

**STATE ENVIRONMENTAL LAWS
AFFECTING
MISSOURI AGRICULTURE**

*(See NASDA's website for
Federal Environmental Laws Affecting U.S. Agriculture)*

A Project of the

**National Association of State Departments
of Agriculture Research Foundation**

through the

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Research and Information**



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Table of Contents

This document has two components: the state guide and federal guide. To complete this guide, please download the federal guide also found on NASDA's website.

The Project Participants	MO-iii
Disclaimer	MO-iv
Quick Reference Guide	MO-v
I. Water Quality	MO-1
A. Missouri Water Quality Laws and Regulations	MO-1
1. Missouri NPDES Permits for Discharges into Water	MO-1
2. Missouri Concentrated Animal Feeding Operations	MO-6
3. Other Missouri Water Quality Laws	MO-8
II. Groundwater	MO-9
A. Missouri Groundwater Laws and Regulations	MO-9
1. Missouri Safe Drinking Water Act	MO-9
2. Missouri Water Well Standards	MO-9
III. Air Quality	MO-10
A. Missouri Air Quality Laws and Regulations	MO-10
1. Missouri Air Pollution Statutory Provisions	MO-10
2. Missouri Air Emissions from Farming Operations	MO-11
3. Missouri On-Farm Incinerators	MO-11
4. Missouri Air Pollution Caused by Vehicles	MO-11
5. Missouri Open Burning	MO-12
IV. Solid Waste and Hazardous Waste	MO-13
A. Missouri Solid Waste and Hazardous Waste Laws and Regulations	MO-13
1. Missouri Solid Waste	MO-14
2. Missouri Hazardous Waste, Toxic Substances	MO-15
3. Missouri Underground Storage Tanks	MO-18
V. Pesticides and Chemigation	MO-20
A. Missouri Pesticide and Chemigation Laws and Regulations	MO-20
1. Missouri Pesticide Laws	MO-20
2. Missouri Pesticide Licenses	MO-21

VI.	Protection of Wildlife	MO-22
A.	Missouri Wildlife Protection Laws and Regulations	MO-22
1.	Missouri Endangered Species Law	MO-22
2.	Other Missouri Wildlife Protection Acts	MO-23
VII.	Other Missouri Statutes Affecting Agriculture	MO-23
A.	Missouri Farmland Preservation	MO-24
1.	Missouri Planning and Zoning	MO-24
2.	Missouri Conservation Easements	MO-25
B.	Missouri Nuisance and Right-to-Farm Laws	MO-25
1.	Missouri Right-to-Farm Law	MO-26
2.	Missouri Farm Nuisance Actions	MO-26
C.	Missouri Livestock Waste Management	MO-27
1.	Missouri Waste Management Design Criteria	MO-27
2.	Missouri Anaerobic Structures for Waste Management	MO-30
3.	Missouri Land Application of Waste	MO-32
D.	Missouri Noxious Weeds	MO-33
E.	Missouri Soil and Water Conservation Districts	MO-34
F.	Missouri Aquaculture	MO-35
G.	Missouri Regulation of Biological Products	MO-36
H.	Missouri Environmental Audits	MO-36
	Appendix A - Agencies	MO-37

The Project Participants

National Association of State Departments of Agriculture Research Foundation

The National Association of State Departments of Agriculture (NASDA) is a nonprofit, nonpartisan association of public officials comprised of the Commissioners, Secretaries, and Directors of the fifty State Departments of Agriculture in the fifty states and the territories of Puerto Rico, Guam, American Samoa, and the Virgin Islands. NASDA's mission is to represent the State Departments of Agriculture in the development, implementation, and communication of sound public policy and programs which support and promote the American agricultural industry while protecting consumers and the environment. The NASDA Research Foundation is a 501(c)(3) nonprofit, tax-exempt corporation for educational and scientific purposes.

National Center for Agricultural Law Research and Information

The National Center for Agricultural Law Research and Information (Center) was created in 1987 under Public Law 100-202, 101 Stat. 1329-30 to address the complex legal issues that affect American agriculture. The Center focuses its efforts on research, writing, publishing, development of library services, and the dissemination of information to the public. The Center is located at the University of Arkansas School of Law in Fayetteville, Arkansas.

Natural Resources Conservation Service

The Natural Resources Conservation Service (NRCS), formerly known as the Soil Conservation Service (SCS), is a federal agency within the U.S. Department of Agriculture (USDA). NRCS conservationists work with private landowners and operators to help them protect their natural resources.

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) is a federal agency with primary responsibility for implementation of most federal laws designed to protect, enhance, and conserve the nation's natural resources.

Disclaimer

This guide is designed for use by farmers, ranchers, landowners, and their consultants in understanding the effect environmental laws have on agricultural operations. It is not a substitute for individual legal advice. Producers should always confer with their own attorneys, consultants, or advisors as well as federal, state, and local authorities responsible for the applicable environmental laws.

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The contents and views expressed in this guide are those of the authors and do not necessarily reflect the policies or positions of the United States Department of Agriculture (USDA) NRCS or EPA.

Although every effort has been made to ensure the accuracy of the information contained in this book, environmental statutes, regulations, and ordinances are constantly changing. In addition, the overwhelming complexity and extent of environmental law make it impossible for a single book to describe in complete detail and depth all of the environmental laws and regulations impacting agricultural operations. The following material is simply a basic primer on environmental law for agricultural producers. For these reasons, the utilization of these materials by any person constitutes an agreement to hold harmless the authors, the National Center for Agricultural Law Research and Information, the University of Arkansas, the United States Department of Agriculture, the National Association of State Departments of Agriculture Research Foundation, the Natural Resources Conservation Service, and the United States Environmental Protection Agency for any liability, claims, damages, or expenses that may be incurred by any person or organization as a result of reference to, or reliance on, the information contained in this book.

The background research and final documents were completed in August 2001. Updates of the information contained in the guide will occur on an as needed basis and be available on the internet.

Anyone with comments concerning the guide should contact the NASDA Research Foundation at 1156 15th Street, N.W., Suite 1020, Washington, D.C. 20005, or phone (202) 296-9680.

Quick Reference Guide

Producer Note: The following chart is intended as a quick reference guide to permits which may be necessary for a particular operation. If a permit is necessary, refer to the page numbers listed referencing this document for further information and contact the agencies listed in the final column for information on applications and procedures for securing a permit for an operation. A list of agencies and contact information is also provided in Appendix A.

Regulatory Area	Type of Activity	Permit Required	Agency
Water Quality <i>pp. 1-9</i>	Livestock and aquaculture operations, depending on size	National Pollution Discharge Elimination System (NPDES) and Missouri general permit or land disposal permit	Environmental Protection Agency (EPA) Regional Office and Missouri Department of Natural Resources (DNR)
	Wetlands dredge and fill activity or dam, dike, or bridge building activities	Clean Water Act Section 404 permit	U.S. Army Corps of Engineers with EPA and Missouri Environmental Protection Division approval
	Water usage	Permit required for withdrawal of more than one hundred thousand gallons (100,000 gal.) per day	Missouri DNR
Groundwater <i>pp. 9-10</i>	Water well construction and use	No permit, but construction standards must be followed	Missouri DNR
	Groundwater protection	No permit, but Best Management Practices (BMPs) must be followed	Missouri DNR
Air Quality <i>pp. 10-13</i>	Grain terminals and grain elevators	Permit required	EPA Regional Office or Missouri DNR
	General agricultural operations including odor, dust, or flies	No permit, but may be subject to nuisance suits	EPA Regional Office or Missouri DNR
	Burning	Permit required in certain circumstances	Missouri DNR

Regulatory Area	Type of Activity	Permit Required	Agency
Solid Waste and Hazardous Waste <i>pp. 13-20</i>	Storage, treatment, or disposal of hazardous or solid waste	Permit required for disposal, treatment, or storage activities	EPA Regional Office and Missouri DNR
	Public notice of hazardous waste	No permit	Local Emergency Planning Committee and Missouri Department of Labor
Pesticides and Chemigation <i>pp. 20-22</i>	Application and use of pesticides	No permit, but a license may be required	EPA and Missouri Department of Agriculture (MDA)
	Use of pesticides around farmworkers	No permit, but training and notification is required	Missouri DNR and MDA
	Record keeping	No permit, but all requirements must be met	MDA
Wildlife Protection <i>pp. 22-23</i>	Taking of wildlife	Permit required if endangered or threatened species may be affected	U.S. Fish and Wildlife Service
Waste Lagoons <i>pp. 7 and 27-31</i>	Storage of animal waste	No permit, but Natural Resources Conservation Services (NRCS) requirements must be met	Missouri DNR
Land Application of Waste <i>p. 3 and 27-33</i>	Land application of animal waste to cropland	No permit, but NRCS requirements must be followed	Missouri DNR
Dead Animal Disposal <i>p. 15 and 19-20</i>	Disposal of animal carcasses	No permit, but regulations must be followed	MDA

STATE ENVIRONMENTAL LAWS AFFECTING MISSOURI AGRICULTURE

Producer Note: Agricultural producers are faced with many challenges in today's rapidly changing world. Changes in industrialization, computer-based technology, marketing dynamics, and environmental regulation are affecting producers in a number of ways. Environmental regulation is a complex area with both federal and state government involvement. Staying informed is the producer's most useful instrument for meeting the challenges of today's agriculture. This information on environmental regulation is provided to educate producers on the breadth and scope of environmental laws which may impact daily production activities.

