ENVIRONMENTAL LAWS AFFECTING SOUTH DAKOTA AGRICULTURE

A Project of the

National Association of State Departments of Agriculture Research Foundation

through the

National Center for Agricultural Law Research and Information

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The Project Participants

National Association of State Departments of Agriculture Research Foundation

The National Association of State Departments of Agriculture (NASDA) is a nonprofit association of public officials representing the Commissioners, Secretaries, and Directors of Agriculture in the fifty states and four territories. The NASDA Research Foundation is a 501(c)(3) nonprofit, tax-exempt corporation for education and scientific purposes.

National Center for Agricultural Law Research and Information

The National Center for Agricultural Law Research and Information (the 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, the development of its 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 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 consult with their own attorneys, as well as federal, state, and local authorities responsible for the applicable environmental laws.

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The contents and use 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 Natural Resources Conservation Service or the United States Environmental Protection Agency.

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 makes 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 of 1997. Updates of the information contained in the guide will occur on an annual basis and be made 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.

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 *pp. 1-10*	Livestock and aquaculture operations, depending on size	NPDES and/or state general permit or surface water discharge permit	EPA Regional Office and South Dakota Department of Environmental and Natural Resources (DENR)
	Wetlands dredge and fill activity or dam, dike, or bridge building activities	Section 404 permit	US Army Corps of Engineers with EPA and DENR
	Water usage	Permit required for withdrawal for nondomestic uses or wells with greater than 18 gallons per minute daily average	South Dakota DENR
	Water well construction and use	Permit required for wells with greater than 18 g.p.m. daily average or nondomestic uses	South Dakota DENR
Groundwater *pp. 11-14*	Groundwater protection	Groundwater discharge permit required	South Dakota DENR
Air Quality *pp. 15-19*	Grain terminals and grain elevators	Permit required or operation under general permit program	EPA Regional Office or South Dakota DENR

Regulatory Area	Type of Activity	Permit Required	Agency
Air Quality *cont'd*	General agricultural operations including odor, dust, or flies	Permit required where concentration would be injurious or a nuisance	EPA Regional Office or South Dakota DENR
	Open Burning	No permit required outside the Black Hills Fire Protection District but subject to restrictions on material burned and location	EPA Regional Office or South Dakota DENR
	Open Burning in the Black Hills Fire Protection District	Permit required within the Black Hills Fire Protection District	South Dakota Department of Agriculture (DOA)
Solid Waste and Hazardous Waste *pp. 19-27*	Storage, treatment, or disposal of hazardous or solid waste	Permit required for disposal, treatment, or storage activities	EPA Regional Office and South Dakota DENR
	Public notice of hazardous waste	No permit	Local Emergency Planning Committee
Pesticides and Chemigation *pp. 28-34*	Application and use of pesticides	No permit, but a license may be required	EPA and South Dakota Department of Agriculture
	Use of pesticides around farm workers	No permit, but training and notification is required	South Dakota Department of Agriculture
	Record keeping	No permit, but all requirements must be met	South Dakota Department of Agriculture
Wildlife Protection *pp. 34-36*	Taking of wildlife	Permit required if endangered or threatened species may be affected; ordinary permit requirements apply to nonthreatened species	U.S. Fish and Wildlife Service, South Dakota Department of Agriculture, and South Dakota Department of Game, Fish, and Parks

Regulatory Area	Type of Activity	Permit Required	Agency
Waste Lagoons *pp. 48*	Storage of animal waste	No permit, but construction standards and NRCS requirements should be met	South Dakota DENR
Land Application of Waste *p. 48*	Land application of animal waste to cropland	No permit, but NRCS requirements should be followed	South Dakota DENR
Dead Animal Disposal *p. 50*	Disposal of animal carcasses	No permit, but regulations must be followed	South Dakota Animal Industry Board

ENVIRONMENTAL LAWS AFFECTING SOUTH DAKOTA AGRICULTURE

Producer Note: Agricultural producers are faced with many challenges in today's rapidly changing world. Changes in industrialization, use of computer-based technology, governmental involvement in market 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. Keeping informed is the producer's most useful instrument for meeting the challenges of today's agriculture. This information on environmental regulation is provided to inform producers of the breadth and scope of environmental laws which may impact daily production activities.

I. WATER QUALITY

A. Federal Clean Water Act

1. Overview

The Clean Water Act[1] (CWA) is an important federal environmental statute affecting agriculture. The law was originally enacted by Congress in 1972 and has been amended several times since. Its objective is to reduce or eliminate water pollution in the nation's rivers, streams, lakes, and coastal waters. A variety of mechanisms are employed by the CWA to control domestic, industrial, and agricultural pollution. Several types of agricultural activities and practices are regulated under the statute. Direct discharges from feedlots are an example. The U.S. Environmental Protection Agency (EPA) is charged with enforcing the CWA.

2. Water Quality Standards

The CWA requires each state to adopt water quality standards for most water bodies located within the state's borders. Rivers and streams are often divided into segments for this purpose. The water quality standards specify appropriate uses to be achieved and protected for each segment of water, such as public water supplies; protection and propagation of fish, shellfish, and wildlife; recreation in and on the water; agriculture uses such as irrigation or livestock watering; and navigation. Each state's water quality standards also include numerical or narrative criteria that are designed to protect these uses. The standards are then used to establish water quality based treatment controls and strategies to protect the water quality, including requirements for point sources that are placed in permits issued to those point sources. However, there are no federal laws or regulations that require the control of nonpoint sources to achieve water quality standards. In addition, as an anti-degradation policy, water quality standards may also prohibit new waste discharges into waters of exceptionally high quality.

[1] 33 U.S.C. § 1251 *et seq.* (1994).

3. NPDES Permits

Discharges of waste from point sources into navigable waters are regulated through a permit system known as the National Pollutant Discharge Elimination System (NPDES). Permits are issued either by EPA or by the state under a program approved by EPA. It is illegal to discharge waste from point sources into navigable waters without a permit or in violation of the terms of the permit. The CWA defines a point source as the following:

> The term "point source" means 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, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural storm water discharges and return flows from irrigation.

Navigable waters are defined by the CWA as "waters of the United States." This phrase has been interpreted broadly by EPA regulations and the courts to include most rivers, streams, lakes, and wetlands. Navigable waters do not have to be accessible by boats to meet the definition.

NPDES permits contain effluent limitations specifying the amounts of pollutants which may also be discharged. The permits contain other terms and conditions as well. Operational practices may also be specified. Monitoring, record keeping, and reporting requirements are usually included. If EPA is issuing the permit, a state certification that the permit complies with the CWA and state laws is required. In some cases, a permit may prohibit all discharges into water.

The permit issuance process normally involves the submission of an application, agency review of the application for completeness, a tentative permit decision by the agency, time for public comment or a hearing, and the final permit decision.

Producer Note: Many animal feeding operations and aquatic feeding operations are considered point sources and therefore require permits. If a pollutant discharge into waters of the U.S. occurs and the operation does not have a required permit, an owner or operator may be exposed to serious penalties. Producers may contact state and federal authorities to determine if a permit is required for a particular operation. Generally, an NPDES permit application will request information concerning activities occurring at the facility, including a description of the nature of the business. In addition, the name, address, telephone number, and ownership status of the operation will be required, along with a list of all other environmental permits or construction approvals which have been received or for which application has been made, a topographical map, and whether the facility is located on tribal land.

Concentrated animal feeding operations (CAFOs) are required to obtain an NPDES permit. A facility is a CAFO if it has more than 300 animal units and discharges directly into navigable waters, or if the operation has more than 1,000 animal units. A feeding operation does not need a permit, however, if it only discharges as a result of a 25-year, 24-hour storm event. An animal unit is defined as 1.0 unit per animal for slaughter and feeder cattle, 1.4 units per animal for mature dairy cattle, 0.4 unit per animal for swine, 0.1 unit per animal for sheep, and 2.0 units per animal for horses.[2]

Generally, 1,000 animal units is the equivalent of 1,000 slaughter and feeder cattle, 700 mature dairy cattle, 2,500 swine which are over 55 pounds, 500 horses, 10,000 sheep or lambs, 55,000 turkeys, 100,000 laying hens or broilers with continuous overflow watering, 30,000 laying hens or broilers with a liquid manure system, or 5,000 ducks. In addition, 300 animal units is the equivalent of 300 slaughter or feeder cattle, 200 mature dairy cattle, 750 swine over 55 pounds, 150 horses, 3,000 sheep or lambs, 16,500 turkeys, 30,000 laying hens or broilers with overflow watering, 9,000 laying hens or broilers with a liquid manure system, or 1,500 ducks.

Concentrated aquatic feeding operations require an NPDES permit if they produce more than 9,090 harvest weight kilograms per year of cold water fish or 45,454 harvest weight kilograms per year of warm water fish. Discharges into aquaculture projects also require a permit. An aquaculture project is a "defined managed water area which uses discharges of pollutants into that designated area for the maintenance or production of harvestable freshwater, estuarine, or marine plants or animals."

4. Wetlands

Producer Note: When agricultural operators conduct dredging and filling activities affecting water sources, these activities may require a permit. Careful attention in these activities is required as the lack of a required permit may expose the operator to serious penalties.

A separate permit, known as the section 404 permit,[3] is required by the CWA for discharges of dredge and fill materials into navigable waters. These permits are issued by the U.S. Army Corps of Engineers and are subject to review and approval by EPA and the state. The filling of wetlands and the construction of structures in streams, such as irrigation gates or docks, will often require a section 404 permit.

Although minor wetlands filling activities may be covered by a section 404 EPA General or Nationwide Permit, substantial dredging or filling will usually require an individual permit.

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[2] 40 C.F.R. § 122.23, app. B to Part 122 (1992).

[3] 33 U.S.C. § 1344 (1994).

Permits may be denied if the activity causes significant adverse effects on the water body or the surrounding environment and there are practical alternatives available.

There are 36 section 404 General or Nationwide Permits.[4] In addition, a General Permit for prior converted cropland has been proposed. The following agricultural activities are allowed under the permits:

- Fish and wildlife harvesting, enhancement, and attraction devices and activities (permit #4);
- Wetland restoration activities (permit #27);
- Cranberry production activities (permit #34);
- Emergency watershed protection and rehabilitation (permit #37); and
- Farm buildings (permit #40).

In addition, a number of permitted activities may relate to a farming operation, including maintenance, utility line backfill and bedding, bank stabilization, road crossing, return water from upland contained disposal areas, minor discharges, minor dredging, oil spill cleanup, headwaters and isolated waters discharges, temporary construction and access, and cleanup of hazardous and toxic waste. On December 13, 1996, the Army Corps of Engineers reissued the existing Nationwide Permits with some modifications and issued two new Nationwide Permits. The two new permits were for moist soil management for wildlife (permit #30), and maintenance of existing flood control facilities (permit #31). In addition, changes to headwaters and isolated waters discharges (permit #26) will cause an increase in review time for some activities and more clearly define the activities allowed under the permit.[5]

Producer Note: All producers are encouraged to check with state and federal environmental officials to determine if a specific farming activity will be covered by a section 404 General or Nationwide Permit, or if the activity needs an individual permit. Should the activity be covered by such a permit, a producer should obtain a copy of the permit for reference and guidance. Copies can be requested from the U.S. Army Corps of Engineers.

[4] 33 C.F.R. app. A to Part 330 (1996).

[5] 61 Fed. Reg. 65,874 (1996).

A permit may include either onsite or offsite mitigation requirements. Mitigation requirements include restoring altered wetlands and permanently protecting other wetlands from alteration.

Many normal farming, ranching, and logging practices, such as plowing, seeding, cultivating, minor drainage, and harvesting, are exempt from permit requirements under section 404(f) of the CWA if the activities are already occurring and will be ongoing and continuous.[6] However, a permit may still be required if major changes to the operation occur.

5. Nonpoint Source Pollution

Producer Note: Section 319 of the CWA was enacted in 1987 and guides the states in conducting nonpoint source assessments, developing nonpoint source management programs, and, as of 1990, beginning implementation of those programs. There are no federal regulatory requirements in Section 319.

Nonpoint source pollution is generally caused by runoff or snowmelt from cropland, pastures, barnyards, and impervious surfaces such as roads, parking lots, and roofs. The runoff may carry sediment, pesticides, herbicides, fertilizers, and other chemicals into adjacent waters, causing pollution. The CWA recognizes that cleaning up the nation's waters requires control of nonpoint as well as point source pollution, and regulation of nonpoint source pollution involves cooperative programs with the states.

The plan will generally provide for the development of best management practices (BMPs) as a means of controlling nonpoint sources of pollution. Cost sharing programs to help farmers implement BMPs in their operations are also authorized. To assist states implementing their approved programs, states have received a total of about $470 million in the years 1990-1996 to implement programs, including cost share for demonstration projects, technical assistance, education, training, and enforcement.

