

STATE ENVIRONMENTAL LAWS AFFECTING NORTH CAROLINA AGRICULTURE

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

A Project of the

**National Association of State Departments
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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 consult with their own attorneys, consultants, or advisors, as well as federal, state, and local authorities responsible for the applicable environmental laws.

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

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

The background research and final documents were completed in October of 2000. 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, or phone (202) 296-9680..

Quick Reference Guide

Producer Note: The following chart is intended as a quick reference guide to permits that may be necessary for a particular operation. If a permit is necessary, refer to the listed page numbers that reference that section for further information. Contact the agencies listed in the final column for information on applications and the 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. 1-30</i>	Livestock and aquaculture operations, depending on size, and all animal waste management systems	NPDES permits, state general permit, land disposal permit, and animal waste management system permit (operators must be certified)	EPA Regional Office and the Division of Soil and Water Conservation (SWC), the Division of Water Quality (DWQ), & the Environmental Management Commission (EMC) within the North Carolina Department of Environment and Natural Resources (DENR)
	Wetlands dredge and fill activity or dam, dike, or bridge building activities	Section 404 permit	U.S. Army Corps of Engineers with EPA and DENR approval
	Water usage	Registration may be required, permit may be required in capacity use areas, depending on circumstances	EMC and the Division of Water Resources (DWR) within DENR
	Water well construction and use	Permit required in some circumstances, especially in capacity use areas, and construction standards must be followed	EMC

Regulatory Area	Type of Activity	Permit Required	Agency
Groundwater <i>pp. 30-34</i>	Groundwater protection	Permit required for point source discharges; BMPs must be followed	EMC
Air Quality <i>pp. 34-37</i>	Grain terminals and grain elevators	Permit required	EPA Regional Office and DENR
	General agricultural operations including odor, dust, or flies	No permit, but animal operations are required to comply with best management plans for the control of odors. In some cases these BMP plans must be submitted to the DENR.	EPA Regional Office and DENR
	Burning	Depends on the circumstances, but a permit is usually required	Division of Forestry Resources and DENR. Local governments may also require a permit.
Solid Waste and Hazardous Waste <i>pp. 37-41</i>	Storage, treatment, or disposal of hazardous or solid waste	Permit required for disposal, treatment, or storage activities	EPA Regional Office and Division of Waste Management (DWM) within DENR
	Public notice of hazardous waste	No permit	Local Emergency Planning Committee and North Carolina Department of Labor
Pesticides and Chemigation <i>pp. 41-44</i>	Application and use of pesticides	License required for commercial applicators. Certification usually required for all applicators. Permit may be required in some cases, including emergency application of restricted use pesticide	EPA and North Carolina Department of Agriculture (DOA) and North Carolina Pesticide Board (Board)
	Use of pesticides around farmworkers	No permit, but training and notification is required	DENR, DOA, and Board

Regulatory Area	Type of Activity	Permit Required	Agency
	Record keeping	No permit, but all requirements must be met	DOA and Board
Wildlife Protection <i>pp. 44-46</i>	Taking of wildlife	Permit required if endangered or threatened species may be affected	U.S. Fish and Wildlife Service

STATE ENVIRONMENTAL LAWS AFFECTING NORTH CAROLINA 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. North Carolina Water Quality Laws and Regulations

Most states have enacted clean water legislation. While these states' statutes usually contain provisions similar to those found in the parallel federal legislation, there may be significant differences. In fact, state statutes may impose requirements that are even more restrictive than the federal law. In all cases, federal Clean Water Act (CWA) requirements must be followed, and federal laws and regulations are enforced together with state laws and state regulations issued by state administrative agencies.

Subject to certain standards and conditions, the CWA permits the EPA to delegate administration of the federal NPDES (point source) permit program to the individual states. Most states, including North Carolina, abide by the federal NPDES permit standards but additionally administer their own state water quality programs. Along with the federal laws and regulations which address only point source pollution, North Carolina has enacted laws governing nonpoint source pollution.

Nonpoint source (NPS) pollution is described as pollution in runoff from stormwater and snowmelt from agricultural, urban, mined, and other lands. NPS pollution comes from diffuse sources rather than a discernable source. In other words, NPS pollution does not derive from a single source, and point source pollution is defined as a discernable, confined, and discrete discharge such as a discharge through a pipe, channel, or conduit. (See *Nonpoint Source Pollution Management* section on pages NC-16 to NC-17.)

Furthermore, for some of the 17 river basin areas designated as "Nutrient Sensitive Waters", North Carolina has enacted more stringent laws and regulations. These laws and regulations supercede the conventional statewide water quality laws and regulations. Farmers and ranchers should be aware of the differing regulatory treatment of areas designated as "Nutrient Sensitive Waters."

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.

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 North Carolina, the primary agency for environmental issues is the Department of Environment and Natural Resources (DENR). Within DENR, there are separate divisions (See appendix A, page NC-67?) that administer specific environmental areas.

1. North Carolina Water Quality Classifications

In order to maintain, protect, and enhance water quality, North Carolina has charged the Department of Environment and Natural Resources (DENR) with the responsibility of establishing standards for water quality and administering a complete program for water conservation, pollution abatement, and pollution control.¹

To carry out these duties, the Division of Water Quality (DWQ)² within DENR carries out the regulatory programs for the protection of groundwater and surface water. The DWQ also issues pollution control permits, monitors permit compliance, evaluates environmental quality, and carries out enforcement actions for violations of environmental regulations. The DWQ administers the policies and rules established by the Environmental Management Commission, a commission withing DENR.

The Environmental Management Commission (EMC),³ authorized by the North Carolina legislature to promulgate rules for air and water resources including dams, is a 17 member commission created within DENR. EMC established the series of classifications and standards for all waters of the state including both surface waters and groundwaters. The EMC also established basinwide water quality management plans for the 17 major river basins and minimum water supply and watershed protection requirements. The factors used by the EMC in assigning the classifications for the waters of the state are as follows:

¹ N.C. General Statutes § 143-211 and §§ 143B-279.1 to -279.4 (Bender 1999).

² The Department of Water Quality (DWQ) has five sections, Water Quality, Groundwater, Construction Grants and Loans, Laboratory, and Wetlands Restoration, and seven regional offices across the state besides the central office in Raleigh. Please note, the Water Quality section is a section within DWQ which is a division within the Department of Environment and Natural Resources (DENR).

³ N.C. General Statutes §§ 143B-282 to -285 (Bender 1999); The Governor appoints 13 members with 6 year terms, the President Pro Tempore of the Senate appoints 2 members with 2 year terms, and the Speaker of the House appoints 2 members with 2 year terms.

- Size, depth, surface area covered, volume, direction and rate of flow, stream gradient, and temperature of the water;
- Character of the district bordering the water, including the development and economic interest established in relation to the particular use of the water; and
- Present and future uses of the waters, such as domestic consumption, bathing, fishing, and transportation or disposal of wastes.

When revising or adopting new standards, the factors EMC considers include the use and value of the water as a public water supply, its use for the propagation of fish and wildlife, its use for recreation and agriculture, and other economic and social costs.

As to groundwater standards, EMC considers the natural quality of the water below the land surface, condition of occurrences, recharge, movement, discharge, vulnerability to pollution from wastewaters, and potential for improvement of the quality and quantity of the water.⁴

2. *North Carolina NPDES Program*

Producer Note: The EPA has delegated the federal NPDES program and other related sections of the Clean Water Act to North Carolina.⁵ State agencies are required to administer the program in accordance with all federal statutes, regulations, and standards. Accordingly, North Carolina authorized DENR to not only carry out the federal and the state NPDES (point source) pollution program but also North Carolina’s nonpoint source pollution program. Consequently, two entities within DENR, the Division of Water Quality (DWQ) and the Environmental Management Commission (EMC) have responsibility to maintain, protect, and enhance water quality. Together DWQ and EMC are charged with the responsibility of establishing standards for water quality and administering a complete program for water conservation, pollution abatement, and pollution control.⁶ North Carolina requires all waste systems to be permitted. Thus, DWQ issues permits for point source discharges as well as nonpoint source permits for animal feeding operations. Non-discharge permits are issued by the “Non-discharge Permitting Unit” of the DWQ.

One of North Carolina’s state functions under state administration of the otherwise federal NPDES (point source) permit program is the issuance of permits for point source discharges into the state’s surface

⁴ N.C. General Statutes §§ 143-214.1, -214.5, -215.8 (Bender 1999).

⁵ Of course, any valid NPDES permit issued by EPA will satisfy any requirements for a state NPDES permit.

⁶ N.C. General Statutes § 143-211 and §§ 143B-279.1 to -279.4 (Bender 1999).

waters.⁷ When granting these NPDES permits, the DWQ may impose certain conditions⁸ that it deems necessary to prevent a significant increase in water pollution in the state. Additionally, the DWQ may deny, modify, or revoke a permit if it determines that the holder is not in compliance with the CWA, that permit conditions have been violated, that material facts have been misrepresented, or that there has been a change in the conditions that existed when the permit was granted.

The North Carolina NPDES program primarily targets the control of water pollution by providing the requirements and procedures for NPDES permits for point source discharges or for proposals to discharge into the surface waters of the state. Particularly targeted are activities which include the construction, operation, and contracting for construction of sewer, disposal, treatment, or pretreatment systems plus discharges or proposals to discharge stormwater⁹ that causes water pollution. Although NPDES permits have associated fees, NPDES fees are disregarded if the permit fee pertains to farming operations.

a. North Carolina General NPDES Permits

In North Carolina, various point source discharges to surface waters may be “deemed” permitted under a general NPDES permit¹⁰ provided no water quality standards are contravened.¹¹ These specific point source discharges are identified by state regulation.¹² In these cases, no separate permit must be issued. Discharges that may be deemed to be permitted and, thus, fall under a general NPDES permit include:

- Filter backwash and draining associated with swimming pools;
- Filter backwash from raw water intake screening devices;
- Condensate from residential or commercial air conditioning units;

⁷ N.C. General Statutes § 143-215.1 (Bender 1999). See also N.C. Administrative Code 15A Sections 2H.0100 *et seq.*

⁸ Conditions are controlled by incorporating the condition within the permit itself.

⁹ Stormwater from industrial dischargers and municipalities serving populations greater than 100,000 have regulated stormwater discharges. Stormwater discharges other than these two exceptions fall outside mandatory control under the CWA but may fall under state control.

¹⁰ General NPDES permits may be effective for up to five years before renewal is required.

¹¹ N.C. Administrative Code 15A Section 2H.0106.

¹² When it is determined that water quality standards may be contravened, an individual NPDES permit must be obtained.

- Individual non-commercial vehicle washing operations;
- Flushing and hydrostatic testing water associated with utility distribution systems;
- Discharges associated with emergency removal and treatment activities for spilled oil authorized by the federal or state on-scene coordinator when such removals are undertaken to minimize overall environmental damage due to an oil spill;
- Groundwaters generated by well construction or other construction activities;
- Landscape irrigation, water from crawl space pumps, and foundation or footing drains;
- Street wash water; and
- Flows from fire fighting.

With a few exceptions listed below, whenever construction or operation of the facilities will result in a discharge into navigable waters including wetlands,¹³ discharge sources must also obtain a water quality certification¹⁴ from DWQ¹⁵ in order to obtain an NPDES permit, regardless of whether it is a general NPDES permit or an individual NPDES permit. Note, however, an application for water quality certification in conjunction with an individual NPDES permit includes public notice. Application for water quality certification in conjunction with a general NPDES permit requires only submission of the required information to DWQ. The application for water quality certification must include the following information:

- Date of application;
- Name, address, and phone number of the property owner;
- Name of the person primarily responsible for the activity to be certified;
- Nature of the activity;
- Whether discharge is proposed or already occurred;
- Precise location of the discharge and its receiving waters;

¹³ Navigable waters as described in 33 CFR Part 323 including wetlands as defined at 33 CFR 328.3 and 40 CFR 230.3.

¹⁴ N.C. Administrative Code 15A Section 2H.0500.

¹⁵ For C I areas, the application for certification may be submitted to the Division of Coastal Management.

- Description of the type waste treatment facilities; and
- Detailed map or sketch delineating the boundaries of the lands owned, structures, and waters present.

Although a notice of intent¹⁶ must be submitted to DWQ, the following general NPDES discharge sources are exceptions to the requirement to obtain water quality certification and are deemed to be certified under a general “Certificate of Coverage” certification without written concurrence of the DWQ.¹⁷

- Once-through non-contact cooling waters with no biocidal additives;
- Mine dewatering facilities;
- Water filtration facilities;
- Swimming pool filter backwash facilities;
- Seafood packing facilities;
- Oil terminal storage facilities;
- Tourist gem mines;
- Sand dredges;
- Trout farms;
- Aquifer restoration;
- Stormwater discharges; and
- Other discharges that involve the same or similar operations, have similar discharge characteristics, or have the same effluent limitations.

¹⁶ The notice of intent must be submitted on a DWQ form.

¹⁷ N.C. Administrative Code 15A Section 02H.0506 the certification application section setting forth the activities listed in N.C. Administrative Code 15A Section 2H.0501(c)(2) for general certification.

