per day to surface waters. Interim and final limitations are established for meat processors (all meat processing facilities, excluding poultry processors and others explicitly exempted by rule or this permit) and for poultry processors (which includes poultry first and poultry further processing).

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR DISCHARGING FACILITIES:

DISCHARGING WASTEWATER MEAT PROCESSORS	TABLE A-1 INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				
The facility is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance of the Master General Permit and remain in effect for [three (3) years minus one day after the effective date of the Master General Permit] from the effective date of the Master General Permit until October 1, 2022. Such discharges shall be controlled, limited, and monitored by the facility as specified below:					
EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS †	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	SAMPLING FREQUENCY	SAMPLE TYPE
LIMIT SET: MI						
PHYSICAL						
Flow	MGD	*		*	once/month	24 hour total
Temperature	°F	*		*	once/month	measured
CONVENTIONAL						
Biological Oxygen Demand$_5$	mg/L	39		19	once/month	grab
Chlorine ‡	µg/L	*		*	once/month	grab
E. coli ǂ	#/100mL	*		*	once/month	grab
Fecal coliform	#/100mL	400		-	once/month	grab
Oil and Grease	mg/L	19		10	once/month	grab
pH Ω	SU	*		-	once/month	grab
Total Suspended Solids	mg/L	65		32	once/month	grab
NUTRIENTS						
Ammonia as N	mg/L	8.0		4.0	once/month	grab
Nitrate plus Nitrite	mg/L	*		*	once/month	grab
Nitrogen, Total	mg/L	194		134	once/month	grab
Phosphorus, Total	mg/L	*		*	once/month	grab
OTHER						
Chloride	mg/L	*		*	once/month	grab
Chloride plus Sulfate	mg/L	*		*	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE N/A. THE DISCHARGE SHALL NOT CONTAIN FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

Discharging Wastewater Meat Processors	**TABLE A-2 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**				
The facility is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit and as issued under the Master General Permit. In accordance with 10 CSR 20-7.031, the final effluent limitations outlined in Table A-2 must be achieved as soon as possible but no later than **October 1, 2022 + 3 years**. Such discharges shall be controlled, limited, and monitored by the facility as specified below:					
EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS †	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	SAMPLING FREQUENCY	SAMPLE TYPE
OUTFALL: LIMIT SET: MI						
PHYSICAL						
Flow	MGD	*		*	once/month	24 hour total
Temperature	°F	*		*	once/month	measured
CONVENTIONAL						
Biological Oxygen Demand$_5$	mg/L	39		19	once/month	grab
Chlorine ‡	µg/L	19 ML 130		2 ML 130	once/month	grab
E. coli ǂ	#/100mL	ǂ		ǂ	once/month	grab
Fecal coliform	#/100mL	400		-	once/month	grab
Oil and Grease	mg/L	19		10	once/month	grab
pH Ω	SU	6.5 - 9.0		-	once/month	grab
Total Suspended Solids	mg/L	65		32	once/month	grab
NUTRIENTS						
Ammonia as N (April 1 – Sept 30)	mg/L	6.9		0.8	once/month	grab
Ammonia as N (Oct 1 – March 31)	mg/L	6.9		1.8	once/month	grab
Nitrate plus Nitrite	mg/L	*		*	once/month	grab
Nitrogen, Total	mg/L	194		134	once/month	grab
Phosphorus, Total	mg/L	††		††	once/month	grab
OTHER						
Chloride	mg/L	378		188	once/month	grab
Chloride plus Sulfate	mg/L	1,000		*	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE N/A. THE DISCHARGE SHALL NOT CONTAIN FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

Discharging Wastewater Poultry Processors	**TABLE A-3 INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

The facility is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance of the Master General Permit and remain in effect for [three (3) years minus one day after the effective date of the Master General Permit] from the effective date of the Master General Permit October 1, 2022. Such discharges shall be controlled, limited, and monitored by the facility as specified below:

EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS †	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	SAMPLING FREQUENCY	SAMPLE TYPE
OUTFALL: LIMIT SET: PI						
PHYSICAL						
Flow	MGD	*		*	once/month	24 hour total
Temperature	°F	*		*	once/month	measured
CONVENTIONAL						
Biological Oxygen Demand$_5$	mg/L	26		16	once/month	grab
Chlorine ‡	µg/L	*		*	once/month	grab
E. coli ǂ	#/100mL	*		*	once/month	grab
Fecal coliform	#/100mL	400		-	once/month	grab
Oil and Grease	mg/L	14		8	once/month	grab
pH Ω	SU	*		-	once/month	grab
Total Suspended Solids	mg/L	30		20	once/month	grab
NUTRIENTS						
Ammonia as N	mg/L	8.0		4.0	once/month	grab
Nitrate plus Nitrite	mg/L	*		*	once/month	grab
Nitrogen, Total	mg/L	147		103	once/month	grab
Phosphorus, Total	mg/L	*		*	once/month	grab
OTHER						
Chloride	mg/L	*		*	once/month	grab
Chloride plus Sulfate	mg/L	*		*	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY VIA THE DEPARTMENT'S eDMR SYSTEM.
THE FIRST REPORT IS DUE N/A.
THE DISCHARGE SHALL NOT CONTAIN FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

Discharging Wastewater Poultry Processors	TABLE A-4 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					
The facility is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit and as issued under the Master General Permit. In accordance with 10 CSR 20-7.031, the final effluent limitations outlined in Table A-4 must be achieved as soon as possible but no later than **OCTOBER 1, 2022 + 3 years**. Such discharges shall be controlled, limited, and monitored by the facility as specified below:						
EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS †	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	SAMPLING FREQUENCY	SAMPLE TYPE
OUTFALL: LIMIT SET: PI						
PHYSICAL						
Flow	MGD	*		*	once/month	24 hour total
Temperature	°F	*		*	once/month	measured
CONVENTIONAL						
Biological Oxygen Demand$_5$	mg/L	26		16	once/month	grab
Chlorine ‡	µg/L	19 ML 130		2 ML 130	once/month	grab
E. coli ǂ	#/100mL	ǂ		ǂ	once/month	grab
Fecal coliform	#/100mL	400		-	once/month	grab
Oil and Grease	mg/L	14		8	once/month	grab
pH Ω	SU	6.5 - 9.0		-	once/month	grab
Total Suspended Solids	mg/L	30		20	once/month	grab
NUTRIENTS						
Ammonia as N (April 1 – Sept 30)	mg/L	6.9		0.8	once/month	grab
Ammonia as N (Oct 1 – March 31)	mg/L	6.9		1.8	once/month	grab
Nitrate plus Nitrite	mg/L	*		*	once/month	grab
Nitrogen, Total	mg/L	147		103	once/month	grab
Phosphorus, Total	mg/L	††		††	once/month	grab
OTHER						
Chloride	mg/L	378		188	once/month	grab
Chloride plus Sulfate	mg/L	1,000		*	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE N/A. THE DISCHARGE SHALL NOT CONTAIN FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

* Monitoring requirement only.

Ω pH is measured in standard units and is not to be averaged.

ǂ Samples shall be taken during the recreational season from April to October and submitted monthly. The monthly average is determined by calculating the geometric mean of the sample data each month. The following final limits are established:

Waterbody Classification (Within Two Miles of Discharge)	Daily Maximum #/100 mL	Monthly Average (Geometric Mean, #/100 mL)	Limit Set	Sampling Frequency
WBC-A	630	126	WA	monthly
WBC-B	1,030	206	WB	monthly
SCR	5,670	1,134	S	monthly

† If a discharge occurs during the reporting period, samples shall be collected and tested for the parameters listed. Report as no-discharge when a discharge does not occur during the reporting period. If multiple samples are collected and analyzed during the sampling period, the multiple samples are not to be averaged at intervals exceeding one calendar month. The permittee may report 'No-Discharge' if all reasonable attempts to collect a sample throughout the reporting period have resulted in the inability to collect an effluent sample.

†† Daily maximum is monitoring only for all facilities. Phosphorus monthly average is also monitoring only (Limit Set P) for all facilities except the following: Phosphorus monthly average limit of 0.5 mg/L is required for facilities discharging to tributaries of Lake Taneycomo (HUC 110100003) between Table rock Dam and Power Site Dam permitted on or after May 9, 1994; and facilities discharging to Table Rock Lake (HUC 11010001 and 11010002) permitted on or after November 30, 1999. (Limit Set

PL)

‡ Chlorine, Total Residual. This permit contains a Total Residual Chlorine (TRC) limit.
(a) This effluent limit is below the minimum quantification level of the most sensitive EPA approved CLTRC methods. The Department has determined the current acceptable minimum level (ML) for total residual chlorine to be 130 µg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 130 µg/L will be considered violations of the permit and values less than the minimum quantification level of 130 µg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.
(b) For facilities covered by this permit, final limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31. If your location does not require disinfection during the non-recreational months, do not chlorinate in those months.
(c) Do not chemically dechlorinate if it is not needed to meet the limits in your permit.

SCHEDULE OF COMPLIANCE – SUBDIVISION A

Within one (1) year of the effective date of the Master General Permit, existing facilities shall submit a report to the Department's appropriate Regional Office detailing progress made in attaining compliance with final effluent limitations for Biological Oxygen Demand (BOD), Chlorine, Total Suspended Solids, Ammonia, Nitrate, Total Phosphorus, Chloride, and Chloride plus Sulfate, and every 12 months thereafter.

The existing facility shall attain compliance with final effluent limitations for Biological Oxygen Demand (BOD), Chlorine, Total Suspended Solids, Ammonia, Nitrate, Total Phosphorus, Chloride, and Chloride plus Sulfate as soon as reasonably achievable or no later than two (2) years and 364 days after the effective date of the Master General Permit on Date, 20XX.

New facilities (new construction or newly expanded to be a commercial facility) obtaining this permit for the first time must meet the final effluent limitations in this permit at time of permit issuance. The schedule of compliance does not apply to these facilities.

SPECIAL CONDITIONS – SUBDIVISION A

1. Report no discharge when a discharge does not occur during the report period. It is a violation of this permit to report no-discharge when a discharge has occurred.

2. The Department may require sampling and reporting as a result of illegal discharges from the site, compliance issues related to water quality concerns or BMP effectiveness, or evidence of off-site impacts from activities or discharges at the facility.

3. Prior to permit issuance, permittees discharging to Table Rock Lake must demonstrate that their discharge does not have reasonable potential to violate in-lake, site-specific nitrogen nutrient criteria for Table Rock Lake. If sampling indicates that reasonable potential to violate this nitrogen water quality standard, a site-specific permit will be required.

SUBDIVISION B – WASTEWATER EARTHEN STORAGE BASINS

This subdivision applies to facilities that store wastewater in an earthen storage basin.

Monitoring Requirements for Earthen Storage Basins:

Table B-1	Storage Basin Monitoring Requirements				
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:					
Parameter(S)	Units	Monitoring		Monitoring Requirements	
		Daily	Monthly Average	Sampling Frequency	Sample Type
Limit Set: SB					
Storage Basin Freeboard (Minimum) †	feet	*	-	once/month	measured
Precipitation	inches	*	-	daily	24 hour est.
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY VIA THE DEPARTMENT'S EDMR SYSTEM. THE FIRST REPORT IS DUE N/A. IT IS A VIOLATION OF THIS PERMIT TO FAIL TO SAMPLE.					

* Monitoring requirement only.

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

STORAGE BASIN REQUIREMENTS – SUBDIVISION B

1. Per 10 CSR 20 8.200(4)(A), the basin shall have a minimum freeboard of two (2) feet maintained at all times. The minimum and maximum operating water levels for the storage basin shall be clearly marked. Each basin shall be operated so the maximum water elevation does not exceed two feet below the Emergency Spillway except due to exceedances of the 10-year or 25-year, 24-hour storm events according to National Weather Service data. Process wastewater shall be land applied whenever feasible based on soil and weather conditions and permit requirements.

2. 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.

3. Any unauthorized discharge from the wastewater storage basins shall be reported to the Department as soon as possible but always within 24 hours of the facility becoming aware of the discharge. Unauthorized discharges should be reported to the appropriate Regional Office during regular business hours, or to the Department's 24-hour Environmental Emergency Response Hotline at 573-634-2436 outside of regular business hours.

4. Storage Basin Minimum BMPs.
   (a) To maintain structural integrity, 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, animal dens, or other potential sources of damage; and any leaks or issues shall be noted.
   (b) The facility shall ensure adequate provisions are provided to prevent surface water intrusion and run-in into the storage basin(s), divert stormwater runoff from around the storage basin(s), and protect embankments from erosion.
   (c) The minimum and maximum operating water levels for the storage basin(s) shall be clearly marked.
   (d) 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.
   (e) No-discharge storage basins should be lowered to the minimum operating level prior to November 30 each year.
   (f) The treatment facility or extended area (i.e., the entire facility) must be fenced or otherwise have access is restricted.
   (g) It is a violation of this permit to place material in the emergency spillway or otherwise cause it to cease to function properly, as this may result in a catastrophic failure of the storage basin.

SUBDIVISION C – SUBSURFACE DISPERSAL (LEACH FIELDS)

This subdivision applies to facilities that discharge 1,000 gallons wastewater or less per day into an approved subsurface dispersion system.

SPECIAL CONDITIONS FOR SHALLOW SUBSURFACE DISPERSAL:

1. Subsurface Wastewater System(s).
   (a) Subsurface dispersion system(s) under this permit are deemed Class V well(s). All Class V wells shall comply with the reporting requirements of 40 CFR 144.26; an inventory form shall be submitted to the Department of Natural Resources' Missouri Geological Survey. Only one submittal is required for the life of the Class V well.
   (b) The facility shall maintain all service and maintenance records for a period of at least five years. These records shall be made available to Department personnel upon request.
   (c) The facility shall develop, maintain, and implement an Operation and Maintenance (O&M) manual. The manual must include all necessary items to ensure the operation and integrity of the waste handling system, including key operating procedures, an aerial or topographic site map with the feature outlined, and a brief summary of the operation of the facility. The O&M manual shall be made available to the operator. The O&M manual shall be reviewed and updated at least every five years and be made available to Department personnel upon request.
   (d) Subsurface dispersal shall not occur within 100 feet of any well, sinkhole, or losing stream. All systems shall act as a no discharge system and shall not allow effluent to surface, reach waters of the state, effect a stream, or effect any nearby buildings or dwellings.
   (e) Access to subsurface dispersal areas must be controlled to prevent damage from heavy vehicles, livestock, construction, or digging.

2. This permit only authorizes dispersal into approved, shallow, subsurface systems designed by a professional engineer and soil scientist pursuant to design standards in 10 CSR Chapter 8. This permit does not authorize other subsurface discharges that may or may not meet the definition of underground injection.

3. Any pretreatment devices or systems (prior to subsurface dispersion system) must be properly operated and maintained in accordance with the design specifications and plans.

4. The facility must submit engineering designs and as-builts prior to receiving authorization for shallow sub-surface dispersal under this permit.

SUBDIVISION D – WASTEWATER LAND APPLICATION

This subdivision applies to facilities that land apply no more than 50,000 gallons of wastewater per day; facilities land applying more than 50,000 gallons of wastewater per day must obtain a site-specific permit.

LAND APPLICATION MONITORING

TABLE D-1	LAND APPLICATION OPERATIONAL MONITORING REQUIREMENTS					
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:						
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	*	-	-	once/day	total
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE N/A. IT IS A VIOLATION OF THIS PERMIT TO FAIL TO SAMPLE.						

* Monitoring requirement only.

** If land application does not occur during the report period, report as "no discharge". If a facility does not land apply, this limit set will not be assigned.

TABLE D-2	WASTEWATER MONITORING FOR LAND IRRIGATION					
The facility is authorized to conduct land application of 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:						
PARAMETER(S)	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS**	
		Daily Maximum	Weekly Average	Monthly Average	Sampling Frequency	Sample Type
LIMIT SET: LW						
Total Kjeldahl Nitrogen (TKN)	mg/L	*		ǂ	once/year	grab***
Total Phosphorus as P	mg/L	*		ǂ	once/year	grab***
Total Sodium**	mg/L	*		ǂ	once/year	grab***
Total Suspended Solids	mg/L	*		ǂ	once/year	grab***
Total Chloride as Cl	mg/L	*		ǂ	once/year	grab***
pH Ω	SU	*		ǂ	once/year	grab***
Oil and Grease	mg/L	*		ǂ	once/year	grab***
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE N/A. IT IS A VIOLATION OF THIS PERMIT TO FAIL TO SAMPLE.						