6. Oil Spill Liability

The CWA imposes strict liability on the operators of facilities that spill oil or other hazardous wastes into navigable waters. This would include spills from petroleum storage tanks located on farms. The CWA requires that the operator promptly notify EPA of any spill. A failure to give EPA notice of the spill is also a violation of the statute.

[6] 33 C.F.R. § 323.4 (1995).

7. Enforcement and Judicial Review

Persons who violate the regulatory requirements of the CWA face substantial penalties. These include both civil and criminal fines. Incarceration is possible for severe violations. EPA or the state can enjoin or stop producers' activities in order to force compliance with the statute. The CWA allows citizens to file suits to enforce CWA requirements in certain circumstances. However, if a producer disagrees with the way CWA requirements are applied to an operation, opportunities for both administrative and judicial review of EPA and state decisions are available.

Producer Note: In order for producers to maintain compliance with water quality legislation, they must be aware of state water quality standards, NPDES permit requirements, state and local nonpoint source pollution programs, wetlands permits, oil spill liability, and whether there are waters requiring special protection in the area. The states take active roles in ensuring that producers comply with these requirements.

B. State Water Quality Laws and Regulations

Most states have enacted clean water legislation. Many of these state statutes contain similar requirements to the CWA, but some impose more restrictive requirements than the federal law. The CWA authorizes EPA to delegate the NPDES permit program to individual states. However, where states have this responsibility, EPA requires enactment of statutes closely tracking the CWA. In these states, CWA enforcement requirements often come through state statutes and procedures, and states can also pass their own special state water quality legislation. State administrative agencies promulgate regulations to implement the state laws. These regulations usually contain provisions similar to those found in the parallel federal regulations, but there may be significant differences.

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

The South Dakota legislature has declared that the state's public policy regarding water pollution and beneficial uses is one of conservation of resources and protection and improvement of water quality. The state's policy also is not to allow discharges of untreated waste into the state's waters.[7]

The state, through the Department of Environmental and Natural Resources (DENR), assumed administration of the NPDES program of the federal CWA on December 30, 1993.

[7] S.D. CODIFIED LAWS ANN. § 34A-2-1 *et seq.* (1992 & Supp. 1996).

The state regulates discharges of pollutants into surface waters through surface water discharge (SWD) permits, and no person may discharge pollutants into surface waters without one.[8]

Producer Note: The state's jurisdiction over Indian Reservations for the purpose of this program has not yet been established, and it is expected that administration by EPA or its delegates will continue unless South Dakota jurisdiction is established. Those who are unsure concerning which agency has jurisdiction over their operations are advised to consult DENR, EPA, the Bureau of Indian Affairs, and tribal government authorities.

1. SWD Permit Programs

As a condition of issuance of an SWD permit, the state requires an operation to meet the effluent limits of the federal CWA and all state rules, if more stringent. The state may attach conditions to issuance of the permit and set out or revise a schedule for compliance with a permit, and the permit must clearly state any imposed limits relating to the discharges allowed. Point sources which are regulated under the program include, but are not limited to:

- Concentrated animal feeding operations;
- Concentrated aquatic animal production facilities;
- Discharges into aquacultural projects; and
- Silvicultural point sources.

Producer Note: Point sources which had previously obtained EPA authorization to operate under the federal NPDES program are considered as holding a state SWD permit.

2. Revocation, Suspension, or Modification

Any ground or surface water discharge permit issued may be revoked, suspended, or modified for cause, including violations, misrepresentation, less than full disclosure, or a change in conditions which requires a temporary or permanent reduction or halt in the discharge. Such grounds include substantial alterations to the facility, a request for a variance, noncompliance with permit conditions, a danger to human health or the environment, and a failure to disclose fully relevant facts on the permit application. If a permit is changed or a denial is recommended, a hearing must be held within thirty days on written request of the person affected.

[8] S.D. ADMIN. R. 74:03:17:02 (1993).

Producer Note: Since the circumstances that can trigger adverse certificate action may change rapidly, a good working relationship with concerned administrative agencies and their key people is useful.

3. Permit Violations

Those who violate permits may be subject to injunctions and misdemeanor criminal penalties, including jail time and fines of not more that $10,000 per day of violation. Permit violators are also liable for civil penalties not to exceed $10,000 per day of violation. Violators are also liable for the costs of cleaning up or repairing environmental damage caused by their permit violations. They may also have to pay the legal costs of enforcing the permit. The same penalties apply to those who make false statements or certifications, or who tamper with any monitoring equipment.

4. Public Access to Information

All data submitted to the state by an operation with a permit is available for public inspection, except if the information would reveal trade secrets or processes. In these cases, the information may be treated as confidential. Persons holding trade secrets may request confidentiality if they can show that records or information, except for effluent data, permit applications, or permits, would divulge that person's trade secrets. However, this information may be disclosed to other concerned state and federal agencies and their employees or in any relevant permit or judicial proceeding.

5. Concentrated Animal Feeding Operations

South Dakota defines an animal feeding operation as a lot or facility where animals are confined or fed 45 days or more in any 12-month period and where crops and vegetation are not sustained in the normal growing season over any portion of the facility.[9]

The state further defines a concentrated animal feeding operation (CAFO) as one which contains more than 1,000 slaughter or feeder cattle, 700 mature dairy cattle, 2,500 swine over 25 kg, 500 horses, 10,000 sheep or lambs, 55,000 turkeys, 100,000 hens or broilers if the facility has continuous overflow watering, 30,000 hens or broilers if the facility has a liquid manure handling system, or 5,000 ducks, or 1,000 animal units.

If pollutants are discharged into surface waters through a manmade device or they pass over, across, or through the facility or come in contact with the animals, facilities containing 300 slaughter or feeder cattle, 200 mature dairy cattle, 750 swine over 25 kg, 150 horses, 3,000 sheep or lambs, 16,500 turkeys, 30,000 hens or broilers if the facility has continuous overflow

[9] S.D. ADMIN R. 74:03:18:21 *et seq.* (1993).

watering, 9,000 hens or broilers if the facility has a liquid manure handling system, 1,500 ducks, or 300 animal units are considered CAFO's for the purposes of the SWD permit process.

An animal unit is determined by applying the following multipliers to the number of animals found on the facility: 1.0 x number of slaughter and feeder cattle, 1.4 x number of mature dairy cattle, 0.4 x number of swine over 25 kg, 0.1 x number of sheep, and 2.0 x number of horses.

DENR may also designate a facility as a CAFO if it determines that the facility is a significant contributor to water pollution. In making that determination, DENR considers the facility's size, location, animal waste conveyance, wastewater processing methods, slope, vegetation, rainfall, and other factors which could affect the likelihood or frequency of discharges into the state's waters.

Producer Note: Before a small feeding operation is required to apply for a permit, an on-site inspection must be conducted to determine whether the operation should be regulated. In addition, two or more CAFOs under common ownership are considered a single unit for permit purposes if they utilize a common waste handling system.

6. General Permit Programs

A general permit may be issued for a readily identifiable class of similar operations, subject to terms and conditions that are necessary to protect adequately public health, safety, welfare, and the environment. Examples of facilities which can operate under a general permit are stormwater point sources, CAFO's, and categories of similar operations that require the same type of monitoring and which are most appropriately dealt with under general permit rules.

However, an individual permit may still be required if the discharge is a significant contributor to water pollution, or if it is a health hazard, if the discharger is not in compliance with the general permit, if effluent guidelines are set for facilities operating under a general permit, or if a water quality management plan containing requirements applicable to such point sources is approved.

7. Exclusions

DENR does not require SWD permits for the following agriculturally-related discharges:

- Return flows from irrigated agriculture; and
- Pollutants from nonpoint source agricultural activities, including runoff from orchards, crops, pastures, rangeland, and forest land.

8. Nonpoint Sources of Pollution

Even if an operator is not required to obtain an SWD permit, the state's permit process for discharges of waste into groundwater imposes a permit requirement on nonpoint sources which is administered through DENR. In addition, DENR approval of plans and specifications is required for all operations involving:

- Installation, extension, additions to, or operation of any waste disposal system or part of a waste disposal system;
- A change in volume or strength of the discharge over an existing limit;
- Construction, installation, operation, or modification of any waste discharge apparatus which would increase discharge of waste or would illegally alter the physical, chemical, or biological properties of groundwater into which it discharges; and
- Construction or use of a new outlet for discharge into the state's water.

Producer Note: Since South Dakota's program of water quality regulation is comprehensive in nature, producers should determine their potential need for permits before undertaking construction or modifications that could substantially change their operations.

9. South Dakota Wetlands Law

South Dakota law defines a wetland as "an area inundated or saturated by surface or groundwater and on which a prevalence of vegetation typically adapted for life in saturated soils exists."[10] As a result, wetlands are waters of the state. Discharges of pollutants from any source into a wetland, including fill, are prohibited except when permitted under §404 of the federal Clean Water Act. (See page SD-3) No solid waste facilities are permitted to be established in defined wetlands.

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

[10] S.D. ADMIN. R. 12:56:01:01 (1991).

II. GROUNDWATER

A. Federal Groundwater Laws and Regulations

1. Safe Drinking Water Act

The objectives of the Safe Drinking Water Act[11] (SDWA) are:

- The protection of public health by establishing safe limits, based upon the quality of tap water, for contaminants that may have an adverse effect on human health; and

- The prevention of surface and ground drinking water source contamination.

The 1996 amendments to the SDWA[12] give EPA authority to target contaminants for regulation which could pose the greatest threat to public health. These new amendments also provide additional sources of financial assistance for public water systems.

The amendments create a voluntary source water protection program, which may include whole farm/ranch or voluntary agricultural resource management plans, to prevent contaminants from entering drinking water in the first place.

Other new provisions include:

- Flexibility in monitoring of contaminants;

- Compliance exemptions for small water systems; and

- Programs which enable water systems to more fully comply with the law through "capacity development."

Under the new amendments, EPA is required to establish a program for monitoring unregulated contaminants and must use risk assessment and cost-benefit analysis in setting new standards for contaminants. In addition, states are now required to identify areas that provide source water for drinking water systems and must conduct vulnerability assessments for high priority areas.

Finally, the new amendments include right-to-know provisions which require that when an SDWA violation presents a threat to public health, the public must be notified of the

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[11] 42 U.S.C. § 300g-1 *et seq.* (1996).

[12] Safe Drinking Water Act Amendments of 1996, P.L. 104-182.

contaminants present in tap water within 24 hours. The law also requires standards for high-priority microbial contaminants and disinfection by-products.

Under regulations which implemented the prior SDWA, states could establish a Comprehensive State Ground Water Protection Program (CSGWPP) to protect underground sources of drinking water. Under these programs, states could require the use of BMPs. In such cases, agricultural operations were required to meet drinking water regulations only if the operation served piped water to an average of 25 people or had more than 15 service connections for more than 59 days per year. This regulation primarily affected those with drinking water wells or operations which provided drinking water to contract labor. Farms were required to sample for microbiological and nitrate problems based on schedules established by either the state or the appropriate EPA regional office.

Producer Note: Under the Comprehensive State Groundwater Protection Program, each state must establish goals to guide all relevant groundwater protection programs in the state; prioritize water resources; identify sources of contamination and needs to achieve protection of the resource; define all authorities, roles, responsibilities, and resources within the state; coordinate information collection and management; and improve public information and education.

Also under prior law and regulations, farmers with Class V agricultural drainage wells were required to furnish inventory information concerning the wells to appropriate state agencies. In addition, states could require individual well permits. Class V agricultural drainage wells included:

- Air conditioning return flow wells;
- Cesspools receiving wastes with open bottoms and perforated sides;
- Cooling water return flow wells used to inject water used for cooling;
- Drainage wells primarily used to drain storm runoff;
- Dry wells used for waste injection;
- Recharge wells used to replenish aquifers;
- Salt water intrusion barrier wells;
- Sand backfill, other backfill wells, and injection wells used primarily in mining areas;

- Septic system wells used to inject waste or effluent from multiple dwelling or business septic tanks; and

- Subsidence control wells.[13]

In addition, farmers were not allowed under former regulations to inject contaminants into an underground source of drinking water which used a well if the contaminant could cause a violation of any primary drinking water regulation or if the activity would adversely affect the public health.

Producer Note: The extent to which former requirements will be affected by the 1996 SDWA amendments will be fully realized when regulations implementing the amendments are adopted by EPA. Until that time, farmers must closely monitor and maintain all previously required activity and to consult frequently with their state environmental departments to determine whether changes in an activity may be required by any new regulations.

2. State Groundwater Management Plans

South Dakota law mandates the development of state management plans for pesticides and fertilizers.[14] The Department of Agriculture continues to work towards the development of these plans in cooperation with state and federal agencies and other interested parties.

Producer Note: EPA has published a proposed regulation[15] which would require states to develop groundwater management plans in order to allow the continued use of five chemicals--alachlor, atrazine, cyanazine, simazine, and metolachlor. The rule is not expected to be effective until the fall of 1997. Producers should contact the state Department of Agriculture for effective dates.

[13] 40 C.F.R. § 146.5 (1995).

