

ENVIRONMENTAL LAWS AFFECTING NEBRASKA AGRICULTURE

A Project of the

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

through the

**National Center for Agricultural Law
Research and Information**



Website: http://www.nasda-hq.org/nasda/nasda/Foundation/foundation_main.htm

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

Natural Resources Conservation Service

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

U.S. Environmental Protection Agency

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

Disclaimer

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

This guide has been prepared in part with funding from the Natural Resources Conservation Service (NRCS) cooperative agreement number NRCS 68-75-5-174 and the United States Environmental Protection Agency (EPA) grant number CX-825088-01-0.

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 (USDA) NRCS or EPA.

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

The background research and final documents were completed in June 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 <i>pp. 1-9</i>	Livestock and aquaculture operations, depending on size	NPDES and state construction and operation permits	EPA Regional Office and Nebraska Department of Environmental Quality
	Wetlands dredge and fill activity or dam, dike, or bridge building activities	Section 404 permit	US Army Corps of Engineers with EPA and Nebraska Department of Environmental Quality approval
	Impoundment irrigation	Permit required for storage and use	Nebraska Department of Water Resources
Groundwater <i>pp. 10-14</i>	Groundwater protection	Permit required for new wells in management areas	Nebraska Department of Environmental Quality, Nebraska Natural Resources Districts, and the Nebraska Director of Water Resources
Air Quality <i>pp. 16-17</i>	Incinerators and grain elevators	Permit may be required	EPA Regional Office or Nebraska Department of Environmental Quality
	General agricultural operations including odor, dust, or flies	No permit, but may be subject to nuisance suits	EPA Regional Office or Nebraska Department of Environmental Quality

Regulatory Area	Type of Activity	Permit Required	Agency
Solid Waste and Hazardous Waste <i>pp. 18-24</i>	Storage, treatment, or disposal of hazardous or solid waste	Permit may be required for disposal, treatment, or storage activities	EPA Regional Office and Nebraska Department of Environmental Quality
	Petroleum products and hazardous substances	Permit may be required for existing and new storage tanks; farm residential tanks for storing heating oil may require registration	Nebraska Fire Marshal and Nebraska Department of Environmental Quality
	Public notice of hazardous waste	No permit	Local Emergency Planning Committee
Pesticides and Chemigation <i>pp. 25-29</i>	Application and use of pesticides	No permit, but registration and a license may be required	EPA and Nebraska Department of Agriculture
	Use of pesticides around farmworkers	No permit, but training and notification is required	EPA, Nebraska Department of Environmental Quality, and Nebraska Department of Agriculture
	Record keeping	No permit, but all requirements must be met	Nebraska Department of Agriculture and EPA
	Chemigation	Permit may be required and applicators may need a license	Nebraska Department of Environmental Quality and Nebraska Natural Resources Districts
Wildlife Protection <i>pp. 30-32</i>	Taking of wildlife	Permit required if endangered or threatened species may be affected	U.S. Fish and Wildlife Service and Nebraska Game and Parks Commission
Waste Lagoons <i>pp. 45-46</i>	Storage of animal waste	Permit required if Nebraska Department of Environmental Quality determines potential violations exist	Nebraska Department of Environmental Quality

Regulatory Area	Type of Activity	Permit Required	Agency
Land Application of Waste <i>p. 47</i>	Land application of animal waste to cropland	No permit, but NRCS requirements must be followed	Nebraska Department of Environmental Quality
Dead Animal Disposal <i>p. 47</i>	Disposal of animal carcasses	No permit, but regulations must be followed	Nebraska Department of Agriculture

ENVIRONMENTAL LAWS AFFECTING NEBRASKA 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 Act¹ (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; agricultural 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 treatment controls and strategies to protect the water quality, and may include specific requirements placed in permits issued to 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 stormwater 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 which affect water sources, these activities may require a permit. Careful attention to 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 General or Nationwide Permit, substantial dredging or filling will usually require an individual permit.

² 40 C.F.R. § 122.23, app. B to pt. 122 (1996).

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.⁵ 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.

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 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.

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

⁴ 33 C.F.R. app. A to pt. 330 (1996).

⁵ 61 Fed. Reg. 65,874 (1996).

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 and ranchers implement BMPs on 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 a violation of the statute.

7. *Enforcement and Judicial Review*

Persons who violate the regulatory requirements of the CWA may 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

⁶ 33 C.F.R. § 323.4 (1996).

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 their 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 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.

1. Nebraska Environmental Protection Act

Producer Note: The Environmental Protection Act is the primary water quality legislation in Nebraska. Air quality and solid wastes are also regulated under the Act. The Act is administered by the Nebraska Department of Environmental Quality (DEQ) under the general supervision of the Environmental Quality Council (Council).

The Environmental Protection Act⁷ (Act) gives DEQ authority to regulate the quality of surface waters in Nebraska. The Act authorizes DEQ to develop comprehensive programs for the prevention, control, and abatement of new and existing sources of water pollution. DEQ establishes effluent guidelines and standards under the Act that, together with water quality standards, are used to set waste discharge permit requirements. It promulgates requirements and technical standards for the design, construction, and operation of waste disposal systems.

⁷ NEB. REV. STAT. § 81-1501 *et seq.* (1994 & Supp. 1996).

Producer Note: As required by the Environmental Protection Act, the Council has promulgated water quality standards for all surface waters in the state. The standards first set forth the use to be made of each river, stream, and lake in the state, including recreation, irrigation, or drinking water supply. The standards then describe for each type of pollutant the amount of waste that can be discharged into a river, stream, or lake without reducing the water quality below the minimum necessary for its intended use. These standards are used to set discharge permit requirements.

