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ON THE LEGAL ASPECTS OF NORTH CAROLINA COASTAL PROBLEMS†

ROBERT MORGAN

It is obvious, I think, why North Carolinians have a special interest in coastal problems. We are blessed with a lengthy shoreline and an estuarine area of magnificent proportions. Its magnitude was noted in a recent North Carolina Supreme Court decision which pointed out that

"[t]he vast estuarine areas of North Carolina—'those coastal complexes where fresh water from the land meets the salt water of the sea with a daily tidal flux'—are exceeded in total area only by those of Alaska and Louisiana. Extuarine areas include bays, sounds, harbors, lagoons, tidal or salt marshes, coasts, and inshore waters in which the salt waters of the ocean meet and are diluted by the fresh waters of the inland rivers. In North Carolina, this encompasses extensive coastal sounds, salt marshes, and broad river mouths exceeding 2,200,000 acres."

The coastal area is truly one of North Carolina's most valuable resources and has been given increased attention by the state in recent years. The coastal problems of North Carolina are many and varied, however, and a great deal still needs to be done. In this introduction I will mention just two of the many problem areas that are of concern to the state in our coastal zone.

I. Marshlands

In spite of the fact that I was raised in Eastern North Carolina and have had many opportunities to enjoy our seacoast, I must admit that I did not understand its importance until recently. My appreciation was increased a great deal by reading Life and Death of the Salt Marsh by John and Mildred Teal. The Teals point out:

The undisturbed salt marshes offer the inland visitor a series of unusual perceptions. At low tide, the wind blowing across Spartina grass

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sounds like wind on the prairie. When the tide is in, the gentle music of moving water is added to the prairie rustle. There are sounds of birds living in the marshes. The marsh wren advertises his presence with a reedy call, even at night, when most birds are still. The marsh hen, or clapper rail, calls in a loud, carrying cackle. You can hear the tiny, high-pitched restling thunder of the herds of crabs moving through the grass as they flee before advancing feet or the more leisurely sound of movement they make on their daily migrations in search of food. At night, when the air is still and other sounds are quieted, an attentive listener can hear the bubbling of air from the sandy soil as a high tide floods the marsh.

The wetlands are filled with smells. They smell of the sea and salt water and of the edge of the sea, the sea with a little iodine and trace of dead life. The marshes smell of Spartina, a fairly strong odor mixed from the elements of sea and the smells of grasses. These are clean, fresh smells, smells that are pleasing to one who lives by the sea but strange and not altogether pleasant to one who has always lived inland.\(^2\)

All that the Teals note, however, is not good.

Unfortunately, in marshes which have been disturbed, dug up, suffocated with loads of trash and fill, poisoned and eroded with the wastes from large cities, there is another smell. Sick marshes smell of hydrogen sulfide, a rotten egg odor. This odor is very faint in a healthy marsh.\(^3\)

Marine scientists inform us that between sixty-six and ninety-eight percent of the commercially harvested fish and shellfish spend some part of their life cycle in the marshlands. In addition, we know that the United States has dropped from second in total world fish catches a few years ago to sixth place in 1969. This drop in the total catches by the United States could be attributed to many factors, such as the failure to upgrade fishing equipment and the increased effort by the Russians, Poles and South Koreans, who have large factory ships and hundreds of smaller vessels off the eastern coast of the United States. Although it is not known what direct effect destruction of the marshland has on the total United States fish catch, it seems logical that, if between sixty-six and ninety-eight percent spend some part of their life cycle in the marsh, destruction of marshland does have an effect on the total available species. As we search for more knowledge of the sea, which covers

\(^3\) Id. at 4.
seventy-one percent of the earth’s surface, and seek new food sources for the populations of the world, we would be foolish to permit the destruction of marshland that we know is valuable until we obtain more knowledge of just how valuable it is from an ecological standpoint.

North Carolina has already taken steps to prevent the indiscriminate destruction of its marshlands. In 1969, the North Carolina General Assembly enacted General Statutes section 113-229, which states that “[b]efore any excavation or filling project is begun in any estuarine waters, tidelands, marshlands, or state-owned lakes, the party or parties desiring to do such shall first obtain a permit from the North Carolina Department of Conservation and Development.”

