

History of environmental and water regulations

Environmental laws and regulations are enacted to protect natural resources and the environment. Kansas environmental law has often preceded national law. For example, Kansas had a permit system for confined animal feeding operations (CAFOs) several years before federal legislation, which created the National Pollutant Discharge Elimination System (NPDES). Current Kansas laws and regulations include those that originated in Kansas plus federal laws that give Kansas implementation and/or enforcement authority.

It is said that if there is a conflict regarding water or the environment it often occurs first in Kansas. Kansas has a long history of conflicts over water. An example is the dispute with Colorado over Arkansas River water flows, which went before the U.S. Supreme Court in 1902, 1907, and 1943. After the 1943 action, the states developed the Arkansas River Compact, which apportioned the Arkansas River waters between the two states. More recent Arkansas River cases have been heard by the U.S. Supreme Court in 1995, 2001, and 2004. (Source: www.newworldencyclopedia.org/entry/Arkansas_River.)

Using this guide

Laws and regulations, which may affect landowners, can be confusing. This guide is intended as an introduction to laws and regulations with which landowners may need to comply. When it is not easy to determine if compliance is required, the reader should consult the local or state regulating agency or legal counsel for clarification. In some cases, it may be possible to enlist a third party to ask questions of the regulating agency without disclosing the owner's name or specific location.

This guide provides an overview of laws and regulations relating to the environment that are most likely to be encountered by rural landowners. Information is grouped into six broad categories then listed alphabetically under the headings: Agricultural Chemicals; Air, Land, and Water Management; Livestock, Fish, and Wildlife Management; Oil, Gas, and Water Wells; Storage and Transportation; and Waste Management.

First, select the category that best fits your area of interest. Then look through the entries to find those that apply. It is a good idea to keep notes as you use this publication. Write down the laws and regulations with which you must comply. Record the reasons why and why not regarding the need for compliance. Visualize your plans for the future and think about how implementing those plans would affect the need for compliance. For example, the need for secondary containment for agricultural chemicals is determined by the quantity and length of storage. Careful planning is critical to making informed decisions about management practices.

Disclaimer and limitations

This publication is intended solely for educational and informational purposes to help the reader determine if a situation requires compliance with statutes or rules and regulations. It is not intended to be the sole source of legal information. The guide should help the reader identify basic regulatory concepts and find where to go for compliance information. Readers should not rely on this information alone to determine when and what compliance is required. Neither Kansas State University nor the authors are to be held responsible for failure to seek other information sources or competent legal counsel. Safety and health effects can result from many other environmental issues that are not covered by regulations. Readers should become aware of these situations on or adjacent to their property and take measures to protect the health and safety of their family and others.

Activity or Situation	Required Action	Agency with Regulatory Responsibility	Contact Information	Critical Concerns or Requirements
1. Agricultural Chemicals				
Above ground storage tanks (AST)	Register tanks. Cleanup plan required. Report spills or leaks within 24 hours.	Local fire marshal, KDHE, Bureau of Environmental Remediation, Storage Tank Section	785-296-1678 www.kdheks.gov/tanks/	Individual tanks \geq 660-gallon capacity must be registered with local fire marshal. If the location has more than 1,320 gallons of total storage capacity in any size tanks, then they must have a Spill Prevention, Control, and Countermeasure (SPCC) plan. New and relocated tanks must have advance approval from state fire marshal. Base of tank must be above ground or the tank will be considered an underground installation.
Chemigation: Applying pesticides, fertilizers or effluent through an irrigation system	User permit, operator certification, and proper operation of anti-pollution equipment	Kansas Department of Agriculture (KDA), Pesticide and Fertilizer Program	785-564-6688 http://agriculture.ks.gov/divisions-programs/pesticide-fertilizer	Required for all systems where chemicals or waste are applied through the irrigation system while the system is connected to a groundwater or surface water supply; Chemigation Safety Law. K.S.A. 2-33 and K.A.R. 4-20-11
Hazardous material transport, including agricultural chemicals	Must comply with regulations	U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration	800-467-4922 816-329-3800 www.phmsa.dot.gov	Transportation of certain chemicals requires shipping papers. Placard is required when transporting 1,000 pounds or more (including containers) of certain chemicals. Liability insurance of at least \$1 million is required for either.
Pesticide container return or disposal	Thorough cleaning and proper disposal of empty containers	Kansas Department of Health and Environment (KDHE), Bureau of Waste Management	785-296-1600 www.kdheks.gov/waste	After pesticide containers have been thoroughly cleaned by triple rinse or power rinsing, they can be returned to the dealer or delivered to a permitted landfill. Small amounts of pesticide can often be taken to a local household hazardous waste (HHW) site. Burning, re-use, or on-farm disposal is not permitted. K.A.R. 4-13-18
Pesticide and fertilizer storage	Secondary containment for bulk pesticide and unpackaged fertilizer	KDA, Pesticide and Fertilizer Program	785-564-6688 http://agriculture.ks.gov/divisions-programs/pesticide-fertilizer	Secondary containment is required when the total of all chemicals stored is \geq 1,000 gal. liquid or \geq 3,000 lbs dry in any 365-day period, or when all liquid fertilizer storage containers total \geq 2,000 gallons (except if bulk container is $<$ 350 gallon and is stored $<$ 60 days for end use application). K.A.R. 4-13-25
Restricted use pesticides (RUP) purchase and application	Certification for purchasing, applying, or supervising application; must maintain records of all applications	KDA, Pesticide and Fertilizer Program	785-564-6688 http://agriculture.ks.gov/divisions-programs/pesticide-fertilizer	Kansas Pesticide Law requires certification of pesticide applicators; farm operator must keep records of all RUP applications, whether applied by the operator or a commercial applicator. K.S.A. 2-2438a et seq.; K.A.R. Article 13

