

ARTICLE 28

# Conservation, the Environment, and Local Government

by Richard B. Whisnant and Milton S. Heath Jr.

The State Constitution / 2

Preemption / 3

Environmental Impact Statements / 3

Land Acquisition and Conservation / 4

Consent of Counties to Land Acquisition / 4

Solid Waste Regulation / 5

Municipal Solid Waste / 5

Hazardous Wastes and Low-Level Radioactive Wastes / 5

Water Pollution and Water Resources / 7

Groundwater Quality / 8

Sewage Treatment, Including Septic Tanks / 8

Non-Point-Source Pollution / 10

Sedimentation Pollution / 10

Stormwater Management / 11

Other Non-Point-Source Pollution Control Measures / 12

Water Supply Watershed Protection / 12

Floodway and Floodplain Management / 13

Regulation and Restoration of Streams and Wetlands / 14

Drainage Districts / 14

Special Issues with Agriculture / 15

Agricultural Non-Point-Source Pollution / 15

Intensive Livestock Operations / 16

Pesticides / 16

Soil and Water Conservation / 17

Cooperative Extension Service / 18

Air Pollution / 19

Local Programs / 19

Land Use and Transportation Control / 19

Oxygenated and Reformulated Gasoline / 19

Indoor Air Pollution / 20

Consistency of Air and Water Pollution Permits with Local  
Land Use Ordinances / 20

Occupational Safety and Health / 21

Place-Based Environmental Regulation / 22

Coastal Area Management / 22

Mountain Ridge Protection / 23

---

ISBN 978-1-56011-525-0. This article was last updated in 2006. © 2007 School of Government. The University of North Carolina at Chapel Hill. This work is copyrighted and subject to “fair use” as permitted by federal copyright law. No portion of this publication may be reproduced or transmitted in any form or by any means—including but not limited to copying, distributing, selling, or using commercially—without the express written permission of the publisher. Commercial distribution by third parties is prohibited. Prohibited distribution includes, but is not limited to, posting, e-mailing, faxing, archiving in a public database, installing on intranets or servers, and redistributing via a computer network or in printed form. Unauthorized use or reproduction may result in legal action against the unauthorized user.

THIS ARTICLE COVERS laws aimed at conservation of natural resources and minimizing pollution of the environment. The article focuses mostly on conservation and environmental laws that are important to the work of North Carolina local governments, with an emphasis on state law, but with occasional reference to the federal laws that often underlie state and local requirements. “Environment” is not a clearly defined word; there are many aspects of local government work that have environmental impacts, but that are covered in other articles. Article 38 discusses water and sewer enterprises, which are core services of local government that have a heavy environmental regulatory component. Article 39 discusses solid waste enterprises, another important local government service that is closely bound up with environmental law. Other local government functions covered elsewhere, such as planning and land use regulation and the design and maintenance of transportation systems, are equally important to a full picture of local government’s role in environmental management.

Local government’s involvement in North Carolina environmental management goes back to the early days of the colonial legislature. In 1795, the General Assembly passed a statute providing for the draining of swamp lands by ditching through private property, with or without the consent of property owners, under the direction of the county commissioners.<sup>1</sup> In the twenty-first century, drainage problems continue to pose challenges for many local governments, but it is just as likely that their staff will be charged with restoring wetlands and retaining stormwater onsite as with draining water quickly. As the environmental sciences have brought heightened awareness of the environmental consequences of human activities, especially land development, environmental management tasks have grown much more complex. An increasing share of these tasks falls to county and city governments as the country struggles to cope with diffuse, nonpoint sources of pollution.

## The State Constitution

Article XIV, Section 5 of the North Carolina Constitution provides:

It shall be the policy of this State to conserve and protect its lands and waters for the benefit of all its citizenry, and to this end it shall be a proper function of the State of North Carolina *and its political subdivisions* to acquire and preserve park, recreational, and scenic areas, to control and limit the pollution of our air and water, to control excessive noise, and in every other appropriate way to preserve as a part of the common heritage of this State its forests, wetlands, estuaries, beaches, historical sites, open lands, and places of beauty. (N.C. CONST. Art. XIV, § 5, emphasis added)

The supreme court handed down a dramatic decision in the summer of 1998 that in essence declared this section to give direct power to local units of government “to regulate our waters” (*Smith Chapel Baptist Church v. City of Durham*, 348 N.C. 632, 502 S.E.2d 364, 367 (1998) (Smith Chapel I) (superseded on rehearing)). On rehearing, however, a divided North Carolina Supreme Court superseded its earlier opinion and struck down the stormwater ordinance in question on different grounds. The final opinion gave no interpretation of Article XIV (*Smith Chapel Baptist Church v. Durham*, 350 N.C. 822 (1999) (superseding 348 N.C. 632)). The legislature got in the final word (perhaps) in the 2000 session by passing a bill that retroactively allowed the stormwater financing mechanism that led to the lawsuits.

Prior to the *Smith Chapel* case, the only published decision construing Article XIV, Section 5 was *Rohrer v. Credle*, 322 N.C. 522 (1988). *Credle* involved ownership of submerged lands and relied on the constitutional provision just to bolster its argument for public trust rights in those lands. This constitutional provision was also cited in support of the public nature of and county’s authority to charge special assessments for relocation of a coastal inlet, in *Parker v. New Hanover County*, 619 S.E.2d 868 (2005).

The ultimate meaning and importance of Article XIV, Section 5 remain unclear. Is it a direct constitutional authorization of North Carolina local government action to protect the environment?<sup>2</sup> Until an appellate court determines whether this constitutional language directly authorizes North Carolina local governments to conserve natural resources and protect the environment, local jurisdictions will be left in the environmental arena, as in other areas of their work, needing to find legislative authority for any environmental efforts.

1. Sess. Laws 1795-7 (reprinted in *N.C. Laws Compilation of 1804* at 76).

2. For an analysis of the constitutional amendment’s history that argues in favor of this reading, see Milton S. Heath Jr.,

## Preemption

In addition to the apparent need for legislative authority to undertake environmental and conservation efforts, North Carolina counties and cities must consider whether those efforts are preempted by state or federal law. The basic law of state preemption of local action in North Carolina is set out in G.S. 160A-174, which is applicable both to cities and counties. The hardest questions in the environmental field tend to be when “a State or federal statute clearly shows a legislative intent to provide a complete and integrated regulatory scheme to the exclusion of local regulation.”<sup>3</sup> The state supreme court interpreted this language to have a very broadly preemptive effect in striking down a county ordinance and identical county health board rules regulating swine farms.<sup>4</sup> Several state environmental programs allow local governments to enact more stringent requirements or take full administrative responsibility for a given regulatory program, but these provisions normally require state approval of the local program before the delegation is made or the local enactment is effective.<sup>5</sup>

## Environmental Impact Statements

The North Carolina Environmental Policy Act of 1971, G.S. Chapter 113A, Article 1, declares broad state policy to encourage productive use of natural resources without damage to the environment, to encourage public awareness of the environmental consequences of state actions, and to interpret all laws and policies of the state in accordance with these environmental goals. To further them in a concrete manner, G.S. 113A-1 requires that state agencies file an environmental impact statement (EIS) in connection with all “actions involving expenditure of public moneys or use of public lands for projects and programs significantly affecting the quality of the environment.” A similar requirement applies to federal projects and programs under federal law. As defined in G.S. 113A-9(9), a “state agency” does not include local governments *except* when their programs, projects, and actions are subject by law to review, approval, or licensing by a state agency.<sup>6</sup>

Counties and cities may by ordinance require EISs in connection with “major development projects” (those larger than two acres) of private developers and special-purpose governments. The authorization could cover such projects as shopping centers, residential subdivisions, and industrial or commercial developments. A few counties and cities have made use of this authority. A 1986 revision of the state guidelines under the Environmental Policy Act stimulated further local interest; it provided that “state [permitting] agencies shall consider any information generated by” local governments under the act.<sup>7</sup> A 1991 amendment codified this provision at G.S. 113A-4(2a). Note that G.S. 113A-8 allows a local EIS to be required of a private developer, whereas G.S. 113A-4 only provides for an EIS to be required of a state agency.

G.S. 113A-8 places certain restrictions on local EIS processes:

- They must be adopted by ordinance.
- They may not be designed to apply only to one particular project, and they must be applied consistently.
- They must exempt projects for which a state or federal EIS or functionally equivalent permit is required. A “functionally equivalent permit” is a state or federal environmental permit that separately requires the same type and degree of environmental assessment that the ordinance would require.

---

*North Carolina Environmental Bill of Rights: Origins and Implications* (Chapel Hill, N.C.: Institute of Government Memorandum, January 1999).

3. N.C. GEN. STAT. §§ 160A-174(a)(5) (hereinafter G.S.).

4. *Craig v. County of Chatham*, 356 N.C. 40 (2002).

5. *See, e.g.*, G.S. 143-214.23 (delegation of riparian buffer protection requirements to local governments); Erosion and Sedimentation Pollution Control program, discussed in this article.

6. *See Town of Highlands v. Hendricks*, 164 N.C. App. 474, 596 S.E.2d 400 (2004) (EIS not necessary for condemnation for road widening).

7. 15A NCAC 25.0802 (amended effective May 3, 1993).

- The ordinance must establish minimum criteria to determine whether an EIS is required and may not require an EIS for a project that does not exceed the minimum criteria. The state guidelines in 25 NCAC 25.0801 *et seq.* set forth examples of minimum criteria.

A good starting point for a local government considering the adoption of a local EIS ordinance would be to limit the ordinance to projects that require (1) any listed state environmental permit, such as a mining permit or a water quality NPDES permit, or (2) any listed local land use permit, such as a subdivision approval or zoning conditional use permit. These limitations keep the ordinance focused on specific “actions” within the purview of G.S. 113A-4(2).