I. WATER QUALITY

A. Missouri Water Quality Laws and Regulations

Most states have enacted clean water legislation. While these statutes usually contain provisions similar to those found in the parallel federal legislation, there may be significant differences. In fact, state statutes may impose requirements that are even more restrictive than the federal law. In all cases, however, federal Clean Water Act¹ (CWA) requirements must be followed along with the state enacted statutes and state agency regulations. Agricultural producers should be aware that, depending on their location or proximity near sensitive watershed areas, they may be subject to more stringent regulations than in other areas.

Caution: Because environmental laws and regulations change frequently, agricultural producers must stay in touch with both state and federal officials in order to remain in compliance and aware of changes in the law.

1. *Missouri NPDES Permits for Discharges into Water*

Under the CWA, all discharges into waters of the United States are regulated by the Environmental Protection Agency (EPA) through the National Pollution Discharge Elimination System (NPDES) permit program. The CWA, however, allows the EPA to delegate the NPDES permit program to states that prefer to assume the responsibility and administer the program. Missouri is one of those states that has assumed the responsibility for the administration of the NPDES permit program.

¹ 33 U.S.C. § 1251 *et seq.* (1994).

Producer Note: The federal CWA authorizes the EPA to delegate the NPDES permit program to individual states. Missouri has assumed the responsibility for the administration of the NPDES permit program. Accordingly, Missouri established the Missouri Clean Water Law (MCWL).

In accordance with the federal CWA, the Missouri Clean Water Law² (MCWL) was established to protect water quality and to set forth water quality standards for waters of the state based on the type of water usage, i.e., domestic, industrial, agricultural, and recreational. The MCWL is enforced by the Clean Water Commission within the Missouri Department of Natural Resources (DNR). The MCWL prohibits any person from placing a substance in any area that:

- Is reasonably certain to reduce water quality below the MCWL standards;
- Is reasonably certain to render waters harmful to public health, wildlife, or any domestic, industrial, agricultural, or recreational use; or
- Creates a nuisance.³

The MCWL requires a person to obtain a NPDES permit before building, altering, or operating any source or potential source of water contamination. NPDES permits are not required for:

- Single family residences;
- Water used in constructing or maintaining a drinking water well;
- Non-point source pollution discharges; or
- Routine repairs of a sewer system or point source;

Producer Note: Point source pollution is defined as any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation (CAFO), or vessel or other floating craft from which pollutants are or may be discharged.⁴ Non-point source pollution is any source of pollution that does not fall within the definition of point source pollution.

² MO. ANN. STAT. § 644.006 *et seq.* (West 1988 & Supp. 1998).

³ MO. CODE REGS. tit. 10 § 20-2.010 *et seq.* (1996).

⁴ MO. ANN. STAT. § 644.016(14) (West 1988 & Supp. 1998).

Because oversight control of potential and improbable discharges is necessary to protect the environment, even no-discharge⁵ facilities must obtain a no-discharge construction or a no-discharge permit from the DNR for building, erecting, altering, replacing, operating, using, or maintaining any water contaminant source or process waste facility. Limited exemptions from this requirement that are subject to DNR approval include:

- De minimus sources;⁶
- Non-point sources of pollution;
- Land application of composts and mulches in normal farming or horticulture operations;⁷
- Land application sites (but not treatment or storage facilities) for the beneficial use of residues from drinking water treatment plants;⁸
- Single family residences;
- Non-discharging facilities for domestic wastewater flows of three thousand gallons per day (3000 g.p.d.) or less;
- Non-discharging solid waste facilities that hold a valid solid waste facility permit;
- Animal feeding operations;⁹
- Composting sites of less than two acres (2 ac.);¹⁰

⁵ In general, a no-discharge facility is a facility that is designed, constructed, and operated to hold or irrigate or otherwise dispose without discharge to waters of the state all its process wastes and storm water flow; that does not apply its process wastes to land during frozen, snow covered, or saturated soil conditions; and that has its process waste basins properly sealed with no improper subsurface releases; *see* MO. CODE REGS. tit. 10 § 20-6.015(1)(B)(7) (2001).

⁶ In general, de minimus source means a source that will not discharge or will have a negligible environmental impact as determined by the DNR; *id.* at 6.015(3).

⁷ Provided that the compost does not contain more than five percent (5%) sewage sludge or industrial sludge; *id.* at 6.015(3)(B)(2).

⁸ Provided that aluminum or other potentially phytotoxic compounds are not present in concentrations toxic to plants or animals; *id.* at 6.015(3)(B)(3).

⁹ *But see id.* at 6.300.

¹⁰ When less than five percent (5%) of the compost mix is sludge and storm water is not discharged except during a catastrophic or chronic storm; *id.* at 6.015(3)(B)(7).

- Products containing or derived from sludges, biosolids, or other process wastes when such products are licensed under the Missouri Fertilizer Law and do not exceed pollutant standards for public health;¹¹
- Internal plumbing and piping or other water diversion or retention structures within a manufacturing or industrial plant or mine that are an integral part of the process or operation;¹²
- Small scale pilot or demonstration projects approved by DNR;
- Waste holding structures where the waste contents are hauled to a permitted treatment or disposal facility;
- Contract haulers if all waste is hauled to a permitted facility;
- Other exemptions prescribed in a general permit issued and determined by the DNR;
- Placements of uncontaminated soil, rock, sand, gravel, concrete, cinder blocks, bricks, recycled asphaltic pavement, and minimal amounts of wood and metal which are removed by demolition or construction activities and used as fill for construction projects;¹³ and
- Placements of materials other than those listed above which are considered as clean fill or beneficial use;¹⁴

Agricultural producers may seek a variance from the DNR when enforcement of the MCWL would result in an unreasonable taking of property or cause the closing of a business without a sufficient corresponding benefit to the state. The DNR, however, will not grant a variance that would cause a violation of the federal CWA or adverse human or wildlife health effects. Additionally, any granted variances does not relieve a producer from any liability for the creation of a nuisance.

¹¹ *Also see* MO. CODE REGS. tit. 10 § 20-6.015(3)(B)(8) (2001).

¹² *Id.* at (10).

¹³ Provided that such material does not violate water quality standards; *id.* at (15).

¹⁴ According to the Missouri Solid Waste Management Law and regulations and provided that such material is not placed in contact with surface or subsurface waters of the state; *id.* at (16).

Individuals that cause or permit any discharge of a water contaminant in violation of the MCWL¹⁵ may be subject to:

- An injunction issued by a court of competent jurisdiction¹⁶ to prevent such violation or further violation;
- A civil penalty up to ten thousand dollars (\$10,000) for each day of violation; or
- Both.¹⁷

In addition to civil penalties, the DNR may request that criminal charges be brought against the violator for the same conduct. A willful or negligent violation of such water contaminant discharges may subject the violator to:

- A fine up to twenty-five thousand dollars (\$25,000) for each day of violation;
- Imprisonment up to one year (1 yr.); or
- Both.¹⁸

Penalties for subsequent convictions of willful or negligent violations include:

- A fine up to fifty thousand dollars (\$50,000) for each day of violation;
- Imprisonment up to two years (2 yrs.); or
- Both.¹⁹

No penalties are imposed, however, for such water contaminant discharges caused by an act of God or a war, strike, riot, or other catastrophe.²⁰

¹⁵ Or its provisions, associated rules and regulations, permits, authorized orders, determinations, or filing requirements; MO. ANN. STAT. § 644.076(1) (West 2000 & Supp. 2001).

¹⁶ The DNR generally institutes this civil action; *id.*

¹⁷ But a civil monetary penalty pursuant to this section shall not be assessed for a violation where an administrative penalty was assessed pursuant to section 644.079; *id.*

¹⁸ *Id.* at (3).

¹⁹ *Id.*

²⁰ *Id.* at (4).

A separate provision of the MCWL addresses water contaminant discharges without a permit, i.e., failure to obtain a permit. A violator convicted of discharging a water contaminant to waters of the state without a permit is criminally charged with a misdemeanor and may be fined up to five hundred dollars (\$500) and ordered to obtain the proper permit within thirty (30) days.

Any person who knowingly makes a false statement or falsifies a document or tampers with a monitoring device is subject to:

- A fine up to ten thousand dollars (\$10,000) per day of violation;
- Imprisonment up to six (6) months; or
- Both.²¹

For all such violations of the MCWL and its rules and regulations, the state may recover from the violator actual damages for the cost to establish, collect, and restore any waters to pre-violation conditions.

2. Missouri Concentrated Animal Feeding Operations

A concentrated animal feeding operation (CAFO) is any operation where:

- Animals are confined and maintained for at least forty-five (45) days within any twelve (12) month period; and
- Over fifty percent (50%) of the confinement area is not covered by vegetation.

Larger animal feeding operations are considered to be CAFOs if they meet the criteria for Class I A, B, or C below:

- Class I A - a capacity of 7,000 or more animal units (AUs);²²
- Class I B - a capacity between 3,000 and 6,999 AUs; or
- Class I C - a capacity between 1,000 and 2,999 AUs;

²¹ MO. ANN. STAT. § 644.076(2) (West 2000 & Supp. 2001).

²² One AU equals 1.0 beef feeder or slaughter animal, 0.5 horse, 0.7 dairy cow; 2.5 swine weighing over 55 pounds, 10 sheep, 30 laying hens, 55 turkeys, 100 broiler chickens, or an equivalent number for other species; *see* MO. CODE REGS. tit. 10 § 20-6.300 (1996).

