

NORTH CAROLINA COASTAL FEDERATION

COAST

STATE OF THE

R E P O R T

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A SPECIAL EDITION OF THE COASTAL REVIEW

COAST STATE OF THE

NCCF's Sixth Annual State of the Coast Report

The purpose of the *State of the Coast Report* is to present a straightforward look at the issues shaping our coastal environment. There are no hidden agendas – just a sincere effort to present the best information from those most qualified in the field. To take it a step further, we offer possible solutions to some of the most challenging problems. We hope this publication will motivate you to take an active role in coastal conservation. If you need help getting started, please call us at 252-393-8185. *The opinions expressed in the State of the Coast Report represent views of the North Carolina Coastal Federation.*

Acknowledgments

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Citizens Working Together for a Healthy Coastal Environment

The North Carolina Coastal Federation is the state's largest non-profit organization working to restore and protect the coast. Formed in 1982, the NCCF has grown to serve more than 5,000 members and 200 member groups. The NCCF focuses on three main areas of work including habitat restoration and protection, environmental education, and the encouragement of sound environmental programs and their enforcement. To learn more about NCCF call 252-393-8185 or come by the NCCF headquarters, located at 3609 Highway 24 in Ocean between Morehead City and Swansboro. Headquarters are open Monday through Friday between 8:30 am and 5:00 pm. The NCCF's Nature Shop, Daland Nature Library and Patsy Pond Nature Trail can also be found at this location. The NCCF field office is located at 720 Market Street in Wilmington.

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The image was acquired by Landsat 7 on September 23, 1999, one week after Hurricane Floyd swept through North Carolina. The image shows the high sediment volume of the streams and rivers following the storm. It was provided courtesy of the Landsat Project Science Office at NASA's Goddard Space Flight Center in Greenbelt, MD. Landsat 7 is a joint undertaking of the NASA and the US Geological Survey. For more information about the Landsat program, visit the following website: <http://landsat7.usgs.gov/>



North Carolina Coastal Federation



2000 STATE OF THE COAST REPORT

"If you think you're too small to have an impact, try going to bed with a mosquito." – Anita Roddick

Introduction by Todd Miller, Executive Director, North Carolina Coastal Federation

IT WOULD BE NICE IF WE COULD JUST

ignore what's happening to our coastal environment and assume that it won't affect us. If you believe that's possible, then you must not pay taxes, insure your house, drink water, swim, eat seafood, or drive. The fact is that poor stewardship of the coast is not only harming fish and wildlife, it costs you money and threatens your health and quality of life.

I'm not being an alarmist. Read this year's *State of the Coast Report* and you'll begin to appreciate the true costs of unwise coastal development. Some of the numbers will stagger you and make you hold on to your pocketbook or billfold a lot tighter.

In my job as executive director of NCCF, I visit and work with environmental groups all over the United States. I've learned a lot from these collaborations. But what's impressed me the most is the extent to which so many coasts are severely degraded by rapid population and industrial growth.

Coastlines that are more developed than ours typically are in a big mess. Fisheries have collapsed, and the waters are often too polluted for swimming or to eat the seafood that does remain. Shorelines are armored and ugly. Wetlands are gone – replaced by polluted runoff that causes damaging flash floods and further degrades coastal waters. When big hurricanes threaten to strike, there are simply too many people to get safely out of harm's way.

While billions of dollars are being spent in attempts to clean up these degraded areas there is little real hope that they'll ever be fully restored.

It would be wonderful to conclude that North Carolina has wised up and learned to avoid making these same mistakes. But for the most part, we have not. Instead, we're barreling down the same well-worn path followed by more developed coastlines. The final destination isn't going to be any prettier.

In fact, it might actually be a lot worse. That's because NC's coast is more fragile and dynamic than most. Our vast 2.1 million acres of inland estuaries and coastal rivers are a lot like lakes, flushing through to the ocean only about once every 100 years. Most pollutants just stay put.

Large sections of our coastal counties are just a few feet above sea level, and situated on unstable geologic landforms. With the sea rising at a rate of more than a foot a century, many coastal

communities already face serious erosion and flooding problems that threaten their very existence.

Decades ago, the NC coast was overlooked and isolated. That is simply not the case anymore. It is under immense growth pressures for permanent and seasonal housing, commercial resorts, industrial development and intensive agriculture.

These changes are causing problems that you don't have to look far to see. Beaches are being moved by a rising sea level and more frequent storms. As a result, thousands of ocean and other low-lying coastal buildings will be lucky to survive another decade. Hurricanes Fran and Floyd, both minimal Category 3 storms, taught us that occupants in these buildings aren't much safer as massive evacuations are difficult to complete. Finding safe havens for all the people living in eastern NC from more powerful hurricanes is simply not possible.

The more developed parts of the NC coast now live with degraded waters that aren't getting any cleaner. Most of the sounds, coastal rivers and tidal creeks from Cedar Island in Carteret County, to the South Carolina border are polluted after heavy rains. This year state water quality experts threw up their hands, telling the US EPA that they have no idea how to restore these impaired waters.

Not being able to catch clams and oysters that are safe to eat isn't all we're really worried about. The same runoff that contaminates shellfish also makes it unsafe to swim. Where stormwater is being pumped or drained into the ocean or sounds, warning signs are now being posted telling people that they risk getting sick if they go swimming.

Scientists have also found that many of the sediments in our coastal sounds and rivers contain heavy metals and other persistent pollutants that disrupt the food chain, making these waters less productive for fisheries.

In a world without limits – anything goes. That's what is currently happening to our coast. We continue to encourage virtually unlimited uses of our land and water as we watch the health of our natural environment go down the drain.

Perhaps we should accept this as the inevitable, but that's not what NCCF is here to do. We're out to alter history. But we need your help or we won't succeed.

This *State of the Coast Report* takes a close look at some hard issues; *Protecting Water Quality* – how preserving wetlands and implementing new

stormwater requirements may offer hope; *Environmental Law and Order* – the real reason why NC's good laws are not enforced; *Living in Harmony with a Restless Sea* – just how much can we or should we attempt to control Mother Nature? and *Growing Smart* – what's ahead for coastal North Carolina and how we can best plan for the boom ahead.