The statute does not necessarily prohibit all work in marshlands or estuarine waters, but does give the state an opportunity to look at the proposed project and to grant or deny a permit before the project begins. This is far more than the state had prior to 1969 when anyone could dredge as he wished in any of the marshlands and non-navigable waters of the state.

Prior to the passage of this law, however, a person or firm desiring to do dredge or fill work in navigable waters had to obtain a permit from the United States Army Corps of Engineers. Despite the fact that the Corps gave the state the opportunity to comment on this federal permit, it was not bound by any objection of the state. Moreover, since the Corps’ jurisdiction was restricted to navigable waterways, those projects which were concerned with non-navigable waters were not subject to federal control. The 1969 statute rectified this latter problem by authorizing state review of dredge-and-fill projects prior to the issuance of a permit or the commencement of work.

When the applications are submitted to the Department of Conservation and Development, the Commissioner of Commercial and Sports Fisheries circulates the application to all interested state and federal agencies. These agencies and the Commissioner have the responsibility of looking at the proposed project in light of the six criteria set forth in the statute:

(i) [T]he value and usefulness of the project to be served by the dredging,
(ii) the effect of the proposed dredging and filling on the use of the water by the public,

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(iii) the value and enjoyment of the property of any riparian owners,
(iv) public health, safety and welfare,
(v) the conservation of public and private water supply, [and]
(vi) the conservation of wildlife or fresh water, estuarine or marine
fisheries.  

If the Department of Conservation and Development, in view of the comments of all interested agencies, feels that the project is contrary to the public interest, the permit shall be denied.

There are two problems, however, with this present dredge-and-fill law. The first is that it is too piecemeal; that is, each application must be considered individually. As we noted, North Carolina has 2,000,000 acres of estuarine land and is ranked third among the contiguous states in total estuarine land. There is no accurate inventory, but it is estimated that more than 200,000 acres of this estuarine land is marshland. To date, dredge-and-fill permit applications submitted have encompassed relatively little of the total marshland of the state. Therefore, if each of the 200,000 or more acres of marshland must be dealt with on an individual basis, considerable time and money will have to be expended by both the state and private citizens in order to deal with this problem.

In 1963 the Commonwealth of Massachusetts passed a similar dredge-and-fill law. Through their experience, they also determined that the law was too piecemeal. Consequently, in 1965 they enacted a law giving the Department of Natural Resources the authority to issue an order which, upon the approval of the Board of Natural Resources, would regulate, restrict or prohibit dredging, filling, removing or otherwise altering the coastal wetlands. Under this law, the commissioner is required to hold a public hearing in the municipality where the wetlands are located prior to adopting, amending, or modifying this order. Notice must be given to state agencies as well as to the assessed owner of the wetlands at least twenty-one days prior to the hearing. If the order is issued, it must be recorded in the Registry of Deeds in the district where the land is located. If the landowners object to the order, Chapter 130, section 105 permits appeal to the superior court within ninety days in order to determine whether the order unduly restricts the use of their property so as to deprive them of the reasonable

6 Mass. Gen. Laws ch. 130, § 105 (Supp. 1970). "Coastal wetlands" is defined as any "bank, marsh, swamp, meadow, flat or other low land subject to tidal action or coastal storm flowage." Id.
use thereof. If the court feels that the order is an unreasonable exercise of the police power, then the order shall be adjudged not applicable to that particular petitioner. 7

As of June, 1970, Massachusetts had had quite a bit of luck with this 1965 law; and in a number of counties where an order had been issued, the state has encountered relatively few appeals. For example, in Essex County, there were 2,200 acres of coastal wetland subject to the order which involved 270 landowners. There was only one appeal, and it involved only ten of those 2,200 acres. In the county of Ipswich, there were 3,500 acres, 237 owners and no appeals. In total, there were nine counties which were affected by an order involving a total of 7,800 acres and 877 owners. Only eleven appeals were brought affecting 128.1 acres of land. It is clear that this Coastal Wetlands Act has been far more effective than the dredge-and-fill law in protecting the wetlands of Massachusetts.