In a case involving Cane Creek Reservoir in Orange County, the North Carolina Court of Appeals held that the state Environmental Policy Act also required preparation of an EIS for certain local government projects—in particular, for a local water supply reservoir—that needed a state permit.<sup>8</sup> The logic of this decision extends to other state-licensed local government projects. After the *Cane Creek* decision the legislature specifically exempted sanitary landfills operated by local governments from the act, as well as the siting of a super-conducting super-collider and the siting of certain prison units and law enforcement training facilities. It also exempted applications for hazardous waste facility permits “to the extent that the review thereof provides the functional equivalent” of an EIS, certain prison construction efforts, building of a Western Justice Academy, and building of some juvenile facilities.<sup>9</sup> The *Cane Creek* case also illustrates the fact that partially overlapping federal, state, and local EISs may be required for some projects. In that case, separate but similar federal and state impact statements were necessary.

Environmental impact analysis provides an opportunity for a thorough (and sometimes very lengthy) airing of the possible environmental consequences of major developments. A unit that wants to act to take advantage of this opportunity can either adopt a separate environmental impact ordinance under G.S. 113A-108 or insert similar provisions into its local zoning ordinance or subdivision control ordinance. Which approach is preferable will depend on the local government’s objectives.

## Land Acquisition and Conservation

### Consent of Counties to Land Acquisition

G.S. 153A-15, which as of January 2006 applies to eighty-three counties, requires the consent of the board of county commissioners before land in the county may be condemned or voluntarily acquired by a unit of local government outside the county (other than a city condemning or acquiring land within its corporate limits). The motive behind the original legislation (enacted in 1981) was to give a small group of southeastern counties control over the acquisition of landfill sites by a large neighboring county. The number of covered counties has been gradually increased from the handful of original counties to the current eighty-three. Motives for the post-1981 amendments have addressed other resource acquisitions, such as water supply sites, but the literal scope of the statute is not limited by any of these motives.

Local government units whose property is tax-exempt and who wish to acquire or condemn land for the purpose of wetlands mitigation must agree to pay estimated foregone property taxes for the next twenty years after condemnation to the county where the land is located, if the county is an enterprise tier one or tier two county under G.S. 105-129.3.<sup>10</sup>

8. *In re* Environmental Management Comm’n, 53 N.C. App. 135, 280 S.E.2d 520 (1981).

9. See G.S. 113A-1, note; 1987 N.C. Sess. Laws ch. 3, §§ 4, 5; G.S. 130B-9.

10. G.S. 153A-15.1.

## Solid Waste Regulation

### Municipal Solid Waste

The subject of solid waste management is addressed in detail in Article 39 in this volume. A brief summary of the subject follows here for general information.

The federal Resource Conservation and Recovery Act (RCRA)<sup>11</sup> regulates hazardous wastes from “cradle to grave.” It also regulates management of nonhazardous solid waste in some important ways. RCRA itself prohibits the establishment of new open dumps, requires that existing open dumps be closed, and requires that all solid waste be disposed of in sanitary landfills, be used for resource recovery, or otherwise be disposed of in an environmentally sound manner. The United States’s Environmental Protection Agency’s (EPA) landfill rules under RCRA go beyond these statutory provisions by requiring monitoring, leachate collection, effective liners, financial responsibility, and closure and postclosure care, among other restrictions on the design and operation of municipal solid waste disposal facilities.

Beginning with Senate Bill 111 in 1989, the General Assembly began to enact legislation that comprehensively regulates solid waste management by local governments. County governments are primarily responsible for the disposal of solid wastes, but cities are also involved, some more than others. Most cities are responsible for day-to-day collection. Counties can adopt solid waste management ordinances, and the ordinance is an essential part of the county’s management program.<sup>12</sup> Counties were charged with responsibility for meeting a state goal of 40 percent reduction of the solid waste stream between July 1, 1991, and June 30, 2001. Only one county, Orange, met this goal. Overall, per capita generation of solid waste *grew* statewide in this ten-year period by 12 percent, despite the local plans, and it continues to grow.<sup>13</sup> Counties can (and some do) license or franchise private haulers and disposers of solid waste. See Article 39 for the details.

### Hazardous Wastes and Low-Level Radioactive Wastes

There is a large body of federal and state law that regulates hazardous waste management, another pollution control field in which the federal government sets the basic goals, standards, and procedures, and state governments provide much of the machinery to achieve federal objectives. One of the principal federal statutes is RCRA. It regulates the generation, transportation, treatment, and storage of hazardous wastes under a so-called cradle-to-grave system, which monitors the wastes from the time they are generated through ultimate disposal, relying on a manifest that follows the materials and is filed with regulatory agencies.

Another major federal statute is the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA, or *Superfund*), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) and the Small Business Liability Relief and Brownfields Revitalization Act of 2001.<sup>14</sup> It established two funds to help finance removal and disposal of hazardous substances released to the environment, especially substances disposed of to the ground through dumps or otherwise. As it was interpreted by the numerous courts who reviewed it in the 1980s and 1990s, CERCLA also made those responsible for these releases as well as owners of property contaminated by the releases jointly, severally, strictly, and retroactively liable for all costs of removal or remedial action and for damages to natural resources, subject to a few narrow exceptions.

North Carolina has statutes that parallel RCRA and CERCLA (G.S. 130A-290 through -309, and 130A-310 through -310.40). Legislation in the 1980s made the state a party to the Southeast Interstate Low-Level Radioactive Waste Compact and established state boards to seek sites for disposal of hazardous wastes and low-level radioactive wastes. These boards also had general responsibility for state hazardous waste management policy. After nearly a

---

11. 42 U.S.C. §§ 6901-6992k (1983 & Supp. 1995).

12. G.S. 153A-136. *See also* G.S. 153A-132.1 (authorizing counties to provide for waste removal outside cities); 153A-143 (authorizing regulation of junked cars).

13. State of North Carolina, Department of Environment and Natural Resources, Division of Waste Management, *Solid Waste Management Annual Report 2003-4* (Raleigh, N.C., 2004) Table 1, p. 5. Available online at [http://www.wastenotnc.org/SWHOME/SW03-04\\_AR.htm](http://www.wastenotnc.org/SWHOME/SW03-04_AR.htm).

14. 42 U.S.C. §§ 9601-9675 (1983 & Supp. 1995).

decade of intensive, tumultuous, and ultimately fruitless searching for hazardous and low-level radioactive disposal sites in the state, and after the Southeast Compact stopped further funding of site assessment, North Carolina withdrew from the compact and eliminated these special-purpose state boards in the mid-1990s.

One unintended result of hazardous waste programs such as the Superfund has been to deter the reuse of many properties that are stigmatized because of known or suspected contamination, properties sometimes known as *brownfields*. National and state policy is now encouraging a new look at this subject, with a view to encouraging productive reuse of some brownfields properties. North Carolina joined the ranks of states that are participating in this reappraisal by enactment in 1997 of a brownfields program as well as a similar, special program for sites contaminated by dry cleaning solvents. G.S. 130A-310.30 promotes the reuse of brownfields by developers under procedures overseen by the Department of Environment and Natural Resources (DENR).<sup>15</sup> The basic idea is that the state gives property owners protection from liability in exchange for the owners' agreement to take some measures to make the property safe. G.S. 130A-310.3 and 143-215.84 establish procedures by which an owner who does not want contaminated property to be used may place enforceable restrictions on current and future use of the property. A county may want to take advantage of the state brownfields program as part of its economic development strategy, and the registers of deeds must be familiar with the recording requirements spelled out in G.S. 130A-310.8 and G.S. 143-215.85A.

Federal legislation goes beyond the regulation of hazardous wastes to the regulation of useful but toxic chemicals that have not reached the waste stream. The lead federal statute on this subject is the Toxic Substances Control Act (TSCA),<sup>16</sup> which establishes a system for regulatory review and clearance of new chemicals that are proposed to be placed on the market, and review of existing chemicals, as well as special regulations concerning PCBs (polychlorinated biphenyls). In addition, the 1986 SARA amendments contain complex chemical right-to-know and emergency planning provisions. This subject was already addressed by state legislation in some states, including North Carolina.<sup>17</sup>

A final important federal law in this area is the Oil Pollution Act of 1990 (OPA).<sup>18</sup> Enacted in the wake of the wreck of the *Exxon Valdez*, which released millions of gallons of oil into the coastline of southern Alaska, OPA set up a system for recovering damages from oil spills. North Carolina has its own oil spill act, which is broader than OPA in that it also serves as a basis for liability for spills of hazardous substances other than oil. The Oil Pollution and Hazardous Substances Control Act of 1978 (OPHSCA) creates strict liability for those who control oil or hazardous substances immediately prior to their release.<sup>19</sup> Local ordinances aimed at discharges of oil or hazardous substances to sewers or waste disposal systems are specifically preserved by OPHSCA.<sup>20</sup>

Some cities and counties have adopted ordinances that add local controls on hazardous wastes to the complex set of federal and state laws. These ordinances range from those that merely supplement state inspection and monitoring, to those that regulate small waste-producing sites below the minimum size for state regulation, to those that establish comprehensive procedures for reviewing proposed sites for hazardous waste or low-level radioactive waste treatment and disposal. At least one county has adopted an underground storage tank ordinance.

Any local government unit that is considering a local ordinance on these subjects should closely examine the underlying statutory authority, the possibility of state or federal preemption of the field in question, and the constitutionality of the proposed ordinance. Unless the ordinance takes the form of zoning, the only source of local authority may be the general ordinance-making power (G.S. §§ 153A-121, 160A-174), specific local responsibility for sewer or other wastewater systems, the statute granting cities (and, by judicial interpretation, counties) the power to regulate

---

15. See generally R. Whisnant, *Cleanup Law of North Carolina* (Chapel Hill, N.C.: Institute of Government, The University of North Carolina at Chapel Hill, 2003); Whisnant, "Brownfields in a Green State," *Popular Government* 64(2) (Winter 1999).

16. 15 U.S.C. §§ 2601-2629 (1982 & Supp. 1995).

17. G.S. Ch. 95, Art. 18.

18. 33 U.S.C. §§ 2701-2761.