This year's report also charts a new course for the NC Coast. You'll find the *Environmental Checklist* in the center of this report. It suggests steps we can take to maintain and restore our great coastal heritage. Please keep this list and help us work toward these important goals.

These goals and the health of our coast depend on aggressive leadership from our elected and appointed officials. As you'll see from this year's *Report Card, Year in Review* and *Legislative Review*, that's not happening. For officials to consider our goals and environmental agenda seriously, they must hear from you again and again.

Perhaps we should adopt the persistent mosquito's strategy – swarming until we get what we want.

North Carolina will have a new opportunity in November when ballots are cast for governor. With this in mind, we asked the gubernatorial candidates to speak out about what they consider to be the most important environmental issues facing the coast. Please read what they have to say and then contact them with questions and concerns.

This report is now in the homes of approximately a quarter of a million people. If only 10 percent of the people who read it decide to contact at least one public official, a loud message will be sent that we need leaders to protect our coast – especially to the new governor who will take office in January.

These days it's easy to communicate with public officials and most are very responsive. All of them have email and telephones. Let them know your concerns and ask them a lot of questions. Keep them accountable – that's your job.

We can help you understand environmental issues, government regulatory programs, and connect you with others who want to work with you to protect the coast. Please join with us to save our coast. The impact that we can have together will be enormous.



PROTECTING WATER QUALITY: ENTERING A NEW AGE IN STORMWATER MANAGEMENT

Stormwater pollution is destroying coastal water quality. Controlling runoff represents the best opportunity for the public and local governments to prevent further degradation of tidal creeks and estuaries.

THERE'S NOTHING LIKE A RAINY DAY AT THE coast. Windshield wipers slap at sheets of rain to no avail, water pours from rooftops onto the streets, cars splash through huge puddles and ditches overflow with a brownish liquid. Some rainwater collects in yards and parking lots, but most of it travels swiftly to the nearest creek or sound.

Along the way, stormwater picks up nutrients, bacteria, sediment and contaminants of all kinds as it flows across the land. By the time it deposits into a body of water, the cleansing rain has been transformed into a polluted stew that can be harmful to humans and marine life.

The source of excess nutrients and sediment in large river basins often can be traced far upstream. But pollution of tidal creeks and protected sounds occurs locally. Fecal coliform bacteria, for instance, would never survive the trip from a source many miles away. As a result, the solution to pollution on the coast is also mostly local.

Of the many contaminants in stormwater, public health officials pay close attention to fecal coliform. A type of bacteria, fecal coliform resides in the intestinal tracts of warm-blooded animals. While fecal coliform does not pose a human health risk, it does indicate the likely presence of pathogens known to cause disease in humans. Pathogens such as *E. coli*, *Giardia*, *Cryptosporidium*, *Salmonella*, *Shigella* and *Vibrio* are commonly found in stormwater. As a result, high fecal coliform levels are the spark for closing shellfish areas to harvesting and recreational beaches to swimming.

Because shellfish are filter feeders, water is constantly being flushed across their gills and food particles retained. A single oyster can filter and clean from 50 to 75 gallons of water each day. In this process, shellfish accumulate waterborne pathogens at concentrations that can make them unsuitable for human consumption. Thus, shellfish are frequently considered the “canary” of coastal ecosystems. Just as the death of a canary in a coal mine indicated the necessary retreat of a miner, shellfish impairment signals a pollution problem that is bad and probably getting worse.

Portions of shellfish waters are routinely closed from Cedar Island to the South Carolina border every time it rains an inch and one-half or more. Pollution from stormwater and marinas have resulted in the permanent closure of 56,000 acres of waters suitable for commercial shellfish harvest.

Over the past 10 years, more than 1,000 acres of Outstanding Resource Waters, so designated because of its superior water quality, have been closed to shellfishing.

George Gilbert, Chief of Shellfish Sanitation, says that stormwater runoff is the biggest water quality problem facing shellfish. He knows which areas will be unsuitable for shellfish harvest after one and a half inches of rain and which areas will be added to the list after two inches. “Most of our areas are managed on a conditional concept. We close automatically,” says Gilbert. Testing is conducted to determine when areas are suitable for re-opening.

Mission Impervious

At one time, fecal coliforms were thought to originate from faulty septic tanks or sewage plants. But monitoring has shown that faulty septic tanks are the exception, not the rule. New wastewater treatment plants are no longer permitted to discharge near shellfish waters. Now, the source is understood to be leaking sewer lines, and wild and domestic animals. Migratory waterfowl cause seasonal problems. Boats that dump holding tanks also contaminate shellfish waters.

While little can be done about the supply of fecal coliforms, much can be done to halt the rapid transport of these bacteria into sensitive coastal waters. In areas where natural vegetation and wetlands once thrived, homes, shopping centers and roads have been built. This change in landscape disrupts the natural hydrology of coastal watersheds. Impervious surfaces, such as parking lots and rooftops, decrease the area of land available to absorb rainwater. The result is a rapid movement of highly contaminated water into tidal creeks and sounds.

Researchers at the University of North Carolina at Wilmington (UNC-W) have confirmed that stormwater can cause fecal contamination of tidal creeks with as little as 10 percent impervious cover. Dr. Mike Mallin of UNC-W's Center for Marine Science has analyzed the tidal creeks in New Hanover County. He determined that acceptable microbiological water quality occurs when the percent of impervious surface of a watershed is less than 10 percent. Impaired microbiological water quality occurs above 10 percent impervious surface, and highly degraded water occurs at 20 percent impervious surface.

Buffers & Wetlands

Wetlands are pivotal to controlling stormwater in the coastal region. In addition to significantly slowing the speed with which stormwater spills into neighboring creeks, wetlands perform a critical filtering function that removes contaminants that pass through it. The flipside is that ditching and draining of wetlands may mean water quality will suffer. The UNC-W research team found that “removal of natural wetlands for agricultural, forestry, or urban development will significantly increase runoff-driven sedimentation and, in many cases, fecal coliform contamination of receiving streams.”

