



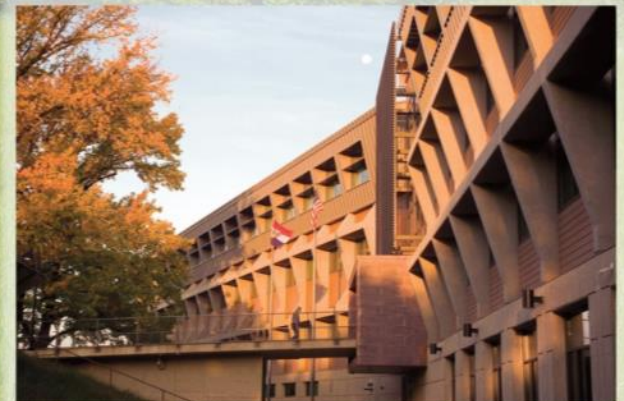
**MISSOURI**  
DEPARTMENT OF  
NATURAL RESOURCES

### ***Mission***

The Missouri Department of Natural Resources protects our air, land, water, and mineral resources; preserves our unique natural and historic places; and provides recreational and learning opportunities, while promoting the environmentally sound operations of businesses, communities, agriculture, and industry for the benefit of all Missourians.

### ***Vision for Missouri***

The Missouri Department of Natural Resources helps Missouri citizens thrive by balancing a healthy environment with a healthy economy.



# Agency Roles

1. The **Missouri Department of Agriculture (MDA)** is charged with the implementation of disposal of dead animals pursuant to Chapter 269, RSMo.
2. The **Missouri Department of Natural Resources (DNR)** is charged with the implementation and enforcement of the Missouri Clean Water Law, the Missouri Safe Drinking Water Act and Missouri Solid Waste Management laws pursuant to Chapters 640, 644 and 260, RSMo., and the federal Clean Water Act, 33 U.S.C. § 1251 et seq., and the federal Safe Drinking Water Act, 42 U.S.C. § 300f et seq, and implementing regulations.
3. The **University of Missouri Extension** in an advisory role will advise the state veterinarian of proper composting methods for the applicable situation.

# Dead Animal Disposal Law

Mo. Dept. of Ag regulations apply only to dead animals within their definition of ‘animal’ stated in Missouri Statute, Chapter 269.

- “Animal’ refers to cattle, swine, sheep, horses, other domestic and exotic animals including birds, fish, and reptiles, and all other animals raised or produced for commercial purposes, and beginning July 1, 1995, the term shall include poultry and turkeys;”
- MDA’s regulations require the owner of the dead ‘animal’ to properly dispose of the body within 24 hours of discovery.
- Please note that MDA does not regulate dead animals outside of the definition above and would not include dead wild animals or dead animals from businesses other than slaughter houses.



**MISSOURI**  
DEPARTMENT OF  
NATURAL RESOURCES

---

# DNR Role in Mortalities

## Routine vs. Mass Mortalities

Routine – Expected losses that occur on a regular basis as a result of normal operations.

Mass – An unexpected loss of large numbers of animals that result from events such as disease, acts of nature, or equipment failure.

# Management Options for Mortalities

- **Composting (Onsite)**
  - Usually 1<sup>st</sup> choice
  - Storm water practices (if outside) may be required
- **Rendering/Landfilling**
  - Some facilities available
  - expensive
- **Incineration (Air-Curtain)**
  - expensive
- **Burial**

## Division of Environmental Quality (DEQ)

- DEQ Admin
- Air Pollution Control
- **Environmental Services / Emergency Response**
- Hazardous Waste
- **Solid Waste**
- Soil & Water Conservation
- Water Protection
  - Financial Assistance
  - Public Drinking Water
  - **Water Pollution Control**

### Regional Offices

- **Kansas City (KCRO)**
- **Northeast (NERO)**
- **St. Louis (SLRO)**
- **Southeast (SERO)**
- **Southwest (SWRO)**

## Division of Missouri Geological Survey

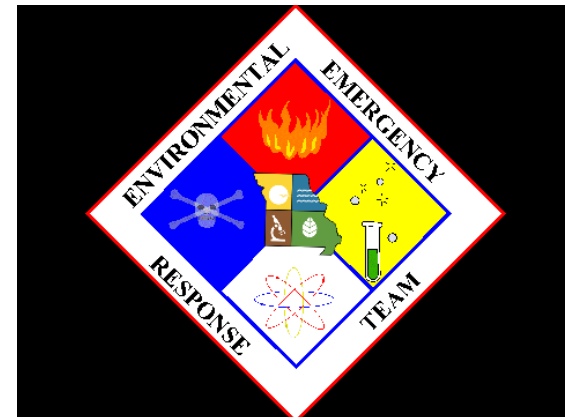
- **Geological Survey Program**



# Environmental Emergency Response



**In case of environmental emergency, call Missouri Department of Natural Resources at 573-634-2436.**





# **DNR EMERGENCY RESPONSE ROLE IN MASS MORTALITY IN LIVESTOCK OR POULTRY**

**Immediately** contact the following (in order) until you successfully reach someone – all contact information on EER Yellow Pages. (leave messages along the way):

- **EER Section Chief, ESP Director, DEQ Deputy Director, DEQ Director, or Department Director**
- **Immediately** contact the **Department's Agriculture Liaison (Kurt Boeckmann)**
- **Immediately** contact the **MO State Veterinarian** - if the initial call did not originate from the MO Department of Agriculture.

