COASTAL AREA MANAGEMENT IN NORTH CAROLINA: PROBLEMS AND ALTERNATIVES

ROBERT V. BODE
WILLIAM P. FARTHING, JR.

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PREFACE

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Robert V. Bode
William P. Farthing, Jr.

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CHAPTER I

AN INTRODUCTION TO THE NORTH CAROLINA COASTAL AREA

The development of the American public's interest in preserving and protecting out natural world is a well documented phenomenon. No real starting point for the revolution of modern thought concerning man's relationship to his environment and his place in its natural systems has been pinpointed. Yet there is no doubt as to how recent the development of the widespread "environmental movement" has been, with its capturing of national headlines and its slight contribution to the reordering of national priorities and human consciousness. A recent television commentator bespoke the startling recency of the entire movement: "Before Rachel Carson", noted the announcer, "environmentalists were called conservationists. And conservationists were thought of as gentle souls with the temperaments of, say, birdwatchers."[1]

Since Rachel Carson and Silent Spring of 1962, attitudes and perspectives have changed. The words ecology, SST, impact statements, thermal pollution, fish kill, and oil spill have all entered the everyday American lexicon. The Army Corps of Engineers, nuclear power, progress and growth, the internal combustion engine, strip mining for coal--all have gone full circle as to the images the words evoke. The names: Commoner, Dubos, Ruckleshaus; the initials: EPA, CEQ, DDT; the places: Lake Erie, the Hudson River Valley, the Santa Barbara Channel, all have acquired their instinctive reactions.

North Carolina has not been absent from the turmoil. New Hope, Blue Ridge, Chicod Creek, Joyce Kilmer--all have had their continuing presence in our state's recent history.

But the environmental movement is in transition. The Earth Days go

unnoticed, the bleak prophecies of doom are not in vogue. The symbolic gestures and the dramatists have had their fling and have passed on, leaving only visual images that made their mark and then faded away. The ecologists seem more sedate today, more academic, more established, less "in". The environmental movement has lost its baby fat, and has moved into the clumsiness of adolescence. Russell Train[2] has coldly proclaimed the shift: "The glamorous period in fighting pollution is over. Now we are in the period of implementation. It is going to be hard to demonstrate to the public significant progress for some time. Yet it is necessary to maintain public support."[3]

This study should illuminate for the public some of North Carolina's efforts during this period of implementation. It will investigate various legislative statutes, alternatives, and processes that relate to perhaps the most ecologically significant section of our state - the North Carolina coastal area.

During the last five years in North Carolina environmental goals and policies have been set and significant environmental activity has occurred; in short, much has been accomplished. By stating that much has been done, it is meant that many necessary and thorough laws have been enacted to protect North Carolina's coastal resources. However, the ratification of laws is only the first step in establishing effective protection for North Carolina's coastal area. Many substantive needs follow the enactment of legislation. These include the need for public awareness of the new legislation, the need for education of the public concerning the role and purpose of this legislation, and the need for effective enforcement of legislation by the state to make the laws printed mandates and policies an everyday reality. It is the purpose of this treatise to inform the North Carolina public as to the wealth and

value of their coastal area; to analyze and critique North Carolina's recent efforts in comprehensive coastal area management as seen through the drafting and development of the Coastal Area Management Act of 1973; to investigate the present and potential role of the Board of Water and Air Resources as an instrument in coastal area management; and finally, to note briefly a common law doctrine which may figure prominently in any judicial involvement in coastal preservation.

It is hoped that this investigation of the various legislative, administrative, and judicial processes at work in North Carolina that affect the coastal area will bolster and enrich the level of public awareness and support concerning protection of the coastal environment.

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The coastal area of North Carolina is a jagged, uneven web of peninsulas, sounds, marshlands, estuaries, swamps, and streams. Unlike the coastlines of California or Florida, which are nearly straight north-south lines, the North Carolina coast is a scribbled mass of inlets and sounds which extends in a straight line for only three hundred twenty-five miles. There are more than 3000 miles of coastline within those 325 miles, however.

The North Carolina coastal area is one of the most unique and valuable regions of the United States. The natural world of this area, with its intricate and interrelated ecosystems, is delicate and, if destroyed, irreplaceable. The coastal area is also an area of people, native inhabitants and sojourners, who come in ever-growing numbers to the coast to enjoy its natural amenities, yet who expect while there to have access to the benefits of an urban society. Consequently, the coast is the locale of a precarious tension created by these people pressuring the coast's natural systems.

This tension is a major element in the uniqueness of the North Carolina coast. As one writer has noted, "the degree to which the value of privately owned land and other resources is dependent upon the close juxtaposition of non-marketable common resources held in trust for the use of all citizens" is unmatched anywhere inland.[4] The dynamic relationship of public rights in preservation and control versus the private rights of ownership and development of a non-renewable and delicate area of our state is a recurring (yet perhaps unspoken) theme in this study.

It is necessary to define the coastal area of North Carolina before any comprehensive discussion of the region takes place. For our present introductory purposes, and for the sake of simplicity, the coastal area can be simply defined as the lands and waters lying within the boundaries of the following twenty-two counties (and extending offshore to the limits of state jurisdiction): Currituck, Camden, Pasquotank, Hertford, Gates, Perquimans, Chowan, Bertie, Martin, Washington, Tyrrell, Dare, Hyde, Beaufort, Craven, Pamlico, Carteret, Onslow, Pender, Balden, New Hanover, and Brunswick.

The North Carolina coastal area has as its major distinction the fact that it is the locale of our state's precious estuaries. North Carolina's estuaries, which comprise over 2,200,000 acres, are exceeded in total area only by the estuaries of Alaska and Louisiana.[5] By some accounts the North Carolina estuarine zone is ranked first in the nation in overall importance.[6]

It is unusual to find a precise definition of estuaries. One source has conceded that "estuaries usually end up to be what the speaker wants them to be."[7] A variety of definitions are included here to give the reader a broad grasp of the estuary idea. Estuaries have been defined as a "semi-encircled coastal body of water which has free connection with the open sea"[8] and within which the sea water is measurably diluted with fresh water derived from land

drainage.[9] Estuaries can also be defined on the basis of their salinity, hydrography, or geology. A legal definition of estuaries is "that part of the mouth or lower course of a river flowing into the sea which is subject to tide," [10] and a simple but vague layman's definition would be where fresh water flowing from the land meets salty ocean water,[11] or "that part of the mouth or lower course of a river in which its currents meet the sea."[12] With these definitions in mind, it is easy to understand why an estuary is a dynamic area that is strongly influenced by tides, fresh water, ocean water, waves, temperature changes, and salinity.

Simply defining estuaries, however, does not convey their importance. To do this, estuaries must be placed in context. An estuarine <u>area</u> includes transition zones with which it is closely associated. These transition zones include salt meadows, bays, coastal marshes, intertidal areas, sounds, and harbors, plus the vital fresh water habitats above the upper limit of salt water intrusion. In North Carolina the estuarine zone encompasses extensive coastal sounds, salt marshes, and broad river mouths, which exceed 2,200,000 acres in total area. Thus, the entire estuarine system includes the main water areas and all the peripheral areas that are major contributants to the system. Perhaps the best and most succinct definition of an estuarine zone is "an environmental system consisting of the estuary and those transitional areas consistently influenced or affected by waters from the estuary." [13]

North Carolina's estuaries are massive in size. The acreages of the major sounds shows why many refer to these sounds as "inland seas":[14]

Currituck	102,400 acres
Albemarle	320,000
Croatan	22,400
Roanoke	16,000
Pamlico	1,088,000
Core	76,500
Bogue	22,400

Thousands of other acres of estuaries are found in the Minor Sounds of Stump, Middle, Masonboro, Topsail, and Myrtle, which extend to the South Carolina border.[15]

The Pamlico-Albemarle - Currituck Sound estuarine area of North Carolina is the second largest estuarine area complex on the east coast of the United States (behind Chesapeake Bay).[16] This area is made up of four major river systems (the Pamlico, Neuse, Chowan, and Roanoke) which flow into a huge shallow basin which is protected from the ocean by the thin strip of barrier islands known as the Outer Banks. These barrier islands are broken by inlets, which allow the salt water of the ocean to mix in the basin with the fresh water which drains from the land.[17]

The North Carolina estuarine zone can be seen as a large buffer zone or cushion which separates the land from the open sea. It is a "complex blending of earth, air, and water,"[18] whose boundaries are never fixed. It is this constant changing which creates the drastic and harsh environmental fluctuations in temperature and salinity that add to the estuaries' uniqueness. This dynamic habitat, where the fresh water and the salt water meet and are intermingled by the tides and currents, results in a mixture that is far richer than either sea water or fresh water.

The physical composition of the estuarine system makes it an ideal habitat for the formation of the coastal marsh. Coastal marshes, which form at the borders of the estuaries where the bottom is regularly waterlogged, are an integral part of the larger estuarine system because of the part they play in the fertility of the area.[19] In these areas, "sediment from the continent that has eroded settles out from the water, causing the bay bottom to rise to the level of low tide. The marsh grows vertically upward and laterally outward to cover virtually the entire area of sediment deposit."[20] The

waters that flood these marshes may be fresh, brackish, or salty, and the flooding may occur irregularly or rhythmically with the tide. The water overflow causes a system of drainage canals or creeks that form over the previous channels of the bay.[21] The shallow, broad estuaries of North Carolina are an ideal locale for these coastal marshes (or wetlands), as shown by the fact that North Carolina possesses over 200,000 acres of these wetlands, which is more than any other eastern state.[22]

North Carolina's two million acres of estuarine resources vary in depth, salinity, vegetation, resources, and use.[23] At the estuarine locale, the river waters, the coastal currents, the ocean tides, and the contours of our shores interact and sediments from the rivers and sea are deposited. Nutrients and enrichment (as well as pollutants) come from both the land and the sea. These sediments and nutrients settle to the bottom as the force of the rivers is negated by the counterforce of the ocean. Mud and sand flats develop, providing an environment for the growth of algae and other plants that are capable of surviving the rapid changes in temperature and salinity. These plants cause the build-up of more area by collecting more sediment, and new plants grow in this sediment. In time, the coastal marsh is formed with its myriad channels, creeks, and potholes.[24] All of these features are vital components in the unique coastal and estuarine zone.

Let us now shift away from this description of the estuarine zone and to another inquiry: Why is the estuary so fertile? After satisfactorily answering this question, we will be more qualified to understand both the importance of the estuaries and the need to control the conflicting public and private relationships in the estuaries that was noted in this paper's early pages.

WHY ARE ESTUARIES SO FERTILE?

One of the many undisputed facts concerning the estuarine area is the realization that estuaries are among the most fertile areas of the world.[25] It has been estimated that estuaries produce (because of the abundant nutrients, warm shallow waters, and vast quantities of solar energy) ten tons of dry organic food per acre per year.[26] This is contrasted to the world average net production of wheat, which is one and one-half tons per acre per year including straw and roots as well as the grain.[27]

The natural fertility of the estuaries exceeds that of both the ocean and the land. The food makers for the entire system, the "production units",[28] are the marsh grass, the mud algae (microscopic plants that grow throughout the intertidal sediments and mud and especially on creek banks) and the phytoplankton.[29] The interaction of these three production units creates the fertility of the system. Research has shown that 60% of the estuaries' production occurs in the vast marshes of cordgrass, that 30% of production occurs in the mud algae,[30] and that most of the 10% remaining occurs from the minute phytoplankton in the water.[31] Shallows are equally productive whether covered by grass or mud.[32] It has also been found that relatively little nutrient production is contributed from upland plant communities or drainage.

Thus, 90% of the total fertility of coastal water comes from the marshlands.[33] It is here that the food chain begins. The marsh grasses produce an excess of organic matter over what is actually used in the marsh, and this excess is exported into the waters of the estuarine zone. The predominant production of the salt marshes is destined to be used in the form of organic detritus[34] (a product of the plant's disintegration). The process is as follows: the marsh grass dies, falls into the water, and begins its process

of disintegration. Micro-organisms convert the dead grass into particles rich in bacterial and algal growth and full of proteins, carbohydrates, and vitamins. This organic detritus is then swept into the estuarine system, where its riches feed all the life therein.

It is here that the unique relationship of the marshes to the overall estuarine zone is consummated. Because of the mixing of the fresh and salt waters as they converge in the estuary itself, there is created a "nutrient trap" [35] in which the nutrients, instead of being swept out to sea, "move up and down among a host of organisms, water, and bottom sediments."[36] The tidal flow, exerting pressures back and forth in the waters, is a favorable factor since food, nutrients, and oxygen are continually supplied and waste products are automatically removed. Thus, the estuarine bottom itself, rich in nutrients and sediments, becomes the primary locale of the estuaries' fertility (as shown by the 90% marshland production). The land that is alternately flooded by the tides (which deposit their microscopic nutrients and then recede,[37] exposing the enriched lands to the further power of the sun) is especially fertile.

Therefore, it is in the marshes and mud flats that the living organisms and chemicals (being produced by the complex life-death cycle of the marsh) enrich the waters of the zone. These marsh plants and animals die and release their organic matter, nitrates, and phosphates into the estuarine zone. These very released nutrients, held, jostled, and mixed in the "trap" of the estuary, feed the other living creatures of the area ranging from one-celled animals to clams, snails, shrimp,crabs and fin fish, and they in turn are fed upon by still larger species.[38] Finally, some nutrients find their way to the sea, to enrich the life there. Many sea dwellers are found near the

inlets as they lie in wait to devour the products of the estuarine world.

In this completion of the estuarine cycle (and note that all this occurs with no requirement of human effort--the estuary fertilizes itself) it is evident that estuaries are much more than the barren wastelands they were once considered.[39] The entire estuarine zone is a complex interlocking system, in which the workings of one part are only a step in the progression of the overall life chain. All the stages must thrive for the system to produce its optimum. This is why it is important to realize that the destruction of one small area, which may seem inconsequential, is fraught with dire consequences for the entire surrounding area.[40] The life cycles depend on each other, and destruction of one system or process (such as dredging and filling that destroys marsh grass and mud algae) can also cause the death of later and distant life cycles (such as fish that need the dredged grass nutrients for food).

The foregoing description is an oversimplication of an extremely complex network. Yet, it must be realized that "because of the kinds and varieties of producer organisms in the marshes and the estuaries, and because of the tide action that removes waste and transports food and nutrients, the estuary is one of the most highly productive areas on earth."[41]

The biological worth and value of the estuary, and its role as the fertile home of food chains and life cycles, has hopefully been made evident. But, "perhaps nowhere on earth are there found areas that are equal in other diversified values as those to be found in the estuaries."[42] Let us now turn our attention to these other diverse and widespread values of the estuarine zone.

THE NATURAL VALUES OF THE ESTUARINE ZONE

The major importance of the coastal area to the rest of the state lies in its multiplicity of values. When speaking of values, one often thinks only of monetary or economic values. Crucial as these factors are, it is unfortunate that most discussion of values usually revolves around dollars and cents. It is this factor alone that is predominant in causing much of the natural coastal wealth to go unappreciated. With a monetary perspective it is difficult to quantify open space, aesthetic pleasure and beauty, the joys of quiet beaches and unspoiled wilderness.[43] Yet it is these very unquantifiable values that give the coastal zone its unique allure and its primary distinction. It has been noted in a study authorized by the United States Congress that "the values of the estuarine zone as a fish and wildlife habitat, as a recreational facility, and as an aesthetic experience are probably greater than they are for commercial exploitation but, unfortunately, we have not yet developed the ability to express adequately these social and humanistic values in quantitative terms."[44] Thus, these natural values go largely ignored on an economic balance sheet for the coast. In being ignored, they are also unprotected. Due to this lack of protection, the estuaries can be destroyed, and then they are lost forever. Perhaps a look again at these previously unquantified amenities can help to halt this lackadaisical trend of destruction of unrealized values.

These "natural" values refer to the values of an estuarine zone when it is left in its natural, unspoiled state. The production of nutrients is one major unquantified value of the natural estuary that often goes unrecognized.[45] Going hand in hand with this value is the areas' role as a shelter

for the eggs and larvae of shell and fin fish, and as a locale for a portion of the life cycle of 90% of all commercially marketable salt-water fish.[46]

Another often unrealized natural worth of the estuary is its value as a "buffer zone". In this sense the estuary acts as a resilient strip that protects the land from erosive storm waves and prevents the need for and expense of erecting artificial barriers to protect coastal structures and cropland. The marshes (and dunes) absorb high tides and storms, and prevent many beaches from simply eroding away.[47] The structures protected include much high-value shore property that lies just above high tide, which without the marshes and dunes would be exposed to the sea's destructive powers.

Other often ignored values include providing a place "for water to be stored and purified"[48] and an area for mud and sediment carried by the rivers to be filtered out. In addition, the marshlands provide a natural means for flood control which is more efficient and less expensive than any yet devised by man.[49]

The marshlands' role as a maintainer of coastal navigation should not be ignored. Sediment is trapped and held by marshes; much of this same sediment would otherwise be deposited in harbors and navigation channels. Many small natural harbors exist at the mouths of salt marshes. In removing this marsh to increase the harbor size, the scouring up and down action of the marsh is destroyed and results in the need to continously dredge the harbor to clear the sedimentation that man himself has caused.

Finally, the aesthetic and scientific value of the estuaries and marshlands is of critical importance. Especially in North Carolina, with its heavy dependence on tourism in the coastal area, the abundance of beauty and natural unspoiled areas is a primary attraction. This aesthetic value for tourists,

sportsmen, and nature enthusiasts cannot be quantified. Nevertheless, one cannot help but wonder what the effect on tourism would be if the destruction of the many natural features that are a magnet for tourists were to continue to be unregulated. It must be realized that humans often desire too much of a "good" thing, and too much development in the coastal area is especially tragic--for it can destroy the very values that make the area an attractive place for development. One writer has noted that "the most difficult value of all to sell to local and very tax conscious City Council members, real estate developers and businessmen [is] the aesthetic and scientific value"[50] of salt marshes. This value alone, the writer continues, is high enough to warrant the marshes eternal protection.

The continuation of these natural values of the estuary is dependent on only one factor - that the estuaries remain untouched and unspoiled by the hand of man. Yet, the entire estuarine area of the state cannot be, and should not be, a huge marine reserve. The areas left to nature must co-exist with the areas directly used by man. The value of these other areas depends not on their remaining natural, but on the use to which they are put by man. The ideal overall development for the coastal area lies in multiplicity of use, for it is through this multiplicity of use, not the economic value for any particular use, that the true importance and total value of the estuarine system will be realized. Thus, the value of the developed areas depends upon their use by man; the value of the natural areas depends upon their non-use by man. All too often, however, non-use is regarded as waste. Areas underdeveloped are not regarded as areas to be preserved, but as future areas to be exploited. What must be realized is that the future of the North Carolina coast depends

upon vast areas of non-use. Acres must be left untouched and left out of the market, so that the question of "use" for these areas is never reached. The recognized tragedy is that often "economic pressures of diverse and often conflicting uses have resulted in a pre-emption of the estuarine resources for individual profitable use to the limitation or exclusion of other valuable, but much less quantifiable, uses."[51]

PRESENT USES--AND VALUES--OF THE ESTUARINE ZONE

The National Estuary Study reports that the major uses of estuaries nationally, in terms of gross monetary return, are military use, shipping, and industrial activities.[52] Narragansett Bay is cited as an example of an estuary that has historically developed in an unbalanced fashion because of the predominance of these three uses. Industrial, military and transportation uses there have developed to virtual exclusion of other uses. North Carolina is still in a position to avoid this form of drastically unbalanced development. Nationally, recreation, sports, and aesthetic enjoyment can be developed to attain equal importance economically with military, industrial, and shipping uses. In North Carolina, these advantageous uses of estuaries are already tremendously important. The key question is not one of creating recreation or sports areas, but of preserving and conserving the fragile areas that presently exist from population pressures, unwise forms of commercial development, and unplanned industrial incursion. The needed development that should occur must proceed with the least destructive impact possible in the appropriate areas.

That attractive, appropriate, and economically pleasing uses of the N. C. coast presently exist can be adequately documented by resort to the

value of our estuarine area as a fish and wildlife habitat. In this area, monetary figures are useful to establish and document the value of estuaries when left in their natural state. Nationally in 1970, sports fishing attracted 11,000,000 people in coastal areas; 16,000,000 are estimated by 1975.[53] Saltwater sportfishing is seen as a "growing giant",[54] growing about four times faster than the population.[55] In North Carolina in 1965, there were 400,000 sports fishermen. The average estimated daily expenditure was $80 per man per day to fish. These figures show that in 1965 there was a total North Carolina expenditure of $32 million for gas and oil, food and lodging, fishing equipment, baits, charters, and other items associated with coastal sports fishing. Translated into other terms, the 2,150,000 acres of estuaries got a return of $50 per acre per year on sports fishing alone.

Commercial fishermen numbered 5,000 in North Carolina in 1965. They received $9,400,000 for the almost 226,000,000 lbs. of fisheries products which they landed. Using a multiple of seven, which economists contend applies to the overall economic impact (taking into account the people employed handling, processing, wholesaling and retailing the catches) of this dockside value,[56] the total consumer value of the commercial catch is in the neighborhood of $66,000,000.[57]

The estuaries were perhaps the most essential ingredient in the life cycle of nearly all (97%)[58] of the commercial fish landed in North Carolina in 1965.[59] In North Carolina, of 225,859,000 pounds landed in 1965, approximately 97% were estuarine dependent species.[60] These species accounted for $8,031,000, or 85%, of the total dockside value of the fish.[61] By using

the familiar multiplier, it can be seen that in 1965 the estuaries were a crucial component in the production of approximately $56,000,000 in North Carolina's salt water commercial fishing business.

Because of the biological conditions of the estuary, many species of fish are dependent on the estuary for their entire life cycle. At least 60 species of fish are dependent on the estuarine ecosystem at some stage in their life cycle.[62] Estuaries thus serve as a basic and fundamental link in all successful coastal fishing.[63] They must be recognized and appreciated as a major factor in creating this economic asset for the state. The almost $100,000,000 that was involved in commercial and sports fishing in North Carolina in 1965 must be attributed in large part to the thriving presence of the North Carolina estuarine system.

Fish are not alone in depending upon estuaries. Many species of mammals and migratory waterfowl also depend upon estuaries in their natural state. The estuarine system is inhabited by mink, raccoon, ducks, herons, coots, geese, egrets, ospreys, rails, deer, otter, and opposum.[64] Waterfowl hunting and the harvesting of the raw pelts of the mammals found in and around estuaries adds a significant boost to the North Carolina economy.[65]

Natural uses of the coastal zone must be recognized as carrying economic clout which, when combined with tourism and other natural recreation on the coast, can rival and surpass commercial and industrial values.[65A] The overall value of the coast can only be optimized by recognizing the multiplicity of values present in the coastal area, especially the natural values that are already established. North Carolina's coastal urban concentrations and residential developments are not meant to be ignored or spurned by this

study - they are unquestionably needed and desirable. They must, however, be viewed in context. The value of natural, unspoiled, undeveloped areas must be particularly appreciated along with the uses of the zone which accompany man in his urban and residential sprawl. Man's socioeconomic activities are welcome on the coast, but a delicate balance must be drawn between these needs and the fragile biophysical systems which provide the coast with much of its value and uniqueness.