19. G.S. Ch. 142, Art. 21A. The primary liability-creating statute is G.S. 143-215.84.

20. G.S. 143-215.82.



emission of pollutants or contaminants,<sup>21</sup> or the uncharted waters of the constitutional provision on the environment. These may or may not be legally adequate bases for this kind of local regulation. The general tests for preemption of local ordinances by state or federal laws are set forth in G.S. 160A-174, and several of the state regulatory statutes concerning hazardous waste management contain specific preemption or override provisions of their own that should be considered.<sup>22</sup>

The state has had a long-running debate on the methods for assessing the risks posed by cleanups that leave residual contamination at sites. The legislature required risk-based analysis in one program area, the cleanup of discharges from leaking underground storage tanks, to determine whether a discharge from a tank poses risks to human health or the environment that are greater than acceptable levels of risk established by the Environmental Management Commission (EMC). The objective is to avoid unproductive cleanup efforts that have threatened the stability of the underground storage tank cleanup fund.<sup>23</sup> A cost-benefit analysis had previously been required under G.S. 143-215(c) and -215.107(f) for new water and air pollution control rules that were more stringent than federal rules. The 1984 amendments to the federal RCRA contained special regulations concerning petroleum underground storage tanks, but the actual system of regulations for these tanks is largely driven by state priorities for using public funds to pay for cleanups. Risk-based analysis was also required in 1997 legislation concerning cleanup of contamination from dry cleaning solvents, a cleanup program modeled loosely on the underground storage tank program.<sup>24</sup> Whether a more general and consistent method of risk assessment will be applied to contaminated property cleanup in the state continues to be a hot topic of debate as this is written, in 2006.

## Water Pollution and Water Resources

The basic U.S. systems of water and air pollution control are generally similar. The federal government sets goals and some standards; state government is largely responsible for providing the machinery to achieve the federal objectives. In North Carolina as in most states, state government does most of the permitting and enforcement, and also adds its own standards and legislation targeted to its own peculiar environmental problems. The North Carolina clean water legislation is codified at G.S. Chapter 143, Article 21, Parts 1, 1A and 7, and Article 21A. Local government's regulatory role in this area has consisted largely of health department programs concerning septic tanks and pretreatment programs for significant industrial dischargers, along with greater and greater responsibility for nonpoint sources of pollution, such as stormwater, and for special areas such as water supply watersheds.

Federal legislation<sup>25</sup> establishes long-term national water quality goals. The standards required to meet them became increasingly stringent during the 1970s and 1980s as the nation worked toward the objective of achieving recreational water quality for all its water. The EPA continues working to help the states keep their water pollution control laws and programs in compliance with federal standards, but regulatory attention has increasingly turned to diffuse, decentralized, nonpoint sources that are difficult or impossible to regulate with "one-size-fits-all" federal standards. Even under the well-established, federal-led system for point source discharge controls, there is a trend to more particularized local regulation of such things as the sewage collection system and localized water quality problems like the excess nutrients in the Neuse, Tar-Pamlico, and parts of other North Carolina river basins.

---

21. G.S. 160A-185. Note that this statute expressly requires that any local ordinance adopted under it be "consistent with and supplementary to State and federal laws and regulations."

22. *See, e.g.*, G.S. 130A-293.

23. 1995 N.C. Sess. Laws ch. 377.

24. G.S. 143-215.104A.

25. The primary federal legislation for water pollution control is the Water Pollution Control Act, codified at 33 U.S.C. §§ 1251-1387 (1986 & Pocket Pt. 1995).

## Groundwater Quality

There is growing concern about protection of groundwater quality, especially in states like North Carolina where as much as half the population depends on wells for drinking water. This concern is also reflected nationally in federal standards for the 1986 and 1996 amendments to the federal Safe Drinking Water Act.<sup>26</sup>

In North Carolina there is no comprehensive state law on groundwater quality, only a number of separate laws on the subject that neither collectively nor individually cover all significant groundwater pollution problems. The most nearly comprehensive approach is the North Carolina groundwater classification system administered by the DENR, which adapts the concepts of an earlier surface water classification system to groundwater conditions and serves as a checkpoint for other decisions (such as landfill siting) that may affect groundwater quality.<sup>27</sup> In addition, wells are to some extent regulated by the Well Construction Standards Act (G.S. 87-83 through -96), by some county well ordinances or health board rules, and by the Capacity Use Areas Law (G.S. 143-215.11 through -215.22). The 1997 General Assembly enacted a statute that requires individuals in the business of constructing, installing, repairing, altering, or abandoning wells to be certified by a Water Well Contracting Certification Commission, a unit of DENR (G.S. 87-98.1). In some specific situations, groundwater quality may also be protected by state solid and hazardous waste regulations (including underground storage tank regulations), septic tank regulations, or radiation protection regulations, or the federal or state oil and hazardous substances spill-control acts.<sup>28</sup> Some of these topics are covered elsewhere in this article.<sup>29</sup>

## Sewage Treatment, Including Septic Tanks

The water pollution laws place important responsibilities on local governments to collect and treat their sewage properly. Local governments must obtain permits to discharge their treated sewage to the waters of the United States, just as industries must obtain permits to discharge their treated wastewaters. The permit is obtained from the Division of Water Quality (DWQ) within DENR and is known as the *NPDES* (National Pollution Discharge Elimination System) *permit*. Failure to meet the law's requirements may result in the assessment of heavy penalties on local governments and officials.

During the 1970s and early 1980s, large-scale federal and state subsidies, ranging up to 75 percent or more of the total cost, were available to help local governments build sewage treatment plants. Although the days of this extraordinary federal and state largesse are over, some loan funds may still be available. Financing of water and sewer projects through grants, loans, and other methods is discussed in some detail in Article 38 of this volume.

The General Assembly became quite active on water quality issues in the 1990s, reflecting public concern over water pollution and major news stories about fish kills and hog waste spills.

- It created a Clean Water Management Trust Fund in 1996 to make grants to state, local, and nonprofit agencies for the acquisition of riparian buffers and conservation easements, the repair of failing wastewater treatment systems, and the stimulation of water quality planning. The fund is financed by an earmarked percentage of unreserved annual credit balances in the General Fund, which will also help support a Wetlands Restoration Fund. The 1997 assembly created a Drinking Water Revolving Loan fund to take advantage of \$20 million in annual federal grants to each state.
- It launched legislative initiatives that parallel the EMC's river basin planning program, by concentrating on problems of particular basins. Special attention was given to the Neuse River Basin by a legislative nitrogen reduction goal and atmospheric nitrogen deposition study set in 1996, expanded in 1997 by specific legislative

26. 42 U.S.C. §§ 300f through 300j-26 (1991 & Pocket Pt. 1995).

27. See 15A NCAC Subchapter 2L.

28. The federal and state oil and hazardous substances spill-control acts are codified at 33 U.S.C. § 1321 (1986 & Pocket Pt. 1995) and G.S. 143-215.75 through -215.104, respectively.

29. See also Milton S. Heath Jr., "Ground Water Quality Law in North Carolina," *Popular Government* 52 (Winter 1987): 39-49. This article addresses the subject of groundwater quality law in greater detail. Because of the rapidly changing nature of the groundwater protection field, local government units that have concerns about groundwater quality may wish to consult with federal, state, or private experts before addressing those concerns.



nitrogen and phosphoric reduction limits, and aided by a 1996 grant of \$2 million to help meet the nitrogen reduction goal. The 1997 assembly followed through with grants for water quality monitoring in the Cape Fear Basin (\$1.5 million) and the Roanoke and Pamlico estuaries (\$400,000). It also funded evaluation of septic tank use in the Neuse Basin and innovative technology to reduce nitrification (\$850,000). Enacted alongside these river basin measures in 1997 was a law allowing the EMC to approve plans developed by coalitions of local governments for any river basin or subbasin as an alternative way to achieve water quality standards. In the Neuse Basin, there are now both Upper and Lower Neuse Basin Associations. The 1997 General Assembly also directed the Department of Health and Human Resources to develop a coastal fishing waters contaminant monitoring program, and enacted a comprehensive coastal fisheries reform law directing DENR to coordinate development of critical fisheries management and habitat protection plans and reforming the coastal fisheries licensing system.

- In 1995 the General Assembly thoroughly overhauled the on-site wastewater (or septic tank) law, instituting a new five-year authorization concept and making improvement permits valid indefinitely. It also codified the EMC's authority to impose moratoria on wastewater systems that have reached capacity. In 1996 it funded a program aimed at eliminating "straight-piping" of domestic wastewater discharges, which is the direct discharge of wastewater to streams.

Local environmental health specialists (formerly called *sanitarians*) employed by county health departments have traditionally been responsible for inspecting and supervising installation of septic tanks and other on-site sewage treatment facilities. The septic tank law is codified at G.S. Chapter 130A, Article 11. In recent years, as septic tanks have been used for larger projects and in more densely built-up areas, these wastes have become an increasing concern for the EMC, with its general mandate for water pollution control, for state health authorities, and for local health departments. As a result, jurisdiction over sewage treatment is now divided among state agencies and the local health departments in a fairly complex way. These bureaucratic arrangements were frequently changed in the 1990s.

Under 1992 legislation (1) all subsurface on-site wastewater discharge systems are regulated by state and local environmental health agencies—the Division of Environmental Health (DEH) and county health departments; and (2) all systems discharging to surface waters or to the surface of the ground (spray irrigation) are regulated by DWQ under EMC rules. When the EMC has jurisdiction, an EMC permit is required for a sewage system: either an NPDES permit for a sewage discharge system, or a nondischarge permit for a system not covered elsewhere or for system elements such as sewer lines (G.S. 143-215.1). The EMC may impose a moratorium on the addition of wastes to a wastewater treatment plant when it determines that the plant is incapable of treating additional wastes.