Public notice¹⁸ is required for each pending application for water quality certification in conjunction with an individual NPDES permit, but no notice is required for an application for water quality certification in conjunction with a general NPDES permit. (Notice for water certification should not to be confused with public notice required for application for a general or individual NPDES permit.)

Public notice is also required for each application for a general NPDES permit¹⁹ or an individual NPDES permit, i.e., permits allowing discharge to surface water, at least 45 days prior to any proposed final action by DWQ. Notice must be by publication in a newspaper having general circulation in the county of the activity and by mailing the notice to all persons and agencies listed on the NPDES permit mailing list.²⁰

In cases of accidental spills or discharges²¹ of 1,000 gallons or more of untreated waste to the surface waters of the state, the owner or operator of an animal waste management system is required to issue a press release in a newspaper having general circulation in the county where the discharge occurred setting out details of the discharge within 48 hours. When the spill or discharge is 15,000 gallons or more, the press release must have approval by DWQ prior to publication in a newspaper having general circulation in the counties significantly affected by the discharge within 10 days. Records of the publication of the notice should be maintained. Contact DWQ for details.

b. North Carolina Individual NPDES Permits

An individual NPDES permit is required for activities²² that discharge or have the potential to discharge into the surface waters of the state but do not fall under the general NPDES permit activities as described in the above section. Examples of discharges that may require an individual NPDES permit include:

- Making a water outlet into waters of the state;
- Construction, operation, or contracting construction of a sewer, disposal, treatment, or pretreatment system;

¹⁸ N.C. Administrative Code 15A Section 02H.0109.

¹⁹ General NPDES permit applications require the inclusion of waste management plans. Waste management plans are the backbone of North Carolina's water quality control program.

²⁰ The NPDES permit mailing list includes persons requesting placement on the list, pollution control agencies of North Carolina and surrounding states (VA, SC, TN, and GA), DENR, the lead agency for Section 208(b) CWA plans, the state agency for Section 303(e) of CWA, U.S. Army Corps of Engineers, and any other federal, state, or local agency upon request.

²¹ N.C. General Statutes § 143-215.10C(h) (Bender 1999).

²² N.C. General Statutes § 143-215.1(a)(1) through (a)(12) (Bender 1999).

- Alteration, extension, or changes in a sewer, disposal, treatment, or pretreatment system;
- Increased quantities of waste discharged through any outlet affecting the receiving waters;
- A change in the nature of the waste discharged that would exceed the effluent standards or adversely affect the water quality;
- Causing waste to mix with water in violation of water quality standards;
- Causing waste from pretreatment facilities to discharge such that it would violate an effluent standard or adversely increase its quantity or change the nature of its waste discharged;
- Disposal of sludge from treatment works;
- Causing any pollutant to enter a defined managed area of state waters for harvestable freshwater, estuarine, or marine plants or animals;
- Stormwater discharges²³ that result in water pollution to waters classified as shellfish waters, water supply watersheds, and outstanding resource waters; stormwater disposal in coastal counties; stormwater from other nonpoint sources; and
- Construction or operation of an animal waste management systems equal to or greater than 75 horses, 100 head of cattle, 250 swine, 1,000 sheep, or 30,000 poultry (with a liquid waste system) without a permit.

The Director of DENR may require any person, otherwise eligible for coverage under a general permit, to apply for an individual NPDES permit by notifying that person that an application is required. Coverage by any previous general permit automatically terminates upon issuance of the individual permit. Reasons for requiring an application for an individual permit may be:

- The discharge is a significant contributor of pollutants;
- Conditions change at the permitted site, altering the components or characteristics of the discharge such that the discharge no longer qualifies for coverage under a general permit;
- Noncompliance with the general permit;
- Noncompliance with DWQ rules;

²³ N.C. General Statutes §143-214.7 (Bender 1999).

- A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;
- A water quality management plan is not approved after the issuance of the general permit;
- A determination that the water receiving the discharge is not meeting applicable water quality standards.

In conjunction with applications for individual NPDES permits, there are public notice requirements for water quality certification and public notice requirements for the permit application itself.

Water quality certification notice for the individual NPDES permit must be published one time at least 15 days prior to final action on the application in a newspaper with general circulation in the county where the discharge will occur. The notice must set forth the name and address of the applicant, the action requested, the nature and location of the discharge, the proposed final action date by DWQ²⁴, and that the reader may inspect further information on file with DWQ. A public hearing may be held prior to granting or denying certification to review public comments if the Director of DWQ determines that it is in the public interest. The evaluation of requests for certification are determined on the basis of whether the proposed activity has the potential to degrade any significant existing uses of surface waters or wetlands as classified by EMC. Certification is issued upon the determination that water quality standards are met including protection of existing uses.

3. North Carolina's Nonpoint Source Management Program

North Carolina's Nonpoint Source Management Program (NPSMP) fulfills the requirements of the Water Quality Act of 1987 by identifying procedures that address nonpoint source pollution and procedures that restore and protect surface, groundwater, and wetlands. The NPSMP sets forth outlines an action plan to implement the program and the BMPs that reduce pollution loadings. The NPSMP calls for a Basinwide Water Quality Management Plan for each of the 17 river basin areas. Each basinwide plan uses a watershed-based approach which undergoes continuous five-year reviews. The basinwide plans call for the integration of point and nonpoint source pollution control programs, the setting of progressive pollution reduction goals for any waters designated as "Nutrient Sensitive Waters" (See next section discussion.), procedures for permitting, the collection of basinwide data, and annual progress reports. The purpose of the watershed approach is to better identify water quality problems, help develop appropriate pollution management strategies, maintain and protect water quality, maintain and protect aquatic habitat, and assure equitable distribution of waste capacity for dischargers.

²⁴ Or Division of Coastal Management according to N.C. Administrative Code 15A Section 7J.0206 or U.S. Army Corps of Engineers according to their established procedures.

The NPSMP program includes the establishment of NPS teams for each river basin. These teams include representatives from state and federal agencies, Farm Bureau, industry groups, local governments, researchers, environmental groups, and local resource users. An NPS workgroup of key state and federal NPS agencies provide oversight and direction for expenditures of Section 319 Clean Water Act funds.

North Carolina's NPS Management Program includes:

- Voluntary and regulatory approaches;
- Technology-based and water quality-based approaches;
- Prioritization of its impaired and unimpaired waters; and
- An attempt to include all stakeholders.

The multifaceted approach of the NPSMP is an attempt to be both efficient and effective for water quality protection.

4. North Carolina Nutrient Sensitive Waters

The waters of the Neuse River Basin have been classified as “Nutrient Sensitive Waters” (NSW). Therefore, the EMC has enacted rules that require by the year 2003 the collective achievement of a 30% reduction in the average annual load of nitrogen that is delivered to the Neuse River Estuary from all sources of pollution [calculated using the total maximum daily load (TMDL) of pollutants that can be added without significantly reducing the water quality] . To achieve this goal, specific rules and regulations have been enacted that require owners and operators of agricultural lands in the Neuse River Basin to choose one of two options:

- Implement standard best management practices (BMPs) on their land as specified in the rule or
- Participate in the local strategy group, i.e., the Local Advisory Committee that sets forth site-specific BMPs that reduce nitrogen pollution.²⁵

The standard BMP option in “Nutrient Sensitive Water” areas requires protection of basin waters using a 50 forest vegetation buffer. The 50 foot riparian buffer must consist of a minimum of 30 feet of

²⁵ N.C. Administrative Code 15A Section 2B.2038. Sign up for local strategy groups, i.e., Local Advisory Committees, was required by August 1, 1999. Local Advisory Committees are made up of representatives of SWC, NRCS, DOA, Cooperative Extension Service, local conservation district members, and farmers approved by SWC with guidance and oversight by a Basin Oversight Committee.

undisturbed forest on all sides of intermittent or perennial streams plus a maximum of 20 feet of grass, trees, and other vegetation. Man-made water courses such as ditches are allowed a narrow exemption in certain circumstances. The standard option, however, does not require this buffer if a farmer uses both approved nutrient management BMP's and water control BMP's.

To participate in the local strategy option, owners and operators must sign up with a Local Advisory Committee (LAC), commit to an individual plan, and implement the BMPs as determined by the committee. LACs are coordinated by a multi-agency basin oversight committee.

b. North Carolina General Non-discharge Permits

Generally, all waste systems (all those being constructed, altered, extended, or operated) in North Carolina require a permit. There are, however, waste systems in which the waste does not discharge into surface waters but does discharge onto or below land surface.²⁶ These systems are called non-discharge systems. Non-discharge systems are “deemed” to be permitted, i.e. they are covered by state agency regulations called a general non-discharge permit and, thus, do not require an individual NPDES permit unless the state determines that the operation poses certain risks to water quality. Owners or operators of non-discharge systems must, however, obtain certification²⁷ that the system will properly collect, treat, store, or apply a waste to land such that no discharge of pollutants occurs to surface waters of the state by any means except as a result of a storm event more severe than a 25-year, 24-hour storm. Non-discharge systems²⁸ that may be “deemed” permitted under a general non-discharge permit are identified as:

- Sewer systems;
- Disposal systems;
- Treatment works;
- Residual and residue disposal utilization systems;
- Certain animal waste management systems²⁹ where waste does not reach the surface waters by runoff, drift, direct application, or direct discharge during operation but may discharge

²⁶ N.C. Administrative Code 15A Section 2H.0217.

²⁷ N.C. Administrative Code 15A Section 6F.0001.

²⁸ Non-discharge waste systems do not include sanitary sewage systems or solid waste management facilities permitted under the Commission for Health Services. On a case-by-case basis, the Director of DENR may determine that a facility should not be deemed to be permitted based on existing or projected environmental impacts.

²⁹ Animal waste management systems with an adverse impact on water quality, however, may be required to obtain an approved animal waste management plan or an individual NPDES permit from DENR.

onto or below land surface (See *Animal Feeding Operations* section on pages NC-20 to NC-23);

- Individual land applications receiving compost or other stabilized nonhazardous and nontoxic residuals that meet EPA's Processes to Further Reduce Pathogens (PFRP) or Class A residuals; applications that are registered by DOA as a commercial fertilizer or soil amendment; applications that are utilized at agronomic rates;³⁰ and applications that are sold and used exclusively in bag form.
- Storage sites for petroleum contaminated soils if utilized for less than 45 days, storage is on 10 mil or more plastic, and provisions for leachate and runoff have been made and approved by DENR;
- Land application sites for petroleum contaminated soils with 50 cubic yards or less of soils from each source with DENR approval;
- Swimming pool filter backwash and pool drainage that is discharged to the land surface;
- Drilling muds, cuttings, and wellwater from the development of wells;
- Facilities that rest on an impervious weight-bearing foundation for composting dead animals if operated under a roof, if constructed and operated in accordance with North Carolina's DOA guidelines, and if approved by the State Veterinarian;
- Operations that involve routine maintenance or the rehabilitations of existing sewer lines (a North Carolina Professional Engineer's certification must be submitted to the appropriate Regional Supervisor after completion);
- Treatments of petroleum contaminated soils; and
- Stormwater management systems (but not sanitary sewage systems or solid waste management facilities permitted under the Commission for Health Services).

³⁰ The amounts recommended in the nutrient management standard of the USDA NRCS Technical Guide IV or the amounts recommended by the North Carolina DOA and Cooperative Extension Service at the time of certification of the animal waste management plan.

Individual pump and haul permits³¹ are not required for the transport of animal waste from animal waste management systems permitted under the general non-discharge permit.

c. North Carolina Agriculture Cost Share Program

Producer Note: North Carolina has enacted legislation to establish the Agricultural Cost Share Program, a program to reduce the input of nonpoint source pollution from agriculture sources into its waters. The program is administered by the Soil and Water Conservation Commission (SWCC).

The Agricultural Cost Share Program for Nonpoint Source Pollution Control³² provides technical and financial assistance to farmers and ranchers who implement certain conservation practices. Under the program, the State will compensate participating farmers up to 75% of the average cost of each BMP they implement to reduce nonpoint source pollution. Payments are limited to a maximum of \$75,000 per year per applicant. The farmer's 25% portion can be provided by in-kind support of the practice.

Approved BMPs include the following: conservation tillage, diversions, filter strips, field borders, critical area planting, sediment control structures, sod-based rotations, grassed waterways, strip-cropping, terraces, cropland conversions to permanent vegetation, grade control structures, water control structures, closure of lagoons, emergency spillways, riparian buffers, odor control best management practices, insect control best management practices, erosion control practices, livestock exclusions from streams, stream crossings, plus animal waste management systems and applications.

5. North Carolina Animal Feeding Operations

Producer Note: Although an animal feeding operation may not be required (see below) to obtain an NPDES permit under federal EPA guidelines, under North Carolina rules and regulations, the construction, alteration, expansion, or operation or contracting to construct any animal feeding operation requires a waste permit. Additionally, two annual inspections of the animal waste management system and certification of the operator are also required if the number of animals it is designed for and actually serve are greater than or equal to 75 horses, 100 head of cattle, 250 swine, 1,000 sheep, or 30,000 birds (using a liquid waste system).

³¹ Pump and haul permits may be issued for a period up to six months on a case by case basis to domestic wastewater treatment facilities in cases of environmental emergencies, nuisance conditions, health problems, or other unique situations when no other superlative alternative is reasonably available.

³² N.C. General Statutes §§ 143-215.74 to -215.74B (Bender 1999).