2. *Nebraska NPDES Program*

Producer Note: EPA has delegated the NPDES program in Nebraska to DEQ. Consequently, DEQ, rather than EPA, has primary responsibility for issuing permits for point source discharges and for enforcing related sections of the CWA. However, DEQ is required to administer the program in accordance with all federal statutes, regulations, and standards.

One of DEQ's most important duties under the Act is the issuance of permits for waste discharges into the state's surface waters. It may deny or revoke permits and issue orders prohibiting discharges when it determines that a producer is not in compliance with the standards established under the Act. The principal permit program administered by DEQ is the NPDES program.

3. *Concentrated Animal Feeding Operations*

Producer Note: An operation may be required to obtain permits in addition to the NPDES permit. In some cases, construction and operation permits may be required even when an NPDES permit is not required. For example, concentrated animal feeding operations are often required to obtain multiple permits.

A new feeding operation must generally obtain a construction permit if it requires waste treatment facilities such as holding ponds, liquid manure storage pits, tanks, or lagoons. The permit applicant is required to submit plans and specifications for the facility to obtain the permit. The plans and specifications must meet both state technical standards and facility location requirements. The facilities must be constructed in accordance with the plans and specifications and certified as such to DEQ.

In addition, a livestock feeding facility must obtain an operation permit before it begins feeding animals. The permit will contain operation requirements, including:

- Conditions for operation;

- Maintenance requirements; and
- Monitoring, inspection, and reporting requirements.

Producer Note: An NPDES permit will be required for livestock feeding operations in addition to construction and operation permits if the operation will discharge wastes into navigable waters, the operation will handle the minimum number of animal units specified by EPA regulations, or the operation will handle the minimum number of animal units set forth in the state regulations.

4. Enforcement of the Environmental Protection Act

Discharging wastes into surface waters, unless authorized by an NPDES or other permit, is a violation of the Act. Persons who violate the Act are subject to both civil and criminal penalties. Civil penalties include fines of no more than \$10,000 per day per violation, and each day of a continuing violation is a separate offense. In addition, liability also exists for the costs of restocking fish or replacing wildlife killed as a result of the violation.

Serious violations of the Act may be a felony, with less serious violations being misdemeanors. Convictions can result in jail sentences and fines, and DEQ may also seek an injunction from a court. The Attorney General or a county attorney represents DEQ in any litigation.

The Act also declares the discharge of wastes that reduce water quality below the standards set by the Council to be a public nuisance. In general, a nuisance is any activity or use of property that causes annoyance, harm, inconvenience, or damage to another. A nuisance is public when it violates public rights or causes an injury to the public at large instead of only nearby residents and landowners. State law gives parties injured by a public or private nuisance the right to sue the person causing or allowing the nuisance for damages (see discussion of nuisance laws on page NE-46).

However, the Act contains a special provision that declares that a livestock operation shall not be considered a public nuisance if reasonable techniques are employed to keep dust, noise, insects, and odor at a minimum, if the operation is in compliance with the Council's rules and local zoning regulations, and if the party alleging a nuisance took possession of his or her land after the livestock operation was permitted or, if no permit was required, after the livestock operation started business.

Producer Note: An administrative process is available to contest DEQ actions, including issuance or denial of permits, issuance of abatement orders, and assessment of civil penalties. Administrative procedures provide for a hearing before the DEQ Director or a designated hearing officer, and decisions of the Director may be appealed to the courts. Requests for hearings must be filed within 30 days of the issuance of a DEQ order. All appeals must be filed within 30 days after the Director's decision.

5. *Nebraska Nonpoint Source Pollution Control*

Producer Note: Nebraska has enacted a statute with the objective of reducing soil erosion, sediment deposition, and related water pollution caused by wind and by water runoff. The Act is administered by the Nebraska Natural Resources Commission (Commission) together with the Natural Resources Districts (Districts) of the state, and applies to both agricultural production and to nonagricultural land disturbing activities.

The Erosion and Sediment Control Act⁸ requires the Commission to develop a comprehensive erosion and sediment control program, which includes soil loss limits for the different soil types within the state. The Districts are authorized to investigate complaints of excessive soil erosion, and may issue administrative orders directing landowners and farm operators to bring their land into compliance with applicable soil loss limits. Districts may also petition the courts for orders directing immediate compliance with the administrative orders. Failure to comply with a court order can result in the landowner or operator being found in contempt of court and punished accordingly.

However, a farm owner or operator is considered to be in compliance with the Act if operating in strict compliance with a farm unit conservation plan approved by a District and if the operation is in compliance with established soil loss limits. The owner or operator is not required to install permanent soil and water conservation facilities listed in the farm unit conservation plan unless 90 percent cost sharing assistance is available. Some cost sharing assistance is available from the Nebraska Soil and Water Conservation Fund.

6. *Best Management Practices*

Nebraska has incorporated best management practices (BMPs) into aspects of its water quality program. However, with regard to livestock operations specifically, the DEQ has adopted regulations which reflect best management practices of livestock waste control facilities.⁹

⁸ NEB. REV. STAT. § 2-4601 *et seq.* (1991 and Supp. 1996).

⁹ NEB. ADMIN. R. & REGS. tit. 130, ch. 12 (1992).

The BMPs require livestock waste control facilities to be operated and maintained so as to prevent water pollution and generally protect the environment of the state.

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 changes which may occur in a particular program.

II. GROUNDWATER

A. Federal Groundwater Laws and Regulations

1. *Safe Drinking Water Act*

The objectives of the Safe Drinking Water Act¹⁰ (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 ground and surface drinking water source contamination.

a. *1996 SDWA Amendments*

The 1996 amendments¹¹ to the SDWA give EPA authority to target contaminants for regulation which could pose the greatest threat to public health. These 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 provisions include:

- Flexibility in monitoring of contaminants;
- Compliance exemptions for small water systems; and

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

¹¹ Safe Drinking Water Act Amendments of 1996, P.L. 104-182.