The Health Services Commission (HSC) is the rule-making body for state environmental health. Under HSC rules, local health departments are delegated routine operating responsibility for the regulatory system. Local departments may also elect to administer their own sewage rules instead of state rules, if the DEH finds that the proposed local rules are at least as stringent as the state's and are necessary to protect public health. Fewer than five counties now have this approval. These local rules may incorporate the state's rules together with more stringent local modifications and additions. The DEH reviews local rules for consistency with changes in state rules as they are adopted, and examines the enforcement of local rules from time to time.<sup>30</sup> The EMC may also delegate authority to local governments to approve contracts for sewage and wastewater treatment systems.<sup>31</sup>

Persons who are subject to DEH or local health department jurisdiction must obtain authorizations and improvement permits for their sewage systems before beginning construction. They must also procure operation permits after the system is in place. Field inspection and tests are required before permits are issued. To reinforce these permit provisions, the on-site wastewater law provides that no permit for electrical or other utility or construction work on a residence or a place of business or public assembly may be issued until the necessary approvals have been obtained.<sup>32</sup>

---

30. G.S. 130A-335(c), (d).

31. G.S. 130A-317.

32. G.S. 130A-338, -339.

In addition to the authority granted to local boards of health to adopt their own sewage rules with DEH approval, these boards have a more general power to adopt “a more stringent rule” in an area regulated by the EMC or the HSC.<sup>33</sup> Health officials have relied on this authority to justify a variety of local rules covering subjects such as wells, package sewage treatment plants, and odor problems from animal feedlots. The scope of this power has been judicially limited in cases involving smoking regulation and swine waste management.<sup>34</sup>

### **Non-Point-Source Pollution**

The main thrust of traditional water pollution control programs has been to reduce pollution of streams by *point sources*, such as pipes that discharge the treated sewage of cities. There is growing recognition, however, that runoff from roads, shopping centers, farms, and forests, collectively known as *non-point-source pollution*, is a major contributor to stream pollution. This recognition is reflected in 1987 amendments to the federal Clean Water Act<sup>35</sup> that provide for states to present non-point-source water pollution control plans to the EPA for review. These plans draw heavily on existing state and local programs, such as the North Carolina programs summarized in the following sections. In some circumstances, however, these plans may involve the setting of Total Maximum Daily Loads (TMDLs) for pollution through management measures beyond anything presently required in the state. For example, a TMDL is being debated in 2006 to address nutrient problems in Jordan Lake that would require retrofits of existing stormwater structures. There is no other existing program requiring such retrofits.

### **Sedimentation Pollution**

Sedimentation pollution control involves preventing the silting of streams by uncontrolled stormwater runoff from construction projects, logging activities, and so on. In most states (including North Carolina), sedimentation pollution control programs are not administered by the general water pollution control agency.

The Sedimentation Pollution Control Law of 1973 (G.S. Ch. 113A, Art. 4) creates a Sedimentation Control Commission within DENR and authorizes it to formulate and supervise a cooperative state-local program to control the pollution of streams by sediment and silt. A principal function of this commission is to review local ordinances and programs for compliance with state standards and criteria. Any city or county that wishes to adopt a sediment-control ordinance should contact the commission, which will provide assistance. About eighteen counties, twenty-seven cities, and two consolidated city-county programs have delegated erosion and sediment control authority as of January 2006. The administrative arm of the commission is DENR’s Land Quality Division.

Developers are required to obtain approval of erosion-control plans if they engage in “land disturbing activities that result in a change of natural cover or topography and contribute to sedimentation” of streams.<sup>36</sup> G.S. 113A-57 establishes statewide standards that set buffer zones for lakes and watercourses; limit grades of graded slopes or fills to the angle that can be retained by vegetative cover, devices, or structures; and require erosion-control practices during construction, as well as permanent ground cover for tracts of land larger than one acre that are uncovered in construction.

The Sedimentation Pollution Control Law covers residential, commercial, and industrial construction activities. It exempts agriculture and applies only to forestry activities that do not comply with DENR-approved best management practices (BMPs) for water quality. It applies to local and state governmental land-disturbing activities, such as construction projects, as well as to private or commercial work. Generally, government activities are regulated directly by the Sedimentation Control Commission, while private and commercial activities are regulated by a local program.

33. G.S. 130A-39(a), (b).

34. See *Roanoke Rapids v. Peedin*, 124 N.C. App. 578 (1996) (smoking); *Craig v. County of Chatham*, 356 N.C. 40 (2002) (swine waste).

35. 33 U.S.C. § 1329 (Pocket Pt. 1995).

36. G.S. 113A-52(6), -54(c), -57.

## Stormwater Management

Stormwater management emerged in the early twenty-first century as a critically important and highly contentious part of water pollution control. As noted at the start of this article, North Carolina counties have had a very long involvement with drainage, which is the water *quantity* aspect of stormwater. Federal mandates under the Clean Water Act are increasingly pushing local government units, at least those with significant urbanized areas in them, into stormwater *quality* control as well.

The 1987 amendments to the federal Clean Water Act required that large cities (those with more than 250,000 in population) and medium-sized cities (those with 100,000–250,000 in population) obtain NPDES permits covering their stormwater discharges.<sup>37</sup> Deadlines were established for these so-called Phase I jurisdictions to file applications and obtain permits during 1992 and 1993 and to bring the systems into compliance within the following three years. Charlotte, Cumberland County (including Fayetteville), Durham, Greensboro, Raleigh, and Winston-Salem were the North Carolina Phase I jurisdictions. In 1999, EPA finalized its rules for Phase II stormwater, which extends the reach of stormwater quality controls to over one hundred local jurisdictions in North Carolina. As of January 2006, it is still unclear to what extent county governments themselves will be covered by Phase II in North Carolina.<sup>38</sup> Many cities, including small cities, are covered and will be required to regulate stormwater even after construction of stormwater-handling practices are completed on private property within their jurisdictions. These legal requirements present huge challenges to administrators in Phase II stormwater areas.

North Carolina is one of a very few states in which counties do not own the roads and thus do not have direct responsibility for the stormwater drainage systems along roads outside the cities. It is responsibility for these drainage systems, termed *municipal separate stormwater systems*, that triggers the obligation to get a permit and set up a stormwater quality program under Phase II. Whatever ultimately emerges as the counties' responsibility for roads and for private development along county roads, it is clear that county-owned property in urbanized areas that has some manmade stormwater conveyance (such as a ditch) that discharges to waters of the state is subject to Phase II, and thus requires an NPDES permit.

County facilities also may be covered under another part of the federal program, for industrial activities. This category of regulated facilities includes not only industrial and commercial activities per se but also municipal airports, landfills, and motorpool fleet facilities. As of June 1993, all municipal airports were covered, as were uncontrolled landfills.<sup>39</sup> In cities above 100,000 in population, motorpool facilities, controlled landfills, and wastewater treatment plants were covered.<sup>40</sup>

Prompted by the 1987 federal amendments, the 1989 North Carolina General Assembly enacted legislation broadening both the municipal and the county enterprise statutes to cover stormwater utility systems. G.S. 160A-311 and 153A-274 now define *public enterprises* to include stormwater and drainage systems. This supplements general ordinance-making and nuisance abatement powers, on which cities had sometimes relied to justify municipal drainage activities. It gives cities and counties the complete range of financing powers that go with the enterprise statutes.<sup>41</sup> The 1994 General Assembly authorized water and sewer authorities to adopt stormwater ordinances in G.S. 162A-6(14c).

---

37. 33 U.S.C. § 1342(p) (1986 & Pocket Pt. 1995).

38. In an unusually complex series of administrative rule-making proceedings and litigation, the EMC passed both a temporary and permanent rule on Phase II, which differed in the extent of county coverage. The permanent rule was held up by the Rules Review Commission and a lawsuit ensued. The temporary rule, with a few changes, was codified legislatively as Senate Bill 1201, S.L. 2004-163. Litigation against the Rules Review Commission successfully challenged that entity's veto of the permanent rule, which then went forward. As of this writing, it appears clear only that further legislation will be necessary to establish the contours of the Phase II stormwater program in North Carolina.

39. *Uncontrolled* landfills are those that do not meet the runoff requirements of the Resources Conservation and Recovery Act, Subtitle D, 42 U.S.C. §§ 6941-6949a (1983 & Supp. 1995).

40. Note that the Phase II rule provided a potential exemption from these rules if all the industrial activities are protected from exposure to stormwater by a storm resistant shelter. This exemption had been provided only to a limited category of light industry in the original Phase I rule, but the Ninth Circuit Court of Appeals found this limited exclusion to be arbitrary, and EPA expanded it in the Phase II rule.

41. For further details on stormwater, see <http://www.ncstormwater.org/>.

The 1997 General Assembly required DENR to develop a model stormwater management program as a guide for local governments, and The University of North Carolina–Chapel Hill School of Government published a model ordinance for postconstruction stormwater controls on behalf of DENR.<sup>42</sup>

### Other Non-Point-Source Pollution Control Measures

Some counties and cities have begun to include provisions in zoning and other land use ordinances aimed at reducing non-point-source pollution. Examples include buffer zones around lakes and streams, structural requirements such as silt basins, and limitations on impervious surfaces in developments. Similar provisions have been adopted in Coastal Resources Commission rules covering the twenty coastal counties under the Coastal Area Management Act. The state continues a long-standing strategy of creating river basin specific management measures for particular pollution problems, such as the excess nitrogen and phosphorus that have led to various point and non-point-source controls in the Neuse and Tar-Pamlico River basins.

### Water Supply Watershed Protection

A number of state government programs combine to provide some protection for surface water supply *watershed* areas. These include: EMC discharge and nondischarge permits, administered by DWQ; the sewage rules administered by health departments; sedimentation pollution control standards; the agricultural cost-share program for nonpoint sources of pollution; and state stormwater rules of various sorts.

The Drinking Water Act (G.S. Ch. 130A, Art. 10), administered by DENR, authorizes the setting of maximum contaminant levels for physical, chemical, biological, and radiological contaminants that may affect the public health. It also authorizes watershed protection rules and disinfection rules that are graded according to the nature of the particular water supply source. In addition, there are statutory emergency powers and response procedures for oil or chemical spills that can be activated by DWQ or the secretary of the DENR in response to spills and other emergencies that jeopardize public water supplies.