ǂ Monitor and report annually. If more than one sample is analyzed, report the average of samples collected during a particular month. In the event no land application occurs during the monitoring period, report "conditional monitoring not required this monitoring period."

* Monitoring requirement only.

** If land application does not occur during the report period, report as "no discharge".

*** Process wastewater which is land applied shall be sampled at the irrigation pump, wet well, or application vehicle.

Ω pH is measured in standard units and is not to be averaged.

LAND APPLICATION REQUIREMENTS – SUBDIVISION D

1. Land application of wastewater and/or sludge materials listed in the Facility Description 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 are land applied in accordance with the exemption.

2. Land owned, operated and used for land application by the permittee must be listed in this permit. Additional land application sites may be used, without permit modification, if:
   (a) The land is owned and operated by a third party and used for agricultural purposes,
   (b) The permittee maintains a map of all of the additional land application sites and the volume of wastewater applied annually,
   (c) No more than three inches (3") of wastewater per acre is applied during one land application event within any 12 month period; the individual land application "event" can last no more than one week,
   (d) Land application practices and rates meet all land application requirements within this permit, except electronic reporting, and
   (e) The volume and location(s) of all additional land application activities must be maintained in an annual Land Application Operational Summary report, provided within 48 hours of department request.

3. Land Application Equipment Minimum Requirements, if applicable.
   (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 over the entire land application site.
   (c) Equipment should be calibrated at least once per calendar year to assure even distribution of wastewater.

4. Land Application Field(s) Minimum Requirements.
   (a) Land application activities shall not result in a discharge of process wastewater from land application fields
   (b) No land application shall occur when the soil or ground is frosted, frozen, snow covered, or saturated.
   (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) If land application sites listed in this permit are also included as land application sites in another permit, the wastewater and sludge applications from all sources shall be included in the application rates in the facility description. Records for all sources must be kept for all permits.
   (f) Grazing and Harvesting Deferment.
      i. May 1 to October 31, the minimum grazing or forage harvest deferment shall be fourteen (14) days from application;
      ii. November 1 to April 30, the minimum grazing or forage harvest deferment shall be thirty (30) days from application;
      iii. If deferment period spans two timeframes, the minimum grazing or forage harvest deferment shall be thirty (30) days from most recent application.
      iv. Lactating dairy animal grazing is generally not recommended for application areas unless there has been a much longer deferment period.
   (g) 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.
   (h) Land application fields shall be checked daily during land application for runoff. Application activities shall cease if these conditions occur.
   (i) Sites utilizing spray irrigation shall monitor for the drifting of spray across property lines. Spray drift is not permissible.
   (j) Setback distances from sensitive features per 10 CSR 20-8.200(6)(B). There shall be no land application within:
      i. The 10 year floodplain;
      ii. 50 feet inside of the property line;
      iii. 100 feet of any classified or unclassified gaining perennial or intermittent stream, any wetland, or any public or privately owned pond or lake;
      iv. 150 feet of any dwelling, residence, public building, or public use area (excluding roadways);
      v. 300 feet of any potable water supply well not located on the property, adequate protections shall be implemented and maintained for any potable water supply well located within the application area;
      vi. 300 feet from any sinkhole, losing stream, or any other physiographic structure with a conduit to groundwater;

5. 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 may need to reduce application of wastewaters and/or sludges. If phytotoxicity is observed, the facility shall cease land application activities and evaluate the applied substances to determine the cause of phytotoxicity. This permit does not authorize land disposal or the application of hazardous waste.
   (b) The application rate shall not exceed twenty-four inches (24") per year, three inches (3") per week, and one inch (1") per day.
   (c) Wastewater application on slopes exceeding 10%:
      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.
   (d) Applications shall not exceed any agronomic rates 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.
   (e) Runoff and ponding is prohibited.
   (f) The fertilizer recommendation shall be based on all of the following:
      1) The nutrient recommendation (nitrogen or phosphorus) for each crop. Nutrient recommendations can be found in University of Missouri Extension Guide WQ430 Crop/Nutrient Considerations for Biosolids or University of Missouri Extension Guide EQ202 Land Application Considerations for Animal Manure 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.
   (g) Applications shall be conducted according to one the following nutrient based management practices. The chosen method is required to be the most stringent (not over-applying one pollutant).
      1) Nitrogen:
         (i) Plant Available Nitrogen (PAN) based application. This method can be used when soil test phosphorus (P) levels are 120 pounds or less per acre using Bray P-1 test method, or if the field has been assessed by Missouri Phosphorus Index (P-index) with a low or medium rating. The amount of wastewater and/or sludge to be applied shall be adjusted annually based on the PAN calculation using the current wastewater and/or sludge nutrient analysis and the following:
         (ii) For non-legume crops, the nitrogen fertilizer recommendation shall be adjusted to account for nitrogen credits from a preceding legume crop and residual nitrogen from the previous year's application. Nitrogen removal rates can be found in WQ430.
         (iii) For legume crops, the nitrogen removal capacity of the legume crops should be based on the estimated nitrogen content of the harvested crop as defined in WQ430 and a realistic yield goal. The estimated nitrogen content of the crop must be adjusted using nitrogen credits for residual nitrogen fertilizer from the previous year's application.
         (iv) PAN = [Ammonia Nitrogen x volatilization factor*] + [Organic Nitrogen x 0.2] + [Nitrate Nitrogen]
         *Volatilization factor is 0.7 for surface application and 1 for subsurface application.
         (v) The amount of wastewater and/or sludge applied shall not exceed the nitrogen fertilizer recommendation or the estimated nitrogen removal capacity of the planned crop during the year of the application;
      2) Phosphorus:
         (i) This method must be used when soil test phosphorus (P) levels are above 120 pounds per acre using Bray P-1 test method, or if the P-index rating is high. The amount of wastewater and/or sludge to be applied shall be adjusted annually based the phosphorus content of the current wastewater and/or sludge nutrient analysis and may be applied according to one of the following methods;
         (ii) The annual amount of phosphorus applied shall not exceed the planned crop's phosphorus removal estimate from WQ430, or from publications by other land grant universities in adjoining states; or,
         (iii) Multi-year phosphorus applications. Wastewater and/or sludge applications can exceed the annual planned phosphate removal estimate for the crop when a multi-year phosphorus application is utilized. The multi-year application must comply with the following conditions:
         (iv) The amount of phosphorus banked shall not exceed four years of the estimated crop removal rate for the planned crop rotation;
         (v) The actual application rate shall not exceed the multi-year application rate; and
         (vi) No additional applications shall occur until the applied phosphorus has been removed from the field by crop removal or harvest.
         (vii) No land application can occur if the P-index rating for a field is very high.

6. Soil Monitoring.
   (a) Composite soil samples shall be collected every five years from each field listed in this permit where land application has occurred in the last 12 months. No land application shall occur on fields listed in this permit if soil sample results are more the five years old. Sample results shall be maintained on site and provided upon request.
   (b) Soil sampling shall be in accordance with University of Missouri (MU) Guides G9215, Soil Sampling Pastures or G9217, Soil Sampling Hayfields and Row Crops or other methods approved by the Department. The recommendation of one composite sample per 20 acres in G9215 and G9217 is not required by this permit; however, this is a useful method to identify soil fertility fluctuations in large fields due to past management practices, soil type, and variability of crop yields. There shall be at least one composite sample per 80 acres.
   (c) Testing shall conform to Recommended Chemical Soil Testing Procedures for North Central Region (North Central Regional Research Publication 221 Revised), Soil Testing in Missouri (MU Extension Guide EC923), or other methods approved by the Department.

7. Record Keeping. The following record keeping shall occur, be maintained for at least five years, be made available to the Department upon request, and shall be submitted with the application for renewal. 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, effluent analysis performed (including analytical result laboratory pages), and any clean-up actions taken.
   (h) To assure 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).
   (j) For fields where total nitrogen application exceeded 150 pounds per acre, the facility must submit PAN calculations to document the applied nitrogen was utilized.

8. The process wastewater land application system shall be operated so as to provide uniform distribution of process wastewater over the entire irrigation site.

9. These requirements do not supersede nor remove liability for compliance with county and other local ordinances.

SUBDIVISION E – NON-ANIMAL IMPACTED STORMWATER

This subdivision applies to meat processing facilities which require a stormwater permit in accordance with 10 CSR 20-6.200 and do not have a current no-exposure certification approved by the Department. This subdivision also applies to all facilities covered under Subdivisions F, and G. If the facility activities in the outfall area include animal holding, animal transfer, animal waste storage or other potential animal (alive, dead, processed) impacts, the facility must also meet requirements in Subdivision F or G, as appropriate.

STORMWATER MONITORING REQUIREMENTS

TABLE E-1	BENCHMARKS AND MONITORING REQUIREMENTS			
The facility is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The benchmarks shall become effective upon issuance of the permit and remain in effect until the expiration of the permit. Such discharges shall be controlled, limited, and monitored by the facility as specified below:				
DISCHARGE PARAMETER(S)	UNITS	BENCHMARK	SAMPLING FREQUENCY	SAMPLE TYPE
LIMIT SET: Q				
Flow	MGD	*	once/year	grab
pH Ω	SU	6.0 – 9.0	once/year	grab
Oil and Grease	mg/L	10	once/year	grab
Total Suspended Solids	mg/L	100	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE JANUARY 28, 2026. IT IS A VIOLATION OF THIS PERMIT TO FAIL TO SAMPLE.				

* Monitoring requirement only.

Ω pH is measured in standard units and is not to be averaged.

*** If a discharge occurs during the reporting period, samples shall be collected and tested for the parameters listed in Table A-3. Report as no-discharge when a discharge does not occur during the reporting period. If multiple samples are collected and analyzed during the sampling period, the multiple samples are not to be averaged.

STORMWATER REQUIREMENTS

1. This permit specifies pollutant benchmarks applicable to the facility's discharge. The benchmarks do not constitute direct numeric effluent limitations. Benchmark exceedances alone, therefore, are not a permit violation. The facility shall develop and implement a Stormwater Pollution Prevention Plan (SWPPP) as explained in more detail later in this section. Benchmark monitoring data are primarily to determine the overall effectiveness of the SWPPP and to assist the facility in knowing when additional corrective action may be necessary.

   If a sample exceeds a benchmark, the facility must review the SWPPP and BMPs to determine what improvements or additional controls are needed to reduce the pollutant in the stormwater discharge(s). Additionally, when a benchmark exceedance occurs a Corrective Action Report (CAR) must be completed and documented in the SWPPP. A CAR is a document that records the efforts undertaken by the facility to improve BMPs to meet benchmarks in future samples. If the efforts taken by the facility are not sufficient and subsequent exceedances of a benchmark occur, the facility may demonstrate to the Department a benchmark value cannot be achieved.
   The demonstration must include rationale and supporting documentation (which would include multiple CARs) and must show a benchmark value cannot be achieved through the application of BMPs representing available practicable technology. Additionally, the demonstration must show the benchmark is not feasible because no further pollutant reductions are technologically available and economically practicable in light of best industry practices. This demonstration must be presented to the Department for review and approval. Failure to improve BMPs or take corrective action to address a benchmark exceedance and failure to make tangible progress towards achieving a benchmark is a permit violation, unless the permittee has demonstrated to the Department a benchmark value cannot be achieved and an alternative benchmark is approved, or in the process of being approved, by the Department. Exceedances believed to be the result of legacy chemical use at the facility are not exempted from this requirement. Facilities are encouraged to contact the Department to formulate a plan for investigation and clean-up if legacy chemical use is suspected to be the cause of exceedances.

2. If/when a sample of stormwater is collected:
   (a) Precipitation events include rainfall as well as run-off from the melting of frozen precipitation.
   (b) For flow-through BMPs, stormwater samples shall be collected within the first 60 minutes of discharge occurring as a result of precipitation events exceeding 0.1 inches during a 24-hour period, if possible.
   (c) For retention BMPs, stormwater samples shall be collected only when a discharge occurs and, if possible, shall be taken from the outfalls. Dip sampling of effluent in retention structures should not be performed.
   (d) Stormwater samples shall be collected prior to leaving or at the property boundary or before the discharge enters waters of the state on the property.

   More information on stormwater sampling may be found in the following document: Industrial Stormwater Monitoring and Sampling Guide (Document number: EPA 832-B-09-003) published by the Environmental Protection Agency (EPA) in March 2009, https://www.epa.gov/sites/default/files/2015-11/documents/msgp_monitoring_guide.pdf.

3. If data becomes available indicating existing water quality will be protected by alternative benchmarks specific to this industry, the Department may propose to incorporate those benchmarks into the master general permit as part of a future permit action (e.g renewal or modification. Such data must be approved by the Department as appropriate and representative before it can be considered.

4. This permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). When applying for coverage under this permit, a SWPPP including an Alternative Analysis of the BMPs must be developed, implemented, and maintained at the facility. Failure to implement and maintain the chosen alternative, which can be revised and updated, is a permit violation. The Alternative Analysis is a structured evaluation of BMPs to determine which are reasonable and cost effective. The analysis should include practices designed to be 1) non-degrading 2) less degrading, or 3) degrading water quality. The chosen BMP will be the most reasonable and cost effective while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The analysis must demonstrate why "no discharge" or "no exposure" are not feasible alternatives at the facility. Existing facilities with established SWPPPs and BMPs need not conduct an additional alternatives analysis unless new BMPs are established to address BMP failures. This structured analysis of BMPs serves as the Antidegradation review, fulfilling the requirements of 10 CSR 20-7.015(9)(A)5 and 7.031(3).

5. The permittee shall select, install, use, operate, and maintain the BMPs prescribed in the SWPPP in accordance with the concepts and methods described in the following document*: Developing Your Stormwater Pollution Prevention Plan, a Guide for Industrial Operators*, (Document number EPA 833-B-09-002) published by the United States Environmental Protection Agency (EPA) in in June 2015. https://www.epa.gov/sites/default/files/2021-03/documents/swppp_guide_industrial_2021_030121.pdf. (General information may also be found at https://www.epa.gov/npdes/industrial-stormwater-guidance.).
   (a) **New Facilities:** The new SWPPP for the facility must be prepared within 60 days and implemented within 180 days of permit issuance.
   (b) **Existing Facilities**: The existing SWPPP for your facility must be reviewed, revised as necessary, and implemented within 30 days of reissuance of coverage.
   (c) **Expanding Facilities:** The existing SWPPP for the facility, including the Alternative Analysis, must be reviewed and revised as necessary. Once expansion occurs the revised SWPPP must be implemented within 30 days of permit modification.

6. The SWPPP must be kept on site (either electronically or paper copy), readily available upon request, and should not be sent to the Department unless specifically requested. Throughout coverage under this permit, the facility must perform SWPPP review and revision to incorporate any significant site condition changes which impact the nature and condition of stormwater discharges.