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

Under the 1996 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 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 contaminants present in tap water within 24 hours. The law also requires standards for high-priority microbial contaminants and disinfection by-products.

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, producers must closely monitor and maintain all previously required activity and consult frequently with their state agency that regulates drinking water to determine whether changes in an activity may be required by any new regulations.

b. Comprehensive State Ground Water Protection Program

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 this program, states could require the use of BMPs. Generally, 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 CSGWPP, 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.

c. Underground Injection Control Program

Underground injection means the subsurface emplacement of fluids by well injection. The SDWA provides an underground injection control (UIC) program which is intended to protect groundwaters that may reasonably be expected to supply any public water system from contaminants which may result in noncompliance with drinking water regulations or otherwise adversely affect public health.

The SDWA classifies all injection wells into one of the following categories:

- Class I) Wells used to inject hazardous wastes and industrial and municipal disposal wells which inject fluids beneath the lowermost formation containing an underground source of drinking water;
- Class II) Wells which inject fluids in connection with natural gas storage, conventional oil or natural gas production, enhanced recovery of oil or natural gas, and storage of hydrocarbons which are liquid at standard temperature and pressure;
- Class III) Wells which inject for extraction of minerals;
- Class IV) Wells used by generators of hazardous or radioactive waste disposing of the waste into or above a formation which within 1/4 mile contains an underground source of drinking water, and all other disposals of hazardous waste; and
- Class V) All injection wells not included in Classes I, II, III, or IV.

Generally, all underground injections are prohibited without a UIC permit. In addition, the construction of any well is prohibited until a permit has been issued.

Producer Note: Agricultural drainage wells are categorized as Class V wells in the UIC program. As a result, most producers will only need to be familiar with Class V well requirements.

Producers with Class V agricultural drainage wells are required to furnish inventory information concerning the wells to appropriate state agencies. In addition, states can require individual well permits. Class V agricultural drainage wells include:

- 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.¹²

In addition, producers are not allowed to inject contaminants into an underground source of drinking water which uses 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.

2. Groundwater State Management Plans

In Nebraska, the Department of Agriculture is required by the Nebraska Pesticide Act¹³ to adopt a state management plan for the prevention and mitigation of pesticides in ground and surface water. The plan may contain a list of limited use pesticides and include conditions for their use (see discussion of state pesticide laws on page NE-30).

¹² 40 C.F.R. § 146.5 (1996).

¹³ NEB. REV. STAT. § 2-2622 *et seq.* (Supp. 1996).

Producer Note: EPA has published a proposed regulation¹⁴ which will require states to develop groundwater management plans 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 agriculture department for effective dates.

B. State Groundwater Laws and Regulations

The Nebraska Ground Water Management and Protection Act¹⁵ recognizes that groundwater is a valuable resource. The objective of the statute is to protect both the quantity and quality of groundwater within the state. Every landowner is entitled to a reasonable and beneficial use of the groundwater underlying his or her land. However, this right is subject to the provisions of the Act and the rights of other landowners when the groundwater supply is insufficient for all users.

The Act also addresses the contamination of groundwater supplies by nonpoint source pollutants such as nitrate nitrogen fertilizers as well as pollution from point sources and deterioration caused by the dewatering of aquifers.

Producer Note: The Act was substantially modified in 1996. Legislative Bill 108¹⁶ added provisions for the integrated management of interconnected groundwater and surface water to the existing programs for managing groundwater quantity and quality.

The Natural Resources Districts may designate management areas for groundwater quantity, groundwater quality, integrated management, or any combination of the three. The Natural Resources Districts may also designate management areas for integrated management with participation and assistance by the state Department of Water Resources. DEQ may designate management areas on its own for groundwater quality. A special provision allows the Department of Water Resources to impose integrated management within the Republican River Basin before January 1, 1999.

The Act permits a number of mandatory groundwater controls to be imposed within management areas. These include:

- Allocation of water among users;

¹⁴ 61 Fed. Reg. 33260 (1996).

¹⁵ NEB. REV. STAT. § 46-656.02 *et seq.* (Supp. 1996).

¹⁶ 1996 Neb. Laws 108.

- Rotation in use among wells;
- Well-spacing requirements;
- Meters and other water use measuring devices;
- Reduction in irrigated acreage;
- Best management practices (BMPs) to conserve water and prevent contamination;
- Soil and water sampling and analysis;
- Educational programs;
- Water quality monitoring and reporting; and
- A moratorium on the drilling of new wells.

The following additional controls may be imposed on surface water within management areas:

- Increased monitoring and enforcement;
- A moratorium on additional appropriations of surface water;
- The use of reasonable water conservation measures; and
- Other reasonable restrictions on surface use.

The Natural Resources District in which a management area is located has the primary responsibility for enforcing groundwater controls. The Department of Natural Resources enforces surface water controls in integrated management areas in cases where DNR made the area designation on its own. DEQ can enforce controls necessary to protect groundwater quality. However, nothing in the Act limits the powers of the Nebraska Department of Health in relationship to groundwater protection.

Producer Note: Permits are required for new wells in management areas, and various types of allocations, restrictions, and controls may be imposed on water usage in these areas. Modifications of existing wells may also need a permit if the modified well would have needed a permit if newly built.

An application for a permit for a water well in a management area will be denied only in the following circumstances:

- The location or operation of the proposed well would conflict with any district regulations;
- The proposed use would not be a beneficial use of water for domestic, agricultural, manufacturing, or industrial purposes; or
- In the case of a late permit application, the applicant did not act in good faith to obtain a timely permit.

All permits must be issued or denied within 30 days of receipt of the application by the District. Any person who is aggrieved by any order of the Natural Resources District, the Director of DEQ, or the Director of Water Resources may appeal the order. The appeal must be filed within 30 days of a final decision by DEQ.¹⁷

Producer Note: All producers must determine if their operations are located within a management area. Check with the local Natural Resources District or DEQ to determine if special requirements exist for an operation's location.