However, smaller Class II animal feeding operations may be designated CAFOs by the DNR if they discharge waste to waters of the state.²³

A building or lagoon in conjunction with a CAFO with a Class I A, B, or C capacity criteria may not be located within three thousand feet, two thousand feet, or one thousand feet (3000', 2000', or 1000'), respectively, of any public building or residence. These distance requirements do not apply, however, if:

- The CAFO existed as of June 25, 1996;
- The residence within the buffer zone involves only the CAFO owner's residence;
- A written agreement is obtained from owners of residences within the buffer zone indicating that they are aware of the distance requirement and that they do not object to the location of the CAFO; or
- The DNR authorizes an exception to the facility's location within the buffer zone.

Class I A operations using a flush system which utilizes liquid as the primary agent for moving manure shall:

- Employ someone to visually inspect the facility for unauthorized discharges and structural integrity at least every twelve hours (12 hrs.) with a time deviation not exceeding three hours (3 hrs.);
- Maintain records of each inspection and retain them for three years (3 yrs.);
- Report to the DNR any unauthorized discharges that cross the facility owner's property line;
- Maintain a containment structure, such as an earthen dam, when the DNR determines that aquatic life or a public drinking water supply is at risk or when the operation is located within a drainage basin three hundred feet (300') or less from adjacent property. (The containment structure must hold a minimum 24-hour flushing capacity);
- Use an electronic or mechanical shutoff system in the event of a pipe stoppage; and

²³ A Class II facility has a capacity between 300 and 999 AUs; see MO. ANN. STAT. § 640.700 *et seq.* (West 2000 & Supp. 2001).

- Obtain the necessary certifications for supervisor, assistant supervisor, operator, or operator trainee.²⁴

The DNR assesses Class I A operations an amount equal to ten cents per AU which may be returned if the operation closes. This fee is deposited into the CAFO indemnity fund which is used for the purposes of closing abandoned Class I A, B, and C and Class II CAFO wastewater lagoons.

Producer Note: Missouri allows local governments to enact stricter CAFO controls. Thus, an agricultural producer should contact local officials to determine requirements imposed at the county or city level.²⁵

3. *Other Missouri Water Quality Laws*

Any person that willfully poisons or diverts the natural course of waters used for domestic purposes is subject to:

- A misdemeanor charge;
- Liability to injured parties for three times their actual damages; and
- Fined up to five hundred dollars (\$500), imprisoned for up to one year (1 yr.), or both.

Any individual that discards garbage in any water, land, road, or park within Missouri is guilty of a class A misdemeanor.²⁶

Property owners may install, repair, or clean an on-site sewage disposal system without obtaining a point source permit. The owners of a building where people work or live must:

- Provide for the sanitary disposal of all domestic sewage; and
- Notify the city or county before constructing or modifying an on-site sewage disposal system.²⁷

²⁴ MO. CODE REGS. tit. 10 § 20-14.010 (1996).

²⁵ MO. ANN. STAT. § 640.710 (West 2000 & Supp. 2001).

²⁶ *Id.* at 577.070 (West 1995).

²⁷ *Id.* at 701.031 *et seq.* (West 1988 & Supp. 1998).

Producer Note: Often the specifics of environmental laws are found in state agency regulations. In addition, regulations are likely to be amended frequently. As a result, an agricultural producer must stay in contact with those offices administering specific environmental programs in order to keep up with changes which may occur.

II. GROUNDWATER

A. Missouri Groundwater Laws and Regulations

1. *Missouri Safe Drinking Water Act*

The Missouri Safe Drinking Water Commission is charged with enforcing the federal Safe Drinking Water Act.²⁸ Operators of a community water system must obtain DNR authorization prior to construction or alteration of any community water system.²⁹ Agricultural producers that provide employee housing equipped with a water supply from a central system or well could fall under the definition of a community water system. A community water system is any public water system which serves at least fifteen (15) service connections and is operated on a year-round basis or regularly serves at least twenty-five (25) residents on a year-round basis.³⁰

2. *Missouri Water Well Standards*

Under the Water Well Drillers' Act,³¹ an individual must obtain a permit from the Division of Geology and Land Survey before operating a water well business. However, a person does not need a permit to construct a well on property owned or leased if the well is used for:

- Farming purposes; or
- A single-family permanent residence.

²⁸ MO. ANN. STAT. § 640.100 *et seq.* (West 2000 & Supp. 2001).

²⁹ MO. CODE REGS. tit. 10 § 60-3.010 (1996).

³⁰ *Id.* at 2.015.

³¹ MO. ANN. STAT. § 256.600 *et seq.* (West 1990 & Supp. 1998); *see also* MO. CODE REGS. 10 § 23-1.090 (1996).

Any water wells abandoned after August 28, 1991 must be plugged. Any well owner who knowingly permits the deterioration of groundwater quality must:

- Forfeit his right to a certified well;
- Plug the well; and
- Be liable to the state and any endangered neighbors for any resulting damages.

Waste disposal wells are prohibited.³² Waste disposal wells do not include certain sanitary landfills, cesspools used solely for disposal of waste from private residences, or septic tanks used solely for disposal of waste. Violators are guilty of a misdemeanor and punishable as provided by law.

Producer Note: A city or county may adopt standards to protect the water in springs and wells from contamination.³³

III. AIR QUALITY

A. Missouri Air Quality Laws and Regulations

1. *Missouri Air Pollution Statutory Provisions*

The Missouri Air Conservation Law (MACL) regulates air pollution.³⁴ Any person that constructs an air contaminant source must obtain a permit from the DNR and pay an annual fee based on the annual tonnage of air contaminant emitted. DNR permits are not required for a:

- Livestock operation from which the only potential air contaminant is odorous gas;³⁵
- Facility that handles only the owner's grain if the facility stores no more than seven hundred fifty thousand bushels (750,000 bu.) and handles no more than four thousand bushels (4,000 bu.) per hour but only if the facility is also located at least five hundred feet (500') from any recreational area, residence, or business not used solely by the facility owner;

³² MO. ANN. STAT. § 577.150 *et seq.* (West 1995).

³³ *Id.* § 71.710 (West 1987).

³⁴ *Id.* at 643.010 *et seq.* (West 1988 & Supp. 1998).

³⁵ MO. CODE REGS. tit. 10 § 10-6.060 (1997).

- Commercial grain facility that stores no more than one hundred ninety thousand bushels (190,000 bu.); or
- Person that holds a permit from a city or county which satisfies MACL requirements.

A person that violates a permit condition, including air contaminant limitations and fees, may be subject to an injunction and a fine up to ten thousand dollars (\$10,000) per day of violation plus all other existing civil and criminal remedies. No liability shall be imposed for a violation that results from an act of God or a strike, riot, or other catastrophe.

2. *Missouri Air Emissions from Farming Operations*

Reasonable measures must be taken to prevent fugitive particulate matter resulting from the handling of any material, the construction or repair of a building, or the operation of any commercial installation from being visible in the air or accumulating on the surface of a neighbor's premises.³⁶ The moving of livestock and other agricultural operations including tilling, planting, cultivating, or harvesting within a field are exempted from this requirement.

3. *Missouri On-Farm Incinerators*

Agricultural producers may operate an incinerator that has a rated burning capacity of less than 100 pounds per hour if the incinerator is located more than one thousand five hundred feet (1500') from the nearest off-farm, inhabited dwelling.³⁷ The farm incinerator is permitted to burn only type IV waste, as defined by the Incinerator Standards of the Incinerator Institute of America (11A-STDS66).

4. *Missouri Air Pollution Caused by Vehicles*

To obtain a certificate of inspection, commercial motor vehicles must be equipped with air pollution control devices, exhaust systems, and any other safety equipment required by the state.³⁸ The emission systems of all motor vehicles, excluding those exempted, in high population areas are tested as well.³⁹ Exemptions for motor vehicle emission testing exist for:

³⁶ MO. CODE REGS. tit. 10 § 10-6.170 (1997).

³⁷ *Id.* at 10-6.020.

³⁸ MO. ANN. STAT. § 307.170 (West 1994 & Supp. 1998).

³⁹ The Missouri emissions inspection program is mandated by federal Clean Air Act at 42 U.S.C. 7401 *et seq.*; see *id.* at 366.

- Vehicles with a manufacturer's gross vehicle weight rating in excess of eight thousand five hundred pounds (8500 lbs.);
- Vehicles with a model year prior to 1971;
- Diesel-powered vehicles;
- Vehicles registered in high population areas but operated outside such areas when the owner presents a sworn affidavit of such restricted operation area to the Department of Public Safety; and
- New motor vehicles not previously titled or registered prior to the initial motor vehicle registration or the next succeeding registration.

Certain cities and counties that are designated high population areas include:

- Cities not within a county;
- Counties of the first classification having over nine hundred thousand (900,000) inhabitants;
- Counties of the first classification with a charter form of government with two hundred thousand to two hundred twenty thousand (200,000 - 220,000) inhabitants;
- Counties of the first classification without a charter form of government with one hundred seventy thousand to one hundred eighty thousand (170,000 -180,000) inhabitants; and
- Counties of the first classification without a charter form of government with eighty thousand to eighty-two thousand (80,000 - 82,000) inhabitants.⁴⁰

5. *Missouri Open Burning*

Open agricultural burning is allowed throughout the state, however, several exceptions apply including the burning of tires or waste oil. Tires or waste oil may not be burned or used to start fires. Burning must also not produce smoke that would impair visibility for anyone operating a motorized vehicle or cause a health hazard. Producers are reminded to contact local officials to determine if more restrictive laws and regulations exist.