The second problem with the present dredge-and-fill law is the ownership question: that is, whether the marshland is privately or publicly owned and whether the state ever had the authority to grant the land if it is presently owned by private individuals. These questions bear directly on the state's right to deny a dredge-and-fill permit. The courts have not decided the ownership issue, and it no doubt will be the subject of litigation in the future. The North Carolina cases that do bear on the subject of marshlands are in conflict.

The possible solutions to the marshland problem in North Carolina assume various postures. One solution may be a statute similar to the Massachusetts law mentioned above: that is, an order restricting the use of the coastal wetlands and thus, in effect, zoning the coastal wetlands for the protection and preservation of its natural resources. Another answer may be a variation of the Massachusetts law in the form of land-use regulations based on the study and recommended plan which Dr. Thomas Linton, Commissioner of Fisheries, was directed to conduct by the 1969 General Assembly. Out of that plan, hopefully, will come effective recommendations for the rational use of our coastal wetlands. An interim report has been submitted to the Governor for presentation to the legislature. A third solution may come about by educating the public and the developers on the value of the natural environment. Developers and the public alike must change their thinking from the

7Id.
traditional idea of changing nature to meet their demands to a more rational development which blends with nature rather than alters it. Development along the coast has to take into account the environmental factors of the area concerned and rationally include nature in its plans. Finally, one answer may be for the federal government to take over the protection of marshlands in the coastal states. This is not a desirable solution, but it may become the forced solution if the states do not act to protect their own natural resources.

On July 16, 1970, the Fifth Circuit Court of Appeals handed down a decision in the case of Zabel v. Tabb. This case dealt with a proposed dredge-and-fill project in the navigable waters of Boca Ciega Bay near Tampa, Florida. The Corps of Engineers, which passes on all applications for dredge and fill in navigable waters, denied the permit—not on the traditional navigational grounds, but rather on the ecological factors of damage to fish and wildlife resources.

In upholding the action of the Corps, the court reasoned that the Fish and Wildlife Coordination Act of 1958 required submission of dredge-and-fill plans to the Fish and Wildlife Service. Since the National Environmental Policy Act of 1969 directs federal agencies to consider ecological factors when dealing with activities which may have an impact on man's environment, the court held the Corps' denial of the permit was justified in light of the objection of the Fish and Wildlife Service. With the subsequent denial of certiorari by the United States Supreme Court, the ruling of the Fifth Circuit Court of Appeals remains in effect. Even though this case is only binding on the Fifth Circuit, the refusal of the United States Supreme Court to hear the case is an indication of the direction in which the high court may be tending in relation to activities in the coastal wetlands.

The Wilmington, North Carolina, District of the Corps of Engineers has already indicated that it is going to follow the guidelines of the FC opinion and take a closer look at ecological effects of dredge-and-fill projects. In view of this case and the activity of the federal government, it appears that there is going to be more federal intervention in the estuarine areas of the United States. I think that it is clear that if the states do not take action in protecting their coastal wetlands, the

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8430 F.2d 199 (5th Cir. 1970).
federal government is going to step in and do it for them. I hope that North Carolina, with the aid of all three branches of the government, will be able properly to protect its coastal wetlands.

II. SAND DUNE PROTECTION

The second area that is of particular concern to the State of North Carolina at the present time is sand dune destruction. The problem is twofold. First, the sand dunes are being leveled by developers; and second, the sand dunes are being weakened by such activities as building on the dunes, cutting roads through the dunes, and riding beach buggies upon the dunes.

The dunes are being leveled by developers in several areas along the coast. The first example that comes to mind is the construction of a motel on one of our southern beaches. At one time, there was an inlet that cut through where the motel is presently located. When this inlet was closed, the dunes proceeded to build up to a height of approximately eight feet. This dune system was not one of the stronger ones along the coast, but it did afford some protection to the landward and sound-side of Wrightsville Beach. These dunes now have been completely leveled, and one can look beyond the construction and see the waves lapping against the shore. I am told that the possibility of severe storm damage is very real.