Activity or Situation	Required Action	Agency with Regulatory Responsibility	Contact Information	Critical Concerns or Requirements
Right-To-Know; Community Right-To-Know	Report inventory of stored chemicals to proper local offices and pay fee to KDHE	KDHE; Local Emergency Planning Committee and local fire department	County government offices: emergency planning, fire	Requires owner to report locations and quantities of chemicals stored on-site to help communities prepare to respond to chemical spills or similar emergencies. All Tier II and Toxic Release Inventory (TRI) Chemical data must be collected and maintained; Federal Emergency Planning and Community Right-To-Know Act (EPCRA) Sections 311 and 321
Spill Prevention, Control, and Countermeasures (SPCC) for Agriculture	Development and maintenance of a spill prevention plan (SPCC Plan) for oil and oil products in aboveground storage containers	U.S. Environmental Protection Agency (EPA)	EPA Oil Information Center 800-424-9342; www.epa.gov/oil-spills-prevention-and-preparedness-regulations/spill-prevention-control-and-countermeasure-spcc	SPCC applies to a farm that: Stores, transfers, uses, or consumes oil or oil products, such as diesel fuel, gasoline, lube oil, hydraulic oil, adjuvant oil, crop oil, vegetable oil, or animal fat; and stores more than 2,500 U.S. gallons in aboveground containers; and could reasonably be expected to discharge oil to waters of the United States, adjoining shorelines, interstate waters, intrastate lakes, rivers, and streams. Farms that meet all of these criteria are covered by SPCC. Online plans are available; however some plans are required to have a Professional Engineer-certified plan.
Underground storage tanks (UST)	Permit, annual registration, and fee required.	KDHE, Bureau of Environmental Remediation, Storage Tank Section	785-296-1678 www.kdheks.gov/tanks	Regulations apply to tanks containing petroleum or other regulated substance where any portion of the tanks or piping is below the ground surface and more than 1,100 gallons capacity at site. Installation, removal or modification of a UST must be by a licensed firm or individual.
Worker protection standard	Train workers and handlers; provide appropriate personal protection equipment	KDA, Pesticide and Fertilizer Program	785-564-6688 http://agriculture.ks.gov/divisions-programs/pesticide-fertilizer ; www.epa.gov/pesticide-worker-safety	United States Environmental Protection Agency (USEPA) Worker Protection Standard for Ag Pesticides; comprehensive standards for worker protection, training workers and handlers, posting required risk notices, restrictive reentry, etc.; provide appropriate personal protection equipment. Standards were updated in 2015.