Dr. Bill Kirby-Smith, a professor at Duke University, has been restoring perimeter wetlands at Open Grounds Farm in Carteret County. According to Kirby-Smith, the restored wetlands have lowered the fecal coliform counts to an undetectable level. Because water in a wetland is shallow and exposed to sunlight, bacteria are killed before the water flushes into the sound. However, there are some institutional hurdles that must be cleared in order to construct a wetland. Kirby-Smith notes, “It turns out that it's as hard to get a permit to build a wetland as it is to destroy a wetland.”

Riparian buffers also provide important water quality benefits by removing nutrients and slowing stormwater runoff, but science has shown that small buffers do little to remove bacteria from runoff. In August 2000, a 30-foot buffer requirement adopted by the Coastal Resources Commission went into effect along navigable bodies of water in the 20 coastal counties. The new rule allows the construction of water dependent structures such as docks, ramps, and shoreline stabilization devices within the buffer zone. But impervious surfaces in this area must be kept to a minimum in order to protect water quality.

In the Tar-Pamlico and Neuse river basins, the Environmental Management Commission (EMC) approved a 50-foot buffer extending from the coast to the Piedmont. The EMC buffer rules will protect most existing trees in the first 30 feet and require an additional 20 feet of vegetation. Taken together, these buffer requirements, if properly enforced, should help to slow sedimentation, nutrients and some contaminants from reaching estuarine waters after storms.



Rain Check

The best way to control stormwater runoff is to reduce the area of impervious surfaces below 10 percent of total land area. As the old saying goes: *An ounce of prevention is worth a pound of cure.* Communities that are tackling their stormwater problems after development is already in place are confronted with sticker shock.

One such town is Emerald Isle. Flooding in Emerald Isle has become a serious and chronic problem. It's illegal to pump stormwater into Bogue Sound because it will violate water quality standards. If the stormwater is pumped into the ocean, the town must close the beach to swimming because of the pollution. The only option left is to contain the stormwater on land.

The town is seeking a \$3.2 million grant from the Clean Water Management Trust Fund to purchase 40.7 acres of soundfront property. Prime real estate is the only remaining land for handling stormwater, which drives the price of the project sky-high. Adding in the engineering expenses of pipes and pumps, the entire project is expected to cost \$4.2 million, excluding operation and maintenance costs. The average cost for the 1.6 square mile area is \$4,100 per acre drained.

Emily Farmer, Emerald Isle's Mayor Pro Tempore, says, "Obviously if the planning had been done, we wouldn't be in this pickle." In 1989, Emerald Isle came up with a stormwater plan that is impressive on paper, but implementation has been lacking. According to Farmer, the town is not solely to blame because state and federal permits were issued for many years that allowed construction in a natural drainage trough. Farmer adds, "After spending roughly \$4 million, we will still be flooded at times."

Turning the Tide

As it turns out, local governments are not always informed about stormwater runoff or how their land-use policies might help avoid it. South Carolina Sea Grant runs a program called "Non-point Education for Municipal Officials" (NEMO), which tries to bridge this gap.

An initial survey of local elected officials in South Carolina revealed that 24 percent of them did not know that water in a storm drain was discharged into a stream, even though the survey was multiple-choice. The NEMO program addresses the fundamental disconnect between the choices that officials are called upon to make and the lack of awareness about issues such as impervious cover and the effects of development on water quality.

That may soon change. A brand new tool for addressing local stormwater pollution was unveiled by the US Environmental Protection Agency (EPA) in December 1999. The Phase II Stormwater Program provides a mechanism for local governments to educate citizens, improve planning and reroute stormwater outflows away from creeks.

Phase I began in 1990 when the EPA required municipalities with more than 100,000 residents, ten categories of industrial activity, and construction disturbing five acres or more to obtain National Pollutant Discharge Elimination System (NPDES) stormwater permits. In Phase II, NPDES permits will be needed by communities with a population greater than 10,000 or a density higher than 1,000 people per square mile, and by construction sites that disrupt one to five acres of land.

States also have the discretion to extend stormwater requirements to localities that have a likelihood for negative impacts on water quality. Some of the criteria for deciding which localities may be included are: *discharges to sensitive waters; high population density; high growth or growth potential; adjacency to an urbanized area; significant contributor of pollutants to waters of the US; and ineffective control of water quality by other programs.* These characteristics describe

most of the areas on the coast that suffer from water quality problems.

The state Environmental Management Commission (EMC) initiated a stakeholder process in 2000 to decide how to expand the Phase II program to all areas of the state. According to Jeanette Powell of the state Stormwater Section, the ultimate goal of the stakeholder team is to develop a "comprehensive statewide stormwater program that protects water quality and hopefully draws in the Phase II rules as an umbrella."

Plans for a Rainy Day

Under the new Phase II program, small communities will develop comprehensive stormwater programs designed to reduce the discharge of stormwater pollutants to the "maximum degree practicable." They will also need to satisfy appropriate water quality requirements of the federal Clean Water Act and to protect existing water quality.

The tools for achieving these objectives include public education and involvement, planning on a watershed basis, detecting and eliminating illicit connections to sanitary sewers, and developing controls to reduce runoff both during and after construction to insure the ongoing capture of stormwater contaminants.

The NPDES stormwater permit process could be an important mechanism to guide and enforce the water quality aspects of land use planning. Every five years, counties and many towns in the coastal region must prepare plans consisting of objectives, policies, and standards to be followed on public and private lands. Land use plans, which are required by the state's Coastal Area Management Act (CAMA), are intended to provide a mechanism for weighing development decisions with ecological consequences.

Through a strong stormwater policy, effective planning and follow-through, water quality can be restored in the coastal region. The new Phase II Program offers renewed optimism.



Want to Learn More on the Web?

US Environmental Protection Agency has fact sheets that describe why controlling stormwater is important and how the Phase II rules will help.

www.epa.gov/owm/sw/phase2/

Center for Watershed Protection website contains model ordinances for stormwater control, articles on issues, and an electronic newsletter listserve.

www.cwp.org

NC Sea Grant has a new publication entitled "Recreational Water Quality: A Fact Sheet for Coastal Vacationers and Water-Dependent Businesses." This series of fact sheets can be accessed on their website.

www.ncsu.edu/seagrant/



ACHIEVING ENVIRONMENTAL LAW AND ORDER: REALIZING THE FULL POTENTIAL OF EXISTING LAWS

If you think that polluters are punished, think again. North Carolina slaps the hands of polluters, but seldom slaps them with a big fine. Unless the legislature beefs up environmental enforcement staff, polluters will continue to laugh – all the way to the bank.