⁴⁰ MO. ANN. STAT. § 307.366(1) (West 1994 & Supp. 2001).

The open burning of garbage such as plastics, cardboard cartons, grease, oil, or chemicals is prohibited unless approval is granted by the DNR.⁴¹ The open burning of garbage or vegetation is only permitted when it can be proven that it is:

- The only feasible method of disposal;
- An emergency;
- A resident's own refuse that is burned on the premises;
- In connection with the growing or harvesting of agricultural crops; or
- A land clearing operation where trees and vegetation are burned at a distance of two hundred yards (200 yds.) or more from the nearest inhabited dwelling.

Nevertheless, discharging smoke into the open air within any city is a public nuisance.⁴² A violator may be subject to a misdemeanor charge and fined up to one hundred dollars (\$100) per day of violation. A violation does not occur, however, if a practicable device or method is not available to prevent the discharge.

IV. SOLID WASTE AND HAZARDOUS WASTE

Producer Note: There are several laws which control the use, disposal, and cleanup of hazardous wastes. Agricultural producers who use petroleum, hazardous chemicals, or other products stored in storage tanks must be aware of requirements governing these activities.

A. Missouri Solid Waste and Hazardous Waste Laws and Regulations

Producer Note: While most farmers and ranchers are not generators, transporters, or disposers of hazardous waste, it is important to check with state officials concerning the definitions of solid waste to determine whether an operation's activities could be regulated under state solid or hazardous waste statutes.

⁴¹ MO. CODE REGS. tit. 10 § 10-3.030 (1998); *see also* MO. CODE REGS. tit. 10 §10-6.020 (1997).

⁴² MO. ANN. STAT. § 71.760 *et seq.* (West 1987).

1. *Missouri Solid Waste*

All solid waste disposal facilities must obtain a permit from the DNR.⁴³ Solid waste is any 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 but does not include hazardous waste⁴⁴ as defined by Missouri law, recovered materials, overburden, rock, tailings, matte, slag, or other waste material resulting from mining, milling, or smelting.⁴⁵ A solid waste permit, however, is not required for:

- Any area that receives only uncontaminated soil, rock, or concrete for fill;
- A single household or building that processes its solid waste on-site;
- Solid waste used in normal farming operations;
- Solid waste used in the manufacturing of products;
- Solid waste resulting from residential activities and disposed on property owned or lawfully occupied by the resident;
- The operation of a waste lagoon or other waste water treatment facility which has a permit from the Missouri Clean Water Commission;
- The composting of poultry waste if permitted or approved by the Missouri Clean Water Commission; and
- The composting of other agricultural or domestic waste on property owned or lawfully occupied by the generator.⁴⁶

A permit is, however, required for any activity that creates a public nuisance or health hazard. Additionally, a landfill located in a flood area where the final cover is likely to be significantly eroded may not obtain a permit.

⁴³ *Id.* at 260.200 *et seq.* (West 2001).

⁴⁴ As defined in *id.* §§ 260.360(11) and 260.360 to 260.432.

⁴⁵ MO. ANN. STAT § 260.200(34) (West 2001).

⁴⁶ MO. CODE REGS. tit. 10 § 80-2.010 *et seq.* (1997).

The following solid waste related activities are prohibited:

- Conveyance of title to a permitted or unpermitted disposal site without disclosing such to the buyer;
- Construction or alteration of a solid waste facility without a permit;
- Disposal of a lead-acid battery at any location other than a battery recycling facility; or
- Allowing solid wastes to be dumped onto the ground or into any waters without a permit.

Used oil must not be disposed into a solid waste facility or the environment; instead, it must be deposited with a collection center that is registered with the DNR.

A license to dispose garbage or dead animals must be obtained from your local county commission.⁴⁷ A license is not required, however, to dispose garbage from one's own household upon one's own land as long as such disposal does not create a nuisance.

Any person who receives compensation for an unpermitted disposal is liable for cleanup costs and any damages caused to third parties. A violator may be:

- Fined up to twenty thousand dollars (\$20,000) or the dollar amount received as compensation for the disposal;
- Enjoined from further violations; and
- Subject to a penalty up to one thousand dollars (\$1000) per day of violation.

No liability is imposed for an act of God or a strike, riot, or other catastrophe.

2. *Missouri Hazardous Waste, Toxic Substances*

Under the Missouri Hazardous Waste Management Law (HWML),⁴⁸ a permit must be obtained before operating a hazardous waste management facility. Hazardous waste is any waste or combination of wastes as determined by the Hazardous Waste Management Commission (HWMC) by rules and regulations which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause or significantly contribute to an increase in mortality, cause or significantly contribute to an increase in serious irreversible or incapacitating

⁴⁷ MO. ANN. STAT. § 64.460 *et seq.* (West 1989).

⁴⁸ *Id.* at 260.350 to 260.430 (West 2001).

reversible illness, or pose a present or potential threat to the health of humans or the environment.⁴⁹

Agricultural producers should note that certain persons are exempted from the requirements of the Missouri HWML. Persons exempted include individual householders and farmers⁵⁰ who generate only small quantities of hazardous waste and any person the HWML determines generates only small quantities of hazardous waste on an infrequent basis except that householders, farmers, and HWML-exempted persons must manage all hazardous wastes they may generate in a manner so as not to adversely affect the health of humans, pose a threat to the environment, or create a public nuisance.⁵¹

Civil penalties are imposed for individuals that cause or permit any acts or hazardous waste management practices that are considered violations⁵² of Missouri's HWML.⁵³ These acts or practices may be subject to:

- An injunction issued by a court of competent jurisdiction⁵⁴ to prevent such violations or further violations;
- A civil penalty up to ten thousand dollars (\$10,000) per day of violation; or
- Both.⁵⁵

In addition to civil penalties, an administrative penalty in an amount up to the civil penalty may be imposed for a non-minor violation that is knowingly committed or that causes or has the potential to cause pollution or a risk to human health or to the environment.⁵⁶ Furthermore, criminal charges may be brought against violators for acts that cause or may cause injury or threat to the health of humans or the environment.

⁴⁹ *Id.* at 260.360(11) (West 2001).

⁵⁰ A farmer is defined as a person primarily engaged in the production of crops or livestock for agricultural purposes, or both; *see* MO. CODE REGS. tit. 10 § 25-3.260(2)(F)1 (1998).

⁵¹ MO. ANN. STAT. § 260.380.2 (West 2001).

⁵² Or that are in imminent danger of being a violation; *see id.* at 644.076(1) (West 2000 & Supp. 2001).

⁵³ Or its provisions, standards, associated rules and regulations, license or permit terms or conditions, authorized orders, determinations, or filing requirements; *see id.*

⁵⁴ The DNR generally institutes this civil action; *see id.*

⁵⁵ But a civil monetary penalty pursuant to this section is not assessed for a violation where an administrative penalty was assessed pursuant to section 644.079; *see id.*

⁵⁶ As defined by the EPA; *see id.* at 260.412(1) (West 2001).

Criminal penalties may be imposed for any person who knowingly:

- Transports or permits or causes the transportation of hazardous waste in violation of the Missouri HWML;
- Treats, stores, or disposes hazardous waste with the knowledge that it is in violation to any material condition or requirement of proper authorization or that such acts are without proper authorization;
- Makes a false statement of a material nature, falsifies a document, or tampers with a monitoring device;
- Generates, treats, stores, transports, disposes, or otherwise handles any hazardous waste in connection with the knowing destruction, alteration, or concealment of any record⁵⁷ required to be maintained;
- Owns, maintains, or operates any hazardous waste disposal facility which permits any acts or hazardous waste management practices that are violations.⁵⁸

A knowing violation, as described above, subjects the actor to punishment which may include:

- A fine up to twenty-five thousand dollars (\$25,000) per day of violation;
- Imprisonment up to one year (1 yr.); or
- Both.⁵⁹

Punishment for subsequent violations may include:

- A fine up to fifty thousand dollars (\$50,000) per day of violation;
- Imprisonment not less than ten years (10 yrs.); or
- Both.⁶⁰

⁵⁷ Any record pursuant to MO. ANN. STAT. §§ 260.350 to 260.430 (West 2001).

⁵⁸ *Id.* at 260.425(3)-(6).

⁵⁹ *Id.* at (6).

⁶⁰ *Id.*

Liabilities or penalties are not imposed, however, for a hazardous waste violation that is caused by an act of God or a war, strike, riot, or other catastrophe.⁶¹

Producer Note: Upon discovery of an emergency involving a hazardous substance under an individual's control, that individual is required by law to contact Missouri officials by phone at (573) 634-2436 or the National Response Center at (800) 424-8802.

3. *Missouri Underground Storage Tanks*

The DNR regulates aboveground and underground storage tanks.⁶² Missouri requires owners or operators to:

- Register each aboveground and underground tank with the DNR;
- Pay all fees established by the DNR for aboveground and underground storage tanks;
- Install underground storage tanks according to DNR guidelines;
- Maintain a leak detection and inventory control system for underground storage tanks;
- Maintain evidence of financial responsibility for underground storage tanks in an amount specified by the DNR ;
- Maintain a permit and records regarding the contents, operation, condition and monitoring of each underground storage tank;
- Report any release from any underground storage tank to the DNR;
- Take corrective action for any underground storage tank release; and
- Properly close any aboveground and underground storage tanks according to DNR guidelines.