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Balance, along with planning, control, management and preservation, are perhaps the key words for the future in the coastal area. As will be seen in subsequent chapters, North Carolina has taken seriously its need and responsibility to preserve and protect much of the estuarine environment. Let us now consider more fully why this control was necessary, as a preliminary step to studying the actual existing and proposed control and management schemes.

WHY CONTROL?

There has occurred, along with the outgrowth of environmental concern in the last several years, a concomitant blossoming of legal and public interest in the estuaries.[66] For hundreds of years the estuaries were alternatively ignored, regarded as wastelands, or treated as a limited resource by those who knew them. By and large, the estuaries elicited little public interest. Today, however, the estuaries are subject to a multiciplicity of

demands. Man's ability to alter the landscape is no longer limited as it has been in the past, and this excessive capability to alter overnight a previously untouched natural world is placing an inordinate strain on the estuaries' biophysical environment. These people-demands and competing uses today include fishing, navigation, real estate, hunting, boating, municipal waste receptacles, shoreline development, transportation, municipal and industrial water supply, and industrial and other general pressures which accompany a burgeoning population. Along with the increase in these uses there has also occurred a heightening of understanding concerning man's relationship to his natural environment. The official realization that "all of the human activities in the estuarine zone can damage the environment, and most of them do"[67] is supported by the further realization that "now the most accurate term to express the relationship of man to his biophysical environment is pollution."[68] The continuing trend is to destroy and ignore the very values--natural beauty and productivity--that make the estuarine zone a priceless feature of the human environment.[69] Growth, progress, and broadening the tax base at the expense of the environment have become fervent dreams of many residents who hope to break the chain of poverty in many coastal counties. Yet others on the coast now realize that uncontrolled growth, like cancer, is not progress.

Because of "the degree to which activity in one area of the estuarine zone affects uses at great distances from where the action takes place,"[70] there is a domino factor of destruction existing in the estuaries. This factor compounds the ill effects of certain developments in the estuaries, and also compounds the ire and heartbreak of those opposed to that development. The multiplying effects of conflicting and degradating uses has now resulted in the realization that some uses are overly destructive, that many uses

conflict with each other and cannot co-exist, and that other uses pre-empt any alternative uses for all time to come.[71] The need for some form of comprehensive technical management and control has arisen. Unfortunately, however, some do not believe that the time for comprehensive management has arrived. Others believe that the meager management that already exists has gone too far.[72] To test the validity of the assertion that North Carolina has already gone too far in coastal regulation, let us investigate why the presently existing laws came into being.

In 1967, it was stated that "[t]he history of our estuaries has been one of steady and accelerating destruction. Today their condition is shocking, their future is bleak, and the need for action is urgent."[73] The accuracy of that statement today depends on where one looks to support it: the destruction of oyster beds in North Carolina has now reached 660,000 acres; the reported destruction of marshlands (nearly one-third of North Carolina's coastal marsh from 1954-1967)[74] is appalling. Other sources tend toward more optimistic assertions: the legislative history of the 1968 Estuarine Inventory Bill[75] notes that 8,000 acres in North Carolina of basic estuarine habitat were lost by dredge and fill, but that is only a one percent loss (in comparision, California has lost 225,800 acres, or 67% of its basic areas of importance).[76] A recent N.C. Law Review article asserts that North Carolina's coast is still relatively unspoiled.[77] In addition, the legislation to protect the North Carolina coastal area that has been enacted since 1970 is impressive.[78] Yet, regardless of these most recent optimistic visions, in 1967 it was possible for one writer to state that "perhaps no state is destroying the productivity of its estuaries as rapidly as this one (North Carolina)."[79] A quick look at the ignorance that has prevailed in many areas of the coastal zone is at least inferentially supportive of that assertion:

- "A few years ago a man was awarded a prize for draining a salt marsh and producing a large crop; the next year, as the area continued to dry out, the accumulated sulfates turned into sulfuric acid and the area became an absolute desert."[80]

- The County Commissioners of Dare County in the 1960's purchased a drag line for $29,000 for the express purpose of ditching every acre of salt marsh in the county (15,500 acres). [81]

-In Brunswick county regularly flooded salt marshes no longer exist.[82] They have been replaced by ditches and filled areas which are now used for building roads and cottages.

-45,292 acres of irregularly and regularly flooded marshes have been directly altered by man's activities during the past 15 years. This represents over 28.5% of the 158,850 acres of these coastal marshes in North Carolina.[83]

-in the past, a favorite method of increasing the value of salt marsh on the coast is to fill it in and locate the town dump on one edge.[84]

- in 1972, an eastern North Carolina judge fined a man who had illegally dredged and filled one cent. The judge said he needed to dredge and fill himself, and environmentalists had gotten too strict.[85]

- in the past, courts have found a judicial policy in favor of draining and filling salt marsh. [86]

- a new Holiday Inn has been built at Kill Devil Hills about 100 feet from the Atlantic Ocean. It is totally unprotected. Secretary of Natural and Economic Resources James Harrington has stated that, because of the typically poor ocean front planning, the "chances that this building will survive five years are slim and none." [87]

- the original plan of Frank Sherrill for Bald Head Island was to bulldoze the dune that gave the island its name and to construct a huge residential and marina complex. It has been observed that without the Bald Head dune as protection the island would have disappeared within a matter of years. At least this disaster was averted.

- the new Carpetbagger Inn in Atlantic Beach has been built so close to the ocean that the entire barrier dune system had to be leveled to accommodate the motel and its parking lot.[88]

- David Stick, a real estate developer on the Outer Banks, has publicly criticized local developers (including himself) "for selling land unsuitable for habitation, some of which has been or will soon be taken over by the seas."[89] From fifteen to twenty houses on the Outer Banks were washed into the sea this past winter. A Kitty Hawk carpenter has called some developers "unscrupulous". "Some of them (developers) will warn a guy not to build next to the ocean, some won't," he continued. "Most of them are out to make a fast buck."[90]

- to be frank, the public needs controls to blunt the sometimes voracious appetite of some local developers. Mr. Bill McLean, a Carteret County developer, recently stated that if "you would give me two more bulldozers, why, those ecologists couldn't spend all the money I would make."[91]

- Another small developer in Carteret County, Mr. J. C. Keeter, has argued that more development of the coast was needed, and then money could be made to clean up the environment. Mr. Keeter was then questioned by State Senator George Rountree:

Sen. Rountree: Do I understand you to be saying that if the coastal counties desire to increase their tax base, they need to create the sources of pollution before they can get enough money to clean up the pollution these sources create?"

Mr. Keeter: Yes sir. That is exactly right. That is just what we must do." [92]

By adding to these specific instances of illogic the fact that most of the present uses of marshlands today either seriously degrade or despoil completely many or all of the natural values of the marsh (destruction which may never be undone), one may wonder why any marshes are left at all. By adding the current boom in real estate development and the pressures, ignorances, and self-interests of a short-run cash perspective, one can clearly see why the dredge and fill, dunes protection, and other laws of 1969 to 1973 were needed.

One major, long term tactic to stop estuarine zone despolation is educating the public.[93] That is one purpose of this study. Robert Morgan, the Attorney General of North Carolina, has stated that one solution to the marshlands problem "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 traditional idea of changing nature to meet their demands to a more rational development which blends with nature rather than alters it".[94] That this plea is perhaps at last being heeded is shown by Secretary of the Department of Natural and Economic Resources

Harrington's comment that the Ocean Sands development in Currituck County, and the accompanying land use plan, is the "beginning of a new era in ecology and esthetics on the Outer Banks." [95] There must be a recognition that progress in the coastal area is not synonymous with uncontrolled growth and development, and that in some areas preservation is the highest form of progress. On the other hand, not all development must be regarded as bad -- especially in North Carolina's economically depressed coastal areas. Here again balancing and trade-offs must occur, but the full environmental impact of the destruction of natural areas must be appreciated by all involved. As has been stated, "the issue here is not one use or the other applied to the entire system, but each use in its proper place, and all in proper perspective." [96] Government officials and legislators cannot singlehandedly fight the necessary battle against ignorance and for enlightened multiple-use of the coastal zone. They must have the support of an aware public. With this support, deleterious use of the coastal area can be controlled.

In conclusion, the socioeconomic environment [97] of the coastal area is a result of its value as a place to live and to prosper. The biophysical environment[98] of the coastal zone is a result of a fragile and delicately balanced natural system that is of unestimable, yet often times unrealized,[99] value. The institutional environment is assigned the role of resolving conflicts between these first two often competing environments.[100] All these systems must co-exist, but it must be realized that the biophysical environment is the primary uniqueness of the coast and the major provider of the coast's sustenance. This biophysical environment has been subjected to over 300 years of exploitation and alteration.[101] Objective analysis shows that positive action is needed to preserve, conserve, and enhance the finite and

irreplaceable resources of the coastal area. As the National Estuary Study has noted, "the laws regulating man's activities in the estuarine zone are historically intended to protect and serve individual and group interest in dealing with each other. Only recently has it become apparent that the laws protecting man from himself must be extended to protect the natural environment from man."[102] This protection must be genuine and forceful, for to many the estuarine zone represents perhaps "the most valuable and most vulnerable natural trust placed in the hands of this generation."[103]

CHAPTER II

THE COMPREHENSIVE COASTAL AREA MANAGEMENT BILL

THE HISTORY OF NORTH CAROLINA'S EFFORTS IN COASTAL AREA MANAGEMENT

In North Carolina, the concept of comprehensive coastal area management has grown right along with the renewed citizen interest in protecting and preserving our estuarine environment. In this state, the idea of comprehensive coastal area management is not new. The need for comprehensive coastal management was realized as early as 1967 when Dr. David Adams, then Commissioner of Fisheries, North Carolina Department of Conservation and Development, stated that there should be a unified effort within the State government to preserve the State's estuaries and coastal marshes.[104] In speaking of a present need for a "unifying agent,"[105] he cited the resultant fact that "no single agency views the estuaries as its sole responsibility, and 'that which belongs to everyone belongs to no one'."[106] Adams felt that "some public entity" must be given the responsibility and authority "to carry out a successful comprehensive estuarine program."[107] On November 21, 1967, Adam's ideas were presented to the Inter-Agency Council on Natural Resources.[108] As a result of that council meeting, an Estuarine Study Committee was established to "develop a comprehensive state program for multiple use of the State's estuaries, and [was directed] to present this program to the Council in time for implementation by the 1969 General Assembly."[109]

The 1968 Estuarine Study Committee produced a report that contained the basic outline from which a germinal program for estuarine control could have been developed. The program was intended to "provide a means for allocating uses" throughout the estuarine area in a way that would guarantee the preservation of diverse and conflicting uses of the coastal area. It recommended that the Department of Administration[110] be responsible for the State's estuarine

program. ..ccording to the program outline, the Department of Administration would have the responsibility of providing for the coordination of the program among all affected agencies. In addition, an Estuarine Council was recommended to handle disputes which could not be handled by "a Board or Commission with established membership." This Council, composed of government officials[111] and appointed private citizens,[112] working with the Administrative agency, was to be given the authority to control estuarine land and water use by: (1) reviewing all public projects and programs affecting estuarine lands and water and "transmitting its recommendations to the proper authority" (2) acquiring interests in estuarine lands and waters in the public interest through purchase, gift, lease, easement, or condemnation;[113] (3) maintaining a continuing inventory of the State's estuaries[114] and (4) regulating private uses which may affect the public interest through a permit system.[115]

The estuarine control program also provided a small technical staff[116] under the Department of Administration to be "primarily responsible for preparing master plans for estuarine use and maintaining an inventory of estuarine lands."[117] Provisions were also made for estuarine land acquisition for which $500,000 was appropriated.[118] Surveillance of the State's estuarine lands and the enforcement of the program was to be provided by law enforcement personnel of the Wildlife Resources Commission and the Department of Conservation and Development's Division of Commercial and Sports Fisheries. Despite these apparently unusual enforcement provisions, it was hoped that the enforcement agencies' deep commitments would allow them to handle the added work. Finally, the program report made recommendations which stressed the need for: (a) new legislation to implement the administrative provisions

of the program and to spell out administrative organization and powers; (b) legal studies which would guide the shift of land acquisition from Conservation and Development to Administration; and (c) new legislation that would require permits for dredging and filling.[119]

As a consequence of the presentation of the Study Committee report to the 1969 General Assembly, a bill was ratified entitled "An Act to Direct the Commissioner of the Commercial and Sports Fisheries to Make a Comprehensive Study of the Estuaries of North Carolina, and for related purposes."[120] This bill directed the Commissioner "to study the estuaries of North Carolina with a view to the preparation of a comprehensive and enforceable plan for the conservation of the resources of the estuaries, the development of their shorelines, and the use of the coastal zone of North Carolina."[121] A final report of the Commissioner was to be submitted to the Governor by the first of January, 1973. That report was never prepared. However, after the 1969 legislation was enacted, the Commissioner did work with a private consulting firm[122] in the preparation of A Plan for North Carolina Estuaries[123] and The New Hanover County Pilot Project.[124] These reports were professionally prepared and are of some limited use,[125] but they are not a fulfillment of the study mandate issued by the 1969 General Assembly. The Commissioner of the Division of Commercial and Sports Fisheries has stated that these documents "provide the basic direction for developing the report to be submitted to the Governor." In fact, however, the reports fall woefully short of the study and the plan called for by the 1969 General Assembly. In all fairness, it should be noted that the Commissioner was probably laboring under an impossible burden since the funding for the comprehensive study was only $94,000. Also, it is doubtful that the production of a comprehensive

estuarine plan was within the competance and administrative expertise of the Division of Commercial and Sports Fisheries. However, North Carolina would now be more capable of formulating the technical data needed to produce a comprehensive management plan of the coastal area had the mandated study been carried out.

Following the preparation of the two consultant reports,[126] the Commissioner formed a "committee" to assist in the development of a document "which [would] be beneficial to the coastal area, its citizens, and the state as a whole in the development of a coastal plan."[127] The activities of this "blue ribbon committee"[128] form the bulk of the legislative history concerning the development of the mandated "Comprehensive Estuary Plan." Yet, the plan that was developed was not a plan at all.[129] The Committee instead developed a draft of the Comprehensive Coastal Zone Management Bill of 1973.[130]

This brief historical background shows that North Carolina's interests and efforts in comprehensive management of the coastal area environment were aroused nearly eight years ago. Since David Adams' first plea, however, much of the effort in the coastal area management has been wasted in unnecessary administrative detail. What now exists as a product of these eight years of work is a draft of a bill that will once again be considered in the 1974 General Assembly; two consultant's reports that are gathering dust; and no real coastal land use management plan at all, only the hope that one will be created pursuant to the comprehensive Coastal Area Management Bill.

THE FEDERAL EFFORT

During these eight years of concern on the state level for comprehensive coastal area management, the federal government was also taking actions in the

coastal management field. The result of this federal activity was the passage of the Federal Coastal Zone Management Act of 1972.[131] While it is clear that the federal activity concerning coastal zone management and the federal policies developed in the 1972 Act were not the primary motivations in the beginning of the state program,[132] it is now obvious that to be successful the state program must depend substantially on federal funding. Thus, meeting the guidelines in the Federal Coastal Zone Management Act of 1972 is crucial to the success of any State program.

In order to appreciate the impetus that the Federal Act provides for North Carolina, a brief analysis of the Federal Act is necessary. Interest at the federal level began in the mid 1960's principally because of the growth of concern in protecting the coastal areas of our nation from destructive encroachments. The reality of competing use conflicts on the coast, the fear of ocean pollution, the rise of coastal population,[133] the prevalence of haphazard planning, the pollution of bays, harbors and estuaries, all played a part in creating the federal concern.[134]

On June 17, 1966, the U.S. Congress authorized[135] the Commission on Marine Science, Engineering and Resources[136] to prepare a report on marine problems ranging from "the preservation of our coastal shores and estuaries to the more effective use of the vast resources that lie beneath the sea."[137] The Commission was to study and recommend a national ocean policy. The final report of the Commission, entitled Our Nation and the Sea,[138] was completed on January 9, 1969. The report recommended a federal coastal zone management program.[139] Also in 1966, pursuant to the Clean Water Restoration Act of 1966,[140] the Secretary of the Interior was authorized to undertake a three year study entitled "The National Estuarine Pollution Study."[141] This three volume

work was printed in 1970; it contained a detailed analysis of the estuarine area, but more importantly, it analyzed in much detail the development of a comprehensive national program of estuarine management. The effect of all these massive studies and recommendations, combined with the factors of heightened public awareness and desire for protective programs, led to the passage of the Federal Coastal Zone Management Act of 1972.

The 1972 Act addressed itself to the traditional inadequacies of past coastal area management programs. These inadequacies included: (1) the separation of development from control in the coastal area; (2) the dispersed and uncoordinated agency controls; (3) the traditional approach of focusing on preserving only one natural resource at a time; and, (4) the lack of specific long-term and short-term goals. As Professor Thomas Schoenbaum has noted, the traditional management system "discriminates in favor of those uses which result in short-run private profit."[142] In most instances where there were no long-term goals or clear policies, individuals and the government, Schoenbaum continued, "competed amongst themselves for short-term advantage." [143]

To remedy these problems, the Federal Act unequivocally identifies the states as the focal point for coastal zone management.[144] The legislative history states that the bill's main purpose is "the encouragement and assistance of States in preparing and implementing management programs to preserve, protect, develop, and whenever possible restore the resources of the coastal zone."[145] It further states that "the intent of this legislation is to enhance state authority by encouraging and assisting the states to assume planning and regulatory powers over their coastal zone."[146]

Under the Act, a participating state is initially eligible to receive

planning grants ("Management program development grants") to develop a management program for the land and the water resources in its coastal zone, from the fiscal year ending June 30, 1973 until the fiscal year ending June 30, 1977.[147] $9,000,000 of federal money is to be made available from planning grants. After a state develops a management program of its own, the state submits the program to the Secretary of Commerce for review. If the program is approved, the state's eligibility for planning grants terminates, and the state then becomes eligible for administrative grants. $30,000,000 a year is to be available for expenditure in a 2/3 federal - 1/3 state matching grant program for costs of administering the state's management program, if the Secretary of Commerce approves the program in accordance with the necessary guidelines.[148]

These two stages of federal grants to the states, for planning and for administering the state management program, are the heart of the 1972 Act. State participation in the legislation, however, is not required. States can ignore the federal program. Also, unlike other recent environmental legislation,[149] a state's failure to adhere to its approved management program will not result in a federal take over of the implementation program, but only in the termination of any financial assistance in the form of administration grants.[150] The desire for federal money will hopefully provide the incentive for state participation in the federal plan and continued adherance to the state plan that is approved. Also, "as an additional incentive a participating state has an advantage in dealing with the federal government if it has an approved coastal zone management program since all federal projects and permits must conform to the state's approved management program. If there is no approved management program,

a federal project could be commenced against state wishes."[151] Thus, after a state plan has been approved, applicants for federal licenses or permits must get state certification saying that the activity is consistent with the approved management program, thus allowing, in effect, ultimate state control of many federal coastal activities.

The federal act also makes grants available to the states to assist them in acquiring "estuarine sanctuaries"[152] for long-term scientific analysis and study. These 50% grants (with 6,000,000 total available) are meant to cover the acquisition, the development, and the operation of the estuarine sanctuaries. These sanctuaries are seen as "natural areas set aside primarily to provide scientists the opportunity to make baseline ecological measurements."[153] Because of its relatively undeveloped estuarine areas (which clearly come within the concept of santuaries as contemplated by the federal act) North Carolina seems to be in a prime position for receipt of these grants -- especially since testimony before the Commerce Committee indicated that the primary example of an oligohaline estuary is the Pamlico River on North Carolina's coast.[154] This recognition of the importance of the Pamlico estuary should spur legislative action; prompt state action could result in North Carolina's purchase or reclamation of a large portion of this estuary with the federal funds made available for purchase of estuarine santuaries.

It is obvious that in order to have the most comprehensive and well funded estuarine management program, North Carolina must work within the Federal guidelines. Efforts to do so are obvious in North Carolina's Coastal Area Management Bill of 1973.[155] But there are areas in our state's coastal zone bill that need further explanation and analysis in light of

the federal mandate. These areas can best be explored against the background of the activities of the "blue-ribbon" committee and the drafts they produced.

DRAFTS OF THE BLUE-RIBBON COMMITTEE

Understanding the activities of this committee is crucial for a complete understanding of the North Carolina coastal area bill, especially as relating to the bill's history and its development from the summer of 1972 to March 27, 1973, when the final draft version entitled "The Coastal Area Management Act of 1973"[156] was introduced before the North Carolina General Assembly.

The 25 member committee was formed initially in December of 1971. It was composed of some lawyers, academicians, government executives, environmental experts and industry representatives. Entitled the "Comprehensive Estuarine Plan Blue Ribbon Committee", the Committee functioned until December 15, 1972. The official work of the Committee began on May 15, 1972. Sub-committees were subsequently established,[157] and within a week the Committee had issued a short "Problem Statement," a statement of basic goals for the Comprehensive Plan, a proposal for a study of coastal resources, and suggestions on the power and composition of the proposed "Coastal Zone Authority."

After this initial activity, all the efforts of the blue ribbon committee were aimed at drafting a proposed comprehensive coastal area bill. A study of the development of this comprehensive bill, through all of its drafts up to the version that was introduced in the General Assembly on May 27, 1973, will form the remaining portions of this chapter.

Six drafts[158] of the Coastal Area Management Bill exist, including the bill that was introduced. There may well be more versions of the bill but unfortunately no record of the bill's development, other than oral accounts and the drafts themselves, are available.

The first draft of the proposed bill, entitled "An Act Creating Coastal Resources Commissions to Manage Land and Water Use in the Coastal Zone of North Carolina," was drawn up on July 7, 1972, by a member of the committee. This draft contained an exemplary section on legislative findings and purposes, and a brief statement of goals. It also established a 13 member "State Coastal Resources Commission" (with an Executive Director appointed by the Commission). This State Commission was authorized "to establish standards for land and water use in the coastal zone." The standards were to be used to to designate "what uses or activities may be authorized in a specified area or areas of the coastal zone." These uses or activities were loosely defined in the draft: "No use or activity should be permitted in the coastal zone that does not depend on one or more of the economic, physical, or social resources or attributes of the coastal zone to be successful." Restated, this means that no use of coastal resources which did not use a coastal resource would be permitted.

In addition to creating the State Coastal Resources Commission and the use guidelines, this July 7, 1972 draft would have created four Regional Coastal Resources Commissions of fifteen members each. These regional commissions would carry out various duties delegated to them by the State Commission, recommend standards or changes to these standards, and prepare regional reports.

The inadequacies of this particular draft are legion. The draft con-

tained no definitions, no clear grants of authority, no clear guidelines, and no mention of a comprehensive management plan. It merely set up a state commission and four regional commissions which would create and implement land and water use standards, and authorized such commissions to "control public and private development" in the coastal area. After this draft was circulated, it seems to have disappeared. Only similarities in the legislative findings and purposes section of later drafts hint at its short existence.