WHEN WE WERE YOUNG AND NAÏVE,

Officer Friendly came to school and told us “crime doesn’t pay.” He said if we committed a crime, we would be caught, sent to jail and slapped with a heavy fine.

But in the real world, state agencies responsible for protecting the environment are encouraged to coddle polluters. Recently, the chairman of one regulatory commission even went so far as to publicly advise state staff to be “magnanimous” in their compliance actions.

Environmental enforcement should be the strongest tool in the box as North Carolina has some of the best environmental laws in the country. Enforcing these laws should be an effective deterrent to would-be polluters. Yet institutional barriers to enforcement effectively handcuff state agencies from catching polluters and bringing them to justice.

enforcement efforts were effective. “I don’t know what our compliance rate is,” former DENR assistant secretary Bill Holman told the *The News and Observer*. “We have to guess at compliance because we can only do a few inspections of facilities in a year,” Holman added.

Three days after the news story, Gov. Hunt ordered DENR to conduct an internal assessment of its enforcement program. DENR senior policy analyst, Michael Shore gathered data from 10 regulatory agencies involved in enforcement. Shore also conducted focus groups of DENR staff, environmental groups and business interests.

Shore’s report, *Enforcement Assessment 2000*, was issued in February 2000. What Shore found was a lack of uniformity on enforcement within individual agencies and no coordination among agencies. The report makes a number of specific recommendations such as factoring in a facility’s past record of violations when scheduling inspections and levying fines, conducting unannounced inspections, and making enforcement data available to all agencies and the public via the Internet.

Labor Shortage

One finding of DENR’s *Enforcement Assessment 2000* was that there were no performance measures for any division within DENR, except one. Performance measures track how many hours it takes to perform an inspection, how many days to process a permit application, and how many months before an enforcement case is closed. Without these numbers, DENR has no way to estimate how many staff it needs to approve permits in a timely manner or investigate potential violations and bring polluters to justice.

The exception is DENR’s Land Quality Section, which has responsibility for insuring that sediment from construction sites does not reach streams. By law, developers disturbing an acre or more of land must submit plans to stabilize slopes and control runoff during construction, and reestablish ground cover after construction.

In 1997, the Sedimentation Control Commission (SCC) convened a stakeholder group to reevaluate the Sedimentation Pollution Control Act. Among its charges, the stakeholder group examined the staffing needs of Land Quality. It recommended that each construction project should be inspected once a month and no more

than 45 projects should be assigned to each inspector. To handle the growing number of projects in the state, Land Quality would need 133 inspectors, or 113 more than the 20 they currently had in the field.

Gov. Hunt used these recommendations to seek funding for 30 additional sedimentation inspectors in 1998. The General Assembly granted money for just four. The following year, Hunt asked for 15 new inspectors and successfully secured funding for 10 from the legislature. In 2000, the governor asked for only three new inspectors and got none. Land Quality is fortunate to be 14 positions ahead of where it was, but it is still 99 inspectors short of being a fully functional enforcement unit.

Having sufficient staff positions is only half the battle. Staff turnover places agencies in a peculiar bind as existing staff temporarily pick up the duties of those who have left. According to Division of Water Quality (DWQ) spokesman Ernie Seneca, people leave for better pay in the private sector and because of burnout from the workload. Last year, DWQ’s turnover rate in the Central Office was 24 percent in the Wastewater Unit, 28 percent in the Planning Unit and 30 percent in the Non-discharge Unit, which among other things investigates hog farms.

Catch-As-Catch Can

With limited staff, enforcement takes a back seat to other, more pressing duties. “As far as compliance and enforcement, to be honest with you, just trying to issue permits is a full-time job,” said Bill Moore, head of DWQ’s regional Stormwater Unit in Washington, NC. When stormwater rules changed in 1995, developers and industries were required to obtain permits, rather than simple certifications. Moore recalled, “The review process became more formal and involved, and still no new people were added.”

With the influx of people moving to the coast, there’s also increased activity. Linda Lewis, head of DWQ’s regional Stormwater Unit in Wilmington, NC said, “Our database of inspections just continues to grow every year and the number of staff stays the same.” Lewis added, “I could spend a month straight writing up enforcement actions.” But then the permit reviews would get backed up.

In an effort to address this disparity, Gov. Hunt asked the legislature to fund nine new stormwater



On May 2, 1998, *The News and Observer* published an exposé analyzing the Department of Environment and Natural Resource’s (DENR) enforcement efforts. “Although state law allows regulators to issue big-ticket fines, huge workloads, business-friendly policies and fears of legal battles keep penalties low,” the article concluded.

The in-depth examination also found that DENR had scarcely a clue whether or not its



Who's Minding the Shore?

Inadequate staffing led to one of the biggest environmental travesties of the last decade. The saga began in June of 1998 when the US Army Corps of Engineers lost a crucial court case. A series of court decisions and appeals in that case, known as the Tulloch Rule, prevented the Corps from requiring permits for wetland ditching unless dirt spoil was deposited directly into wetlands.

DENR initially vowed to charge into the breach and enforce a 1996 state rule that prohibits the draining of wetlands. In the fall of 1998, DENR changed directions and publicly announced that it would not begin enforcing the state wetlands rule for five months. Between DENR's October 1998 announcement and the March 1, 1999 date for enforcing the rule, more than 9,400 acres of wetlands were drained on 84 sites in the southeastern part of the state.

As it turns out, the Wetlands Unit within DENR had been given another task that sapped its staff resources, that of rewriting riparian buffer protection rules for the Neuse River. Bill Holman, who was DENR's Assistant Secretary for Environmental Protection, told the *The News and Observer* that "he regrets the decision to postpone enforcement, but he said the water quality agency lacked sufficient staff to do the job."

When March 1, 1999 finally rolled around, DENR encountered yet another loophole. Landowners of 1,500 acres of ditched wetlands were claiming the "forestry exemption" which effectively freed them from complying with water quality protection laws. The State Division of Forest Resources had affirmed the sites as forestry operations, even though the nature of the ditching and circumstances of the sites clearly establish that the intended use of the properties are for residential or commercial development.