However, a farm or residential aboveground or underground storage tank of eleven hundred gallons (1100 gal.) or less that contains motor fuel for noncommercial purposes is exempt from these regulations.

⁶¹ *Id.* at (4).

⁶² MO. ANN. STAT. § 319.100 *et seq.* (West 1994 & Supp. 1998); *see also* MO. CODE REGS. tit. 10 § 20-10.010 *et seq.* (1997).

Any person that violates a regulation may be assessed a penalty up to ten thousand dollars (\$10,000) for each day of violation. A storage tank certificate of registration may be denied or invalidated if the owner fraudulently registers with the DNR or fails at any time to comply with any regulation. Any storage tank owner that fails to abate or eliminate an immediate threat to public health or the environment involving such tank is liable for the reasonable costs incurred by the DNR in taking such corrective action.

4. Missouri Dead Animal Disposal

Any person caring for an animal that has died shall dispose the carcass within twenty-four hours (24 hrs.) after knowledge of the death.⁶³ The carcass must be disposed by arranging for a person lawfully permitted to dispose or transport the carcass,⁶⁴ burying in an permitted sanitary landfill, or burying, incinerating, composting, or disposing in a manner approved by the state veterinarian on-site or another site provided that the site is in accordance with the loading limitations, geographic restrictions, and other conditions specified by the DNR's Division of Geology and Land Survey.^{65, 66} Disposing an animal carcass into any waters or on the premises of another is prohibited.⁶⁷ Any person violating this provision may be subject to a fine up to five hundred dollars (\$500). Failure to remove the animal carcass from such waters or the premises of another within three (3) days is deemed a second offense.

The number of carcasses that may be buried per acre per year depends upon the site's major groundwater contamination potential. Generally, per acre limits range from one to seven (1 to 7) cattle carcasses, six to forty-four (6 to 44) swine carcasses, seven to forty-seven (7 to 47) sheep carcasses, seventy to four hundred (70 to 400) turkey carcasses, and three hundred to two thousand (300 to 2000) poultry carcasses. MDA specifications state that a permitted burial site must:

⁶³ MO. ANN. STAT. § 269.010 *et seq.* (West 2001).

⁶⁴ Such as a renderer.

⁶⁵ MO. ANN. STAT. § 269.020.

⁶⁶ *Id.* at § 269.020(2). For areas having major groundwater contamination potential, the maximum loading rate per acre per year is limited to: one (1) bovine, six (6) swine, seven (7) sheep, seventy (70) turkeys, three hundred (300) poultry carcasses, or one thousand pounds (1000 lbs.) of any other species and immature cattle, swine, and sheep. For other areas the maximum loading rate per acre per year is seven (7) cattle, forty-four (44) swine, forty-seven (47) sheep, four hundred (400) turkey carcasses, two thousand (2,000) poultry carcasses, or seven thousand pounds (7,000 lbs.) of any other species and immature cattle, swine, and sheep. One acre or ten percent (10%) of the total acreage owned, whichever is greater, is the maximum amount of land that can be used for burial of dead animals per year. Other specifications and restrictions exist including but not limited to low-lying areas, slope or topography of area, pre-treatment of carcasses, separation distances from property lines, neighboring residences, and proximity to water. Agricultural producers can check with DNR, MDA, or University of Missouri Extension Service for further, more specific details.

⁶⁷ *Id.* at § 577.076 (West 1995).

- Not consist of more than ten percent (10%) of an owner's land per year;
- Not be located in low-lying areas subject to flooding;
- Not be placed on a hill or in a cavern;
- Not be deeper than six feet (6') below the ground's surface;
- Have six inches of soil immediately placed over and covering the carcass with a minimum final cover of thirty (30) inches of soil; and
- Be at least three hundred feet (300') from any well or spring, fifty feet (50') from an adjacent property line, three hundred feet (300') from a neighbor's residence, and one hundred feet (100') from any body of surface water.

The abdominal cavity of a carcass over one hundred fifty pounds (150 lbs.) must be punctured to allow escape of putrefactive gases. Skinning a dead animal is only allowed if the animal did not die of a contagious disease and such skinning will not create a nuisance.

V. PESTICIDES AND CHEMIGATION

Producer Note: Use of pesticides and other farm chemicals is regulated by federal and state statutes. Most states have some form of licensing or certification requirements controlling pesticide users. In addition, if an agricultural producer employs agricultural workers, there are regulations which address safety concerns about pesticide use by those workers and around those workers.

A. Missouri Pesticide and Chemigation Laws and Regulations

Producer Note: Missouri, like most states, has laws designed to control the use of pesticides. The laws are designed to closely monitor the distribution and ultimate use of pesticides within the state.

1. *Missouri Pesticide Laws*

The Missouri Pesticide Use Act (MPUA)⁶⁸ is enforced by the Missouri Department of Agriculture (MDA). For purposes of the MPUA, the term pesticide includes any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest or intended for use as a plant regulator, defoliant, or desiccant.

⁶⁸ MO. ANN. STAT. § 281.010 *et seq.* (West 2000).

The MPPUA makes it unlawful to use any pesticide in a manner inconsistent with its label. A violator is deemed guilty of a misdemeanor and may be subject to:

- A fine up to five thousand dollars (\$5,000);
- Imprisonment up to one year (1 yr.); or
- Both.

In addition to the above criminal penalty, after inquiry and an opportunity for a hearing, the MDA may deny, suspend, revoke, or modify any issued pesticide license, permit, or certification, if the applicant or the holder of a license, permit, or certification:

- Has violated any Missouri pesticide statute or regulation;
- Has been convicted or subject to a final order imposing a civil or criminal penalty pursuant to the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA);
- Has been convicted or is the subject of prosecution in another state or protectorate of the United States;
- Has had a pesticide applicator license, certificate or permit denied, suspended, revoked or modified by another state or protectorate of the United States; or
- Has been finally adjudicated and found guilty or entered a plea of guilty or nolo contendere, in a criminal prosecution under the laws of any state or of the United States for any offense reasonably related to the qualifications, functions, or duties of any profession licensed or regulated by Missouri pesticide laws for any offense having an essential element of which is fraud, dishonesty, or an act of violence or for any offense involving moral turpitude, whether or not a sentence is imposed.

Furthermore, if the MDA determines after inquiry and opportunity for a hearing that any individual is in violation of the MPPUA or its related regulations, the agency has the authority to assess a civil penalty up to one thousand dollars for each violation, and in addition, may order that restitution be made to any person damaged by such violation.

2. *Missouri Pesticide Licenses*

The MPPUA requires licensing for the following classifications:

- For a certified private applicator who is permitted to use or supervise the use of restricted-use pesticides for purposes of producing any agricultural commodity on property owned or rented by him or his employer or on the property of another

person if used without compensation other than the trading of personal services between producers of agricultural commodities;

- For a certified noncommercial applicator who is certified to use or supervise the use of restricted-use pesticides on lands owned or rented by him or his employer;
- For a certified commercial applicator who is authorized to use, supervise the use, or determine the need for the use of any pesticide on his own or another's land as a service in exchange for compensation;
- For a certified public operator who is authorized to use or supervise the use of restricted-use pesticides in the performance of his duties as an official or employee of a governmental agency;
- For a pesticide technician who works under the direct supervision of a certified commercial applicator but is authorized to determine the need to use any pesticide;
- For a pesticide dealer who engages in the wholesale or retail business of distributing or selling any pesticide.⁶⁹

The MPUA defines specific licensing, record keeping, and training for all classifications.

VI. PROTECTION OF WILDLIFE

Producer Note: Agricultural producers also have responsibilities concerning wildlife and migratory birds which may have habitat on the producer's property. Federal and state laws contain measures designed to protect or enhance wildlife or wildlife habitat.

A. Missouri Wildlife Protection Laws and Regulations

Producer Note: Many states have additional measures which either enhance protections under federal laws or address issues peculiar to wildlife found within the state. These states also may address common problems caused by wildlife. Missouri has state laws protecting wildlife.

1. *Missouri Endangered Species Law*

The Missouri Endangered Species Law prohibits the importing, transporting, selling, purchasing, taking, or possessing of any endangered species of plant, fish, or wildlife as well as

⁶⁹ MO. CODE REGS. tit. 2 § 70-25.010 *et seq.* (1991).

the hide or any other part of such species.⁷⁰ The endangered species of the plants, fish, or wildlife protected in Missouri includes those species designated as endangered by the Missouri Department of Conservation (MDC), those listed by the Fish and Wildlife Service in the Department of the Interior or the National Marine Fisheries Service in the Department of Commerce which share responsibility for administration of the United States Endangered Species Act, and any species listed by the Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITIES).

2. *Other Missouri Wildlife Protection Acts*

Any person that causes a poisonous substance to enter any waters in quantities sufficient to injure or kill fish is deemed to be guilty of a misdemeanor.⁷¹ This action does not apply to persons in an industry that discharge a substance under precautionary measures specifically approved by the MDC.

VII. OTHER MISSOURI STATUTES AFFECTING AGRICULTURE

Producer Note: Many other state statutes have the potential of impacting agricultural operations and their relationship to the environment. The following is a brief discussion of such state laws in Missouri.