North Carolina has incorporated the federal EPA regulatory scheme for Concentrated Animal Feeding Operations (CAFOs) into its more stringent state regulations.³³ Under the federal scheme an NPDES permit would be required if the operation is:

- An Animal Feeding Operation (AFO) with 300 or more animal units and discharges or has potential to discharge animal waste into navigable the waters of the U.S.,³⁴
- An Animal Feeding Operation (AFO) with 1,000 or more animal units,³⁵ or
- A feedlot which is defined as any lot, building or combination specifically designed for the confined feeding, breeding, or maintenance of animals for at least 45 days per year and during which time waste may accumulate or where animal concentration is such that a vegetative cover cannot be maintained; the 45 days are not required to be consecutive.

However, even though an NPDES permit may not be required under the federal regulatory scheme, North Carolina requires a waste permit, as detailed in the following section, to construct, expand, operate, or contract to construct any animal feeding operation.³⁶ In addition to a permit, North Carolina also requires two annual inspections of the animal waste management system and certification of the operator.³⁷

³³ N.C. Administrative Code 15A Sections 2H.0122 and 2H.0123.

³⁴ Generally 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.

³⁵ Generally, 1,000 animal units is the equivalent of 1,000 slaughter or feeder cattle, 700 mature dairy cattle, 2,500 swine 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.

³⁶ N.C. General Statutes § 143-215.1(d) and §§ 143-215.10A to -215.10M (Bender 1999).

³⁷ For operators of animal waste management systems serving 75 or more horses, 100 or more cattle, 250 or more swine, 1,000 or more sheep, or 30,000 or more poultry with a liquid animal waste management systems must be operated by a certified operator. To become certified, an operator must take 10 hours of classroom training prior to taking an examination. Operators must then take 6 hours of additional training every subsequent 3-year period. This training program is designed to provide operators of animal waste management systems the basic understanding needed to operate and maintain these systems in an efficient and environmentally sound manner. Any operator who fails to take the required training within 30 days of the end of the 3-year period shall be required to take and pass the examination again in order to renew the certificate. The operator certification program is administered by the Water Pollution Control Systems Operators Certification Commission (WPCSOCC), an 11 member commission appointed by the Commissioner of Agriculture, the Secretary of DENR and with approval by EMC. An annual certification fee is required. The WPCSOCC may revoke certificates for fraud, failure to use reasonable care or judgment, or failure to properly perform the duties. The WPCSPCC may also assess a fine of \$1,000 per violation for any willful violations of the certification requirements.

There are animal waste systems in which the waste does not discharge into surface waters but does discharge onto or below land surface.³⁸ These systems are called non-discharge systems (See General Non-Discharge Permits section on page NC-20) and may include certain animal feeding operation waste management systems. Non-discharge systems are “deemed” to be permitted and fall under a general non-discharge permit,³⁹ i.e. they are covered by state agency regulations. These systems do not require an individual NPDES permit unless the state determines that the operation poses certain risks to water quality.⁴⁰

Those animal feeding operations with waste management systems that discharge waste such that it does not reach the surface waters by runoff, drift, direct application, or those that do not directly discharge during operation⁴¹ may qualify for general non-discharge permits if they also meet the following criteria:

- Existing animal waste systems that have an approved animal waste management plan (See following *Animal Waste Management Plans* section.) and are designed for and actually serve fewer than:⁴²
 - 75 horses;
 - 100 head of cattle;
 - 250 swine;
 - 1,000 sheep; or
 - 30,000 birds (with a liquid waste system).

- Poultry operations with an approved animal waste management plan:
Using a dry litter system if records are maintained for one year and include:
 - the date the waste was removed;
 - the estimated amount removed;
 - the location where it was applied; andthe waste is not:

³⁸ N.C. Administrative Code 15A Sections 2H.0217 *et seq.*

³⁹ N.C. General Statutes § 143-215.1(d) (Bender 1999).

⁴⁰ Animal waste management systems with an adverse impact on water quality, however, may be required to obtain an approved animal waste management plan or an individual NPDES permit from DENR.

⁴¹ N.C. Administrative Code 15A Section 6F.0001; Owners or operators of non-discharge systems must, however, obtain certification that the system will properly collect, treat, store, or apply a waste to land such that no discharge of pollutants occurs to surface waters of the state by any means except as a result of a storm event more severe than a 25-year, 24-hour storm.

⁴² All animal waste management systems that are designed for and actually serve a number equal to or greater than 75 horses, 100 confined head of cattle, 250 swine, 1,000 sheep, or 30,000 confined poultry using a liquid animal waste management system may not be “deemed” permitted by regulation and are subject to the general non-discharge permitting process or the individual permitting process.

- ▼ applied greater than agronomic rates;⁴³
- ▼ stockpiled within 100 feet from perennial waters;⁴⁴ and other waters as determined by local Soil and Water Conservation districts; or

Using a third party waste application service if the operator's records are kept for one year include the third party's:

- name;
 - address; and
 - phone number.
- Land application sites with an approved animal waste management plan under separate ownership from the waste generator which receive animal waste from feedlots and the waste is applied by the generator or by the third party:
 - At no greater than agronomic rates;⁴⁵ and
 - With a vegetative buffer of at least 25 feet from perennial waters⁴⁶ if a wet waste application system is used.
 - New and expanded animal waste management systems with an approved animal waste management plan and serving equal to or greater than:
 - 75 horses;
 - 100 head of cattle;
 - 250 swine;
 - 1,000 sheep; or
 - 30,000 birds (with a liquid waste system).

As indicated above in the list of requirements that must be satisfied for general non-discharge permits, an animal operation must have an approved and certified waste management plan. (See *Animal Waste Management Plans* section at NC-27 for details.)

⁴³ The amounts recommended in the nutrient management standard of the USDA NRCS Technical Guide IV or the amounts recommended by the North Carolina DOA and Cooperative Extension Service at the time of the certification of the animal waste management plan.

⁴⁴ Perennial waters of the state are defined by a solid blue line on the most recent version of the U.S. Geological Survey 1:24,000 (7.5 minute) scale topographic maps.

⁴⁵ Agronomic rates are the amounts recommended in the nutrient management standard of the USDA NRCS Technical Guide IV or the amounts recommended by the North Carolina DOA and Cooperative Extension Service at the time of certification of the animal waste management plan.

⁴⁶ Perennial waters of the state are defined by a solid blue line on the most recent version of the U.S. Geological Survey 1:24,000 (7.5 minute) scale topographic maps.

For general non-discharge permit applications for animal feeding facilities, the permit notice requirement necessitates that written notice be sent by certified mail. Notice is limited to adjacent property owners and local county officials. Notice must include the name and address of the person responsible for the facility, the type activity and its location, the design capacity of the animal waste management system, the address of the local Soil and Water Conservation District office, and information that the reader may submit written comments to DWQ.⁴⁷

The criteria for inclusion in a general non-discharge permit are detailed and may include operations other than those described here. To determine whether or not a specific operation requires a permit, farmers should begin by contacting the Division of Soil and Water Conservation.

It is important to note that compliance with the North Carolina general nondischarge permit requirements for animal waste management systems does not excuse compliance with all other state and federal laws including NPDES and other permits that might be applicable.

Depending on the specific circumstances in each case, other farming operations may be required to obtain a general NPDES permit, an individual NPDES permit, or satisfy the requirements for inclusion under a general non-discharge permit.

Because of the frequently changing water quality laws in North Carolina, the information provided in this section may be an incomplete summary of the many legal requirements and provisions that may affect animal operations or animal waste management systems. Even mere negligent failures to follow the law could potentially result in severe consequences including civil penalties or criminal convictions. Farmers are encouraged to consult with competent legal counsel and to contact each of the regulatory agencies (see Appendix A) involved including but not limited to the Division of Soil and Water Conservation (DSWC), the Division of Water Quality (DWQ), and the Environmental Management Commission (EMC) within the Department of Environmental and Natural Resources (DENR) for further advice and assistance. Farmers should not assume they are in compliance with the law.

a. North Carolina Animal Waste Management Systems

It is illegal in North Carolina for any person to construct, alter, expand, operate, or contract to construct any animal feeding operation unless they first obtain a state waste permit as required by law.⁴⁸

⁴⁷ For all discharges that do not fall under a general NPDES permit and are 500,000 gallons or more on any day, the DENR staff must prepare and make available public notice fact sheets from information required to be submitted by the discharger.

⁴⁸ N.C. General Statutes § 143-215.1(a)(12) (Bender 1999).

Producer Note: Obviously, any Animal Feeding Operation (AFO) must have a system to dispose of manure and other associated wastes. Due to increased growth in animal operations and the subsequent need to have effective waste systems to handle this growth, all AFOs in North Carolina are required by North Carolina law to operate under a waste permit for the construction, alteration, extension, or operation of their animal waste management systems. Owners and operators of AFOs should contact the Division of Soil and Water Conservation (SWC), the Environmental Management Commission (EMC), and the Division of Water Quality (DWQ) within the Department of Environmental and Natural Resources (DENR) in regard to permits, certification, inspection, technical assistance, and enforcement. Also, with North Carolina's passage of the state's Clean Water Act of 1999, there are now mandatory public disclosure requirements for animal operations that experience spills.

For animal waste management systems that discharge into surface waters of the state or "for which waste may reach the surface waters by runoff, drift, direct application, or direct discharge during operation or land application..." i.e., discharge from a discernible point source, there are two kinds of permits in North Carolina.⁴⁹ The permit may be an individual NPDES permit that is issued to a specific animal operation or it may be a general non-discharge permit that is issued by regulation and applies to all systems that meet the specific criteria established by the permit or regulation.⁵⁰ Regardless of what type permit is required for an animal feeding operation, an animal waste management plan is required. (See *Animal Waste Management Plans* section following this section.)

Failing to obtain a permit, or failing to abide the terms of a permit that has been issued, may subject the offender to a civil penalty of up to \$25,000 per day for each day that the violation continues. Additionally, a person who negligently fails to obtain a permit or who negligently fails to follow the conditions or requirements of an issued permit may be imprisoned and fined up to \$15,000 per day of violation and up to \$200,000 per 30-day period. A person who "knowingly and willfully" violates the permit requirements may be convicted of a felony, imprisoned, and fined up to \$100,000 per day and up to \$500,000 per 30-day period. A person who commits a permit violation and knowingly and willfully endangers another person may be convicted of a felony, imprisoned, and fined up to \$250,000 per day and up to \$1,000,000 per 30-day period.⁵¹

⁴⁹ Currently, certain waste management systems which do not discharge into surface waters of the state or "for which waste does not reach the surface waters by runoff, drift, direct application, or direct discharge during operation or [by] land application..." may be permitted under a general or "deemed" non-discharge permit by regulation. This general non-discharge permit is issued through the Non-Discharge Unit within DENR. Therefore, individual NPDES or general NPDES permits are not required. Non-discharge waste permits by regulation include certain animal feeding operations. (See earlier discussion on pages NC-17 and NC-18.)

⁵⁰ N.C. General Statutes § 143-215.10C (Bender 1999) also known as "The Clean Water Act of 1999."

⁵¹ N.C. General Statutes §§ 143-215.6A and -215.6B (Bender 1999).

Each animal feeding operation with an animal waste management system is required to have a “certified operator.”⁵² The owner or the person in charge of the animal feeding operation is legally responsible for assuring that the operator of the system is a certified operator. It is illegal to “perform the duties of an operator in charge” without certification. Persons without certification may assist in the operation provided that they are directly supervised by a person who holds certification. An owner of an animal feeding operation may hire a certified operator to fulfill these requirements.

b. North Carolina Animal Waste Management Plans

An approved animal waste management plan consists of a plan that includes animal waste management practices that meet the water quality protection standards and specifications of the USDA’s NRCS Field Office Technical Guide or meet the standards adopted by the Soil and Water Commissioner (SWCC). Additionally, for the plan to be approved, the plan must be certified by a Technical Specialist from either the Division of Soil and Water Conservation (SWC) or the local Soil and Water Conservation district⁵³ or the federal NRCS. (Do not confuse with the “operator certification.”)

The Technical Specialist must certify that the BMPs in the waste management plan meet the applicable operation and maintenance standards and specifications of USDA’s Natural Resources Conservation Service (NRCS) Field Office Technical Guide or the standard of practices adopted by the North Carolina Soil and Water Conservation Commission (SWCC). The land application buffers described in the animal waste management plan must meet applicable minimum standards and specifications. Waste may not be applied at greater than agronomic rates.⁵⁴

⁵² N.C. General Statutes §§ 90A-47.2 to -47.5 (Bender 1999). To become certified, an operator must take 10 hours of classroom training prior to taking an examination. Operators must then take 6 hours of additional training every subsequent 3-year period. This training program is designed to provide operators of animal waste management systems the basic understanding needed to operate and maintain these systems in an efficient and environmentally sound manner. Any operator who fails to take the required training within 30 days of the end of the 3-year period shall be required to take and pass the examination again in order to renew the certificate. The operator certification program is administered by the Water Pollution Control Systems Operators Certification Commission (WPCSOCC), an 11 member commission appointed by the Commissioner of Agriculture and the Secretary of DENR with approval by EMC. An annual certification fee is required. The WPCSOCC may revoke certificates for fraud, failure to use reasonable care or judgment, or failure to properly perform the duties. The WPCSOCC may also assess a fine of \$1,000 per violation for any willful violations of the certification requirements.