Fortunately, this first draft only started the development process of a Coastal Area Management Bill and did not end it. On August 24, 1973, a second draft of a proposed Coastal Area Management Act of 1973 was presented to the Committee. This bill,[159] drafted by Professor Thomas Schoenbaum of the UNC School of Law with the assistance of Ms. Marianne Smythe,[160] represents the most comprehensive and enlightened draft of the coastal area bill.

The Schoenbaum draft would create two new agencies: The State Coastal Resources Planning Commission, and the Coastal Zone Authority.

The Planning Commission (established in the office of the Governor[161]), would be composed of the Governor, 18 appointed members,[162] and an Executive Director. The duties of the Commission were threefold: (1) "to prepare and adopt a statement for coastal zone management";[163] (2) "to designate by rule areas of critical state concern";[164] and (3) "to reconstitute itself every five years to amend as necessary its statement."[165] Thus, the Planning Commission was directly charged with the formulation of a management plan for the coastal area. As Professor Schoenbaum relates, "it would be an inter-agency group, temporary in nature, which would not require the establishment of yet another state bureaucracy. It would draw on the staffs of

existing groups, relying heavily on the work of the lead regional agencies, the Department of Administration and the Department of Natural and Economic Resources."[166]

The second agency created by the Schoenbaum draft, the Coastal Zone Authority, was established within the Department of Natural and Economic Resources. The Coastal Zone was composed of a chairman and six members.[167] Its main duties were:[168] (1) to appoint hearing officers (who would be attorneys competent to conduct hearings as to (a) authorizing development in areas of critical state concern or (b) allowing developments of regional impact);[169] (2) to issue or deny state "permits for development" within areas of critical state concern[170]; (3) "to conduct investigations of proposed developments in order to obtain sufficient evidence to enable a balanced judgment to be rendered concerning the issuance of a permit to build such developments"; (4) to develop the form and content of development permits; (5) to acquire lands or any interest in lands by any proper means; and (6) to keep a list of interested persons to be notified of any proposed developments.[171]

It should be noted that the Schoenbaum draft was the first measureable effort of the committee. Portions of the Schoenbaum draft are clearly evident in the bill that was introduced to the General Assembly on March 27, 1973. Thus, after the July 7 draft, and the Schoenbaum draft, the serious business of developing legislation was well under way. Unfortunately, after the Schoenbaum draft the process went occasionally downhill, with subsequent developments leading to many solid portions of the Schoenbaum draft being compromised or omitted. Following the drafting of the Schoenbaum bill, committee activity resulted in the production of three more drafts.

These drafts - which for convenience will be referred to as the drafts of November 14, 1972 , December 7, 1972 and January 12, 1973 - grew from the original Schoenbaum draft, and were essentially sequential revisions of that version. From the Schoenbaum, November 14, and December 7 drafts, the committee developed a bill--the January 12 draft--which represented its final product.

The principal changes of the Schoenbaum draft made by the November 14 bill revolve around three areas.[172] The major change was in the area of administrative organization. The Schoenbaum draft administratively separated the planning and policy function in coastal area management from the governance and management functions. That is, the Planning Commission would have handled planning of the coastal zone management statement and would have controlled policy making, whereas the Coastal Zone Authority would have been in charge of governing, managing, and enforcing the "State Coastal Land and Water Use Statement."

The November 14 draft created a quite different procedure. It set up a "Coastal Resources Commission" within the Department of Natural and Economic Resources[173] which would have control and power over all aspects of coastal zone management: planning, policy, enforcement, management, and governance.[174] This "strong commission" was to be assisted by an "Advisory Committee" made up of nine high level government officials who would serve as ex officio members.[175] The enumerated duties of the Committee were to advise and assist the Commission in its development of the Coastal Zone Management Plan, including assistance on technical questions in the development of rules and regulations. It has been stated that the Advisory Committee "would be expected to make a major input to [sic] these decisions after the fashion

of established advisory commission's in fields such as water and air resources, pesticide control, etc."[176] The general and continuing governing board (the Coastal Resources Commission) and the statutory advisory committee (the Advisory Committee) were believed "to allocate the fundamental functions [of organization and administration] along more familiar lines for North Carolina"[177] than the Planning Commission and the Coastal Zone Authority of the Schoenbaum draft. Perhaps the tactic taken by the November 7 draft is correct. For those who prefer a consolidated source of authority, the Commission would serve their purposes. However, one must wonder about such a concentration of power in the hands of such few people. One must also wonder about whether such demands should be placed on an unsalaried group of laymen. The demands on their time would be extensive and the work called for would surely be unusual and unfamiliar to them. Indeed, perhaps asking such an undertaking from nine laymen is too much. These nine members would be entrusted with practically the entire job of coastal area management which would include: preparing and adopting a plan, designating "areas of environmental concern,"[178] issuing or denying permits for development, investigating proposed developments, acquiring land, and informing interested persons of proposed developments. For all this work, the Commissioners were to receive only per diem and travel expenses.

The draft of December 7, 1972, apparently recognized and attempted to alleviate some of the overburden on the Coastal Resources Commission. The Commission in this draft was expanded to include an "Executive Director."[179] The Executive Director was to be appointed by the Commission and serve at its pleasure. In this draft, the Executive Director would have been assigned a function similar to the Coastal Zone Authority in the Schoenbaum draft.

The Executive Director had the power to: issue or deny permits for development within areas of environmental concern; investigate all proposed developments; draw up the form and procedures for the permits; keep a list of all interested persons who wished to be informed of proposed developments; and carry out any other assigned functions and duties. This left the Commission with the duties of preparing the coastal area management plan and with designating areas of "particular public concern" within the coastal area.

The December 7 draft also expanded considerably the Coastal Resources Advisory Council. Whereas the Advisory Council in the November 14 bill was composed of nine ex officio members who were to advise and assist the Coastal Resources Commission, the December 7 draft expanded the 9 to 43 ex officio members. This increase in membership was due to the addition of 26 new members (one from each coastal county as appointed by each County's Board of Commissioners), four members selected from coastal zone municipalities, and additional government and planning officials. The blue-ribbon committees fifth and final draft of a Coastal Area Management Bill was completed on January 10, 1973. This draft made only minor changes in the December 7 draft. The composition of the Coastal Resources Commission was revised slightly, but the Executive Director of the Coastal Resources Commission was retained and his powers and duties as specified in the December 7 draft were left intact. The final draft also added four new members to the Advisory Council.

Thus, after a year of activity, the Committee had produced five drafts of a coastal area management bill. From July to January it had painstakingly revised, amended, and refined a mass of confusing proposals. By January

12, 1973, a thorough and comprehensive legislative document had been developed. The "blue-ribbon" committee had tediously and devotedly performed its duties and had spent untold man hours producing a bill it thought was solid. The bill was the product of considerable input, give and take, compromise, and expert appraisal; the Committee thought it was worthy of immediate legislative scrutiny and enactment. However, between January 10, 1973, the date the final committee draft was completed, and March 27, 1973, the date a Comprehensive Coastal Zone Management Bill of 1973 was introduced in the North Carolina General Assembly, the bill went through a curious transformation. Why the bill was changed, and by whom, has been the subject of some debate.

AN ANALYSIS OF THE MARCH 27 BILL

As mentioned above, the final "blue ribbon" committee version of the bill established a nine member Coastal Resources Commission within the Department of Natural and Economic Resources which was "to prepare and adopt in conjunction with the appropriate units of local, regional, state, and federal governments a coastal zone management plan." The Commission was also "to designate areas of particular public concern" within the coastal area counties as defined in the bill. Along with this Commission in the Department of Natural and Economic Resources there was to be an Executive Director who was to issue or deny permits for development within areas of particular public concern, conduct investigations of developments, etc. A Coastal Resources Advisory Council of 47 members was also to be created to advise and assist the Commission.

The March 27 bill, as introduced to the General Assembly, differed quite radically from the final committee draft of January 10. The March 27 bill contained Coastal Resources Commission within NER, but the Executive Director was dropped. The Commission in the March 27 bill, in conjunction with the Secretary of NER,[180] was only to (1) designate areas of environmental concern[181] and (2) supervise the permit system[182] within the areas of environmental concern. In perhaps the boldest change of all, the areas of environmental concern were limited not to areas within the coastal counties, but to areas "below the 100 year flood line"[183] within the coastal counties. Thus, close state scrutiny of the permit system by the Commission was limited to a "thin sliver" along the sea coast and along coastal waterways. In addition, the Coastal Area Management Plan, that in the January draft was to be prepared by the Commission, was to be prepared in the March 27 draft by the Secretary of the Department of Administration with the assistance of the Secretary of the Department of Natural and Economic Resources. The Secretary of Administration was to "coordinate the planning" of the management program and was to "develop the machinery by which the plan would be submitted for final approval." The Secretary of NER was to provide "information and expertise" on certain aspects of the plan. The Secretary of NER was also to designate by rule the areas of environmental concern and the Commission was relegated solely to approving these areas.[184] Finally, all of the powers and duties given to the Commission and the Executive Director in the January 10 draft were given instead to the Secretary of NER in the March 27 bill.[185]

Thus, major changes in the Coastal Area Management Bill, quite admittedly made for reasons of political expediency, occurred between January 10 and

March 27. The January 10, 1973 draft's active Coastal Resources Commission with a strong Executive Director was relegated in the March 27, 1973 draft simply to approving areas of environmental concern developed by the Secretary of the Department of Natural and Economic Resources and to supervising the permit system within the areas of environmental concern, which areas now had to be below the 100 year flood line. The Commission completely lost its power to develop the comprehensive management plan to the Department of Administration. It also lost nearly all of its other collateral powers and duties to the Secretary of the Department of Natural and Economic Resources.[186]

It should be noted that the 47 member Coastal Resources Advisory Council was retained in the March 27 bill. The Council was kept in the bill in order to: (1) advise and assist the Secretary of NER and the Commission in designating areas of environmental concern, (2) advise and assist the Secretary of Administration in developing the Coastal Area Management Plan, and (3) assist the Secretaries in an advisory capacity on any other matters submitted, including technical questions.

The obvious and widespread rewriting of the bill between January 10 and March 27 provoked outspoken reaction from environmentalists and from members of the blue ribbon committee. Many committee members were surprised by the changes made in the bill, and not all the members of the Committee were appreciative of the latest revisions.

The criticisms from environmentalists, who felt that they had been sold out by the March 27 bill, surfaced on April 17, two days before a proposed public hearing on the March 27 draft. Asserting that the bill "had been sabotaged and is now 'worthless'", one critic called the March 27 version

of the bill "weak, toothless, a sham, and a paper tiger."[187] Dr. Ernest Carl, a zoologist at the University of North Carolina at Chapel Hill, and a member of the blue ribbon committee, and Dr. Orrin Pilkey, a Duke University geologist, were especially critical of the two major changes in the bill; neither liked limiting the state permit system for areas of environmental concern to only those areas below the 100 year flood line, nor did they like the shift of the planning power from the Coastal Resources Commission to the Department of Administration.[188]

One noticeable development since April, 1973, has been the lack of this form of outspoken criticism from the side of the environmentalists. Being initially offended because the bill had been revised (and arguably weakened) without their knowledge, members of the blue ribbon committee had reacted with a quick show of pique. While this anger has now subsided, suggestions for improving the bill continue.[189] The sharp criticism from the environmentalists, while it ruffled some feathers temporarily, was only a short diversionary issue. These critics soon realized that the weakened bill was "at least a small step toward checking uncontrolled development."[190] Because of the harsh criticisms leveled at the bill from other factions, the environmentalists realized that their criticisms has best be muted and the revised version handled gingerly or even that would be lost. Fortunately, the environmental criticisms have now mostly subsided into

cautious hopes that the bill may still perhaps be strengthened.[191] These criticisms from "friendly" environmentalists - labeled by one spokesman as "possibly the most dangerous potential development" in terms of securing the bill's passage--have thus been tempered, but not squelched. This is as it should be. These past critics made sound points, even if they were couched in somewhat inflammatory language.[192] Their criticisms of the bill should still be considered and confronted, and perhaps adopted in the end, for as one North Carolina Representative has said, certainly "no part of the bill is cast in stone." All concerned seem to have now adopted the wise viewpoint of one state representative as expressed to this writer: "The overly zealous sponsors of some needed legislation sometimes wreck that very legislation because of their uncompromising attitude."

Legislation can also be wrecked by the uncompromising attitudes of earnest opponents, and it appears that the Coastal Area Management Act of 1974 will have its share of opposition. The most vocal and vociferous opposition comes almost entirely from coastal developers, real estate interests, and some selected local government officials.

An early criticism of the bill, and apparently a widespread view, is the opinion that Secretary of NER Harrington is an "empire builder ."[193] It has been charged that the bill would make the Secretary of NER a "Super Secretary faster than a speeding bullet and more powerful than a locomotive."[194] When this criticism is combined with the widespread coastal residents view that the bill is poorly organized, is "thrown together by patchwork,"[195] "looks like an agency compromise",[196] and "is a scissors and and paste job of the two bills,"[197] the criticisms by the moneyed coastal interests and the environmentalists sound strikingly similar.

A further criticism of the bill grows out of the coastal counties' desire for economic development. The fear that the strictures in the bill will stifle development, and that it is heavily weighted toward conservation interests and not economic development[198] causes much opposition. The defensiveness of the coastal counties, because of their impoverished economies and their dependency on military establishments, is a cause of much discontent. Much of this form of opposition to the bill comes from local opponents who simply have not studied the bill and do not understand it.[199] Local interests, as Senator Staton has recognized, "fear more what they do not know about the bill than what they do know about it."[200] Yet the issue of the economic development of poor coastal areas (areas that genuinely yearn to "catch up with the rest of the state"), along with the maintenance of environmental quality in these areas, lies at the very heart of the bill's purpose. It is clear that this issue, with all its broad implications, is alive, vital and valid; it must be answered satisfactorily by the bill or by the plan developed pursuant to the bill's mandate. Perhaps some of the tension between conservation and development in the coastal area can be alleviated by a well conceived management plan. If not, conflict and confusion will continue to be the rule concerning any coastal development. This conflict between economic growth and environmental quality is the most difficult topic for the coastal bill to overcome. Much further thought as to goals, policies, and methods of implementation must be done to resolve this issue successfully.

Perhaps the most banal criticism of the bill has come from an Eastern North Carolina attorney who has represented local governments in several coastal counties. The attorney has charged that "the bill is unconstitutional

because it would restrict an owner from using his property as he wishes."[201] One wonders if this advocate would still adhere to this belief if his neighbors made plans to construct a smelting plant next to his home. The issue is not the use of one's private property however one desires. That reasonable restrictions can be placed on private property rights is a settled issue in the law.[202] Reasonable zoning and land use controls are clearly constitutional as valid uses of the state's policy power to protect the public health, safety, and welfare. If wise controls had already been developed and valid restrictions had been placed on private property use, there would not be a loud automobile repair garage within 100 feet of a hospital in Brunswick county. The issue, then, instead of "restricting an owner from using his property as he wishes," is one of controlling the rampant and uncoordinated growth that exacts too high a price on our environment in the misplaced name of progress. As one witness at the public hearing stated, "in 1973, unlimited, uncontrolled development is just as obsolete as hunting buffalo."[203]

Perhaps one criticism that will fall by the board by 1974 is the accusation by local government officials that they "had not been given enough opportunity to participate in writing the bill."[204] One critic last April argued for a delay on the bill, asserting that until the bill was introduced on March 27, it "was the best kept secret since Watergate."[205] The recent series of public hearings[206] conducted in coastal locales by the General Assembly should substantially defuse that criticism.

Few opponents of the bill seem to be opposed to the concept of orderly land management. The plaintive cry of "Don't get me wrong, I'm in favor of some bill, just not this one" has been said by so many opponents of the

bill that one wonders if it is a common and agreed upon tactic to delay enactment of any coastal bill. A legislative lobbyist last year stated that few critics of the bill openly opposed the management concept - but many opposed "this bill" as written. One speaker at Morehead City on July 20, stated, "I'm not protesting. There's need for new, unified, regulatory authority. It's just that this bill is using the wrong approach." Some minutes later, the same witness apologized: "Looking at the bill now, I really don't understand it." Another common criticism is that the bill is too strict or too unclear; yet it is these same critics who have been unable to offer suggestions as to how the bill should be changed. Typically, one coastal developer who roundly criticized the bill (while at the same time supposedly supporting some form of coastal zone management) was asked if he had any ideas concerning how the bill should be changed, replied "No sir." Another witness opposed to "this bill" was asked the same question by a state representative. The witness replied that "writing a better bill is your job, not mine." Thus, many opponents to "this bill," while purportedly in favor of some coastal land use controls, are vague and uncertain as to what controls they would approve, and have few ideas on how the bill should be rewritten. On must inevitably wonder whether these same individuals would openly favor any bill that did anything other than bow to coastal developmental interests. Certainly most of these critics of the bill are well intentioned; perhaps they are simply fearful or ignorant of exactly what the bill represents. One major critic of the bill, a Carteret County real estate appraiser, prefaced his remarks at a public hearing, which were derogatory, with typical aplomb: "I'm not thoroughly prepared, gentlemen. I haven't read the bill. But I don't think I like it."

Some critics are openly hostile to the idea of any form of coastal area management. Mr. J. C. Keeter, a small developer in Carteret County, contends that no further regulation is needed. "What we really need is sewerage," said Mr. Keeter. "If we get that, we can develop the land properly ourselves. With sewerage systems we don't need no management [sic]. Developers will do it [their developing] well so they can get a good return on their investment." Mr. Keeter continued: "As the Bible says, first seek ye the kingdom of God and these things will be added to you. So just give us some tax dollars and we can get all the other stuff [the environment] fixed up."[207]

Thus, the Coastal Area Management Bill is a target of much and varied criticism. It has been attacked by vocal environmentalists and by self-interested coastal developers. It is now marching toward a vote in early 1974. It has been acknowledged by Arthur Cooper, Assistant Secretary of the Department of Natural and Economic Resources, that the "brutal truth is that no one (neither the developers nor the ecologists) will be satisfied with it."[208] A recent exchange typifies the truth in Dr. Cooper's comment: Henry Boshamer, past State Legislator from the coastal area, argued in July that the bill "looked too much like a compromise." Representative Bob Wynne then asked Mr. Boshamer, "Have you ever seen a bill come out of the legislature that doesn't look like a compromise?" Mr. Boshamer conceded, "No. But I like some compromises better than others."

Yet not all coastal voices oppose the bill. Some even speak of the urgency of the need for state control. One coastal resident, Mr. Earl Oglesby, rose to speak to the joint committee hearing comment on the bill. He pleaded his case in the slow, salty accent of a longtime coastal resident:

"We've got to have somethin done down here or we're goin' to be ruined. Why, trees and marshgrass and vegetation is all we got to purify the air. If we build any more buildings and roads around here, we ain't gonna have no more air.

We're gonna be too slow if we don't watch out. When it comes to bein' hurt a little bit or not bein' able to exist at all, why, I'll take bein' hurt a little bit."

SPECIFIC PROBLEM AREAS

Having discussed this organizational tangle and political thicket, it is now important to move to an investigation of other prominent questions concerning the bill that are established by the March 27 draft and its differences with the previous drafts. By briefly examining these areas of controversy we might become more aware of all the major areas of dispute in the bills, and thus perhaps pinpoint insufficiencies in the present bill.

A. THE QUESTION OF THE DEFINITION OF THE COASTAL AREA

One area of considerable dispute in the bill has involved the definition of the coastal area. We shall first note the definitions as given by the various drafts:

August 23 (Schoenbaum): Coastal Zone means that area of land and waters from the most inland extent of substantial maritime influence seaward to the territorial limit.[209]

November 14: Coastal Zone means those counties which are adjacent to, adjoining, or bounded in whole or in part by the Atlantic Ocean or any coastal sound; that is Beaufort, Bertie, Brunswick, Camden, Carteret, Chowan, Currituck, Dare, Hyde, Martin, New Hanover, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Tyrrell, and Washington counties.

The November draft contained the following alternate definition: "Coastal Zone means the coastal waters (including the lands therein and thereunder) and the adjacent shorelands (including the waters therein and thereunder), strongly influenced by each other and in proximity to the shoreline of North Carolina, and includes transitional and intertidal areas, salt marshes, wetlands, and beaches. The zone extends seaward to the outer

limits of the State of North Carolina and extends inland from the shorelines only to the extent necessary to control shorelands, the uses of which have a direct and significant impact on the coastal waters."

The December 7 draft: the alternate November draft was incorporated, with the following addition: "The applicable lands and waters are those within the following counties:" and the list included all the counties noted in the November 14 draft, with the addition of eight counties - Bladen, Columbus, Craven, Gates, Halifax, Hertford, Jones and Northampton.

The January 10 draft: Coastal Zone means the particular counties which are adjacent, adjoining, intersected by or bounded in whole or in part by the Atlantic Ocean, or any coastal sound or major rivers to the end of the zone of tidal influence.[210]

The March 27 draft made only minor revisions to the January 10 version[211] "Coastal area means the counties that (in whole or in part) are adjacent to, adjoining, intersected by or bounded by the Atlantic Ocean or any coastal sound or major river to the end of the zone of tidal influence, and extending offshore to the limits of state jurisdiction.[212]

The definitions in these various drafts moved from vagaries to specifics, or so it was intended. It is crucial to have a clear definition of the "coastal area", for in the first draft these words defined not only the area within which areas of environmental concern would be designated but also the area that would be covered by the comprehensive management plan. The problem of defining the extent to which the coastal area protruded inland was resolved in the Schoenbaum draft by the use of the words "substantial maritime influences." Some maps showing lines delineating these "substantial maritime influences" include such inland counties as Halifax and Bladen simply because of the fresh water migration of anadromous fish. The effort to statutorily redefine "areas of tidal influence" seem to be undertaken out of the desire to limit the coastal zone to those counties (22 in all) that were obviously and directly bordering on coastal and not inland waters. The definitions of the March 27 draft seem to have accomplished the delineation of the coastal counties adequately. Now county lines can be used as jurisdictional boundaries for the coastal area rather than vaguely drawn

lines depicting an agency's idea of "zones of tidal or maritime influence."

B. THE ONE-HUNDRED YEAR FLOOD LINE

The real nub of the March 27 draft comes not in its definition of coastal area, but in its definition of "Areas of Environmental Concern." These areas, states the March 27 draft, "shall lie below the one-hundred year flood line." It is clear that areas of environmental concern shall not, as envisioned by previous drafts of the bill, be designated in any areas of all the counties of the coastal zone; rather, they shall only be designated in areas below the 100-year flood line. Thus, in the March 27 draft, the definition of "coastal area" is important only to delineate the boundaries of the area that will be covered by the comprehensive management plan, and not to delineate boundaries within which areas of environmental concern shall be located.