III. AIR QUALITY

A. Federal Clean Air Act

The Clean Air Act¹⁸ (CAA) 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.

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 on 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.

¹⁷ NEB REV. STAT. § 84-917 (1994).

¹⁸ 42 U.S.C. § 7401 *et seq.* (1994).

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 usually handled under state nuisance laws or other state environmental laws or local ordinances. 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

Air quality is regulated in Nebraska under the Environmental Protection Act,¹⁹ the same statute which governs water quality and solid wastes. The general administrative and enforcement requirements contained in the Act and its regulations are the same for all three types of pollution. There are also specific provisions for the air quality programs the Act

¹⁹ NEB. REV. STAT. § 81-1501 *et seq.* (1994 & Supp. 1996).

establishes. However, agricultural activities have no special air quality requirements, and few agricultural operations will have air pollutant emissions subject to regulation under the Act. On-farm incinerators and grain elevators may be exceptions.

Producer Note: If an operation has an incinerator or a grain elevator, an operator should contact DEQ to determine if air quality requirements will affect the operation.

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.

A. Federal Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act²⁰ (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 producers:

- Disposal of hazardous waste on a farm could subject producers 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 producers to hazardous waste generator requirements.

1. *Disposal*

Producers 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.

²⁰ 42 U.S.C. § 6901 *et seq.* (1994).

Producers 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 tanks²¹ (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 (see discussion of state storage laws on page NE-26).

3. *Used Oil*

Producers 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. Producers 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 producer receives a permit from EPA. The producer 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.

²¹ 42 U.S.C. § 6991 *et seq.* (1994).

B. Federal Comprehensive Environmental Response, Compensation and Liability Act

The Comprehensive Environmental Response, Compensation and Liability Act²² (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" (PRPs). The government is also authorized to issue cleanup directives or seek injunctive relief ordering PRPs 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 PRPs.

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. Incarceration for up to three years for a first conviction and up to five years for subsequent convictions can also be imposed. 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 Act²³ (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.

²² 42 U.S.C. § 9601 *et seq.* (1994).

²³ 15 U.S.C. § 2601 *et seq.* (1994).

D. Federal Emergency Planning & Community Right to Know Act

The objectives of the Emergency Planning & Community Right to Know Act²⁴ (EPCRA) are 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.

EPCRA requires businesses which store chemicals subject to the Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard to submit information on 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 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

²⁴ 42 U.S.C. § 11001 *et seq.* (1994).

comply with the regulations. The regulations cover workers involved in clean up 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

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

1. *Nebraska Environmental Protection Act*

Solid and hazardous wastes are regulated under the Nebraska Environmental Protection Act.²⁵ The Act contains several definitions of waste:

- Solid Waste) Any garbage, refuse, or sludge from a waste treatment plant, water supply treatment plant, or air pollution facility, or any other discarded material including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, and mining operations and from community activities, but not including solid or dissolved materials in irrigation return flows or industrial discharges which are point sources and subject to CWA permits;
- Hazardous Waste) Solid waste, or any combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may:
 - ◆ Cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or
 - ◆ Pose a substantial present or potential hazard to human or animal health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed; and

²⁵ NEB. REV. STAT. § 81-1501 *et seq.* (1994 & Supp. 1996).

- Land Pollution) The presence upon or within the land resources of one or more contaminants, including, but not limited to refuse, garbage, rubbish, or junk, in quantities and of quality as will or are likely to:
 - ◆ Create a nuisance;
 - ◆ Be harmful, detrimental, or injurious to public health, safety, or welfare;
 - ◆ Be injurious to plant and animal life and property; or
 - ◆ Be detrimental to the economic and social development, the scenic beauty, or the enjoyment of the natural attractions of the state.

Producer Note: Solid waste for regulatory purposes is not necessarily solid in form. Producers must consider whether they may be violating either federal or state statutes when they dispose of wastes on their farms or ranches. Of particular concern are petroleum products, unused pesticides, herbicides and fertilizers and their containers, and other wastes that may contaminate ground or surface water or pose a threat to humans, livestock, or wildlife. The practice of burying items in a farm dump may no longer be permissible under RCRA or the Nebraska Integrated Solid Waste Management Act.

The Act directs DEQ to adopt regulations for solid waste disposal and for hazardous waste management. The solid waste regulations cover storage, collection, transportation, processing, resource recovery, and disposal. The protection of groundwater and the handling of hazardous materials are of particular concern.

The hazardous waste management regulations also address the generation of hazardous wastes, labeling, container requirements, treatment, storage, collection, transportation, processing, resource recovery, and disposal. As with solid waste regulations, groundwater protection is important.

The improper disposal of solid and hazardous wastes constitutes an unlawful act under the statute. Also unlawful is the discharge of those wastes into the waters or air or onto the lands of the state in excess of permitted amounts, or in a manner that would degrade environmental quality below established standards. Water and air pollution civil and criminal penalties will apply.

Producer Note: The Act also prohibits the accumulation of junk on any property if the junk is a potential hazard to health. An exception is made, however, for junk that is "purely agricultural in character."

2. *Nebraska Integrated Solid Waste Management Act*

The Nebraska Integrated Solid Waste Management Act²⁶ includes additional requirements for the handling, disposal, and regulation of solid waste by counties and municipalities. The Act also prohibits the disposal of solid waste at any place other than a landfill approved by DEQ, unless a permit has been obtained from the agency for disposal at another location. The Act allows the Council on Environmental Quality to adopt regulations exempting the following from the permit requirements:

- The use of dirt, stone, brick, or specified inorganic compounds for landfill, landscaping, excavation, or grading purposes;
- The placement of tires, posts, or ferrous objects, not contaminated with other wastes, for bank or blowout stabilization; and
- Other waste placement or depositing activities that are found not to pose a threat to the public health or welfare.