# DNR SOLID WASTE ROLE IN MASS MORTALITY IN LIVESTOCK OR POULTRY

The Solid Waste Management Law (SWML) regulates dead animals through the definition of “solid waste”,

“..... garbage, refuse and other discarded materials including, but not limited to, solid and semisolid waste materials resulting from industrial, commercial, agricultural, governmental and domestic activities...”

- Disposal of livestock, domestic or wild animal carcasses and trimmings of a fur or hide business fall within this definition.
  - \*However, since on-site disposal of dead domestic animals falls within MDA’s jurisdiction, the SWMP would defer these complaints to MDA.
- The other situations named, (offsite disposal) fall under the jurisdiction of the SWML.

# Solid Waste Management Program

## Sanitary Landfills

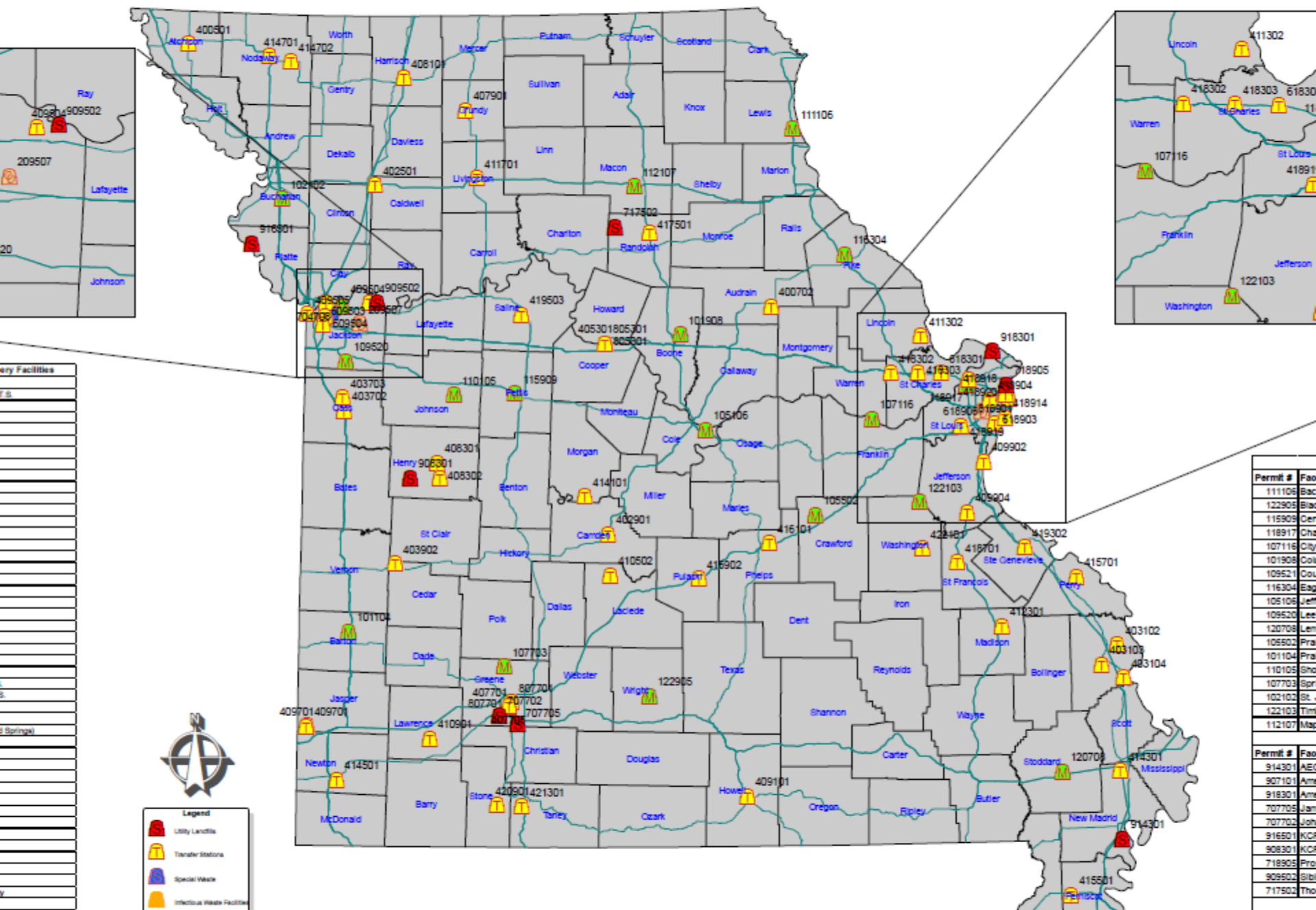
- 1.Backridge
- 2.Black Oak
- 3.Central Missouri Inc.
- 4.City of Columbia
- 5.City of Washington (Struckhoff)
- 6.Courtney Ridge
- 7.Eagle Ridge
- 8.Champ
- 9.Timber Ridge
- 10.Jefferson City
- 11.Lee's Summit
- 12.Lemons
- 13.Prairie Valley
- 14.Prairie View
- 15.Show-Me
- 16.Springfield
- 17.St. Joseph
- 18.Veolia ES Maple Hill