After reviewing the sites, the US Environmental Protection Agency (EPA) demanded that the State rescind the 22 claimed forestry exemptions because they are not "normal and customary forestry practices, but are violations of the Clean Water Act." The State does not seem to know how to resolve EPA's concerns.

Derb Carter, an attorney with the Southern Environmental Law Center, maintains, "If limited exemptions exist to an environmental law, someone will attempt to abuse it." The great wetlands debacle of 1998-99 is proof enough. As developer Dallas Harris told the *The News and Observer* in March 1999, "Anyone who didn't go and claim their properties in the last 90 days is crazy as hell."

positions in the 2000-2001 budget. The legislature agreed to none.

Hal Bryson, a former DWQ employee from Wilmington, thinks DWQ staff are so overburdened that, "There is almost a disincentive to go into the field and find violations because it takes so much time." Bryson describes their predicament as follows: "When employees do find a violation, they have to make up an enforcement package that takes up a lot of time. When this package finally comes back to the field staff, the fines are largely decreased or it states that, 'The Central Office doesn't wish to take action at this time.'"

Southern Environmental Law Center lawyer Michelle Nowlin believes one of the reasons for inaction is that morale is extremely low. "In part because industry hammers them by appealing penalties and taking them to court, then on the other hand, environmental groups criticize them for not doing enough," she said. Nowlin thinks DENR has dedicated personnel, but the agency as a whole doesn't support them.

Reinventing Enforcement

Weary of phone calls from irate businessmen, the General Assembly adopted a special provision to the 2000-2001 state budget that requires DENR to create one-stop permit assistance pilot projects in at least two of its seven regions. Under the pilots, DENR must tell permit applicants how long it will take to render a final decision regarding the issuance or denial of permits. If DENR misses its deadline by 60 days, then the permits are automatically approved. This legislative provision also requires DENR to set up a tracking system to account for the time it takes to process permits.

While these legislative pilot projects do attack the problem of slow permitting, they do little to recognize understaffing as the primary cause. To add insult to injury, the one-stop shopping pilot projects come with no additional funding for implementation.

Enforcement is a very different function from permitting. Yet in North Carolina, the same DENR staff is responsible for both. Some states have chosen to separate the two functions to make sure enforcement is not shortchanged. In Delaware, an academy-trained law enforcement unit within the Department of Natural Resources and Environmental Control is responsible for investigating environmental pollution.

Delaware utilizes 12 environmental police officers that act on referrals from the permitting staff. They pursue compliance or enforcement actions in concert with five deputy attorney generals that work exclusively on state environmental cases. The Delaware enforcement unit also conducts its own surveillance of industry and follows up on tips from the public via a toll-free hotline.

Public involvement is an essential component of environmental enforcement because of the small number of state inspectors and the growing number of projects in the coastal region. "Most actions that have been taken are because of a neighbor or an environmental group who raises a fuss," notes Michelle Nowlin of SELC.

The protection of our natural heritage is a huge task that will require the strong commitment and significant resources from the next governor and the state legislature. As former DWQ staff Hal Bryson put it, "We have plenty of environmental regulations on the books, but don't have adequate staff in the regional offices to provide adequate oversight and enforcement. Nor does there appear to be the political will to follow through on the penalties."

NCCF's New Keeper Program

In an effort to improve enforcement, the NC Coastal Federation (NCCF) is planning a SoundKeeper Program in 2001. NCCF Keeper staff will interact with interested citizens as well as scout the estuaries in search of environmental violations. The program will have an educational component so that people can learn where to turn when they see environmental damage being done.



Want to Learn More on the Web?

DENR's *Environmental Assessment 2000* report and principles are online. You can even see who got fined and how little they paid every month.
www.enr.state.nc.us/novs/enforce.htm

Environmental Mediation and Information Services has data and links for NC environmental laws, rules, pending legislation, enforcement actions, court decisions and administrative hearings. Be sure to check out the "News - What's Hot" section.
www.environmentalinsight.com

The Southern Environmental Law Center has taken aerial and ground photos of ditched and drained land. Go to their website and click on NC Forestry Exemption.
www.southernenvironment.org/state_nc.shtml



LOOKING AHEAD: LIVING IN HARMONY WITH A RESTLESS SEA

Global changes could spell trouble for rampant development of barrier islands. Sea level rise and storms are facts of life at the coast. The ecological consequences of fighting the sea are high and the price tag to taxpayers is enormous.

BARRIER ISLANDS WOULD NOT EXIST IN THE absence of storms. Huge hurricanes and nor'easters created these ribbons of sand and also sustain them. They can also rearrange them.

Dr. Stan Riggs has spent ten thousand hours on the ocean floor. He has drilled thousands of holes to analyze core samples and written many books and reports about barrier island geology.

For many years, the East Carolina University geologist predicted that at some point in the next few centuries, the outer banks system would collapse and reform in a shape we've never seen before. Time will tell. What's different now is that Riggs thinks he may live to see it happen.

Riggs boldly predicts that the Outer Banks are on the verge of breaking up. It could happen within a decade with above average storm activity, or within a generation given normal storms combined with predicted sea level rise. Or a direct hit by a Category 4 or 5 hurricane could do it. Any combination could make the Outer Banks look more like the Florida Keys.

While most people think about time in terms of their next paycheck, geologists think in terms of millions of years. The Earth's temperature has been severely fluctuating for the last two million years. From 1300 to 1800 the planet underwent a Little Ice Age. But since that time, the temperature has risen and so has the sea. If present conditions continue, sea level is expected to rise anywhere from one-foot three-inches to one-foot eight-inches during this century.

To be sure, all barrier islands are not created equal. The underlying geology predetermines the height, width and longevity of island masses. Some islands are complex and durable, while others rapidly erode away with each passing storm.

Complex islands, such as Bogue Banks, usually have a significant source of sand offshore to nourish and build it up. Simple overwash islands, like Topsail Beach, are sand-starved and generally speaking, their days are numbered. Yet all islands are vulnerable to storms and they will continue to migrate toward the mainland as sea level rises.