The implications of this change to include the 100-year flood line boundary have been variously interpreted. The one-hundred year flood line has been defined in the bill as "the elevation of a flood having an average frequency of occurrence in the order of once in 100 years, although the flood may occur in any year." [213] Thus there is a one percent chance in every year of a 100 year flood occurring. The line is an elevation along the boundaries of waters of the coastal area which has been determined and mapped by the U.S. Army Corps of Engineers. Albert C. Costanzo, the Corps of Engineers District Engineer in Wilmington has argued that "anything from the ocean to the 100-year flood line should be included [as within the state's power to label an area of environmental control]... it would make your bill much easier to administer." [214] Costanzo favors the 100-year flood line limit

limit because of its specificity; he has noted that the 100 year line is at 11.5 feet above sea level at Wrightsville Beach and 7.4 feet at Manteo. Some assert that the fact that the line is clearly discernible and can be pinpointed is a clear factor in favor of its use.[215] The vagueness of other proposed definitions is perhaps constitutionally hazardous. Also, several provisions of the Federal Coastal Zone Management Act of 1972, which must be met before any matching funds can be sought, support the use of the 100 year line. The Federal Act notes that "'coastal zone' extends inland only to the extent necessary to control shorelands, uses of which have a direct and significant impact on coastal waters."[216] The intent of the Federal Act - that only resources close to the ocean fall within its purview--is clear.[217] The 100 year flood line for determining the limits of complete state permit control is certainly within the limits of the Federal Act, while earlier and more expansive boundaries for areas of environmental concern may have been too broad.

Yet, the 100 year line is not without its disadvantages and confusion. Large portions of many beach towns would be beyond the control of the permit system of the Coastal Resources Commission and the Department of NER because they are above the flood line elevation.[218] There are also those who believe that unscrupulous developers would import fill dirt to build their property up above the 100-year lien.[219] Furthermore, the line would not cover all areas that need to be stringently protected.[220] Environmentalists have criticized the line as including for state control only "a thin sliver along the coast" which "would not even cover the tops of protective primary dunes."[221] The same environmentalists can find comfort in the fact that one large developer is also disenchanted with the 100-year line. Mr. Seby Jones of

Raleigh has criticized the line, especially as "pinpointed" by the Corps of Engineers. Jones has stated that "the estimates [of] the government agencies [are] off because flood levels go back only sixty years," records are therefore insufficient, and "estimates are at best uncertain." He continued that "It is possible that the 100-year flood has not yet occurred, and the worst is still yet to come . . . Nobody really knows what a 100-year flood is." [222]

Thus, the use of the 100-year flood line as a boundary for the areas of environmental concern is yet to be settled. The original use of county boundaries to delimit the boundaries within which areas of environmental concern could be found is admittedly broad and, more importantly, politically inexpedient.[223] The area defined by the 100-year flood line, on the other hand, is limited and narrow, and perhaps too specific (i.e., so specific that it can be easily abused or sidestepped).

There are two possible alternatives or compromises that may solve this dilemma. The first alternative was voiced by Dr. Ernest Carl, who has suggested that the zone in which critical areas could be designated could be widened by including "those areas within the 100-year flood zone and such lands above this zone whose development would significantly affect the physical character and/or biological processes of the 100-year flood zones."[224] While vague, this definition broadens the area so that at least the 100-year line would be less susceptible to abuse (i.e., a developer's construction of a sea wall exactly one inch above the 100-year line, which would be above the limit for state control but which would also certainly affect the immediate physical and biological character of the adjacent lands below the flood line). The second alternative centers on the development of a new

standard for defining the boundary in question. In the Board Room of the Department of Natural and Economic Resources building in Raleigh is a state map which depicts specifically an area determined by the Federal Environmental Protection Agency to be the "estuarine zone" of North Carolina. This line encompasses an area wider than the 100-year flood line, yet smaller than the area occupied by all our coastal counties.[225] The use of this line, which is EPA's depiction of North Carolina's "zone of tidal influence," could easily serve as the compromise solution to the problem of delimiting the boundaries of an area within which areas of environmental concern may be designated.[226] At least the options deserve to be legitimately explored. As of this date, as has been noted, no part of the March 27 bill is yet "cast in stone."

C. THE QUESTION OF THE ADMINISTRATIVE STRUCTURE

It is appropriate at this point to analyze the administrative structure of the March 27 bill. It is this March 27 version which first involves the Department of Administration in the coastal area management process.[227] In addition to the Department being mentioned for the first time, the Secretary of the Department was given the primary and crucial job of preparing the comprehensive Coastal Area Management Plan. That such a major change should occur in the draft so unexpectedly is somewhat puzzling. As one state legislator expressed to this writer, "I don't see why the Department of Administration should be involved at all." Another supporter of the legislation noted that what the Department of Administration would be doing is essentially "scut work" and tedious, but he still expressed confusion as to

why they were placed in such a vital role at such a late date. Dr. Ernest Carl was initially upset over the inclusion of the Department of Administration in the draft without any consultation with the blue-ribbon committee. Dr. Carl still believes the planning function should be placed in the hands of the Commission, as originally proposed. Believing that "the present environmental mess on the coast was in part caused by the division of authority between the Department of Administration and the Department of Natural and Economic Resources,"[228] Carl is not hopeful that the Departments can function together satisfactorily on the management plan.[229] He sees the division of authority as unnecessary and confusing. It is ironic that in this dispute Carl finds himself supported by coastal development interests. Henry Boshamer, a past coastal legislator, finds the bill an "organizational hodgepodge", poorly laid out, and "an agency compromise."[230] Mr. Grover Lancaster, the Chairman of the Craven County Board of Commissioner, has pleaded that the primary "powers and duties . . . be vested in the Coastal Resources Commission and not the Secretaries of NER or Administration."[231] Mr. Lancaster felt that the December 7 draft, which gave the Commission the power to draw up the plan and to designate areas of environmental concern, with an Executive Director to issue or deny permits for development in areas of environmental concern, was the best drafted version of the bill. The criticisms of Lancaster of the split authority concept were asserted with some vigor. At the Morehead City public hearing on the bill, he contended that the March 27 bill was "a scissors and paste job of two bills." He supported this contention by exposing a quite revealing faux pas: The March 27 bill, on page 22, refers to an "Executive Director". No where else in the bill is "Executive Director" mentioned. Mr. Lancaster concluded that

someone in the haste of substituting the Secretary of Natural and Economic Resources's authority for the past authority of the "Executive Director" "missed scratching through one such wording." [232] Another drafting slip in the March 27 bill also appears to be the result of a similar failure to "scratch through" a certain wording. The Secretary of Administration is authorized to develop the management plan, and the Advisory Council is authorized to advise and assist the Secretary in this endeavor. Yet one member of the Advisory Council is "the Secretary of Administration or his designee." [233] Thus the Secretary in this draft is curiously expected to develop the plan and to also assist himself in its development.

Despite these conflicts, and despite the fact that environmentalists [234] and developers [235] and local officials [236] seem justifiably confused and united in their disagreements with the burdensome inclusion of the Department of Administration as the preparer of the management plan, this portion of the bill has strong supporters. One of these supporters must surely be the Secretary of Administration. However, the most authoritative and convincing support for retaining the bill's structure is given by Milton Heath of the Institute of Government. Mr. Heath believes that the shift of power away from the Commission and into the Department of Administration was made possible by "a new administrative attitude" in the Holshouser administration. This spirit of inter-agency cooperation allows the division of authority, contends Mr. Heath. He may well be correct, especially since traditionally the Department of Administration had had control of all long range planning.[237]

Another strong supporter of the March 27 bill's administration organization, and a strong opponent of the earlier draft's "strong" Commission strategy, is Senator George Rountree of New Hanover County. Senator Rountree disliked the early drafts of the bill that put all the planning, regulatory, and

enforcement functions in the Commission. The Senator "philosophically fears the autocratic administration of the laws in a vertical Commission." He contends that "my experience is that when you centralize all the powers to plan, formulate, adopt, issue permits, and enforce, you are creating more than our democratic system is prepared to accept." Rountree considers the "strong" Commission idea "an inefficient way to protect the results" of the management plan, and contends that "the division of authority is a wiser way to do it from the standpoint of the people."[238] In rebuttal to the Senator's opinions, a witness countered that "having two agencies may compound the problem of who gets what from whom." Thus the issue is joined. Senator Rountree, while opposing the strong Commission, did not necessarily vocalize support for the split in the bill which gave the Department of Administration control of planning and the Department of NER control of implementing the plan. With this controversy in mind, perhaps the original Schoenbaum draft's concept of a Commission to prepare a plan and designate areas of critical state concern, and an Authority (within NER) to investigate developments and issue or deny permits (which seem to split the control to Rountree's liking yet does not involve two entire Departments in the process) deserves to be reevaluated.

Whatever the result, one fact is obvious in the present draft--citizen, as opposed to governmental, control of the coastal area is substantially diluted. The nine member Commission, composed of laymen supposedly well versed in various aspects of coastal life,[239] is delegated to a back seat role while the two governmental agencies point the way. In the March 27 draft, the Commission is given no power to participate in the planning. It is given only an "approval" power over the Secretary of NER's designation of areas of

environmental concern. It has appellate power in the form of Administrative review but not the original power to grant permits in areas of environmental concern. Most of the Commission's residuary powers granted by earlier drafts has been usurped by the Secretary of Natural and Economic Resources in Section 8 of the bill. In Section 8(c) the Commission is still allowed to "recommend" the acceptance of donations and to "recommend to the Secretary of Administration" the acquisition of any coastal lands. Thus, by any fair appraisal, the Commission has become only a shell of its former self.

As to the Advisory Council and its effectiveness in inspiring genuine citizen input and commitment, no one's hopes can be high. As one speaker at the public hearings attested, "I'm a member of an Advisory Committee, and we haven't met in seven years." [240] The entire concept of the Advisory Committee--to advise and assist the two secretaries--could be excised from the bill and the backbone of the bill would not be affected. While the existence of the Advisory Council does somewhat allay the opponents cries of "no local control or particpation," facades are still no effective substitute for true citizen participation.

Perhaps with this perspective, some reevaluation of the true degree of citizen involvement provided by the bill is needed. The erosion of the Commission's power is a direct result of the accretion of power in the two governmental departments. While the governmental interests of the Executive Branch are well represented in the bill, the same cannot be said of private citizen' imput

D. THE CONCEPT OF THE MANAGEMENT PLAN

There is not much that can be said about the actual coastal area man-

agement plan for on one really knows what the plan will be.

The substance of the Plan is contained in Section 6 of the March 27 bill. That section states: "A Coastal Area Management Plan, which includes but is not limited to a comprehensive statement in words, maps, illustrations, or other media of communication, shall be prepared setting forth objectives, policies, and standards to guide public and private use of lands and waters within the Coastal area, consistent with the goals of the coastal area management system, as set forth in Section 2(b) of the act." This language is lifted verbatim from the Federal Coastal Zone Management Act of 1972, section 304(g).[241]

The only other substantive language concerning the management plan is found in Section 6(b) and (c) of the March 27 bill, where it is stated that the plan shall be prepared by the Secretary of the Department of Administration with the assistance of the Secretary of Natural and Economic Resources (who shall provide information and expertise on the environmental and economic aspects of the plan). The Secretary of Administration shall be responsible for coordinating the planning with local and regional government units and for developing the machinery by which the plan will be submitted for final approval. The Secretary of the Department of Administration shall consult with and seek the assistance of other enumerated parties,[242] and he shall, in effect, consider all appropriate research and information available, and undertake any further research himself.

That such scanty information should be provided concerning such a crucial component of the bill is somewhat troublesome. The Schoenbaum draft of August 23 contained a skeleton outline of the components of a land use plan. While Schoenbaum noted in some detail what should be included in the management plan,[243] the March 27 draft curiously incorporates only some of this

information in its statement on the goals of the management system. There is no description in the March 27 bill of what a land classification or zoning system should contain, who would be the primary developer of the plan, or to what extent any developed plan would be subject to local or regional control. The vagueness of the grant of power to the Secretary of Administration certainly gives him the broadest and most flexible authority to construct whatever system he deems appropriate and to involve the local authorities only as he pleases. Because of the enormity of the scope of the Secretary's power, one must wonder whether this entire section of the bill is an unconstitutional delegation of legislative powers.

The Federal bill required inclusion of six elements in the management program.[244] The Federal bill also contains wide and encouraging guidelines concerning the degree to which a state may allocate portions of the management programs to local governments.[245] Perhaps guidelines noting at least the minimum expected involvement of local governments could be included in the state bill. Ideally, the state could work closely in advising and assisting the coastal governments in developing and implementing a land use plan for the coast,[246] and provide provisions for state take-over only where the coastal counties are lethargic in implementing or enforcing their own plan. The effect of this procedure would be enforceable statewide standards with local implementation, a common procedure in our federal system. Secretary Harrington of the Department of Natural and Economic Resources has stated that "the Administration hopes to delegate many of its powers under the bill to county governments"[247] unless they prove unwilling to administer it. The Secretary has thus expressed a desire to provide for as much local authority and control as possible in the management plan. Yet, the broad powers of the two Departmental Secretaries creates an

understandable uneasiness and suspicion in those who are pleading for as much local control as possible. It is unfortunate that any state action is necessary, but the inability of local governments to develop and implement effective land use controls themselves is well documented and quite evident. [248]

The extent of any state action is left unanswered by the bill. State Representative Ward Purrington has recognized the problem of the vagueness of the management plan authorization. In asking whether "the bill should [presently] set out rules and regulations rather than arrive at them later," Purrington went on to answer his own question. He contended that "there is a need for more guidelines in the bill." In stating that he would like to see "something more substantive" concerning the management plan, Purrington concluded that the bill seemed too broad and gave too much planning authority to an administrative agency. The Representative's objections certainly deserve a complete hearing. There is no need for the bill to maintain such vagueness about the procedures, the processes, and the components of the management document which it will authorize.

E. PERMITS FOR DEVELOPMENTS OF REGIONAL IMPACT

Professor Schoenbaum included in his draft an intriguing concept involving "Developments of Regional Impact." This section, deemed one of the three "operative provisions" lying at the heart of the Schoenbaum draft, has since been deleted from the Coastal Area Bill. This deletion should be reconsidered.

Recognizing the fact that "large scale developments are likely to be of sufficient magnitude to create problems in or significantly effect areas of statewide or regional importance," [249] Schoenbaum proposed to control such

large scale development[250] by a state operated permit system.[251] This system would allow the State to assert control over regional developments that are in geographical proximity to the areas of environmental concern. Such regulation would make the preservation and conservation of areas of environmental concern much more comprehensive and meaningful. The reinstatement of the regional impact idea is especially bolstered by the fact that the locale in which areas of environmental concern can be designated are now limited to only those lands below the 100-year flood line. The inclusion of the regional development permits would lessen the criticisms of that narrow classification, and would encourage the belief that the areas of environmental concern can in fact be perpetually preserved by state controls. The areas of environmental concern would thus be directly and indirectly protected from destruction.

It is believed that the section involving permits for regional development was excised from the bill for political and constitutional reasons. This appears, however, to be the type of decision which should be made by the entire state legislature. The regional impact idea should be presented to that body for its full consideration.[252] If the concept is then rejected, so be it. A concept as important as the regional development permits should not be excised from the bill at such an early stage simply because some individuals have suspicions about its political viability. The constitutional objections to the regional regulation seem to be similarly ill-founded.[253]

F. THE QUESTION OF LOCAL CONTROL-WITH REFERENCE TO THE CURRITUCK PLAN

In regard to any comprehensive coastal area management program, the

most persistent plea of most coastal residents has been the demand for "local control." Without question, this demand has been at the forefront of critical comment on the March 27 bill. Advocates of "local control" want there to be "no doubt that the exclusive source of authority and responsibility for planning and regulation of coastal resources be that of local governments working with the state . . ."[254] The only role of the state in a strong "local control" bill would be to "assist" local governments in developing a management system. State guidelines, policies, and procedures would, if "local control" advocates prevail, have the sole purpose of providing local governments with "guidance" in the formation of their management plans. In short, the desire of proponents of "local control" is to see a management bill that would provide for planning, management, and enforcement exclusively at the local level.

Theoretically, the local control advocates are in a strong position. It would be best to be able to place the primary authority for preparing and enforcing any coastal area management plans in the hands of the local officials who are closest to the needs of the area. The desires of the local governments to carry the weight of coastal area management should thus be initially received with some favor.

However, one is justified in being suspicious and skeptical of a plea for complete local control under a coastal area management bill. The local governments, as shown by past actions, are unwilling, recalcitrant, and unable to implement and to assume primary responsibility for any workable planning or management scheme. In response to the plea of coastal officials for a "chance" at management, a state representative asked if the officials were aware that the coastal counties presently have the chance to plan and zone;

the answer was no. The representative, after noting the long existence of state planning and zoning enabling legislation which is available to all North Carolina governments, yet rarely used in the coastal area, specifically responded to the coastal officials demand for "local control": "If you [coastal governments] want local authority, with the state in a position only to recommend, then you'd continue along and never accomplish anything." [255]

The historical weakness of local governments, and their oftentimes questionable desire to manage strictly their land areas, is well documented. Zoning legislation in most of the counties of the coastal area has been not just ignored, but spurned. The perhaps intentional failures of some local governments has led to ineffective enforcement of the existing sand dunes regulation. Furthermore, it is no secret that the dredge and fill legislation, so vital to any coastal management system, would be endangered if its enforcement were left to local governments. Local governments are also weak "in the face of massive private economic power and the public resistance to increased taxes." [256] Even some coastal county officials recognize the discrepancy between their demands and their ability to meet the responsibilities of those demands. As one coastal official recently confessed, "I admit, our best is not good enough."

Thus, local efforts in the North Carolina coastal area to assume strong control over development have ranged from inadequate to nonexistent. Yet, the theoretical and practical preferability of local control, along with the broad guidelines in the Federal Coastal Zone Management Act of 1972 which encourages the delegation of powers to the local governments, are two reasons why the "local control" idea should not be ignored. There is also one further compelling justification for leaving the door open on the question

of "local control"--the existence of the Currituck Plan.[257] The Currituck Plan, which provides for strict and comprehensive local control, is unlike prior local efforts in the coastal area in that it represents a genuine effort by a coastal county to recognize and affirm its responsibility for rational planning and development. With commitment and dedication, there is no reason why the precepts embodied within the Currituck Plan cannot be followed with just as much intensity elsewhere on the coast. The Currituck Plan could then be coordinated with a "Dare Plan," a "Carteret Plan", a "New Hanover Plan", etc., and a powerful scheme for coastal area management with genuine local controls would be born.

It must be recognized that the idea represented by the Currituck Plan need not be a wholly autonomous alternative for coastal area management. Pursuant to the "management plan" mandated by the Coastal Area Management Bill, the coastal counties could develop their own local control schemes along the lines of the Currituck Plan. While in their developmental stages, these locally developed management plans could be coordinated through the state to prevent unnecessary repetition and disjointed effort. Then, after each local plan was finally developed, it could simply be plugged into the administrative and organizational scheme envisioned by the Coastal Area Management Bill. In this respect, comprehensive management would be accomplished with the maximum amount of local planning, management, and implementation.

Currituck County is unique in its geography and its physical features. It is also unique in the enlightened role it has asserted in controlling and managing its future development in an environmentally sensitive manner. Many components of the Currituck Plan are unique to the area and are not of value to other coastal locales. Yet the guiding principles and techniques

of the Currituck Plan, with the genuineness they represent and the professional thoroughness they embody, are a guiding light to any coastal county that is desirous of locally developed and controlled management plans. Before any further coastal counties demand "local control" in any future coastal management plans, they must be aware of the implications of that demand. Let them look first to Currituck County.

CONCLUSION

It is practically beyond question that the idea of comprehensive coastal area management, through whatever system devised, is the most direct and forceful way to wisely control coastal growth and to preserve coastal amenities. Various interests support comprehensive legislation for differing reasons. Milton Heath of the Institute of Government supports the bill because of its "coordinating potential," its ability to pull coastal conservation and development factors "into one picture." Heath sees as the major advantage of the bill its potential in drawing together two sets of interests--first, the state, local and federal, and second, the conservation, development and land use planning interests. Dr. Ernest Carl, perhaps a more outspoken figure than Heath, supports the bill because it is better than no bill at all, and because it will at least place North Carolina on the road to long range planning. Furthermore, Carl feels that the strength of the bill will be bolstered in the short term by good appointments and in the long term by subsequent legislative revisions. Professor Schoenbaum favors the bill because it will " . . . reorder the objectives, goals, and policies regarding the use of the lands and waters of the coastal zone," and because

goals such as "the long-term value of the preservation of marshlands, shorelands, and estuaries and long-term economic development"[258] will be recognized through intelligent management. The comprehensive bill has support from Senator William Staton and Representative Willis Whichard, the environmental committee chairmen of the North Carolina General Assembly and from Senate floor leaders Gordon P. Allen and Charles H. Taylor. Secretary Harrington of NER favors the legislation as "a means to control growth rather than letting growth control us."[259] The legislation also has support from the Carteret County Board of Commissioners, whose spokesman, Ken Newsome, has expressed the most succinct plea for passage of the bill: "What is important is that we begin."[260]

CHAPTER III

THE COMPREHENSIVE MANAGEMENT POTENTIAL OF THE BOARD OF WATER AND AIR RESOURCES

INTRODUCTION

North Carolina presently has a vast quantity of environmental legislation which, while state-wide in scope, relates specifically to the coastal area. The specificity and comprehensiveness of this legislation would allow its use as a management device in planning the future growth and development of that region. It is the purpose of this chapter to study possible coastal management area powers that are available through the use of this environmental legislation.

This study will examine the administrative procedures and the substantive authority granted to Board of Water and Air Resources. It will show that the Board has the ability to mold viable alternatives to the Coastal Area Management Bill. It should be recognized, however, that the "alternatives" discussed in this chapter are not the result of any intentional effort of the legislature to establish alternatives; rather, as a result of recent amendments to the Board's powers, there is now new authority vested in the Board of Water and Air Resources.

THE BOARD OF WATER AND AIR RESOURCES

The Board of Water and Air Resources was established by the 1967 General Assembly as the successor commission to the Stream Sanitation Commission.[261] The scope of the Board's jurisdiction and authority, however, was greatly expended in contrast to the jurisdiction and authority of the Stream Sanitation Commission. To understand the perimeter of these powers, close analysis will be made of the Board's major functions, which include the Board's authority to:

(1) make regulations regarding the waters of the state; (2) require persons who discharge material into state waters to have an approved permit; (3) declare capacity use areas; and (4) issue special prohibition orders in designated areas.

Administratively, the Board of Water and Air Resources is the governing body of the Office of Water and Air Resources which is within the control of the Department of Natural and Economic Resources. It is composed of thirteen persons,[263] five of whom are required to be from the public-at-large and to be ". . . interested in water and air pollution control . . ." [264] The remaining eight members of the Board must meet various statutory requirements related to the environment or public health. These eight persons must also represent a variety of environmentally related fields.[265] All the members of the Board are appointed by the Governor and serve staggered six year terms.[266]

The Board of Water and Air Resources was created because of North Carolina's desire to conserve the water and air of the State and insure that this water and air is used in a prudent manner.[267] To implement this policy the Board was given the authority to administer ". . . a complete program of water and air conservation, pollution abatement and control . . ."[268] This program was directed toward setting standards of purity in water and air that would protect human, animal, and plant life and would prevent damage to public and private land. [269]

WATER QUALITY STANDARDS AND CLASSIFICATION

To implement this program of conservation and control it was necessary for the Board to set standards of water and air quality.[270] Thus, on January 30, 1968, under the authority of N. C. Gen. Stat. §143-214.1, the Board adopted "Rules, Regulations, Classifications and Water Quality Standards

Applicable to the Surface Waters of North Carolina."[271] This set of guidelines describes what standards of water and air quality will be maintained in North Carolina and how these standards are determined.