2. Air, Land, and Water Management

CAFO – air quality; ammonia and hydrogen sulfide emissions from confined animal feeding operation	Report ammonia and hydrogen sulfide emissions to state and local emergency response officials	Local: County Kansas Division of Emergency Management	County emergency management department KDEM 785-646-1409	All CAFOs (with ≥1,000 beef cattle; 700 mature dairy cows; 1,000 veal calves; 2,500 swine >55 lbs.; 10,000 swine, <55 lbs.; 500 horses; 10,000 sheep) must notify state and local emergency response officials if ammonia and hydrogen sulfide emissions are ≥100 lbs during any 24-hour period. USEPA 40 CFR 355.32 and the final rule published on December 18, 2008, 73 Fed. Reg. 76948, Emergency Planning and Community Right to Know Act of 1986 (EPCRA).
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Activity or Situation	Required Action	Agency with Regulatory Responsibility	Contact Information	Critical Concerns or Requirements
Construction of residence or other structures in floodplain	Flood plain development permit required; additional requirements to get flood insurance	City, County, or Division of Water Resources	Local (county) Guidance from: http://agriculture.ks.gov/divisions-programs/dwr/floodplain , 785-564-6640	The Kansas Department of Agriculture, Division of Water Resources provides floodplain management guidance. The Federal Emergency Management Agency (FEMA) administers the National Flood Plain Insurance Act of 1968. Most cities and counties follow FEMA maps and guidelines. Construction may require approval by the chief engineer.
Construction storm-water runoff; a project that leaves land surface subject to erosion	Discharge permit may be required to control erosion and stormwater	Local KDHE Bureau of Water Industrial Programs Section	City or County http://www.kdheks.gov/stormwater/#construct ; 785-296-5549	When a construction project disturbs ≥ 1 acre KDHE NPDES permit is required. When < 1 acre of land surface is disturbed a permit may be required.
Dam safety	Permit and engineering plans are required.	KDA, DWR, Dam Safety Program	785-564-6779 http://agriculture.ks.gov/divisions-programs/dwr/dam-safety	Requirements apply to dams or impoundments more than 25 feet high or that are 6 feet high or higher and impound more than 50 acre-feet at the top of the dam; K.S.A. 82a-301 – 305a; K.S.A.82a-701 et seq. May also need a COE Dredge and Fill permit.
Dredge and Fill; CWA, Sec 404 and Sec 10 of the Rivers and Harbors, Appropriations Act	Permit may be required to dredge, excavate, or fill material into wetlands, streams, rivers.	U.S. Army Corps of Engineers; oversight by EPA	816-389-2000 816-389-3990 www.nwk.usace.army.mil	A permit may be required, especially for a large pond, waterway, or when excavating or filling in or near a stream (blue line on USGS map), water body, or wetland area. Routine field operations should not be affected; Section 10: Rivers and Harbors Act; Section 404: Clean Water Act. May also need a DWR Stream Obstruction permit.
Highly Erodible Lands (HEL); Farming or tilling land classed as highly erodible	HEL must be protected to be in compliance	USDA, Natural Resources Conservation Service (NRCS)	785-823-4500 www.ks.nrcs.usda.gov	When soil type, slope, and rainfall results in highly erodible land classification that is not in compliance the USDA may withhold benefits; Federal Food Security Act.
Material stockpiles in floodplain	Permit required	KDA, DWR	785-564-6640 http://agriculture.ks.gov/divisions-programs/dwr	Generally applies to unconsolidated material removed during a gravel and/or sand removal operation; however, can be any type of material, other than qualified safety berms, which contain soil, rock, or rubble placed in the floodplain; The Levee Law - K.S.A. 24-126, K.A.R. 5-45-19 thru 5-45-23
Open burning, including all agricultural burning.	Notification Exemption required	Local fire/law enforcement department KDHE, Bureau of Air	Local (county) KDHE: 785-296-1551 www.kdheks.gov/bar/index.html	Open burning restrictions apply for certain counties during the month of April (K.A.R. 23-19-645a). Fire control and smoke management are potential concerns; specific regulations concerning meteorological conditions, burning near occupied dwelling or public roadway, and burning within 2 miles of airport. Local requirements may also exist. Burning of tires is prohibited; KAR 28-19-647 and KAR 28-19-648