In 1989 the General Assembly enacted the Water Supply Watershed Protection Law, which combines minimum state standards for the protection of surface water supply watersheds with local land use powers. Since 1989 the statute has been amended, and the EMC has adopted the necessary implementing rules and has received and reviewed proposed local ordinances and programs that were required to be presented to it during 1993. The main elements of the resulting watershed protection program are discussed below.

Streams that may be sources of water supply are placed in one of five classifications, ranging from WS-I for undeveloped watersheds to WS-IV and -V for moderately to highly developed watersheds and their upstream drainage reaches. About 20 percent of the state's land area is located in these watersheds, the majority of it in the piedmont and mountain areas.

Within the WS-II, -III, and -IV classifications there are *general watershed areas* and *critical areas* (where risks associated with pollution are highest) that extend either one-half mile from the normal pool elevation of a reservoir or one-half mile upstream from a water supply intake located directly in a stream. The rules place greater restrictions on activities within critical areas than within general watershed areas.

The rules treat WS-I watersheds as pristine areas where no development will be allowed, nor sewer lines, sludge application, landfills, wastewater discharges, or hazardous materials storage, and where best management practices (BMPs) are required for agricultural, forestry, and transportation activities. Only 0.2 percent of the state's land area lies within WS-I watersheds. The rules regulate these activities and facilities in varying degrees within WS-II, -III, -IV, and -V watersheds.

The heart of the rules is the standard for allowable density of development in WS-II, -III, and -IV watersheds. For each of these classifications, local governments may select a low-density option without stormwater controls or a high-density option with stormwater controls. The *most restrictive* low-density option without stormwater controls (for WS-II watershed critical areas) are the 2-acre-minimum lots or 6-percent built-upon areas. The *least restrictive* high-density option with stormwater controls (for WS-IV *protected areas*) is development up to a 70 percent built-upon area that controls runoff from a 1-inch rainstorm. For the WS-V watersheds (the upper drainage reaches of WS-IV watersheds), there are no restrictions other than in-stream water quality standards that apply to all water supply sources.

---

42. See the UNC Environmental Finance Center website, [www.efc.unc.edu](http://www.efc.unc.edu), for a copy of the model ordinance.

Cities and counties that contain WS-I water supply watersheds are essentially bound to maintain these areas in an undeveloped state. Cities and counties containing WS-V watersheds are not required to restrict development at all in these watersheds.

Cities and counties containing WS-II, -III, or -IV watersheds may choose to go with the applicable low-density option or the high-density option with stormwater controls. They may apply the relevant development options either through their zoning, subdivision control, and sediment control ordinances, or through police power ordinances. The EMC has approved a model ordinance as a guide for cities and counties in meeting their requirements for local watershed protection planning under the statute.

The ultimate sanction available to the state if a city or a county fails to adopt a satisfactory program or to enforce it adequately is a civil penalty of up to \$10,000 per month. After notice, the EMC may assume responsibility for the program in the affected area and assess the civil penalty to recoup its administrative and enforcement costs.

The rules allow expansion of existing single-family residences without any restrictions, and they allowed development to continue in watershed areas until the applicable deadlines for submission of local watershed plans (from July 1, 1993, to January 1, 1994). The rules also protect vested rights under the 1989 vested rights legislation.

The state standards set by this legislation require cities and counties to protect water supply watersheds located within their boundaries whether these watersheds serve their own residents or the residents of other units. That is, County A may be required to protect watershed areas within the county that serve the residents of City X located in neighboring County B.

The North Carolina Supreme Court upheld the constitutionality of the act against a claim that it lacked adequate standards for the powers that it delegated to the EMC.<sup>43</sup>

### **Floodway and Floodplain Management**

The *floodway* of a stream is essentially the channel, banks, and adjoining areas that carry normal stream flow and moderate flooding. The floodway is defined by G.S. 143-215.52(b) as “that portion of the channel and floodplain of a stream designated to provide passage for the 100-year flood, without increasing the elevation of that flood by more than one foot.” The *floodplain* is the broader area receiving and carrying large floods that overflow the banks of a stream and spread out extensively into surrounding areas. It is widely believed that construction and related activities within floodplains, and especially within floodways, should be limited to protect life, property, and the environment.

The state’s counties and cities have long had the legal authority under their general zoning powers to adopt floodplain zoning ordinances (for counties, G.S. Ch. 153A, Art. 18, Pt. 3; for cities, G.S. 160A-458.1). Special zones or districts may be established to regulate land use in floodplains, or floodplain management provisions may be added to existing zones. A number of local governments have used the zoning approach to regulate floodplain land uses.

State legislation passed in 1971 specifies in detail the procedure for adopting and administering controls over the use of floodways, as opposed to floodplains (G.S. 143-215.51 through -215.61). Counties and cities may adopt floodway ordinances under this legislation whether or not they have zoning ordinances, or they may adopt floodway ordinances that supplement floodplain zoning. Once a floodway has been officially delineated, construction is prohibited there without a permit from the appropriate county or city government, except for certain uses of the land that may be made as a matter of right; these include farming, parking areas, recreational areas, streets, utility and railroad facilities, dams, docks, ramps, and temporary accommodations such as those for circuses. Counties and cities must adopt ordinances providing for floodway permits in order to allow any construction within an officially delineated floodway other than construction for the exempted uses.

The EMC may trigger local adoption of a floodway permit system by delineating a floodway if a local government does not do so. Except for this authority, however, the state government’s role in floodplain and floodway management is generally limited to providing technical assistance to local governments.

---

43. Town of Spruce Pine v. Avery County, 346 N.C. 787, 488 S.E.2d 144 (1997).



The North Carolina Supreme Court upheld Asheville's flood hazard district ordinance in 1983.<sup>44</sup> The court found that it was a valid exercise of the police power and that there was no regulatory taking of affected commercial properties because the plaintiffs were left with adequate "practical uses" of their land. The Asheville ordinance was a free-standing regulation; it was not part of another ordinance. It established floodway and flood-fringe areas, and it set standards for some construction and prohibited other new or improved construction in these areas.

Any floodway or floodplain ordinance that is adopted by a county or a city should take into consideration the Federal Flood Insurance Program, administered by the Federal Insurance Administration (a branch of the Department of Housing and Urban Development [HUD]).<sup>45</sup> Under this program, federal mortgage guarantees and other housing assistance programs are not available to communities with flood hazards unless they have adopted approved floodway or floodplain controls.

### **Regulation and Restoration of Streams and Wetlands**

The federal Clean Water Act, § 404, requires local governments and private property owners to get permits from the U.S. Army Corps of Engineers before placing structures, fill, drains, or most any other matter into waters of the United States, including wetlands. A related provision of the federal Clean Water Act, § 401, gives states the right to make their own independent decision whether to permit any such proposed activity in waters of the state. The law surrounding these provisions is important to any development in and around water. For example, when a local government unit proposes to extend sewer lines that cross streams or wetlands and trigger the 404/401 permit requirements, the draft permits will be circulated to state and federal resource protection agencies for comments, and these agencies, such as the U.S. Fish and Wildlife Services, may then have their own set of issues to be resolved (such as impairment of habitat for threatened and endangered species) before a permit is issued.

In addition to its role under § 401 of the federal Clean Water Act, North Carolina has enacted its own independent set of rules regarding the draining and filling of wetlands. In 1996, DENR promulgated these rules based on general legal authority: G.S. 143-214.1, directing and empowering the Environmental Management Commission to classify and apply standards to the waters of the state; G.S. 143-215.1, requiring permits for sources of water pollution; and G.S. 143-215.3, the general rule-making power of the EMC to implement the articles of the general statutes regulating air and water. A group of business and trade associations challenged the state's wetlands rules, but the rules were upheld.<sup>46</sup> Thus in North Carolina there are independent state and federal regulatory regimes for wetlands.

In 1996, the legislature also created a nonregulatory program specifically for the restoration of wetlands and stream corridors, the North Carolina Wetlands Restoration Program.<sup>47</sup> The Wetlands Restoration Program prioritized the river basins and subbasins of the state from 1996–98 and was charged with using appropriated funds as well as funds received from wetlands mitigation requirements to attempt to restore critical wetlands. The Wetlands Restoration Program was eventually transformed into a broader effort, the Ecosystem Enhancement Program, which conducts plans and oversees stream and wetland restoration efforts both as mitigation for transportation-related and other losses and whenever there are other reasons to work on riparian improvements.<sup>48</sup>

### **Drainage Districts**

Drainage districts can and do serve as sponsors of federally aided small watershed projects under the Watershed Protection and Flood Prevention Act of 1954, Public Law 83-566, but in North Carolina, programs of farm drainage and land reclamation long antedate this federal law.

---

44. *Responsible Citizens in Opposition to the Floodplain Ordinance v. City of Asheville*, 308 N.C. 255, 302 S.E.2d 204 (1983).

45. The statutes governing the Federal Flood Insurance Program are codified at 42 U.S.C. §§ 4001-4129 (1994).

46. *In re Ruling by Environmental Management Commission*, 153 N.C. App. 408, 573 S.E.2d 732 (2002).

47. G.S. § 143-214.8 *et seq.*

48. G.S. §§ 143-214.8 through 143-214.13.

Under G.S. Chapter 156, Subchapter III, drainage districts may be organized with the approval of the clerk of superior court following an engineering survey by a board of viewers. The procedures to be followed by the clerk—beginning with the filing of a landowner petition to create a district and ending with the clerk’s adjudication on the final report of the board of viewers and appointment or election of a board of drainage commissioners—are spelled out in G.S. 156-54 through -78. (The appointment authority for multicounty districts was held invalid by a supreme court decision in 1990, but this defect was remedied by the General Assembly.)<sup>49</sup>

No city or county participation is required in organizing or operating drainage districts, except that district assessments are collected by the county tax collector. The procedures to be followed in levying and collecting these assessments are set out in detail in G.S. Chapter 156, Article 8.