[14] S.D. CODIFIED LAWS ANN. § 34A-2-109. (1992 & Supp. 1996).

[15] 61 FED. REG. 33260.

B. State Groundwater Laws and Regulations

1. Groundwater Quality

South Dakota's drinking water standards are not more stringent than those of the SDWA, and South Dakota provides a variance procedure and an exemption procedure from state water quality standards for public water supplies.[16]

If the water source cannot meet the maximum contaminant level (MCL) with application of the best treatment technology reasonably available, and the water contaminant is not an unreasonable health risk, a variance from the MCL standard is authorized if the owner of the water supply agrees within one year to implement a schedule for compliance with drinking water standards.

The state also operates a program which prohibits discharges of pollutants into groundwater without a permit.[17] A permit may be granted if the discharge can meet the level of all relevant federal and state water standards. Groundwater discharge permits are valid for not more than five years.

2. Construction Standards for Wells

Water wells must be constructed so as to prevent waste and underground leakage, and must be constructed by a licensed driller. The owner of an abandoned well must plug and cap the well so as to prevent leakage. The owner of the land on which such a well is located is deemed to be the owner of that well. If an owner drills a new well and has no intention of using the older well it replaces, the old well must be plugged within thirty (30) days. Any well in use must be sealed or capped at the surface. The chief engineer may enter property and order an improperly maintained well plugged or controlled if it poses a palpable danger to health or property. Water mining or withdrawal of water beyond the recharge rate is prohibited in some aquifers.

Producer Note: Farmers and agricultural operators must consider the existence of abandoned wells, waste disposal wells, and drainage wells on their land as potential sources of environmental liability since they represent potential sources of unregulated discharges of pollutants into groundwater and they violate the construction standards provisions of the water code. In addition, groundwater contamination has been held to be a nuisance by South Dakota courts.

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[16] S.D. CODIFIED LAWS ANN. § 34A-3A-1 *et seq.* (1992 & Supp. 1996).

[17] S.D. CODIFIED LAWS ANN. § 34A-2-36.1 (1992).

State and federal jurisdiction exists over underground waste disposal injection wells, depending on their classification and based on the type of fluid injected. These classifications are:

- Class I Wells--Those used by disposers of hazardous waste under RCRA, and other industrial and municipal users;
- Class II Wells--Used to reinject waste water produced in petroleum and gas extraction;
- Class III Wells--Used by the mining and power industries, particularly in solution mining of uranium;
- Class IV Wells--Used for underground injection of radioactive or hazardous waste above or into a formation within 1/4 mile of an underground water drinking source; and
- Class V Wells--Cesspools and multidwelling septic systems, drainage wells, and assorted other categories of underground injection wells.

An area of great concern for agriculture is the Class V drainage well, since such wells are considered groundwater discharge points. These wells are regulated under the South Dakota DENR groundwater discharge permit process, which requires that any discharge of material which may enter the state's groundwater must occur under a permit.

Producer Note: The Class V drainage well is of importance to producers who may provide multifamily waste disposal service for the homes of transient laborers and their families.

III. AIR QUALITY

A. Federal Clean Air Act

The Clean Air Act (CAA)[18] is a comprehensive and complex piece of environmental legislation. The 1990 amendments to the CAA require sources which may cause pollution to obtain operating permits. These permits include a comprehensive statement of the pollution source's CAA obligations regarding emission limits, fee requirements, inspection, monitoring, and reporting duties. Violators are exposed to administrative compliance orders and federal court injunctions.

[18] 42 U.S.C. § 7401 *et seq.* (1994).

Under the 1990 CAA amendments, all criminal penalties are felonies. Fines of up to $250,000 per day may be imposed on individuals and up to $500,000 per day for corporations. Prison terms of up to five years may be imposed. Subsequent violations may result in the doubling of sanctions. Knowing endangerment offenses for the release of hazardous air pollutants may subject individuals to fines of up to $250,000 with jail sentences of up to 15 years, and corporations may be fined up to $1,000,000.

Negligently releasing hazardous air pollutants can subject the polluter to fines of up to $250,000 and one year in jail if the polluter knows that the actions will place another person in imminent danger of death or serious bodily injury. Making false statements on reports or tampering with monitoring devices may result in fines up to $250,000 per day and jail terms of up to two years.

In April of 1994, EPA announced a reward program for citizens who report companies that violate the CAA. Rewards of up to $10,000 may be awarded to citizens whose information results in a criminal conviction or fine under the CAA.

The overall objective of the CAA is to protect human health, welfare, and the environment by maintaining and improving the quality of the air through the development of standards. Standards controlling ambient air emissions from farming practices like prescribed burning are geographically specific within each State Implementation Plan (SIP). The SIP may also provide visibility standards. Locations which the National Ambient Air Quality Standards designate as air non-attainment areas are subject to more restrictions.

Finally, grain terminal elevators having a permanent storage capacity of more than 2.5 million bushels and grain storage elevators with a permanent storage capacity of more than one million bushels, including their loading and unloading facilities, are governed by regulations controlling discharge of gases and grain loading and unloading emissions.

Currently, the CAA has no application to the problem of odor, which is a common complaint regarding agricultural facilities. Odor problems are handled under state nuisance laws. However, livestock producers must stay informed of changes in the CAA which might affect them in the future. For example, regulations have been proposed which would prohibit dust from remaining in the air beyond the property on which it originates. A strict interpretation of this regulation could subject combining, disking, or other farm and ranch operations to the provisions of the CAA.

Producer Note: While most agricultural operations are not air pollution sources under the CAA, complaints concerning odor and dust resulting from agricultural operations may be made. These complaints normally come in the form of actions filed under state law against an agricultural producer for nuisance.

B. State Air Quality Laws and Regulations

1. Air Pollution Statutory Provisions

Through DENR, South Dakota administers the provisions of the federal Clean Air Act.[19] Air pollution regulations are also promulgated by the Board of Minerals and Environment (BME).

The state defines air contaminants as dust, fumes, mist, smoke or other particulate matter, vapor, gas, odorous substances, radioactive materials, and combinations of those materials. Air pollution is the presence in the atmosphere of air contaminants at concentrations which tend to be injurious to human health or welfare, animals or plant life, or constitute a common law nuisance.

Air pollution control programs may be administered by local or county authorities if authorized by BME. The board may, however, find that control of contaminants is beyond the ability of the local authority. For this reason, persons who may be required to obtain permits to conduct activities which are potential sources of air pollution are advised to consult BME, DENR, or local authorities to determine the source of air pollution enforcement authority in their area.

Producer Note: Currently there is no agricultural exemption in the South Dakota air pollution regulatory plan, although hardship variances and operation under the general permit system are allowed.

2. Permits and Violations

The state may require a permit for any use of equipment capable of causing or contributing to air pollution or of air pollution control equipment. All persons who are subject to state air pollution regulation who violate permits or operate without them are subject to civil penalties and misdemeanor criminal penalties. Persons who knowingly violate any requirement or permit condition or who disable or make inaccurate any piece of monitoring equipment are subject to additional misdemeanor criminal penalties and fines of up to $10,000 per violation per day.

A permit applicant must submit in the application:[20]

- General information concerning the firm and its ownership;

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[19] S.D. CODIFIED LAWS ANN. § 34A-1-1 *et seq.* (1992 & Supp. 1996).

[20] S.D. ADMIN. R. 74:36:04:01 *et seq.* (1993).

- A description of the plant and the processes used;
- Fuels used, quantities used, and raw materials used in the processes;
- A description of the air pollution equipment in use;
- A plan of abatement; and
- Any other information required, including air dispersion modeling, stack performance testing, and copies of plans and specifications for any equipment or other facilities used in controlling emissions.

Despite a permit, if DENR determines that a source is causing air pollution that poses imminent danger to human health and safety and which requires immediate action, DENR may order cessation of air emissions by way of an emergency order. Those who violate permits may be ordered to implement corrective action plans. Failure to take corrective action subjects violators to civil penalties of up to $10,000 per day or damages to the environment, or both.

3. General Permits

General permits may be issued for certain classes of industries or facilities which are classified as minor sources of air contaminants. Minor source examples are a rock crusher, ready mix concrete plant, or grain elevator which emits less than 100 tons per year of air contaminants and does not emit defined toxic or hazardous substances. These operations do not require individual permits if they operate under a general permit and are not subject to regulation because they do not use toxic or hazardous compounds. The general permit may not be stricter than the federal requirement.

A minor source facility may be required to obtain an individual permit if the operation cannot comply with the general permit, if it is significantly different from the industry standard, if it is causing or has caused a threat to public health or safety, or if a change has occurred in the availability of demonstrated technology for that activity. In addition, violations of the general permit may be cause for requiring an individual permit for the facility.

Producer Note: Facilities of the type for which a general permit has been established should carefully examine their inventory of compounds, particularly fumigants and other similar substances, and the manner in which they use them to determine their potential ability to operate under a general permit, as well as their potential liability under other environmental statutes.

4. Variances

Anyone who owns or operates a stationary source of air contaminants may apply for a variance with regard to the quality, extent, or nature of the emission at issue, but no variance is allowed for facilities subject to the federal Clean Air Act. DENR will consider preexisting uses, the interests of the parties, any hardship which strict compliance may cause, availability and cost of pollution abatement methods, compliance schedules, and the potential effect a variance will have on human health and safety. A variance is limited to three years' duration in the case of hardship, and variances may be renewed.

5. Open Burning

Negligent open burning is a misdemeanor, as well as burning wood, marsh, prairie, grass, or stubble without a firebreak and without giving due caution to weather conditions.[21] The offender is liable for the costs of extinguishing these fires. Special open fire permits are also required in the Black Hills forest fire prevention district. In addition, municipalities may prohibit open burning altogether.

Waste oil, tires, tar paper, shingles, or treated railroad ties may not be burned in the open. Agricultural wastes, silvicultural wastes, trees, untreated wood and storm debris may be burned. Agricultural crop burning and burning of vegetation generated by land clearing activities is permissible on-site. However, lessees on state lands may not burn hay, straw, stubble, or stover, and may forfeit their leases or be assessed for damages they cause.[22] In addition, in rural areas where no regular collection or disposal of refuse is available, landowners may burn debris in containers with some restrictions, if it is done on the owner's property. Open burning of pesticide containers is allowed in certain situations subject to rules and limitations imposed by DENR.

Producer Note: It is advisable for farmers to consult with local authorities prior to commencing burning operations. Farmers should consult with DENR prior to burning pesticide containers.

IV. SOLID WASTE AND HAZARDOUS WASTE

Producer Note: There are several laws which control the use and disposal, as well as the cleanup, of hazardous wastes. Producers who use hazardous chemicals or use petroleum or other products stored in storage tanks must be aware of the requirements governing their actions.

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[21] S.D. CODIFIED LAWS ANN. § 34-35-9 *et seq.* (1994).

[22] S.D. CODIFIED LAWS ANN. § 5-5-19 (1994).

A. Federal Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act[23] (RCRA) controls the treatment, storage, and disposal of hazardous waste as well as the disposal of municipal solid waste. RCRA also regulates the storage of petroleum and other products in underground storage tanks.

RCRA could have the following impacts on farmers:

- Disposal of hazardous waste on a farm could subject farmers to significant responsibility including closure and post-closure care;
- Recalled pesticides intended for disposal may be subject to manifest and transportation requirements; and
- Offsite disposal of hazardous waste could subject farmers to hazardous waste generator requirements.

1. Disposal

Farmers disposing of their own used waste pesticides which are hazardous wastes are exempted from hazardous waste requirements, so long as the emptied containers are triple-rinsed in accordance with the labeling and the pesticide residue is disposed of on the farm in a manner consistent with the disposal instructions on the pesticide label. However, if the chemical is defined as a RCRA waste, the triple-rinsate must be disposed of at an approved hazardous waste site.

Farmers can dispose of non-hazardous agricultural wastes on their own property, unless the disposal is prohibited by other state or local laws. This includes manure and crop residues returned to the soil as fertilizers or soil conditioners and solid or dissolved materials in irrigation return flows.

2. Underground Storage Tanks

Underground storage tanks[24] (USTs) and their associated piping holding less than 1,100 gallons of motor fuel for non-commercial purposes, tanks holding heating oil used on the premises, and septic tanks are excluded from RCRA regulations. All new regulated USTs are required to meet standards related to construction, monitoring, operating, reporting to state or federal regulatory agencies, owner record keeping, and financial responsibility.

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[23] 42 U.S.C. § 6901 *et seq.* (1994).

[24] 42 U.S.C. § 6991 *et seq.* (1994).

3. Used Oil

Farmers who generate an average of 25 gallons or less per month of used oil from vehicles or machinery per calendar year are exempt from regulations. Farmers exceeding 25 gallons are required to store the used oil in tanks meeting underground or aboveground technical requirements and use waste transporters with EPA authorization numbers for removal of the waste from the farm. Storage in unlined surface impoundments which are wider than they are deep is banned.