Activity or Situation	Required Action	Agency with Regulatory Responsibility	Contact Information	Critical Concerns or Requirements
Property tax exemption	Application after construction of a private dam or donation of easement to a unit of government	KDA, DWR	785-564-6640 http://agriculture.ks.gov/divisions-programs/dwr	Provides for partial abatement of property taxes on land upon which a reservoir is constructed either by the landowner or by a local unit of government; K.S.A. 82a-405 – 409 and K.S.A. 79-201g
Sand and gravel dredging	Permit required	KDA, DWR	785-564-6640 http://agriculture.ks.gov/divisions-programs/dwr	There are two types of operations — one for domestic operations (<100 cubic yards per year) and one for commercial operations (>100 cubic yards per year); K.S.A. 82a-301 to 305a, K.A.R. 5-43-1 through 5-43-5
Spills: Release of material that may contaminate land and/or water, including crude oil or saltwater	Report within 24 hours and complete clean up as needed.	Emergency Personnel KDHE & KDEM	911 24 /7 785-291-3333 kdhe.SpillHotline@ks.gov	All spills of hazardous materials in amounts that may be a risk to safety or cause soil and/or water contamination must be reported. Cleanup procedures will be suggested, required, or performed and billed to owner of property; KAR 28-48 – Spill Reporting; K.S.A. 65-171d – Prevention of Water Pollution; K.S.A. 65-171v – Cleanup Operations
Stream obstruction; levee or anything that may act as a levee, such as a dam or channel diversion	Engineering plans must be approved before beginning construction; permit required	KDA, DWR Dam Safety Program	785-564-6640 http://agriculture.ks.gov/divisions-programs/dwr/dam-safety/dam-safety-resources	Any levee or structure acting as a levee on a stream must be approved and permitted. A stream is a watercourse with a minimum drainage area of 240 to 640 acres, depending on region in the state; K.S.A. 24-126
Swampbuster: modification to wetland in an agricultural field or development is regulated	Must classify an area as wetland or non-wetland; only applies to wetland	USDA, NRCS	785-823-4500 www.ks.nrcs.usda.gov	Any wetland conversion or increased drainage may result in withholding of USDA benefits; Federal Food Security Act. USDA, NRCS Field Office Technical Guide Section 3
Water rights and use restrictions	Water right permit required	KDA, DWR	785-564-6640 https://agriculture.ks.gov/divisions-programs/dwr/water-appropriation	A water right is required whenever more surface or groundwater will be used than the amount required for a home and two acres of land. A permit is also required for any livestock confinement facility of more than 1,000 head capacity or for an annual water use of 15 acre-feet or more; K.S.A. 82a-701 et seq.
3. Livestock, Fish, and Wildlife Management				
Dead animal removal	Regulated; handling or disposal by other than approved means is unlawful	KDHE Bureau of Waste Management	785-296-5550 www.kdheks.gov/waste	Disease transmission and nuisance is a concern. Dead animals may be buried (at least 3 ft of cover), burned, rendered or composted. Most other disposal options are prohibited, though some are not addressed by present law; K.S.A. 47-1219

Activity or Situation	Required Action	Agency with Regulatory Responsibility	Contact Information	Critical Concerns or Requirements
Kansas Nongame and Endangered Species Act, aka Threatened and Endangered (T and E) Species	Permit required for any activity that alters or disturbs T and E species habitats	Kansas Department of Wildlife, Parks and Tourism (KDWP),	785-296-2281 http://ksoutdoors.com/Services/Threatened-and-Endangered-Wildlife	The act gives KDWP broad responsibility and authority over species determined to be threatened or endangered within the state. KDWP identifies threatened and endangered species (K.A.R. 115-15-1), and protects all habitats essential for these species (K.A.R. 115-15-3); national oversight and enforcement from U.S. Fish and Wildlife Service
Manure and livestock composting	Permit required	KDHE, Bureau of Waste Management	785-296-5550 www.kdheks.gov/waste	Composting of manure or dead animals must follow KDHE regulations; KAR 28-29-25c and KAR 28-29-25c
Migratory bird habitats	Permit required	U.S. Fish and Wildlife Service Kansas Ecological Services Field Office	785-539-3474 www.fws.gov/kansas/	The Migratory Bird Treaty Act lists 836 protected species of migratory birds (including eggs, nests, and feathers); 778 of which are non-game birds. Before attempting to help an injured or orphaned bird, remove or destroy an active bird nest, or pick up bird feathers or nests, contact KDWP or the Kansas Field Office of USFWS for assistance.
Waste from livestock confinement facilities	Registration or permit	KDHE, Bureau of Water, Livestock Waste Management Section	785-296-5550 www.kdheks.gov/feedlots	Any facility with animal unit capacity ≥ 300 or that presents a significant water pollution potential must register with KDHE. Operations with animal unit capacity of $\geq 1,000$ must have a Livestock Waste Management Permit and approved facilities.