⁵³ Each soil and water conservation district conforms to county boundaries, except for the Albemarle district. The Albemarle district includes five counties: Camden, Chowan, Currituck, Pasquotank, and Perquimans.

⁵⁴ The amounts recommended in the nutrient management standard of the USDA NRCS Technical Guide IV or the amounts recommended by the North Carolina DOA and Cooperative Extension Service at the time of certification of the animal waste management plan.

A copy of the certification and a copy of the waste management plan must be submitted to the local Soil and Water Conservation district⁵⁵ office, and the DWQ also requires a copy of the certification for their files.

Inspection of the animal facilities is required to maintain certification of the animal waste management plan.⁵⁶ The Division of Water Quality must inspect for violations of water quality standards, and the Division of Soil and Water Conservation must inspect for compliance with the animal waste management plan. An animal waste management system is authorized to operate under a one-size-fits-all general "non-discharge" permit if the animal waste management plan is approved and certified.⁵⁷ (See earlier *General Non-discharge Permits* discussion on pages NC-19 and NC-20 and *Animal Feeding Operations* section at NC-21 to NC-25.)

Existing animal waste systems are subject to operational and maintenance standards and specifications in effect on the date of plan approval. Design and construction standards for existing waste storage and treatment structures are not required for plan approval.

New and expanded animal operation plans must be approved before stocking or adding animals, and new and expanded animal waste storage and treatment facilities must be located at least 100 feet from perennial waters.

Amendments to an approved plan for an existing animal waste management system may be made any time without resubmitting a new certification to DWQ if the revision meets minimum standards and specifications and is approved by any technical specialist described in the paragraphs above. Plans are not required to be reapproved when revisions are made to minimum standards and specifications but applicable revisions are encouraged.

The waste management plan for animal waste systems existing before 1993 and having no subsequent modification must only include the specifications and the operational and maintenance standards on the date of the plan's approval. There is no requirement for existing waste storage and treatment structures to meet minimum design and construction standards or specifications for plan approval.

⁵⁵ The Soil and Water Conservation District Law that was enacted in 1937 established the 96 Soil and Water Conservation districts. Each soil and water conservation district conforms to county boundaries, except for the Albemarle district. The Albemarle district includes five counties: Camden, Chowan, Currituck, Pasquotank, and Perquimans. The Division of Soil and Water Conservation (SWC) works very closely with NRCS in the design and implementation of conservation measures.

⁵⁶ N.C. General Statutes § 143-215.10F (Bender 1999).

⁵⁷ N.C. General Statutes § 143-215.10C and § 90A-47.2 to -47.5 (Bender 1999).

For systems that use third party applicators, the plan must include records containing the third party's name, address, and phone number. These records must be maintained for one year.

For changes in ownership, the new owner must notify DENR in writing within 60 days of transfer of ownership that the approved animal waste management plan has been read and understood and that all provisions will be implemented under the new ownership. Copies of the approved plan must be maintained by the operator.

Failure to follow an approved animal waste management plan will result in appropriate enforcement actions or a requirement to obtain an individual NPDES permit. Fines and penalties for violations including willful discharges are commensurate with actual or potential environmental damage and assessed by the Secretary of DENR.

General livestock recommendations by the North Carolina Cooperative Extension Service include:

- All livestock waste storage and treatment facilities must be 100 feet or more from wells;
- Stream banks that have no vegetative cover should be fenced to restrict animal access;
- Wetlands or spring-fed water courses may also need to be fenced;
- Streambanks with vegetative buffers and permanent wooded buffers may not need to be fenced to protect streambank integrity but may need to be fenced to prevent animals from loafing in the streams;
- Livestock feeding, loafing, and grazing areas should be at least 100 feet from a well;
- Use runoff control systems to collect water runoff from livestock loafing areas and feedlots for later application to crop fields or direct the runoff for even distribution on open grassed areas or filter strips away from streams, ditches, waterways, and sandy soils;
- Stockpile manure on a concrete pad, compressed clay, or a plastic sheet at least 100 feet from all water wells and water sources; and
- Cover manure stockpiles for extended periods of storage.

c. *North Carolina Specific Requirements: Swine Operations*

Producer Note: Currently, there is a moratorium on the construction and expansion of swine operations with more than 250 hogs. This moratorium is in reaction to a substantial amount of spillage from swine operation lagoons. Existing swine operations generally store manure and waste water in lagoons and spray the accumulation onto fields as fertilizer. Recently, there has been an increase in legislative campaigns that seek to phase out the use of lagoons for all swine feeding operations. The North Carolina General Assembly has extended the moratorium through July 1, 2001.

In addition to the moratorium on the construction and expansion of swine operations, North Carolina's animal waste management system statutes also require swine growers "to register any swine operation integrator with which the grower has a contractual relationship to raise swine." A "swine operation integrator" is a person, other than a grower, who provides 250 or more animals to a swine farm and who either has an ownership interest in the animals or otherwise establishes management and production standards for . . . the maintenance, care, and raising of the animals." Registration is with DENR. An "ownership interest" in the swine includes an option or a right to purchase the animals. A "grower" is the person who holds the permit for the waste management system or who operates a swine farm that is subject to state operations review or inspection. Growers are also required to notify DENR within 30 days if the grower terminates an integrator relationship or enters into a new relationship. Registration must be in writing and include only the following information:

- The name and mailing address of the owner of the swine farm;
- The physical location of the swine farm;
- The swine farm facility number;
- A description of the animal waste management system for the swine farm;
- The name and address of the grower, if different from the owner of the farm; and
- The name and mailing address of the integrator.

Although a moratorium exists on swine operations in excess of 250 hogs, permits for new or expanding swine waste operations may be issued if the operation utilizes an innovative waste management system that does not employ an anaerobic lagoon.⁵⁸ An "anaerobic lagoon" is a lagoon designed to treat

⁵⁸ N.C. Administrative Code 15A Section 2H.0226.

waste by converting it into carbon dioxide, methane, other gaseous end products, organic acids, and cell tissue. Such an exception is possible if the system does not include an anaerobic lagoon and either one of the following conditions is satisfied:

- The system is installed on state or federally owned property and is a research or demonstration project or
- The system is substantially different from systems currently in use in the state on swine operations with more than 250 swine, the system will provide a viable alternative to the continued use of anaerobic wastewater lagoons, and it greatly demonstrates significant improvements for swine waste management.

Additionally, North Carolina strictly regulates the location of “swine houses, lagoons, and land areas onto which waste is applied at swine farms” in the state.⁵⁹ In general, new swine houses and lagoons must be located:

- At least 500 feet from the property boundary;⁶⁰
- At least 2,500 feet from any school, hospital, church, outdoor recreation facility, national park, state park, historic property, or child care center;
- At least 1,500 feet from any occupied residence;
- At least 500 feet from any well that supplies water to a public water system; and,
- At least 500 feet from most other wells that supply water for human consumption.

However, if an adjacent owner gives written permission to the swine farmer, then a swine house or lagoon may be located at less than the otherwise required distances from a residence, school, church, hospital, or property boundary.

Setbacks for fields receiving land applications of swine waste are 75 feet from the boundary of property where an occupied residence is located and 75 feet from any perennial stream or river other than an irrigation ditch or canal. No component of a liquid animal waste management system for which a permit

⁵⁹ N.C. General Statutes § 106-803 (Bender 1999).

⁶⁰ The 500 feet requirement does not apply to any swine farm for which a site evaluation was conducted prior to October 1, 1996. For animal waste management systems sited prior to October 1, 1996 and after October 1, 1995, the setback from property boundaries is 100 feet.

is required shall be constructed on land that is located within the 100-year floodplain. Land applications to areas located within the 100-year floodplain are allowed.

Anyone who is affected by a violation of the swine siting requirements described above is authorized by statute to bring a civil action against the owner or operator of the swine farm and to be awarded appropriate relief, which may include an injunction, an order enforcing the requirements, civil damages, or any combination of these remedies. Additionally, the statute provides that the court is authorized to award attorneys fees and costs, including expert witness fees, to any party if the court determines that it is appropriate to do so.

The North Carolina legislature has enacted laws to establish a "Violation Points System" for swine farm animal waste management systems.⁶¹ Under this system, points are given to swine farms for violations. When a set number of points has accumulated over a specified period of time, which may not be less than 5 years, the animal waste management system permit for that farm must then be revoked.

6. North Carolina Management of Water Resources

a. Water Withdrawal Registration

As noted earlier, North Carolina's environmental laws are intended to protect or improve both the water quality and the quantity of water available for beneficial use. Registration with the Division of Water Resources (DWR) is required for withdrawals or transfers of 100,000 or more gallons of water per day from the surface or groundwaters for non-farming purposes and withdrawals of 1,000,000 or more gallons of water per day for certain farming purposes.⁶² Registration limits vary with the production of certain agricultural products. There are further restrictions on increases in water transfers of 25% or more and upon initial transfers of 2,000,000 gallons or more.⁶³ In either case, the user must secure a certificate from the DWR in advance.

After March 1, 2000, any new withdrawal must be registered no later than six months after the first date the withdrawal exceeds the 100,000 or the 1,000,000 gallon limit.⁶⁴ Registrations must be updated every five years. Generally, farmers are exempt from the registration fee and any late registration penalties.

⁶¹ N.C. General Statutes §143-215.6E (Bender 1999).

⁶² N.C. General Statutes § 143-215.22H (Bender 1999).

⁶³ N.C. General Statutes § 143-215.22I (Bender 1999).

⁶⁴ N.C. General Statutes § 143-215.22H(b) (Bender 1999).

Registration requires the following information:

- The maximum daily amount of water withdrawal;
- The monthly average withdrawal; and
- The location of the points of withdrawal, and the capacity of each facility used to make the withdrawal.

It is important to note that water transfer or withdrawal restrictions are much more severe in capacity use areas, as described below, and that agricultural producers may be subjected to severe civil and criminal penalties for negligent or willful violations of the law. Much of the law governing water use in North Carolina is new, especially with the recent enactment of the North Carolina Clean Water Act of 1999. Frequent amendments are possible, and new administrative regulations may be imposed. Therefore, agricultural producers in North Carolina should always consult with competent legal counsel and appropriate government officials before taking any action that affects water or waterways.

b. Capacity Use Areas

The Environmental Management Commission is authorized by law to identify certain areas within the state where water quality or water supply is at risk and to declare those areas Capacity Use Areas (CUAs). Specifically, a capacity use area is an area where water use threatens to exceed water capacity due to past, current, or anticipated future development of the area.⁶⁵ All water users in a capacity use area, including those who are not required to hold a permit, are required to “comply with procedures established to protect and manage the water resources of the area.”⁶⁶

The purpose of the Capacity Use Program (CUP) is to protect the groundwater and surface water supplies from overpumping and avoid conflict among users. The CUP prohibits using, withdrawing, or obtaining 100,000 gallons or more of either surface water or groundwater, or a combination of both, without a permit from the EMC. Permits are not transferable. A permit is also required for the construction of any well in a capacity use area; however, wells used only for individual water supplies are exempted from the permit requirement.

Permit holders are required to monitor and report the source, the quantity, the use, the water level, the pumping water level, and other information. A report is also required when a well construction is completed or when a well is abandoned. Reports are to be submitted on forms provided by the EMC.

⁶⁵ N.C. General Statutes § 143-215.13(b) (Bender 1999).

⁶⁶ N.C. General Statutes § 143-215.16(c) (Bender 1999).

Capacity Use Area (CUA) #1 and its corresponding CUA #1 regulations were established by DENR in 1968, as required by the Water Use Act of 1967. CUA #1, which includes parts of Beaufort, Carteret, Craven, Hyde, Martin, Pamlico, Tyrrell, and Washington Counties, was designated to control the impacts of water depletion from area aquifers that was caused by a phosphate mine in Beaufort County. Largescale pumping at the mine affected the water supply on a regional basis, causing a measurable drawdown in aquifers from up to 50 miles away from the site.

With increasing evidence of present and future groundwater supply shortages within part of the CUA #1 but specifically the area encompassed by fifteen North Carolina counties,⁶⁷ groundwater from the Black Creek and Upper Cape Fear aquifers was being withdrawn at a rate that exceeded the available recharge. To address the threat to groundwater supplies in the region, the DENR proposed a regulation that would create the Central Coast Plain CUA (CCPCUA).⁶⁸ If rulemaking proceeds as planned, the new CCPCUA regulations will become effective August 1, 2000. As this area covers most of CUA #1, present CUA #1 regulations should be repealed as the new CCPCUA regulations become effective.

7. *North Carolina Best Management Practices*

North Carolina has incorporated best management practices (BMPs) into different aspects of its water quality program. Specifically, BMPs have been instituted for animal waste management systems. An example is the requirement of riparian buffers or equivalent controls for waste systems located along perennial streams. Technical Specialists with the Division of Soil and Water Conservation may be a good source of detailed information about BMPs.

8. *North Carolina Coastal Management*

North Carolina recognizes that its estuarine shorelines are especially vulnerable to erosion, flooding, and other adverse effects of wind and water.⁶⁹ Development of these areas is regulated, and buffer zones are required for all development projects, proposals, and designs.