The "Rules" that apply to classifications and water quality standards define the procedures the Board and its staff will use in classifying and testing water. The guidelines that are developed are used to determine the safety and suitability of the various classes of water in the State. The results of these classifications and tests reflect physical, chemical and bacteriological determinations and are part of the Public Health regulations of the State.[272]

The "Regulations" that apply to classifications and water quality standard detail the various classifications that will be made of the water. For example, Class A-1 water is described as being water that is usable for drinking and cooking. The classification A-1 is used

> ". . . for waters having watersheds which are uninhabited and otherwise protected . . . and which require only approved disinfection with additional treatment when necessary to remove naturally present impurities, in order to meet the "Public Health Service Drinking Water Standards" and will be considered safe for drinking, culinary, and food processing purposes.[273]

The regulations also list the "Quality Standards" that apply to the various classes of water. These standards describe items that water generally contains and then specify whether or not a specific class of water may contain such items.[274]

In order to effectively classify waters the Board must make individual determinations regarding the quality of each body of water in the State.[275] Thus, for each stream, lake, or other body of water, classification must be made. These determinations are not solely based on the actual quality of the water at the time it is studied. Rather, the determinations are based

on the suitability of the water for various uses considering its present condition. The effect of using such a method is that in some circumstances water will be classified above its actual quality. For example, in certain instances water that should be Class B water[276] because of the area it is in and the uses it requires will be so classified despite the fact that the water is in fact Class C water.[277] The purpose of this upgraded classification is to force the persons who make discharges into the water to treat the water as Class B.

CONTROL OF SOURCES OF WATER POLLUTION

Once the classifications have been made the Board can begin to control discharges through the use of the legislatively created permit system. Under this system " . . . no person shall do any of the following things or carry out any of the following activities until or unless such person shall have applied for and received from the Board a permit therefor and shall have complied with such conditions, if any, as are prescribed by such permit . . ."[278] Among the activities prohibited without permits are those which involve making outlets such as ditches, canals, or sewer systems, into State waters.[279] Permits are also required where modifications in discharges which relate to the quality of a discharge, or to the quantity of the discharge, or to both, are made.[280]

In order to obtain a permit to make outlets or discharges, an individual must apply in writing to the Board of Water and Air Resources.[281] Along with the application, the Board may require any additional information that is pertinent to the granting of the permit. Upon receipt of the necessary

data and documents, the staff of the Office of Water and Air Resources will evaluate the information, chiefly considering what effect the discharge, if allowed, will have on the waters receiving it. The staff will then submit their evaluation to the Board which will issue or deny the permit.[282]

Through the permit system the Board of Water and Air Resources can force the upgrading of the water in the state. Streams and other bodies of water can be controlled so that no additional pollutants will be added to them without the Board and its staff carefully considering the effects the discharge will have on the quality of the water.[283]

Absolute prohibitions on discharges, along with requirements for permits for discharging wastes into the waters of the State, have caused significant concern on the part of many coastal residents. Because of the existence of these regulations, further growth and development in some coastal areas will be impossible. The most recent example of this public concern was reflected in the controversy caused by the new regulations adopted by the Board of Water and Resources on July 18, 1973, regarding a specific portion of the coastal area.[284] The regulations essentially curtailed all waste discharges in certain areas of the coast. As Mr. Herb Dugroo, the town manager of Nags Head, stated, the regulations ". . . would be essentially a moratorium on development."[285] It is clear upon reading those regulations that Mr. Dugroo is probably correct. However, there is little doubt that the condition of the water in North Carolina's coastal area would deteriorate further if past practices of waste discharge and disposal continue as before. There is obviously a point at which the polluted water conditions will halt growth in the area. At this point a natural, more stringent "moratorium" will occur. It is this type of "moratorium" that sound and well-developed planning can prevent.

SEPTIC TANKS

One of the most common methods used to dispose of sewage and waste material is the septic tank. In areas of the State where no municipal treatment facilities exist, the septic tank has been a decisive health factor in preventing water pollution and disease.[286] However, as a result of the development of cities and the growth of the population the role of septic tanks has changed. "As long as our population was relatively sparse so that the real economic demand for septic tanks was small, the problems that arose, while serious, were handled without great difficulty in the majority of cases."[287] As the population of the coastal area rapidly expands, the attendant development of housing on the coast is occurring where there are no municipal or community sewer systems. Housing developments alone are not responsible. Mobile homes have also increased the need for disposal facilities in areas unserved by sewer systems.

The sewage disposal problem is mushrooming. Understandably, vast numbers of people desire to live in the coastal area. Unfortunately, the eastern part of North Carolina and thus the coastal area, has long been the poorest section of the State. Towns and communities in this area have not needed sewage systems until recently and they have never had the money to construct their own. The influx of summer dwellers and new homes has disproportionately enlarged these communities to the point where a sewer system is now financially out of question.

Aside from the lack of funds to develop sewage systems and the overcrowding in the coastal area, political problems and feuding between the Board of Water and Air Resources and the State Board of Health has hindered the regulation of sewage disposal. However, recent legislation has now clearly

defined the areas of authority over which the Board of Water and Air resources and the State Board of Health have control.[288] All sewage systems over 3000 gallons are now subject to the rules and regulations of the Board of Water and Air Resources and those systems less than 3000 gallons are under the control of the State Board of Health. The effect of this legislation is that the Board of Water and Air Resources is now able to control the development of many motels, restaurants, condominiums and industrial plants in the coastal area if these facilities are currently being built in areas not served by municipal or community sewage disposal systems and waste disposal systems are a necessity for each of them.

The Board of Water and Air Resources' recent adoption of the disposal and septic tank regulations regarding the treatment and disposal of waste in the coastal area has further broadened the Board's control over this problem.[289]

The regulations apply to waste treatment and disposal systems that are within the authority of the Board including any sewage disposal system that has a capacity of over 3000 gallons. Geographically, the area to which the regulations apply is a coastal area as defined by the Board which extends from Calabash on the South Carolina border to Moyock on the Virginia border, with varying boundaries between the two state lines, and encompasses all land eastward to the ocean.[290]

The regulations are basically prohibitory in that they forbid discharges of wastewater into certain classifications of water and into waters that are in close proximity to those classified waters. Specifically, the prohibitions concern discharges of wastewater in "SA" waters, which are waters from which shellfish are taken for consumption, and "SB" waters, which are used for outdoor bathing.[291] Wastewater, according to the regulations, is

not to be discharged into waters that could experience excessive growth of algae and vegetation or into the ocean. Further, the regulations also provide that septic tanks will not be allowed in areas that produce more than 1,200 gallons of wastewater per acre per day or in an acre of land which has three residences on it already. The effects of the Board's broadened powers are clear. With the authority of these provisions the Board can insure limited and controlled growth will occur in the coastal area. However, the most important effect is that water quality will remain stable in the coastal area.

By enforcing these regulations the Board can insure that drinking, fishing and recreational waters will not become further polluted by allowing increases in the amount of wastewater or sewerage that uncontrolled development of the coast can cause. As stated above, these limitations seemingly hurt the economic development of an area, but the real effect is that the limitations force an ordered, thoughtful pattern of development, beneficial not only to the year-round inhabitants but to the developers as well. Costs, such as in constructing sewage disposal units, whether for a housing development, a motel or condominium, will not be borne by the developer, or the "economically poor residents", but by the persons who create the waste: the buyer. Thus, to have ordered development costs are no greater than the cost of bad development. It is simply a matter of planning.

SPECIAL ORDERS & POWERS

Under the authority of the 1967 Act which established the Board and through recent amendments to it, the Board of Water and Air Resources has the power to issue special orders to persons violating the water quality standards that

have been established by the Board. A special order issued to any person would prohibit any person from continuing any activity which the Board finds is causing water pollution. By the terms of the Act, such an order cannot be issued unless a hearing is held or unless the person consents to the order voluntarily.[293] Once the person has complied with an order and taken effective steps to end the pollution that is being caused, the order will be rescinded.[294]

Through the use of the special order the Board will be able to quickly stop certain identifiable pollutants without a great amount of procedural problems. A plant, for instance, discharging pollutants into a stream would either have to consent to an order requiring the plant to stop the discharges or participate in a public hearing. Thus, the plant by consent to the special order can halt the pollution itself or face the publicity of a public hearing. Such publicity is likely to be adverse to the plant especially upon the presentation of facts regarding the pollution found by the staff of the Board of Water and Air Resources.

While special orders can obviously be effective tools in enforcing water quality standards, their use requires investigation, analysis, and manpower. The staff of the Board and the Board are not capable of doing continuous policing along the lakes, streams and sounds of the State. This means that this measure can only be used in emergency situations. It is clear that the permit system, properly administered, should be able to control the discharge of all pollutants. The special order is a compliment to the permit system. It is an enforcement tool where the permit system has not worked--it is not a managing tool for preventing pollution.

Further additions to the authority of the Board of Water and Air Resources have increased the Board's ability to manage and control water quality in

geographical areas as designated by the Board. If the Board, after holding a public hearing, determines ". . . that the permitting of any new or additional source or sources of water . . . pollution will result in a generalized condition of water . . . pollution within the area contrary to the public interest . . ."[295] and detrimental to the health and safety of the public, the Board is empowered to stop granting permits for the discharge of waste in any area of the State.[296] This power to withhold permits does not bind the Board to an inflexible policy. "The Board may make reasonable distinctions among the various sources of water . . . pollution . . ."[297] and in so doing designate that the withholding of permits will apply ". . . only to those sources which it determines will result in a generalized condition of water pollution."[298]

This new power of the Board, which is in many respects a broad version of the special order discussed above, is unique in that it applies to areas of potential generalized condition of water pollution. The Board must, of course, define the area to which this order applies. In doing so, the Board is exercising a form of management. There is no doubt that this management capacity is negative in that a limited number, if any, permits will be issued. Despite this feature, however, the Board can in essence control the development of an area. Conceivably, that area could be the entire coastal area. In that respect, if the Board, after considering evidence presented by its staff and by the public, finds that there is a danger that a generalized condition of water pollution could result in the coastal area, it could stop granting permits ". . . for the construction or operation of any new or additional disposal systems . . ."[299] Hence, it is obvious that any development that uses water can be halted in the areas defined by the Board as being in

potential danger of losing water quality. Yet, once again, it is only where the permit system fails that such action will be taken by the Board of Water and Air Resources. If dischargers comply with the permit system and monitor the discharge of their effluents, there should never be a need to use the provisions of this section. Thus the special order and the power to withhold permits gives the Board, if conditions become drastic, two statutory means for ensuring that water quality standards are maintained.

CAPACITY USE POWERS

The power of the Board of Water and Air Resources to declare capacity use areas is perhaps the most useful planning and managerial device the Board has for insuring that water resources are not depleted in certain geographical areas.[300]

A "capacity use area" is an area of the State, which is specifically defined by the Board and not necessarily defined by along county lines or other political boundaries. It is an area where the Board has found that the ". . . aggregate uses of ground water or surface water, or both, in or affecting said area (1) have developed or threatened to develop to a degree which requires coordination and regulation, or (2) exceed or otherwise threaten or impair, the renewal or replenishment of such waters or any part of them."[301] Thus a "capacity use area" is declared when water supplies in an area are drastically low or are becoming so drastically low that regulation of the use of that water in that area is necessary. In order to declare a capacity use area the Board of Water and Air Resources must first evaluate the results of an investigation conducted by the Office of Water and Air Resources of the area concerned, and then consider the recommendation of that office relating

to the investigation.[302] If the Board finds that a capacity use area should be declared it will hold at least one public hearing in that area before it takes final action.[303]

Once a capacity use area has been declared, the Board must then prepare regulations regarding water use in the area.[304] These regulations will describe the amount and the timing of withdrawals of surface and ground water. They will also describe what measures will be taken to abate salt water intrusion and to protect other water users in the area from various adverse effects related to water withdrawals.[305] Again, prior to the adoption of such regulations, public hearings must be held.[306]

Water usage in the capacity use area is controlled by permits from the Board of Water and Air Resources.[307] Holders of permits are subject to the conditions under which the permits are granted and as contemplated by the authority of the Act.[308] Permit holders are required to give various types of information on a continuing basis regarding their withdrawals of water.[309]

At the present time, only one capacity use area has been declared in the State.[310] This area is in the coastal area of the State and includes ". . . all of Beaufort, Pamlico, and Washington counties and portions of Carteret, Craven, Hyde, Martin and Tyrrell counties."[311] This area, according to the investigation made by the Office of Water and Air Resources, contained surface waters that were ". . . not suitable for general purpose use" and ground waters that were suitable for general purpose use but, ". . . the total quantity of fresh water available from principal aquifiers in the areas exceeds present and projected demands for the area as a whole."[312] On the basis of these findings, a capacity use area was declared and regulations for the area were drawn-up and adopted. As stated by the regulations, they were promulgated ". . . to

provide for the management of water withdrawal and . . . as needed to conserve water resources in the area, and to maintain conditions that are conducive to the orderly development and beneficial use of these resources."[313]

In the regulations, it is not required that persons withdrawing less than 100,000 gallons of water per day obtain permits for such withdrawals. Any person constructing a well which is not to be used for domestic purposes, however, is required to have a Well Construction Permit.[314] The regulations contain requirements pertaining to persons who withdraw over 100,000 gallons per day.[315] In addition to the permits, specific information regarding the quantity and use of the water withdrawn is also required.[316] Other provisions in the regulations require approval from the Board of Water and Air Resources prior to any surface or subsurface drainage projects or any mining or excavation projects.[317]

From this brief description of the current rules regarding the only capacity use area in the State, it is clear that the management powers of the Board in this area are extensive. Water supplies in the present capacity use area are crucial to any further development of that area. Yet, without some form of broad extra-county control, the preservation of the water supply could not occur. Ground water does not follow state or county boundaries. It is confined by different barriers and as such the use of water in an aquifer must be carefully regulated. In capacity use areas water should be regulated by a body that can measure and understand the capabilities of the water available. In this particular instance the Board of Water and Air Resources was best situated to handle the water capacity problem. If such problems arise again in the coastal area, the Board's past experience in managing capacity use areas should allow it to effectively handle the situation.

EXTENSION OF THE CAPACITY USE POWERS

As part of an extension of the right of the Board of Water and Air Resources to declare capacity use areas, the 1973 General Assembly granted the Board more pervasive powers than the right to declare a capacity use area. In amending, by addition, N. C. Gen. Stat. §143-215.13, the Legislature granted the Board, pursuant to a public hearing and without the declaration of a capacity use area, the authority to make certain prohibitions regarding the withdrawal or discharge of waters.[318] According to these amendments, the Board may issue an order prohibiting ". . . any person from constructing, installing or operating any facility that will or may result in the discharge of water pollutants to the waters in excess of the rate established in the order."[319] Further, the Board may issue an order "prohibiting any agency or political subdivision of the State from issuing any permit or similar document for the construction, installation, or operation of any new or existing facilities for withdrawing or discharging water pollutants to the waters in such area in excess of the rates established in the order."[320] To issue this order discussed above, the Board is required to have reason to believe ". . . that the withdrawal of water from or the discharge of water pollutants to the waters . . ."[321] of any areas of the State ". . . is having an unreasonably adverse effect upon such waters."[322]

Because of this new authority to issue prohibitionary orders, the Board has the power to control the growth and development of any area of the State. Once sufficient evidence of withdrawals or discharges of water is submitted to the Board to enable it to find that an unreasonable adverse effect is resulting to the waters of the State, the Board is in a position to halt any project, public or private, that relates to that adverse effect. The coastal area

management potential of such authority is obvious.

At this point, there are some difficult interpretations to be made concerning the relationship of the Board's new powers to the powers of other agencies, most notably the State Board of Health.

As previously mentioned, the State Board of Health has authority over waste disposal systems of less than a 3000 gallon capacity. However, in the face of the new grant of powers to the Board of Water and Air Resources it appears that when the conditions described in N. C. Gen. Stat. §143-215.13 (relating to generalized conditions of water pollution) are met, the Board of Water and Air Resources can prevent the State Board of Health from issuing any permits for the construction of septic tanks or other waste disposal systems. If this is possible, it is also clear that the Board of Water and Air Resources can prevent building and construction permits from issuing on the basis that to issue them would " . . . result in a generalized condition of water depletion or water pollution within the area . . .."[323]

The Board of Water and Air Resources, therefore, may have given the power and authority to prevent water pollution by halting any further development in any area of the State that is in danger of having its water polluted. This is a broad and powerful statement.[324] Private and State development can be prevented unless it meets standards that will not cause water pollution. By the terms of the new amendment, the Legislature has granted the Board the authority to manage and control the development of any area of the State where water can or will be involved. This power, however, like the Board's power to issue special orders and to withhold permits for new sources of discharges, is apparently based on the situation where the permit system in N. C. Gen. Stat. §215-143.1 fails to prevent water pollution.[325] It is, in fact, an

emergency device and would not be used unless conditions are such that ". . . the availability or fitness for use of such water has been impaired for existing or proposed uses and that injury to the public health, safety, or welfare will result if increased or additional withdrawals or discharges occur."[326] The obvious difficulty with such conditions is that in all likelihood there is not any area of the State that does not already fit those conditions. It appears that the Board would be fulfilling its legislative mandate if it began controlling the issuance of all State permits throughout the State, immediately.

It should be further noted that the Board's determination that such a condition of water pollution does or could exist must be supported by detailed facts and evidence and that appeals from such orders can be made through normal judicial channels.[327]

CONCLUSION

The Board of Water and Air Resources has, in Professor William B. Aycock's conceptualization, the potential authority to control every raindrop that falls in this state.[328] This control capability has been shown in the above analysis of the Board's structure and authority. At the present time, this capability to control raindrops is only a capability. It is not a reality. The Legislature's charge to the Board in the Act is, it appears, a direction to control and manage areas of the State only when a crisis in water pollution has or is about to occur. In essence, the Board is expected to be a grantor of permits with appropriate powers to regulate the issuance of these permits.

If a Coastal Area Management Bill does pass the General Assembly in 1974, it is likely and entirely proper that the Board of Water and Air Resources

will continue to be a passive permit granting agency with potentially expansive powers that must be used only in "crisis" or emergency situations. If a Coastal Area Management Bill does not pass, serious consideration to viable alternatives must be made. The Board of Water and Air Resources as a managing body is one potential alternative.

On paper, the regular[329] and crisis[330] powers of the Board make the Board an imposing management agency. Within these two levels of authority, however, there are certain changes that could be made, which would enable the Board to exercise both levels of authority without waiting for a crisis to occur. Legislative amendments to the Board's grant of authority are possible--and advisable. In brief, new legislation should establish a control and management division within the Office of Water and Air Resources. This would be a major step toward making the Board a management agency for the coastal area. Once established, a control and management division could utilize the planning directives already in the Act to establish standards for future development of the coastal area and throughout the State. These planning directives authorize the Board and the Department of Natural and Economic Resources to ". . . undertake a continuing planning process to develop and adopt plans and programs to assure that the policy, purpose, and intent declared in this article(N. C. Gen. Stat. §143)are carried out with regard to establishing and enforcing standards of water purity to protect public health . . . to insure the continued enjoyment of the natural attractions of the State, to encourage the expansion of employment opportunities, to provide permanent foundations for healthy industrial development, and to insure the beneficial use of the water resources of the State."[331] At the present time, if the Board and the Department of Natural and Economic

Resources drew up such plans there would be no way to implement them. Therefore, it is necessary to amend the grant of authority to the Board of Water and Air Resources to include a Control and Management Division.[332] This Division could comprehensively implement the planning processes and powers of the Board.

To insure that plans for development are followed and enforced, the "crisis" powers of the Board would have to be used more fully. This would mean that these powers would be used not only for emergency situations in water quality, but also in developing and carrying out management plans. In this manner, the Board, through the Control and Management division, would be able to define geographical areas throughout the coastal area and issue development standards for these areas based on their water quantity. Using this procedure, a crisis could be prevented rather than cured.[333] Plans and standards so defined and set out would serve as a development guide to the coastal area. Builders, developers, and private citizens would be required to follow these standards. The staff of the Office of Water and Air Resources, to insure that the standards are being followed, would recommend approval or disapproval of a developer's project to the Board. After studying a proposed project the Board would deny or approve it. Each of these decisions would be based on the planning standards set forth by the Control and Management Division for a given area, in this case the coastal area.

Under this method of setting standards and reviewing applications the Board of Water and Air Resources would in fact be managing a geographical area. It should be noted that nothing recommended thus far has suggested that the Board's powers be increased. It is only suggested that the use of the present powers be broadened under the auspices of a Management and Control

Division. Water and air are obviously the prime concerns of any type of development. Through a broadening of the Board's powers, tighter control of the water and air resources would result. Plans for development would be forced to reflect the standards of water and air quality set by the Board. These standards would necessarily cause a higher quality of water and air to be maintained and would consequently fulfill the goals of the planning process to enhance ". . . the quality of life and protection of the environment through development by the Board of Water quality plans and programs utilizing the resources of the State on a priority basis to attain, maintain, and enhance water quality standards and water purity throughout the State."[334]

Without amendments to the Board of Water and Air Resources authority it is likely that any plans developed under the planning authority of the Department of Natural and Economic Resources or the Board will be paper tigers. They will be plans that contain excellent ideas and concepts, but have no method of implementation. The amendments would enable the Legislature to look to the existing law to obtain the necessary management authority for the coastal area. Clearly the Board's powers present a viable alternative for Coastal Area Management in the form of centralized and comprehensive administrative control. It is worth noting in this regard that if a Coastal Area Management Commission and Office is created that in time other commission and offices will be needed for the other areas of the State,, specifically the mountains and the piedmont. This means creation of three new State agencies. It might be worthwhile for the Legislature to carefully weigh the possibility of redundancy in this area when there is already an agency with the capability to handle the problems that must be faced.

CHAPTER IV

THE PUBLIC TRUST DOCTRINE--A MEANS OF JUDICIAL CONTROL

THE PUBLIC TRUST DOCTRINE

Within the legal concepts of Roman and Anglo-Saxon law that are embodied in the laws of this country is the public trust doctrine.[335] This doctrine recognizes that a State, under common law and statutory law[336] holds certain submerged lands in trust for the beneficial use of the public.[337] Traditionally, these beneficial uses have included the right to fish and navigate in the waters covering the submerged lands. In North Carolina, this means that the estuaries and tidelands of the state are held in trust for the public's use and that this use will be protected by the State to the extent of excluding private use and ownership.[338]

DETERMINING WHAT LANDS ARE HELD IN TRUST

The use of this public trust doctrine to protect the rights of the public to fish and navigate has developed in North Carolina in a confusing and controversial way. Because the public trust doctrine is based on the fact that water covers land, there are situations in which the doctrine is easily applied and understood such as where the land in question is always covered with water. however, in the coastal area of North Carolina the tides move in and out over large portions of land. The confusion is in this area.

The confusion began in common law which applied the doctrine to lands over which the tide ebbed and flowed. In time, the Supreme Court of the United States modified the doctrine and applied it to lands under water that were navigable in fact, i.e., waters that vessels could actually sail over.