4. Farming

For food chain crops, farming can occur on land where hazardous chemicals are applied so long as the farmer receives a permit from EPA. The farmer must demonstrate that no substantial risk to human health is caused by the growth of crops in that manner.

5. Penalties

RCRA criminalizes a variety of knowing violations in the transportation of waste to unpermitted facilities, or transporting, treating, storing, or disposing of waste without a permit. In addition, making false statements or knowingly omitting material information in applications, manifests, or reports constitutes criminal conduct. Fines can be as high as $50,000 per day of violation and imprisonment may be from two to five years, depending on the violation. Subsequent convictions result in a doubling of penalties. Any person who knowingly violates the law and subjects another person to imminent danger of death or serious injury may be fined up to $250,000 and imprisoned up to 15 years. A corporation found guilty of knowing endangerment is subject to a fine of up to $1,000,000.

B. Federal Comprehensive Environmental Response, Compensation and Liability Act

The Comprehensive Environmental Response, Compensation and Liability Act[25] (CERCLA) was passed to rectify perceived inadequacies of earlier environmental legislation, especially RCRA. RCRA was deemed inadequate to address past hazardous waste disposal sites.

The federal government is authorized under CERCLA to conduct cleanup operations with funds from the "Superfund." The government may then seek to recover the costs of cleanup from "potentially responsible parties" (PRP). The government is also authorized to issue cleanup directives or seek injunctive relief ordering PRP to conduct responsive actions to abate an "immediate and substantial endangerment to public health or the environment." In addition, private parties are authorized to seek reimbursement from the "Superfund" or they may file cost recovery actions against PRP.

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[25] 42 U.S.C. § 9601 *et seq.* (1994).

CERCLA and the courts have broadly defined the term persons to include individuals, corporations, and other corporate actors, such as corporate officers, as well as other types of business entities.

Under CERCLA, criminal penalties may be levied for failing to report releases, knowingly reporting false or misleading information, or knowingly destroying or falsifying records. Fines may be as high as $250,000 for individuals and $500,000 for corporations. Violators may be incarcerated for up to three years for a first conviction and up to five years for subsequent convictions. An individual who provides information leading to the arrest and conviction of a person failing to report a release can receive up to $10,000 as a reward.

C. Federal Toxic Substances Control Act

The Toxic Substances Control Act[26] (TSCA) allows EPA to regulate new commercial chemicals prior to sale on the market and to regulate the distribution and use of existing chemicals when they pose an unreasonable risk to human health or to the environment. TSCA also prohibits the use of polychlorinated biphenyl (PCB) transformers in areas that could affect food or feed. An exposure risk to food or feed is caused if PCBs are released in any way from the item and the releases have a potential pathway to human food or animal feed. EPA considers human food or animal feed to include items regulated by USDA or the Food and Drug Administration (FDA) as human food or animal feed, including direct additives. Food or feed stored in private homes is excluded.

D. Federal Emergency Planning & Community Right to Know Act

The objective of the Emergency Planning & Community Right to Know Act[27] (EPCRA) is to: (1) allow state and local planning for chemical emergencies; (2) allow for emergency release notification; and (3) allow for toxic and hazardous chemical right to know.

The EPCRA requires businesses which store chemicals subject to the Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard to submit information or a list of those chemicals to state and local authorities. Submittal of this information will facilitate emergency planning and response. Annual reporting to state and local authorities is required for businesses which have those chemicals present at the facility in amounts above a certain threshold. However, hazardous chemicals used in routine agricultural operations or fertilizers held for resale by a retailer are excluded from EPCRA.

In addition, farms storing and using hazardous chemicals for routine agricultural operations do not have to meet the requirements for reporting under EPCRA. However, farms

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[26] 15 U.S.C. § 2601 *et seq.* (1994).

[27] 42 U.S.C. § 11001 *et seq.* (1994).

storing any amount of an "extremely hazardous substance" above specified thresholds must notify state and local emergency planning committees.

Businesses which produce, store, or use "extremely hazardous substances" or CERCLA hazardous chemicals must report any non-permitted releases of a listed chemical above threshold amounts to federal, state, and local authorities. Releases could occur into the atmosphere, surface water, or groundwater.

Producer Note: Farmers should work with their Local Emergency Planning Committee (LEPC) to ensure that the LEPC has sufficient information to respond should a local emergency occur. Excluded from the emergency planning requirements are activities involving the proper application of Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) regulated pesticide products as well as the handling and storage of these pesticide products by an agricultural producer.

E. Occupational Safety and Health Administration

Producer Note: State OSHA or Labor Department officials can assist the operator in fully understanding worker training and safety requirements, particularly in the area of exposure to hazardous chemicals.

The Occupational Safety and Health Administration (OSHA) has regulations which include training requirements to protect workers from hazardous chemicals. Employers must comply with the regulations. The regulations cover workers involved in cleanup responses under CERCLA and RCRA.

OSHA has over 100 standards which include some training requirements. OSHA has also promulgated a right-to-know law for employees exposed to hazardous chemicals, and many states have similar laws. RCRA regulations require treatment, storage, and disposal facility personnel to have expertise in their areas of assignment.

F. State Solid Waste and Hazardous Waste Laws and Regulations

1. Solid Waste

South Dakota defines solid waste as any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility, and other discarded materials, including solid, liquid, semisolid, or contained gaseous material, resulting from industrial, commercial, and agricultural operations. The definition does not include defined hazardous waste, solid, or dissolved sewage materials, dissolved material in return irrigation flows, discharges from point sources subject to water pollution laws or nuclear material regulated by the Atomic Energy Act.

All persons who intend to dispose of solid waste are required to comply with the state's solid waste statutes.[28]

No person may operate a solid waste disposal site without a permit. Permit requirements for solid waste facilities may include requirements for financial security and other operating standards. The owner or operator of the facility is responsible in perpetuity for the waste and any detrimental effect or pollution caused by it, as are any governmental units which have exported solid waste to South Dakota. Additionally, owners and operators of solid waste disposal facilities are required to monitor groundwater unless it is affirmatively shown that groundwater deterioration will not result.

Persons who knowingly or intentionally operate a solid waste facility without a permit are guilty of felonies as well as being subject to a civil action. Those who operate in violation of permits or make false statements and misrepresentations in the permit process are guilty of serious misdemeanors. Illegal disposal of solid waste in any quantity is an offense. Disposal of more than ten pounds of waste is considered illegal dumping, which in some cases is a felony.

Producer Note: Farmers who generate solid waste from normal farming and domestic activities may dispose of it on their land as long as the disposal is not a nuisance, a danger to public health, and does not otherwise violate state or federal water pollution law.

General permits may be issued to cover specific categories of solid waste handling facilities. Facilities operating under general permits must dispose of the same or substantially similar materials, be of similar design, operate under similar operating conditions, and require similar monitoring. Examples of facilities which may be issued general permits are land applicators of petroleum contaminated soils, land applicators of whey, demolition and rubble disposal, waste tire handlers, and sludge disposal facilities.[29]

2. Hazardous Waste Management

No hazardous waste treatment, storage, or disposal facility may be owned, built, operated, or modified without a permit.[30]

Discharges of a wide variety of substances are classified as regulated substance discharges, and these include federally defined hazardous and toxic substances, pesticides, fertilizers, and petroleum and petroleum products, including waste oil.[31]

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[28] S.D. CODIFIED LAWS ANN. § 34A-6-1.1 *et seq.* (1992 & Supp. 1996).

[29] S.D. ADMIN R. 74:27:10:01 (1993).

[30] S.D. CODIFIED LAWS ANN. § 34A-11-1 (1992 & Supp. 1996).

[31] S.D. CODIFIED LAWS ANN. § 34A-12-1 *et seq.* (1992 & Supp. 1996).

Regulated substance discharges cannot occur without a permit. Anyone discharging a regulated substance must report it immediately, and be held strictly liable for the costs of corrective action. Corrective costs function as a lien on property. If the discharger is not identifiable, the owner or operator of the property may be designated as a responsible party for the purposes of corrective action.

The pesticide rules, in conjunction with Sough Dakota environmental laws and rules, dictate the proper disposal of pesticide wastes. Properly prepared containers may be buried within the limitations provided in the rules. The DOA offers a free program for the disposal of unusable pesticides. The DOA oversees the land application of pesticide and fertilizer contaminated materials for this intended purpose. (See page SD-35).

Producer Note: No small scale or farmer exemption to regulated substance discharge requirements exists.

3. Underground Storage Tanks

For the most part, South Dakota has chosen to implement its underground storage tank (UST) program through a series of administrative rules.

Producer Note: Underground storage tank rules do not apply to motor fuel tanks of less than 1,100 gallons capacity or to home heating oil tanks. Producers should carefully inventory their underground tanks for possible regulatory problems.

In South Dakota, any tank or combination of tanks and pipes containing regulated substances which is more than 10 percent below ground is considered an underground tank. This does not include farm and residential motor vehicle fuel tanks containing less than 1,100 gallons for noncommercial purposes, or tanks containing residential heating oil, surface lagoons, wastewater collection systems, or septic tanks.[32] In addition, tanks which contain used oil, sumps, and those tanks containing a minimal amount of a regulated substance are exempt from the rules controlling USTs, as are tanks of less than 1,110 gallons capacity.[33]

[32] S.D. CODIFIED LAWS ANN. § 34A-2-98 (1992 & Supp. 1996).

[33] S.D. ADMIN. R. 74:03:29:01 (1989).

Producer Note: All new USTs and associated subsurface plumbing are required to be of fiberglass reinforced plastic, cathodically protected steel, or steel and fiberglass reinforced composite. Tank installations must comply with nationally recognized standards for construction. Existing USTs must be upgraded to comply with spill and overfill standards for new tanks, release detection systems must be implemented, and cathodic protection or an internal liner must be installed.

Owners of all USTs must notify DENR of the existence and location of the UST and also notify the local authorities, unless the tank is known to have been removed. Installations of USTs require the filing of plans and specifications with DENR and any designated local notification agency prior to the start of installation. Designated local notification agencies are local subdivisions designated by the Governor to carry out any provisions of UST statutes or rules.

All operators and owners must report spills, overfills, and other releases of regulated substances from their tanks unless the spill is less than 25 gallons of petroleum, in which case it must be cleaned up within 24 hours or reported. If a release is suspected, the owner must investigate and take immediate corrective action, which can include removal of the tank contents, reporting the corrective action taken, removal of contaminated soil, and submission of data to DENR which substantiates the taking of corrective action.

If a tank is taken out of service for more than three but less than 12 months, continued monitoring is required, and the owner must cap and secure all equipment other than vents. If the tank is removed from service for more than 12 months, it must be permanently closed. If the tank was closed after 1987, it must be removed or filled with an inert solid.

4. Emergency Planning and Management

The state Emergency Response Commission (ERC) assists local emergency planning commissions by reviewing their response plans for dealing with the release of extremely hazardous, hazardous, and toxic chemicals.[34] ERC functions include:

- Determining the threat from release of dangerous substances and the local ability to respond;
- Preparation of action recommendations; and
- Evaluation of options and preparation of funding recommendations.

[34] S.D. CODIFIED LAWS ANN. § 1-50-1 *et seq.* (1992 & Supp. 1996).

In addition, some agencies, such as DENR, the Department of Agriculture, Soil Conservation Districts, and the Animal Industry Board have the power to issue emergency orders and take necessary actions to address other environmental emergencies. Among these are:

- Orders to abate air pollution;[35]
- Emergency soil erosion control orders;[36]
- Livestock quarantine orders;[37]
- Plant quarantine and pest control orders; and[38]
- Orders to abate water pollution.[39]

5. Infectious Waste

Producer Note: Producers need to be aware of and comply with regulated medical waste disposal rules that apply to their livestock health programs.

Infectious waste includes medical waste containing disposable equipment, instruments, or substances that carry harmful organisms.[40] Also, the state treats used sharps, vials, pipettes, needles, tubing and syringes as regulated medical waste. These definitions include materials used in the care and treatment of livestock. Animal carcasses or parts resulting from the treatment of disease are not included in the definition of infectious waste. Persons who knowingly or recklessly cause the release of infectious waste are guilty of felonies, and those who negligently cause the release of infectious waste are guilty of misdemeanors. Substantial fines and penalties may be imposed.

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[35] S.D. CODIFIED LAWS ANN. § 34A-1-45 (1992).

[36] S.D. CODIFIED LAWS ANN. § 38-8A-24 (1996).

[37] S.D. CODIFIED LAWS ANN. § 40-5-11 (1991).

[38] S.D. CODIFIED LAWS ANN. § 38-24A-9.1 (1996).

[39] S.D. CODIFIED LAWS ANN. § 34A-2-68 (1992).

[40] S.D. CODIFIED LAWS ANN. § 34A-6-93 (1992 & Supp. 1996).

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 those who use pesticides. In addition, if a producer employs agricultural workers there are regulations which address safety concerns about pesticide use by or around those workers.