The Missouri Agricultural and Small Business Development Loan Act (ASB&DLA)⁷² established a public corporation to promote the development of agriculture and small businesses. Missouri recognizes that the high cost of land, equipment, and pollution control devices makes it difficult for farmers to continue their operations at present levels. The ASB&DLA provides eligible farmers with loans at reasonable interest rates to acquire agricultural property, continue daily operations, and install environmental protection devices. In addition to providing loans directly to eligible borrowers, the corporation purchases loans from other lenders, participates with lenders in making loans, and makes commitments to other lenders to purchase agriculture and small business loans. Loans for animal waste treatment may be coordinated with federal and state cost-share programs in Missouri.

⁷⁰ MO. ANN. STAT. § 252.240 (West 1990); *see also* MO. CODE REGS. tit. 3 § 10-4.111 (1997).

⁷¹ MO. ANN. STAT. § 252.210 (West 1990).

⁷² *Id.* at § 348.005 *et seq.* (West 1991 & Supp. 1998).

A. Missouri Farmland Preservation

1. Missouri Planning and Zoning

Missouri, like many other states, allows preferential taxation for agricultural property. Agricultural property is property devoted primarily to the raising and harvesting of crops; dairying; and feeding, breeding, and management of livestock. Buildings and structures customarily associated with such activities are considered agricultural property. Agricultural property also includes land devoted to and qualifying for government program payments or other compensation under agreements with the federal government.⁷³ Forested croplands, however, are not considered agricultural or horticultural property, and these properties receive different taxation treatment.

The assessment of agricultural and horticultural property is based on the true economic value of the land when it is being used as such, i.e., the value of the land when it is used for agricultural and horticultural purposes. The true value of structures located on the property is added to the use value of the agricultural and horticultural land to determine the overall value. The land is taxed at the agricultural and horticultural rate as long as it is used for such purposes, regardless of who may be the owner of the property.⁷⁴

With regard to agricultural and horticultural property, if such property also contains a dwelling unit, the farm dwelling and up to five acres (5 acs.) immediately surrounding the dwelling is identified as residential property. The zoning classification of property is also considered unless the zoning classification does not reflect the immediate, most suitable economic use of the property. Where property is held or used for more than one purpose and each of those purposes falls under a different property tax classification, the county assessor must allocate percentages to the appropriate use classification based on the true value devoted to each use.

The state of Missouri has not enacted legislation providing for the purchase of development rights or the transfer of development rights associated with land, nor has the state enacted legislation for the creation of agricultural districts.

Producer Note: Agricultural operations frequently are controlled by local planning or zoning board activities. Since it is not possible to outline each local area's requirements, an agricultural producer must check with local boards to determine local planning and zoning regulations which may affect an operation.

⁷³ MO. ANN. STAT § 137.016(2) (West 1993).

⁷⁴ *Id.* at 137.021(2),(3).

2. *Missouri Conservation Easements*

In Missouri, the Environmental Improvement and Energy Resources Authority (EIERA)⁷⁵ has a number of responsibilities and capabilities. Among these are the ability to:

[P]rovide for the conservation of the air, land, and water resources of the state by the prevention or reduction of the pollution thereof and proper methods of disposal of solid waste or sewage . . . and to further such programs the authority is authorized to acquire and construct, and finance projects and to issue bonds and notes and make loans as herein provided . . .⁷⁶

The EIERA is granted numerous powers within the statutes including the ability to acquire by gift or purchase, hold and dispose real and personal property, and execute contracts in furtherance of its statutory mission. Costs which are associated with the acquisition of easements and other interests in real property are allowable costs.

Most states which use conservation easements as a means of farmland preservation utilize easements in the sense that restrictions are placed on the use of such land. The primary restrictive use that is expressed on the easements is the conservation use. The EIERA's acquisition of easements for areas on and around wetlands near agricultural drainage wells is a recent focus of the conservation easement program which endeavors to increase the protection against groundwater contamination caused by the use of such wells.⁷⁷

Producer Note: Many states have passed laws allowing preservation or conservation of agricultural land through the use of easements. When easements are used for these purposes, the law frequently has certain requirements relating to the creation, compensation, and enforcement of the easement.

B. *Missouri Nuisance and Right-to-Farm Laws*

Producer Note: Agricultural producers may be confronted with complaints from local residents. These complaints may originate due to odors, flies, rodents, or dust generated by the agricultural operation. Resulting lawsuits or court actions in these instances are usually based on a nuisance theory, and in some cases, a right-to-farm defense may apply.

⁷⁵ *Id.* at § 260.010 (West 2001).

⁷⁶ MO. ANN. STAT. § 270.015 (West 2001).

⁷⁷ Missouri is bordered by Iowa on the north, and conservation easements are also used within Iowa for managing and preserving protected water areas.; *see* IOWA CODE ANN. § 108.11 and 108A.9 (West 1993).

1. Missouri Right-to-Farm Law

Under state statutes commonly referred to as the Missouri Right-to-Farm law, an agricultural facility that has been in operation for more than one year (1 yr.) and was not a nuisance at the time the operation began, the facility and any of its appurtenances may not be deemed a nuisance by any changed condition in the locality.⁷⁸ The protected status of an agricultural operation, once acquired, is assignable, alienable, and inheritable, and cannot be waived by the temporary cessation of operation or by diminishing the size of the operation. The operation can recover all reasonable expenses incurred in defending a nuisance action that a court determines to be frivolous.

An agricultural operation may reasonably expand in terms of acres or AUs without losing its protected status if the expansion does not:

- Violate any environmental laws;
- Generate a hazard to public health;
- Create a substantially adverse effect upon the environment;
- Increase pollution which significantly affects existing neighbors; or
- Completely relocate the farming operation.

To qualify for protected status, a poultry or livestock operation must also ensure that its waste handling facilities meet the minimum recommendations of the University of Missouri Extension Service. An agricultural operation is, however, liable for any nuisance that:

- Results from the operator's own negligent or improper acts;
- Occurs within the limits of a city, town, or village; or
- Injures a third party as a result of pollution or other change in water quantity or water quality used by such third person.

2. Missouri Farm Nuisance Actions

Nuisance actions against swine operations have been reported in Missouri case law. These cases, however, predate the Right-to-Farm provisions of the Missouri statutes. In *Bower v. Hog Builders*,⁷⁹ a nuisance was found and damages awarded to two (2) neighbors of a large

⁷⁸ MO. ANN. STAT. § 537.295 (West 1988 & Supp. 1998).

⁷⁹ 461 S.W.2d 784 (Mo. 1970).

swine facility. The operation's waste management practices were found by the court to constitute a nuisance. The court in *Bower* went into great detail describing the defendant's operation which improperly disposed dead animals; created foul odors; and included septic tanks containing hog manure, urine, and rotted feed that continuously and repeatedly overflowed onto the plaintiff's property causing fish kills.

Another Missouri case, *Meinecke v. Stallsworth*,⁸⁰ involved a nuisance action for odors from a hog farm; however, the court did not enjoin the operation's odors as a nuisance. The court based its decision on the presence of similar facilities in the area and maintained that any annoyances created by the operation were not substantial and were a part of the general atmosphere of the area in which other landowners also kept swine.

There have been no published or reported cases under the 1990 amendments of the Right-to-Farm statutes of Missouri.

C. Missouri Livestock Waste Management

Producer Note: A common by-product of livestock operations is animal waste which must be stored and disposed properly. Many states are becoming more involved in the regulation of waste storage, treatment, handling, and land application through regulations, recommendations, pollution prevention plans, and best management practices (BMPs).

Producer Note: Recommendations for land application of waste are covered by Natural Resources Conservation Service (NRCS) technical guidance materials. These recommendations should be followed in order to preserve the producer's potential defense in nuisance actions or to aid the producer when defending against alleged permit violations. While these recommendations do not have the force of law that agency regulations have, compliance with them will generally aid the agricultural producer.

1. Missouri Waste Management Design Criteria

The *Manual 121, Design Guidelines for Animal Waste Management for Concentrated Animal Feeding Operations* is published by DNR and contains design criteria for no-discharge waste management systems. Non-point pollution sources, however, are not covered by the manual. In addition to the design criteria set out in *Manual 121*, the manual contains regulations for the design of small sewage works that include animal waste management systems.⁸¹

⁸⁰ 483 S.W.2d 633 (Mo. Ct. App. 1972).

⁸¹ The regulations for small sewage works are found at MO. CODE REGS. tit 10 § 20-8.020 (1993), and animal facilities are included under the general definition of small sewage works.

The general requirements for a no-discharge system include:

- Management plans showing:
 - Design plans and specifications for containing waste including storage capacity;
 - Specifications for land application of waste including a schedule (application rates must be compatible with agronomic rates);
 - Vegetation management;
 - Pretreatment of waste as necessary;
 - Written agreements for use of any portion of the system not owned by the production facility;
 - Engineering certification that the storage structures have been properly constructed and sealed to prevent subsurface discharges; and
 - Other required operation and management information.
- An application for a letter of approval for construction and operation of an animal waste system including:
 - Geologic and soils reports including a location map with a general layout;
 - Design worksheets including a narrative summary;
 - Detailed construction plan drawings and construction specifications set forth for any subsequent operation; plans and specifications must be followed according to as-built plans; and
 - Operation and maintenance plan narratives.