Thus, the controversy arose over whether the State owned land that was constantly covered with water, or whether the State owned land over which the tide flowed.[339]

North Carolina has followed varying interpretations of the law in this area. Cases have conflicted as to whether navigability in fact or ebb and flow are the appropriate tests for determining what land the State holds. Consequently, there is considerable doubt as to which lands the public trust doctrine applies.[340]

At the present time, the Attorney General's office and the Legislature are each using different methods to resolve the controversy. The Attorney General's office of North Carolina is perfecting cases in which it disputes the right of certain citizens to claim title to lands over which the tide flows.[341] It is hoped that the outcome of these cases will show that North Carolina follows an ebb and flow test and thus holds submerged lands up to the high water mark in trust for the people. If that is not the case, it is possible that the courts could use a navigable-in-fact test that would state that waters that are navigable-in-fact are navigable up to the high water mark.

The legislature's attempt to resolve the controversy has resulted in an effort to pass an amendment redefining navigable waters.[342] The effect of this amendment would be that when water is found to be navigable it will be navigable to the high water mark. This would place all submerged land affected by tides in the control of the State and result in the public trust doctrine applying to all those lands. Indeed, both the legislative and judicial methods of settling the controversy of what submerged land is held by the State are

directed toward establishing that all lands affected by the tides are State held lands up to the high water mark. If either of these methods of settling the controversy is successful, the State will follow an ebb and flow test to determine what lands are impressed with a public trust.[343]

The recent North Carolina Supreme Court decision in Carolina Beach Fishing Pier, Inc. v Town of Carolina Beach, 277 N.C. 297, 177 S.E.2d 513 (1970). has shown that the ebb and flow test is definitely applicable to ocean front land. That decision, coupled with the decision in Capune v. Robbir ., 273 N.C. 581 at 587,88, 160 S.E. 2d 881 (1968). which explains the qualified rights of riparian owners,provides a legal basis for establishing that this State does hold title to all submerged lands up to the high water mark.[344] However, until that basis is established, title to much of the land in the coastal area will be disputed. To further appreciate the importance of determining what test is used to delineate public trust lands, a closer look at the rights that this trust involves will be beneficial.

Perhaps the simplest understanding of public trust rights can be seen in the activities that citizens of the State pursue in the coastal area. For example, fishing in the sounds and estuaries of the State is a public trust right. The citizens have that right because the State holds title to all the land under that water and is bound by the public trust doctrine to allow its citizens to use that water for their benefit. The same rights apply to fishing in the marshland and to clamming on the banks of Bogue Sound. Swimming and sunning on the beaches are public trust rights. Landowners on the ocean front own nothing below the high water mark. That land belongs to the people for their beneficial use.

Because these rights exist in the people and the State is the trustee of the land, it is the fiduciary duty of the State to protect the land and the rights. Evidence of this protection is abundant. Fish and Game Laws, Dredge and Fill Laws, Pollution Laws and numerous other laws exist to protect these rights. These laws prevent individuals from usurping the benefits that belong to all citizens of the State. These laws are designed to give the largest number of people the greatest benefit possible from the public trust lands. This means that the sale of public trust land to private persons is forbidden unless such a sale benefits the people as a citizenry.

There is no doubt that the terms of the public trust have been violated in North Carolina in numerous instances. In many of these situations the violation has been the result of misunderstanding and the State's inability to oversee all the land that is impressed with the trust. Consequently, much land that belongs to the people has passed into the hands of individual citizens and is being used for their private benefit and not for the benefit of the citizens. Some would say that once this land has been conveyed that the State has used its sovereign rights and that title remains in the purchaser. This may in fact be true, but it is apparently the law in this State ". . . that the state can no more abdicate its trust over such property than it can abandon its police powers and the preservation of the peace."[345] Furthermore, if the above is not the law in North Carolina, there is also a general rule of law that a purchaser of property from the state takes no better title than the title the state held. In this sense, a person who bought trust lands from the State would hold the property in the same way the state did. Thus, the private owner would assume the trust responsibility of the State to use the land for the benefit of the people. Such an assumption

of this trust responsibility has been called the private trust doctrine.[346] At any rate, the existence of this aspect of the public trust and the concept that in North Carolina there might not be a legal basis for conveying public trust lands, establishes firm ground for the belief that the trust rights of the people can never be dissolved.[347]

As a result of the existence of the Public trust doctrine, there are problems regarding the protection of the coastal area that must be carefully studied. These problems specifically concern the right of private citizens to make certain that their trust lands are not misused or misappropriated by the trustee, i.e., the State.

It is the role of the Attorney's General's Office of the State to insure that the laws of the State are followed and if and when they are not to take appropriate action. In the public trust arena then, it is the role of the Attorney General to make sure that the public trust lands of the State remain in the trust. The recent sale of Baldhead Island is a good example of some of the problems that confront the Attorney General's Office in dealing with public trust property.

In a deed recorded in Bk 249, p. 251, Office of the Register of Deeds, Southport, North Carolina, Frank O. Sherrill conveyed all the land of Smith Island to Carolina Cape Fear Corporation. The description in the deed delineates the boundaries of the conveyance as extending into the ocean to a depth of three feet. Such a description obviously includes lands that are impressed with the public trust. This places the conveyance in direct contradiction to the precedent set in Carolina Beach Fishing Pier, Inc. v. Town of Carolina Beach, 277 N.C. 297, 177 S.E.2d 513 (1970). This case is discussed by Professor Thomas J. Schoenbaum of the UNC Law School in a recent article entitled Public Rights and Coastal Zone Management. In that article,

Professor Schoenbaum in analyzing the case states clearly that the North Carolina Supreme Court ruled that ". . . private property ends at the mean high tide mark."[348]

The law is clear. Part of the land supposedly sold to CCF Corporation by Sherrill is part of the public trust. The problem, however, is not as simple as reading the deed and applying the law. Other complications exist not only in the deed and official records but also in the facts themselves. Among complications in the deed are the convenants. In one covenant it is stipulated that the entire conveyance is made ". . . subject to such rights if any which the State of North Carolina has in and to the bottom of the navigable streams and the land lying between high and low water within the property hereinabove described." On its face, this seems to state that the owners realize the right of the State to protect public trust lands. However, in the subsequent covenant it is stated that the conveyance is made subject to the State's right to land ". . .lying between the high and low water mark or the marshlands located within the property hereinabove described, provided however, that nothing contained in this deed shall be construed as conceding or in any way acknowledging the validity of any right of or claim by the State of North Carolina or any agency or subdivision thereof, nor as waiving or releasing any rights of the parties of the first part (CCF Corp.) or the parties of the second part (Frank O. Sherrill) in and to such lands lying between high and low water water or such marshlands."

One can only read this as meaning that the state may have rights to public trust land but that in the transfer here involved, those rights do not automatically apply. In short, the deed appears to say that the State will have to seek judicial intervention and win before the land lying between the

high and low water marks can be declared a part of the public trust.

Accordingly, the owners of Baldhead Island have the right, according to the deed, to prevent the public from using any of the beaches or marshland surrounding the island. This appears to be directly contradictory to the law of this State. Further, the deed would supposedly allow the owners of the island to use the marshlands to their own benefit. Such uses could easily include dredging, building and prohibiting fishing in that area.

The legal conflicts here are apparent. Does CCF Corporation own the property in the deed? If it does,what precedent does this set for the rest of the coastal area? What is the benefit to the public in this situation? How large does a group of people have to be before they constitute the public? The deed conveying Baldhead Island fairly poses all these questions. In fact, the deed appears to be a challenge to the public trust doctrine itself. However, the question does not stop there. Even if the courts of this State declare that the owners of Baldhead Island have the right to claim title to the lands between high and low tide and the marshlands, is there a private trust doctrine that will require CCF Corporation to hold the land in trust for the people?

Baldhead Island presents all the problems necessary for a ripe legal action. The public trust doctrine in this State cannot exist without answers to the questions that Baldhead raises. It would not be proper to let the owners of that island act to their eventual detriment based on the belief that all the land in their deed is in fact their land. To allow these facts to lie idle is seemingly to abdicate the duties imposed by the public trust. Hopefully the action that the Attorney General's Office is

taking will lay the foundation to solving these problems or at least encourage the legislature to consider seriously defining navigable waters in such a way that future title disputes can be clearly resolved.

APPENDIX A

THE CURRITUCK PLAN

The Currituck Plan is, in essence, a development plan for Currituck County. The Outer Banks Development Plan is the first half of the overall Currituck Plan, and it is the only portion of the plan that is completed. The first efforts of the development plan dealt primarily with the Outer Banks segment of Currituck County (and not the mainland area) because the pressures for access and development of the Banks are the most severe. The Mainland segment of the County will not be ignored by the Plan; the Outer Banks area of the county simply needed more immediate attention. With the Outer Banks Development Plan completed, the efforts of all those interested in planning for Currituck County will now turn to the second half of the Currituck Plan, i.e., a development guide and management plan for the entire county.

The development plan for the Outer Banks was based on "the developmental suitability of the land combined with the development pressure created by property ownership, taxation, recreational value, and the influx of new residents and tourists from more heavily populated areas to the North and Northwest."[1] Six characteristics of the area, called "Internal Factors,"[2] were studied to determine the developmental suitability of the Currituck Banks. Also, "External Factors," such a developmental pressures,[3] were investigated. Both Internal and External Factors were combined on composite maps, which were used to show the areas most suitable for development along with the areas which were under the most pressure for development. With the Internal Factors (developmental suitability) and the External Factors (developmental pressures) thus determined, a Currituck Banks Development Plan was prepared which took into account these findings as its base.

The Policy Recommendations for Currituck,[4] especially the "Policies

related to Land Use Planning and the Management of Natural Resources"[5] and the "Policies Related to the Economic Development"[6] of the County, deserve the full attention of anyone (especially coastal government officials) who might be involved in any Coastal Area Management scheme. The policy recommendations point out the genuineness of intent of the Currituck Plan's creators, a genuineness that has been lacking in most other coastal locales. These policies behind the Currituck Plan speak for themselves.

Perhaps the most basic issue confronting the Currituck Planners was what to do about the necessary water and sewer facilities. The 1970 population of Currituck County was 6,976, only a fraction of which lived on the Banks themselves;[7] some estimates predict that 10,000 new residents will descend on the Banks before 1980. Within the existing plotted subdivisions alone, there are 3,200 lots. Due to these population pressures and because of the physical characteristics of the area,[8] septic tanks are determined by the Plan to be totally unsatisfactory. The installation of a large number of septic tanks "would guarantee the pollution of Currituck Sound and the ground water supply."[9] Thus, the Plan prohibits the intensive use of septic tanks. Septic tanks would only be allowed in isolated instances where large drainage fields away from the marshes and sound would exist. Temporary installation of septic tanks would also be allowed in the early stages of development of the banks when few structures are completed. Thus, a central water and sewer system is a prerequisite for approval of any development.[10]

The most explosive issue confronting the future of the Currituck Banks concerns the questions of access to and transportation systems upon the Currituck Banks. Only some 35 miles north of the center of the Currituck Banks lies the megalopolis area of Norfolk and Virginia Beach. It now takes residents of this area over two hours to reach the Currituck Banks, for present

road access requires them to come down to Nags Head and then up to get to the Banks. Access from the north is also available by four-wheel drive vehicle over the beach. The pressures for a road to reach the millions of people directly to the north are obvious. The horrors of such a road, carrying hundreds of thousands of visitors yearning to descend on Currituck, or worse yet, to stop, buy a 25-cent hamburger and move on, are obvious. The Currituck Planners have faced these realities and have developed two guiding considerations in relation to a Currituck transportation plan. These major considerations are (1) the creation of a "destination beach" of cluster development rather than a "thoroughfare beach" of strip development, and (2) the linking of the County with its Outer Banks for cultural and economic reasons. To accomplish these purposes, the Plan sees the creation of a major north-south artery into Virginia as a disaster. Instead, two ferry systems are recommended, one from Aydlett to Corolla, and another from Knott's Island to Carova Beach. These ferries could be used in one of two ways. The first option is the creation of an automobile ferry service from the mainland, and a system of roads on the Banks to handle this automobile orientation. The second option is much more foresighted. It calls for de-emphasizing the automobile in favor of a passenger and pedestrian orientation. By providing free, attended parking on the mainland at the ferry terminal, a transportation system using passenger ferries crossing the Sound and a light-guage rail system within the Banks development area could be established. Transportation on the Banks would be mostly pedestrian, supplemented by bicycles, golf carts, and the rail system. An alternative option to the rail system would be a public bus system. This comprehensive transportation scheme called for in the Plan would provide easy access to both the northern and southern portions of the Banks with a minimum of

ecological disruption. A life style freed from the burdens and societal problems accompanying widespread automobile use would be avoided. Also, the disruption that is inevitable should a major north-south thoroughfare be constructed would be shunned. Of course public vehicles, construction vehicles, and service vehicles would be needed on the Banks, and these could easily be accomodated. The major problem of automobile access to at least 3,500 homes would be solved, nonetheless, with only the slightest destruction of the banks, by the installation of a passenger ferry - public transportation system. The need to provide permanent access routes across the Sound could be delayed for consideration at a much later date.[11]

The fear of a major north-south thoroughfare on the Currituck Banks, even with the planning that has been done and the recommendations that have been made, still exists. This fear could be permanently laid to rest if the State follows the mandates and recommendations of the Currituck Plan. In the geographical center of the Currituck Banks lies the Monkey Island Club and its acres of property, the Whale Head property and it's Knight Clubhouse[12] and grounds, and, between these two, the Currituck beach lighthouse and its keepers quarters. The Currituck Plan makes an extraordinarily strong plea for State purchase of these lands[13] to create a vibrant "nucleus of public property" on the Currituck Banks. By purchasing these lands and using them appropriately, the State would "enrich the recreational base of North Carolina."[14] At the same time, and perhaps more importantly, the State would provide a buffer zone between the northern and southern Currituck Development, and would thus be in a position to prevent for all time the disastrous construction of a highway route which would make the Currituck Banks just another "thoroughfare beach".

Three further major issues are addressed by the Currituck Banks Devel-

opment Plan. First, the protection of marshlands is to be encouraged by every means possible. Dredging and filling, ditching and diking, channel dredging, and septic tank use - all are discouraged to the fullest possible extent. Scenic easements, nature conservation areas, public acquisitions and any other appropriate tactics are called for by the Plan to preserve the marshlands. Second, all construction in the dynamic area[15] of the beaches and foredunes is meant to be "uniformly and severly restricted" by the Plan, "limited only to beach access areas and public safety facilities."[16] Also, the Plan calls for identifying, protecting and perhaps stabilizing all the major dunes on the Banks.

Thirdly, the control of private housing development is forthrightly addressed by the Plan. The Plan encourages a developmental concept "which will reduce the cost for providing utility systems, access and interval movement systems, and other services over the traditional grid-type subdivision."[17] A "cluster" rather than a "strip" design for all housing developments is encouraged by the Plan, in the realization that this style of development will provide more open space, use less land, eliminate sprawl and strip commercialism, and make more practical the use of underground utilities.

The Currituck Plan itself is only that - a plan. All the work that has gone into the development of the plan will be for nought if the spirit of the plan's implementation does not match the spirit of its creation. The line is thus drawn for Currituck County; its future depends on the quality of local leadership and control that develops pursuant to the Plan's mandates. The County government will need to assert progressive management and planning policies in providing central water and sewer systems, open spaces, cluster developments, preservation of scenic, historical, and environmentally sensitive

areas, and sound transportation policies. The Plan also calls for local leadership in developing a sound economic base for the county, and in working in conjunction with other governmental interests[18] in regard to all future planning, management, and preservation.

FOOTNOTES

1. John Hart, on CBS News Retrospective "The Silent Spring of Rachel Carson," July 22, 1973, 6:00 PM.

Rachel Carson was the author of the now classic Silent Spring, a study of the use of pesticides in the United States. The book is thought by many to represent the beginning of this nation's widespread environmental movement.

Some further conflict over labels such as "conservationist" and "environmentalist" and the images some of the labels connote, took place last summer in our nation's capital. The Senate Public Works Committee on Aug. 1, 1973, was questioning Russell Train, President Nixon's choice to succeed William Ruckleshaus as the head of the Environmental Protection Agency. Sen. William Scott of Virginia in the hearings accused Train of being a "conservationist" because his interest was conservation, "regardless of what effect that may have on our standard of living." Sen. Scott continued that not only was Train "a conservationist; but he was obviously an 'environmentalist' as well - maybe even, heaven forbid, an 'ecologist.'" Sen. Scott was later on the short end of a 13-1 vote to recommend Train's confirmation.

See the Winston-Salem Journal and Sentinel, August 5, 1973, p. D3, col. 5.

2. Mr. Train is the present head of the Environmental Protection Agency.

3. The Christian Science Monitor, July 27, 1973, at 3, col. 2.

4. McBroom, Multiple Use of the Coastal Zone, in ESTUARINE RESOURCES 8 (1969).

5. See Rice, Estuarine Lands of North Carolina: Legal Aspects of Ownership, Use, and Control, 46 N.C.L. Rev. 779 (1968).

6. G. Spinner, A PLAN FOR THE MARINE RESOURCES OF THE ATLANTIC COASTAL ZONE 6 (1969).

7. Critcher, The Wildlife Values of North Carolina's Estuarine Lands and Waters, in "Proceedings of the Inter-Agency Council on Natural Resources," Nov. 21, 1967.

8. See Schoenbaum, Public Rights and Coastal Zone Management, 51 N.C.L. Rev. 1 (1972), citing E. Odum, FUNDAMENTALS OF ECOLOGY 352 (3rd ed. 1971).

9. R. Smith, Estuary: A Definition, in ESTUARINE RESOURCES 13 (1969).

10. BLACK'S LAW DICTIONARY 652 (4th ed. 1951).

11. Cooper, Salt Marshes and Estuaries: Cradle of North Carolina Fisheries, in ESTUARINE RESOURCES 11 (1969).

12. R. Smith, supra note 9.

13. R. Smith, supra note 9.

14. Adams, North Carolina's Estuarine Systems, in "Proceedings of Inter-Agency Council on Natural Resources," Nov. 21, 1967.

15. Id.

16. Schoenbaum, supra note 8, at 3.

17. Id. at n. 20.

18. R. Smith, supra note 9.

19. Marshes most commonly are formed behind barrier beaches or on the edges of protected bodies of water.

20. Schoenbaum, supra note 8, at 2.

21. Id.

22. There are three major types of coastal marsh in North Carolina: regularly flooded salt marsh, irregularly flooded salt marsh, and coastal fresh marsh. There are 58,400 acres of regularly flooded salt marsh, primarily from the South Carolina line to the vicinity of Beaufort; limited stands exist on the Outer Banks north to Oregon Inlet. Over 8,000 acres - the state's largest stands of this marsh type - are behind Smith Island (Bald Head Island) at the mouth of the Cape Fear. The irregularly flooded marshes are North Carolina's most extensive variety. They comprise over 100,000 acres from north and east of Beaufort along the Outer Banks and on the inner side of Pamlico Sound in Dare, Hyde, Pamlico, and Carteret Counties. These marshes are flooded at irregular intervals, mostly as result of winds and storms, and are generally of lower salinity than regularly flooded marshlands. Finally, coastal fresh marsh covers 47,500 acres, over one-half of which is in Currituck Sound (where salt water incursions are rare). The rest of the fresh marsh is in local areas in Beaufort, Brunswick, Camden, Craven, Dare, Hyde, New Hanover, and Tyrell counties. The major plants of the North Carolina salt marshes are cord grass (Spartina alterniflora) and marsh hay (Spartina patens), although mud algae and phytoplankton are also important. These salt marsh plants are important (along with the mud algae and phytoplankton) because of the role they play in the ecology and the life cycle of the marsh. Being the major plant life in the estuaries, their place is of primary importance not just to the marsh, or the estuary, but to the wealth of the entire coastal area itself.

23. For a brief description of the various types of estuaries, see Schoenbaum, supra note 8, at 2, citing Pritchard, What is an Estuary: Physical Viewpoint, in ESTUARIES (G. Lauff ed. 1967).
See Legislative History, infra note 24 .

24. See Legislative History to 16 U.S.C.A. §§ 1221-26, in 1968 U.S. Code Cong. & Admin. News 3097.

25. E. Odum, The Role of Tidal Marshes in Estuarine Production, in ESTUARINE RESOURCES 14 (1969).

26. Id. at 14-15.

27. Id. at 15. Odum notes that in the high yield areas of Northern Europe, seven tons per acre of wheat and corn is obtained, three tons per acre less than the estuaries. Also, as compared not to the best agricultural land but to the sea, gross production of continental shelf water is a little over one ton per acre per year, and ocean water production is only one-third of the shelf water production.

28. Id. at 17.

29. Id.

30. Brown, What Good Are Estuaries to Fisheries, in "Proceedings of the Inter-Agency Council on Natural Resources, "Nov. 21, 1967.
Odum, supra note 25, was surprised to find the mud algae were so important. He found that the mud flats and exposed sediments supported a dynamic community of algae and microorganisms.

31. Id.

32. Odum, supra note 25.

33. See WILDLIFE IN NORTH CAROLINA, Nov., 1968, at 6.

34. Odum, supra note 25, at 16.

35. Id. at 15.

36. Brown, supra note 30, at 4.

37. Odum, supra note 25, at 15-16.

38. Id.

39. E. Odum, supra note 25, at 17.
See also Schoenbaum, supra note 8, at 2, citing case law in which courts found a public policy in favor of draining and filling salt marshes.

40. This "domino theory" of destruction is rarely understood. In testimony July 20, 1973, before the Joint Senate and House Committees' Public Hearings on the Coastal Area Management Bill in Morehead City, Mr. Bill MacLean, a local developer, noted his disgust at having a dredge and fill permit for a marina denied. "That marina couldn't possibly affect any other land," he contended.
See n. 91 infra.

41. Schoenbaum, supra note 14, at 2.

42. G. Allen, Estuarine Destruction--A Monument to Progress, in ESTUARINE RESOURCES 33 (1969).

43. Pocosin, a 17,000-acre area of black bog land in the Croatan National Forest, is presently under consideration by the Senate Committee on Interior and Insular Affairs for inclusion in the National Wilderness System.

44. 3 FISH & WILDLIFE SERV., U.S. DEP'T. OF THE INTERIOR, NATIONAL ESTUARY STUDY, H.R. DOC. NO. 286 PART II, 91st Cong., 2d Sess. 40 (1970) [hereinafter cited as NATIONAL ESTUARY STUDY].

45. This value can be translated into economic terms. See Gannon, Constitutional Implications of Wetlands Legislation, in 1 Environmental Affairs 654 (1971-72).
See also Allen, supra note 42, at 33, who states "It has been computed by investigators that in the production of available proteins that could eventually be made available to the public, the estuarine areas are the greatest producing areas to be found anywhere."

46. Schoenbaum, supra note 8, at 3, citing Tripp, The Ecological Importance of a Salt Marsh, in PAPERS 172.

47. Comment, Defining Navigable Waters and the Application of the Public-Trust Doctrine in North Carolina: A History and Analysis, 49 N.C.L. Rev. 888, 891 (1971).