## Special Issues with Agriculture

### Agricultural Non-Point-Source Pollution

The exemption of agriculture from the Sedimentation Pollution Control Act left a gap in programs that address stream pollution caused by agricultural runoff. In theory this gap could be filled by the authority of soil and water conservation districts to adopt land use regulations concerning erosion (G.S. 139-9, -10). In practice, however, this authority has never been exercised, probably because of a combination of philosophical reasons and a requirement for referendum approval of any such regulations by a vote of two-thirds of the land occupiers of the district.

A more promising approach to controlling agricultural non-point-source pollution has emerged in recent years: the agricultural cost-share program. It provides 75 percent matching grants to encourage farmers to apply BMPs to control soil erosion and runoff from pesticides and fertilizers. The cost-share program is administered by the state Soil and Water Conservation Commission (S&WCC) under guidelines outlined in G.S. 143-215.74, with periodic review by a committee established by G.S. 142-215.74B that reports to the state legislative leadership. At the local level, soil and water conservation districts work closely with farmers in applying BMPs. The districts are responsible for reviewing and approving these practices for individual farms under the conservation compliance, “sodbuster,” and “swampbuster” provisions of the 1985 and subsequent federal farm bills.<sup>50</sup> As a result of these provisions, farmers who want to keep their commodity price supports must either apply the approved BMPs or stop farming highly erodible lands and drained wetlands. The cost-share program began in a few northeastern and Piedmont Triangle counties in the early 1980s. It was gradually extended to its present statewide coverage.

Another element of agricultural non-point-source pollution control is the so-called .0200 rules of the EMC.<sup>51</sup> These rules regulate a variety of water-borne wastes that do not discharge into surface waters, under *nondischarge permits*. Amendments in 1993 to the .0200 rules addressed, among other things, potential pollution from intensive livestock operations, such as large hog and poultry feedlots. They set forth a cooperative program involving local soil and water conservation districts, the S&WCC, and the EMC. In essence, the .0200 rules and related S&WCC rules contemplate these arrangements:

- The local districts advise farmers about their need to have nondischarge pollution-control systems, to develop animal waste management plans containing approved BMPs, and to get their waste management plans properly certified. Farmers who meet all these requirements are “deemed permitted” under the .0200 rules. New or expanded systems must have certified waste management plans, and existing systems must have been certified by December 31, 1997.
- The S&WCC adopts rules concerning approved BMPs and certification of qualified *technical specialists* to review each farmer’s animal waste management plan.<sup>52</sup>

49. Northampton County Drainage District Number One v. Bailey, 326 N.C. 742, 392 S.E.2d 352 (1990); G.S. 156-81 (1996 Cum. Supp.).

50. Food Security Act of 1985, 16 U.S.C. §§ 3811-3836 (1985 & Pocket Pt. 1995).

51. 15A NCAC 02H.0200 (Feb. 1, 1976–Feb. 1, 1994).

52. 15A NCAC 06F.0001 through .0005 (effective March 1, 1994).

- The technical specialists are responsible for certifying animal waste management plans containing approved BMPs. Alternatively, a farmer may comply with United States Natural Resources Conservation Service guidelines. The Natural Resources Conservation Service was formerly known as the Soil Conservation Service. The specialist's approval may be set aside by a local district, whose decisions may be reviewed by the S&WCC.<sup>53</sup>
- The EMC and its staff administer the nondischarge permit requirements, which they enforce against farmers who do not have certified animal waste management plans.

### ***Intensive Livestock Operations***

The 1995 and 1996 legislatures enacted a state swine-siting law covering swine farms larger than 250 animals, a new permit law for all intensive livestock operations, a mediation requirement as a precondition of farm nuisance suits, and substantial increases in state funding for enforcement of laws and for the agricultural cost-share program. The 1997 legislature strengthened the swine-siting law, imposed a statewide moratorium on new or expanded swine farms, and gave counties a limited authority to zone swine farms. The following rules resulted from the 1995–97 legislation:

- On swine farms devoted to raising 250 or more swine, the swine houses and lagoons must be set back *at least 1,500 feet* from occupied residences; *at least 2,500 feet* from any school, hospital, church, outdoor recreational facility, national or state park, historic property, or child care center; and *at least 500 feet* from any property boundary and from any public water supply well or well supplying water for human consumption. No part of a permitted system can be constructed within a 100-year floodplain except a land application site. The perimeter of any waste application site must be at least 75 feet from the property boundary, from occupied residences, and from perennial streams. There are some additional setbacks and buffers in the .0200 rules.
- There has been a statewide moratorium on the installation of new or expanded swine farms larger than 250 animals and on waste lagoons at such farms since 1997. There are a number of exemptions from the moratorium for works in progress or under permit, innovative systems, and the like, and the act includes a special moratorium without exemptions that is probably applicable only to Moore County.
- In the late 1990s, several county health boards adopted local health rules that contained their own setbacks and other siting provisions for intensive livestock operations (ILOs); one of these counties also readopted its health rules as a county ordinance; three county health boards adopted health rules that applied public health nuisance concepts to both new and existing ILOs; and four boards of county commissioners adopted their own local moratoriums on new and expanded ILOs. In light of *Craig v. County of Chatham*, 356 N.C. 40 (2002), this type of local swine farm regulation is suspect as possibly preempted.
- The long-standing exemption of agricultural operations from the county's zoning authority has been loosened to allow counties to zone swine farms served by waste management systems with a design capacity of 600,000 pounds "steady state live weight" or greater. (This reportedly translates into anywhere from 423 sows in a "farrow-to-finish" operation to 20,000 piglets in a "weanling-to-finish" operation.) The county may not exclude eligible swine farms from the entire zoning jurisdiction, prohibit the continued existence of a swine farm in existence when the zoning is adopted, require its amortization, or prohibit repair or replacement that does not increase population beyond designed waste capacity. The application of this new legislation is probably limited to new and expanded operations.

### **Pesticides**

Federal laws and programs set general standards for pesticide control, which must be met by state laws and programs if a state is to retain control over its permit system for the use of pesticides. In 1971, North Carolina enacted a comprehensive law that clearly meets minimum federal standards (G.S. Ch. 143, Art. 52). Principal elements of the state's program are regulation of the sale and the use of restricted-use pesticides, licensing of dealers who sell restricted-use pesticides, licensing of commercial pesticide applicators and consultants, and registration of pesticides. The North Carolina Pesticide Board is the policy-making agency for the state program, and the commissioner of agriculture has administrative responsibility. The EPA is responsible for the federal program.

---

53. 15A NCAC 06F.0003 (effective March 1, 1994).

Local governments are subject to the licensing requirements and regulations of the North Carolina Pesticide Board. Local and state government agencies that use or apply pesticides, as well as commercial operators, must obtain licenses unless they are specifically exempted by law.

State law enacted in 1995 preempts local ordinances regulating the sale, use, or application of pesticides.<sup>54</sup> The United States Supreme Court had previously held that the federal pesticide law did not preempt local spraying ordinances.<sup>55</sup> The 1995 state law, however, makes it clear that North Carolina local governments do not have the authority under state law to regulate pesticide sale, use, or application by ordinance.

## Soil and Water Conservation

North Carolina has a soil and water conservation district in each county (except for one multicounty district covering five counties in the Albemarle Sound region). Each district is governed locally by a board of supervisors that is partly elected by the voters of the district and partly appointed by the State Soil and Water Conservation Commission. A majority of the local board is elected. District activities include the following:

- The basic soil erosion control and land treatment programs that date from the dust bowl era.
- The agricultural cost-share program for non-point-source water pollution control, and related animal waste control responsibilities, described in the section “Agricultural Non-Point-Source Pollution,” earlier in this article.
- Assistance to farmers in preparing farm plans required by the 1985 and 1990 federal farm bills to retain crop price supports.
- Educational programs for adults and schoolchildren.
- The small watershed (or watershed improvement) program, which assists farmers and other local residents with flooding, farmland drainage, and related water conservation problems. Individual small watershed projects are usually carried out either by counties acting under G.S. 139-41 or by drainage districts acting under G.S. Chapter 156, Subchapter III, although soil and water districts are authorized to do this work. Federal and state aid may be available for small watershed projects.<sup>56</sup>

A typical piedmont or mountain small watershed project in North Carolina may involve one or more small impoundments that provide for water storage to prevent flooding, a sedimentation pool, and downstream channel clearance. It may also include limited storage for water supply and recreational use, as well as areas for conservation of fish and wildlife habitat. Eastern Carolina projects usually emphasize drainage improvements rather than flood prevention.

Cities or counties sometimes serve as cosponsors of small watershed or drainage projects. Cities and counties are authorized to assist small watershed programs in any or all of the following ways:

- By levying property taxes to undertake watershed improvement projects, pursuant to G.S. 160A-209(c)(34) and 153A-149(35).
- By participating in small watershed projects and contributing funds to projects that provide (or protect) city or county water supply sources, flood damage protection, or drainage benefits to the city or the county, pursuant to G.S. 139-37.
- By issuing bonds to finance water supply storage in small watershed projects, pursuant to G.S. 139-37.1.
- By installing and maintaining recreation facilities or fish and wildlife habitat features in small watershed projects, pursuant to G.S. 139-46.28.

---

54. G.S. 143-465(d).

55. *Wisconsin Public Intervenor v. Mortier*, 501 U.S. 597, 111 S. Ct. 2476, 115 L. Ed. 2d 532 (1991); *cf.* *Bates v. Dow Agrosciences, LLC*, 544 U.S. \_\_\_\_\_, 125 Sup. Ct. 1788 (2005) (state common law claims and potentially statutory claims may survive FIFRA preemption).

56. The federal statutes pertaining to small watershed programs are codified at 16 U.S.C. §§ 1001-1009 (1985 & Pocket Pt. 1995). In addition to this NRCS-assisted program, a comparable activity known as the “tributary areas development program” is sponsored by the Tennessee Valley Authority in the Tennessee Valley section of western North Carolina. Localized flood control and navigation improvement projects are also sponsored by the U.S. Army Corps of Engineers with county or municipal cooperation, sometimes assisted by state cost-sharing.