The Act further provides that no person will be in violation of the ordinance if:

- The solid waste generated by an individual is disposed of on that individual's property;
- The property is outside the corporate limits of a municipality; and
- DEQ determines that the county has not provided integrated solid waste management facilities for its residents.

3. *Petroleum Products and Hazardous Substances Storage and Handling Act*

Nebraska has also enacted the Petroleum Products and Hazardous Substances Storage and Handling Act.²⁷ The Act was passed to address the problem of leaking underground storage tanks and has two primary features. First, all producers with existing or new tanks for storage of a regulated substance must obtain a permit from the Nebraska Fire Marshal. Farm and residential tanks for storing heating oil must be registered with the Fire Marshal. Regulated substances include designated hazardous substances and all petroleum products except propane and natural gas. Exempt from these regulations are tanks that hold no more than 1,100 gallons of motor fuel for farm or residential use and tanks of the same size used for storing heating oil.

²⁶ NEB. REV. STAT. § 13-2001 *et seq.* (Supp. 1996).

²⁷ NEB. REV. STAT. § 81-15,117 *et seq.* (1994 and Supp. 1996).

The statute also creates a program for reimbursing cleanup costs of leaking underground tanks. Payments are made in accordance with an approved remedial action plan, and eligibility for reimbursement is based on a number of criteria found in the Act. These include whether the tank was in substantial compliance with statutory requirements, and whether timely notice of the spill was given to the Fire Marshal or to DEQ.

Persons violating the requirements of the Act are subject to a civil fine of not more than \$5,000 for each offense, with each day of violation constituting a separate offense. DEQ and the Fire Marshal may also seek injunctions against violations and threatened violations of the statute.

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

EPA also administers the Federal Insecticide, Fungicide, and Rodenticide Act²⁸ (FIFRA), 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.

I. 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.²⁹

²⁸ 7 U.S.C. § 136 *et seq.* (1994).

²⁹ Pesticides classified under FIFRA for restricted use are listed at 40 C.F.R. § 152.175 (1996).

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 (see discussion of state pesticide laws on page NE-30).

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

2. *Record Keeping 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.

<p>Producer Note: Individual states may have requirements which are more stringent than FIFRA.</p>

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 30 days of a restricted use pesticide application, all applicators must give a copy of the records of 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, certified private pesticide applicators 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 Pesticides and 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.³⁰

To facilitate the collection and proper disposal of canceled and other unusable or unwanted pesticide products, EPA has enacted the Universal Waste Rule (UWR).³¹ Many states have enacted rules similar in content and intent to UWR. Some states sponsor collections of these products on a regular basis.

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.

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: Nebraska, 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. Nebraska Pesticide Act

The Nebraska Pesticide Act³² contains provisions that both implement and supplement the requirements of FIFRA. The Act is administered by the Nebraska Department of Agriculture (Department), and its primary provisions are as follows:

³⁰ 40 C.F.R. pt. 165 (1996).

³¹ 40 C.F.R. pt. 273 (1996).

³² NEB. REV. STAT. § 2-2622 *et seq.* (Supp. 1996).

- The Department is required to adopt a state management plan for the prevention and mitigation of the occurrence of pesticides in groundwater and surface water;
- The state management plan may contain a list of state limited use pesticides, and the timing and conditions for use of state limited use pesticides may be regulated by the Department;
- The Act requires the registration of all pesticides which are distributed or transported within the state;
- Labeling requirements are imposed on all pesticides distributed within the state;
- Wholesale and retail pesticide dealers in the state must be licensed;
- Pesticide applicators must undergo training and/or testing and licensing, and restricted use and certain general use pesticides may be applied only by licensed applicators; and
- Applicators must maintain records of the utilization of all restricted use pesticides.

The Department is required to investigate all complaints when it has reason to believe that a violation of the Act has occurred. Improper use of pesticides and improper disposal of pesticides or pesticide containers are violations of the Act. Violations can be punished by administrative fines not exceeding \$5,000 and civil penalties not exceeding \$15,000 per offense, with each day of a continuing violation constituting a separate offense. In addition, violations may be prosecuted criminally as misdemeanors, and injunctive relief is also available.

2. *Nebraska Chemigation Act*

The Nebraska Chemigation Act³³ regulates the use of irrigation distribution systems to apply agricultural chemicals to prevent the contamination of water supplies. DEQ and the Natural Resources Districts are authorized to document, monitor, regulate, and enforce chemigation practices in the state.

The Act requires a permit for application of chemicals by means of chemigation. The permit may set forth conditions under which the chemigation will be conducted. A permit is not required for chemigation performed through an open discharge system. The Natural Resources Districts are authorized to conduct inspections of chemigation facilities to ensure compliance with the statute and with the terms of the permits. A permit may be suspended if the permit

³³ NEB. REV. STAT. § 46-1101 *et seq.* (1993 & Supp. 1996).

application was fraudulent or if the permit holder has violated any statutory provision or any regulation promulgated under the Act.

Producer Note: Chemigation applicators must undergo training and be certified under the statute. In addition, an individual must be licensed as a private applicator if applying restricted use pesticides.

The Act mandates that chemigation facilities be fitted with certain equipment to prevent contamination of water supplies. Signs are required to be posted giving notice that fields are being treated by chemigation when the chemicals being applied are restricted use pesticides or have labels which require posting. Chemigation accidents must be reported by the applicator or permit holder within 24 hours, and the permit holder is responsible for conducting cleanup operations in accordance with a recovery plan and under the supervision of the Natural Resources District or DEQ.

Violations of the statute or of the terms of a chemigation permit subject the offender to civil fines of up to \$1,000 per offense, with each day of a continuing violation being a separate offense. Criminal prosecution is also authorized for misdemeanors.