A. Federal Insecticide, Fungicide, and Rodenticide Act

The EPA also administers the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA),[41] the major federal statute governing pesticide use. FIFRA establishes minimum national standards for the use of pesticides, and regulates the registration, production, and sale of pesticides.

FIFRA grants primary, but not exclusive, enforcement responsibility for pesticide use to the states. States retain the authority to regulate the sale or use of any federally-registered pesticide or device in the state, but only if state regulations do not permit sale or use of pesticides prohibited under FIFRA. States may not impose any requirements for pesticide labeling or packaging in addition to or different from those required under FIFRA.

1. Use of Pesticides

FIFRA provides that it is unlawful for any person to use a registered pesticide in a manner inconsistent with its labeling. Based on the pesticide's toxicity or the degree of adverse effects on humans and the environment, EPA divides pesticides into two broad groups, either unclassified (general use) or restricted use pesticides.[42]

Pesticides for unclassified or general use may be purchased and used by any person in a manner consistent with the pesticide's label. Restricted use pesticides may be applied only by or under the direct supervision of a certified applicator. Note that "under the direct supervision of a certified applicator" means that the pesticide is applied by a competent person acting under the instructions and control of a certified applicator who is available if and when needed. This means that the certified applicator need not be physically present at the time and place the pesticide is applied, unless the pesticide label prescribes a greater degree of supervision.

FIFRA requires the certification of applicators of restricted use pesticides and provides for EPA-approved state certification programs.

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[41] 7 U.S.C. § 136 *et seq.* (1994).

[42] Pesticides classified under FIFRA for restricted use are listed at 40 C.F.R. § 152.175 (1995).

2. Reporting Requirements

Under FIFRA regulations, commercial applicators must keep and maintain routine operational records containing information on kinds, amounts, uses, dates, and places of application of restricted use pesticides. Records must be maintained and kept for a period of two years.

The 1990 Farm Bill added the following record keeping and disclosure requirements for pesticide use:

- All pesticide applicators, including certified and non-certified, must maintain restricted use pesticide application records; time frames governing when records must be maintained are included and spot application records are required;

- Within thirty days of restricted use pesticide application, all applicators must give a copy of records of the pesticide application to the person for whom the application was provided;

- Records must be made available to any federal or state agency that deals with pesticide use or any health or environmental issue related to the use of pesticides at the request of the agency; however, a government agency may not release data from the records that directly or indirectly reveals the identity of individual producers and USDA is charged with administering access to the records by federal agencies, while states designate a lead agency to administer access by state agencies;

- When a health professional determines that pesticide information maintained in the records is necessary to provide medical treatment or first aid to an individual who may have been exposed to pesticides, persons required to maintain the records must promptly provide the record and available label information to the health professional upon request, and, in the case of an emergency, the information must be provided immediately;

- Penalties in the form of fines may be imposed by USDA for failure to comply with pesticide use and reporting requirements; and

- USDA and EPA are required to use the records to develop and maintain a database sufficient to enable USDA and EPA to publish annual comprehensive reports concerning agricultural and nonagricultural pesticide use.

Producer Note: Certified private pesticide applicators must record information no later than 14 days following the pesticide application. The information must include the brand or product name of the federal restricted use pesticide and the product's EPA registration number; the total amount applied; the size of the area treated; the crop, commodity, stored product, or site to which the pesticide was applied; the location of the application; the month, day, and year of the application; and the certified applicator's name and certified number.

Producer Note: For spot applications, a certified private pesticide applicator must record information regarding spot treatments if they apply restricted use pesticides on the same day in a total area of less than 1/10th of an acre. The information must include the brand or product name of the federal restricted use pesticide and the product's EPA registration number; the total amount applied; the location of treatment designated as "spot application," followed by a description (e.g. the location could be recorded as "spot application" followed by "treatment for noxious weeds on Field A, C, and all pastures"); and the month, day, and year of the application. This provision does not pertain to greenhouse and nursery applicators, who are required to keep all data elements as listed.

3. Disposal of Pesticide Containers

Producer Note: Producers must take special care in disposing of pesticide containers. Although permits for disposal are not required, under FIFRA the pesticide labeling will reflect requirements for disposal which must be met in order to prevent violations of the law.

A pesticide's labeling may contain specific procedures for disposal of the pesticide and its container. Disposal of the pesticide in a manner inconsistent with the labeling violates FIFRA. EPA regulates the disposal of pesticides which can no longer be legally used due to cancellation of their registration. The agency also recommends special procedures for the disposal of unwanted pesticides.[43]

4. Worker Protection Standard

Producer Note: Producers are also required to take precautions to protect farm workers from pesticides. Producers must properly train and notify workers of pesticide dangers. Producers should refer to the EPA publication entitled *The Worker Protection Standard for Agricultural Producers--How to Comply; What Employers Need to Know* for specific explanations of the requirements.

[43] 40 C.F.R. pt. 165 (1995).

Agricultural employers must also comply with the Worker Protection Standard (WPS) for Agricultural Pesticides. The WPS covers all agricultural employers and their employees. The WPS contains requirements for training employees who handle pesticides, provisions for protecting employees from pesticide exposure, and how to provide emergency assistance to exposed employees.

B. State Pesticide and Chemigation Laws and Regulations

Producer Note: South Dakota, 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 these substances within the state.

1. Pesticides

The South Dakota Department of Agriculture (Department) administers the state's pesticide programs.[44]

All pesticides offered in commerce must be registered with the Department, and the registration must include names and addresses of pesticide registration applicants and producers, name of pesticide, copy of the label, the list of ingredients, and classification of the pesticide for general or restricted use. A list of ingredients is not required, but may be requested of registration applicants.

Pesticides are considered misbranded if the labeling is inadequate in any way, or if the pesticide, if used as directed, is injurious to man or animals, or to the applicator. Sale of misbranded pesticides is prohibited.

The Department has established rules for pesticides which include sampling, inspection, and analysis to determine compliance with state law regarding content, identification, and adulteration; as well as approval by the Secretary of Agriculture of site and storage conditions for bulk pesticide facilities.

The Department may issue stop sale orders against pesticides offered for sale which are inconsistent with any state or federal regulation.

[44] S.D. CODIFIED LAWS ANN. § 38-20A-1 *et seq.* (1996).

a. Applicators and Distributors

Producer Note: The Department has issued extensive regulations that set forth detailed rules concerning the registration, sale, storage, use, and handling of pesticides.[45] These regulations should be reviewed by all farmers and ranchers who use pesticides. Copies can be obtained from the Department.[46]

Generally, pesticides must be applied only by licensed applicators.[47] Persons who apply other than restricted use pesticides through hand powered equipment to lawns, ornamental shrubs, and small trees are exempt, as are producers who apply pesticides on their own farms or the farms of neighbors as an accommodation. However, certification is required if the producer commercially applies restricted use pesticides for production of agricultural commodities, the value of the crop is potentially in excess of $1,000, or the application is made aerially.

While federal law allows the application of restricted use pesticides by non-certified applicators under the direct supervision o of certified applicators, South Dakota law does not allow this practice.

All persons who wish to engage in the business of applying pesticides to the lands of others must obtain an appropriate applicator's license, which may restrict or classify the types of compounds, areas, or methods of application the license holder may use. Applicator's licenses expire on the last day of February in the year following issuance.

Producer Note: Producers who apply pesticides to their own or to neighbors' crops as an accommodation are generally exempt from licensing. Individuals who are unsure about whether they are exempt under the rules should contact the South Dakota Department of Agriculture prior to application of pesticides.

Dealers who sell pesticides must be licensed, except for applicators who sell pesticides as an integral part of their business, doctors, pharmacists, and veterinarians under very limited conditions.

Reasons for which any licenses or permits may be revoked or suspended include:

- Making false claims or reports;

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[45]S.D. CODIFIED LAWS ANN. §38-20A-1 *et seq.* (1996), S.D. CODIFIED LAWS ANN. §38-21-1 *et seq.* (1996), S.D. ADMIN. R. 12:56 (revised June 6, 1996).

[46]Chapt. 38-20A, Chapt. 38-21, Art. 12:56 (Revised June 6, 1996).

[47] S.D. CODIFIED LAWS ANN. § 38-21-1 *et seq.* (1996).

- Recommending an off-label use;
- Applying a known ineffective material; or
- Aiding or abetting a violator.

Any persons who violate the statute are guilty of misdemeanors and may be subject to civil penalties in the maximum amount of $5,000 per violation. Any person claiming damage from pesticides must file a written statement of the occurrence with the Department within 30 days of the time the damage occurred.

b. Pesticide Worker Training

Under South Dakota rules, all applicators who own or operate a defined operational area must provide yearly training to current employees concerning use, hazards, and other pesticide requirements, and within three days to new employees engaged in the handling and use of pesticides.[48] An operational area is deemed to be an area where the applicator:

In addition, special containment provisions are required for certain operational areas that:

- Handle more than 1,500 pounds per year of pesticides and engages in washing or rinsing of concentrated or diluted pesticides from containers or handling, storage, or application equipment more than 30 days per year;
- Operate within 150 feet of a lake, stream, wetland, or well;
- Operate within 200 feet of an occupied building that is not owned or controlled by the applicator; or
- Operate within 500 feet of a public water supply well.

Such containment areas are to be constructed in accordance with professional engineering practices, and must be of sufficient strength to bear the weight and movement of loaded vehicles. All seams and cracks must be sealed, floors must be constructed of concrete or other approved materials, and must be sloped to collect and recover fluids. If the pesticide is handled in a dry state, the containment area must extend beneath all open augers and conveyors.

[48] S.D. ADMIN. R. 12:56:17:04 (1993).

2. Chemigation

South Dakota defines chemigation as "any process whereby chemicals are added to irrigation water applied to land or crop, or both, through an irrigation system."[49] Persons who use irrigation systems for chemigation must comply with all rules regarding standards, performance, installation requirements, and requirements for location and use of antipollution devices. In this context, antipollution devices include mechanical equipment used to reduce hazards to the environment in case of malfunction or shutdown of chemigation equipment, such as check valves, chemical line shutoff valves, automatic low pressure drains, and interlock equipment. Chemigation laws are administered by the DENR.

Violators of any rule or regulation are subject to criminal misdemeanor prosecution, civil penalties, and may lose any water permits or licenses they hold.

Producer Note: Since the penalties for violation of the chemigation and pesticide statutes are serious, proper care and regular preventive maintenance of all equipment used in those operations is highly recommended.

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. Federal Endangered Species Act

The Endangered Species Act[50] (ESA) is designed to protect endangered and threatened species from federally-funded or directed activities, including pesticide use and wetlands manipulation.

The ESA also prohibits private persons from taking any listed endangered or threatened species of animal without a permit or exemption which allows the taking. Taking is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting the animal. An intent to take the animal is a required element for a violation of the ESA. No reported cases involve the taking of animals by pesticide poisoning, but the U.S. Fish and Wildlife Service has taken administrative action against farmers and ranchers who kill

[49] S.D. CODIFIED LAWS ANN. § 34A-2A-1 *et seq.* (1992 & Supp. 1996).

[50] 16 U.S.C. § 1531 *et seq.* (1994).

protected animals with meat illegally laced with pesticides. For example, in *Christy v. Hodel*,[51] a court upheld the authority of the U.S. Fish and Wildlife Service to assess penalties against livestock owners who deliberately killed grizzly bears, an endangered species, in order to protect their livestock.

Producer Note: An unlawful taking can result in serious criminal and civil penalties. Producers can apply for incidental taking permits if a contemplated activity might result in an inadvertent taking of a protected species. Permits are granted by the U.S. Fish and Wildlife Service.

The ESA makes it unlawful for anyone to import, take, possess, sell, deliver, or transport an endangered species of fish or wildlife or an endangered species of plant. Any person who knowingly violates the ESA is liable for a criminal fine of up to $50,000 and up to one year of imprisonment. All other ESA violations, such as reporting violations, are subject to a criminal fine of up to $25,000 and up to six months imprisonment.

Through FIFRA, mandatory limitations on pesticide use are included on pesticide labels and in county specific use bulletins. If a producer uses pesticides in an area where mandatory limitations exist, they need to follow the directions and limitations contained in the bulletins. Voluntary limitations on pesticide usage may also be employed to protect endangered and threatened species and are contained in interim pamphlets available through EPA.

Producer Note: The Endangered Species Act can be a powerful tool in the protection of wildlife and its habitat through the imposition of serious criminal and civil penalties for the destruction or harming of protected species. Producers must be aware of any endangered or threatened species existing on their property and take steps to ensure that activities do not harm those species.

B. Federal Migratory Bird Treaty Act

Producer Note: Treaty provisions like those which protect migratory birds will be taken into account by regulatory officials when making certain determinations. For example, these provisions will be considered by an agency when determining whether to grant or deny permits for concentrated animal feeding operations.

The Migratory Bird Treaty Act[52] implements conventions between the United States and Canada, Japan, Mexico, and the former USSR for the protection of migratory birds. Birds

[51] 857 F.2d 1324 (9th Cir. 1988), *cert. denied* 490 U.S. 1114 (1989).