7. For all facilities the SWPPP must include the following:
   (a) An assessment of all stormwater discharges associated with the facility, facility activities, and facility materials. This assessment must include a list of potential contaminants and an annual estimate of amounts used and/or produced in the described activities.
   (b) A listing of BMPs and a narrative explaining how the BMPs will be implemented to control and minimize the amount of potential contaminants entering stormwater.
   (c) A site map, or multiple maps, if necessary, showing the following:
      (1) Boundaries of the property and the size of the property in acres;
      (2) Location and extent of significant structures and impervious surfaces;
      (3) Direction of stormwater flow (use arrows), marking areas where high potential for soil erosion are found;
      (4) Location of all permitted features, outfalls, structural BMPs, and other stormwater control measures;
      (5) Location of all stormwater conveyances including ditches, pipes, and swales;
      (6) Location of potential stormwater pollutant sources;
      (7) If applicable, municipal separate storm sewer systems (MS4s) and where stormwater from the facility discharges to them;
      (8) Locations of the following activities which are exposed to precipitation:
         i. Fueling stations;
         ii. Vehicles and equipment maintenance and/or cleaning areas;
         iii. Loading and unloading areas;
         iv. Locations used for the treatment, storage, or disposal of wastes;
         v. Salt storage areas (salt used for de-icing or other commercial or industrial purposes);
         vi. Liquid storage tanks, noting whether they have secondary containment; and
         vii. Processing and storage areas.
      (9) Locations and sources of run-on to your site from adjacent property that may contain significant quantities of pollutants.
      This map shall be updated as needed to reflect current BMPs in use. Outfalls do not need to be marked in the field. The map does not need to be printed on paper. Electronic or other accessible maps will be considered adequate compliance with this condition.
   (d) A schedule for monthly site inspections and a brief written report, which includes the name of the inspector, the signature of the inspector, and the date. The inspections must include observation and analysis of BMP effectiveness, deficiencies, and corrective action to be taken.
      (1) At a minimum, the following areas must be inspected:
         i. Disturbed areas;
         ii. Stormwater controls and pollution prevention measures;
         iii. Locations where stabilization measures have been implemented;
         iv. Material, waste, borrow, or equipment storage and maintenance areas;
         v. Areas where stormwater flows; and
         vi. Points of discharge.
      (2) During inspections, at the minimum, the following must be checked:
         i. Whether all BMPs are installed, operational, and working as intended;
         ii. Whether any new or modified stormwater controls are needed;
         iii. Facilities examined for conditions that could lead to a spill or leak; and
         iv. Facility examined for visual signs of erosion or sedimentation at outfalls. Excessive erosion or sedimentation may be due to BMP failure or insufficiency. Response to the excessive erosion or sedimentation should be addressed in the inspection report.
      (3) Operational deficiencies must be corrected within seven (7) days and must be documented in the inspection report.
      (4) Minor structural deficiencies must be corrected within fourteen (14) calendar days and must be documented in the SWPPP records.
      (5) For major structural deficiencies which are projected to take longer than fourteen (14) calendar days to correct, the facility may submit a written request to the Department's appropriate Regional Office justifying additional time, if necessary, to complete corrective action. If required by the Department, the permittee shall work with the appropriate Regional Office to determine the best course of action. The permittee should consider temporary structures to control stormwater runoff. The facility shall correct the major structural deficiency as soon as reasonably achievable.
      (6) BMP failure causing discharge through an unregistered outfall is considered an illicit discharge and must be reported in accordance with Standard Conditions Part I. https://dnr.mo.gov/document-search/standard-conditions-npdes-permits-aug-1-2014-part-i
      (7) Inspection reports must be kept with the SWPPP and must be made available to the Department within 48 hours of request.
   (e) A provision for evaluating benchmarks/effluent limitations established in this permit.

8. The following minimum BMPs must be implemented at all facilities:

(a) Collection facilities shall be provided on site and arrangements made for proper disposal of waste products, including, but not limited to, crude glycerin, petroleum waste products, and solvents, which may be exposed to stormwater.
(b) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of stormwater from these substances.
(c) Provide collection facilities on site and arrange for proper disposal of waste products including, but not limited to, petroleum waste products solid waste, de-icing/anti-icing products, and solvents.
(d) Store all paints, solvents, petroleum products, petroleum waste products, and storage containers (such as drums, cans, or cartons) so they are not exposed to stormwater or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of stormwater with container contents. Commingled water may not be discharged under this permit. Provide spill prevention, control, and countermeasures to prevent any spill of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall prevent the contamination of groundwater.
(e) Provide sediment and erosion control sufficient to minimize sediment loss off of the property, pollution of waters of the state, and to comply with the conditions of this permit, Missouri Clean Water Law, and the CWA. This may require the use of straw bales, silt fences, sediment basins, or other treatment structures. This may require the construction of properly designed sediment basins or other treatment structures
(f) Provide good housekeeping practices on site to keep solid waste from entering waters of the state.

SUBDIVISION F – ANIMAL HOLDING AREAS

This Subdivision F applies to wastewater from animal holding areas, including precipitation and other runoff in areas impacted by animal holding areas, including but not limited to pens, cages, tie-lines, which are not wholly and completely enclosed, covered and contained with no stormwater ingress or egress and the waste is collected and used as fertilizer or discharged to a permitted wastewater treatment facility. This does not apply to animals held on fully-vegetated pastures or fields. A facility may get a determination that Subdivision F is not applicable for their animal holding areas if the area is wholly and completely enclosed, covered and contained with no stormwater ingress or egress and the waste is collected and used as fertilizer or discharged to a permitted wastewater treatment facility. The Appropriate Departmental Office will work with facilities to make an applicability determination.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR ANIMAL HOLDING AND LIVE ANIMAL OFFLOADING AREAS:

Animal Impacted Stormwater Meat Processors	**TABLE F-1 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**					
The facility is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance of the Master General Permit. Such discharges shall be controlled, limited, and monitored by the facility as specified below:						
EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS		BENCHMARK	MONITORING REQUIREMENTS †	
		DAILY MAXIMUM	MONTHLY AVERAGE		SAMPLING FREQUENCY	SAMPLE TYPE
OUTFALL: LIMIT SET: MH						
PHYSICAL						
Flow	MGD	*	-	-	once/quarter ◊	24 hour est
CONVENTIONAL						
Biological Oxygen Demand$_5$	mg/L	39	19		once/quarter ◊	grab
E. coli ǂ	#/100mL	ǂ	ǂ	-	once/quarter ◊	grab
Fecal coliform	#/100mL	400		-	once/quarter ◊	grab
Oil and Grease	mg/L	19	10	-	once/quarter ◊	grab
pH Ω	SU	*	*	-	once/quarter ◊	grab
Total Suspended Solids	mg/L	65	32	-	once/quarter ◊	grab
NUTRIENTS					once/quarter ◊	
Ammonia as N (April 1 – Sept 30)	mg/L	6.9	0.8	-	once/quarter ◊	grab
Ammonia as N (Oct 1 – March 31)	mg/L	6.9	1.8	-	once/quarter ◊	grab
Nitrogen, Total	mg/L	194	134	-	once/quarter ◊	grab
Phosphorus, Total	mg/L	††	††	-	once/quarter ◊	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE N/A. THE DISCHARGE SHALL NOT CONTAIN FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

Animal Impacted Stormwater Poultry Processors	**TABLE F-2** **FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**					
The facility is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance of the Master General Permit. Such discharges shall be controlled, limited, and monitored by the facility as specified below:						
EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS		BENCHMARK	MONITORING REQUIREMENTS †	
		DAILY MAXIMUM	MONTHLY AVERAGE		SAMPLING FREQUENCY	SAMPLE TYPE
OUTFALL: LIMIT SET: PH						
PHYSICAL						
Flow	MGD	*	-	-	once/quarter ◊	24 hour est
CONVENTIONAL						
Biological Oxygen Demand$_5$	mg/L	26	16		once/quarter ◊	grab
E. coli ǂ	#/100mL	ǂ	ǂ	-	once/quarter ◊	grab
Fecal coliform	#/100mL	400	-	-	once/quarter ◊	grab
Oil and Grease	mg/L	14	8	-	once/quarter ◊	grab
pH Ω	SU	6.5-9.0	-	-	once/quarter ◊	grab
Total Suspended Solids	mg/L	30	20	-	once/quarter ◊	grab
NUTRIENTS						
Ammonia as N (April 1 – Sept 30)	mg/L	6.9	0.8	-	once/quarter ◊	grab
Ammonia as N (Oct 1 – March 31)	mg/L	6.9	1.8	-	once/quarter ◊	grab
Nitrogen, Total	mg/L	147	103	-	once/quarter ◊	grab
Phosphorus, Total	mg/L	††	††	-	once/quarter ◊	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE N/A. THE DISCHARGE SHALL NOT CONTAIN FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

* Monitoring and reporting requirement only

Ω pH is measured in standard units and is not to be averaged.

ǂ Samples shall be taken during the recreational season from April to October and submitted quarterly. The quarterly average is determined by calculating the geometric mean of the sample data each quarter. The following final limits are established:

Waterbody Classification (Within Two Miles of Discharge)	Daily Maximum #/100 mL	Monthly Average (Geometric Mean, #/100 mL)	Limit Set	Sampling Frequency
WBC-A	630	126	WA	quarterly
WBC-B	1,030	206	WB	quarterly
SCR	5,670	1,134	S	quarterly

†† Daily maximum is monitoring only for all facilities. Phosphorus quarterly average is also monitoring only (Limit Set P) for all facilities except the following: Phosphorus quarterly average limit of 0.5 mg/L is required for facilities discharging to tributaries of Lake Taneycomo (HUC 110100003) between Table rock Dam and Power Site Dam permitted on or after May 9, 1994; and facilities discharging to Table Rock Lake (HUC 11010001 and 11010002) permitted on or after November 30, 1999. (Limit Set PL)

◊ Quarterly sampling

MINIMUM QUARTERLY SAMPLING REQUIREMENTS			
QUARTER	MONTHS	QUARTERLY EFFLUENT PARAMETERS	REPORT IS DUE
First	January, February, March	Sample at least once during any month of the quarter	April 28th
Second	April, May, June	Sample at least once during any month of the quarter	July 28th
Third	July, August, September	Sample at least once during any month of the quarter	October 28th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28th

SPECIAL CONDITIONS – SUBDIVISION F

1. Stormwater impacted by animal holding areas, classified as wastewater (under the ELG 40 CFR 432), must be controlled and monitored for all animal holding areas, which includes areas where live animals are penned, caged, or held and may excrete waste that may contact any stormwater, directly or indirectly through run-on and run-off of rainwater.

2. This subdivision does not apply to fully-vegetated agricultural or animal pastures or fields. This permit does not cover Animal Feeding Operations (AFOs) or Concentrated Animal Feeding Operations (CAFOs).

3. The following BMPs must be implemented in all animal holding areas:
   (a) Manure, litter and animal waste impacts must be minimized, by removal, disposal, or collection and appropriate agronomic land application upon agricultural fields or pastures.
   (b) Animal waste must be controlled and/or contained to the most practicable extent, except when animals are held on vegetated pastures and fields. As such, animals should be contained in pens, cages, or other areas where waste can be more easily controlled and/or contained.
   (c) Stockpiling of uncovered solid manure within this area, without runoff collection, is prohibited.
   (d) If live animals remain more than 12 hours, animal holding areas must be built to prevent all discharge of manure from the animal holding area.
   (e) Minimize water ingress into the animal holding area.
   (f) Routinely check the areas while in use to insure manure or other animal waste is contained and properly managed.

4. All impacted stormwater from animal holding areas permitted in this subdivision is also subject to Stormwater Requirements 4 through 8 in Subdivision E, General Stormwater Requirements.

SUBDIVISION G – ANIMAL TRANSFER, TRANSPORTATION, AND WASTE AREAS

This Subdivision G applies to stormwater in areas impacted by animal transfer, transportation, waste or other animal impact areas, including but not limited to temporary animal comfort areas, transportation truck parking, waste holding structures (except compost areas covered in Subdivision H), docks and access doors, which are not wholly and completely enclosed, covered and contained with no stormwater ingress or egress. Areas covered by Subdivision F do not need to be duplicatively covered by this subdivision. A facility may get a applicability determination for the applicability of Subdivision G for their animal transfer, transportation, and waste areas if the area is wholly and completely enclosed, covered and/or contained with no stormwater ingress or egress and the waste is collected and used as fertilizer or discharged to a permitted wastewater treatment facility. The Appropriate Departmental Office will work with facilities to make an applicability determination.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR ANIMAL HOLDING AND LIVE ANIMAL OFFLOADING AREAS:

Animal Impacted Stormwater Poultry & Meat Processors	**TABLE G-1 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**					
The facility is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance of the Master General Permit. Such discharges shall be controlled, limited, and monitored by the facility as specified below:						
EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS		BENCHMARK	MONITORING REQUIREMENTS †	
		DAILY MAXIMUM	MONTHLY AVERAGE		SAMPLING FREQUENCY	SAMPLE TYPE
OUTFALL: LIMIT SET: TA						
PHYSICAL						
Flow	MGD	*	-	-	once/year	24 hour est
CONVENTIONAL						
Biological Oxygen Demand$_5$	mg/L	**	-	39	once/year	grab
E. coli €	#/100mL	**	-	799	once/year	grab
Oil and Grease	mg/L	**	-	10	once/year	grab
pH Ω	SU	**	-	6.0 – 9.0	once/year	grab
Total Suspended Solids	mg/L	**	-	65	once/year	grab
NUTRIENTS						
Ammonia as N	mg/L	*	-	-	once/year	grab
Nitrogen, Total	mg/L	*	-	-	once/year	grab
Phosphorus, Total	mg/L	*	-	-	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE N/A. THE DISCHARGE SHALL NOT CONTAIN FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

* Monitoring and reporting requirement only

** Monitoring and reporting requirement with benchmark. See Special Conditions for additional requirements.

Ω pH is measured in standard units and is not to be averaged.

€ *E. coli*: monitoring requirements are applicable only during the recreational season from April 1 through October 31.

SPECIAL CONDITIONS – SUBDIVISION G

1. Stormwater must be controlled and monitored for all animal transfer and transportation areas, which includes temporary parking areas where live animals are present and may excrete waste that may contact any stormwater, directly or indirectly through run-on and run-off of rainwater. This also includes areas where manure or urine may be washed or spray off of the ground, concrete, parking areas, trucks, trailers, or other surfaces.

2. This subdivision does not apply to fully-vegetated agricultural or animal pastures or fields.

3. The following BMPs must be implemented in all animal transfer and transportation areas:

(a) Manure, litter, and animal waste impacts must be minimized, by removal, disposal, or collection and appropriate agronomic land application upon agricultural fields or pastures.
(b) Animal waste must be controlled and/or contained to the most practicable extent, except when animals are held on vegetated pastures and fields.
(c) Stockpiling of uncovered solid manure within this area, without runoff collection, is prohibited.
(d) Minimize water ingress into the animal holding area.
(e) Routinely check the areas while in use to insure manure or other animal waste is contained and properly managed.

4. All impacted stormwater from animal holding areas permitted in this subdivision is also subject to Stormwater Requirements 4 through 8 in Subdivision E, General Stormwater Requirements.

SUBDIVISION H – COMPOSTING

This subdivision applies to composting areas located at a meat processing facility.

SPECIAL CONDITIONS AND REQUIREMENTS FOR COMPOSTING AREAS:

1. Facilities subject to this requirement must also meet all special conditions in Subdivision E but are not required to conduct the monitoring required in Subdivision E.

2. The composting area must be operated as a no-discharge area and may not have any leachate runoff from the composter. Leachate is any liquid that has percolated through the compost or has come in contact with the compost. Leachate may be collected and recycled back onto the compost to maintain proper moisture content.

3. The permittee shall not stockpile any raw materials or animal carcasses for a period to exceed five (5) calendar days before mixing unless the stockpile location has a stormwater collection system or is roofed and contained.

4. Compost systems must be designed for the material to be composted. Meat processors may use the University of Missouri Agricultural Extension Center's guidance, "*Composting Dead Swine*" to assist in designing the composting system but must account for variations in moisture content associated with a meat processing operation rather than an animal mortality management system.

5. 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.

6. The permittee may reuse the water as part of the composting process, mix with wastewater regulated in Subdivision A, mix with wastewater being land applied under Subdivision B, or haul the contents of the basin to a permitted treatment or disposal facility with written approval from the facility that receives the water.

7. The composting area shall have a base, which may be made of asphalt, concrete, or other impermeable materials.

8. 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.

PERMIT RENEWAL – ALL FACILITIES

1. Unless terminated, the permittee shall submit an application for the renewal of this permit by submitting *Form E-Application for General Permit* https://dnr.mo.gov/document-search/form-e-application-general-permit-under-missouri-clean-water-law-mo-780-0795 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 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 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: http://dnr.mo.gov/env/wpp/edmr.htm.

PERMIT TRANSFER – ALL FACILITIES

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/document-search/application-transfer-operating-permit-mo-780-1517 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.

2. Facilities that have undergone transfers of ownership without prior notice to the Department may be considered to be operating without a permit.

PERMIT TERMINATION – ALL FACILITIES

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)(C)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.

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
MO-G220000

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 CFR124.8, 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.

This Fact Sheet is for a: Master General Permit

Part I – Facility Information

Facility Type:	(Industrial) Meat Processing and Packing
Facility SIC Code(s):	0751, 20XX, 2077
Facility Description:	This permit authorizes the storage, discharge, and land application of wastewater and stormwater runoff from meat processing and meat packing facilities, including, but not limited to, facilities with Standard Industrial Classification (SIC) codes listed above, which includes slaughter, processing, removal of hide, blood, viscera, or other renderable materials, cutting, deboning, grinding, chopping, and other processing. This permit is intended primarily for smaller facilities regulated under 40 CFR 432.