The 1972 federal Coastal Zone Management Act (CZMA) provided funding and technical assistance for the coastal states if they voluntarily developed approved state coastal programs to protect water quality⁷⁰ from nonpoint pollution. States had to demonstrate that they had programs (including

⁶⁷ The counties of Beaufort, Carteret, Craven, Duplin, Edgecombe, Green, Jones, Lenoir, Martin, Onslow, Pamlico, Pitt, Washington, Wayne and Wilson.

⁶⁸ North Carolina Reg. 3889.

⁶⁹ Estuarine shorelines are non-ocean shorelines that extend from the high water levels along the estuaries, sounds, bays, and brackish waters connected to the estuaries.

⁷⁰ According to the water quality standards under Section 303 of the Clean Water Act.

enforceable policies and authorities to implement such policies). Under Section 6217 of the Coastal Zone Reauthorization Amendments of 1990 (CZARA), states that had voluntarily developed programs were now mandated to restore and protect coastal waters with a nonpoint pollution program using specific management measures. States with federally-approved coastal zone management programs that failed to develop coastal nonpoint pollution control programs faced reductions of federal financial support for their coastal zone management and nonpoint source (section 319) programs. North Carolina was one of twenty-nine states that developed and implemented an approved program using specific management measures.

North Carolina's Coastal Management Program assures responsible development and use of the coast by overseeing coastal activities. Coastal wetlands, coastal hazards, and impacts of population growth and development of coastal areas are monitored by the Division of Coastal Management (DCM), a division within the DENR. The NOAA Coastal Services Center in conjunction with the North Carolina State University Computer Graphics Center and DCM have produced land databases for North Carolina coastal areas using satellite remote sensing technology. This GIS information is being used by scientists and the coastal resource management community to better understand the man-made changes occurring in coastal habitats and to identify the impacts they have on marine resources.

Setback laws and a prohibition on structures within buffer zones keep property out of harm's way during storms and beaches available for the public. The governor-appointed Coastal Resources Commission adopts rules and policies for the program although coastal counties are allowed to develop local land use plans.

The buffer zone rule applies to rivers, streams, and marshes in the 20 coastal counties but does not apply to ocean frontage which has separate setback requirements. New homes and businesses must be built at least 30 feet from the waterfront. With few exceptions, only docks, piers, walkways, boat ramps, and similar structures may be built inside this buffer zone. Mowing in the buffer zone area is allowed but no grading, filling, or excavating is allowed.

The DCM has established Areas of Environmental Concern (EAC) where fee based permits are required for development along ocean and estuarine shorelines and all navigable waters in the 20 coastal counties with two hardship exceptions:

- Single family residences of 1,000 sq. ft. or less are allowed on undeveloped properties that were platted prior to June 1, 1999, if the lot is too small to accommodate the 30 ft. buffer and
- Replacement of an existing structures severely damaged or destroyed are allowed if the structures are no larger than the original structure.

Permits are also required for:

- Placing riprap adjacent to wetlands if it is in conjunction with erosion and if it is not in an AEC and
- Construction of offshore parallel breakwaters if it is in conjunction with erosion and if it is not in an ocean hazard or AEC.

For areas in the Neuse and Tar-Pamlico River Basin, any EMC rules that conflict with DCM rules have priority over the DCM rules since these areas are nutrient sensitive areas.

While great strides have been made in controlling point sources of pollution since enactment of the Federal Water Pollution Control Act of 1972, nonpoint source pollution remains a major problem in many coastal areas. Leading contributors of nonpoint source pollutants to estuarine waters are urban runoff and agriculture. In some areas, forestry, marinas, and hydromodification also contribute to nonpoint source pollution. The loss and degradation of wetlands and riparian areas have also adversely affected coastal water quality.

Under Section 6217 of CZARA, coastal nonpoint programs are implemented through changes to:

- The state's existing nonpoint source pollution program with approval by EPA under section 319 of the Clean Water Act and
- The existing state coastal zone management programs with approval by NOAA under section 306 of the Coastal Zone Management Act. Coastal nonpoint pollution programs must adequately address the following program components in order to receive approval from EPA and NOAA:
 - Identification and implementation of management measures;
 - Response to NOAA boundary recommendations;
 - Enforceable policies and mechanisms to implement program requirements;
 - Coordination with all relevant federal, state, and local programs;
 - Technical assistance to local government and the public; and
 - Public involvement in all aspects of the program.

North Carolina's Long Creek program⁷¹ was approved under Section 319 National Monitoring Program Project.⁷² Management measures for nonpoint source pollution were identified and divided into five categories: 1) agricultural runoff; 2) urban runoff; 3) forestry runoff; 4) marinas and recreational boating; and 5) channelization and channel modification, dams, streambank erosion, and shoreline erosion. Management measures were also required for wetlands, riparian areas, and vegetated treatment systems.

Implementing management measures involves implementing management practices which are specific, actual techniques or tools. This approach is technology-based rather than water quality-based and is based on technical and economic achievability, rather than on cause- and-effect linkages between particular land use activities and particular water quality problems. The philosophy behind this approach is that states should concentrate their resources on developing and implementing measures that experts agree will reduce pollution significantly.

A two year monitoring period (until January 2001) follows the implementation of management measures.⁷³ If any additional management measures are necessary to reduce nonpoint pollution, the measures must be in place by January 2004. North Carolina's program is in the implementation phase.⁷⁴

⁷¹ The Section 319 National Monitoring Program projects comprise a small subset of nonpoint source pollution control projects funded under Section 319 of the Clean Water Act Amendments of 1987. The program is designed to support 20 to 30 watershed projects nationwide that meet the minimum project planning, implementation, monitoring, and evaluation requirements. At the end of 1992, four 319 National Monitoring Program projects had been approved: Snake River Plain, Idaho; Sny Magill Creek Watershed, Iowa; Elm Creek Watershed, Nebraska; and Long Creek Watershed, North Carolina.

⁷² Monitoring of both land treatment and water quality is necessary to document the effectiveness of nonpoint source (NPS) pollution controls in restoring water quality. The Section 319 National Monitoring Program is designed for successful documentation of project effectiveness under Section 319 of the Clean Water Act Amendments of 1987. The objective of the North Carolina Section 319 National Monitoring Program is to quantify the effects of nonpoint source pollution controls on: 1) bacteria, sediment, and nutrient loadings to a stream from a working dairy farm, 2) sediment and nutrient export from a field with a long history of manure application, and 3) sediment loads of a watershed stream that fall under the provisions of the North Carolina Water Supply Watershed Protection Act. The water quality monitoring effort incorporates the following three designs: 1) single station before/after at water supply intake and watershed outlet, 2) upstream/downstream monitoring of Long Creek at the dairy, and 3) paired watersheds on the dairy cropland. The idea is to monitor water quality and land treatment in selected projects in order to document water quality changes associated with land treatment.

⁷³ To date, 29 state programs have been approved including North Carolina's.

⁷⁴ Under Section 6217(a) of CZARA, states had until July 19, 1995 to submit state coastal nonpoint programs for approval. NOAA and EPA then had six months to review programs for approval by January 1996. These states were given three years to fully implement management measures by January 1999. A two year monitoring period follows the implementation of management measures. Any additional measurement measures must be in place by January 2004.

II. GROUNDWATER

A. North Carolina Groundwater Laws and Regulations

1. *Groundwater Standards and Classifications*

In addition to surface water regulations, the Environmental Management Commission (EMC) has developed classifications and water quality standards for groundwater in North Carolina.⁷⁵ State regulations place restrictions on, and require corrective actions for, all activities that degrade groundwater regardless of whether the activity is intentional, accidental, or permitted.

There may be an exception from this burden, however, for an innocent landowner. To be an innocent landowner, one must be a bona fide purchaser of property that contains a source of groundwater contamination, and the purchaser must have purchased the property without knowledge, and without reasonable basis for knowing that groundwater contamination had occurred on the property. There may also be an exception for a person whose only interest or ownership in the property is the possession of a security interest on the property.⁷⁶

The groundwater classifications and usage established by the EMC are as follows:

- Class GA: To be used as an existing or a potential source of drinking water for humans;
- Class GSA: To be used as an existing or a potential source of water supply for potable mineral water and conversion to fresh water; and
- Class GC: To be used as a source of water supply for purposes other than drinking including other human domestic uses.

Once groundwater has been classified, the EMC will not grant approval of a waste disposal system that will affect the groundwater if any one of the following conditions would occur:

- A significant degradation of groundwaters with quality superior to its assigned standard, unless it is in the best interests of the citizens of the State;
- A violation of a groundwater quality standard beyond the boundary around a disposal system where the groundwater quality standard cannot be exceeded; or

⁷⁵ N.C. General Statutes § 143-214.1 (Bender 1999).

⁷⁶ N.C. Administrative Code 15A Section 2L.0101.

- The impairment of existing groundwater uses or an increase in public health and safety risks.⁷⁷

In the event groundwater quality has been degraded, restoration to designated standards will be the primary corrective action to be taken. If these standards cannot be achieved, however, then the regulations require that the quality be restored to a level that is as close to the original standard as is economically and technologically possible. Required corrective actions may include the following:

- Prevention of fire, explosion, or the spread of noxious fumes;
- Cessation, containment, or control of the flow of the contaminants;
- Removal or treatment and control of any primary pollution source such as buried waste or surface accumulations of waste products; or
- Removal, treatment, or control of secondary pollutants such as contaminated soils, that are a potential, continuing source of groundwater pollution.

Under the regulations, any one conducting an “activity which results in the discharge of a waste or hazardous substance or oil to the groundwaters of the State, or in proximity thereto, shall take immediate action to terminate and control the discharge, mitigate any hazards resulting from exposure to the pollutants, and notify the Division of Water Quality (DWQ) of the discharge.”⁷⁸ However, activities of an agricultural operation that do not require a permit to operate may not be required to notify the DWQ when the activity results in an increase in the concentration of an excessive amount of a contaminant, provided of course, that the operation meets the legal definition of an agricultural operation and provided that the contaminant does not meet the legal definition of a “hazardous substance.” Furthermore, an activity that requires a permit -- such as a livestock waste management system -- and that causes an increase in the concentration of an excessive amount of a contaminant, must demonstrate that its site conditions, facility design, and operational controls will prevent a violation of the set standards. Otherwise, the operation must submit a plan for the alteration of existing site conditions, facility design, or operational controls that will prevent a violation of the groundwater quality standards.⁷⁹

⁷⁷ N.C. Administrative Code 15A Section 2L.0103.

⁷⁸ N.C. Administrative Code 15A Section 2L.0106(b).

⁷⁹ N.C. Administrative Code 15A Section 2L.0106.

2. *North Carolina Well Construction Act*

Permission must be obtained from the EMC prior to the construction of a water well or well system with a capacity of 100,000 or more gallons per day and for any well in an area where permission is necessary to protect groundwater resources or to protect the public health, safety, and welfare.⁸⁰ Every well must be constructed and maintained in such a manner that it cannot become a source or channel for contamination of groundwater. Furthermore, permission is also required before a well may be used for recharge, injection, or disposal purposes.

If the withdrawal of water from an area will result in water depletion or water pollution to the extent that the availability and fitness of the water source will be impaired, the EMC is authorized to:

- Establish a new limitation amount and to prohibit the withdrawal of water in an amount that is in excess of the new limit⁸¹ and
- Prohibit the construction of any new wells that have a capacity in excess of the new limitation amount.⁸²

When a well is temporarily abandoned or removed from service, the top of the well must be sealed with a watertight cap or seal. If a well is permanently abandoned, it must be filled, plugged, or sealed in a way that prevents the well from becoming a channel for the vertical movement of water or from otherwise becoming a source of groundwater contamination. However, any well removed from service as a supply for drinking water may be used for other purposes such as irrigation, and in that case, the well is only required to be sealed if it is thereafter temporarily or permanently abandoned.⁸³

3. *North Carolina Underground Injection Control Program*

The construction, use, or operation of an injection well for agricultural drainage is prohibited if it is:

- A groundwater aquaculture return flow well;
- A storm water drainage well;

⁸⁰ N.C. General Statutes § 87-88 (Bender 1999).

⁸¹ By water users who are in the class of users that normally withdraw more than 100,000 gallons within the applicable time period.

⁸² N.C. General Statutes § 143-215.13(d) (Bender 1999).

⁸³ N.C. General Statutes § 87-88(k)(3) (Bender 1999).

- An agricultural drainage well or other well that receives irrigation tailwaters, field drainage, or runoff from an animal yard, feedlot, or dairy;
- A sewage or wastewater disposal well that injects sewage or wastewater from any source;
- A mining, sand, or other backfill well that is used to inject fluids or solids from subsurface mines; or
- Any other well that is prohibited by applicable law.⁸⁴

The director of the North Carolina DWQ is authorized to permit the construction and operation of the following kinds of injection wells, but only if the injected material will not create a danger to human health or unreasonably alter the condition of the receiving waters and, further provided, other legally required conditions are satisfied:

- Heating and cooling water return wells but only if the temperature of the discharge does not vary more than 30 degrees from the temperature of the receiving water;
- Aquifer recharge wells that are used to replenish depleted aquifers with uncontaminated water that is of equal or better quality than the receiving water;
- Salinity barrier wells that are used to inject uncontaminated water into fresh water aquifers in order to prevent the intrusion of salt water;
- Subsidence control wells that are used to inject fluids into non-oil or non-gas producing zones to reduce or eliminate the subsidence associated with oil or natural gas production; or
- Any other underground well that is permitted by applicable law.⁸⁵

⁸⁴ NCAC Title 15A Section 2C.0209.