[52] 16 U.S.C. § 703 *et seq.* (1994).

protected under the Act are not necessarily endangered. The Act provides that, except as permitted by regulation, it is unlawful to pursue, hunt, take, capture, or kill any migratory bird. Violation of the Act is a misdemeanor with penalties including fines up to $500 and imprisonment up to six months. Federal courts have split on the question of whether intent must be present in order to impose liability under the Act in cases where birds have been poisoned by pesticides.[53]

C. State 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. South Dakota has laws protecting wildlife.

In South Dakota, an endangered species is a species of plant or animal which is threatened with extinction throughout all or much of its range, other than an insect species determined to be a pest and the protection of which would pose a significant risk to man.[54] The Department of Game, Fish, and Parks (DGFP) is required to develop lists of endangered species, and reevaluate the lists on a biennial basis.

Possession, taking, transporting, or engaging in commerce of a listed species is a misdemeanor, unless it enters the state from another region under a permit. An endangered species may be held under a permit granted by the Secretary of Agriculture or the Secretary of Game, Fish, and Parks for scientific, zoological, or educational reasons or for propagation.

A permit may be obtained to destroy a listed species upon a showing of good cause and where it is found necessary to alleviate damage to property or to protect human health.

Producer Note: What constitutes good cause to destroy a listed species has not been addressed by the courts of South Dakota, but it is generally held to be a substantially or legally sufficient reason for doing something. Producers are advised to contact DGFP for a determination if in doubt.

Listed carnivores may be removed or destroyed in an emergency without a permit, but a report must be filed within 24 hours of the action.

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[53] *See* United States v. Van Fossan, 899 F.2d 636 (7th Cir. 1990) *and* United States v. Rollins, 706 F. Supp. 742 (D.C. Idaho 1989).

[54] S.D. CODIFIED LAWS ANN. § 34A-8-1 *et seq.* (1992 & Supp. 1996).

Currently extinct species may not be reintroduced into the state without specific authorization from the legislature in each instance. Permits may also be obtained to kill wild animals, including wolves, which are damaging property.[55]

South Dakota allows the use of blinds and decoys in the hunting of migratory game birds, and has consented to the acquisition of land by the federal government to protect land and water habitat for these birds under the Migratory Bird Conservation Act.[56]

VII. 1996 FARM BILL

Producer Note: This section only discusses the environmental or conservation related provisions of the 1996 Farm Bill.[57] For a more thorough examination of flexibility programs, export programs, dairy marketing, risk management, and other provisions of the 1996 Farm Bill, resources such as the local Farm Service Agency office, a producers' association, or appropriate governmental offices should be consulted.

A. Environmental Conservation Acreage Reserve Program

The Environmental Conservation Acreage Reserve Program (ECARP) includes the Conservation Reserve Program (CRP), the Wetlands Reserve Program (WRP), and the Environmental Quality Incentives Program (EQIP). Under ECARP, USDA may designate watersheds, multi-state areas, and regions of special environmental sensitivity as priority areas eligible for enhanced federal assistance. USDA may also designate areas in which it will assist producers in meeting federal, state, and local environmental laws and regulations.

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[55] S.D. CODIFIED LAWS ANN. § 41-6-29 (Supp. 1996).

[56] S.D. CODIFIED LAWS ANN. §§ 41-8-33 *and* 41-3-6 (1991 & Supp. 1996).

[57] Federal Agricultural Improvement and Reform (FAIR) Act of 1996, P.L. 104-127.

1. Conservation Reserve Program

Producer Note: The Conservation Reserve Program[58] (CRP) has been reauthorized and extended by the 1996 Farm Bill. Producers who wish to participate in this program may submit an offer to enroll land during specified signup periods. A continuous signup is provided for certain special practices, including filter strips, riparian buffers, shelter belts, grassed waterways, field wind breaks, living snow fences, salt tolerant vegetation and shallow areas for wildlife. The Commodity Credit Corporation (CCC) administers the program through Farm Service Agency (FSA) state and county offices. The owner or operator submits a per acre rental bid. If accepted, the CCC enters into a contract with the owner or operator to convert the land into a conserving use for a minimum of 10 years in return for financial and technical assistance. Conservation plans approved by the local conservation district are required on eligible acreage.

The CRP has been extended through the year 2002 at the current level of enrolled acreage of 36.4 million acres. Under the 1996 Farm Bill, land ownership requirements prior to enrollment have been reduced from three years to one year.

USDA is authorized to allow current participants in the CRP to terminate any CRP contract which was entered into prior to January 1, 1995 with written notice, so long as the contract has been in effect at least five years. This early termination provision does not, however, apply to those enrolled lands which are determined to be of high environmental value.

CRP contracts which are not eligible for early termination include:

- Contracts entered into after January 1, 1995;
- Contracts entered into before January 1, 1995 which are less than five years old;
- Land with an erodibility index greater than 15;
- Land devoted to useful life easements, field windbreaks, grass waterways, shallow water areas, filter strips, shelter belts, and bottom land timber on wetlands;
- Land enrolled under the wetland eligibility criteria; and
- Land located within an average of 100 feet of a stream or other permanent water body.

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[58] Conservation Reserve Program-Long Term Policy, 61 Fed. Reg. 49697-01 (1996) (to be codified at 7 C.F.R. pt. 704 *and* pt. 1410)(proposed Sep. 23, 1996).

Total acreage placed in the CRP, combined with that placed in the Wetlands Reserve Program (WRP), may not exceed 25 percent of the total cropland of the county. In addition, no more than 10 percent of the cropland in the county can be subject to a CRP or WRP easement. CRP participants must comply with the CRP contract, implement approved conservation plans, establish required vegetative cover or water cover, not produce agricultural commodities or allow grazing or harvesting unless provided by the U.S. Secretary of Agriculture under certain conditions on land subject to the contract, comply with state noxious weed laws, and control all weeds, insects, and pests on the land. Additionally, conservation compliance and Swampbuster requirements must be met as a condition of CRP eligibility.

2. Wetlands Reserve Program

The Wetlands Reserve Program[59] (WRP) has been reauthorized through the year 2002 with a maximum enrollment of 975,000 acres. One-third of all new enrollments must be in permanent easements, one-third in 30-year easements or less, and one-third in wetland restoration agreements which include cost sharing. At least 75,000 of the total acres must be enrolled in other than permanent easements before any additional permanent easements will be accepted for enrollment in the program.

Producer Note: To participate in the WRP program, a producer may enroll acreage at any time by applying for program participation with the local NRCS office.

Emphasis will be given to enrollment of lands that:

- Maximize wildlife benefits;
- Maximize the amount of wetlands;
- Achieve cost-efficient wetlands restoration; and
- Have the least likelihood of being reconverted.

Conservation plans are required for WRP program participation. Eligibility determinations for participation in the program is made by NRCS. In addition, landowners may be provided with 75 percent to 100 percent cost sharing for restoring wetlands under permanent easements, 50 percent to 75 percent for 30-year easements, and 50 percent to 75 percent for restoration cost share agreements.

[59] Wetlands Reserve Program, 61 Fed. Reg. 42137-01 (1996) (to be codified at 7 C.F.R. pt. 620 *and* pt. 1467).

3. Environmental Quality Incentives Program

The Environmental Quality Incentives Program[60] (EQIP) is a new cost share program which was created to provide assistance to crop and livestock producers. Available funds for assistance will be evenly split between crop and livestock producers. Agricultural land that poses a serious problem to soil, water, or related resources is eligible for EQIP contracts. Large livestock operations are ineligible for cost sharing for animal waste management facilities under the program, but they remain eligible for technical assistance.

Producer Note: The producer desiring EQIP participation may apply at NRCS for an EQIP contract at any time. The contract includes a plan, approved by the local conservation district, that indicates the practices to be applied and the amount of cost share to be received. Producers should be aware that the regulations implementing EQIP have been proposed. However, changes could occur in the final regulations.

Contracts which are based on an EQIP plan will be used to implement the program. Payments in the EQIP program are limited to $10,000 per year and to $50,000 over the duration of the contract. Contracts may be for no less than five years and no more than 10 years. Assistance to producers will be available through cost share payments, incentive payments, education, and technical assistance. Cost share payments are limited to no more than 75 percent of the projected cost of the practice. Incentive payments are also available to encourage the adoption of new practices.

EQIP will be focused in conservation priority areas. Higher priority will be given to areas where state or local governments offer financial or technical assistance, or where agricultural improvements will help meet water quality objectives.

B. Swampbuster, Sodbuster, and Conservation Compliance Programs

1. Swampbuster

Producer Note: The Swampbuster program has been in place since 1985 and was passed to discourage producers from converting wetlands to croplands and generally encourage landowners to preserve wetland areas. The 1985 law made producers ineligible for farm program participation if farming occurred on wetlands after 1985. A 1990 amendment strengthened the program by making conversion alone even without cropping a swampbuster violation. USDA implements Swampbuster regulations and the NRCS is the primary agency involved in ensuring compliance with Swampbuster provisions.

[60] Environmental Quality Incentives Program, 61 Fed. Reg. 53574-01 (1996) (to be codified at 7 C.F.R. pt. 1466)(proposed Oct. 11, 1996).

Wetland conservation provisions, known as Swampbuster, are continued under the 1996 Farm Bill. Wetland mitigation is allowed through restoration, enhancement, or creation so long as wetland functions are maintained. When a violation of the Swampbuster program occurs, USDA has the discretion to waive the penalty of ineligibility for USDA program benefits if USDA determines the person acted in good faith and without intent to violate the Swampbuster provisions.

Abandoned prior converted wetlands and farmed wetlands are not subject to Swampbuster so long as the use of those lands is limited to agricultural purposes. USDA is authorized to identify categories of actions that constitute minimal effects. Finally, prior wetland determinations will be reviewed for accuracy.

The 1996 Farm Bill made other changes in the Swampbuster program which include:

- Expansion of areas in which mitigation can be used, allowing individuals to work with producers, conservation districts, and other relevant entities;

- More options for mitigation, including restoration, enhancement, or creation;

- Natural Resources Conservation Service (NRCS), based upon recommendations of the state technical committee, may identify practices that have a minimal effect on the environment and may put them on fast track determination; and

- Wetland conversion activities authorized by a section 404 permit which make agricultural production possible will be accepted for Swampbuster program purposes if the permitted activities were adequately mitigated.

Producer Note: Prior converted cropland is a converted wetland where the conversion occurred prior to December 23, 1985, and an agricultural commodity had been produced at least once before December 23, 1985.

In addition, the 1996 Farm Bill expands the definition of agricultural land contained in the Interagency Wetlands Memorandum of Agreement[61] to include cropland, pasture land, tree farms, rangeland, native pasture land, and other land used for livestock production, placing NRCS in charge of making delineation decisions.

[61] NATURAL RESOURCE CONSERVATION SERVICE, INTERAGENCY WETLANDS MEMORANDUM OF AGREEMENT (1994). NRCS has the primary responsibility for interagency coordination and NRCS can distribute copies of the Memorandum of Agreement.

Producer Note: Interim regulations implementing Swampbuster changes found in the 1996 Farm Bill are already in effect. Producers must make themselves aware of the new Swampbuster regulations by obtaining copies from NRCS or USDA offices and should keep themselves informed of regional wetlands issues.

2. Sodbuster

Producer Note: The Sodbuster program also began with the 1985 Farm Bill. These programs were designed to conserve highly erodible land brought into crop production. Under Sodbuster, producers are ineligible for farm program payments unless conservation systems are applied on the land that achieve tolerable levels of soil erosion. Highly erodible land determinations are made by NRCS.

The highly erodible lands conservation program, known as Sodbuster, is retained under the Farm Bill. A new provision states that if CRP lands are returned to production, those lands cannot be required to meet a higher conservation standard than that applied to other highly erodible cropland located within the same area.

In addition, a wind erosion pilot project is established under the 1996 Farm Bill. The pilot project is for producers in selected counties which have nearly 100 percent of their cropland designated as highly erodible and where wind erosion factors are likely to have caused inequitable application of highly erodible land factors to that cropland. In this circumstance, the cropland must be redelineated.

3. Conservation Compliance

Producer Note: Conservation compliance provisions of the 1985 and 1990 Farm Bills were continued under the 1996 Farm Bill. These provisions required the producer to have a plan approved by NRCS and implemented by the producer to address highly erodible cropland to remain eligible for certain USDA program benefits. These plans are continued by the 1996 Farm Bill, with some changes. The term conservation plan describes the conservation systems or practices relative to the location, use, tillage system, and treatment measures used to improve soil condition.

Under the 1996 Farm Bill, after consultation with local conservation districts, USDA is required to establish expedited procedures to grant temporary variances in conservation plans, formerly referred to as conservation compliance plans. Decisions on variances must be made within 30 days or the request will be considered granted.

County committees may provide for appropriate relief where application of a conservation system would impose an undue economic hardship on the producer. This discretion is allowed upon consideration of the use of variances and exemptions.