CLARIFICATION:
This permit is not intended for facilities that only custom cut fully-processed meat (for example, meat shops similar to those found within a grocery store) currently regulated, permitted, or authorized by the Missouri Department of Health or their associated local health department.

This general permit is not intended for larger meat processing facilities. Larger facilities may have higher technology-based effluent limitations based on their higher production levels. Larger facilities may not be able to meet the limits and conditions established within this general permit.

This general permit is a new general permit intended to cover wastewater and stormwater management at meat processing facilities. These facilities have been removed from coverage under the MOG822000.

This permit does not cover aquaculture and seafood processing. These activities must be covered under a site specific permit, and they have separate Effluent Limitation Guidelines (ELG) 40 CFR 451 for the specific activities.

This permit does not cover tanning or leather finishing activities. These activities have a separate ELG, 40 CFR 425, and must obtain a site-specific permit.

This general permit does not authorize an associated permit exemption, because meat processors are required by the Missouri Department of Agriculture regulations to obtain a permit or a site-specific permit exemption from the Department for wastewater management.

Part II – Receiving Stream Information

WATERS OF THE STATE DESIGNATIONS:
Waters of the state are divided into seven categories per 10 CSR 20-7.015(1)(B)1 through 7. The applicable water of the state category is listed below. Missouri's technology-based effluent regulations are found in [10 CSR 20-7.015] and are implemented in 10 CSR 20-7.015(2) through (8). When implementing technology regulations, considerations are made for the facility type, discharge type, and category of waters of the state. Stormwater discharges and land application sites are not subject to limitations found in 10 CSR 20-7.015. Effluent limitation derivations are discussed in PART IV: EFFLUENTS LIMITS DETERMINATIONS.

- ✓ Missouri or Mississippi River; identified at 10 CSR 20-7.015(2)
- ✓ Lakes and Reservoirs; including natural lakes and any impoundments created by the construction of a dam across any waterway or watershed. An impoundment designed for or used as a disposal site for tailings or sediment from a mine or mill shall be considered a wastewater treatment device and not a lake or reservoir. Releases to lakes and reservoirs include discharges into streams one-half (1/2) stream mile before the stream enters the lake as measured to its conservation pool.
- ✓ Subsurface Water; identified at 10 CSR 20-7.015(7), including underground injection control permits, and regulated by 10 CSR 20-7.031(6)
- ✓ All other waters; identified at 10 CSR 20-7.015(B)7 and 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). 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 waterbody 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.

- ✓ Not Applicable: This is a new master general permit.

ANTIDEGRADATION:
Antidegradation policies ensure protection of water quality for a particular waterbody 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. The Department has determined the best avenue forward for implementing the Antidegradation requirements into general permits is by requiring the appropriate development and maintenance of a SWPPP. The SWPPP must identify all reasonable and effective BMPs, taking into account environmental impacts and costs.

This analysis must document why no discharge or no exposure options are not feasible at the facility. This selection and documentation of appropriate control measures will then serve as the analysis of alternatives and fulfill the requirements of the Antidegradation Rule and Implementation Procedure 10 CSR 20-7.031(3) and 10 CSR 20-7.015(9)(A)5.

Any facility seeking coverage under this permit, which undergoes expansion or discharges a new pollutant of concern, must update their SWPPP and select reasonable and cost effective new BMPs. New facilities seeking coverage under this permit are required to develop a SWPPP including this analysis and documentation of appropriate BMPs. Renewal of coverage for a facility requires a review of the SWPPP to ensure the selected BMPs continue to be appropriate.

- ✓ Applicable; The pollutants of concern for this permit are Total Kjeldahl Nitrogen, Total Phosphorus, Total Sodium, Total Chloride as Cl, Total Suspended Solids, pH changes, Oil and Grease and Biochemical Oxygen Demand; however, the only discharges resulting from the activities allowed under this no discharge permit are short term, intermittent, and expected to be non-degrading or minimally degrading. Compliance with the effluent limitations established in this permit for the protection of General Criteria, along with the evaluation and implementation of BMPs as documented in the SWPPP, meets the requirements of Missouri's Antidegradation Review [10 CSR 20-7.031(3), 10 CSR 20-7.031 Table A, and 10 CSR 20-7.015(9)(A)5].
- ✓ Not Applicable; Antidegradation reviews are performed at the time of construction. No degradation proposed and no further review necessary. Facility did not apply for authorization to increase pollutant loading or to add additional pollutants to their discharge.
- ✓ Applicable; the facility must review and maintain stormwater BMPs as appropriate.

BENCHMARKS:
When a permitted feature or outfall consists of only stormwater, a benchmark may be implemented at the discretion of the permit writer. Benchmarks require the facility to monitor, and if necessary, replace and update stormwater control measures. Benchmark concentrations are not effluent limitations. A benchmark exceedance, therefore, is not a permit violation; however, failure to take corrective action is a violation of the permit. Benchmark monitoring data is used to determine the overall effectiveness of control measures and to assist the permittee in knowing when additional corrective actions may be necessary to comply with the limitations of the permit.

Because of the fleeting nature of stormwater discharges, the Department, under the direction of EPA guidance, determined monthly averages are capricious measures of stormwater discharges. The Technical Support Document for Water Quality Based Toxics Control (EPA/505/2-90-001; 1991) Section 3.1 indicates most procedures within the document apply only to water quality based approaches, not end-of-pipe technology-based controls. Hence, stormwater only outfalls will generally only contain a maximum daily limit (MDL) or benchmark, determined by the site-specific conditions including the receiving water's current quality.

Numeric benchmark values are based on water quality standards or other stormwater permits including the Environmental Protection Agency's (EPA's) Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP). Because precipitation events are sudden and momentary, benchmarks based on state or federal standards or recommendations use the Criteria Maximum Concentration (CMC) value, or acute standard. The CMC is the estimate of the highest concentration of a material in surface water to which an aquatic community can be exposed briefly without resulting in an unacceptable effect. The CMC for aquatic life is intended to be protective of the vast majority of the aquatic communities in the United States.

- ✓ Applicable; this permit contains benchmark requirements.

BEST MANAGEMENT PRACTICES (BMPS):
Minimum site-wide 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 industrial 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 mixed with other industrial wastewater.

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.

- ✓ Applicable; the industries covered under this permit have an associated Effluent Limit Guideline (ELG), 40 CFR 432, which is applicable to the wastewater/stormwater discharges in this permit and is applied under 40 CFR 125.3(a). Reasonable Potential has been established for some parameters and this permit either applies the ELG limit or applies the appropriate water-quality derived effluent limit, whichever is more protective of the receiving water's quality, the WQS will be used as the limiting factor in accordance with 40 CFR 122.44(d) and 10 CSR 20-7.015(9)(A). See Part IV: EFFLUENT LIMITS DETERMINATION.

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 also to 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. for will be excused.
  - o This permit authorizes land applying impacted stormwater in compliance with the land application subdivision of this permit.
  - o 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 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 is a heavy metal which will show injurious effects at levels above 1 mg/L (Pal and Overcash; p. 406)
  - Selenium does not degrade in soil, water, or sunlight (Pal and Overcash; p. 384). 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.

✓ 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:
Land disturbance, sometimes called construction activities, are actions which cause disturbance of the root layer or soil; these include clearing, grading, and excavating of the land. 40 CFR 122.26(b)(14) and 10 CSR 20-6.200(3) requires permit coverage for these activities. Coverage is not required for facilities when only providing maintenance of original line and grade, hydraulic capacity, or to continue the original purpose of the facility.

✓ 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 Statues Chapter 256.400 Geology, Water Resources and Geodetic Survey Section). https://dnr.mo.gov/document-search/frequently-asked-major-water-user-questions-pub2236/pub2236.

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. This permit requires monitoring of nutrient concentrations.

OIL/WATER SEPARATORS:
Oil/water Separator (OWS) tank systems are frequently found at industrial sites where process water and stormwater may contain oils and greases, oily wastewaters, or other immiscible liquids requiring separation. Food industry discharges typically require pretreatment prior to discharge to municipally owned treatment works. Per 10 CSR 26-2.010(2)(B), all OWS tanks must be operated according to manufacturer's specifications and authorized in NPDES permits per 10 CSR 26-2.010(2) or may be regulated as a petroleum tank.

✓ Applicable; Oil collected is an industrial sludge, is identified as used oil, and must be disposed of according to 10 CSR 25-11.279. 40 CFR 279.20(b)(2)(ii)(B) indicate that OWS operated for compliance with the CWA are not "processors" but are still "generators" of used oil and fall under the used oil requirements for disposal.

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.

✓ Not applicable; the facilities covered under this permit are not 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 may be subject to the pretreatment guidelines found at 40 CFR 432 and 40 CFR 403.

PUBLIC NOTICE OF COVERAGE FOR AN INDIVIDUAL FACILITY:
Public Notice of reissuance of coverage is not required unless the facility is a specific type of facility as defined in 10 CSR 20-6.200(1). 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):
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; but 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). A reasonable potential to violate water quality standards is assumed for the pollutants of concern due to the nature of the activities carried out under this permit, resulting in the effluent limits contained in the permit.

✓ Permit writers 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. For stormwater permits, the permit writer is required per 10 CSR 6.200(6)(B)2 to consider: A. application and other information supplied by the permittee; B. effluent guidelines; C. best professional judgment of the permit writer; D. water quality; and E. BMPs. Part V provides specific decisions related to this permit.

✓ The permit writer reviewed industry materials, available DMR data, past inspections, and other available documents and research to evaluate general and narrative water quality reasonable potential for this permit. Per the permit writer's best professional judgment, based on available data and full and accurate disclosure on application materials, this industry does demonstrate reasonable potential for excursions from the general or narrative water quality criteria. See Part IV: Effluent Limit Determinations for specific parameter RP.

SCHEDULE OF COMPLIANCE (SOC):
Per § 644.051, RSMo, a permit may be issued with a Schedule of Compliance (SOC) to provide time for a facility to come into compliance with new state or federal effluent regulations, water quality standards, or other requirements. Such a schedule is not allowed if the facility is already in compliance with the new requirement, or if prohibited by other statute or regulation. An SOC includes an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. *See also* Section 502(17) of the Clean Water Act, and 40 CFR 122.2. For new effluent limitations, the permit may include interim monitoring for the specific parameter to demonstrate the facility is not already in compliance with the new requirement. Per 40 CFR 122.47(a)(1) and 10 CSR 20-7.031(11), compliance must occur as soon as possible. If the permit provides a schedule for meeting new water quality based effluent limits, an SOC must include an enforceable, final effluent limitation in the permit even if the SOC extends beyond the life of the permit.

✓ Applicable: This permit contains a three (3) year SOC for Chlorine, Total Suspended Solids, Ammonia, Chloride, and Chloride plus Sulfate. This SOC provides ample time for renewal facilities to sample discharges, evaluate compliance with the effluent limitations, and take corrective action as necessary.

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.

✓ Discharge to the watersheds of a Metropolitan No-Discharge Stream (10 CSR 20-7.031 Table F) is authorized by this permit, if the discharges are in compliance with 10 CSR 20-7.015(5) and 10 CSR 20-7.031(7). 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.

✓ This permit does not authorize discharges which are located in a way to allow water to be released into losing streams, sinkholes, caves, fissures, or other openings in the ground which could drain into aquifers per 10 CSR 20-7.015(7).

✓ 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 pollutants of concern at the facilities covered under this permit are found in the tables of this permit, as appropriate for the activity authorized in each subdivision. 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 – DOMESTIC BIOSOLIDS:
Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for beneficial use (i.e., fertilizer). 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. Additional information: https://extension.missouri.edu/publications/eq421 (WQ422 through WQ449).

✓ This permit does not authorize land application of domestic-only biosolids. Land application of industrial wastewater and sludge, including mixed industrial and domestic wastewater, is authorized in this permit.

SLUDGE – INDUSTRIAL:
Industrial sludge is solid, semi-solid, or liquid residue generated during the treatment of industrial process wastewater in a treatment works; including but not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment process; scum and solids filtered from water supplies and backwashed; and a material derived from industrial sludge.

✓ Applicable; this permit authorizes the land application of industrial sludge in accordance with the terms, conditions, and limitations within the permit.

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.

Underground and above ground storage devices for petroleum products, vegetable oils and animal fats are subject to control under SPCC and are expected to be managed under those provisions. 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. These storage devices are not covered under this general permit because to do so would create a double jeopardy for the permitted facility. Permit requirements cover those fueling areas and storage devices which fall below the threshold of SPCC, RCRA and CERCLA regulations.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):
In accordance with 40 CFR 122.44(k), BMPs must be used to control or abate the discharge of pollutants when: 1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; 2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; 3) Numeric effluent limitations are infeasible; or 4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in 2015 https://www.epa.gov/sites/default/files/2021-03/documents/swppp_guide_industrial_2021_030121.pdf, BMPs are measures or practices used to reduce the amount of pollution entering waters of the state from a permitted facility. BMPs may take the form of a process, activity, or physical structure. Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to 1) identify sources of pollution or contamination, and 2) select and carry out actions which prevent or control the pollution of storm water discharges. Additional information can be found in *Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R-92-006; September 1992).

A SWPPP must be prepared if the SIC code for the facility is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2). A SWPPP may be required of other facilities where stormwater has been identified as necessitating better management. The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate stream pollution from stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged during storm events. The following paragraph outlines the general steps the permittee should take to determine which BMPs will work to achieve the benchmark values or limits in the permit. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include but is not limited to minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures determined to be adequate to achieve the benchmark values discussed above. The facility will conduct monitoring and inspections of the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but should be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established.

The EPA has developed factsheets on the pollutants of concern for specific industries along with the BMPs to control and minimize stormwater (https://www.epa.gov/npdes/stormwater-discharges-industrial-activities). Along with EPA's factsheets, the International Stormwater BMP database (http://bmpdatabase.org) may provide guidance on BMPs appropriate for specific industries.

For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. For further guidance, consult the antidegradation implementation procedure (https://dnr.mo.gov/document-search/antidegradation-implementation-procedure).

Alternative analysis evaluation of the BMPs is a structured evaluation of BMPs which are reasonable and cost effective. The alternative analysis evaluation should include practices designed to be: 1) non-degrading; 2) less degrading; or 3) degrading water quality. The glossary of the *Antidegradation Implementation Procedure* defines these three terms. The chosen BMP will be the most reasonable and effective management strategy while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The alternative analysis evaluation must demonstrate why "no discharge" or "no exposure" is not a feasible alternative at the facility. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(3) Water Quality Standards and *Antidegradation Implementation Procedure*, Section II.B.

If parameter-specific numeric benchmark exceedances continue to occur and the permittee feels there are no practicable or cost-effective BMPs which will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the permittee can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review; and 3) the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the Department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of a site specific permit application, which includes an appropriate fee; Form A – Application for Non-Domestic Permit Under Missouri Clean Water Law (Form 780-1479) and Form C – Application for Discharge Permit – Manufacturing, Commercial, Mining, Silviculture Operations, and Stormwater (Form 780-1514) can be found at: https://dnr.mo.gov/forms-applications.

- ✓ Applicable: For all sites using this permit to authorize stormwater management, including subdivisions D through H, a SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the Department with jurisdiction, incorporate control practices specific to site conditions, and provide for maintenance and adherence to the plan.

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: http://dnr.mo.gov/forms/780-1774-f.pdf 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 wastewater systems. The subsurface dispersal system 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:
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.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITATIONS:
Per 10 CSR 20-2.010(78), the amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined total amount of pollutant which may be discharged into the stream without endangering its water quality. Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's Technical Support Document For Water Quality-based Toxics Control (TSD) (EPA/505/2-90-001).

- ✓ Not applicable; mixing is not authorized by this general permit. Effluent limitations were determined using the most protective applicable standards and following TSD recommendations.

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:
Per 10 CSR 20-7.031(1)(FF), a toxicity test conducted under specified laboratory conditions on specific indicator organism; and per 40 CFR 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 water.

- ✓ Not Applicable: At this time, permittees are not required to conduct a WET test. This permit is for stormwater only.