4. Oil, Gas, and Water Wells

Abandoned oil or gas wells: active leaseholder and leaseholder out of business	Leaseholder or KCC must plug according to prescribed procedures; file necessary reports	Kansas Corporation Commission (KCC), Oil & Gas Conservation Division	316-337-6200 www.kcc.state.ks.us	Abandoned wells are a potential source of groundwater contamination from spills or mixing of groundwater zones; KAR 82-3-111 – 115. The 1996 Abandoned Oil and Gas Well / Site Remediation Fund may be used to plug oil and gas wells and remediate sites. KCC manages this fund to plug abandoned wells and remediate damaged sites.
Plugging abandoned (unused) water wells	Leaseholder or KCC must plug according to prescribed procedures; File necessary reports.	KDHE, Bureau of Water, Water Well Program	785-296-3565 www.kdheks.gov/waterwell	Abandoned wells may be plugged by the landowner or a Kansas licensed water well contractor. Abandoned water wells can be a safety hazard to people and animals; can be a potential source of groundwater contamination from surface spills or mixing of groundwater zones.
Water well drilling – all uses except public water supply wells	Must be done by Kansas licensed water well contractor	KDHE, Bureau of Water, Water Well Program	785-296-3565 www.kdheks.gov/waterwell	A Kansas licensed water well contractor shall drill the well; must meet KDHE construction standards; well should not be drilled before a water right permit is received. DWR water right is required for all but domestic wells; K.S.A. 82a-1201 – 1219. There are additional requirements for public water supply wells.
Water well upgrade or improvement	Must be done by Kansas licensed water well contractor	KDHE, Bureau of Water, Water Well Program	785-296-3565 www.kdheks.gov/waterwell	Any modification to well or casing must be by a Kansas licensed water well contractor. Must meet current KDHE construction standards when finished.

Activity or Situation	Required Action	Agency with Regulatory Responsibility	Contact Information	Critical Concerns or Requirements
5. Waste Management				
Biosolids: municipal sewage sludge, management or disposal	Permit required by utility or their contractor.	KDHE, Bureau of Water, Technical Services Section	785-296-2856 www.kdheks.gov/muni	Prevent safety hazard for people, prevent water contamination, and minimize vector and nuisance problems. Must follow EPA regulations for biosolids. Federal statute, 503 regulations.
Biosolids: septage (septic tank pumpage) management	County codes often require a permit for septage haulers. Must comply with federal regulations	Local sanitarian KDHE, Watershed Management Section when no code exists	Local: city, county or group of counties 785-296-4195 www.kdheks.gov/nps/lepp	Prevent safety hazard for people, prevent water contamination, and minimize vector and nuisance problems. Must follow EPA regulations for septage. Federal statute, 503 regulations
Composting organic waste, except manure or dead animals	Permit required except for exemption	KDHE, Bureau of Waste Management	785-296-1600 www.kdheks.gov/waste	Personal composting of agricultural wastes on own property is exempt from permit requirement.
Domestic (onsite) wastewater system: septic systems or lagoon	Requires permit and usually inspection where there is a sanitary code.	Local sanitarian KDHE, Bureau of Water, Watershed Management Section	Local: city, county, or group of counties 785-296-4195 www.kdheks.gov/nps/lepp	Protection of public health and water quality, and prevention of nuisance hazards. Most counties have a sanitary code for regulation. KDHE Bulletin 4-2 gives minimum standards; use these standards in absence of a code.
Solid waste management, including household hazardous waste (HHW)	Dispose in a manner that does not create pollution	County health dept. KDHE Bureau of Waste Management	Local (county) 785-296-1600 www.kdheks.gov/waste	Recycling solid waste, including small amounts of household hazardous materials, is encouraged in Kansas. Most communities in Kansas have access to a HHW collection program.
Used and waste oil	Disposal and reuse is regulated.	KDHE, Bureau of Waste Management	785-296-1600 www.kdheks.gov/waste	Used oil contaminates land, water, and harm vegetation. Dumping on land is prohibited. A person's own oil may be re-used for energy on site in an oil burner for heat, or mixed with diesel and burned in engines. May be taken to oil collection facility for delivery to approved recyclers.
Waste tire storage or processing	Storage/processing requires permit. Disposal must be at a permitted facility.	KDHE, Bureau of Waste Management	785-296-1600 www.kdheks.gov/waste	Tires may be beneficially reused by KDWPT: for fish habitat; or on farms and ranches for weight, containment, etc.