⁸⁵ N.C. Administrative Code 15A Section 2C.0209.

III. AIR QUALITY

A. North Carolina Air Quality Laws and Regulations

1. North Carolina Air Pollution Control Act

The DENR is responsible for administering air quality programs in North Carolina.⁸⁶ The EMC is responsible for establishing air quality standards and developing plans to prevent the deterioration of established standards. Permits are required for any of the following activities that might alter or affect an established standard:

- Operation of any air contaminant source;
- Construction, use, or operation of any equipment that may result in the emission of air contaminants or that is likely to cause air pollution;
- Alteration of any equipment or process from which air contaminants might be emitted; or
- Allowing, causing, or entering into an irrevocable contract for the construction or installation of any air-cleaning device.

Additionally, the Air Pollution Control Act (APCA) provides that with EMC approval the governing body of any county or municipality may establish, administer, and enforce a local air pollution control program. The program may include the following:

- A comprehensive plan for the control and abatement of new and existing sources of air pollution;
- Air quality monitoring;
- Emissions determination and identification;
- Adoption of air quality and emission control standards;
- Establishment of time schedules for control and abatement of existing sources of air pollution;
- Review and approval of existing and new pollution abatement facilities; and
- Establishment of local air pollution control officers and personnel.

⁸⁶ N.C. General Statutes §§ 143-215.105 to -215.114C and §§ 143-211 to -213 (Bender 1999).

As mentioned earlier, air quality permits are required for certain operations or activities. Specifically, permits are required for the emission of a designated toxic air pollutant. However, when used for agricultural operations by a farmer and applied in accordance with agronomic practices acceptable to the North Carolina Department of Agriculture (DOA) and the EMC, the spreading or use of fertilizers, pesticides, and other agricultural chemicals does not require a permit even though these chemicals may contain one or more of the designated toxic air pollutants.⁸⁷

While emissions from incinerators are subject to control by the DENR, incinerators used to dispose of dead animals or poultry are exempt from the regulations if the incinerators meet the following requirements:

- The incinerator is located on a farm and is owned and operated by the farm owner or farm operator;
- The incinerator is used solely to dispose of animals or poultry originating on the farm where the incinerator is located;
- The incinerator is not operated in a manner that exceeds its design capacity; and
- The incinerator complies with the visibility and odor emissions requirements of the regulations.⁸⁸

2. *North Carolina Odor Control*

Producer Note: The EMC is empowered to develop and adopt economically feasible standards and plans to control the emission of odors from animal operations.

An increase in the size and number of livestock and poultry operations in North Carolina, particularly swine operations, has led to an increase in complaints about offensive odors. Consequently, the General Assembly commissioned the University of North Carolina to prepare a report and recommend economically feasible odor control technologies. The University task force recommended that the State implement an odor assessment or monitoring program.

The task force identified certain production strategies and manure treatment technologies that, if integrated properly, could play a significant role in the reduction of odors from all animal operations including swine operations. Currently, details are located on the internet at http://www.cals.ncsu.edu/waste_mgt/.

⁸⁷ N.C. Administrative Code 15A Sections 2Q.0102 and 2Q.0702.

⁸⁸ N.C. Administrative Code 15A Section 2D.1201.

After the task force report, North Carolina promulgated and enacted regulations through DENR for the control of odors from animal operations.⁸⁹ The law requires all animal operations to implement certain management practices for the control of odors. Examples of these legally required practices include the following:

- Extending the discharge point of flush water discharge pipes to a point that is below the surface of the animal wastewater lagoon;
- Disposing of dead animals within 48 hours;
- Avoiding the application of wastewater to irrigation fields whenever there is a danger of drift beyond the boundaries of the field;
- Locating wastewater application spray system intakes near the surface of the wastewater lagoon; using ventilation fans that are maintained to the manufacturer's specifications;
- Keeping a cover on animal feed storage containers that are located outside of containment buildings; and
- Covering wastewater flush tanks with a device that is designed for ready access, in order to prevent overflow, or installing a fill pipe that extends below the surface of the tank's wastewater.

In addition to the required practices mention above for existing animal operations, there are also detailed regulatory requirements for new or modified animal operations. To learn the specifics of the regulations and to assure compliance, producers should consult with competent legal counsel and DENR.

Permits may be issued for a new or expanding swine waste operation that utilizes an innovative animal waste management system that does not employ an anaerobic lagoon. Anaerobic lagoons are designed for the treatment of waste by converting it into carbon dioxide, methane, gaseous end products, organic acids, and cell tissue. Aeration or frequent treatment may be required if there is a potential for the generation of odors.

⁸⁹ N.C. Administrative Code 15A Sections 2D.1801 *et seq.*

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. North Carolina 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 in order to determine whether an operation's activities are regulated under state solid and hazardous waste statutes.

1. North Carolina Solid Waste Management

Under North Carolina's Solid Waste Management Program,⁹⁰ the Division of Waste Management (DWM) of DENR was established to promote the sanitary processing, treatment, disposal, and management of solid wastes. In this context, the term "waste" is legally defined as follows:⁹¹

- Solid waste means any hazardous or nonhazardous garbage, refuse, or sludge from a waste treatment plant, water supply treatment plant, or an air pollution control facility; domestic sewage and sludges generated by the treatment, thereof, in sanitary sewage collection, treatment, and disposal systems; and other material that is either discarded or is being accumulated, stored, or treated prior to being discarded or has served its original intended use and is generally discarded including solid, liquid, semisolid, or gaseous material resulting from industrial, institutional, commercial, and agricultural operations and community activities; the term does not include: fecal waste from fowl and animals, solid or dissolved material in domestic sewage and sludge, irrigation return flows, and wastewater discharges;⁹²
- Special waste is solid waste that requires special handling and management including white goods (domestic and commercial large appliances), whole tires, used oil, lead-acid batteries, and medical wastes; and

⁹⁰ N.C. General Statutes §§ 130A-290 *et seq* (Bender 1999).

⁹¹ N.C. General Statutes § 130A-290(35) (Bender 1999).

⁹² N.C. General Statutes § 130A-290(35) (Bender 1999).

- Hazardous waste is solid waste that, because of its quantity or concentration or because of its physical, chemical, or infectious characteristics, may cause or significantly contribute to an increase in mortality or serious illness or pose a substantial present or potential hazard to human health or the environment when improperly handled.

Specific statutory provisions have been enacted for the handling of special wastes. Because some of these wastes are often found or tend to accumulate on a farm or ranch, the provisions are detailed below.

a. North Carolina Used Oil

The following acts are prohibited in regard to the disposal of used oil. No person may knowingly:

- Use, store, or dispose of used oil in a manner that endangers the public health or welfare;
- Discharge used oil into sewers, drainage systems, septic tanks, surface, or groundwaters;
- Dispose of used oil in landfills not approved for such disposal; or
- Dispose of used oil by mixing it with solid waste and placing it in a landfill approved to accept the solid waste.

Additionally, used oil is prohibited from use for road oiling, dust control, weed abatement, or similar purposes that release the used oil into the environment.⁹³

Violations of the above prohibitions may be prosecuted as Class 1 criminal misdemeanors in state court, and persons found guilty may be subjected to significant fines and periods of incarceration.

b. North Carolina Scrap Tire Disposal Act

The purpose of the North Carolina Scrap Tire Disposal Act⁹⁴ is to establish statewide guidelines for the environmentally safe disposal of scrap tires which are tires that are no longer suitable for their original use because of wear, damage, or defect. As a result, no person may dispose of any scrap tire unless the tire is disposed at a permitted scrap tire collection site. Nonetheless, there appears to be an agriculture exception to this requirement in that the Act specifies that a permissible method of scrap tire disposal is the

⁹³ N.C. General Statutes § 130A-309.15 (Bender 1999).

⁹⁴ N.C. General Statutes §§ 130A-309.51 to -309.63 (Bender 1999).

use of a tire for an agricultural-related purpose. If the tires are going to be used in erosion control, however, whole tires may not be used -- they must be cut.

c. North Carolina Lead-Acid Batteries

As in the case of used oil and scrap tires, no person may dispose of or place a lead-acid battery in a landfill or otherwise improperly dispose of the battery. Violators may face a civil penalty of up to fifty dollars for each battery that is disposed of improperly.

2. North Carolina Leaking Petroleum Underground Storage Tanks

The Oil Pollution and Hazardous Substances Control Act (OPHSCA) of 1978⁹⁵ was enacted primarily for the protection of North Carolina's land and water from pollution by oil, oil products, and other hazardous substances. A significant portion of the Act establishes responsibility for the cleanup of leaking petroleum underground storage tanks. Under the OPHSCA, a distinction is made between commercial and noncommercial Underground Storage Tanks (USTs).

A storage tank is not a UST unless at least 10% of the tank, including its associated piping, is located under the surface of the ground. Farm and residential USTs with a capacity of 1,100 gallons or less that are only used for storing motor fuel or heating oil for consumptive use on the premises are excluded from the commercial UST requirements. However, the tanks are still subject to regulation as noncommercial USTs.

If a discharge or release of petroleum occurs from either a commercial or noncommercial UST, the owner or operator of the tank must notify DENR of the nature, location, and time of the discharge and must immediately undertake corrective action. If a spill or overfill of a UST occurs and results in a release of 25 or more gallons of petroleum into the environment, the owner or operator must immediately clean up the spill and notify DENR within 24 hours. If less than 25 gallons are spilled, however, and no sheen is caused on nearby waters, then notification of the spill may be omitted, but the owner or operator must immediately clean up the spill. Nevertheless, because substantial harm may occur or the responsible parties may face substantial penalties if the law is not carefully followed, competent advisors, including legal counsel, should always be consulted whenever there is a spill of any size whatsoever.

If the owner or operator of a noncommercial UST fails to initiate cleanup as required, DENR may provide for the cleanup and then seek reimbursement from the responsible party through any legal means available.

⁹⁵ N.C. General Statutes §§ 143-215.75 *et seq.* (Bender 1999).

Regardless of fault, any unpermitted discharge of oil or other hazardous materials, whether from an UST or from some other source, is unlawful. Violators may be subjected to significant civil and criminal penalties. The possible penalties vary depending on whether the violation is a violation of the OPHSCA or a violation of the UST provisions.

Persons who violate the requirements of the OPHSCA may be subjected to a civil fine of up to \$5,000 for each violation. Each act or omission that causes, aids, or abets a violation is considered to be a separate violation. Violations are sanctionable regardless of whether they are committed knowingly or negligently.

“Knowing and willful” violations may be prosecuted by the State as Class H felonies, and upon conviction offenders may be subjected to substantial periods of incarceration and a fine up to \$100,000 per day and up to \$500,000 in a 30-day period. A “knowing” discharge that endangers another person may be prosecuted as a Class C felony, and upon conviction, offenders may be subjected to substantial periods of incarceration and criminal fines up to \$250,000 per day and up to \$1,000,000 in a 30-day period. False statements may be prosecuted as Class I felonies with substantial imprisonment and fines up to \$100,000 and up to \$500,000 per 30- day period.

Violation of the Underground Storage Tank provisions may result in a civil penalty up to \$10,000 per day of violation and up to \$200,000 per 30-day period. Violations may also be prosecuted as criminal offenses. Negligent violations may be prosecuted as Class 2 misdemeanors and punished by a significant period of imprisonment and a fine up to \$15,000 a day and up to \$200,000 per 30-day period. Knowing and willful violations may be prosecuted as Class I felonies and punished by a serious period of imprisonment and a fine up to \$100,000 per day and up to \$500,000 in a 30-day period. If the violation places another person in imminent danger and other elements of the offense are established, then the offense may be prosecuted as a Class C felony and punished by a significant period of imprisonment and a fine up to \$250,000 per day and up to \$1,000,000 per 30-day period.

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. North Carolina Pesticide and Chemigation Laws and Regulations

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

1. North Carolina Pesticide Law of 1971

The Department of Agriculture (DOA) together with the North Carolina Pesticide Board (NCPB) is responsible for carrying out the provisions of the Pesticide Law of 1971.⁹⁶ The purpose of the Pesticide Law is to regulate the use, application, sale, disposal, and registration of insecticides, fungicides, herbicides, defoliants, desiccants, plant growth regulators, nematocides, and rodenticides.

a. North Carolina Regulation of Restricted Use Pesticides

The NCPB, upon finding that any pesticide is hazardous or injurious to persons, animals, or the environment, may designate additional restrictions on its sale and use. The following is a partial list of the many rules that the Board is authorized to impose:

- A prohibition on the use of the pesticide for certain purposes and at designated times;
- A requirement that the purchaser or user certify that the pesticide will only be used as labeled and further restricted by regulation;
- A requirement for the certification or re-certification of private applicators; and
- A requirement that all restricted use pesticides be purchased, possessed, or used only under permit of the Board and under its supervision in certain areas, under certain conditions, or in certain quantities.

b. North Carolina Pesticide Handling, Storage, and Disposal

The NCPB is authorized to adopt specific regulations concerning the handling, transportation, storage, display, distribution, and disposal of pesticides and pesticide containers. However, as a general rule, no person may handle, transport, store, or distribute pesticides in a way that will endanger man or the environment. Additionally, the disposal of any pesticide or its container must not cause injury to humans, vegetation, crops, livestock, or wildlife, and it must not pollute any water supply or waterway.