Part IV – Effluent Limitations Determination

OUTFALLS SUBDIVISION A – WASTEWATER DISCHARGING FACILITIES

EFFLUENT LIMITATIONS FOR TABLES A-1 THROUGH A-4:

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVG	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL						
FLOW	MGD	*	*	MONTHLY	MONTHLY	24 HR. TOTAL
TEMPERATURE	°F	*	*	MONTHLY	MONTHLY	MEASURED
CONVENTIONAL						
BOD_5 (MEAT) TABLES 1 & 2	mg/L	39	19	MONTHLY	MONTHLY	GRAB
BOD_5 (POULTRY) TABLES 3 & 4		26	16	MONTHLY	MONTHLY	GRAB
CHLORINE, TOTAL RESIDUAL	µg/L	19	2	MONTHLY	MONTHLY	GRAB
E. COLI (CFU/100ML)	#/100mL	5670/1030 630	1134/206 126	MONTHLY/ WEEKLY	MONTHLY	GRAB
FECAL COLIFORM	#/100mL	400	-	MONTHLY	MONTHLY	GRAB
OIL & GREASE	mg/L	19	10	MONTHLY	MONTHLY	GRAB
PH Ω	SU	6.5-9.0	-	MONTHLY	MONTHLY	GRAB
TOTAL SUSPENDED SOLIDS (TSS)	mg/L	45/30	30/20	MONTHLY	MONTHLY	GRAB
NUTRIENTS						
AMMONIA AS N (APR 1 – SEPT 30)	mg/L	3.6	1.4	MONTHLY	MONTHLY	GRAB
AMMONIA AS N (OCT 1 – MARCH 31)	mg/L	7.5	2.9	MONTHLY	MONTHLY	GRAB
NITRATE PLUS NITRITE AS N	mg/L	*	*	MONTHLY	MONTHLY	GRAB
NITROGEN, TOTAL N (TN)	mg/L	194/ 147	134/ 103	MONTHLY	MONTHLY	GRAB
PHOSPHORUS, TOTAL P (TP)	mg/L	*	*/0.5††	MONTHLY	MONTHLY	GRAB
OTHER						
CHLORIDE	mg/L	378	188	MONTHLY	MONTHLY	GRAB
CHLORIDE PLUS SULFATE	mg/L	1000	-	MONTHLY	MONTHLY	GRAB

DERIVATION AND DISCUSSION OF LIMITS:

PHYSICAL:

Flow

In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD).

Temperature

In accordance with 10 CSR 20-7.031(5)(D), water contaminant sources shall not cause or contribute to stream temperature in excess of ninety degrees Fahrenheit (90 °F) or change the stream temperature by more than 5 degrees Fahrenheit. Meat processors often use warm or hot water in their processing. As such, temperature is a potential pollutant of concern associated with this industry. The ELG did not address this contaminant.

CONVENTIONAL:

Biochemical Oxygen Demand - 5 Day (BOD_5)
Effluent limitations are established within this permit for BOD_5. These wastewater limits are based on the meat processing ELG, 40 CFR 432. There are no numeric water quality criteria for BOD_5, and there are no general criteria pursuant to 10 CSR 20-7.031(4) associated with BOD which need to be established within this permit. Therefore, the technology limits are more stringent than the WQS.

For meat processors (not poultry), the concentration was based on 1000 pounds live weight killed (lbs LWK), the lowest production value in the ELG, and the value of 740 gallons of wastewater generated per 1000 lbs LWK; based on 40 CFR 432 Subpart A. The ELG most conservative effluent limits for BOD_5 are established for a simple slaughterhouse, which is 0.24 lbs LWK daily maximum and 0.12 lbs LWK monthly average. Therefore, 39 mg/L daily maximum and 19 mg/L monthly average for meat processors.

The ELG for poultry processors, however, establishes a limit of 26 mg/L daily maximum and 16 mg/L monthly average based on 40 CFR 432 Subpart K.

Chlorine, Total Residual (TRC)
19 µg/L daily maximum based on water quality standards for acute toxic for warm water habitats and 2 µg/L monthly average, based on chronic toxicity standards for protection of aquatic life in a cold water habitat. General permits are established with the most conservative values for water quality standards to protect receiving waters of potential discharges authorized within this permit.

Escherichia coli (E. coli)
E. coli is a potential pollutant of concern for this industry, both from animal meat processing as well as animal holding areas and other animal waste. This permit establishes water-quality based effluent limits for *E. coli* based on the receiving waterbody:

- WBC-A Daily maximum limit of 630 colony forming units per 100 mL [10 CSR 20-7.015(9)(B)1.E.] and a monthly geometric mean limit of 126 bacteria per 100 mL [10 CSR 20-7.031 Table A1] during the recreational season from April 1 through October 31 only [10 CSR 20-7.031(5)(C)], to protect Whole Body Contact (A) [10 CSR 20-7.031(C)2.A.(I)] designated use of the receiving waterbody.
- WBC-B Daily maximum limit of 1030 colony forming units per 100 mL [10 CSR 20-7.015(9)(B)1.E.] and a monthly geometric mean limit of 206 bacteria per 100 mL [10 CSR 20-7.031 Table A1] during the recreational season from April 1 through October 31 only [10 CSR 20-7.031(5)(C)], to protect Whole Body Contact (B) [10 CSR 20-7.031(C)2.A.(II)] designated use of the receiving waterbody.
- SCR: Daily maximum limit of 1,134 colony forming units per 100 mL [10 CSR 20-7.015(9)(B)1.E.] and a monthly geometric mean limit of 1,134 bacteria per 100 mL [10 CSR 20-7.031 Table A1] during the recreational season from April 1 through October 31 only [10 CSR 20-7.031(5)(C)] to protect the Secondary Contact Recreation (SCR) [10 CSR 20-7.031(C)2.B.] designated use of the receiving waterbody, as per 10 CSR 20-7.031(5)(C).

Monthly monitoring established per permit writer's best professional judgment. Additional samples should be obtained if necessary to meet permit limits for monthly geometric mean. There are no technology limitations established for this parameter therefore water quality limits are the most protective.

An effluent limit for both daily maximum and monthly geometric mean is required by 40 CFR 122.45(d). The geometric mean is calculated by multiplying all of the data points and then taking the n^{th} root of this product, where n = # of samples collected. For example: Five *E. coli* samples were collected with results of 1, 4, 5, 6, and 10 (#/100 mL). Geometric mean = 5^{th} root of (1)(4)(5)(6)(10) = 5^{th} root of 1,200 = 4.1 #/100 mL.

Fecal coliform
Numeric limit of 400 colony forming units per 100 milliliters based on the ELG for meat processors in 40 CFR 432. Fecal coliform does not have a water quality standard in Missouri water quality standards; however, *E. coli* has water quality standards upon which the effluent limits (listed immediately above) are based.

Oil & Grease
Oil and grease is considered a conventional pollutant. Oil and grease is a comprehensive test which measures for gasoline, diesel, crude oil, creosote, kerosene, heating oils, heavy fuel oils, lubricating oils, waxes, and some asphalt and pitch. The test can also detect some volatile organics, such as benzene, toluene, ethylbenzene, or xylene, but these constituents are often lost during testing due to their boiling points. It is recommended to perform separate testing for these constituents if they are a known pollutant of concern at the site (i.e., aquatic life toxicity or human health is a concern). Oils and greases of different densities will possibly form sheen or unsightly bottom deposits at levels which vary from 10 mg/L. To protect the general criteria, it is the responsibility of the permittee to visually observe the discharge and receiving waters for sheen or bottom deposits. At this time, oil & grease, while potentially associated with transportation activities, has not been documented to have a reasonable potential to impact water quality or violate general criteria at these sites. As such, the technology-based effluent limit is appropriate.

These wastewater limits are based on the meat processing ELG, 40 CFR 432. The concentration was based on 1000 pounds live weight killed (lbs LWK), the lowest production value in the ELG, and the value of 740 gallons of wastewater generated per 1000 lbs LWK. The ELG most conservative effluent limits for Oil and Grease are established for a simple slaughterhouse, which is 0.12 lbs LWK daily maximum and 0.06 lbs LWK monthly average for meat processors. The ELG for poultry processors, however, establishes a limit of 14 mg/L daily maximum and 8 mg/L monthly average. Therefore, different values are established for meat processors and poultry processors, both based on the ELG limitations.

pH

6.5 to 9.0 SU – instantaneous grab sample. Water quality limits [10 CSR 20-7.031(5)(E)] are applicable to this outfall. pH is a fundamental water quality indicator. These facilities may have a variety of meat processing activities (eg., smoking, dehydrating, and brining operations) and chemicals at the facility, many of which could affect pH. Additionally, metals leachability and ammonia availability in wastewater is dependent on pH. Limitations in this permit will protect against aquatic organism toxicity, downstream water quality issues, human health hazard contact, and negative physical changes in accordance with the general criteria at 10 CSR 20-7.031(4) and the Clean Water Act's (CWA) goal of 100% fishable and swimmable rivers and streams.

Total Suspended Solids

There are no numeric water quality standards for TSS. However, the technology based effluent limitations are expected to protect water quality from discharges at these facilities, as the flow rates are low (no more than 1,000 gallons per day). This permit establishes TSS limits based on the meat processing ELG, 40 CFR 432. The concentration was based on 1000 pounds live weight killed (lbs LWK), the lowest production value in the ELG, and the value of 740 gallons of wastewater generated per 1000 lbs LWK. The ELG most conservative effluent limits for TSS are established for a simple slaughterhouse, which is 0.4lbs LWK daily maximum and 0.2lbs LWK monthly average for meat processors. The ELG for poultry processors, however, establishes a limit of 30 mg/L daily maximum and 20 mg/L monthly average. Therefore, different technology-based effluent limitations are established for meat processors and poultry processors, both based on the ELG limitations.

NUTRIENTS:

Ammonia, Total as Nitrogen

For general permits, water quality based effluents must consider all potential impacts and provide conservative values to protect all potential designated uses, including aquatic life, in receiving water bodies. As such, early life stages present [10 CSR 20-7.031(5)(B)7.C & Table B3], is the most conservative aquatic life protection for ammonia; total ammonia nitrogen criteria apply. For these calculations, the permit writer used the Interior River Valleys and Hills area data, as this data has the highest average temperatures in the state. The permit writer also used the highest average stream pH by region, which was based on the Western Corn Belt region. The calculations using these most conservative values are provided below:

Calculations for the 2nd and 3rd quarters of the year (4/1 – 9/30)

Acute AQL WQS (CMC): (0.411/(1+10^7.204- pH[8.1]))+(58.4/(1+10^(pH[8.1]-7.204)) = 6.9 mg/L
Chronic AQL WQS (CCC): (0.0577/(1+10^7.688 – pH[8.1]))+(2.487/(1+10^pH[8.1]-7.688))*MIN(2.85,(1.45*10^0.028*(25-temp[24]))) = 1.1 mg/L

Acute AQL WQS (CMC): (0.411/(1+10^7.204- pH[8.1]))+(58.4/(1+10^(pH[8.1]-7.204)) = 6.9 mg/L
Chronic AQL WQS (CCC): (0.0577/(1+10^7.688 – pH[8.1]))+(2.487/(1+10^pH[8.1]-7.688))*MIN(2.85,(1.45*10^0.028*(25-temp[28.6]))) = 0.8 mg/L

Calculations for 1st and 4th quarters (10/1 - 03/31)

Acute AQL WQS (CMC): (0.411/(1+10^7.204- pH[8.1]))+(58.4/(1+10^(pH[8.1]-7.204)) = 6.9 mg/L
Chronic AQL WQS (CCC): (0.0577/(1+10^7.688 – pH[8.1]))+(2.487/(1+10^pH[8.1]-7.688))*MIN(2.85,(1.45*10^0.028*(25-temp[7.5]))) = 2 mg/L
Acute WLA: ((0.108 cfsDF + 0 cfs1Q10ZID) * 6.9 CMC – (0 cfs1Q10ZID * 0.01 bkg)) / 0.108306002 cfsDF = 6.9 mg/L
Chronic WLA: ((0.108 cfsDF + 0 cfs30Q10MZ) * 2.02 CCC – (0 cfs30Q10MZ * 0.01 bkg)) / 0.108 cfsDF = 2 mg/L

Acute AQL WQS (CMC): (0.411/(1+10^7.204- pH[8.1]))+(58.4/(1+10^(pH[8.1]-7.204)) = 6.9 mg/L
Chronic AQL WQS (CCC): (0.0577/(1+10^7.688 – pH[8.1]))+(2.487/(1+10^pH[8.1]-7.688))*MIN(2.85,(1.45*10^0.028*(25-temp[16]))) = 1.8 mg/L
Acute WLA: ((0.108 cfsDF + 0 cfs1Q10ZID) * 6.9 CMC – (0 cfs1Q10ZID * 0.01 bkg)) / 0.108306002 cfsDF = 6.9 mg/L
Chronic WLA: ((0.108 cfsDF + 0 cfs30Q10MZ) * 1.84 CCC – (0 cfs30Q10MZ * 0.01 bkg)) / 0.108 cfsDF = 1.8 mg/L

The calculations above are based on quarterly data and then the most conservative values were used as limits for this general permit. These final values establish in a schedule of compliance for water quality based effluent limits for all potential water bodies authorized in this general permit.

Nitrate plus Nitrite and Nitrogen, Total N (TN)
Nitrate plus Nitrite monitoring is used to assess the types of nitrogen compounds in a discharge. This is helpful is evaluating land application rates and determining potential impacts to groundwater or drinking water sources in future permit reviews. The Total Nitrogen wastewater limits established within this permit are based on the meat processing ELG, 40 CFR 432. The ELG most conservative effluent limits for TN are established for meat under large packinghouses and provide a daily maximum limit of 194 mg/L and 134 mg/L monthly average for meat processors. The ELG for poultry processors, however, establishes a limit of 147 mg/L daily maximum and 103 mg/L monthly average, based on the most stringent limit established in the new point source section of the rule. Therefore, different values are established for meat processors and poultry processors, both based on the ELG limitations. For Table Rock Lake dischargers, facilities with reasonable potential to violate the in-lake total nitrogen nutrient criteria may not use this general permit and must instead operate as no-discharge, discharge to a permitted facility, or obtain a site-specific permit with limitations and conditions established to protection Table Rock Lake nutrient criteria.

Phosphorous, Total P (TP)
Monitoring only for daily maximum and monthly average concentrations of TP for most facilities. This permit also establishes a 0.5 mg/L TP monthly average limit for facilities discharging to tributaries to Lake Taneycomo (HUC 110100003) between Table rock Dam and Power Site Dam permitted on or after May 9, 1994, and facilities discharging to Table Rock Lake (HUC 11010001 and 11010002) permitted on or after November 30, 1999, in accordance with 10 CSR 20-7.015(3)(E). The permit writer determined that the 0.5 mg/L technology-based effluent limit is appropriate for protection of site-specific nutrient criteria, as this technology-based effluent limit was established prior to the development and approval of the Table Rock Lake water quality-based site-specific nutrient criteria, which was established using representative data from the lake after the 0.5 mg/L technology-based effluent limit was established and implemented. Since establishment of the site-specific nutrient criteria, sampling has demonstrated that Table Rock Lake has continued to meet the site-specific nutrient criteria for TP, demonstrating that the 0.5 mg/L facility effluent limit continues to protect water quality in Table Rock Lake.

OTHER:

Chloride and Chloride plus Sulfate
Monitoring and limits established for Chloride in accordance with 10 CSR 20-7.031, Table A1 and EPA's Technical Support Document Water Quality-based Toxics Control, as calculated below:

ACUTE WLA: CE = ((0.108 CFSDF + 0 CFSZID) * 860 – (0 CFSZID * 0 BACKGROUND)) / 0.108 CFSDF = 860
CHRONIC WLA: CE = ((0.108 CFSDF + 0 CFSMZ) * 230 – (0 CFSMZ * 0 BACKGROUND)) / 0.108 CFSDF = 230
LTAA: WLAA * LTAA MULTIPLIER = 860 * 0.321 = 276.132 [CV: 0.6, 99TH %ILE]
LTAC: WLAC * LTAC MULTIPLIER = 230 * 0.527 = 121.31 [CV: 0.6, 99TH %ILE]
USE MOST PROTECTIVE LTA: 121.31
DAILY MAXIMUM: MDL = LTA * MDL MULTIPLIER = 121.31 * 3.114 = 377.8 MG/L [CV: 0.6, 99TH %ILE]
MONTHLY AVERAGE: AML = LTA * AML MULTIPLIER = 121.31 * 1.552 = 188.3 MG/L [CV: 0.6, 95TH %ILE, N=4]

The acute limit for Chloride is based on the 1,000 mg/L limit established for streams with a 7Q10 low flow less than one cubic foot per second (cfs), in 10 CSR 20-7.031(5)(L), as this is the most conservative value for a receiving waterbody under this general permit.