Geologic reports for the area are required for each site where a lagoon or other earthen basin is proposed for wastewater, contaminated storm water, or liquid manure storage.⁸² The reports rate the site based on expected subsurface variability and regional groundwater influences. If the rating is moderate or severe, additional investigations may be recommended.

⁸² MISSOURI DEPARTMENT OF NATURAL RESOURCES MANUAL 121, DESIGN GUIDELINES FOR ANIMAL WASTE MANAGEMENT FOR CONCENTRATED ANIMAL FEEDING OPERATIONS, Section III(B).

A soils report is required in order to determine suitability of the area for pond seals.⁸³ Minimally, the soils report should indicate the classification of soils according to the Unified Soil Classification System.⁸⁴ In addition to a soils report for the storage site, a soils report is also required for the area upon which land application will occur. At a minimum, soil slope and permeability of land application sites must be determined.⁸⁵

The design requirements and regulations for waste management facilities are described in some detail in *Manual 121*, and consultation of this resource is vital. However, some of the requirements for design are as follows:

- *Emergency spillway* - An emergency spillway⁸⁶ must be provided on any earthen basin that will receive wastewater, manure, or contaminated storm water;
- *Irrigation pipe* - If an irrigation pipe is to be used through the berm of the basin as a proposed hook-up, suitable valves must be provided to assure compatible pump intake for the irrigation system. The valve must be lockable and protected from freezing. Pipe through the berm for filling of manure tankwagons is not recommended, and requests for such are considered only on a case by case basis;
- *Pond seal thickness* - Regulations specifically describe the required minimum seal thickness and permeability coefficient. Minimum seal thickness is established by taking into consideration the geologic and soil ratings in the area;
- *Slope* - Inside and outside slopes of earthen basins must range between three to one (3:1) and four to one (4:1);⁸⁷ and
- *Additional construction requirements* - Removal of all rock, tree roots, and organic material during construction is required, and use of specific earth compaction equipment is required based on compaction ratings.

⁸³ Soils reports should be performed by engineers, soil scientists, or NRCS soil technicians; *id.* Section III(C).

⁸⁴ Acceptable soils classifications are CH, Cl, GC, or SC; soils classified as GM, SM, MH, or M must be sampled and a laboratory analysis conducted to determine if they are suitable for construction of a soil liner; soils classified as GP, GW, SP, or SW are unsuitable for a soil liner.

⁸⁵ If a conservative approach is utilized, soil permeability rates should be considered for the top 2 feet of soil; if an intensive application approach or a plant available nitrogen approach is used in land application, soil permeability and soil series must be determined for the top 5 feet of soil; *see* MISSOURI DEPARTMENT OF NATURAL RESOURCES MANUAL 121, DESIGN GUIDELINES FOR ANIMAL WASTE MANAGEMENT FOR CONCENTRATED ANIMAL FEEDING OPERATIONS, Section III(C)(2).

⁸⁶ Spillway elevation should be a minimum of one foot below the top of the berm after allowance for settlement and located so as to minimize erosion as well as at a point farthest from the nearest stream or waterway; *id.* Section IV(A).

⁸⁷ MO. CODE REGS. tit. 10 § 20-8.020 (13)(A)(3) (1993).

As a general rule, all trees within one hundred feet (100') of the water's edge of the pond must be removed. Some trees may be allowed to remain if:

- The trees do not shade the pond or endanger the pond should the tree or limbs fall;
- The tree roots do not endanger the dike structure;
- The tree leaves do not have an adverse effect on the pond's effluent.⁸⁸

2. *Missouri Anaerobic Structures for Waste Management*

Anaerobic design of waste storage structures is not contained in DNR regulations. However, *Manual 121* contains design criteria for these structures. For example, Appendix C to *Manual 121* contains the following guidelines:

Recommended Waste Storage Periods

Lagoons/runoff ponds	365 days
Liquid manure basins	180 days
Solids	90 days

Recommended Waste Design Volume, Cu. Ft. per Pound of Animal⁸⁹

Animal Type	North	Central	South
Nursery & Finishing Hogs	1.4	1.1	1.0
Sows with Litters	1.8	1.5	1.3
Boars or Gestating Sows	0.7	0.6	0.5
Beef	1.8	1.5	1.3
Dairy Cows and Calves on Roughage	2.8	2.3	2.0
Poultry pullets, broilers, layers, and turkeys	5.6	4.7	4.0
Horses	2.4	2.0	1.7
Sheep	3.5	2.9	2.5
Dogs	2.1	1.7	1.5

⁸⁸ MO. CODE REGS. tit. 10 § 20-8.020 (13)(A)(3) (1993).

⁸⁹ These figures are based on cubic feet required per pound of animal and an animal's average weight during confinement; other design criteria examine cubic feet required based on daily animal manure production per 1000 pounds of certain animals.

These charts are by no means exhaustive of the recommended and required design criteria contained in manuals, regulations, and publications of the DNR and other educational institutions such as the University of Missouri. An exhaustive review of design criteria and available regulation information should be performed before construction begins.

In addition to design criteria for waste control structures, the DNR has adopted design criteria which examine:

- Runoff and rainfall amounts;
- Evaporation factors;
- Safety volume depths in a twenty-five year (25 yr.) period, twenty-four hour (24-hr.) rainfall;
- Soil plant filters using the conservative management approach;⁹⁰
- Nitrogen content of manure; and
- Typical nitrogen losses in storage and land application.

The DNR, through the *Manual 121*, has collected in one place most of the design criteria and land application criteria for livestock waste management systems in Missouri. However, a few other publications may prove helpful in examining the issue of BMPs within the state. These publications have been cited in DNR literature and include:

- Fulhage, Charles, *Land Application Considerations for Animal Wastes*, University of Missouri-Columbia, WQ 202.
- MWPS-18. *Livestock Waste Facilities Handbook*, 2nd ed. 1985. Midwest Plan Service, Iowa State University, Ames, IA.
- *Field Application of Manure*. Cooperative Bulletin No. 25. August 1989. University of Delaware, Newark, DE.
- Fulhage, Charles, *Reduce Environmental Problems with Proper Land Application of Animal Wastes*, University of Missouri-Columbia, WQ 201.

⁹⁰ Total solid waste production per day may be estimated for each type of animal; calculate the number of 1000 pound animals per acre based on the vegetative filter at 100 pounds of available plant nitrogen per acre.

3. *Missouri Land Application of Waste*

Some specific approaches for land application of waste include:

Conservation management approach - This approach is based on one hundred pounds (100 lbs.) pounds of applied nitrogen per acre per year and has been found to be suitable for most soil types across the state.

Intensive management approach - This approach is based on the total nitrogen applied, application losses of twenty-five percent (25%), the uptake for the specific crops to be grown, and the soil type and depth. A common assumption made using this approach is that it is suitable for soils used for tilled cropland.⁹¹

Plant available nitrogen approach - This approach predicts the optimum nitrogen application for specific crops based on wastewater testing for content and soil testing for characteristics, nitrogen application losses, leaching, and potential for storm water runoff.

Additional information must be provided to DNR concerning the site for land application of wastewater. This information includes:

- Legal description of the disposal site;
- Location of all existing and proposed residences, commercial or industrial developments, roads, ground or surface water supplies, water supplies, and wells within one-half mile (½ mi.) of the proposed site;
- Land area available for application use;
- Distance from pretreatment and storage facilities;
- Proximity of the site to industrial, commercial, and residential developments, surface water streams, water wells, and public use areas;
- Present and future land and groundwater uses;
- Summary of vegetation in the area;
- Maps showing elevations and contours of the site and adjacent areas including maximum and average slopes of the site; and

⁹¹ Soils with rapid permeability, at depths of less than 5 feet, and with over 50% chert/gravel content in the top 5 feet of soil require site-specific evaluation to determine appropriateness of this method.

- Geological report, if application rates will exceed twenty-four inches (24") of applied wastewater per year.

Equipment design specifications must be included with construction plans and specifications. Agricultural producers must consider the topography of the site, percentage slope of the site, slope length, and width of the area suitable for land application.

Producer Note: Recommendations concerning waste storage, waste management, and land application of waste associated with a CAFO are covered in the *Manual 121*. Used along with a copy of the related DNR regulations, the manual provides the agricultural producer with specific requirements and useful information to determine the best possible system for controlling waste accumulations and techniques for land application of waste.

Producer Note: Recommendations for land application of waste are also covered by NRCS technical guidance materials. These recommendations should be followed in order to preserve the producer's potential defense in nuisance actions or to aid the producer when defending against alleged permit violations. While these recommendations do not have the force of law that agency regulations have, compliance with them will generally aid the producer.

D. Missouri Noxious Weeds

Missouri has extensive legislation on the control of noxious weeds.⁹² The term noxious weed includes Canada, musk, and Scotch thistle, common teasel, cut leaf teasel, field bindweed, Johnson grass, kudzu, marijuana, multiflora rose (except when cultivated or used as understock for cultivated roses), purple loosestrife, and any other weed designated as noxious by rules and regulations promulgated by the MDA.⁹³ Landowners are required to control noxious weeds on their properties. Depending on the particular noxious weed involved, a landowner may be fined for failing to control the noxious weed. For example, any landowner who fails to control thistles designated as noxious weeds is subject to a fine up to one hundred dollars (\$100) for each offense.⁹⁴ In comparison, the failure to control Johnson grass can result in a five hundred dollars (\$500) penalty.⁹⁵

The state of Missouri allows counties to further control noxious weeds at the local level by a majority vote. After a county election where a majority of those voting are in favor of

⁹² MO. ANN. STAT. § 263.190 *et seq.* (West 1993).