⁹⁶ N.C. General Statutes §§ 143-434 *et seq* (Bender 1999).

c. North Carolina Licensing of Pesticide Applicators

All persons engaged in the business of private pesticide application must be licensed annually by the NCPB. Each applicant must demonstrate a knowledge of pesticides, an ability to be a pesticide applicator, and a knowledge of the laws and regulations that govern the use and application of pesticides in the classification for which the applicator has applied. Application without a license is a criminal offense. There may be an exemption for agricultural applicators who apply pesticides on their own farms.

All pesticide applicators of restricted use pesticides must be certified. The following kinds of training will satisfy the requirements for certification:

- Classroom instruction for three or more hours by Cooperative Extension pesticide training agents or other individuals approved by the NCPB;
- Programmed instruction using the EPA or equivalent workbook followed by completing and submitting answers to written questions;
- High school students may receive classroom instruction that utilizes approved materials as part of the curriculum; upon passing the course, the students may be certified; or
- Written examination only (independent study); however, if the score on the exam is less than 70, then the person must participate in one of the above options.⁹⁷

An emergency certification permit for applying restricted use pesticides is available for applicants not previously certified. The ten-day emergency certification permit may be issued by a resident county agricultural extension service pesticide coordinator. The permit authorizes the purchase and use of one restricted use pesticide for one application to a crop or site. Moreover, before issuing the permit the coordinator must:

- Provide the applicant with a training manual and information relative to obtaining full private pesticide applicator certification; and
- Discuss the proper use of the restricted use pesticide with the applicant.

Additionally, the coordinator must keep a copy of the permit which must contain the following information:

- Name and address of the applicant;

⁹⁷ N.C. Administrative Code 2 Section 9L.1103.

- Name and amount of the restricted use pesticide;
- Crop or site to be treated; and
- Date the permit was issued.⁹⁸

d. North Carolina Methods of Pesticide Application

The NCPB is authorized to adopt rules that detail the methods to be used to apply pesticides. In adopting the rules, the following factors will be taken into consideration to prevent damage from drift or misapplication:

- Plants, including forage plants, on adjacent or nearby land;
- Wildlife in the adjoining or nearby areas;
- Fish and other aquatic life in waters within reasonable proximity to treated areas; and
- Other animals, persons, or beneficial insects.

Any person who contracts for an aerial application of a pesticide that has been designated as toxic to bees must first notify the owner or operator of any hives that are within a designated distance of the area to be treated.

2. North Carolina Chemigation

The North Carolina Pesticide Law of 1971 also regulates the application of pesticides through an irrigation system. The NCPB is authorized to enter private property and inspect the equipment, including the irrigation system, that is used to apply pesticide. All irrigation systems in North Carolina that apply pesticides must be fitted with effective anti-siphon devices and a functional systems interlock to prevent the back-flow of pesticides or pesticide-water mixtures into the water supply and the back-flow of water or pesticide-water mixtures into the pesticide supply during system failure or equipment shutdown.⁹⁹

Additionally, no pesticides are allowed to be injected into the irrigation systems on the suction side of the irrigation pump. There are other specific regulatory requirements that must be met; therefore, any

⁹⁸ N.C. Administrative Code 2 Section 9L.1104.

⁹⁹ N.C. Administrative Code 2 Section 9L.2002.

farmer or producer in North Carolina, who is using or is planning to use this method of applying pesticides, should review the requirements and contact local or state agencies.

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. North Carolina Wildlife Protection Laws and Regulations

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

Under North Carolina law,¹⁰⁰ no one may take a wild animal, bird, or fish using poison or pesticide unless specifically permitted by the Wildlife Resources Commission (WRC). Consistent with the North Carolina Pesticide Law of 1971 and the Structural Pest Control Act of 1955, the WRC is authorized to regulate, prohibit, or restrict the use of poisons or pesticides upon wildlife resources.

When a factual basis exists, either the Commissioner of Agriculture or the Pesticide Board may declare a wild animal or bird to be a pest. After such a declaration, the DOA or the NCPB must notify the WRC in writing of:

- The action taken;
- The areas affected by the declaration;
- The type, amount, and mode of application of any poison or pesticide proposed to be used against the pest; and
- Other pertinent information.

Upon notification of a declaration, the WRC may either hold a public meeting or it may take no action at all. If a public meeting is held, then within 60 days of the public hearing the WRC may concur with

¹⁰⁰ N.C. General Statutes §§ 113-300.1 *et seq.* and § 113-262 (Bender 1999).

the declaration without limitation or modification, grant a limited or modified concurrence, or refuse to concur. If the WRC takes no action, then 60 days after the date of notice of the declaration, concurrence is automatic. If the WRC refuses to concur, no poison or pesticide may be used to take the wild bird or animal.

Any person who uses poisons or pesticides to take wild animals or birds unlawfully is guilty of a Class 2 misdemeanor. Any person who neglects to observe any restrictions placed on the taking of an animal or bird declared a pest is guilty of a Class 3 misdemeanor unless a different penalty is prescribed for that offense. Each day that a poison or pesticide is used unlawfully to take an animal or bird is a separate offense.

VII. ENFORCEMENT OF STATE ENVIRONMENTAL LAWS

As with federal environmental laws, persons who violate the regulatory requirements of state environmental laws face substantial penalties. The specific penalties vary to some degree with each statute. However, they generally include both civil and criminal fines. Additional fines may be assessed for each day that an operation remains in violation. For severe or repeated violations, jail sentences may be imposed. State agencies may also bring proceedings, either in court or before an administrative tribunal, to enjoin a producer's activities and force compliance with the statute. In some cases, citizens may also file suits to enforce the requirements of the environmental laws.

Under state laws, as with the federal statutes, if legal procedures have been and are thereafter carefully followed, producers may have a right to administrative or judicial review of agency decisions. To preserve the right of review and to determine the proper legal procedure, producers who are faced with a potentially adverse agency decision should immediately seek the advice of a competent attorney.

VIII. OTHER NORTH CAROLINA STATUTES AFFECTING AGRICULTURE

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

A. North Carolina Farmland Preservation

1. North Carolina Farmland Preservation Enabling Act

Under the Farmland Preservation Enabling Act,¹⁰¹ counties in North Carolina are authorized to adopt county ordinances that establish certain statutorily defined programs that the State Legislature has designed to encourage the preservation of farmland. To be eligible for these authorized programs, the farmland must be “qualifying farmland.” North Carolina statutes¹⁰² defines qualifying farmland as real property that is:

- Enrolled in the farm present-use-value taxation program or determined by the county to meet the requirements of the taxation program;
- Managed in accordance with highly erodible land erosion control practices established by the NRCS;
- The subject of a conservation agreement between the county and the owner of the land that prohibits non-farm use or development of the land for at least ten years;¹⁰³ and
- Certified by the NRCS as a farm with the following attributes:
 - At least two-thirds of the land is composed of soils that are best suited for providing food, seed, fiber, timber, and oil seed crops;
 - The land has good soil qualities that are favorable to the major crops produced in that county;
 - The farm has a favorable growing season; and
 - The farm receives, in eight out of every ten years, the amount of moisture necessary to produce high yields or agricultural, horticultural, or forestry operations have been actively maintained on at least two-thirds of the land during each of the five previous years.

¹⁰¹ N.C. General Statutes §§ 106-735 to -744 (Bender 1999).

¹⁰² N.C. General Statutes § 106-737 (Bender 1999).

¹⁰³ Except for the creation of not more than three lots in compliance with county zoning and subdivision regulations.

Voluntary agricultural districts and conservation easements are two kinds of farm preservation programs that are available to farmers in North Carolina, if their farmland is qualifying farmland, and provided the county has adopted the programs by ordinance.

a. North Carolina Voluntary Agricultural Districts

The purpose of a Voluntary Agriculture District (VAD), as stated by the North Carolina Legislature, is to “increase identity and pride in the agricultural community and its way of life and to increase protection from nuisance suits and other negative impacts on properly managed farms.”¹⁰⁴

VADs in North Carolina are created through the adoption of ordinances at the county level. Only qualified farmland or qualified farms may be included in a VAD. Additionally, state law requires that county VAD ordinances contain the following restrictions:

- Initially, a VAD must consist of at least the minimum number of acres of qualifying farmland or the minimum number of qualifying farms that the board of county commissioners has deemed to be appropriate for the creation of that particular VAD;
- As a prerequisite to the formation of the VAD, the owners of the farms or acreage that make up the VAD must enter into agreements to sustain agriculture in the district;
- A county board, county official, or agricultural advisory board established in compliance with applicable law¹⁰⁵ must review and approve the agreement; and
- Each district must designate a representative to serve on the advisory board.

State or local governmental units that wish to condemn farmland enrolled in a VAD must first request the advisory board to hold a public hearing on the matter. Therefore, one of the benefits of forming a VAD is that the enrolled farmland may be protected from condemnation. Additionally, state law prohibits assessments against VAD farmland for water and sewer improvements unless the farms are actually connected to the water and sewer improvements.

b. North Carolina Agricultural Conservation Easements

A county may purchase a conservation easement for qualifying farmland if the landowner voluntarily consents to sell the easement. Such an easement restricts the residential, commercial, and industrial

¹⁰⁴ N.C. General Statutes § 106-738 (Bender 1999).

¹⁰⁵ N.C. General Statutes § 106-739 (Bender 1999).

development of the land while maintaining its agricultural production capability. Generally, conservation easements are perpetual. However, the county may agree to sell the easement back to the landowner if, not less than twenty years after the initial purchase of the easement, the landowner can demonstrate to the satisfaction of the county that agriculture is no longer practicable on the land.

2. *North Carolina Zoning and Planning*

Zoning legislation¹⁰⁶ authorizes counties to regulate and restrict the use of private land. There are some state and federal constitutional limitations upon the government's authority to enact zoning legislation, and there are additional statutory limitations upon the zoning powers of subordinate government units within the State. However, in general, the power of local governments to enact zoning regulations is very broad. Examples of the kinds of land uses that might be regulated by local zoning regulations or ordinances are as follows:

- The height, number of stories, and size of buildings and other structures;
- The population density and the percentage of lots in a defined area that are permitted to be occupied;
- The size of yards, courts, and other open spaces;
- The location and use of buildings and other structures;
- The use of land as to one or more certain defined types of use, such as trade, industrial, residential, agricultural, or some other category or specific type of use; or
- A combination of allowed, legal restrictions or regulations.

Although there are specific statutory provisions in North Carolina for the protection of farmland from certain zoning regulations, in some cases a county's legitimate exercise of its authority to regulate land uses within its jurisdiction may nevertheless lawfully affect the use of farm property. Moreover, farm property that is used for non-farm purposes is probably not exempted from the governing county's general zoning authority in most cases.

Nevertheless, a county's zoning authority is limited in regard to farm property that is used for a bona fide farm purpose. A bona fide farm purpose may include activities related to the production of crops, fruits, vegetables, ornamental and flowering plants, dairy products, livestock, poultry, and other agricultural products for which there is a domestic or foreign market. As noted elsewhere in this manual, however, in

¹⁰⁶ N.C. General Statutes §§ 153A-340 to -348 (Bender 1999).

North Carolina there are zoning regulations that are specific to swine operations, and notwithstanding other North Carolina laws, counties may adopt zoning regulations that govern swine farms that have animal waste management systems with a design capacity of 600,000 pounds or more live weight. However, counties are prohibited by North Carolina law from enacting zoning regulations that entirely exclude swine operations.

B. North Carolina Nuisance and Right-to-Farm Statutes

1. North Carolina Nuisance

Generally, “nuisance” is a legal term of art that is used to describe a use of property or an activity that unreasonably limits or diminishes another person’s health, safety, or enjoyment of life or that interferes with the other person’s quiet enjoyment or beneficial use of his or her own property. For example, a land-use that causes annoyance, harm, or inconvenience to another person or that causes damage (which may include a mere reduction in value) to another person’s property might be a nuisance. A nuisance is referred to legally as a “public nuisance” when it violates public rights or causes a common injury to the public at large. A nuisance is a “private nuisance” if the damage is limited and peculiar to nearby residents and landowners.

North Carolina law requires the adverse parties in a farm nuisance dispute to first attempt resolution through formal mediation before bringing a civil action.¹⁰⁷ In this context a farm nuisance is defined as an action that is injurious to health, is indecent and offensive to the senses, or is an obstruction to the free use of property. To initiate pre-litigation meditation, the party must:

- File a request for mediation with the clerk of the superior court in a county where the action may, in conformance with proper legal procedure and the applicable rules of court, be heard by the court in the event that mediation fails;
- Mail a copy of the request by certified mail, return receipt requested, to each party in the dispute; and
- Select a mediator with the mutual consent of all parties or request that the court appoint a mediator if the parties are not able to agree on a mediator.