Public notice of future changes in the technical standards affecting conservation compliance, Swampbuster, and CRP programs are also required. If a person has acted in good faith and without any intent to violate the law, up to one year can be provided for that person to actively apply conservation plans for the farm. This action will help ensure that penalties are in proportion to violations.

USDA employees are directed under the 1996 Farm Bill to work with landowners to whom they are providing onsite technical assistance to correct an observed potential compliance problem. Landowners have up to one year to take corrective action before the violation will be reported. Farmers are encouraged to maintain records of residue measurement, including those provided by third parties. These measurements can be used to determine erosion levels on annual review.

C. Other Conservation Programs

Producer Note: Many additional conservation programs were created under the 1996 Farm Bill. Producers must contact the local NRCS or USDA field office in order to obtain specific program regulations, applications for participation, technical assistance, and plan requirements. Some programs provide cost share payments.

1. Conservation Farm Option

The 1996 Farm Bill established a pilot program for producers of wheat, feed grains, upland cotton, and rice with market transition contract acreage. Under the Conservation Farm Option (CFO), the producer must develop and implement a conservation farm plan. Conservation farm contracts are for 10 years and can be extended for an additional five years. In exchange for payments under the CFO, the producer must forego payments in the CRP, WRP, and EQIP programs. The total payment for participation in CFO is the same as if the producer had received separate payments under each program, in addition to production flexibility contract payments.

2. Flood Risk Reduction

Contracts may be entered into with producers who have contract acreage that is frequently flooded. Participants will receive 95 percent of their market transition contract payments. The Secretary may also provide 95 percent of projected crop insurance payments. Participants agree not to receive any contract payments, commodity loans, crop insurance, conservation program payments, or any disaster program payments on the flood risk reduction acreage.

3. Farmland Protection Program

USDA is authorized to purchase easements or other interests in land with prime, unique, or other productive soils if those lands are subject to a pending offer by state or local governments to acquire the land for farmland protection purposes. Easements or other interests on 170,000 to 340,000 acres are allowed. USDA has provided $14.5 million to California, Colorado, Connecticut, Delaware, Florida, Kentucky, Maryland, Massachusetts, Michigan, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, Virginia, Vermont, Washington, and Wisconsin to help purchase development rights from farmers to keep productive farmland in production.

4. Wildlife Habitat Incentives Program

The Wildlife Habitat Incentives Program (WHIP) authorizes $50 million in funding through the year 2002 to establish a program to make cost share payments to landowners in order to implement wildlife habitat improvement activities. In order to receive cost share payments, the landowner must submit a wildlife habitat development plan. The WHIP program, in addition to providing payments, is designed to provide technical assistance to landowners, provide education regarding wildlife needs, and foster a positive public attitude regarding wildlife, wildlife habitat, and land stewardship.

Producer Note: USDA has proposed regulations to implement WHIP. However, changes could occur in the final regulations.

5. Conservation of Private Grazing Land

Federal personnel are to be made available for technical assistance through the Conservation of Private Grazing Land program. The purpose of the program is to promote conservation and enhancement of natural resources on private lands. NRCS offices will administer the program and development of a conservation plan is required for participation.

6. Commodity Credit Corporation Uses

Under the 1996 Farm Bill, the Commodity Credit Corporation (CCC) Charter Act is revised to allow the use of CCC funds for authorized conservation programs. This action is intended to reduce the necessity for annual appropriations to carry out conservation programs.

7. Air Quality

The 1996 Farm Bill establishes a task force on agricultural air quality with NRCS as the chair of the task force. The task force has met and established operating procedures, outlined its objectives, and discussed issues brought up by the public.

8. Other Miscellaneous Provisions

Other miscellaneous provisions of the 1996 Farm Bill which may affect the environmental aspects of an agricultural operation include:

- Task force to study bypass flows and related water rights on national forest land, with an 18-month moratorium on bypass flow requirements during the renewal of Forest Service permits for water supply facilities;
- Flexibility in determining how soil survey information is communicated to the public;
- Reauthorization of the forestry incentives program;
- Reauthorization of the resource conservation and development program;
- Requirement that state technical committees give public notice of meetings and expand committee membership to include representatives of agricultural producers, non-profit conservation organizations, agribusiness, and experts on economic and environmental impacts of conservation techniques; and
- Purchase of floodplain easements under the Emergency Watershed Protection Program.

VIII. OTHER STATE 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 state laws in South Dakota.

A. Farmland Preservation

1. Planning and Zoning

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, a producer must check with local boards to determine local planning and zoning regulations which may affect an operation.

Currently, South Dakota counties and municipalities are not specifically empowered to use zoning as a land preservation tool. However, they have the power to adopt zoning regulations in accordance with a comprehensive plan of development, and may regulate uses in those areas in accordance with the plan.[62] As a result, counties may authorize the creation of agriculturally-zoned areas as part of their zoning function.

2. Municipal Environmental Powers

Under the municipal power to promote public health, safety, welfare, and morals and suppress disease, South Dakota municipalities enjoy the power to do whatever is necessary or expedient to accomplish that purpose.[63] Municipalities have the power to compel owners of stables and pigsties to clean or abate their activities, or remove them entirely, and may regulate the location of these activities. They may exercise the same powers relative to agriculture-related industries such as packing houses, rendering plants, slaughterhouses, bone and soap factories, or any unwholesome or offensive business, and may prevent their establishment within one mile of the corporate limits.

Municipalities may also prevent pollution of, or injury to, their water supplies, or to public water supplies within one mile of their corporate limits. They may also prohibit disposal of any offensive material in any body of water within their borders.

B. Nuisance and Right-to-Farm

Producer Note: Many producers are confronted with concerns of local residents. These problems may originate from dust or odor generated by the operation or may result from a lack of knowledge of what is involved in an agricultural operation. While not specifically an area where the state or federal authorities may become involved, court actions can be brought against the operation. These actions are usually based on a nuisance theory, and in some cases, a right-to-farm defense may apply.

1. Nuisance

Nuisance has been defined in South Dakota as an act or omission which unlawfully:

- Annoys, injures, or endangers the comfort, repose, health, or safety of others;
- Offends decency;

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[62] S.D. CODIFIED LAWS ANN. § 11-2-1 *et seq.* (1995).

[63] S.D. CODIFIED LAWS ANN. § 9-32-1 *et. seq.* (1995).

- Unlawfully interferes with, obstructs, or tends to obstruct, or renders dangerous for passage, any lake or navigable river, bay, stream, canal, or basin, or any public park, square, street, or highway; or

- In any way renders other persons insecure in life, or in the use of property.[64]

County governments and municipalities have the power to declare an activity a nuisance if the activity is not otherwise statutorily defined.[65] When a nuisance is found on private property, the township board of health may order the nuisance removed at the owner's expense.

Under the general police power to regulate public health, safety, welfare, and morals, governments have the power to declare activities nuisances and compel their abatement.[66] This general power extends one mile beyond the corporate limits. Some activities are statutorily defined as nuisances and some activities, such as agricultural uses, have been deemed by statute not to be nuisances.[67] In addition, actions for public and private nuisance may be brought by individuals.

2. Right-to-Farm Statute and Interference with an Animal Facility

The South Dakota right-to-farm statute is aimed at reducing the loss of agricultural resources as a result of the intrusion of nonagricultural land use in agricultural areas.[68] The statute prevents an agricultural operation from being deemed a nuisance due to changed conditions in the locality if the operation has been in existence one or more years and was not a nuisance when it began.

An agricultural operation is defined as "...any facility used in the production or processing for commercial purposes of crops, timber, livestock, swine, poultry, livestock products, swine products, or poultry products." The operation may reasonably expand its operations if it complies with applicable local, state, and federal environmental laws. Once an agricultural operation acquires protected status, it may not thereafter lose protection because of temporary cessation of farming operations or by diminishing its size. If an action is brought against the agricultural operation and is found to be frivolous, the court may assess the cost of defense to the party bringing the action against the operation.

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[64] S.D. CODIFIED LAWS ANN. § 21-10-1 *et seq.* (1987).

[65] S.D. CODIFIED LAWS ANN. § 7-8-33. (1996)., S.D. CODIFIED LAWS ANN. § 8-2-8 (1996).

[66] S.D. CODIFIED LAWS ANN. § 9-29-13 (1996).

[67] S.D. CODIFIED LAWS ANN. § 7-8-33. (1996)., S.D. CODIFIED LAWS ANN. § 8-2-8 (1996).

[68] S.D. CODIFIED LAWS ANN. § 21-10-25.1 *et seq.* (1987 & Supp. 1996).

Protection under the statute, however, is not extended if a nuisance results from negligent or improper operation of the facility, or for damages caused by pollution, reduction in water supply, or drainage onto another's land.

Under a related South Dakota statute, an animal facility is defined as any area where animals are kept. Intentional damage to the facility, obstruction of the facility, or release of the animals is punishable by criminal penalties, and triple damages may be levied against the offender.[69]

C. Land Application of Livestock Waste

Currently, South Dakota allows land application of livestock waste and does not mandate any sort of manure management process. Land application of manure currently does not require a groundwater discharge permit.[70]

Producer Note: Recommendations for land application of waste are covered by NRCS technical guidance materials. These recommendations should be followed in order to preserve the producer's potential defenses in nuisance actions or to aide 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 aide the producer.

D. Pest Control

Lands infested with weeds or pests may be declared a public nuisance.[71] The South Dakota Weed and Pest Control Board (Board) has the power to enter on land with reasonable notice to the owner, and may order the owner to abate a weed or pest problem. If the landowner declines to abate the problem or is unable to do so, the Board may order the cost of abatement to be taxed to the land.

Seizure and destruction of contaminated plant material is allowed, and movement of the material contrary to Board rules is prohibited.

In addition, it is a misdemeanor to move agricultural machinery without first cleaning it, or to transport hay, feed, or other plant products containing weed seed in a manner which constitutes a substantial risk of contamination.

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[69] S.D. CODIFIED LAWS ANN. § 40-38-1 *et seq.* (Supp. 1996).

[70] S.D. ADMIN. R. 74:03:16 (1992).

[71] S.D. CODIFIED LAWS ANN. § 38-22-1 *et seq.* (1996).

E. Soil and Water Conservation

1. Conservation Districts

Conservation districts can be established by filing a petition for the organization of such a district with the State Conservation Commission.[72] The boards of conservation districts are empowered to administer soil conservation, agricultural water management, and erosion control projects.[73]

2. Land Disturbing Activities

A land disturbing activity is defined as land alteration resulting in erosion and movement of sediments into surface waters or onto land.[74] This includes individual and residential landscaping and gardening.

When a conservation district determines that a land disturbing activity is taking place that violates the standards the district has adopted, the owner or operator must develop and implement an erosion control plan within six months. Any person affected may petition the conservation district or permitting authority, which must act on the complaint within two months. Agricultural operators are required to prevent blowing dust or soil by practices which will minimize such a problem, including leaving stubble residue on the soil. The conservation district may issue cease and desist orders and emergency mitigation costs may be assessed against the landowner.

F. Aquaculture and Breeding of Domesticated Fur Bearing Animals

For the purpose of administering state laws, aquaculture operations which produce commercially grown fish and fish products are considered farm operations, and their products are deemed agricultural products.[75] The operator is legally considered to be a farmer. Breeding domesticated fur bearing animals is also deemed an agricultural pursuit.[76] Consequently, the aquacultural operator or breeder of fur bearing animals is subject to all environmental requirements, and enjoys the same rights and privileges as other agricultural producers.

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[72] S.D. CODIFIED LAWS ANN. § 38-8-1 (1996).

[73] S.D. CODIFIED LAWS ANN. § 38-8-1 *et seq.* (1996).

[74] S.D. CODIFIED LAWS ANN. § 38-8A-2 *et seq.* (1996).

[75] S.D. CODIFIED LAWS ANN. § 41-1-7 (1991).

[76] S.D. CODIFIED LAWS ANN. § 40-35-1 *et seq.* (1991).

G. Dead Animal Disposal

The state addresses the issue of disposal of dead animals in two separate ways. First, the Animal Industry Board may compel disposal of animals that have died of disease in a manner that it prescribes, which may include special handling and cleaning.[77] After notice has been provided by the Board to the owner, the county sheriff will cause animals which are undisposed of to be burned or buried. Where dead animals are unburied and are offensive or a danger to health, disposal must be done in a manner provided by law, usually burning or burying.[78]

Notice from a member of the township board of supervisors is provided to the landowner that a carcass must be burned or buried. In the event that the land is in an unincorporated area, the notice to burn or bury is given by county, rather than township authorities. Costs of disposal are taxed to the owner of the animal, and the disposal must be in a manner that does not emit odors and is not offensive or a danger to health. Animals may also be disposed of at a licensed renderer's facility.

H. Environmental Audits

Producer Note: Several states have passed environmental audit protection laws which give businesses an immunity from the use of environmental audit findings in administrative, civil, or criminal actions against the business for environmental problems found and corrected. In other words, businesses cannot be prosecuted, civilly or criminally, for environmental problems they found and corrected in a self-audit process. Fewer than half of the states have this type of law. South Dakota has granted this type of protection.