OUTFALLS SUBDIVISION B – WASTEWATER EARTHEN STORAGE STRUCTURE

EFFLUENT LIMITATIONS TABLE B-1:

PARAMETERS	UNIT	DAILY MINIMUM	MONTHLY AVERAGE	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL						
FREEBOARD	FEET	*	-	ONCE MONTH	MONTHLY	MEASUREMENT
PRECIPITATION	INCHES	*	-	DAILY	MONTHLY	TOTAL

Freeboard
Freeboard level must be measured and maintained pursuant to 10 CSR 20-8.200(4)(A)3 for lagoons/basins. Monthly monitoring of the freeboard in the basin is required to ensure proper operational controls, whether this is a discharging basin monitored under Subdivision A or a no-discharge basin. For no-discharge basins, comply with all BMPs listed, monitor freeboard/liquid levels, and

report highest reading monthly. Freeboard is the distance between the top of the liquid level and the bottom of the discharge pipe or canal. Freeboard should be measured to the nearest inch and is reported in tenths of feet.

Precipitation
Monthly monitoring or recording of the precipitation to determine the regular addition of water to the basin from rainfall in addition to the wastewater being added into the basin.

OUTFALLS SUBDIVISION D– LAND APPLICATION OPERATIONAL MONITORING

IRRIGATION OPERATIONS TABLE:

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVG	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
IRRIGATION ACTIVITY							
IRRIGATION PERIOD	HOURS	*	*	SAME	ONCE/DAY ♠	ONCE/MONTH	TOTAL
VOLUME IRRIGATED	GALLONS	*	*	SAME	ONCE/DAY ♠	ONCE/MONTH	TOTAL
APPLICATION AREA	ACRES	*	*	SAME	ONCE/DAY ♠	ONCE/MONTH	TOTAL
APPLICATION RATE	INCHES	*	*	SAME	ONCE/DAY ♠	ONCE/MONTH	TOTAL

♠ Facility will maintain records for each day land application occurred. If no application occurred, a record is not required.

LAND APPLICATION OPERATIONAL MONITORING:

Application Area
Recording and reporting requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.200, reporting the area utilized will allow the Department to ensure compliance with setback distances. Adhering to the required setbacks prevents illicit discharges to waterbodies.

Application Rate
Recording and reporting requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.200, monitoring the rate will allow the Department to ensure appropriate permeability and plant uptake is occurring. Rates of application must be adjusted based on soil saturation, and rate monitoring will prevent soil saturation conditions possibly resulting in runoff or illicit discharges to waterbodies.

Irrigation Period
Recording and reporting requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.200 monitoring of irrigation period is required. Monitoring the irrigation period will also ensure soils do not get saturated and result in runoff or cause illicit discharges to waterbodies.

Volume Irrigated
Recording and reporting requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.200, monitoring of application activity is required. Monitoring the volume irrigated will allow the Department to ensure over application does not occur, and appropriate hydraulic loading is maintained within design levels. This will also help prevent runoff and illicit discharges due to soil saturation.

IRRIGATED WASTEWATER MONITORING TABLE:

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVG.	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
TOTAL KJELDAHL NITROGEN	mg/L	*	*	ONCE/YEAR	ONCE/YEAR	GRAB
TOTAL PHOSPHORUS AS P	mg/L	*	*	ONCE/YEAR	ONCE/YEAR	GRAB
TOTAL SODIUM	mg/L	*	*	ONCE/YEAR	ONCE/YEAR	GRAB
TOTAL SUSPENDED SOLIDS	mg/L	*	*	ONCE/YEAR	ONCE/YEAR	GRAB
CHLORIDES	mg/L	*	*	ONCE/YEAR	ONCE/YEAR	GRAB
OIL & GREASE	mg/L	*	*	ONCE/YEAR	ONCE/YEAR	GRAB
PH †	SU			ONCE/YEAR	ONCE/YEAR	GRAB

IRRIGATION WASTEWATER MONITORING DERIVATION OF REQUIREMENTS:
A sample is required annually even if no irrigation took place.

Chlorides
Monitoring is required to protect for sudden plant phytotoxicity pursuant to 10 CSR 20-6.015(4).

Oil & Grease
Monitoring of the wastewater prior to land application is necessary to ensure soils have the capacity to absorb any oils or greases. Runoff containing any sheen is prohibited by general criteria pursuant to 10 CSR 20-7.015(4).

pH
Monitoring only to ensure that the land application system maintains proper functionality and does not cause phytotoxicity, per 10 CSR 20-6.015(4)(A).

Total Sodium
Sodium ions can inhibit nutrient uptake in plants. As such, sodium levels should be monitored to prevent phytotoxicity and ensure appropriate nutrient uptake calculations, used to determine appropriate land application rates.

Total Kjeldahl Nitrogen and Total Phosphorus
Nutrient concentrations must be monitored to ensure appropriate land application rates based on agronomic needs. Crop types, soil nutrient levels, and crop management plans must be considered to ensure accurate agronomic application rates.

OUTFALLS SUBDIVISION E– STORMWATER

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	BENCHMARK	MINIMUM SAMPLING FREQUENCY	REPORTING FREQUENCY	SAMPLE TYPE
FLOW	MGD	*	QUARTERLY	QUARTERLY	24 HR. TOTAL
OIL & GREASE	mg/L	10	QUARTERLY	QUARTERLY	GRAB
PH †	SU	6.0-9.0	QUARTERLY	QUARTERLY	GRAB
TOTAL SUSPENDED SOLIDS (TSS)	mg/L	100	QUARTERLY	QUARTERLY	GRAB

Flow
In accordance with [40 CFR Part 122.44(i)(1)(ii)], the volume of effluent discharged from each outfall is needed to ensure 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 an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD); quarterly monitoring is appropriate (unless facility is subject to Subdivision F for animal holding areas).

Oil & Grease
Monitoring with a daily maximum benchmark of 10 mg/L, based on permit writer's best professional judgment. Oil and grease is considered a conventional pollutant. Oil and grease is a comprehensive test which measures for gasoline, diesel, crude oil, creosote, kerosene, heating oils, heavy fuel oils, lubricating oils, waxes, and some asphalt and pitch. The test can also detect some volatile organics such as benzene, toluene, ethylbenzene, or xylene, but these constituents are often lost during testing due to their boiling points. It is recommended to perform separate testing for these constituents if they are a known pollutant of concern at the site (i.e., aquatic life toxicity or human health is a concern). Results do not allow for separation of specific pollutants within the test; they are reported, totaled, as "oil and grease". Per 10 CSR 20-7.031 Table A1: *Criteria for Designated Uses*; 10 mg/L is the standard for protection of aquatic life. This standard will also be used to protect the general criteria found at 10 CSR 20-7.031(4). Ten mg/L is the level at which sheen is expected to form on receiving waters. Oils and greases of different densities will possibly form sheen or unsightly bottom deposits at levels which vary from 10 mg/L. To protect the general criteria, it is the responsibility of the facility to visually observe the discharge and receiving waters for sheen or bottom deposits. The limit is achievable through proper operational and maintenance of BMPs and falls within the range of values implemented in other permits having similar industrial activities. The benchmark this permit applies does not allow the facility to violate general criteria 10 CSR 20-7.015(4) even if data provided are below the benchmark.

pH
6.0 SU minimum to 9.0 SU maximum benchmarks are applicable to the stormwater outfalls. The permit writer has determined the stormwater has no reasonable potential to negatively impact water quality; therefore, a benchmark is applied that is consistent with benchmarks established at other similar facilities.

Total Suspended Solids (TSS)
Monitoring with a daily maximum benchmark of 100 mg/L. There is no numeric water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. TSS is also a valuable indicator parameter. TSS monitoring allows the facility to identify increases in TSS indicating uncontrolled materials leaving the site. Increased suspended solids in runoff can lead to decreased available oxygen for aquatic life and an increase of surface water temperatures in a receiving stream. Suspended solids can also be carriers of toxins, which can adsorb to the suspended particles; therefore, total suspended solids are a valuable indicator parameter for other pollution. The benchmark is achievable through proper operational and maintenance of BMPs and falls within the range of values implemented in other permits having similar industrial activities.

OUTFALLS SUBDIVISION F– ANIMAL HOLDING AREAS

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVG	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL						
FLOW	MGD	*	*			24 HR. TOTAL
CONVENTIONAL						
BOD_5 (MEAT/POULTRY)	mg/L	39/26	19/16	QUARTERLY	QUARTERLY	GRAB
E. COLI (CFU/100ML) WBC-A/WBC-B/ SCR	#/100mL	630/ 1030/ 5670	126/ 206/ 1134	QUARTERLY	QUARTERLY	GRAB
FECAL COLIFORM	#/100mL	400	-	QUARTERLY	QUARTERLY	GRAB
OIL & GREASE (MEAT/POULTRY)	mg/L	19/14	10/8	QUARTERLY	QUARTERLY	GRAB
PH Ω	SU	6.5-9.0	-	QUARTERLY	QUARTERLY	GRAB
TOTAL SUSPENDED SOLIDS (TSS)	mg/L	65/30	32/20	QUARTERLY	QUARTERLY	GRAB
NUTRIENTS						
AMMONIA AS N (APR 1 – SEPT 30)	mg/L	6.9	0.8	QUARTERLY	QUARTERLY	GRAB
AMMONIA AS N (OCT 1 – MARCH 31)	mg/L	6.9	1.8	QUARTERLY	QUARTERLY	GRAB
NITROGEN, TOTAL N (TN)	mg/L	194/ 147	134/ 103	QUARTERLY	QUARTERLY	GRAB
PHOSPHORUS, TOTAL P (TP)	mg/L	*	*/0.5††	QUARTERLY	QUARTERLY	GRAB

DERIVATION AND DISCUSSION OF LIMITATIONS:
The limitations listed below are largely based on the associated meat processors ELG, 40 CFR 432. Runoff from animal holding areas is designated as wastewater in this ELG.

Flow
In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD).

Biochemical Oxygen Demand - 5 Day (BOD_5)
Effluent limitations are established within this permit for BOD_5. There are no numeric water quality criteria for BOD_5, and there are no general criteria pursuant to 10 CSR 20-7.031(4) associated with BOD which need to be established within this permit. Therefore, the technology limits are more stringent than the WQS. These wastewater limits are based on the meat processing ELG, 40 CFR 432. The concentration was based on 1000 pounds live weight killed (lbs LWK), the lowest production value in the ELG, and the value of 740 gallons of wastewater generated per 1000 lbs LWK. The ELG most conservative effluent limits for BOD_5 are established for a simple slaughterhouse, which is 0.24lbs LWK daily maximum and 0.12lbs LWK monthly average. The ELG for poultry processors, however, establishes a limit of 26 mg/L daily maximum and 16 mg/L monthly average. Therefore, different values, 39 mg/L daily maximum and 19 mg/L monthly average for meat processors and 26 mg/L daily maximum and 16 mg/L monthly average for poultry processors, are established for meat processors and poultry processors, both based on the ELG limitations.

Escherichia coli (E. coli)

E. coli is a potential pollutant of concern for this industry, both from animal meat processing as well as animal holding areas and other animal waste. This permit establishes water-quality based effluent limits for *E. coli* based on the receiving waterbody:

- WBC-A Daily maximum limit of 630 colony forming units per 100 mL [10 CSR 20-7.015(9)(B)1.E.] and a monthly geometric mean limit of 126 bacteria per 100 mL [10 CSR 20-7.031 Table A1] during the recreational season from April 1 through October 31 only [10 CSR 20-7.031(5)(C)], to protect Whole Body Contact (A) [10 CSR 20-7.031(C)2.A.(I)] designated use of the receiving waterbody.
- WBC-B Daily maximum limit of 1,030 colony forming units per 100 mL [10 CSR 20-7.015(9)(B)1.E.] and a monthly geometric mean limit of 206 bacteria per 100 mL [10 CSR 20-7.031 Table A1] during the recreational season from April 1 through October 31 only [10 CSR 20-7.031(5)(C)], to protect Whole Body Contact (B) [10 CSR 20-7.031(C)2.A.(II)] designated use of the receiving waterbody.
- SCR: Daily maximum limit of 5,670 colony forming units per 100 mL [10 CSR 20-7.015(9)(B)1.E.] and a monthly geometric mean limit of 1,134 bacteria per 100 mL [10 CSR 20-7.031 Table A1] during the recreational season from April 1 through October 31 only [10 CSR 20-7.031(5)(C)] to protect the Secondary Contact Recreation (SCR) [10 CSR 20-7.031(C)2.B.] designated use of the receiving waterbody, as per 10 CSR 20-7.031(5)(C).

Quarterly monitoring established per permit writer's best professional judgment. Additional samples should be obtained if necessary to meet permit limits for monthly geometric mean. There are no technology limitations established for this parameter; therefore, water quality limits are the most protective.

An effluent limit for both daily maximum and monthly geometric mean is required by 40 CFR 122.45(d). The geometric mean is calculated by multiplying all of the data points and then taking the n^{th} root of this product, where n = # of samples collected. For example: Five *E. coli* samples were collected with results of 1, 4, 5, 6, and 10 (#/100 mL). Geometric mean = 5^{th} root of (1)(4)(5)(6)(10) = 5^{th} root of 1,200 = 4.1 #/100 mL.

Fecal coliform

Numeric limit of 400 colony forming units per 100 milliliters based on the ELG for meat processors in 40 CFR 432. Fecal coliform does not have a water quality standard in Missouri water quality standards; however, *E. coli* has water quality standards upon which are based the effluent limits listed immediately above.

Oil & Grease

The wastewater limits are based on the meat processing ELG, 40 CFR 432. For meat processors, the concentration was based on 1000 pounds live weight killed (lbs LWK), the lowest production value in the ELG, and the value of 740 gallons of wastewater generated per 1000 lbs LWK. The ELG most conservative effluent limits for Oil and Grease are established for a simple slaughterhouse, which is 0.12 lbs LWK daily maximum and 0.06 lbs LWK monthly average for meat processors.

The ELG for poultry processors, however, establishes a limit of 14 mg/L daily maximum and 8 mg/L monthly average. Therefore, different values are established for meat processors and poultry processors, both based on the ELG limitations.

Oil and grease is considered a conventional pollutant. Oil and grease is a comprehensive test which measures for gasoline, diesel, crude oil, creosote, kerosene, heating oils, heavy fuel oils, lubricating oils, waxes, and some asphalt and pitch. The test can also detect some volatile organics such as benzene, toluene, ethylbenzene, or xylene, but these constituents are often lost during testing due to their boiling points. The permit writer completed an RPD on this parameter and found RP based on the activities taking place at these facilities. Oils and greases of different densities will possibly form sheen or unsightly bottom deposits at levels which vary from 10 mg/L. To protect the general criteria, it is the responsibility of the facility to visually observe the discharge and receiving waters for sheen or bottom deposits. The limit this permit applies does not allow the facility to violate general criteria pursuant to 10 CSR 20-7.015(4) even if data provided are below the numeric limit.
AQL Chronic: 10 mg/L per 10 CSR 20-7.031 Table A1
Set chronic standard equal to chronic WLA per TSD §5.4.2 (EPA/505/2-90-001); multiply by 1.5 to obtain acute limit.
10 mg/L * 1.5 = 15 mg/L

pH

6.5 to 9.0 SU – instantaneous grab sample. Water quality limits [10 CSR 20-7.031(5)(E)] are applicable to this outfall.

Total Suspended Solids

This permit establishes TSS limits based on the meat processing ELG, 40 CFR 432. There are no numeric water quality criteria for TSS, but there are general criteria pursuant to 10 CSR 20-7.031(4) associated with TSS. However, the technology limits established in this permit are more stringent than any TSS WQS which would be established. The concentration was based on 1000 pounds live weight killed (lbs LWK), the lowest production value in the ELG, and the value of 740 gallons of wastewater generated per 1000 lbs LWK. The ELG most conservative effluent limits for TSS are established for a simple slaughterhouse, which is 0.4lbs LWK daily maximum and 0.2lbs LWK monthly average for meat processors.

The ELG for poultry processors, however, establishes a limit of 30 mg/L daily maximum and 20 mg/L monthly average. Therefore, different technology-based effluent limitations are established for meat processors and poultry processors, both based on the ELG limitations.