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 Act³⁴ (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 protected animals with meat illegally laced with pesticides. For example, in *Christy v. Hodel*,³⁵ a

³⁴ 16 U.S.C. § 1531 *et seq.* (1994).

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

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 producers use 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 CAFOs.

The Migratory Bird Treaty Act³⁶ implements conventions between the United States and Canada, Japan, Mexico, and the former USSR for the protection of migratory birds. Birds 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

³⁶ 16 U.S.C. § 703 *et seq.* (1994).

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.³⁷

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. Nebraska has laws protecting wildlife.

The Nebraska Nongame and Endangered Species Conservation Act³⁸ provides state protection to species listed as endangered or threatened under the federal Endangered Species Act. The Nebraska Game and Parks Commission is authorized to extend the protection of the Act to other wildlife and wild plants normally occurring within the state and not listed under the federal statute, but still endangered or threatened due to habitat destruction, overutilization, disease, predation, inadequate regulatory mechanisms, or other factors.

The Act prohibits the export of any endangered species from the state or the taking of the species within the state. It is also a violation to possess, process, sell, offer for sale, deliver, carry, transport, or ship any endangered species. The Act further prohibits the violation of any regulation pertaining to the conservation of endangered or threatened species.

The Act directs all state agencies to take steps to ensure that programs and projects do not jeopardize the continued existence of endangered or threatened species. The Game and Parks Commission is authorized to establish programs for the conservation of endangered, threatened, and nongame species.

Producer Note: Another Nebraska statute³⁹ permits a farmer or rancher to destroy predators of livestock or poultry. However, this statute specifically states that the provision does not apply to any species protected by the Nongame and Endangered Species Conservation Act, the Endangered Species Act, and other federal wildlife statutes.

³⁷ 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).

³⁸ NEB. REV. STAT. § 37-430 *et seq.* (1993 and Supp. 1996).

³⁹ NEB. REV. STAT. § 37-201 (Supp. 1996).

VII. 1996 FARM BILL

Producer Note: This section only discusses the environmental or conservation provisions of the 1996 Farm Bill.⁴⁰ 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.

1. Conservation Reserve Program

Producer Note: The Conservation Reserve Program⁴¹ (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, shelterbelts, 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

⁴⁰ Federal Agriculture Improvement and Reform (FAIR) Act of 1996, P.L. 104-127.

⁴¹ 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).

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, shelterbelts, 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.

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, comply with state noxious weed laws, and control all weeds, insects, and pests on the land. CRP participants must not produce agricultural commodities or allow grazing or harvesting on land subject to the contract without the approval of the U.S. Secretary of Agriculture. Finally, conservation compliance and Swampbuster requirements must be met as a condition of CRP eligibility.

2. *Wetlands Reserve Program*

The Wetlands Reserve Program⁴² (WRP) has been reauthorized through the year 2002 with a maximum enrollment of 975,000 acres. Of the new enrollments, 1/3 must be in permanent easements, 1/3 in 30-year easements or less, and 1/3 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.

⁴² Wetlands Reserve Program, 61 Fed. Reg. 42137 (1996) (to be codified at 7 C.F.R. pt. 620 and pt. 1467).

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.

3. Environmental Quality Incentives Program

The Environmental Quality Incentives Program⁴³ (EQIP) was established by the 1996 Farm Bill to provide a voluntary conservation program for farmers and ranchers who face serious threats to soil, water, and other natural resources. It provides technical, financial, and educational assistance primarily to designated priority areas) half of it targeted to livestock-related natural resource concerns and the remainder to other significant conservation priorities. NRCS has leadership for EQIP and consults with FSA to set the program's policies, priorities, and guidelines.

EQIP works primarily in priority areas where significant natural resource problems exist. In general, priority areas are defined as watersheds, regions, or areas of special environmental sensitivity or having significant soil, water, or related natural resource concerns. These concerns could include soil erosion, water quality and quantity, wildlife habitat, wetlands, and forest and grazing lands. Priority areas are identified through a locally-led conservation process. A local work group comprised of members of the conservation district and FSA county committees, and staff of NRCS, Cooperative State Research, Education, and Extension Service, and other federal, state, and local agencies interested in natural resources conservation identifies program priorities by completing a natural resource needs assessment and, based on that assessment, develops proposals for priority areas. The inclusion of conservation districts helps ensure that the work groups develop and implement conservation programs that fully reflect local needs and

⁴³ 62 Fed. Reg. 28258 (1997) (to be codified at 7 C.F.R. pt. 1466).

priorities. Priority area proposals are submitted to the NRCS State Conservationist, who selects those areas within the state based on the recommendations from the state Technical Committees.

EQIP can also address additional significant statewide concerns that may occur outside designated priority areas. In the first year of the program, at least 65 percent of the funds will be used in designated priority areas and up to 35 percent can be used for other significant statewide natural resource concerns. Additional emphasis is given to areas where state or local governments offer financial or technical assistance and where agricultural improvements will help meet water quality and other environmental objectives.

All EQIP activities must be carried out according to a conservation plan. Conservation plans are site specific for each farm or ranch, and can be developed by producers with help from NRCS or other service providers. Producers' conservation plans should address the primary natural resource concerns. All plans are subject to NRCS technical standards adapted for local conditions and are approved by the conservation district. Producers are not obligated, but are encouraged, to develop comprehensive or total resource management plans.

Producer Note: A producer wanting to participate in EQIP 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.

EQIP offers five to 10 year contracts that provide incentive payments and cost sharing for conservation practices called for in the site-specific plan. Contract applications will be accepted throughout the year. NRCS conducts an evaluation of the environmental benefits the producer offers. Offers are then ranked and the FSA County Committee approves for funding the highest priority applications. Applications are ranked according to environmental benefits achieved weighted against the costs of applying the practices. Higher rankings are given to plans developed to treat priority resource concerns to a sustainable level.