48. Gannon, supra note 45.

49. Id.

50. Hawkes, Coastal Wetlands--Problems and Opportunities, in ESTUARINE RESOURCES 19 (1969).

51. NATIONAL ESTUARY STUDY at 39.

52. Id. at 29.

53. See Legislative History to 16 U.S.C.A. §§ 1451-64, in 1972 U.S. Code Cong. & Admin. News 4777.

54. Brown, supra note 30, at 1.

55. Adams, Possible State Programs for Estuarine Management, in "Proceedings of the Inter-Agency Council on Natural Resources, Nov. 21, 1967, at 2.

56. Cooper, supra note 11, at 12.

57. Id.

58. Brown, supra note 30, at 3.

59. Nationwide the per cent of commercial salt water fish dependent on the estuarine area is around 90%. NATIONAL ESTUARY STUDY AT 115-116.
See also Schoenbaum, supra note 8, at 3. The NATIONAL ESTUARY STUDY at 21 states that approximately 65% of all commercial fish species are estuarine dependent.

60. Brown, supra note 30, at 3.

61. Id. at 3.

62. Schoenbaum, supra note 8 at 3, citing Tripp, The Ecological Importance of a Salt Marsh, in PAPERS 172.

63. In North Carolina studies have been taken of all the fish landed in one year, and the fish have been classified as estuarine dependent or non-dependent. Non-dependent species (those that live their entire life cycles in the open oceans and do not depend on estuaries at all) include:

> "calico, sea scallops, swordfish (now, 8 years later, no longer edible due to mercury pollution), tuna, and king mackeral. Fish of questionable dependence were put in non-dependent groups, even though they frequent estuaries: spanish mackeral, blue fish and whiting. Other species, however, such as oysters, bay scallops, and white perch live their entire lives or nearly so,

within estuaries. Shrimp, menhaden, striped mullet, summer flounder, bluefish, anchovies, and striped bass are spawned in the ocean but require estuarine conditions during their first few months of existence. Shad and river herring are spawned far up fresh water streams and except for their first few months live in the ocean. Front and black drum spawn in estuaries and spend over one-half of their adult lives there--migrating to the ocean waters for short periods during the colder winter months."

64. See Schoenbaum, supra note 14, at 3; see also Critcher, The Wildlife Values of North Carolina's Estuarine Lands and Waters, in "Proceedings of the Inter-Agency Council on Natural Resources," Nov. 21, 1967.

65. Critcher, id., notes that in 1965-66, there was a $422,773 harvest of raw pelts in North Carolina.

Further figures are available for the Currituck Sound area. From 1951-1966, the population of ducks, geese, and coots averaged 127,000 birds. 10,000 man-days of hunting per year were enjoyed for the period 1962-65. It has been established that one year of waterfowl hunting on Currituck Sound alone is worth $600,000 to North Carolina's economy.

65A. Studies by Dr. Eugene Odum and R. James Gosselink and R.M. Pope have found that marshland property is worth up to $83,000 per acre in value. "The values were based on by-products of the marshes--fish, shellfish, waste assimilation and total life support value (oxygen production, nutrient recycling, habitat, etc.). Statistics from actual fish catches and processing areas indicate at least $2,000 per acre capitalization value. $50,000 per acre was ascribed to the natural tertiary waste treatment provided by marsh organisms and tidal energy. Without this process many cities and municipalities in coastal areas and upstream would be near bankruptcy trying to detoxify their own sewage. From the Conservation Council of North Carolina's Carolina Conservationist, Vol. 2, No. 35, Nov. 1973.

66. North Carolina's new laws affecting the estuaries are not insignificant - they include wetlands, sand dune, oil spill, dredge and fill, and sedimentation laws.

67. NATIONAL ESTUARY STUDY at 34.

68. Id. at 30. It is interesting to note the National Estuary Study's definition of pollution (at 30); "Pollution is the degradation of the biophysical environment by man's activities; it is no longer limited to the discharge of sewage and industrial wastes, but now includes direct or indirect damage to the environment by physical, chemical, or biological modification."

69. Adams, supra note 14, at 1, expresses his indignation at this fact quite forcefully. He states that as a result of having no central and comprehensive coastal authority, our coastal riches "are being engulfed, bit by bit, by real estate development and dredging spoil, without any apparent rhyme or reason, without any plan or rationality, without realizing that the major attractant, i.e., the typical coastal landscape, is being destroyed by those who are attempting to capitalize on that same attractant."

70. McBroom, supra note 4, at 8.
See also supra note 57.

71. A Comprehensive Estuarine Program for the State of North Carolina, by The Estuarine Study Committee of the North Carolina Inter-Agency Council on Natural Resources, in ESTUARINE RESOURCES 75 (1969).

72. An Eastern North Carolina Judge recently levied a 1¢ fine for violating N.C. Gen. Stat.§113-229 (1971) concerning Dredge & Fill activities.

73. Davis, Waves of Development Threaten the Tidewater, in ESTUARINE RESOURCES 37 (1969).

74. See Burdick, An Investigation of the Alteration of Coastal Marshes in North Carolina, in "Proceedings of the Inter-Agency Council on Natural Resources," Nov. 21, 1967.

75. 16 U.S.C.A. §§ 1221-26 (1968).

76. See 1968 U.S. Code Cong. & Admin. News 3099. A chart therein gives the loss of important fish and wildlife estuarine habitat in each coastal state.

77. Morgan, On the Legal Aspects of North Carolina Coastal Problems, 49 N.C.L. Rev. 862 (1971).

78. See Chapter 2 infra and n. 66 supra. The degree to which this legislation is enforced is another matter altogether.

79. Davis, supra note 73, at 37.

80. Odum, supra note 25, at 17.

81. Burdick, supra note 74, at 1.

82. Id. at 2.

83. Id.

84. Hawkes, supra note 50, at 19. Hawkes notes the prevalence of this tactic in his home state of Rhode Island.

85. See supra note 72.

86. See Oldfield v. Stoico Homes, Inc., 26 N.J. 246, 139 A.2d 291 (1958).

87. The Raleigh News and Observer, June 29, 1973, at 7A, col. 1.

88. This fact is testimony of a sort to the effectiveness of North Carolina's sand dunes regulation. N.C. Gen. Stat. § 105A.

89. The Raleigh News and Observer, April 2, 1973, at 23, col. 4.

90. Id.

91. Testimony at the Public Hearing before the Joint House-Senate Committees considering the Coastal Area Management Bill of 1974, in Morehead City, N.C., July 20, 1973.
See note 40 supra.

92. Id.

93. Some hold hope of a North Carolina environmental education law being effective. The 1973 N.C. Gen. Assembly acted on such an idea.

94. Morgan, On the Legal Aspects of North Carolina Coastal Problems, 49 N.C.L. Rev. 862 (1971). The education of the public concerning coastal problems is a continual theme of many authors, e.g.,
Hawkes, supra note 50, at 26-27;
Allen, supra note 42, at 36;
Note, Preservation of the Estuarine Zone, 49 N.C.L. Rev. 964, 966, 972 (1971); and NATIONAL ESTUARY STUDY at 39.

95. The Raleigh News and Observer, June 29, 1973, at 12A, col. 4.

96. Adams, supra notes 14 and 69, at 1.

97. The National Estuary Study, at 3, uses three terms--socioeconomic, biophysical, and institutional--to describe the three distinct but interacting "environments" at work in the coastal area. The "socioeconomic environment" is described as "the user's world, a system of social and economic pressures directed toward exploitation of the natural environment, either by ignoring what happens to it, modifying it deliberately, or using it in its natural state."

98. The "biophysical environment" is defined in the National Estuary Study, at 3, as "the natural ecosystem . . . of land, water, and life, which follows a steady evolutionary pattern of its own, except when man has changed it. Its elements taken together comprise the total ecology of the estuary."

99. See note, Preservation of the Estuarine Zone, 49 N.C.L. Rev. 964 (1971).
Also see Hitchcock, The Day the Sea Ran Out of Flounder, NATURAL HISTORY, March, 1970, at 30. A quote therein is relevant here as to a prevailing attitude concerning the unrealized values of the coastal zone: "What do people want? They can't save the whole shore. The salt meadows don't do any good. Neither me nor anybody else wants to live there. It's nothing but mud and mosquitos. The only real use for it is marinas and that't the highest value level use. That makes sense. More and more people are buying boats, and they have to have a place to put them . . . ."

100. The NATIONAL ESTUARY STUDY, at 3, defines the institutional environment as "the realm of law, a system composed of those devices man has created in the form of law and organization to regulate his activities." This "institutional environment" is the primary subject of the final three chapters of this work.
The National Estuary Study (at 18) has reported that any new extension of the institutional environment must "recognize not only the realities of how the biophysical environment operates, but it must also recognize the need of human society for the estuarine zone and its value to civilization both as an essential part of his ecosystem and as an exploitable resource."

101. NATIONAL ESTUARY STUDY at 39.

102. Id. at 18.

103. Hawkes, supra note 50, at 21.

104. Adams, Possible State Programs for Estuarine Management, in "Proceedings before Inter-Agency Council on Natural Resources," Nov. 21, 1967.

105. Id. at 3.

106. Id. at 4.

107. Id.

108. The proceedings of this meeting consisted of contributions from the Attorney General's Office, the Dept. of Conservation and Development, the Dept. of Water and Air Resources, and the Wildlife Resources Commission.

109. The Estuarine Study Committee consisted of Clyde P. Patton, David A. Adams, Chester Davis, R.J.B. Page, Milton S. Heath, Jr. (Advisory), Parks H. Icenhour, Frank Turner, and W.C. Bell.

110. It is intriguing to note the use of the Dept. of Administration at this stage in light of subsequent developments concerning that Dept. in the 1973 Coastal Area Management Bill.
See note 227, infra, and accompanying text.

111. It was recommended that the Council should include representatives of governmental agencies such as the State Board of Health, the Wildlife Resources Commission, the Dept. of Conservation and Development, and the Dept. of Water and Air Resources.

112. Appointed by the Governor; members of the academic community and residents of the estuarine region were recommended as appointees.

113. This grant of power was in the March 27, 1973 Coastal Area Management Bill, § 8(c)(2), with the Council changed to a Commission that can only "recommend" that acquisition, purchase, etc. be made by the Dept. of Administration. It has been estimated that it will be necessary to acquire some 100,000 to 150,000 acres. The Dept. of Administration and the Board of Conservation and Development already have the power to acquire land. See N.C. Gen. Stat. §§146-22, 24 (Supp. 1971) and 113-226(g) (1966). The 1969 General Assembly appropriated $500,000 for estuarine land acquisition. The authors are unaware of what lands, if any, were acquired with these funds.

114. This need for an inventory has been a continuing interest for some years. Adams, supra note 104, made a plea for an inventory in 1967 so that land may be classified as to its highest use. In 1968 it was suggested that an inventory be limited, because of tedium and expense, to only "lands needed for conservation purposes." See Heath, State Programs for Estuarine Area Conservation, Report to C. Estuarine Study Committee, April 1968. The March 27, 1973 Coastal Area Management Bill only mentions the work "inventories" in noting that they shall be taken into account in any coastal management system.
A Federal Inventory is presently being compiled. See NATIONAL ESTUARY STUDY, Vol. 3.

115. Note that this recommendation was made before the present dredge and fill law, N.C. Gen. Stat. § 113-229 (1971), became effective.

This permit system would have required a permit for all alterations below the elevation of mean high water adjacent to the estuaries.

116. Under the direction of a trained Natural Resources Director. The staff was to be funded by $40,620 in 1969-70, and $46,240 in 1970-71.

117. ESTUARINE RESOURCES 76 (1969).
For a broad excerpt of the Estuarine Study Committee Report, see ESTUARINE RESOURCES 75 (1969).

118. ESTUARINE RESOURCES 76. The request was adopted by the 1969 General Assembly. See note 113 supra.

119. Id. at 77.

120. House Bill 1101 (1969) (Ratified).

121. Id.

122. The Coastal Zone Resources Corporation, Wilmington, N.C. This corporation acted as a staff for the Division of Commercial and Sports Fisheries in developing its two studies.

123. A Plan for the North Carolina Estuary Study, prepared for the N.C. Dept. of Conservation and Development, Division of Commercial and Sports Fisheries, by the Coastal Zone Resources Corp. (1970). The purpose of this plan was "to provide the Commissioner with the enumeration of components, sources of information, and the sequence of events leading to the preparation of the plan required by the General Assembly."

124. The New Hanover County Pilot Project: A Resource Use Plan, prepared for the N.C. Dept. of Conservation and Development, Division of Commercial and Sports Fisheries, by the Coastal Zone Resources Corporation (1971). This report was prepared "as an interim step in devising an enforceable program to better manage North Carolina's extensive, valuable estuarine and coastal resources. It is a resource use plan for New Hanover County and a synthesis of resource inventories and relative value perceived by individuals and public agencies.

125. They will be useful as resource volumes for the ultimate preparer of a management plan.

126. The Plan for the Estuary Study was completed September 1, 1970. The New Hanover Pilot Project was completed September 30, 1971.

127. Letter of Dr. Tom Linton to members of the Blue Ribbon Estuarine Study Committee, Dec. 28, 1971.

128. The "blue ribbon" committee has been alternatively referred to as "The Estuarine Study Committee," the "Coastal Resources Planning Committee," and the "Comprehensive Estuarine Plan Blue Ribbon Committee."

129. The "blue ribbon committee" was first expected to draw up a "workable master plan for the North Carolina coast." This was never done. It thus appears that the legislative mandate of notes 119 and 120 supra was never effectively carried out. A management plan is still "in the planning stage," and is to be completed pursuant to the Directives of § 6 of the March 27, 1973 Coastal Area Management Bill (Senate Bill 614, 1973).

130. The creation of this document was perhaps justification enough for the formation of the Committee.

One further good thing did come out of the 1969 legislative mandate--the plan for comprehensive management of the coastal zone had its "philosophy embodied" on a stationary seal used by the Commissioner of the Division of Commercial and Sports Fisheries.

131. 16 U.S.C.A. §§ 1451-64 (1972).

132. A point sometimes used in defense by coastal management proponents when met with the argument that the real reason for the Bill is to grab the available federal dollars.

133. The legislative history of the Federal Coastal Zone Management Act (See Chapter One, supra note 53) states that 53% of the population of the U.S. already lives within 50 miles of our nation's coastlines. It is estimated that by the year 2000, 80% of our population, perhaps 225,000,000 people, may live in that same area.

134. See Legislative History to 16 U.S.C.A. §§ 1221-26 (1968), in U.S. Code Cong. & Admin. News 3099.

To this list should be added the losses of marshlands caused by unregulated dredging and filling activities.

135. 33 U.S.C.A. § 1104 (1966).

136. Also known as the Stratton Commission. Julius A. Stratton, then Chairman of the Ford Foundation, was the Chairman of the Commission. David A. Adams of the N.C. Dept. of Conservation and Development was a Commission member. Dr. Adams, after leaving State government, became President of the Coastal Zone Resources Corp., the group that served as the staff for Dr. Linton in drawing up several coastal plans. See notes 122-124 supra.

137. From the Preface to Our Nation and the Sea, The Report of the Commission on Marine Science, Engineering and Resources, U.S. Government Printing Office, Jan. 9, 1969.

138. Id.

139. This Coastal Zone Management program has been contrasted in its approach with the program recommended by the National Estuary Study. See 3 Fish and Wildlife Serv., U.S. Dep't of the Interior, National Estuary Study, H.R. Doc. No. 286 Part IV 91st Cong., 2d Sess. 457 [hereinafter referred to as NATIONAL ESTUARY STUDY].

140. 33 U.S.C.A. § 466(a) (1966) (P.L. 89-753).

141. See note 139 supra.

142. Letter of Prof. Schoenbaum to the "blue-ribbon committee," Aug. 24, 1972.

143. Id.

144. The reason for granting the States' such broad responsibilities was explained by the NATIONAL ESTUARY STUDY at 46:

> Seven aspects of the States' possession of this residual sovereignty which relate more specifically to the management of estuarine and coastal resources, help underscore the States' strategic and primary responsibility. First, although the Federal role has expanded in recent years, the States retain primary authority and responsibility for the prevention and control of water pollution. Second, they hold title to wholly or partially submerged lands and mineral resources in the estuarine and coastal zone and are responsible for administering these, through retention by the State or through their disposal or lease, in the public interest. Third, the States possess primary authority to decide, either directly or through their local subdivisions, how the shoreline and related uplands in the estuarine and coastal zones are to be used for various purposes, that is, trade and commerce, industry, parks, recreation, et cetera. Fourth, the authority of local governments generally in managing the water and land resources in estuaries is determined by the States. Fifth, the exploitation of the fisheries and other living estuarine and coastal resources is under State control to the seaward boundary of U.S. territorial seas. Sixth, the nature and forms of interstate cooperation in managing the Nation's estuaries is a matter which the States largely decide. And, finally, each State presides over the common law which governs private relations in the development and use of estuarine and coastal resources, and resolves the conflicting rights, interests, and privileges of its citizens in using these resources.

145. See Legislative History to 16 U.S.C.A. §§ 1451-64 (1972), in 1972 U.S. Code Cong. & Admin. News 4776.

146. Id. The Federal program was placed in the Dept. of Commerce under NOAA. See also 16 U.S.C.A. § 1453 (1972).

147. 16 U.S.C.A. §§ 1454, 1464 (a)(1) (1972).

148. 16 U.S.C.A. §§ 1454(d), 1455, 1464(a)(2) (1972). See the "management program requirements" (§1454(b)) and the "required authority for management of the coastal zone" (§1455(d)). These requirements must be met by the State before the Sec. of Commerce will release any Federal funds to the State.

149. Eg., The Clean Air Act, 42 U.S.C.A. § 1857 et seq., and The Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C.A. § 1151 et seq.

150. 16 U.S.C.A. § 1458 (1972). See also the legislative history of the Act, supra note 42, which states (at 4789): "The Committee has considered and rejected several different proposals for penalties and sanctions for noncompliance with the terms of this legislation. Until experience dictates the need for greater sanctions than termination of financial assistance under § 306, the Committee believes that this sanction will suffice."

151. The Marine Newsletter, Vol. 3, No. 5, p.3, Nov.-Dec. 1972.

152. 16 U.S.C.A. § 1461 (1972).

153. 1972 U.S. Code. Cong. & Admin. News 4790-91. "Dr. Eugene Odum . . . likened estuarine sanctuaries to 'pilot plants': 'Scientists have to have 'pilot plants' to check out broad theories on a large environmental scale, just as an industrialist would not want to market a product directly from a laboratory; he would want to have a 'pilot plant' study first." Committee on Commerce hearings, "Federal Oceanic and Atmospheric Organization," Part 2, Serial No. 91-59, at p. 1254.

154. Testimony by Dr. B.J. Copeland, N.C. State University, in 1972 U.S. Code Cong. & Admin. News 4791. Dr. Copeland's testimony is interesting in that he pinpointed six areas in which sanctuaries could be established, noting therein his categories of estuary "types."

155. See text accompanying note 241 infra.

156. Senate Bill 614 - House Bill 949 (1973) [hereinafter referred to as the March 27 draft].

157. The Sub-Committees that were established were: Legislation, Critical Area, Movie & Brochure, Recreational Factors, Land Use Coordination, and Industry.

158. The Drafts were:
The Kane draft of July 7, 1972
The Schoenbaum draft of Aug. 24, 1972.
The Committee draft of November 14, 1972.
The Committee draft of December 7, 1972.
The final Committee draft of Jan. 10, 1973.
The draft introduced on the floor of the General Assembly March 27, 1973.
To these drafts should be added the draft introduced on the floor of the General Assembly January 17, 1974.

159. The bill is reprinted in 51 N.C.L. Rev. 31 (1972).

160. Prof. Schoenbaum received acknowledged assistance from Ms. Smythe and John C. Boger, students at the School of Law of the University of North Carolina at Chapel Hill, and Peter Glenn, Assistant Prof. of Law at UNC-CH. Ms. Smythe was a co-draftswoman of the bill.

161. Another earlier draft places this Planning Commission in the office of the Lt. Governor.

162. See 51 N.C.L. Rev. at 32-33.

163. Id. at 33.

164. Id.

165. Id.

166. Letter of Prof. Schoenbaum to "blue ribbon committee," Aug. 24, 1972.

167. 51 N.C.L. Rev. at 33.

168. Id. at 34.

169. Id. at 34 and 38-40.

170. Id. at 34 and 36-38.
Areas of critical state concern could be designated anywhere within the Coastal Zone. These permits for development would be a consolidation of the various permits now deemed necessary in the coastal zone (such as dredge and fill, sand dunes, etc.) Some regard the consolidated permit system as the most important factor in this legislation.

171. 51 N.C.L. Rev. at 34. This provision was retained in Section 8(3) of the March 27 draft, but the interested persons would only be notified of proposed developments in areas of environmental concern.

172. (1) organization and administration
(2) developments of regional impact, and
(3) transitional provisions.

173. The Commission was composed of nine laymen who were chosen so that the following interests would be represented: commercial fishing, wildlife or sports fishing, marine ecology, coastal agriculture, coastal forestry, orderly coastal land development, marine related industry (other than fishing and wildlife), a practicing attorney, and an active member of a state or national conservation organization.

174. This Commission would have the full bundle of powers. It would:
a) prepare and adopt a management plan
b) designate areas of environmental concern
c) issue or deny permits for development
d) investigate proposed developments
e) designate the form and contents of permits for development.
f) acquire lands or any interests in lands with the prior approval of the Governor and the Council of State
g) keep a list of interested persons who wish to be notified of any proposed developments in the coastal zone, and so notify those persons.

175. This Advisory Committee would consist of one member from each of the four multi-county planning districts of the coastal zone, and the Secretary or his designee of each of the following State Departments: Natural and Economic Resources, Administration, Transportation, Human Resources, and Agriculture.

176. From "Principal Changes Made by the Revised Coastal Zone Management Bill, "an addendum to the Nov. 14, 1972 draft, which was sent to members of the "blue ribbon"committee.

177. Id. It is interesting to note that while these changes were made to make the bill reflect more "familiar" North Carolina procedures, later changes in the bill were made with no regard for this familiarity.

178. The phrase "areas of environmental concern" was arrived at after some rather convoluted proceedings. The first draft spoke of "areas of critical state concern." This was changed in November to "Areas of environmental concern." In December another switch was made - this time to "Areas of Particular Public

Concern." In January the label "Areas of Particular Public Concern" was still intact. The March 27 draft, however, reflected the November's draft's "Areas of Environmental Concern." It appears that this concern occupied several hours of the "blue ribbon" committees' deliberations.

179. The idea of an Executive Director for the Commission has been out, in, out, in, and out again in the drafts. Apparently the confusion still persists, for in Section 7(g)(3)(II) of the March 27 draft the term Executive Director is used for the first and only time. It appears that in revising the early drafts this one reference to an Executive Director was missed and inadvertently included in the final draft of the bill.

180. The Commission's mandate to work "in conjunction with" the Secretary of NER in this Section 4(g) was reduced in Section 7(a) to only "approving" the areas of environmental concern designated by the Secretary of NER. Once again a hasty revision has led to a discrepancy, here in the actual role to be played by the Commission.

181. Section 4(g), March 27 draft.

182. Id. The permit system was changed to include not "permits for development," but a simple incorporation of all the existing permit requirements. These are listed in Section 8(e) of the March 27 draft. The result is the same, i.e., a consolidated permit system.