NUTRIENTS:

Ammonia, Total as Nitrogen

For general permits, water quality based effluents must consider all potential impacts and provide conservative values to protect all potential designated uses, including aquatic life, in receiving water bodies. As such, early life stages present [10 CSR 20-7.031(5)(B)7.C & Table B3] is the most conservative aquatic life protection for ammonia; total ammonia nitrogen criteria apply. For these calculations, the permit writer used the Interior River Valleys and Hills area data, as this data has the highest average temperatures in the state. The permit writer also used the highest average stream pH by region, which was based on the Western Corn Belt region. The calculations using these most conservative values are provided below:

Calculations for the 2nd and 3rd quarters of the year (4/1 – 9/30)

Acute AQL WQS (CMC): (0.411/(1+10^7.204- pH[8.1]))+(58.4/(1+10^(pH[8.1]-7.204)) = 6.9 mg/L
Chronic AQL WQS (CCC): (0.0577/(1+10^7.688 – pH[8.1]))+(2.487/(1+10^pH[8.1]-7.688))*MIN(2.85,(1.45*10^0.028*(25-temp[24]))) = 1.1 mg/L

Acute AQL WQS (CMC): (0.411/(1+10^7.204- pH[8.1]))+(58.4/(1+10^(pH[8.1]-7.204)) = 6.9 mg/L
Chronic AQL WQS (CCC): (0.0577/(1+10^7.688 – pH[8.1]))+(2.487/(1+10^pH[8.1]-7.688))*MIN(2.85,(1.45*10^0.028*(25-temp[28.6]))) = 0.8 mg/L

Calculations for 1st and 4th quarters (10/1 - 03/31)

Acute AQL WQS (CMC): (0.411/(1+10^7.204- pH[8.1]))+(58.4/(1+10^(pH[8.1]-7.204)) = 6.9 mg/L
Chronic AQL WQS (CCC): (0.0577/(1+10^7.688 – pH[8.1]))+(2.487/(1+10^pH[8.1]-7.688))*MIN(2.85,(1.45*10^0.028*(25-temp[7.5]))) = 2 mg/L

Acute AQL WQS (CMC): (0.411/(1+10^7.204- pH[8.1]))+(58.4/(1+10^(pH[8.1]-7.204)) = 6.9 mg/L
Chronic AQL WQS (CCC): (0.0577/(1+10^7.688 – pH[8.1]))+(2.487/(1+10^pH[8.1]-7.688))*MIN(2.85,(1.45*10^0.028*(25-temp[16]))) = 1.8 mg/L

The calculations above are based on quarterly data and then the most conservative values were used as limits for this general permit. These values establish water quality based effluent limits for all potential water bodies authorized in this general permit.

Nitrogen, Total N (TN)

The Total Nitrogen wastewater limits established within this permit are based on the meat processing ELG, 40 CFR 432. The ELG most conservative effluent limits for TN are established for meat under large packinghouses and provide a daily maximum limit of 194 mg/L and 134 mg/L monthly average for meat processors. The ELG for poultry processors, however, establishes a limit of 147 mg/L daily maximum and 103 mg/L monthly average, based on the most stringent limit established in the new point source section of the rule. Therefore, different values are established for meat processors and poultry processors, both based on the ELG limitations.

Phosphorous, Total P (TP)

Monitoring only for daily maximum and monthly average concentrations of TP, for most facilities. This permit also establishes a 0.5mg/L TP limit for monthly average for facilities discharging to tributaries to Lake Taneycomo (HUC 110100003) between Table rock Dam and Power Site Dam permitted on or after May 9, 1994; and facilities discharging to Table Rock Lake (HUC 11010001 and 11010002) permitted on or after November 30, 1999, in accordance with 10 CSR 20-7.015(3)(E).

OUTFALLS SUBDIVISION G– STORMWATER- ANIMAL TRANSFER, TRANSPORTATION, AND WASTE AREAS

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	DAILY MAXIMUM LIMIT	BENCH-MARK	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL						
FLOW	MGD	*	-	QUARTERLY	QUARTERLY	24 HR. ESTIMATE
CONVENTIONAL						
BOD_5	mg/L	**	39	QUARTERLY	QUARTERLY	GRAB
E. COLI	#/100mL	**	799	QUARTERLY	QUARTERLY	GRAB
OIL & GREASE	mg/L	**	10	QUARTERLY	QUARTERLY	GRAB
pH Ω	SU	**	6.0-9.0	QUARTERLY	QUARTERLY	GRAB
TSS	mg/L	**	65	QUARTERLY	QUARTERLY	GRAB
NUTRIENTS						
AMMONIA AS N	mg/L	*	-	QUARTERLY	QUARTERLY	GRAB
NITROGEN, TOTAL	mg/L	*	-	QUARTERLY	QUARTERLY	GRAB
PHOSPHORUS, TOTAL	mg/L	*	-	QUARTERLY	QUARTERLY	GRAB

* Monitoring and reporting requirement only
** Monitoring with associated benchmark
Ω Report the minimum and maximum pH values; pH is not to be averaged
€ # of colonies/100mL; the Monthly Average for *E. coli* is a geometric mean. Recreational season only.

DERIVATION AND DISCUSSION OF BENCHMARKS:
The CWA requires all NPDES discharges to Waters of the U.S. contain technology-based or water-quality based effluent limitations, whichever is more stringent. When the EPA has not established industry specific technology based Effluent Limitation Guidelines, Missouri uses EPA's *Technical Support Document for Water Quality Based Toxics Control* (TSD) method for calculating site-specific water-quality based effluent limitations. The TSD method is based on assumptions and statistics which apply to continuous discharges, not intermittent stormwater discharges and, thus, do not apply to this permit. Thus, it is the Department's policy to consult the EPA's *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity* (MSGP) or other applicable documents or guidance.

Flow
In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD).

Biochemical Oxygen Demand - 5 Day (BOD_5)
Effluent limitations are established within this permit for BOD_5. These wastewater limits are based on the meat processing ELG, 40 CFR 432. The concentration was based on 1000 pounds live weight killed (lbs LWK), the lowest production value in the ELG, and the value of 740 gallons of wastewater generated per 1000 lbs LWK. The ELG most conservative effluent limits for BOD_5 are established for a simple slaughterhouse, which is 0.24 lbs LWK daily maximum and 0.12 lbs LWK monthly average. The ELG for poultry processors, however, establishes a limit of 26 mg/L daily maximum and 16 mg/L monthly average. Therefore, different values, 39 mg/L daily maximum and 19 mg/L monthly average for meat processors and 26 mg/L daily maximum and 16 mg/L monthly average for poultry processors, are established for meat processors and poultry processors, both based on the ELG limitations.

Escherichia coli (E. coli)
E. coli is a potential pollutant of concern for this industry, both from animal meat processing as well as animal holding areas and other animal waste. This permit establishes water-quality based effluent limits for *E. coli* based on the receiving waterbody:
Quarterly monitoring established per permit writer's best professional judgment. Additional samples should be obtained if necessary to meet permit benchmarks for quarterly geometric mean. The geometric mean is calculated by multiplying all of the data points and then taking the n^{th} root of this product, where n = # of samples collected. For example: Five (5) *E. coli* samples were collected with results of 1, 4, 5, 6, and 10 (#/100 mL). Geometric mean = 5^{th} root of (1)(4)(5)(6)(10) = 5^{th} root of 1,200 = 4.1 #/100 mL.

Based on research available through the EPA stormwater BMPs database, vegetated buffers can remove 64%-87% of bacteria from stormwater runoff. Using the 64% reduction and an average *E. coli* concentration of 2,220 data gathered from an animal processing facility runoff, the permit writer determined that an appropriate and feasible BMP, vegetated buffers, could result in a treated effluent concentration of 799 colony forming units per 100 milliliters (cfu#/100 mL)L. The benchmark is achievable through proper operational and maintenance of reasonable BMPs for meat processing facilities.

Oil & Grease

Oil and grease is considered a conventional pollutant. Oil and grease is a comprehensive test which measures for gasoline, diesel, crude oil, creosote, kerosene, heating oils, heavy fuel oils, lubricating oils, waxes, and some asphalt and pitch. The test can also detect some volatile organics such as benzene, toluene, ethylbenzene, or xylene, but these constituents are often lost during testing due to their boiling points. It is recommended to perform separate testing for these constituents if they are a known pollutant of concern at the site (i.e., aquatic life toxicity or human health is a concern). Oils and greases of different densities will possibly form sheen or unsightly bottom deposits at levels which vary from 10 mg/L. To protect the general criteria, it is the responsibility of the permittee to visually observe the discharge and receiving waters for sheen or bottom deposits. The benchmark is achievable through proper operational and maintenance of BMPs and falls within the range of values implemented in other permits having similar industrial activities.

pH

6.0 SU minimum to 9.0 SU maximum benchmarks are applicable to the stormwater outfalls. The permit writer has determined the stormwater has no reasonable potential to negatively impact water quality; therefore, a benchmark is applied that is consistent with benchmarks established at other similar facilities.

Total Suspended Solids

This permit establishes TSS benchmarks based on the meat processing ELG, 40 CFR 432, and the expectation of the treatment technology available and expected for use at these types of facilities. The concentration was based on 1000 pounds live weight killed (lbs LWK), the lowest production value in the ELG, and the value of 740 gallons of wastewater generated per 1000 lbs LWK. The ELG most conservative effluent limits for TSS are established for a simple slaughterhouse, which is 0.4 lbs LWK daily maximum and 0.2 lbs LWK monthly average for meat processors. As best management practices and technology are available and reasonable to treat animal-impacted stormwater at these types of facilities, the permit writer determined that this was an appropriate technology-based benchmark for this stormwater at meat processing facilities.

Nutrients: Ammonia, Total as Nitrogen, Total Nitrogen, and Total Phosphorus

Nutrients are potential pollutants of concern for this stormwater that could be impacted by animal transfers, transportation or other animal activities (other than animal holding areas covered in Subdivision F). Monitoring implemented to assess potential nutrients in stormwater runoff and future evaluation.

Part V– Sampling and Reporting Requirements

SAMPLING FREQUENCY:

Sampling frequency is established in accordance with Department policy. Effluent limitations are expressed in a daily maximum and a monthly average. Monthly, quarterly, 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 discharges occur during a sampling period, report as “no discharge.”

Sampling frequency is established in accordance with Department policy. Because of the variability of precipitation occurring in Missouri, it is the permit writer’s best professional judgment quarterly sampling (one sample for each season of the year) is the minimal amount of sampling necessary to obtain a representative set of data on a stormwater discharge. If no discharges occur during a sampling period, report as “no discharge.”

Quarterly sampling ensures seasonal variations in stormwater discharges are adequately characterized as it pertains to the ability of BMPs to meet established benchmark values. The permit requires the facility to develop and maintain a SWPPP which identifies BMPs used on the site to control and reduce the discharge of water contaminants via stormwater as a result of the regulated industrial activity. In absence of gathered data, the Department is unable to determine if the installed BMPs are being adequately maintained and protecting water quality. Thus, the Department has increased stormwater sampling to quarterly and asked the facility to compare the sample results from the quarterly sampling to the benchmarks in the permit. This will aid in identifying inadequate BMPs in need of repair.

It is common to see the Department improve a permit over time as the Department deals with compliance issues and water quality impacts. This change is one such instance where the Department has identified a lack of sampling as being an issue in determining whether or not a sector of stormwater regulated facilities is truly maintaining their BMPs at a level reasonably acceptable and protective of water quality when dealing with industrial stormwater.

SAMPLING TYPE JUSTIFICATION:
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, dissolved oxygen, total phosphorus, volatile organic compounds, and others.

As per 10 CSR 20-7.015, BOD_5, TSS and WET test samples collected for lagoons/sand filters may be grab samples. Grab samples must be collected for pH, Ammonia as N, *E. coli*, TRC, Oil & Grease, Dissolved Oxygen and Total Phosphorus. This is due to the holding time restriction for *E. coli*, the volatility of Ammonia and TRC, and the fact pH and DO cannot be preserved and must be sampled in the field. As Ammonia, Oil & Grease, and Total Phosphorus samples must be immediately preserved with acid, these samples are to be collected as a grab. For further information on sampling and testing methods see 10 CSR 20-7.015(9)(D)2.

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. 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 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 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. 40 CFR 136 lists the approved methods accepted by the Department. Tables A1-B3 at 10 CSR 20-7.031 shows water quality standards.

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 was held on December 8, 2021 as this is a new master general permit.

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 starts March 4, 2022 and ends April 4, 2022.

DATE OF FACT SHEET: JANUARY 5, 2022

COMPLETED BY:

HEATHER PETERS
ENVIRONMENTAL SUPERVISOR
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION
STORMWATER AND CERTIFICATION UNIT
(573) 526-5449
heather.peters@dnr.mo.gov

Addendum 1. 10 CSR 20-7.031 Table N: Site-Specific Nutrient Criteria

This permit does not authorize the discharge of industrial or domestic wastewater (including animal holding area wastewater) into the lakes listed in 10 CSR 20-7.031 Table N, Site-Specific Nutrient Criteria (see Addendum 1, Fact Sheet); discharge is not authorized in this permit directly to the lake or into any tributary to the lake within 5 miles. If other discharges are found to result in exceedances of the site-specific nutrient criteria for these lakes, a site-specific permit may be required. Table Rock Lake is not included in this permit exclusion; limits were established for discharges to Table Rock Lake.

Lakes covered in Table N with Site-Specific Nutrient Criteria

Lake	**County**
Bowling Green Lake	Pike
Bowling Green Lake (old)	Pike
Clearwater Lake	Wayne-Reynolds
Council Bluff Lake	Iron
Crane Lake	Iron
Forest Lake	Adair
Fourche Lake	Ripley
Fox Valley Lake	Clark
Goose Creek Lake	St. Francois
Hazel Creek Lake	Adair
Lincoln Lake- Cuivre River State Park	Lincoln
Loggers Lake	Shannon
Lower Taum Sauk Lake	Reynolds
Marie, Lake	Mercer
Nehai Tonkaia Lake	Chariton
Noblett Lake	Douglas
St. Joe State Park Lakes	St. Francois
Sunnen Lake	Washington
Terre du Lac Lakes	St. Francois
Timberline Lakes	St. Francois
Viking, Lake	Daviess
Waukomis Lake	Platte
Wauwanoka, Lake	Jefferson
Weatherby Lake	Platte

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

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

Part I – General Conditions
Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
   a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
   b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.

2. **Monitoring Requirements**.
   a. Records of monitoring information shall include:
      i. The date, exact place, and time of sampling or measurements;
      ii. The individual(s) who performed the sampling or measurements;
      iii. The date(s) analyses were performed;
      iv. The individual(s) who performed the analyses;
      v. The analytical techniques or methods used; and
      vi. The results of such analyses.
   b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.

3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.

4. **Test Procedures**. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is "sufficiently sensitive" when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility's discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.

5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

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

Section B – Reporting Requirements

1. **Planned Changes.**
   a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
      i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
      ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42;
      iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
      iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.

2. **Non-compliance Reporting.**
   a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

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.

MOG220146

AP 46996

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

FORM P – APPLICATION FOR MOG22 PROCESSING MEAT AND MEAT PRODUCTS GENERAL PERMIT UNDER MISSOURI CLEAN WATER LAW

FOR AGENCY USE ONLY	
CHECK NUMBER OR JET PAY CONFIRMATION NUMBER	1206
DATE RECEIVED: 2/10/25	FEE SUBMITTED: 200

PLEASE READ ALL THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

Complete all applicable fields. Instructions for completing the form are located at the end of the form. Sign, date and return the form and all requested documents along with a check for the appropriate fee to the Missouri Department of Natural Resources. Completed applications may be submitted electronically to CleanWaterPermits@dnr.mo.gov, along with a copy of the fee payment receipt.