Dredging for Dollars

Human influence over the fate of North Carolina's barrier islands dates back to the 1930's. That was an era when the Civilian Conservation

Corps and the Works Progress Administration built a dune system from the Virginia state line to Ocracoke. The dune ridges helped to stabilize portions of the outer banks and made them appear safe for development.

Since then, every imaginable technique has been used to halt the inland migration of these islands. Jetties and groins that catch sand, and seawalls – made of all matter and substance – were built to hold back the sea. The US Army Corps of Engineers has been at the forefront of designing these stopgap measures that history has proven cause greater erosion ... not less. The Coastal Resources Commission finally banned hardened structures on the oceanfront in 1985.

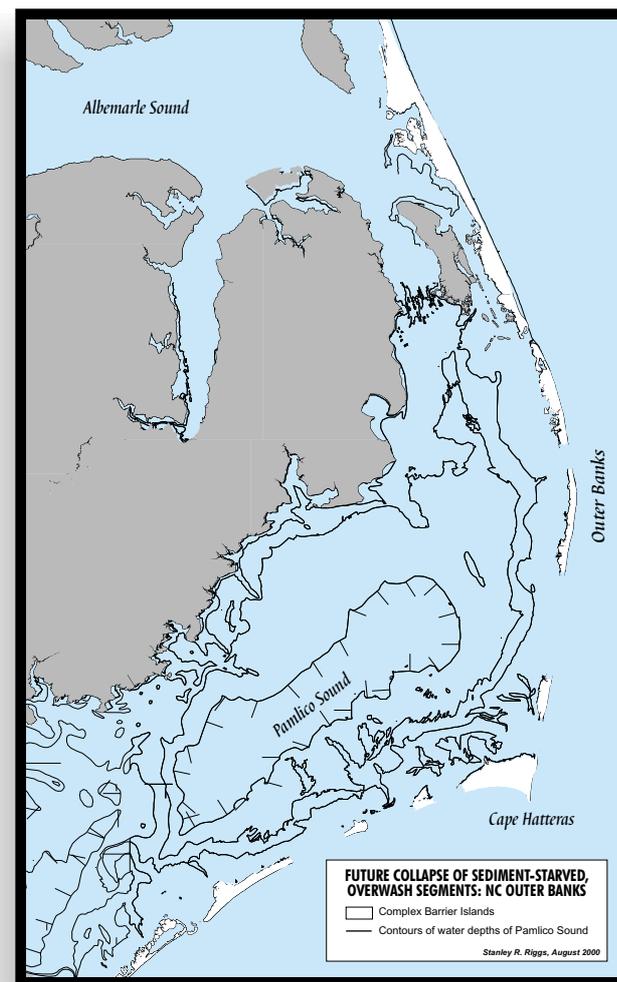
Public concern about shoreline migration or erosion has intensified with increased storm activity. After 35 years of low storm activity, the NC coast was clobbered by a succession of six hurricanes from 1996 to 1999. The National Hurricane Center predicts this trend will continue in 2000 with 11 named hurricanes, of which two or three will make landfall.

The flavor of the day is beach nourishment. Beach nourishment involves pumping sand from offshore or inlets onto the beach. While beach nourishment appears to be a better option for protecting oceanfront development than hardened structures, the environmental impacts are largely unknown and poorly monitored.

Today in North Carolina, every public beach community, except Sunset Beach, Duck and Corolla, is clamoring for a federal beach nourishment project. According to Tom Jarrett with the Corps Wilmington Office, approximately 83.5 miles of NC beach towns are scrambling to qualify for the Corps' 50-year program. Add in the Department of Transportation's plan to protect Highway 12, along with the Marine Corps' plans for Onslow Beach and projects to nourish private islands – and the figure rises to 119.5 miles of North Carolina's 320 mile shoreline that could be nourished in the next fifteen years.

Some beaches, like Bald Head Island and Atlantic Beach, are taking advantage of spoils from

inlet and harbor dredging projects. By law, the Corps must utilize the least expensive method for disposing of dredged material. Beach communities can pay the extra cost for the Corps to deposit the sand on their beach. But dredged material from inlets and harbors can contain shell gravel and mud that degrades a natural sand beach.



Map showing the collapse of the sediment-starved portions of the North Carolina Outer Banks. Using an extensive database, this map predicts what the North Carolina coast could look like in the near future, based upon the following variables: 1) within this generation if sea level continues to rise at its present rate with normal storm patterns, 2) within this decade if the present increased pattern of small hurricanes (category 1 and 2) continues as during the period 1996-1999, or 3) in response to a single direct hit of a large hurricane (category 4 and 5).



Initial beach nourishment projects cost taxpayers between \$3 million to \$10 million per mile of beach, depending on whether a suitable source of sand is readily available. Dare County is planning a beach nourishment project that carries a cost estimate of \$69 million for 14.8 miles, more than \$4.6 million per mile. After the initial project, taxpayers will continue to pay \$18.5 million per year for renourishment for the next 50 years.

Dr. Orrin Pilkey, a coastal geologist from Duke University, looked at the cost of beach nourishment on the Atlantic coast and divided it by the number of beachfront buildings. He determined that on average, beach nourishment projects equate to approximately \$10,000 per beachfront property per year.

The Corps of Engineers pays 65 percent of the initial nourishment project and 50 percent for periodic renourishments thereafter. The State picks up 75 percent of the remaining cost and the county or municipality covers the rest. Localities, which benefit the most, pay a mere 8¾ percent of the total cost of its first nourishment.

Jarrett has projected the potential costs of beach nourishment and renourishment projects over the next 30 years. It will cost federal, state and local taxpayers \$932,675,000 if all beach communities requesting aid, receive it. State taxpayers would pick up a third of the long-term tab.

The issue of who pays for beach nourishment came to a head in Carteret County in the spring of 2000. County voters were asked to pick up part of the cost of a fast-track nourishment project on Bogue Banks. County voters soundly defeated the referendum with 73 percent voting against and 27 percent in favor. Even two beach communities, Salter Path and Emerald Isle, rejected the measure.