## Other Types of Facilities

- Demolition Landfills
- Incinerators
- Infectious Waste
- Composting
- Special Waste Landfills
- Transfer Stations
- Material Recovery
- Utility Waste
- Proposed Facilities

# Missouri Landfill and Processing Facility Locations



# **DNR GEOLOGICAL SURVEY ROLE IN MASS MORTALITY IN LIVESTOCK OR POULTRY**

## Burial

- Missouri Geological Survey (MGS) must evaluate, and give approval, if the site is suitable for burial. This may be done at any time.
- Significant advantage of a mass burial site is the capacity to dispose of a tremendous number (volume) of carcasses in a short amount of time.
- Burial eliminates the need for transportation of potentially infectious material, which in turn reduces the potential for disease spread or breaches in biosecurity.
- Performed on-site (on-farm) and may therefore be less likely to attract significant attention to the public.

However.....



# **DNR GEOLOGICAL SURVEY ROLE IN MASS MORTALITY IN LIVESTOCK OR POULTRY**

## **Burial**

- Potential disadvantage is related to the site setting (i.e., depth to groundwater, soil type, groundwater usage, etc.) and the quantity of material.
- Catastrophic mortality burial may also require disclosing the existence and location of the site prior to the sell, convey, or transfer of title to any property.
- The disease in question may preclude burial as an option (i.e., bovine spongiform encephalopathy or anthrax). If burial involves transporting carcasses off-site; cost; vector control; and making containers leak-proof, or using containment bags can create additional disadvantages.

# **DNR GEOLOGICAL SURVEY ROLE IN MASS MORTALITY IN LIVESTOCK OR POULTRY**

## **Burial**

- MGS will preapprove burial location(s)
  - Contact
    - Sherri Stoner or
    - Jeremiah Jackson

**(573) 368-2100**



**MISSOURI**  
DEPARTMENT OF  
NATURAL RESOURCES

---

# Water Pollution Control MORTALTY MANAGEMENT FOR PERMITTED AND NON- PERMITTED FACILITIES

# Requirements for Permitted Operations

Regulations in 10 CSR 20-6.300 and 10 CSR 20-8.300

- Burial is not allowed as a method of disposal of routine mortalities for Class I operations.
- Must not be disposed of in wastewater system that is not designed to handle them.
- Handled in a manner as to not discharge.
- Management of mortalities must be addressed in the nutrient management plan (NMP).

# Management Options for Routine Mortalities for Permitted Facilities

- Composting (Onsite)
- Rendering
- Incineration
- Landfilling



# Management of Mass Mortalities for Permitted Facilities (cont.)

- Composting, landfilling, incineration, and rendering do not require prior approval from the department.
- Composting must be done in a manner as to not discharge.
- Contact landfill/renderer to see if they will accept.

# Mortality Management for Unpermitted Operations

Must not violate General Criteria Water Quality Standards.

- No unsightly or harmful bottom deposits.
- No scum or floating debris.
- No unsightly color or odor.
- No health hazard or toxicity to human, animal or aquatic life.

# DNR Biosecurity

- Follow DNR biosecurity as well as the CAFOs biosecurity.
- 72 hours between inspections for staff, especially of same species.
- 72 hours between inspections for vehicles, unless washed between inspections.

# DNR Biosecurity

- Have Personal Protective Equipment (PPE) and cleaning supplies available.
- Department staff will not enter production buildings unless authorized by the CAFO.

## DNR Contacts

- Industrial Permit Unit – (573) 751-1300
- Environmental Emergency Response – (573) 634-2436
- Regional Offices
  - Kansas City – (816) 251-0700
  - Macon (NE) – (660) 385-8000
  - Springfield (SW) – (417) 891-4300
  - St. Louis – (314) 416-2960
  - Poplar Bluff (SE) – (573)-840-9750



**For more information contact the  
Industrial Permits Unit at 573-751-1300  
or visit the departments CAFO webpage  
at <http://dnr.mo.gov/env/wpp/cafo/>**