- By levying (county) special assessments under G.S. Chapter 153A, Article 9, and by borrowing funds with voter approval under G.S. 159-48, the Local Government Bond Act.

The federal government aids small watershed projects under Public Law 83-566 by paying all costs of construction for flood prevention, contributing to costs for recreational features and fish and wildlife enhancement, providing planning services, and making loans to help pay for water supply features of projects. Local sponsors must initiate and maintain the projects, obtain easements, and secure agreements with landowners to carry out needed soil conservation measures. In North Carolina, the legislature has usually appropriated funds annually in recent years to help plan, organize, and coordinate small watershed work, as well as varying amounts to help pay capital costs of watershed projects. The legislature has also appropriated matching funds annually for soil and water conservation district programs and travel and subsistence for soil and water conservation supervisors.

Local government units are not involved in creating or operating soil and water conservation districts. However, G.S. 153A-440 authorizes counties to cooperate with and support soil and water conservation work and to appropriate for this purpose revenues not limited as to specific use by law. Acting under this authority, a number of counties have assisted the districts in such ways as funding or supporting particular projects or activities, furnishing office space, and helping to pay staff salaries.

In recent years local staffs serving the districts have grown to meet expanding program needs. In some counties these personnel are treated as county employees, and the districts function essentially as divisions of county government under the guidance of their independent boards of supervisors. In other counties some or all of those personnel are clearly district employees rather than county employees, and there are shades of gray between these extremes. A variety of hiring, firing, and supervision arrangements have evolved from county to county. The situation is further complicated by the status of *district conservationists*, who are employees of the United States Natural Resources Conservation Service, often functioning as supervisors of the local staff in some respects.

The state Division of Soil and Water Conservation and the state Soil and Water Conservation Commission (both units of the DENR) are coordinating efforts to clarify and standardize these staffing and supervisory arrangements. They are also working to resolve some important incidental issues, such as whether counties have the legal authority to represent some or all local soil and water conservation staff and board members in civil litigation and to pay any civil judgments against such persons. (So far, these issues have been largely academic, but the growth of program responsibilities makes it likely they will not remain so indefinitely.)

### **Cooperative Extension Service**

The North Carolina Cooperative Extension Service is headquartered at North Carolina State University, in partnership with North Carolina A&T State University. The Extension Service helps people put research-based knowledge to work to improve their lives, primarily through improved agricultural production. It originated with the Morrill Acts of 1862 and 1890, which established the land-grant college system.

Extension focuses on five program areas: sustaining agriculture and forestry; protecting the environment; maintaining viable communities; developing families; and developing youth. Its local constituent units are familiar household words: county extension agents (or chairs), 4H Clubs, Extension Homemakers, and Master Gardeners. Allied with the agricultural experiment stations, the Cooperative Extension Service has helped farmers improve productivity of the traditional row crops (tobacco, corn, and soybeans) and helped them diversify to livestock and poultry, vegetables, Christmas trees, wood processing, and turfgrass. The service has also been a leader in promoting programs like integrated pest management, reduced tillage, and controlled drainage.

There is a county extension agent and center in each of North Carolina's 100 counties and on the Cherokee Reservation. The agent serves as the bridge from the universities to the county government and to county citizens. Extension researchers at North Carolina State and North Carolina A&T State universities furnish technical training and support to the county agents. Thousands of lay advisers keep extension professionals and researchers informed of local concerns and help set extension priorities.

A memorandum of understanding (MOU) between the Cooperative Extension Service and each board of county commissioners sets the terms under which extension personnel function in the county. Under a standard MOU the county and the Extension Service would jointly determine the share of the salaries of extension personnel to be paid by each. The county commissioners would appoint and determine salaries of local extension personnel on recommendation of the Extension Service; would provide offices, equipment, supplies, and utilities for the county extension center; and would provide the county's share of salaries for extension personnel. The Extension Service would submit an annual budget request to the county commissioners and provide available funds for travel and to purchase publications.



## Air Pollution

Under existing federal and state legislation the federal government sets general goals and standards for air quality,<sup>57</sup> whereas the state governments, under close supervision from the federal EPA, develop the administrative machinery, or implementation plan, for achieving these goals and standards.<sup>58</sup> North Carolina's plan was one of the first to be approved by the EPA. The state's air pollution programs are governed by the EMC and staffed by the Division of Air Quality (DAQ).

Air quality regulations apply to both private and public sources of pollution. No units of government (federal, state, or local) are exempt from complying with these regulations merely because they are government agencies.

### Local Programs

Local governments (cities, counties, and regional groupings of cities and counties) in North Carolina may operate local air pollution control programs, but only if they can demonstrate their ability to do so to the EMC's and EPA's satisfaction. The powers of local programs and the procedures for obtaining state approval are spelled out in G.S. 143-215.112. A city or county that is interested in conducting or participating in an air pollution control program should review this statute carefully because it sets out the alternatives and the requirements for local programs in some detail and is the exclusive source of authority to organize a local program.

There were no active city air pollution control programs in North Carolina as of January 1, 2006. Forsyth and Mecklenburg counties and the western North Carolina region (Buncombe and Haywood counties) were operating local programs that had full state and federal approval. Cumberland County previously operated a local program with partial approval, which covered such functions as open burning, dark smoke control, air quality monitoring, and investigation of complaints. The Cumberland program was returned to the state in 1997.

### Land Use and Transportation Control

Several EPA requirements stress the connection between land use and air pollution controls. For example, state air quality implementation plans must include supplementary land use and transportation controls. The state must also consider the need for air quality maintenance controls in metropolitan areas, and state programs must control *complex sources* of air pollution. A typical complex source would be a large shopping center, and associated parking decks and lots, with a high level of air contamination from motor vehicles. On some of these matters, local planning staffs may play an important part in ensuring that a reasonable balance is maintained between the need for air pollution control and the need for development opportunities.

Special mention should be made of one kind of transportation control: vehicle inspection and maintenance (I and M) for the control of pollution from vehicle emissions. When the EPA finds that an air quality control region is not attaining national standards for certain pollutants related to automobile exhaust, the state that contains the offending *nonattainment area* may be required to institute a vehicle I and M program for the region or risk losing major federal subsidies, notably highway funds. See Figure 28-1 for North Carolina's phased approach to I and M. Regular inspections of emission-control systems on all automobiles are the key feature of an I and M program. Federal law allows the state to decide whether these inspections are conducted by state-run, municipally run, or private inspection stations. Whatever method is chosen, motorists in a nonattainment area are required to have their auto emission controls inspected for a fee and to repair or replace defective controls at their own expense.

Many counties in North Carolina are now required to have emissions inspections for vehicles built after 1996 (these have onboard diagnostics that are used in the tests).

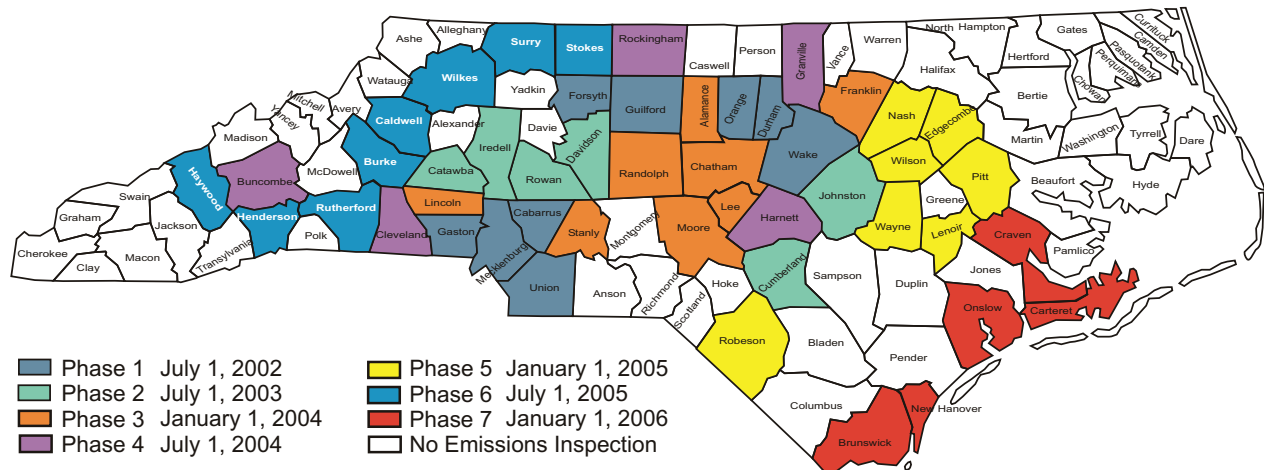
### Oxygenated and Reformulated Gasoline

A provision of the 1990 United States Clean Air Act Amendments requires the use of oxygenated and reformulated gasoline under some conditions. It is designed to enable the nation and the states to correct persistent nonattainment of ozone and carbon monoxide standards. Oxygenated gasoline has oxygen-containing additives like ethanol and

---

57. The federal Clean Air Act is codified at 42 U.S.C. §§ 7401-7671q (1983 & Supp. 1995).

58. G.S. Chap. 143, Art. 21, Part 7; Art. 21B, §§ 20-128.1, -183.3.

**Figure 28-1. I/M County Phase-In**

*Note:* The statutes concerning I and M programs are G.S. 20-128.2, 20-183.2 through -183.8G, and 143-215.107(a)(6).

*Source:* Division of Air Quality.

MTBE, a natural gas derivative. Reformulated gasoline has reduced emissions of volatile organic compounds and toxic chemicals. North Carolina historically had several counties that were required to use oxygenated gasoline because of carbon monoxide nonattainment for several years before 1997. And in 1999, the legislature mandated a switch to low sulfur gasoline in certain counties. But as of 2006, all these special fuel requirements have been eliminated in favor of waiting for the federal Tier II standards required of refiners by 2006.<sup>59</sup>

As of 2006, the areas of the state designated as “nonattainment” for the federal ozone standard are shown in Figure 28.2.