Abbreviations used in this table: aka – also known as; COE – Army Corps of Engineers; CWA – Clean Water Act; DWR – Division of Water Resources; EPA – Environmental Protection Agency; FWS – U.S. Fish & Wildlife Service; KAHD – Kansas Animal Health Department; KCC – Kansas Corporation Commission; KDA – Kansas Department of Agriculture; KDEM – Kansas Division of Emergency Management; KDHE – Kansas Department of Health and Environment; KDWPT – Kansas Department of Wildlife, Parks and Tourism; USDA – United States Department of Agriculture; NRCS – Natural Resource Conservation Service;

Additional Resources listed by category:

1. Kansas Chemigation Safety Law Information and Requirements, <http://agriculture.ks.gov/docs/default-source/statutes-pesticide-fertilizer/chemsafety.pdf>

Hazardous Occupation Safety Training in Agriculture (HOSTA) Task Sheet 2.6, Housekeeping, MF-2671, 2.6; www.bookstore.ksre.ksu.edu/pubs/MF2671.pdf

KDA information on Pesticide and Fertilizer Program regulations; www.agriculture.ks.gov/divisions-programs/pesticide-fertilizer

Oil Spill Prevention, Control, and Countermeasures (SPCC Program): Farms and the Water Resources Reform and Development Act (WRRDA), fact sheet; www.epa.gov/sites/production/files/2015-06/documents/final_wrrda_fact_sheet_4-24-15.pdf

On-Farm Chemical Containment and Loading Facilities Checklist, MF-2443; www.bookstore.ksre.ksu.edu/pubs/MF2443.pdf

Pesticide Application Field Records, P-1102; www.bookstore.ksre.ksu.edu/pubs/p1102.pdf

Pesticide Application Training: General Manual, S-12; www.bookstore.ksre.ksu.edu/pubs/S12.pdf

Pesticide Management for Water Quality Protection in the Midwest, MF-2822; www.bookstore.ksre.ksu.edu/pubs/MF2822.pdf

Private Pesticide Applicator Manual, MF-531; www.bookstore.ksre.ksu.edu/pubs/mf531.pdf

2. Kansas Department of Agriculture, Division of Water Resources, Dam Safety Program site; <http://agriculture.ks.gov/divisions-programs/dwr/dam-safety/dam-safety-resources>

Kansas Emergency Planning and Community Right-to-Know Act, K.S.A. 65-5701 et seq.; www.kdheks.gov/asbestos/download/RTK_Statutes_KS.pdf

Working in Streams, Rivers, Lakes and Wetlands?, Kansas Department of Health and Environment Watershed Management Section, www.kdheks.gov/nps/downloads/StreamsRiversLakesWetlands.pdf

3. Kansas State Wildlife Action Plan, <http://ksoutdoors.com/Services/Kansas-SWAP>

Migratory Bird Treaty Act, U.S. Fish & Wildlife Service, www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php

Threatened and Endangered Species in Kansas, <http://ksoutdoors.com/Services/Threatened-and-Endangered-Wildlife>

4. Environmental Health Handbook, KDHE website, www.kdheks.gov/nps/lepp/EHH.html

Minimum Standards for Design and Construction of Onsite Wastewater Systems, MF 2214; www.bookstore.ksre.ksu.edu/pubs/MF2214.pdf

Onsite Wastewater Systems – Overview, MF-2831; www.bookstore.ksre.ksu.edu/pubs/MF2831.pdf

Plugging Abandoned Wells, MF-935; www.bookstore.ksre.ksu.edu/pubs/mf935.pdf

Plugging Cisterns, Cesspools, Septic Tanks, and Other Holes, MF-2246; www.bookstore.ksre.ksu.edu/pubs/MF2246.pdf

Selecting an Onsite Wastewater or Septic System, MF-2542; www.bookstore.ksre.ksu.edu/pubs/MF2542.pdf

5. Composting at Livestock Facilities, KDHE Bureau of Waste Management publication, www.kdheks.gov/waste/compost/compostingatlivestockfacilitiesinfosheet.pdf

Environmental Considerations for Composting Livestock Mortalities, MF2729; www.bookstore.ksre.ksu.edu/pubs/MF2729.pdf

Use of Biosolids on Agricultural Land: Agronomic, Environmental, and Safety Considerations, MF-2878; www.bookstore.ksre.ksu.edu/pubs/MF2878.pdf

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