Longevity of projects is also a major issue. According to Pilkey's research, 62 percent of beach nourishment projects along the Atlantic seaboard washed away in one to five years and only 12 percent lasted longer. The remaining 26 percent disappeared within a year.

Here Today, Gone Tomorrow

It is hard to imagine that messing with Mother Nature does not have an impact on fisheries, shorebirds, sea turtles and organisms that live in the beach. "When you dredge sand you are sucking up and killing every single organism," said Kevin Moody, a US Fish and Wildlife Service field biologist in Raleigh.

Dredging for sand also greatly increases turbidity of the water at the "borrow site" and degrades the near shore habitat. Invertebrates such as ghost crabs, coquina clams or polychaete worms are buried under tons of sand.

Those that survive may not adapt to the altered sediment on the new beach. The effects can be seen up the food chain as fish and wildlife leave for more productive habitat. "We've never had the animal community of a renourished beach fully restore itself that we know of," Moody said.

Sand that is pumped on the beach will eventually be reclaimed by the ocean and settle on the steep shoreface that lies beneath the waves.

Storms can cause sand to travel even farther, smothering productive hard bottom habits. Moody recalls a very productive hard bottom fishing spot about three miles offshore that was buried from one of Carolina Beach's restoration projects.

"Turtles do nest on renourished beaches, there's no doubt about it," says Ruth Boettcher, Sea Turtle Coordinator with the NC Wildlife Resources Commission. Yet, Boettcher admits that it isn't clear how introducing sand onto the beach influences the development of hatchlings. "It's this unknown that scares me, because so much of our coastline is being examined for beach nourishment. We need to examine the cumulative impacts," she said.

Moody explains, "The ability of the hatchlings to survive is partially dependent on nest habitat." If the nourished sand is darker in color or has high silt content, it may increase the temperature of the sand. This is significant because the sex of the turtle is determined by nest temperature. Warmer nests could skew the population structure if there are more females than males, and further impact the survival of this federally protected species.

Loggerhead sea turtles are not the only threatened species on the beach. The piping plover frequents the beach, dunes and sand flats near inlets where it feeds, breeds and spends the winter. In response to a lawsuit brought by Defenders of Wildlife, the US Fish and Wildlife Service plans to establish 153 miles of North Carolina's coast as "critical habitats" for the piping plover.

While much of the designated habitat is already part of the Cape Hatteras National Seashore, some areas near developed beaches would require humans to be mindful of the plovers' plight. The survival of the piping plover has been and will continue to be a factor when evaluating the feasibility of beach nourishment and inlet dredging projects sponsored by the Corps of Engineers.

Beach Bingo

Building on a barrier island is a gamble. A huge Category 3 hurricane with winds in excess of 110 miles per hour can destroy almost everything in its path. Until Hurricane Fran hit in 1996, no comparable storm had pummeled the NC coast since Hazel ripped through in 1954. The relative lull in the interim gave way to a construction boom on barrier islands that continues unabated today.

After the tragedy of Hurricane Floyd, the Institute on Government (IOG) at University of North Carolina assigned five masters degree students to prepare a study commissioned by the NC Coastal Federation (NCCF). The students were asked to perform a cost/benefit analysis of four potential responses to the threat posed by shoreline migration. The graduate students prepared their analyses based on low storm and high storm scenarios and designed a decision-making model for managers of beach towns.

The study concluded that under a low storm scenario, beach nourishment might be an effective tool, but only if combined with other hazard



MICHAEL HALMINSKI, Waves, NC

mitigation measures. The study recommends hazard mitigation measures such as (1) buy-out programs for structures in high hazard areas; (2) comprehensive local ordinances that limit building sizes; (3) increased setback distances; and; (4) relocation of structures before the sea encroaches.

But under a high storm scenario, the potential benefits of beach nourishment vanish as quickly as the sand on the beach. The costs associated with repeated renourishments make this option prohibitive. The study found that other hazard mitigation tools would have a much lower cost and a higher benefit in a high storm era.

Spencer Rogers, with NC Sea Grant, is conducting a study on the effectiveness of beach nourishment at the three NC beach communities currently involved in the Corps' long-term program: Kure Beach, Wrightsville Beach and Carolina Beach. Rogers says, "Beach renourishment is an effective tool when properly designed and built for either long-term erosion control or hurricane protection. It's not appropriate everywhere and it requires continued maintenance. Public thought is that beach renourishment is a one-time treatment for beach erosion."

Geologists think different. Riggs agrees that some beaches are better candidates for nourishment, while others are clearly not. Yet, when you factor in sea level rise with an era of intensive storms, Riggs believes "Beach nourishment is a short-term option – a feel-good option."



Want to Learn More on the Web?

The Duke University Program for the Study of Developed Shorelines has information on beach nourishment, beach stabilization and coastal hazard maps online.

www.geo.duke.edu/Research/psds/psds.htm



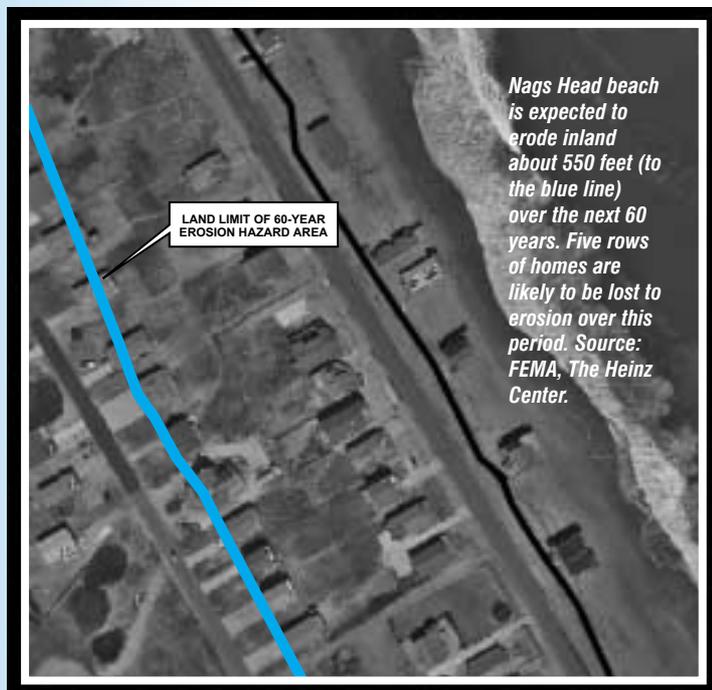
GROWING SMART: MAKING SOUND INVESTMENTS

From the overdeveloped beaches of the Outer Banks to the urban sprawl of Wilmington, the landscape is cluttered, the rivers are polluted and the neighborhoods are flooded. Poor growth management is costing taxpayers a bundle.