Another example is on the western end of Bogue Banks, where a developer came in, leveled a larger barrier dune system, and proceeded to build homes. A Corps of Engineers employee, who is a sand dune and beach restoration expert, visited the site after the homes were built and was amazed to see the purchaser of one of these homes furiously shoveling sand in front of his home in an attempt to rebuild the sand dune for some protection. Restoring the lost natural protection, obviously, is not that simple.

The leveling of the dunes in this manner is an obvious problem. Another problem not quite as perilous, but nonetheless damaging to the barrier dune system, is construction in and upon the dunes which destroys the vegetation that anchors the dune system and thus makes the dunes susceptible to wind and water action. Roads through the dunes have the same effect.

In a northern coastal county, one developer proposed a project which involved the filling of marshland, the leveling of dunes in some
areas, and also provided for a road which would have been constructed along the present barrier dune system parallel to the ocean. Through the efforts primarily of the Department of Conservation and Development, the developer's thinking was changed as to the construction of this highway.

Another seemingly harmless activity which has a destructive effect on the dunes is the use of dune buggies on the barrier dune system. The dune buggies have the effect of destroying the vegetation on the dunes and, like the other activities mentioned, have the effect of weakening the dunes and making them susceptible to wind and sea action.

The Outer Banks consists of beach, dunes, and marsh. It is a shifting, fluctuating land mass that over the years shifts back and forth. It is a fantastic system of barrier dunes vital for the protection of the bays and sounds behind the Outer Banks. The Outer Banks affords protection for safe fishing in the bays and sounds to thousands of fishermen. This is not to say that the bays and sounds cannot be under the full fury of the wind, but it is certainly safer in most cases than the ocean itself, particularly off Cape Hatteras. Also, the shallow areas behind the Outer Banks are needed as an estuary for the protection, breeding, and nursing grounds for young marine organisms. Finally, the salinity ratio in the sound is vital to the bass and other fresh water fish that exist in Currituck and Albemarle Sounds. The salinity ratio (the mixture of fresh and salt water) determines the survival of these fish. The fresh water aquatic plants that are present in Currituck Sound are the food source for migratory geese and duck which visit our state in the winter as well as other year-round species. If the salinity ratio is materially altered, these fish and plants cannot survive.

If man continues to alter and change the Outer Banks, this protection would no longer be afforded to the property on the Outer Banks nor would the bays or sounds be afforded the protection that presently exists. The Outer Banks is a valuable recreational area, and I am not suggesting that we prohibit all building on it. We must look very carefully, however, at what we are doing there to determine if the activity that has been going on in the past is destroying the Outer Banks and the protection it affords to the bays, sounds and property dependent on them.

North Carolina does have one law which specifically addresses itself to sand dune protection. This law is General Statutes section 104B-4,12

which prohibits the destruction or alteration of sand dunes without obtaining a permit from the county commissioners. This law only applies to the Outer Banks. At the present time, there are only two counties (Onslow and Carteret) which have a sand dune protection law. These laws provide for the establishment of a shore protection line. A permit must be obtained before any alteration of the sand dune seaward of this line is permitted. The shoreline protection officer is given the responsibility of administering the law, and he is required by statute to look at the proposed alteration and determine whether such work would so materially weaken the dune as to destroy the protection afforded by the barrier dune system. If such activity would result in damage to the barrier dune system, then the permit must be denied.

It is too early to tell how effective the two counties will be that did pass the sand dune protection ordinance, but we already know that the law is not effective in the other six Outer Banks counties since they have not passed such an ordinance. It has been proposed that section 104B be amended to give the counties until January 1, 1972, to take the necessary action to protect their sand dunes. If they have not acted by then, the legislation proposes that the state take over the control of sand dune protection. Such legislation is likely to be introduced shortly.

The marshland and sand dune problems are only two of the many, many problems on our coast. However, they are two of the most pressing ones and a good starting point. I believe that North Carolina can solve the problems in its coastal zone; and if I may boast just a small bit, I feel confident that she will be a leader in coastal zone management and that North Carolina will be a showcase for the East Coast.