Generally, all parties to a legal proceeding, whether or not they are represented by an attorney, must strictly comply with the court’s rules and the law. Important legal rights may be lost or compromised if the proper legal procedure is not carefully followed by a party. Therefore, farmers who are involved in a legal dispute or mediation should promptly seek the advice of a competent, licensed attorney.

¹⁰⁷ N.C. General Statutes § 7A-38.3 (Bender 1999).

2. North Carolina Right-to-Farm

North Carolina's right-to-farm statutes¹⁰⁸ limit the circumstances under which an agricultural or forestry operation may be deemed to be a nuisance. Although offering some protection to farmers, the statutes do not guarantee or provide absolute protection.

In North Carolina, if an agricultural or forestry operation was not a nuisance at its inception, and provided that it has been in operation for more than one year, then the operation will not become a public or private nuisance merely as a result of a change in the circumstances of the area where the operation is located. In other words, if a person chose to build a home near a farm that had already been in existence for more than one year (and the farm was not a nuisance when it became operational), then the homebuilder might be legally barred from successfully suing the farmer even though the homebuilder's enjoyment of his or her property is adversely affected due to the farm's ordinary operation. These adverse conditions affecting a homebuilder's enjoyment of his property might arise from any number of the ordinary consequences of a farm operation such as insect, equipment, or animal noises, dust, insects or flies, distinct or unique farm odors, or other farm characteristics.

However, less certain is the extent to which the current right-to-farm statutes will protect a farmer whose expansion or alteration of his or her farm results in the creation of a nuisance that did not exist before the expansion or alteration. For example, if the farmer in the case above was operating a dairy, and sometime after the homebuilder had arrived, the farmer decided to convert some cropland to pasture and to increase the size of the herd, then any resulting nuisance that did not exist prior to the modification of the farm would probably not be protected from legal liability.

Furthermore, North Carolina right-to-farm statutes do not protect farmers from liability for the negligent or improper operation of an agricultural or forestry operation, liability for the pollution of a stream, liability for a change in the condition of a stream, or liability for an overflow from lands. Also, agricultural or forestry operations that were already located within the corporate limits of any North Carolina city at the time that North Carolina's right-to-farm statute was enacted are specifically excluded from the statute's protections; however, a farming or forestry operation that is brought into the corporate limits of a city because of annexation that occurred after the enactment of the statute may be protected.

C. North Carolina Dead Animals Disposal

The owner or person in charge of any domesticated animals, including poultry, and the owner, lessee, or person in charge of any land upon which any domesticated animal dies are responsible for the disposal of the dead animal. Disposal must occur within 24 hours after the responsible person knows of the death. The required disposal is by burial to a depth of at least three feet beneath the surface of the ground,

¹⁰⁸ N.C. General Statutes §§ 106-700 and -701 (Bender 1999).

by incineration, or by any manner that is approved by the State Veterinarian. Additionally, no animal may be buried within 300 feet of any flowing stream or public body of water.¹⁰⁹

D. North Carolina Aquaculture

The Aquaculture Development Act (ADA)¹¹⁰ was enacted to promote and encourage the development of North Carolina's aquacultural resources. Under the ADA, the North Carolina Department of Agriculture (DOA) is responsible for matters pertaining to aquaculture. The DOA is assisted by the Board of Agriculture (BA). The DOA's authority under the ADA is limited to commercially reared fish while wild fishery resources remain under the authority of the Wildlife Resources Commission.

The DOA is authorized by law to require the registration and licensing of all aquaculture facilities. The BA has authority to establish the standards of operation, the qualifications of operators, and the conditions under which fish may be commercially reared, transported, processed, bought, and sold.

E. North Carolina Conservation Reserve Enhancement Program

The federal Conservation Reserve Enhancement Program (CREP) is an outgrowth of the federal Conservation Reserve Program (CRP). The benefit of the enhancement program is that states may develop coordinated efforts and combine programs to address problems comprehensively. The Environmental Defense Fund¹¹¹ provides funding through USDA in conjunction with state funds¹¹² to address the problems of a particular estuary, river, or ecosystem in a comprehensive fashion. CREP in North Carolina addresses 100,000 acres¹¹³ of environmentally sensitive buffer land on Estuarine North Carolina waterways and flood prone, marginal croplands.

¹⁰⁹ N.C. General Statutes § 106-403 (Bender 1999).

¹¹⁰ N.C. General Statutes §§ 106-756 to -764 (Bender 1999).

¹¹¹ The Environmental Defense Fund, a leading, national, NY-based nonprofit organization, represents 300,000 members. EDF links science, economics, and law to create innovative, equitable and economically viable solutions to today's environmental problems.

¹¹² Generally, the state must contribute 20% or more of the federal amount contributed. In North Carolina, the state's contribution is \$55.3 million. Combined with the almost \$220 million CRP federal funds, the total funds available to North Carolina is approximately \$274 million. The state contribution is supported by other state programs including the Clean Water Management Trust Fund, the Agriculture Cost Share Program and the Wetlands Restoration Program. The Agriculture Cost Share Program funds technical assistance and cost share funds to farmers to install BMPs to reduce nonpoint source pollution. BMPs include erosion control practices and livestock exclusions from streams, stream crossings, and animal waste lagoons.

¹¹³ North Carolina has the authority until 2002 to enroll 100,000 acres before the enrollment period ends.

The CREP provides financial incentives¹¹⁴ to farmers and ranchers who take sensitive lands out of agricultural production to help solve agriculture-related environmental problems. In exchange for CREP payments, farmers and ranchers agree to follow the CRP requirements and any other state determined requirements imposed.¹¹⁵ When agricultural lands are planted in trees, grass, and other types of vegetation, the results are reduced soil erosion, improved air and water quality, and the establishment of millions of acres of wildlife habitat.

In North Carolina, CREP targets the Albermarle-Pamlico Estuarine System (APES) which contains three river basins. The APES includes the Chowan River Basin, the Nuese River Basin, and the Tar-Pamlico River Basin. The APES is the second largest estuarine complex in the country. The rivers, sounds, creeks, wetlands, and terrestrial areas sustain abundant numbers and wide varieties of fish, wildlife, and plant species as well as a many economic uses including commercial and recreational fishing, tourism, and recreation. The Jordan Lake watershed which affects the Upper Cape Fear River Basin is another targeted area in North Carolina.

¹¹⁴ Under CRP, USDA pays 50 percent of the cost of restoring vegetation or restoring natural flows of water to the land and 75 percent of restoring hydrology to wetlands. Under North Carolina's CREP, the combined state and federal funding provides a financial incentive to farmers and ranchers to cover most of the remaining costs to participants for planting trees or grasses or restoring water flows. The North Carolina CREP also allows farmers and ranchers to receive a 25 percent bonus for permanent easements (The bonus is calculated using the cumulative federal rental payment amounts.), and a substantial bonus for 30-year easements is available as well.

¹¹⁵ CREP contracts are at least 15 year contracts in North Carolina.

Appendix - Agencies

Producer Note: State 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.

State Agencies:

North Carolina Department of Agriculture & Consumer Services

P.O. Box 27647
Raleigh, NC 27611 or
2 West Edenton Street, # 102
Raleigh, NC 27601
(919) 733-7125
(919) 715-0026 fax
<http://www.agr.state.nc.us/>

Divisions:

Agriculture Statistics Division

P. O. Box 27767
Raleigh, NC 27611
(919) 856-4394
(919) 856-4139 fax
<http://www.agr.state.nc.us/stats/>

Agronomic Division

4300 Reedy Creek Road
Raleigh, NC 27607-6465
(919) 733-2655
(919) 733-2837 fax
<http://www.agr.state.nc.us/agronomi/>

Aquaculture and Natural Resources Division

2 West Edenton Street
Raleigh, NC 27601 or
P. O. Box 27647
Raleigh, NC 27611
(919) 733-7125
(919) 733-1411 fax
<http://www.agr.state.nc.us/aquacult/>

Board of Agriculture

2 West Edenton Street
Raleigh, NC 27601 or
P. O. Box 27647
Raleigh, NC 27611
(919) 733-7125

(919) 715-0026 fax
<http://www.agr.state.nc.us/agboard.htm>

Food and Drug Protection Division

4000 Reedy Creek Road
Raleigh, NC 27607
(919) 733-7366 or 3556
(919) 733-6801 fax
<http://www.agr.state.nc.us/fooddrug/>

Plant Industry Division

216 West Jones Street
Raleigh, NC 27603 or
P. O. Box 27647
Raleigh, NC 27611
(919) 733-3933
(919) 733-1041 fax
<http://www.agr.state.nc.us/plantind/>

Public Affairs Division

P. O. Box 27646
Raleigh, NC 27611
(919) 733-4216
(919) 733-5047 fax
<http://www.agr.state.nc.us/paffairs/>

Research Stations Divisions

2 West Edenton Street
Raleigh, NC 27601 or
P. O. Box 27647
Raleigh, NC 27611
(919) 733-3236
(919) 733-1754 fax
<http://www.agr.state.nc.us/research/>

Structural Pest Control Division

2 West Edenton Street
Raleigh, NC 27601 or
P. O. Box 27647
Raleigh, NC 27611
(919) 733-6100
(919) 733-0633 fax

<http://www.agr.state.nc.us/str-pest/>

Veterinary Services Division

2 West Edenton Street, Room 472 or
P. O. Box 27601
Raleigh, NC 27611
(919) 733-7601
(919) 733-6431 fax
<http://www.agr.state.nc.us/vet/>

**North Carolina Department of Environment and
Natural Resources**

1601 Mail Service Center
Raleigh, NC 27699-1601 or
512 North Salisbury Street
Raleigh, NC 27604
(919) 733-4984
(877) 623-6748 toll free
(919) 715-7468 fax
<http://www.enr.state.nc.us/>

Divisions:

Division of Air Quality

1641 Mail Service Center
Raleigh, NC 27699-1641 or
512 North Salisbury Street
Raleigh, NC 27604
(919) 733-3340
(919) 715-7175 fax
<http://daq.state.nc.us/>

Division of Coastal Management

1638 Mail Service Center
Raleigh, NC 27699-1638 or
512 North Salisbury Street
Raleigh, NC 27604
(919) 733-2293
(919) 733-1495 fax
<http://dcm2.enr.state.nc.us/>

Division of Environmental Health

1632 Main Service Center
Raleigh, NC 27699-1632 or
512 North Salisbury Street
Raleigh, NC 27604
(919) 733-2870
(919) 715-3280 fax
<http://www.deh.enr.state.nc.us/>

Division of Forest Resources

1616 Mail Service Center
Raleigh, NC 27699-1616 or
512 North Salisbury Street
Raleigh, NC 27604
(919) 733-2162
(919) 733-2835 fax
<http://www.dfr.state.nc.us/>

Division of Land Resources

1612 Mail Service Center
Raleigh, NC 27699-1612 or
512 North Salisbury Street, Room 519
Raleigh, NC 27604
(919) 733-4574
(919) 715-8801 fax
<http://www.dlr.enr.state.nc.us/>

Division of Marine Fisheries

P. O. Box 769 or
3441 Arendell Street
Morehead City, NC 28557
(252) 726-7021
(800) 682-2632 toll free in NC
(252) 726-0254 fax
<http://www.ncfisheries.net/>

Division of Parks and Recreation

1615 Mail Service Center
Raleigh, NC 27699-1615 or
512 North Salisbury Street
Raleigh, NC 27604
(919) 733-4181
(919) 715-3085 fax
<http://ils.unc.edu/parkproject/ncparks.html>

**Division of Pollution Prevention and
Environmental Assistance Service**

1639 Mail Service Center
Raleigh, NC 27699-1639 or
2728 Capital Boulevard
Raleigh, NC 27604
(919) 715-6500
(800) 763-0136 toll free
(919) 715-6794 fax
<http://www.p2pays.org/>

Division of Soil and Water Conservation

1614 Mail Service Center
Raleigh, NC 27699-1614 or
512 North Salisbury Street

Raleigh, NC 27604
(919) 733-2302
(919) 715-3559 fax
<http://www.enr.state.nc.us/DSWC/>

Division of Waste Management

1646 Mail Service Center
Raleigh, NC 27699-1646 or
401 Oberlin Road, Suite 150
Raleigh, NC 27605 or
(919) 733-2178
(919) 715-3605 fax
<http://wastenot.enr.state.nc.us/>

Division of Water Resources

1611 Mail Service Center
Raleigh, NC 27699-1611 or
512 North Salisbury Street
Raleigh, NC 27604
(919) 733-4064
(919) 733-3555 fax
<http://www.dwr.ehnr.state.nc.us/>

Division of Water Quality

1636 Mail Service Center
Raleigh, NC 27699-1636 or
512 North Salisbury Street
Raleigh, NC 27604
(919) 733-3221
(800) 858-0368 emergency management
(800) 623-6748 regulation information
(919) 715-0588 fax
<http://h2o.enr.state.nc.us/>

Office of Environmental Education

1609 Mail Service Center
Raleigh, NC 27699-1609 or
512 North Salisbury Street
Raleigh, NC 27604
(919) 733-0711
(800) 482-8724 toll free
(919) 733-1616 fax
<http://www.ee.enr.state.nc.us/>

Wildlife Resources Commission

512 North Salisbury Street, Room 334
Raleigh, NC 27604
(919) 733-3391
(919) 733-7083 fax
<http://www.wildlife.state.nc.us/>