⁹³ *Id.* § 263.450.

⁹⁴ *Id.* at .190(1).

⁹⁵ *Id.* at .262.

enforcing a law controlling noxious weeds and proper notice from the clerk of the county is provided to the MDA, the MDA must declare any county a Noxious Weed Control Area.⁹⁶ Within ten days (10 da.) after such a designation, the county commission of the designated county must appoint a county weed control board composed of three county citizens to serve as advisors and to assist in the administration of the county's weed eradication efforts.⁹⁷

The county weed control board has the authority to inspect all lands within the county and to take necessary measures to control the county's noxious weeds.⁹⁸ This includes the right to enter upon any landowner's property to control such weeds at the landowner's expense if the landowner fails to undertake such measures. Costs of controlling noxious weeds in such circumstances may be levied against the landowner's property as a special tax.⁹⁹

The existence of noxious weeds in a weed control area is considered a public and common nuisance. The prosecuting attorney for any county designated as a Noxious Weed Control Area may bring an action in the county's circuit court to enjoin the nuisance.¹⁰⁰

E. Missouri Soil and Water Conservation Districts

Under the Soil and Water Conservation Districts Law,¹⁰¹ Missouri provides for the creation of soil and water conservation districts. The conservation districts are administered by the State Soil and Water Districts Commission (SSWDC) which has the authority to formulate policies and general programs for protecting Missouri soil and water.¹⁰²

The SSWDC is composed of four (4) ex officio members and six (6) farmer members. The ex officio members are the directors of Missouri's DNR, MDA, MDC, and the dean of the College of Agriculture of the University of Missouri. The six (6) farmer members are appointed by the governor of Missouri with the advice and consent of the senate. Not more than four (4) of the farmer members may be from the same political party. Each of the farmer members must hold legal title to a farm and earn the principal part of total income from a farm at the time of appointment.¹⁰³

⁹⁶ MO. ANN. STAT § 263.454.

⁹⁷ *Id.* at .454(2) (West 1993).

⁹⁸ *Id.* at .456.1(1)-(5).

⁹⁹ *Id.* at .456.3.

¹⁰⁰ *Id.* at .460.

¹⁰¹ *Id.* at 278.060-278.155 (West 1993 & Supp. 1998).

¹⁰² *Id.* at .080.1.

¹⁰³ *Id.* at .080.2.

The creation of a soil and water conservation district begins with the filing of a petition with the SSWDC in any county or township. The petition for a district must be signed by twenty-five (25) or more representatives in each proposed district or by fifty percent (50%) of the land representatives if there are less than fifty (50) land representatives in the proposed district. The petition must state that the protection of the soil and water in that proposed district is a public necessity.¹⁰⁴

If the SSWDC finds the petition to be in order, a public hearing on the petition is set. If the SSWDC determines from the public hearing that there is a general desire for a district, then the SSWDC determines whether a district is actually necessary and administratively feasible by surveying of the conditions of farmland within the proposed district. If the SSWDC comes to a favorable conclusion, it sets a referendum on the district's creation.¹⁰⁵

If a majority of the land representatives voting in the referendum vote in favor of establishing a district, and the SSWDC determines that the total number of votes cast amounts to a substantial expression of opinion, the district is created. If the referendum fails, however, the question on the creation of the district cannot be called again for two years (2 yrs.) from the date of the SSWDC declaration that request for a district has failed.¹⁰⁶

A district is governed by a board of supervisors consisting of five (5) members: four (4) land representatives elected by a majority vote of the district's land representatives and an ex officio, the county agricultural extension agent.¹⁰⁷ The board of soil and water supervisors assists the SSWDC in the administration of state soil and water conservation cost-share programs.¹⁰⁸

F. Missouri Aquaculture

Missouri has an aquaculture council to promote and market fish and fish products in the state. The Missouri Aquaculture Council (MAC) consists of five members elected by commercial producers.¹⁰⁹ A commercial producer is any commercial producer or seller of fish or

¹⁰⁴ MO. ANN. STAT. § 278.100.1 (West 1993 & Supp. 1998).

¹⁰⁵ *Id.*

¹⁰⁶ *Id.* at .100.2.

¹⁰⁷ *Id.* at .110.1.

¹⁰⁸ *Id.* at .110.8.

¹⁰⁹ *Id.* at 275.450.1.

fish products who purchases at least two thousand pounds (2000 lbs.) of fish food in a calendar year.¹¹⁰

The MDA has divided the state into four (4) aquaculture districts which contain commercial producers. One council member is elected from each aquaculture district. A fifth (5th) council member is elected at large.¹¹¹

The MAC has an aquaculture marketing development fund to support marketing activities. The fund is supported by a fee assessed to the state's commercial producers at three dollars (\$3) per ton of purchased fish food.¹¹²

G. Missouri Regulation of Biological Products

Biological products used in Missouri to immunize, test, or treat livestock for brucellosis must be administered and sold only as set forth by the MDA. Products may only be sold to accredited and approved veterinarians who have completed appropriate training programs.¹¹³ Additionally, only licensed laboratories may perform the necessary tests on specimens obtained for testing.¹¹⁴

H. Missouri Environmental Audits

Producer Note: Several states have passed environmental audit protection laws which give immunity from the use of environmental audit findings in administrative, civil, or criminal actions against a business for environmental problems found and corrected. Fewer than half of the states have this type law. Missouri, however, has not granted this type protection.

Producer Note: Agricultural producers should confer with an attorney, consultant, or advisor before engaging in an environmental audit. Some federal courts have concluded that state environmental audit protection laws do not provide immunity to businesses for federal environmental law violations, particularly in criminal actions.

¹¹⁰ *Id.* at .452.

¹¹¹ MO. ANN. STAT. § 275.450.1 (West 1993 & Supp. 1998)..

¹¹² *Id.* at .452.

¹¹³ *Id.* at 267.552.

¹¹⁴ *Id.* at .605.

Appendix A - Agencies

Producer Note: State and federal agencies are available to answer questions regarding environmental matters and compliance with environmental laws and regulations. The following is a list of agencies which should be able to answer questions or provide materials for an agricultural producer.

State Agencies:

Department of Agriculture

1616 Missouri Boulevard
P.O. Box 630
Jefferson City, MO 65102-0630
(573) 751-4211
(573) 751-1784 fax
<http://www.mda.state.mo.us/>

Within MDA:

1. Office of the Director

(573) 751-3274
(573) 751-1784 fax

2. Agricultural and Small Business

Development Authority

(573) 751-2129
(573) 751-1784 fax

3. Animal Health Division

(573) 751-3377
(573) 751-6919 fax

4. Grain Inspection & Warehousing Division

(573) 751-5515
(573) 751-5516 fax

5. Market Development Division

(573) 751-2613 or
(573) 751-2868 fax

6. Plant Industries Division

(573) 751-2462
(573) 751-0005 fax

7. State Fair

(660) 530-5609
(660) 530-5609 fax

Department of Conservation

2901 West Truman Boulevard
P.O. Box 180
Jefferson City, MO 65102
(573) 751-4115
(573) 751-9099 fax
<http://www.conservation.state.mo.us/>

Department of Health

920 Wildwood
P.O. Box 570
Jefferson City, Missouri 65102-0570
(573) 751-6001
(573) 751-6041 fax
<http://www.health.state.mo.us/>

Department of Public Safety

Harry S. Truman Building, Suite 870
P.O. Box 749
Jefferson City, Mo 65102-0749
(573) 751-4905
(573) 751-2808 fax
(888) FYI-MDPS toll free
<http://www.mova.missouri.org/members/modps.htm>

Department of Natural Resources

Jefferson State Office Building
205 Jefferson Street
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-4732 or
(800) 334-6946 toll free
(573) 751-7627 fax
(573) 634-2436 environmental emergencies, 24 hrs.
<http://www.dnr.state.mo.us/>

Commissions with DNR:

Air Conservation Commission

(573) 751-4817
(573) 751-2706 fax

Clean Water Commission

(573) 751-6721

Soil and Water Districts Commission

(573) 751-4932
(573) 726-3508 fax

3 Divisions within DNR:

1. Environmental Improvement and Energy Resources Authority (EIERA)

(573) 751-4919
(573) 635-3486 fax

2. Environmental Quality Division¹¹⁵

(573) 751-1387

Air Pollution Control

(800) 334-6946 toll free

Environmental Services (Air Quality)

(800) 334-6946 toll free

Hazardous Waste

(573) 751-3176 or

800-334-6946 toll free

Hazardous Waste Program

(573) 751-2747

(573) 751-7869 fax

Land Reclamation

(575) 751-4041 or

(800) 334-6946 toll free

(573) 751-0534 fax

Public Drinking Water

(573) 751-5331

(573) 751-3110 fax

Soil and Water Conservation

(800) 334-6946 toll free

Solid Waste Management

(573) 751-5401

Technical Assistance

(573) 526-6627 or

(800) 361-4827 toll free

(573) 526-5808 fax

Water Pollution Control

(575) 751-1404 or

(800) 361-4827 toll free

(575) 751-9396 fax

3. Geology and Land Survey Division

(573) 751-2867

¹¹⁵ A reorganization of this division is pending.