Permit fees may be paid by attaching a check to your application, or online by credit card or eCheck through a system called JetPay. Use the URL provided to access JetPay and make an online payment:

For new general permits (MOG and MOR): https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/604/

For modifications: https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/596/

IF YOUR FACILITY IS ELIGIBLE FOR A NO EXPOSURE EXEMPTION:
Fill out the No Exposure Certification Form (MO 780-2828): https://dnr.mo.gov/document-search/no-exposure-certification-exclusion-npdes-stormwater-permitting-under-missouri-clean-water-law-mo-780-2828

1. APPLICATION PURPOSE

1.1
- ☐ a. This facility is now in operation under Missouri State Operating Permit (permit) MO – _____, is submitting an application for renewal, and there is no proposed increase in design wastewater flow. Pay annual fees when invoiced. No additional permit fee required for renewal.
- ☐ b. This facility is now in operation under permit MO – _____, is submitting an application for renewal, and there is a proposed increase in design wastewater flow. Antidegradation Review may be required. Pay annual fees when invoiced. No additional permit fee required for renewal.
- ☒ c. This is a facility submitting an application for a new permit (for a new facility) under MO- G22. Antidegradation Review or a construction permit may be required. New permit fee required.
- ☐ d. This facility is now in operation under Missouri State Operating Permit (permit) MO – _____ and is requesting a modification to the permit. Antidegradation Review or a construction permit may be required. Modification fee required.

1.2 Briefly describe the primary business conducted at the site:

Poultry Processing

2. FACILITY

FACILITY NAME	COUNTY	TELEPHONE NUMBER WITH AREA CODE	
Green Meadows Farm	Dent	573-247-8055	
ADDRESS (PHYSICAL LOCATION)	CITY	STATE	ZIP CODE
5983 Hwy CC	Salem	MO	65560

3. OWNER

NAME	EMAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE	
Elmer Miller	grassfed@upwardmail.com	573-247-8055	
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
5983 Hwy CC	Salem	MO	65560

4. CONTINUING AUTHORITY

NAME	EMAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE	
Elmer Miller			
ADDRESS (MAILING)	CITY	STATE	ZIP CODE

Charter Number (Secretary of State ID)
MO Drivers License Z105140002

5. FACILITY CONTACT

NAME	TELEPHONE NUMBER WITH AREA CODE
Elmer Miller	573-247-8055
TITLE	EMAIL ADDRESS
Owner	grassfed@upwardmail.com

RECEIVED
FEB 10 2025
Water Protection Program

6. APPLICABILITY

6.1 Primary SIC code of facility 2015 Other SIC code _____ Primary NAICS code of facility _____
If other industrial activities are occurring at the facility not covered by the above reported SIC codes, please attach a list of additional activities and applicable SIC and corresponding NAICS codes.

6.2 Review the general permit being applied for on the Department's permit website (https://dnr.mo.gov/env/wpp/permits/index.html). Please determine whether the facility meets the terms and conditions of the chosen general permit and complete the following:

Does the facility meet all applicability requirements of the applied-for permit? ☒ Yes ☐ No
If "No," please contact the appropriate Department Regional Office for further permitting direction.

Does the permit being applied for address all pollutants of concern at the facility? ☒ Yes ☐ No
If "No," please attach a list additional pollutants and possible sources.

Is data from the last two years available that describes the concentration of pollutants in the discharges? ☐ Yes ☒ No
If "Yes," provide the data as an attachment to this application.

7. MAPS AND DIAGRAMS

7.1 Attach a 1:1,000 aerial photograph of the facility or USGS topographic map. The map must indicate the boundaries of the property, the areas of industrial activities (including the location of industrial materials stored outdoors exposed to precipitation), outfall locations, and locations of wastewater treatment devices or stormwater basins.

7.2 Attach a line drawing of the water flow through the facility with water balance values, showing operations contributing wastewater or stormwater to the discharges and/or treatment units. The water balance must show approximate average flows at intake and discharge points and between units, including treatment units. If a water balance cannot be determined, a pictorial description of the nature and amount of any sources of water and any collection and treatment measures may be submitted in the place of a line drawing.

8. ELECTRONIC DISCHARGE MONITORING REPORT (eDMR) SUBMISSION SYSTEM

Per 40 CFR Part 127, National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent limits and monitoring shall be submitted by the permittee via an electronic system to ensure a timely, complete, accurate, and nationally-consistent set of data. One of the following options must be checked in order for this application to be considered complete. Visit https://dnr.mo.gov/env/wpp/edmr.htm for information on the Department's eDMR system and how to register.

☒ I will register an account online to participate in the Department's eDMR system through the Missouri Gateway for Environmental Management (MoGEM) before any reporting is due, in compliance with the Electronic Reporting Rule.

☐ I have already registered an account online to participate in the Department's eDMR system through MoGEM.

☐ I have submitted a written request for a waiver from electronic reporting. See instructions for further information regarding waivers.

☐ The permit I am applying for does not require the submission of discharge monitoring reports.

9. PERMITTED FEATURES

Check the box only if the Subdivision below applies to the facility and provide requested responses (see MOG22 permit for Subdivisions).

	Coordinates (specify units)	Design Flow/ Actual Flow (MGD)	Description of Activities in Permitted Area
Subdivision A ☐ Wastewater Discharges			
Subdivision B ☐ Earthen Basin/ Lagoon			
Subdivision C ☒ Subsurface Dispersal (Leach Fields)		1600 gal. per wk.	Processing wastewater disposal. (includes cooling water)
Subdivision D ☐ Land Application (Surface)			
Subdivision E ☒ Stormwater (non-animal impacted)		In wet weather w/ Heavy rains	This is a natural wet weather drain fully vegetated.
Subdivision F ☐ Animal Holding Area(s)			
Subdivision G ☐ Animal Transfer, Transportation, or Waste Areas			
Subdivision H ☒ Composting			Offal to be composted in sawdust and other carbonaceous materials

If you have additional outfalls, please attach additional pages and include the information listed above.

10. ADDITIONAL SITE INFORMATION

10.1 Provide a narrative identification of each type of process, operation, or production area which contributes effluent for each outfall, including process wastewater, non-process wastewater, cooling water and stormwater runoff; the average flow each process contributes; and a description of the treatment the wastewater or stormwater receives, including the ultimate disposal of any solid or fluid wastes other than by discharge. Processes, operations, or production areas may be described in general terms (for example, "dye-making reactor" or "distillation tower"). The average flow of point sources composed of stormwater may be estimated. The basis for the rainfall event and the method of estimation must be indicated. If this application is for a stormwater discharge permit, provide an attached list of **any** materials that are stored outside and exposed to stormwater, including wood pallets, empty storage barrels, waste disposal containers (except for a secured covered dumpster), or anything that is a raw material, by-product, or product of your manufacturing activities.

10.2 Does the discharge(s) for which you are seeking a permit discharge to a combined sewer system? ☐ Yes ☒ No

10.3 Are any of the wastes at your site disposed to the subsurface via well or onsite wastewater system (septic system)? ☒ Yes ☐ No
If "Yes", please attach a table or narrative description and map of the system, including location of each subsurface tank and what effluent is disposed of subsurface.

OPTIONAL QUESTIONS REGARDING MILITARY SERVICE

Have you or an immediate family member ever served in the U.S. Armed Forces?	☐ Yes	☒ No
If yes, would you like information about military-related services in Missouri?	☐ Yes	☐ No

11. SIGNATURE

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

NAME (TYPE OR PRINT)	OFFICIAL TITLE	TELEPHONE NUMBER WITH AREA CODE
Elmer Miller	Owner	573-247-8055

SIGNATURE	DATE SIGNED
Elmer Miller	2-6-2025

Soil Evaluation for
Onsite Wastewater Treatment

Owners Name: **Green Meadows Farm**	Date: **January 24, 2025**
Address: **5983 Hwy CC**	Phone: **573-729-0902**
City: **Salem MO 65560**	Email: **grassfed@upwardmail.com**
Site Address: **same as above**	County: **Dent**
City: **Salem MO**	Lat/Long: **37.586427 -91.750914**
Property Size: **162 acres**	Legal Description: **T33NR07WS06**
Contractor Name: **Unknown at this time**	Phone:
Address:	City:
System Serves: **Chicken Processing Facility**	Laundry: **No**
Number of People: **N/A**	Number of Bedrooms: **0**

Overall Site Suitability: ***Suitable for a conventional system***
Loading Rate for System (Daily Flow): **Avg 228 gallons/day. Operating 2 days a week at 800 galllons per day.**
Suggested Application Rate for Standard Systems: **0.35 gallons/day/sq.ft.**
Suggested Application Rate for Alternative Systems: **0.2**
Tank Size: The State of Missouri requires a tank with a minimum liquid capacity of 1,000 gallons.
Notes: **Application rate for the system is 0.35 gallons/day which in this situation the system will have little to no use daily but two days a week with the bulk of its flow at 1600 gallons per week. If this was averaged for a daily flow as I normally would do this is 228 gallons/day and a square footage of trench needed at 651 square feet of trench (228 divided by 0.35 = 651). In speaking with one installer he suggested installing large chambers (wide) to give storage capacity to distribute out on days not in use. As the map will show there is a lagoon servicing the home nearby and will need a 50 ft. setback distance from the new system. Soils were somewhat better downslope near pit #1. I might suggest starting layout near pit #1 and working upslope in laying out the system.**

Site Layout: See last pages for site diagram.

S	**LANDSCAPE POSITION:** Footslope			Slope aspect: South
S	Subject to frequent flooding? No		Surface depression(s) in area? No	
S	**TOPOGRAPHY**	Percent Slope: 4-5%	Slope Type: Uniform ☒ Complex ☐	
S	Shape across (contour): Convex		Shape down (profile): Convex	
	SOIL CHARACTERISTICS (See Profile Description for details)			
S	**TEXTURE** to a depth of 48 inches		Depth to unsuitable texture >48 inches	
S	**STRUCTURE** to a depth of 48 inches		Depth to unsuitable structure >48 inches	
S	**SOIL DRAINAGE**	Type of water table: None		Depth to water table None inches
S	Surface drainage limitations: None			Runoff slope length: 50 feet
S	**SOIL THICKNESS**	Depth to bedrock: >48 inches		Rock outcrops: None
S	**RESTRICTIVE HORIZON**	Type: None	Depth: --	Thickness: --
S	**AVAILABLE SPACE**	Estimated space available: 100 x 100 feet plus		
	Adequate for a conventional system: Yes	Alternative system: Yes		Replacement area: Yes
S	**OTHER FACTORS**	Note any environmental hazards:		

S	High groundwater contamination potential? No (If yes, indicate reason)	
S	Sinkhole ☐ Rapid permeability ☐ Depth to highly permeable bedrock ☐ Bottomland position ☐	
S	**OVERALL**	Notes

(7)(K), (L) Overall site classification will be determined by the lowest of the uncorrectable characteristics.

- **S** An overall site classification of **suitable** indicates soil and site conditions favorable for the operation of a conventional absorption system.
- **PS** Sites classified as **provisionally suitable** require some modifications and careful planning, design, and installation for a conventional system or alternative system to function satisfactorily.
- **U** Sites originally classified as **unsuitable** may possibly be reclassified as **provisionally suitable** according to subsection (7)(K).
- An **unsuitable** site may be used for soil absorption systems, provided engineering, hydrogeologic and soil studies indicate to the administrative authority that a conventional or alternative system could be expected to function satisfactorily. These sites may be reclassified as **provisionally suitable** upon meeting the requirements of the administrative authority according to subsection (6)(K).

Recommendations* associated with Provisionally Suitable or Unsuitable classifications:

- ☒ Trenches shall not be dug when wet to prevent damaging soil/trench surfaces.
- ☐ Surface water diversion is needed.
- ☐ An interceptor drain should be installed upslope at a depth of inches.
- ☐ Shallow or modified shallow placed trenches should be installed at a depth of – inches.
- ☐ An alternative/engineered system is needed to overcome site limitations.
- ☐
- ☐
- ☐
- ☐

Comments/Recommendations:

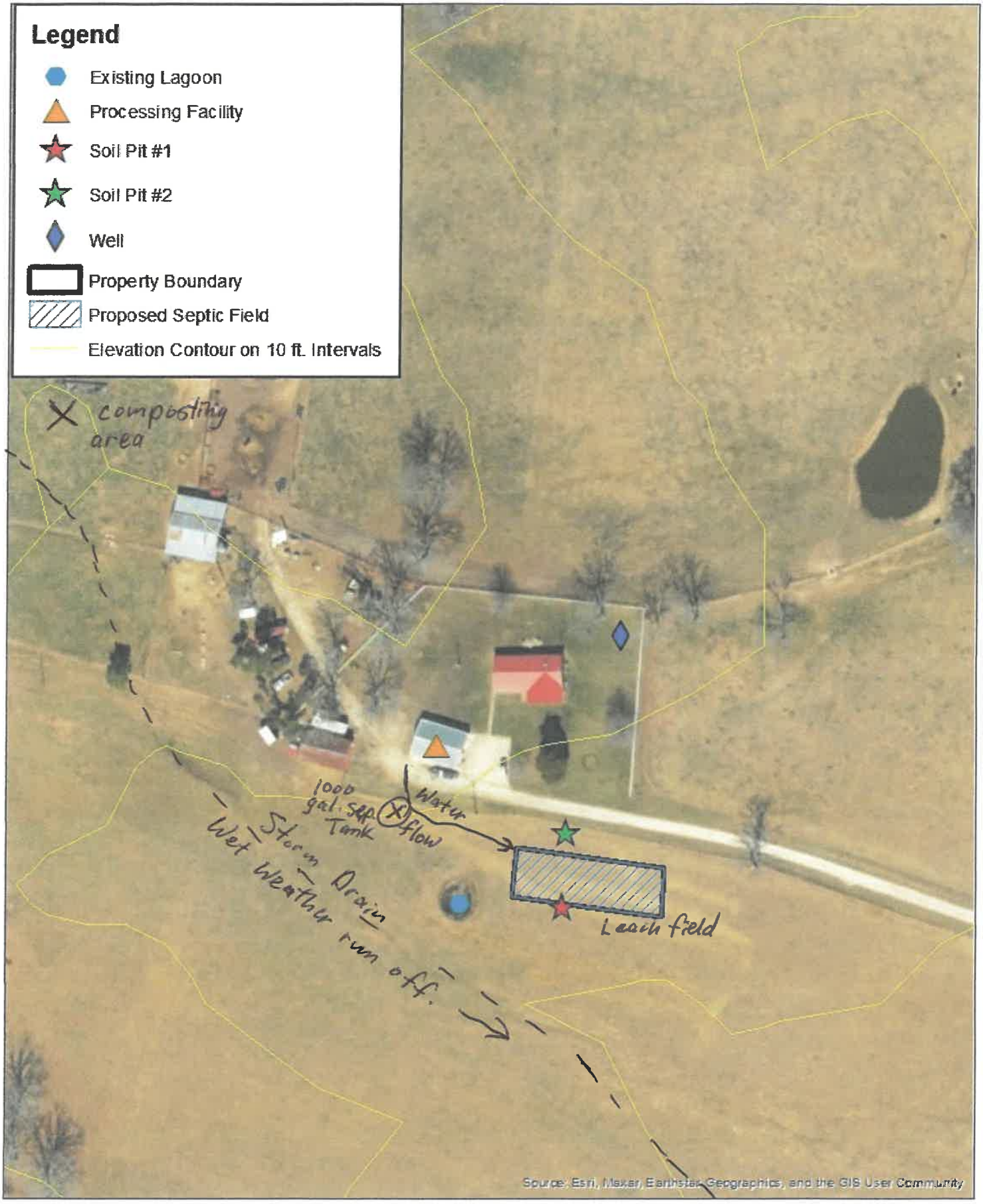
See page 1.

*Recommendations are to assist the property owner and their agents in complying with the standards, and are subject to approval by the administrative authority. **Note**: Soil and site properties, comments and recommendations provided do not give any guarantee that the absorption field will function properly. They are solely to assist the landowner and/or administrative authority in meeting the specifications of 19 CSR 20-32.060. I, the undersigned, hereby certify that the site evaluation was made in accordance with the requirements of Sections 701.025-701.059 RSMo and 19 CSR 20-3.060 and 19 CSR 20-3.080, and that the data recorded is correct to the best of my knowledge.

Brad McKee Digitally signed by Brad McKee Date: 2025.02.01 10:32:23 -06'00'

Signature Date

Brad McKee
5791 State Rt. AP
Willow Springs MO 65793
Home phone: (417) 469-0577
Cell phone: (417) 252-0966


Legend
Existing Lagoon
Processing Facility
Soil Pit #1
Soil Pit #2
Well
Property Boundary
Proposed Septic Field
Elevation Contour on 10 ft. Intervals
composting area
1000 gal. Sep Tank
Water flow
Storm Drain
Wet Weather run off.
Leach field
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Feet
0
50
100
200
N