Under state law, if a regulated entity conducts a voluntary environmental audit of its operations to determine environmental compliance, a legal presumption arises against the imposition of penalties for any violations uncovered, and DENR may not pursue civil or criminal action if the violation is disclosed to DENR in writing within thirty days of its discovery.[79] However, if the state agency is required to assess penalties by the federal government, the environmental audit safe harbor provision does not operate to shield the violator. Environmental audits are discoverable in judicial proceeding, and the safe harbor provisions are unavailable if willful or repeated violations have occurred, or if violations revealed by the voluntary audit are not promptly corrected.

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[77] S.D. CODIFIED LAWS ANN. § 40-5-15 (1991).

[78] S.D. CODIFIED LAWS ANN. § 34-16-10 *et seq.* (1992).

[79] S.D. CODIFIED LAWS ANN. § 1-40-33 *et seq.* (Supp. 1996).

Appendix A - Agencies

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

South Dakota Department of Agriculture
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501-3182
605-773-3375

South Dakota Department of Environmental and Natural Resources
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501-3181
(605) 773-3151

South Dakota Animal Industry Board
411 South Fort Street
Pierre, SD 57501
(605) 773-3321

South Dakota Department of Game, Fish, and Parks
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501-3182
605-773-3485

South Dakota Health Department
445 East Capitol Avenue
Pierre, SD 57501-3185
605-773-3361

United States Department of Agriculture
USDA-NRCS
200 4th St. S.W.
Huron, SD 57350-2475
605-352-1200

United States Environmental Protection Agency
US EPA - Region 8
999 18th Street
Denver, CO 80202
(303) 293-1603

United States Department of Agriculture
14th Street and Independence Avenue, S.W.
Washington, D.C. 20250
(202) 720-2791
http://www.usda.gov/

Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460
(202) 260-2080
http://www.epa.gov/

Natural Resource Conservation Service
United States Department of Agriculture
14th Street and Independence Avenue, S.W.
Washington, D.C. 20250
(202) 720-4525
http://www.ncg.nrcs.usda.gov/

Headquarters United States Army Corps of Engineers
Casimir Pulaski Building
20 Massachusetts Avenue, N.W.
Washington, D.C. 20314-1000
(202) 761-0660

National Association of State Departments of Agriculture
1156 15th Street, N.W.
Suite 1020
Washington, D.C. 20005
(202) 296-9680
http://www.nasda-hq.org/

Appendix B - Glossary

Producer Note: The following definitions are included to further define information discussed in this document. The glossary includes only terms which were not previously defined in the text.

10-year, 24-hour storm: A rainfall event of 24-hour duration and 10 year frequency that is used to calculate the runoff volume and peak discharge rate to a BMP.

25 year, 24-hour storm: A rainfall event of 24-hour duration and 25-year frequency that is used to calculate the runoff volume and peak discharge rate to a BMP.

Animal unit: A standard measure based on feed requirements, used to combine various classes of livestock according to size, weight, age, and use.

Aquaculture: The production of aquatic plants or animals in a controlled environment, such as ponds, raceways, tanks, or cages, for all or part of their life cycle. In the United States, baitfish, catfish, clams, crawfish, freshwater prawns, mussels, oysters, salmon, shrimp, tropical (or ornamental) fish, and trout account for most of the aquacultural production. Less widely established but growing species include alligator, hybrid striped bass, carp, eel, red fish, northern pike, sturgeon, and tilapia.

Aquifer: A geologic formation or structure that transmits water in sufficient quantity to supply the needs for a water development; usually saturated sands, gravel, fractures, and cavernous and vesicular rock.

Best management practice (BMP): A practice or combination of practices that are determined to be the most effective and practicable (including technological, economic, and institutional considerations) means of controlling point and nonpoint pollutants at levels compatible with environmental quality goals.

Chemigation: The addition of one or more chemicals to the irrigation water.

Composting: A controlled process of degrading organic matter by microorganisms.

Conservation: The continuing protection and management of natural renewable resources, like soil, water, wildlife, and forests, in accordance with principles that assure their optimum economic and social enjoyment.

Conservation compliance: A provision authorized by the Food Security Act of 1985 that required farmers with highly erodible cropland to implement an approved conservation plan by 1990. Implementation of the plan was tied to eligibility for federal USDA program benefits.

Conservation easement: A legal interest granted for the purpose of restricting how property is used in order to protect various environmental or natural resource values.

Conservation practices: Methods which protect or improve the soil, water, or related natural resources. Major conservation practices include conservation tillage, crop rotation, contour farming, stripcropping, terraces, diversions, and grassed waterways.

Constructed wetland: Engineered systems designed to simulate natural wetlands to exploit the water purification value for human use and benefits. Constructed wetlands consist of former upland environments that have been

modified to create poorly drained soils and wetlands flora and fauna for the primary purpose of contaminant or pollutant removal from wastewaters or runoff.

Cooperative Extension Service: In general terms, a system of state, local, and federal organizations working together to provide a practical educational network linking research, science, and technology to the needs of people where they live and work. The Cooperative Extension Service provides educational services outside the classroom on agriculture, household management, nutrition, and other topics. States participate mostly through their land grant universities, while the federal partner is the USDA's Cooperative State Research, Education, and Extensions Service. Other partners are the Extension professionals in nearly all of the nation's 3,150 counties and thousands of paraprofessionals and nearly 3 million volunteers.

Diversion: A channel, embankment, or other man-made structure constructed to divert water from one area to another.

Ecosystem: The complex of a community and its environment functioning as an ecological unit in nature; a basic functional unit of nature comprising both organisms and their nonliving environment, intimately linked by a variety of biological, chemical, and physical processes.

Effluent: Solid, liquid, or gaseous wastes that enter the environment as a by-product of man-oriented processes.

Environmental audit: The process of investigating the environmental status and history of a property to determine if it complies with applicable environmental laws and whether it contains any sources of potential environmental liability.

Erosion: Wearing away of the land surface by running water, glaciers, winds, and waves. The term erosion is usually preceded by a definitive term denoting the type of erosion such as gully erosion, sheet erosion, wind erosion, or bank erosion.

Farm bill: Major omnibus agricultural legislation, usually enacted every four or five years. The bill usually includes provisions on commodity programs, trade, conservation, credit, agricultural research, food stamps, and marketing.

Fertilizer: Any organic or inorganic material of natural or synthetic origin that is added to a soil to supply elements essential to plant growth.

Generally Accepted Agricultural Management Practices (GAAMPs): A form of right-to-farm law which gives nuisance protection to farms using GAAMPs as established by the state or common agricultural practices in the area.

Groundwater: Water beneath the earth's surface between saturated soil and rock that supplies wells and springs.

Habitat: The place where an organism naturally lives or grows.

Hazardous waste: Any waste or combination of wastes which pose a substantial present and potential hazard to human health or living organisms.

Herbicide: A chemical substance designed to kill or inhibit the growth of plants, especially weeds.

Highly erodible land: Land that has an erodibility index of greater than eight. This index is based on a soil's inherent tendency to erode from rain or wind in the absence of cover crop or other conservation practices. The erodibility index is based on factors from the Universal Soil Loss Equation (USLE) and the Wind Erosion

Equation (WEE), along with a soil's T-value, which is a measure of the amount of erosion in tons per year that a soil can tolerate without losing productivity. For most cropland soils, T values fall in the range of three to five tons per acre.

Holding pond: A reservoir, pit, or pond, usually made of earth, used to retain polluted runoff water for disposal on land.

Insecticide: A pesticide compound specifically used to kill or control the growth of insects.

Irrigation: Application of water to lands for agricultural purposes.

Lagoon: A reservoir or pond built to contain water and animal wastes until they can be decomposed either by aerobic or anaerobic action.

Leachate: Liquids that have percolated through a soil and that contain substances in solution or suspension.

Manure: The fecal and urinary defecations of livestock and poultry; may include spilled feed, bedding, or soil.

Nonpoint source pollution: Pollution that enters the environment from nonspecific areas via water runoff from a field or feedlot, such as areas in which fertilizers or other chemicals have been applied or animal manure is deposited, rather than from concentrated discharge points.

Noxious weeds: Undesirable plant species, excepting those protected by the Endangered Species Act of 1973, that are considered harmful, exotic, injurious, or poisonous and are targeted for control management under state and federal law. The Secretary of Agriculture may provide cost-sharing assistance to state and local agencies to manage noxious weeds in an area if a majority of the landowners in that area agree to participate in a noxious weed management program.

Nuisance: An offensive, annoying, unpleasant, or obnoxious thing or practice; a cause or source of annoyance, especially a continuing or repeated invasion or disturbance of another's right, or anything that works a hurt, inconvenience, or damage. Nuisances are commonly classified as public, private, or mixed.

Nutrients: Elements or compounds essential as raw materials for organism growth and development, such as carbon, nitrogen, and phosphorus.

Pesticides: Chemicals used by farmers to control plant and animal pests, including herbicides, insecticides, fungicides, nematicides, and rodenticides; to regulate plant growth; or to simplify harvest.

Point source pollution: From the Clean Water Act, meaning a source of pollution from "any discernable, 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, or vessel or other floating craft, from which pollutants are or may be discharged."

Pollutant: Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water.

Prescribed burning: Controlled application of fire to wild-land fuels in either their natural or modified state, under such conditions of weather, fuel moisture, and soil moisture as allow the fire to be confined to a predetermined area and at the same time to produce the intensity of heat and rate of spread required to further planned objectives of silviculture, wildlife management, grazing, and fire-hazard reduction.

Return flow: That portion of the water diverted from a stream that finds its way back to the stream channel either as surface or underground flow.

Right-to-Farm: Protection from nuisance suits for existing agricultural operations, so long as the agricultural operations meet specific requirements. Generally, an operation is required to have been in existence before the change in the area which resulted in the nuisance suit (the farmer/rancher was there first), and the nuisance must not have been created by the farmer's actions.

Rill erosion: Erosion which leads to the land becoming scoured and soil removed so that small channels, or rills, remain.

Riparian rights: Legal water rights of a person owning land containing or bordering on a water course or other body of water in or to its banks, bed, or waters.

Runoff: That part of precipitation, snow melt, or irrigation water that runs off the land into streams or other surface water. It can carry pollutants from the air and land into the receiving waters.

Sediment: The product of erosion processes; the solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice.

Seepage: Water escaping through or emerging from the ground along an extensive line or surface as contrasted with a spring, where the water emerges from a localized spot.

Sheet erosion: Erosion which leads to a generally uniform removal of topsoil over all of a field as a result of strong rains.

Soil: A dynamic natural body composed of mineral and organic materials and living forms in which plants grow on the surface of the earth. In the U.S. there are about 70,000 kinds of soil recognized in a nationwide system of soil classification.

Soil Conservation District: A legal subdivision of state government, with a locally-elected governing body, responsible for developing and carrying out a program of soil and water conservation within a geographic boundary usually coinciding with county lines. The nearly 3,000 districts (also called soil and water conservation districts, natural resources districts, resource conservation districts, resources districts, and conservation districts) provide assistance to producers and landowners.

Solid waste: Generally, any garbage, refuse, sludge from a waste supply treatment plant or air pollution control facility, and other discarded material.

Surface water: All water whose surface is exposed to the atmosphere.

Underground storage tank: Any one of a combination of tanks, including connected underground pipes, which is used to contain an accumulation of regulated substances, and the underground volume is 10 percent or more.

Vegetated buffer: Strips of vegetation separating a waterbody from a land use that could act as a nonpoint pollution source. Vegetated buffers are variable in width and can range in function from vegetated filter strips to wetlands or riparian areas.

Vegetated filter strip: Created areas of vegetation designed to remove sediment and other pollutants from surface water runoff by filtration, deposition, infiltration, adsorption, decomposition, and volatilization. A vegetated filter

strip is an area that maintains soil aeration as opposed to a wetland, which at times exhibits anaerobic soil conditions.

Vegetative cover: Trees or perennial grasses, legumes, or shrubs with an expected lifespan of five years or more.

Waste: Material that has no original value or no value for the ordinary or main purpose of manufacture or use; damaged or defective articles of manufacture; a superfluous or rejected matter or refuse.

Watershed: A drainage area or basin in which all land and water areas drain or flow toward a central collector such as a stream, river, or lake at a lower elevation. The United States is generally divided into 18 major drainage areas and 160 principal river drainage basins containing some 12,700 smaller watersheds.

Waterway: A natural or artificially constructed course for the concentrated flow of water.

Wetlands: Land that is characterized by an abundance of moisture and that is inundated by surface or groundwater often enough to support a prevalence of vegetation typically adapted for life in saturated soil conditions.

Zoning: The division of an area by legislative regulation into districts and the prescription and application in each district of regulations having to do with structural and architectural designs of buildings and of regulations prescribing uses to which buildings within designated districts may be put.

Appendix C - Authors

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