## Indoor Air Pollution

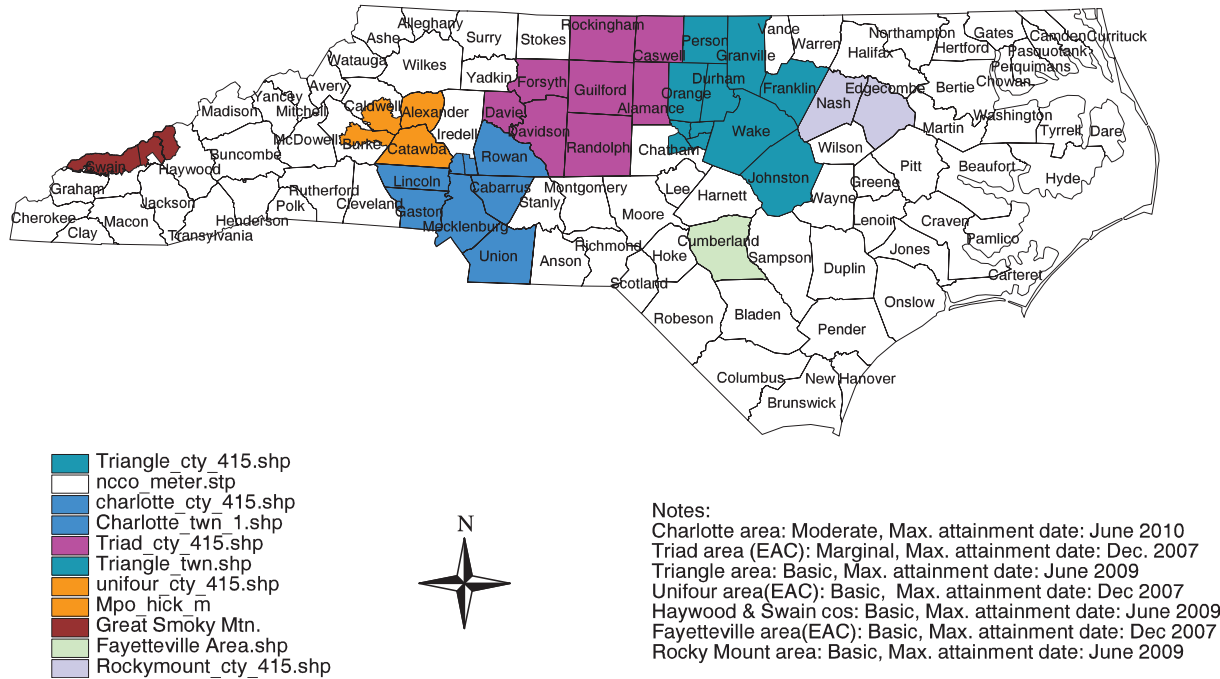
The original federal and state clean air legislation focused mainly on outdoor air pollution problems. Increasing attention is now being paid to indoor air pollution—for example, problems of asbestos insulation in public buildings and of radon in homes. City and county governments may want to inquire about the current status of programs that address indoor air pollution issues. G.S. 130A-452, passed in 1994, authorizes approved local air pollution control programs to enforce asbestos standards for renovation and demolition, pursuant to EMC rules.

### Consistency of Air and Water Pollution Permits with Local Land Use Ordinances

G.S. 143-215.108(f) requires every applicant for an air quality permit covering a new or expanded facility to request each local government having jurisdiction over the facility to determine whether the facility would be consistent with applicable zoning or subdivision control ordinances. If the facility is found inconsistent with a zoning or subdivision control ordinance, the EMC must attach to the air quality permit a condition that the applicant comply with this ordinance and other applicable “lawfully adopted” ordinances unless the local government or a court makes a subsequent determination of consistency. A local government must submit its determination to the EMC within fifteen days

59. S.L. 2005-196 (S 316).

**Figure 28-2. EPA’s Boundary Designations for Eight-Hour Ozone Standards for North Carolina (4/15/2004)**



Source: Division of Air Quality, DENR.

of receipt of a request from the EMC, or the EMC may consider a permit application without regard to local zoning and subdivision controls. It is not clear what scope of inquiry the EMC will or should make to determine whether a local ordinance is lawfully adopted.

This statute is similar to previous legislation that applies to nonmunicipal wastewater discharge permits, contained in G.S. 143-215.1(c)(6). The water quality statute, however, allows the EMC to override the local ordinance if it finds that the application has “statewide significance and is in the best interest of the state.” As originally introduced, the air quality statute would have allowed the EMC the same flexibility, but a Senate committee replaced this quoted language with the requirement to attach a permit condition of compliance with the local ordinance.

### Occupational Safety and Health

The federal Occupational Safety and Health Act (OSHA) imposes standards on employers for the protection of employees’ health and safety.<sup>60</sup> Like most federal environmental and health protection laws, OSHA contemplates a coordinated federal-state program, with standards set nationally and administered largely by the states.

Although this article does not attempt to cover health legislation generally, it briefly describes OSHA for two reasons. First, OSHA provides, in one sense, the “in-plant” equivalent of the protections established by clean air laws for the outdoor environment. Thus an air quality problem in a factory is likely to be covered by OSHA rather than by clean air laws. Second, there is some overlapping and duplication between OSHA and the environmental protection

60. 29 U.S.C. §§ 651-673 (1985 & Supp. 1995).

laws. For example, for the protection of farm workers, OSHA administrators have imposed restrictions on applying pesticides. These restrictions are in addition to (and in some ways may even conflict with) the provisions of pesticide-control legislation (see the discussion under the section “Pesticides” in this article).

North Carolina has adopted the legislation required to put it in a position to administer the OSHA program: the Occupational Safety and Health Law of North Carolina (G.S. Ch. 95, Art. 16). The legislation is administered by the state Department of Labor.

Private employers have been subject to the requirements of OSHA and related state laws since their passage. State and local governmental employers have been required to comply with standards set under these laws since July 1, 1974.

A much-publicized 1991 fire at the Imperial Foods plant in Hamlet led to a strengthening of North Carolina worker safety laws. Among the new laws that directly affect local governments are the following:

- All employers (public and private) whose *experience rate modifier* (a calculation used in determining workers’ compensation premiums) equals or exceeds 1.5 are required to establish workplace safety and health programs. Every such employer must establish an employer-employee safety and health committee with employee-selected representatives. The statute spells out detailed requirements for these programs (G.S. Ch. 95, Art. 22). A committee is required at each work site where there are at least eleven permanent employees unless the workers do not report to or work at a fixed location or the labor commissioner permits a variation.
- The previous exemption of state agencies and political subdivisions from OSHA fines has been repealed. Each local government must report each violation for which it is cited at the next public meeting of its governing board and notify its workers’ compensation insurance carrier or risk pool.<sup>61</sup>

## Place-Based Environmental Regulation

### Coastal Area Management

The 1974 General Assembly enacted a Coastal Area Management Act (CAMA) (G.S. Ch. 113A, Art. 7). Its basic objective is to establish a comprehensive plan for protection, preservation, orderly development, and management of the coastal area of North Carolina. Twenty counties are covered by CAMA: Beaufort, Bertie, Brunswick, Camden, Carteret, Chowan, Craven, Currituck, Dare, Gates, Hertford, Hyde, New Hanover, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Tyrrell, and Washington.

The three main features of the act provide as follows:

- That each of the twenty coastal area counties be covered by a land use plan, preferably prepared by local government and in basic harmony with the plans adopted for the other nineteen coastal area counties. All the counties have plans.
- That all critical areas that need to be considered for protection and possible preservation in each county be designated as *areas of environmental concern*.
- That any proposed development, change, or other use of land within a designated area of environmental concern be subject to review by means of a development permit procedure. Generally, counties and cities handle permits for minor developments (in most cases those under twenty acres), and the state Coastal Resources Commission handles permits for major developments.

The thrust of this act is to establish a cooperative state-local program of coastal land management. It is the responsibility of counties and cities to establish local land use plans and to issue permits for minor development in areas of environmental concern. It is the state government’s responsibility to adopt guidelines and standards for the local land use plans; to establish areas of environmental concern; to issue permits for major developments in areas of environmental concern; and to assume the responsibilities of the local governments if and when they do not exercise their powers under the act. Enforcement is a concurrent state-local responsibility. Amendments to CAMA in the 1980s added two land acquisition elements, the coastal reserve and beach access programs (G.S. Ch. 113A, Art. 7, Pts. 5, 6).

---

61. G.S. 95-137(b)(6).

Directly participating in the CAMA program at the state level are the Coastal Resources Commission, the Coastal Resources Advisory Council, and the secretary of the DENR. The local agencies most involved are the counties, the cities, and the multicounty planning agencies in the twenty coastal area counties.

Coastal cities and counties play an important role in the coastal area management program. Each coastal area city nominates one person to the Coastal Resources Commission, and each county nominates four. Eight representatives of coastal cities and one representative of each coastal county serve on the Coastal Resources Advisory Council. If they wish, coastal area cities and counties may play a role in the planning process, in enforcement, and in beach access programs.

### **Mountain Ridge Protection**

In 1983 the General Assembly enacted a Mountain Ridge Protection Act (G.S. Ch. 113A, Art. 14), which regulates construction of tall buildings along the tops of high mountain ridges. The legislature gave local governments in mountain counties the option of either regulating ridge-top construction through permit systems or allowing the act's prohibitions on this type of construction to go into effect. About two-thirds of the affected counties accepted the state prohibitions. Only one city, Beech Mountain, adopted a city ordinance; one other, Banner Elk, asked its county (Watauga) to enforce the county ordinance inside the city. The act also allowed mountain counties and cities the opportunity to reject its coverage, but none chose to do so by the statutory deadline. State government's role under this act is limited to providing technical assistance in identifying and mapping protected mountain ridges.

**Richard B. Whisnant** and **Milton S. Heath Jr.** are School of Government faculty members whose work includes environmental protection, environmental health, and natural resources law.