Cost sharing may pay up to 75 percent of the costs of certain conservation practices, such as grassed waterways, filter strips, manure management facilities, capping abandoned wells, wildlife habitat enhancement, and other practices important to improving and maintaining the health of natural resources in the area. Incentive payments may be made to encourage a producer to perform land management practices such as nutrient management and wildlife habitat management. These payments may be provided for up to three years to encourage producers to carry out management practices they may not otherwise use without the program incentive.

Eligibility is limited to persons who are engaged in livestock or agricultural production. Eligible land includes cropland, rangeland, pasture, forest, and other farm or ranch lands where the program is delivered. Owners of large confined livestock operations are not eligible for cost share assistance for animal waste storage or treatment facilities. However, technical,

educational, and financial assistance may be provided for other conservation practices on these large operations.

Producer Note: In general, USDA has defined a large confined livestock operation as an operation with more than 1,000 animal units. But, because of differences in operations and environmental circumstances across the country, the definition of a large confined livestock operation may be modified in each state by the NRCS State Conservationist, after consultation with the state Technical Committee and approval of the NRCS Chief.

Conservation practices for natural resource concerns related to livestock will receive 50 percent of the total EQIP funding. Total cost share and incentive payments are limited to \$10,000 per person per year and \$50,000 for the length of the contract.

Four of USDA's conservation programs were combined in EQIP, including the Agricultural Conservation Program, the Water Quality Incentives Program, the Great Plains Conservation Program, and the Colorado River Basin Salinity Control Program.

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 to 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 assuring compliance with Swampbuster provisions.

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;
- 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 Agreement⁴⁴ 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.

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

⁴⁴ NATURAL RESOURCES CONSERVATION SERVICE, INTERAGENCY WETLANDS MEMORANDUM OF AGREEMENT (1994). NRCS has the primary responsibility within USDA for interagency coordination and NRCS can distribute copies of the Memorandum of Agreement.

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 1996 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 other 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, Vermont, Virginia, 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.

<p>Producer Note: USDA has proposed regulations to implement WHIP.⁴⁵ However, changes could occur in the final regulations.</p>

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 considered proposed EPA standards for ozone and particulate matter. The task force has recommended that since the proposed standards are not based on scientific evidence, they should not be finalized at this time, especially the estimates relating to agricultural impacts. In addition, the task force called for new research on agricultural air quality issues.

⁴⁵ 61 Fed. Reg. 65485 (1996) (to be codified at 7 C.F.R. pt. 1470) (proposed Dec. 13, 1996).

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 Nebraska.

A. **Farmland Preservation**

1. *Zoning and Planning*

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.

Zoning⁴⁶ legislation authorizes counties and municipalities to divide their jurisdictions into zones and to permit or restrict the uses of land and structures within each zone. The agricultural use of land may be regulated and conditions may be imposed on the use of that land, which may include some environmental restrictions. However, farm buildings and structures are exempt from county zoning regulation.

2. *Conservation Easements*

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

Nebraska has adopted provisions which allow for conservation and preservation easements.⁴⁷ Conservation easements are interests in real property imposing limitations on the use of the property. Among the general purposes of conservation easements are:

- Retaining or protecting the property in its natural, scenic, or open condition;
- Assuring the property's availability for agricultural, horticultural, forest, recreational, wildlife habitat, or open space use;
- Protecting air quality, water quality, or other natural resources; and
- Other conservation purposes which may qualify as charitable contributions.

A preservation easement is similar to the conservation easement in that it is an interest in real property imposing limitations on the use of the property. Preservation easements are for the following general purposes:

- Preserving the historical, architectural, archaeological, or cultural aspects of real property; or
- Other preservation purposes which may qualify as charitable contributions.

⁴⁶ NEB. REV. STAT. § 19-901 *et seq.* (1991 & Supp. 1996).

⁴⁷ NEB. REV. STAT. § 76-2,111 *et seq.* (1996).

The easement is created by written agreement between the parties and normally the holder of the easement on the property is a governmental body or charitable organization. Approval or acceptance of the easement by the holder is required. Easements may be released by the holder if the release is approved by the governing body of the holder upon a finding that the easement no longer substantially achieves the conservation or preservation purposes for which it was created. Easements may also be assigned to other governmental bodies or charitable organizations, or modified or terminated by court order.

Real property which is the subject of an easement is required to be assessed with regard to its restricted uses.

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

Generally, a nuisance is any activity or use of property that causes annoyance, harm, inconvenience, or damage to another.⁴⁸ A nuisance is public when it violates public rights or causes an injury to the public at large. It is private when the damage is limited to nearby residents and landowners. State law gives parties injured by public or private nuisances the right to sue the person causing or allowing the nuisance for damages and for an injunction prohibiting the activity.

Nebraska nuisance laws also specifically define certain activities which constitute public or private nuisances and authorize cities, counties, and villages to enact ordinances to define, regulate, suppress, and prevent nuisances. Animal control programs, stagnant water, dead animals, carcasses, and offensive matter are specifically covered. Penalties for maintaining a nuisance include fines and jail terms. The government authorities can also seek an injunction against the offending activity.

⁴⁸ NEB. REV. STAT. § 18-1720 *et seq.* (1991).

2. *Right-to-Farm*

The Right-to-Farm Act⁴⁹ in Nebraska restricts the ability of neighboring land owners to bring nuisance claims against farm operations for noise, odor, dust, and the use of agricultural chemicals. However, this statute does not afford farmers absolute protection.

A livestock operation is not a public nuisance if:

- Reasonable techniques are employed to keep dust, noise, insects, and odor at a minimum;
- The operation is in compliance with Council regulations and all local zoning regulations; and
- The nuisance action is filed by a person whose date of possession of the land occurred after the issuance of appropriate permits, or after the operation of the feedlot began when an onsite inspection has been made and the inspection reveals that no permit is required.