183. Section 7(b), March 27 draft.

184. See supra note 180.

185. Section 8 of the March 27 draft.

186. Section 8, "Additional Powers and Duties," March 27 draft.

187. The Raleigh News and Observer, April 71, 1973, at 7, col. 2.

188. One report in the article (supra, note 187) was incorrect concerning Dr. Carl. The newspaper account said that Carl charged that the Dept. of Administration had contributed to the present environmental "mess" on the coast. Carl in fact said that the present mess on the coast was in part caused by the division of authority between the Dept. of Administration and the Dept. of NER. It was not reported, also, that Carl at that time still thought the bill was a start in the right direction and was better than nothing.

189. See infra pp. 50-66.

190. The Raleigh News and Observer, April 19, 1973, p. 15, col. 2.

191. Environmentalists and developers may even find themselves in agreement on some issues concerning how the March 27 draft should be changed.
See infra pp. 53-55.

192. The Raleigh News and Observer, April 19, 1973, p. 15, col. 4. (Dr. Pilkey once referred to the bill as a "false security blanket").

193. Id. at col. 3.

194. Id.

195. Mr. Henry Boshamer in testimony before the Joint Senate-House Committees considering the Coastal Area Management Bill of 1974, Public Hearing in Morehead City, N.C., July 20, 1973 [hereinafter referred to as Public Hearing].

196. Mr. Henry Boshamer, at Public Hearing. Mr. Boshamer continued that the present bill was "an administrative tangle that is full of snags." He characterized it as a hodge-podge bill that "tries to make everybody happy."

197. Mr. Bill Taylor at Public Hearing.

198. One guideline for this kind of discontent has been the criticisms leveled at the composition of the Commission in the bill. Some interests say the Commission is weighted toward the conservationists, others contend the opposite. This form of dispute is rather pointless, for it depends on the individuals who are appointed, not to titles they take into the Commission, as to whether they will be environmental or developmental oriented. This point was made by Ken Newsome, a Carteret County Commissioner, in stating (at Public Hearing) that he found "no inbalance" in the composition of the Committee. One coastal developer expressed at the Public Hearing his self-serving opinion: "Put builders in [Commission membership], not ecologists and biomedicologists (sic) who just eat out of the public trough."

199. See infra pp. 45-46.

200. Letter of Sen. Staton to the authors, July 10, 1973.

201. The Raleigh News and Observer, April 19, 1973, p. 15, col. 4.

202. See Village of Euclid v. Ambler Realty Co., 272 U.S. 365, 47 S.Ct. 365, 71 L.Ed. 303 (1926).

203. Mr. Simpson of the Wildlife Federation at Public Hearing.

204. The Raleigh News and Observer, April 19, 1973, p. 15, col. 4.

205. Mr. Bill Dillon, Dare County Commissioner, in the Raleigh News and Observer, April 19, 1973, p. 15. col. 4.

206. The Public Hearings were held in Morehead City (July 20, 1973), Wilmington (July 23), Elizabeth City (August 17), Manteo (August 20), and Washington, N.C. (August 31).

207. At Public Hearing.

208. The Raleigh News and Observer, April 17, 1973, p. 7, col. 5.

209. See 51 N.C.L. Rev. at 31-32. "Substantial maritime influences" are undefined in this bill.

210. The March 27 draft states that "zone of tidal influence" means "on the Cape Fear River to dam and lock number 1; on the Black River to its confluence with Moore's Creek (river mile number 5); the Northeast Cape Fear to State Highway number 117 Bridge, near the town of Castle Hayne; the Neuse River to State Highway number 1400 Bridge (Streets' Ferry Bridge); the Pamlico River to U.S. Highway number 17 Bridge near the City of Washington; the Roanoke River to Highway number 17 Bridge near the City of Williamston; and the Chowan River to State Highway number 13 Bridge near the Town of Winton." See Section 3(11), March 27 draft.

211. It made only minor changes in the area of defining the Coastal Zone, that is. It is interesting to note that the phrase "Coastal Zone" was used in all the drafts up until March 27, when the change was made to "Coastal Area." The author is unaware of the reason for the change.

212. The limits of state jurisdiction would appear to be 3 miles offshore. Various states claim different limits, however, and this very question is presently the subject of litigation between several states, including North Carolina,and the Federal government.

213. Section 3(7), March 27 draft.

214. The Durham Morning Herald, July 2, 1973, p. 120, col. 3.

215. Yet Ken Newsome of the Carteret County Board of Commissioners is somewhat wary of the line and feels that "the Commission should not be restrained with too specific guidelines." Testimony at Public Hearing.

216. 16 U.S.C.A. § 1453(a)(1972).

217. This is not just to restrict the states' powers, but to also provide for an adequate and simple coordination with other comprehensive Federal and State Land Use Plans to be drawn up in the future. See the Legislative History of P.L. 92-583 in 1972 U.S. Code Cong. & Admin. News 4783.

218. I.e., Carolina Beach. See the Durham Morning Herald, supra note 214.

219. Id.

220. Yet Arthur Cooper, Asst. Secretary of the Dept. of Natural and Economic Resources, contends that "the bill would give the state the power to protect 90% of all coastal land that is environmentally delicate." See the Raleigh News Observer, April 17, 1973, p. 7, col. 5.

221. See the Raleigh News and Observer, April 17, 1973, p. 7, col. 4.

222. The Raleigh News and Observer, July 23, 1973, p. 27, col. 8.

223. The problems and hazards of statutorily defining any such coastal area or line are shown by the previous stabs made in preliminary drafts of the bill. Yet one thing is certain: the 100-year flood line is the most conservative and narrow delineation ever considered by any drafters of the bill. Any further attempts to narrow the areas of state permit capacity would be ludicrous.

224. Letter of Dr. Carl to Honorable William Staton and Honorable Gus Speros, Co-chairman of the Joint Public Hearing on the Coastal Area Management Act of 1973, April 19, 1973.

225. This line is also smaller than some other areas designated as the "Coastal Zone" by various governmental agencies.

226. More complete information on this line can be received from Mr. A.C. Turnage, Regional Engineer, Eastern Regional Office, Office of Water and Air Resources, 209 Cotanche St., Greenville, N.C. (phone: 758-0642).

227. That is, other than having the Secretary of the Dept. serving as a member of the Commission or the Advisory Council. Also, note that in 1968, the Estuarine Study Committee named the Dept. of Administration as the lead agency. See note 110 supra.

228. See note 188 supra.

229. The management plan is to be prepared by the Secretary of Admin. "with the assistance of" the Secretary of Dept. of NER. Administration is to "coordinate the planning" and "develop the machinery", and NER is to provide "information and expertise". See March 27 draft, § 6(b).

230. Testimony at Public Hearing.

231. Testimony at Public Hearing. This stance was also taken by Ken Newsome of the Carteret County Board of Commissioners.

232. Id.

233. March 27 draft, § 5(b)(2).

234. Carl and Pilkey. See text accompanying notes 84-89 supra.

235. Supra note 230.

236. Supra note 231.

237. As to the powers and duties of the Dept. of Administration, see N.C. Gen. Stat. § 143-341 (6) (Supp. 1971).

238. In response to testimony at Public Hearing.

239. See supra notes 173 and 198.

240. Testimony of Mr. C.J. McCotter at Public Hearing.

241. See note 131, supra.

242. Section 6(c), March 27 draft. Parties mentioned therein include: the Marine Science Council, the Coastal Resources Advisory Council, local governments and regional councils of government.

243. 51 N.C.L. Rev. at 35. The scheme provided for in this draft calls for designating coastal lands as either:
(a) areas of critical state concern,
(b) urban-developmental, or
(c) rural.

244. 16 U.S.C.A. § 1454(b) (1972) notes that the state's management program shall include:
(1) an identification of the boundaries of the coastal zone subject to the management program;
(2) a definition of what shall constitute permissable land and water uses within the coastal zone which have a direct and significant impact on the coastal waters;
(3) an inventory and designation of areas of particular concern within the coastal zone;
(4) an identification of the means by which the state proposes to exert control over the land and water uses referred to in paragraph (2) of this subsection, including a listing of relevant constitutional provisions, legislative enactments, regulations, and judicial decisions;
(5) broad guidelines on priority of uses in particular areas, including specifically those of lowest priority;
(6) a description of the organizational structure proposed to implement the management program, including the responsibilities and interrelationships of local, areawide, state, regional and interstate agencies in the management process.

245. 16 U.S.C.A. § 1454(g), § 1455(d)(e)(f) & (g) (1972).

246. § F infra and Appendix A. The role of the State as an adviser and assister was pleaded by Mssrs. C.J. McCotter and Grover Lancaster at the Public Hearing.

247. The Raleigh News and Observer, March 28, 1973, p. 23, col. 3.

248. See the National Estuary Study on Local Controls. See also Appendix A on the Currituck Plan and Section F, supra.

249. 51 N.C.L. Rev. at 38.

250. See "definition of development of regional impact," id.

251. See "Procedure for obtaining a permit to build a development of regional impact," id.

252. The permits for developments of regional impact should be within the control of the Commission.

253. There may be several attacks on not only the areas of regional concern but also on all the classification systems of the bill. The attacks may take the following forms:

(1) Article 29 of the North Carolina Constitution states that any classification schemes must be reasonable. An attack may assert that any land classifications for the coastal area alone, and not for the entire state, are unreasonable. The answer to this assertion lies in the fact that the classifications in the bill (for areas of environmental concern or areas of regional development) are made to protect environmentally sensitive lands and waters, and due to the sensitivities of the areas the classifications are not unreasonable.

(2) Another attack may assert that the power to designate areas of regional development is not a reasonable use of the police power. Yet, the regional development permit idea would be used only for areas adjacent to or affecting areas of environmental concern. There would thus be a clear nexus between areas of environmental concern and areas needing permits for regional developments. The state should thus have the police power to regulate areas of regional development since they would be areas adjacent to areas of environmental concern.

(3) One potential area of litigation is an attack on the statute as a whole on "local legislation" grounds. The North Carolina Constitution prohibits "local legislation". § 24 N.C. Const., Art. II. If an attack on "local legislation" grounds is made, it may fail since the purported use of the counties in the bill is only to provide convenient constructs for the administration of the bill; the actual coastal areas are hopefully to be defined independently of the county lines. Since the powers of the counties may be enhanced in last minute legislative wranglings, however, the "local legislation" attack may be rendered more potent.

254. Comments by Mr. Grover Lancaster at Public Hearing.

255. Rep. Payne at Public Hearing.

256. The National Estuary Study at 413.
See the National Estuary Study at 413-423 for further comments on the role of local governments.

257. See Appendix A infra.

258. Letter of Prof. Schoenbaum to members of the blue-ribbon committee, Aug. 23, 1972.

259. The Raleigh News and Observer, March 28, 1973, p. 23, col. 1.

260. Testimony at Public Hearing.

261. Act of June 22, 1967, Ch. 892 (1967) N.C. Session Laws 1144.

262. Act of July 14, 1971, Ch. 864 (1971) N.C. Session Laws 1266.

263. N.C. Gen. Stat. § 143-214 (Supp. 1971).

264. N.C. Gen. Stat. § 143-214(7) (Supp. 1971).

265. N.C. Gen. Stat. § 143-214 (Supp. 1971).

266. Id.

267. N.C. Gen. Stat. § 143-211 (Supp. 1971).

268. Id.

269. Id.

270. N.C. Gen. Stat. § 143-215.3(a) (Supp. 1971).

271. Rules, Regulations, Classifications and Water Quality Standards Applicable to the Surface Waters of North Carolina (January 30, 1968) [hereinafter cited as Rules, Surface Waters].

272. Id. at 2, 3.

273. Id. at 7.

274. Id.

275. Id. at 2. In order to fully appreciate the difficult and time consuming task that making these classifications is see Report of Proceedings concerning the Reclassification of Various Streams in North Carolina, March 1, 1973, Department of Natural and Economic Resources, Office of Water and Air Resources.

276. Class B water is water that is suitable for bathing but not for drinking or food processing. Further definition can be found in the Rules, Surface Waters at 18.

277. Class C water is water suitable for fishing, boating and wading, but not bathing or as a source of water supply for drinking. For further definition see Rules, Surface Waters, at 20.

278. N.C. Gen. Stat. § 143-215.1 (Supp. 1971).

279. N.C. Gen. Stat. § 143-213(d)(10)(13)(15)(17) (SB682) (July 1, 1973).

280. N.C. Gen. Stat. § 143-215 (Supp. 1971).

281. N.C. Gen. Stat. § 143-215.1(d) (Supp. 1971).

282. Before the Board renders a decision on granting or denying the permit, it may hold a public hearing. This hearing is, however, to be made in response to a written request and showing of public interest. The Board is not required to conduct public hearings for such permit application. Following a hearing where a permit is denied, the Board must state in writing " . . . the reason for such denial and shall also state the Board's estimate of the changes in the applicant's proposed activities or plans which will be required in order that the applicant may obtain a permit." It should be noted that the Board's "estimate" of what changes need to be made in an application means those changes which will bring the application into conformity with the established water quality standards. If an applicant cannot meet those standards after the Board informs the applicant that they are needed, then the permit will not be granted.

283. Certain materials are directly prohibitive by the Act from being discharges into the waters of the State. The prohibitions can be modified if the Board issues regulations regarding them. However, because the amendments to the Act regarding prohibited discharge were ratified May 23, 1973, there are, as of this date, no modifying regulations. Consequently, there are three classes of these prohibited discharges. The first class of prohibited discharges includes any radiological, chemical and biological warfare agent or the waste of high level radioactive material. The second class of prohibited discharges is discharges into the subsurface or groundwaters of the State. The third and final class of prohibited discharges is of wastes into the Atlantic Ocean. This prohibition includes the discharge of thermal waste. Currently this type of discharge is posing large problems to Carolina Power and Light Company's nuclear generating plant in Brunswick County. This plant, which is nearly finished, has a six mile canal to the ocean for its thermal discharges. The effect of the new statutory prohibition on the plan is unknown at this time. The plant could be forced to use cooling towers or be allowed to use the canal. Regulations regarding these prohibited discharges are greatly needed. Doubt concerning the law in this area is costly. The future of Carolina Power and Light's canal usage will be in limbo until such regulations are promulgated. The regulations should be made if only to determine the possibility of additional multi-million costs to the Carolina Power and Light Company if their use of the canal constitutes a prohibited discharge .

284. Regulations for Septic Tanks, Office of Water and Air Resources (July 18, 1973).

285. The Charlotte Observor, July 14, 1973, at 8b col. 2.

286. N.C. State Board of Health, Residential Sewage Disposal Plants, Bulletin 519 (January, 1970).

287. Legislative Research Commission, Report to the General Assembly of North Carolina: Environmental Problems pt 4 at 5 (1973).

288. In an amendment to Article 13, Chapter 130, North Carolina General Statutes, the State Board of Health was given control over "[a]ny such sanitary sewage disposal system with 3000 gallons or less design capacity serving a multiple family residence, place of public assembly . . . "

289. Under the authority of N.C. Gen. Stat. § 143-215.2, the Board is allowed to adopt regulations interpreting and applying the provision of the Act which established the Board.

290. Regulations for Septic Tanks, Office of Water and Air Resources (July 18, 1973).

291. Id. The Rule and Regulations do contain other restrictions regarding the discharge of waste water. These restrictions were not discussed in this section because of the detail involved. If further information is desired a copy of the regulations can be obtained from the Dept. of Natural and Economic Resources, Office of Water and Air Resources, Raleigh, N.C.

292. N.C. Gen. Stat. § 143-215.2 (N.C. Session Laws Ch. 698) (May 23, 1973).

293. Id.

294. N.C. Gen. Stat. § 143-215.3(a)(8) (N.C. Session Laws Ch 698 (May 23, 1973).

295. Id.

296. Id,

297. Id.

298. Id. Persons that are adversely affected as a result of any action that the Board takes pursuant to this authority have the right to appeal the decision, but it will not be stayed on the appeal.

299. N.C. Gen. Stat. § 143-215.3(a)(8) (N.C. Session Laws Ch. 698 (May 23, 1973). The act clarifies "disposal system" by defining it as a system for disposing of waste, including sewer system and treatment works. In further definition, "treatment works" includes ditches, incinerators and sanitary landfills among other items.

300. For further discussion of capacity use areas see Aycock, Introduction to Water Use Law in North Carolina, 49 N.C.L. Rev. 1 (1967-68) [hereinafter cited as Aycock].

301. N.C. Gen. Stat. § 143-215.13(b) (Supp. 1971).

302. N. C. Gen. Stat. § 143-215.13(c)(1),(2) (Supp. 1971).

303. N. C. Gen. Stat. § 143-215.13(c)(3) (Supp. 1971).

304. N. C. Gen. Stat. § 143-215.14 (Supp. 1971).

305. Id.

306. Id.

307. Persons using less than 100,000 gallons per day are not required to obtain a permit.

308. N.C. Gen. Stat. § 143.215.15 (Supp. 1971).

309. N.C. Gen. Stat. § 143-215.16 (Supp. 1971).

310. N.C. Board of Water and Air Resources, Regulations Applicable in a Designated Capacity Use Area That Includes Beaufort, Pamlico and Washington Counties and parts of Carteret, Craven, Hyde, Martin and Tyrell Counties, (June 12, 1969) [hereinafter cited as Capacity Use Area Regulations].

311. Id.

312. Department (now Office) of Water and Air Resources, Report of Water Use in a Specified Area of North Carolina at 6 (Aug. 21, 1968).

313. Id.

314. Capacity Use Area Regulations § 1(c) supra note 76.

315. Capacity Use Area Regulations § II(a) supra note 76.

316. Capacity Use Area Regulations, § III, IV supra note 76.

317. Capacity Use Area Regulations § V supra note 76.

318. N.C. Gen. Stat. § 143-215.13(d) (N.C. Session Laws ch. 698) (May 23, 1973).

319. N.C. Gen. Stat. § 143-215.13(d)(4) (N.C. Session Laws ch.698) (May 23, 1973).

320. N.C. Gen. Stat. § 143-215.13(d)(5) (N.C. Session Laws ch. 698) (May 23, 1973).

321. N.C. Gen. Stat. § 143-215(d) (N.C. Session Laws) (May 23, 1973).

322. Id.

323. N.C. Gen. Stat. § 143-215(d) (N.C. Session Laws) (May 23, 1973).

324. The breadth of this power of the Board of Water and Air Resources is obviously unexercised. It is clear that its use would be similar in effect to a court injunction. In this regard, it should be noted that under the provisions of N.C. Gen. Stat. § 143-215.5 judicial review of the exercise of this power may be had, however, the order shall not be stayed by the appeal as noted in N.C. Gen. Stat. § 143-215.13(d).

325. Under N.C. Gen. Stat. § 143-215.1, the Board's control over permits is supposed to prevent additional pollution. The concept of the permit system was to have polluters recognize their situation and through State regulation change that situation. The passage of new amendments strengthening the Board's enforcement powers indicates that the permit system needed bolstering.

326. N.C. Gen. Stat. § 143.215.13(d) (N.C. Session Laws ch. 698 (May 23, 1973).

327. The enforcement provisions of the Act are found in section 143-215.6, which pertains to the permit system and special orders, and section 132-215.17, which pertains to capacity use areas.

Violations of any of the provisions relating to water quality standards and the permit system are punishable by a civil penalty of not more than $5,000, and if the violation is wilful, the fine is per day for as long as the violation continues. Criminal penalties under this section include fines up to $25,000 per day of violation and/or imprisonment for up to six months.

Violations of the provisions regarding capacity use areas are not as stringent as the permit system penalties. By the terms of § 143-215.17 a fine of up to $1,000 per day can be levied and/or a civil action can be filed seeking injun tive relief to restrain the violation.

328. See Aycock, supra note 300.

329. "Regular" powers of the Board refers to powers over the permit system and capacity use areas.

330. "Crisis" powers refers to the Board's special order powers and orders relating to generalized conditions of water pollution.

331. N.C. Gen. Stat. § 143-215.8(a) (N.C. Session Laws ch. 698) (May 23, 1973).

332. It would be the function of the Control and Management division to draw up these outline plans of an area of the State. The Board of Water and Air Resources would then approve or disapprove them. It is contemplated that these plans would be sufficiently broad to include various diverse plans and ideas related to the long range guidelines. Further, the plans should outline precisely what is being prevented. In this way developers and property owners will know what to avoid in the initial stages of their planning.

333. It has been demonstrated all too effectively in the past that "cures" are often not enough in environmental areas. Chapter 1 has already shown that certain aspects of the coastal area cannot be replaced once they have been destroyed. In this regard prevention is needed not cures.

334. N.C. Gen. Stat. § 143-315.8 (N.C. Gen. Stat. § 143-215.8 (N.C. Session Laws ch. 698) (May 23, 1973).

335. See, The Public Trust in Tidal Areas: A Sometime Submerged Traditional Doctrine, 79 Yale L.J. 762 (1970).

Sax, The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention, 68 Mich L. Rev. 471, 475 (1970).

336. Schoenbaum, Public Rights and Coastal Zone Management, 51 N.C.L. Rev. 1, n 22, 23 (1970).

337. Sax, supra note 335 at 475.

338. Resort Development Co. v. Parmele, 235 N.C. 689, 71 S.E.2d 474, 695 (1952), see also Rice, Estuarine Land of North Carolina: Legal Aspects of Ownership, Use and Control, 46 N.C.L. Rev. 779, 803 (1968).

339. Schoenbaum, supra note 337, at 5, 6, 7.

340. Comment, Defining Navigable Waters and the Application of the Public Trust Doctrine in North Carolina, 49 N.C.L. Rev. 888, 900-907 (1971).

341. Letter from Thomas Kane, Attorney General's Staff of North Carolina to the authors, July 9, 1973 and conversation with Howard Kramer also of the Attorney General's Staff, July 11, 1973 in Raleigh, N.C.

342. House Bill 1118 would have amended N.C. Gen. Stat. 146-64(4) to provide that the test for navigability is whether water capable of being used for purposes of trade and travel in usual and ordinary modes and not the extent to which it is used. HB 1118 would have provided that if water is found to be navigable, then it is navigable to the high water mark.

343. If this test is used numerous tracts of land as discussed later in this chapter will revert to state control and consequently leave the possession of private owners.

344. Schoenbaum, supra note 337, at 12. It should be noted that it is the combination of the Carolina Beach Fishing Pier, Inc. case and the Robbins case that provides this legal base. As of this time no case has been tried that combines these two cases. However, it is within the framework of those cases that a full Public Trust Doctrine could be established in North Carolina.

345. Schoenbaum, supra note 337, at 17.

346. Expanding the Definition of Public Trust Uses 51 N.C.L. Rev. 316, 317 n 8, (1972). A student note by Marianne Smythe implies the existence of this doctrine as does the conversation the authors had with Thomas E. Kane of the Attorney General's Staff of North Carolina in June 1973. The most authoritative source for this public trust doctrine however can be found in Schoenbaum, supra note 337, at 18.

347. Illinois Central Railroad v. Illinois, 146 U.S. 387 at 453 (1892). See also Schoenbaum, supra note 337, at 16.

348. Schoenbaum, supra note 337, at 12.