C. **Livestock Waste Management**

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

1. *Livestock Waste Control Facilities*

Livestock waste control facilities are defined as any structure or combination of structures utilized to control livestock waste until it can be disposed of in a proper manner.

Livestock waste control facilities may include:

- Diversion terraces;
- Holding ponds;
- Debris basins;
- Liquid manure storage pits;

⁴⁹ NEB. REV. STAT. § 2-4401 *et seq.* (1991).

- Lagoons; and
- Other devices utilized to control livestock waste.

These facilities are required for an existing or proposed livestock operation when livestock wastes violate or threaten to violate water quality standards, groundwater quality standards, use classifications for Nebraska, or generally violate the Nebraska Environmental Protection Act. Livestock waste control facilities are also required when livestock wastes are potentially a threat for discharge into the waters of Nebraska.

Owners or operators must request DEQ to inspect their livestock operations to determine if violations or potential violations exist. Should, upon inspection, DEQ determine that livestock waste control facilities are required, the owner or operator must apply for a construction or operating permit.

Permits will contain requirements for design, storage capacity, manure disposal, and location of waste control structures, as well as requirements concerning the sufficiency of waste storage capacity.

2. Irrigation Distribution Systems

If livestock waste is distributed through any irrigation distribution system, except an open discharge system, the system must be equipped with an irrigation pipeline check valve assembly, involving:

- Vacuum relief valve;
- Inspection port; and
- Low pressure drain.

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 aid the producer when defending against alleged permit violations. While these recommendations do not have the force of law that agency regulations have, compliance with them will generally aid the producer.

D. Noxious Weeds

Noxious weed control⁵⁰ legislation creates a fund for each weed control authority. Funds are made available for expenses linked to noxious weed control. Each county in Nebraska has an elected Weed Board. The Board has authority to require landowners to control noxious weeds like the musk thistle. If a landowner fails to control the proscribed weeds, he or she may be fined and the cost of eradicating the weeds on their property assessed against them.

E. Aquaculture

Nebraska has created the Nebraska Aquaculture Board⁵¹ to encourage aquaculture within the state for the purposes of promoting agricultural diversification, augment food supplies, expand employment opportunities, promote economic activity, increase stocks of fish and other aquatic life, protect and better use and manage the natural resources of the state, and provide other benefits to the state. The Aquaculture Board has the authority to consider and recommend appropriate legislation to the legislature on most issues relating to aquaculture.

The term aquaculture is defined as the agricultural practice of controlled propagation and cultivation of aquatic plants or animals for commercial purposes and the term agriculture includes aquaculture.⁵²

F. Dead Animal Disposal

The owner or custodian of any animal which dies must, within 36 hours after receiving knowledge of the death of the animal, bury it at least four feet below the surface of the ground, unless the animal is taken to a licensed rendering establishment in the state.⁵³ Only authorized agents and employees of rendering establishments may remove an animal from the site of its death.

If a dead animal is not properly disposed of, the sheriff of the county is authorized to enter the premises and carry out the requirements of Nebraska law regarding proper disposal. However, the owner of the animal remains liable for the expenses of the disposal.

⁵⁰ NEB. REV. STAT. § 2-945.01 *et seq.* (1991 & Supp. 1996).

⁵¹ NEB. REV. STAT. § 2-5001 *et seq.* (Supp. 1996).

⁵² NEB. REV. STAT. § 2-3804.01 (1991).

⁵³ NEB. REV. STAT. § 54-743 (1993).

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.

Nebraska Department of Agriculture

301 Centennial Mall South
P.O. Box 94947
Lincoln, NE 68509-4947
(402) 471-2341

Nebraska Department of Environmental Quality

1200 N St., Ste. 400
P.O. Box 98922
Lincoln, NE 68509-8922
(402) 471-2186

Nebraska Department of Water Resources

P.O. Box 94676
Lincoln, NE 68509-4676
(402) 471-2363

Nebraska Game and Parks Commission

2200 N. 33rd St.
P.O. Box 30370
Lincoln, NE 68503-0370
(402) 471-0641

Nebraska Natural Resources Commission

301 Centennial Mall South
P.O. Box 94876
Lincoln, NE 68509-4876
(402) 471-2081

Environmental Protection Agency

U.S. EPA - Region 7
726 Minnesota Ave.
Kansas City, MO 66101
(913) 551-7000

USDA Natural Resources Conservation Service

100 Centennial Mall North
Federal Building, Rm. 152
Lincoln, NE 68508-3866
(402) 437-5300

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 Resources 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/>

U.S. Fish and Wildlife Service

Department of the Interior
1849 C Street, N.W.
Washington, D.C. 20240
(202) 208-4717
<http://www.fcs.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. Some variations may exist between state and federal definitions.

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.

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.

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: Any process where pesticides or other chemicals are added to irrigation water applied to land, crops, or both through an irrigation distribution system.

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, thousands of paraprofessionals, and nearly three million volunteers.

Diversion: A channel, embankment, or other manmade 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.

Fertigation: Any process where fertilizers are added to irrigation water applied to land, crops, or both through an irrigation distribution system.

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 (WEQ), 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 per year.

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, crops, or both 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 diffuse areas instead of a single point of origin or a specific outlet. Examples include areas in which fertilizer, animal manure, or other chemicals have been applied.

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 U.S. 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, including herbicides, insecticides, fungicides, nematocides, and rodenticides, used by farmers to control plant and animal pests, to regulate plant growth, or to simplify harvest.

Point source pollution: As defined by the Clean Water Act, 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 producer'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 to banks, beds, or waters of a person owning land containing or bordering on a water course or other body of water.

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, in contrast 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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