THE COAST IS GETTING TOO CROWDED.

From the barrier islands to the US 40 corridor, people are flocking to the coast and staying here. The Wilmington metropolitan area, which includes New Hanover and Brunswick counties, was the second fastest growing place in the state during the last decade at 27.5 percent, according to the NC Office of State Planning. The only metropolitan area growing faster was Raleigh-Durham-Chapel Hill at 29.3 percent.

Proximity to the sea has helped coastal counties to grow. Five of the ten fastest growing counties in the state include portions of developed barrier islands. Projections for the future suggest continued robust growth in Brunswick, Currituck, Dare, New Hanover and Pender counties.



Coastal towns are becoming flooded with people and their dwellings. Sunset Beach grew from 311 people in April 1990 to almost 2,000 by mid-1998, an increase of 525 percent. Some of the fastest growing places in the State are on migrating barrier islands.

Bursting At The Beaches

Many coastal towns have grown so much that there is nowhere left to grow. The Town of Emerald Isle has developed 80 percent of its land. The Town of Oak Island claims to be fully “built out” and has begun looking to mainland areas to annex.

Towns situated on barrier islands present a special risk. Although a Category 4 hurricane has not walloped the North Carolina coast for almost 50 years, that is all it would take to dismantle a fragile beach town.

Even in the absence of the “big one,” constant erosion can make life on the beach a very risky proposition. Erosion can undermine structures, eventually forcing them into the sea if relocation has not occurred.

In 1994, Congress mandated that an independent report, *Evaluation of Erosion Hazards*, be prepared for the Federal Emergency Management Agency (FEMA) to identify the risks and economic impacts associated with erosion and coastal flooding. FEMA hired an independent contractor, the Heinz Center for Science, Economics and the Environment, to examine these effects.

The report released this year projects that one in four houses within 500 feet of a US coastline will fall into the water within the next 60 years as the result of erosion.

The Heinz Center studied seven counties along the Atlantic seaboard, including Dare and Brunswick in North Carolina. The study determined that in Nags Head in Dare County, five rows of houses are expected to be lost to beach erosion over 60 years. At Holden Beach in Brunswick County, two rows of houses have already been lost, and more will follow.

The Heinz Center’s report to FEMA made two major recommendations. The first one was an easy sell: “Congress should instruct FEMA to develop erosion hazard maps that display the location and extent of coastal areas subject to erosion.” Current flood insurance rate maps do not inform current and prospective coastal property owners of erosion risks. Erosion hazard maps would also be an important tool for county and town land use planners. The second recommendation may not go down as easily: “Congress should require FEMA to include the cost of expected erosion losses

when setting flood insurance rates along the coast.” Under the National Flood Insurance Program (NFIP), homeowners that are most susceptible to erosion are currently paying the same rate for flood insurance as policyholders in non-eroding areas. If the risks were fully reflected, the insurance rates of oceanfront property owners would double on average.

These recommendations are music to Dr. Raymond Burby’s ears. According to Burby of the University of North Carolina at Chapel Hill (UNC-CH), losses from hurricanes are not increasing because storms are more frequent or of larger magnitude, but because development in hazard-prone areas has increased at unprecedented rates.

Hurricane Fran made landfall in 1996 causing \$3.2 billion in damage. Fran was the third most expensive hurricane on record, until Hurricane Floyd hit in 1999 and cost almost twice that much. Losses from hurricanes now average almost \$5 billion per year, according to Burby.

Government programs like the NFIP, tax write-offs, beach nourishment, and ever more generous disaster relief payments have “compounded the problem, making it seem foolish to avoid or limit the use of hazardous areas,” Burby said.

Dr. David Godschalk, also with UNC-CH, believes the most important components of smart growth on barrier islands are “setting back from the shore, designing low impact housing projects, planning for hurricane storm surge and evacuations, and limiting growth to areas that are suitable for it.”

Getting Smarter

Warning signs are also evident on the mainland. Suburbs, next to strip malls, next to fast food joints, next to more suburbs have been the formula for development. This sprawling pattern of growth has followed the highways and sewer lines all over New Hanover County and is poised to follow the same path in neighboring Brunswick and Pender counties. There are now more than twice as many people living on the outskirts of Wilmington than there are residing within the city limits.

As people migrate beyond the city, several things happen. Land that was formerly forested or farmed is converted to residential and commercial uses. Housing developments with large lots, huge homes, multi-car garages, and lots of streets



become the norm. Clean air and open space with farmland, forests, wetlands and critters are replaced by bright streetlights, traffic congestion and bad air days.

The phenomenon is known as sprawl. Dr. Robert Burchell of Rutgers University asks and then answers the central question, "If sprawl is so desirable, why should the citizens of the United States accept anything else? The answer is that they no longer can pay for the infrastructure necessary to develop farther and farther out in metropolitan areas."

Sprawl is expensive because new infrastructure must be built over longer distances to serve fewer people. Once the cost of new roads, new sewer and water lines, new libraries and schools are factored in, the county taxpayer is left with a hefty bill. And don't forget public safety and sanitation expenses like police, fire and trash removal.

The alternative to sprawl is "smart growth." According to the Maryland Chapter of the Sierra Club, "Smart growth channels development towards existing cities and towns, preserves farms and natural areas, supports car-independent living, and revitalizes existing neighborhoods. Smart growth saves money while protecting the environment."

Burchell has conducted numerous fiscal impact studies and found that smart growth development consumes substantially less land, and significantly decreases expenditures for roads, utilities, and housing than typical sprawl development.

The Center for Watershed Protection (CWP) determined that on average, sprawl development costs the county \$1.16 for every dollar generated by new taxpayers in residential developments. But for coastal communities, that's not the only downside to sprawl. A CWP publication indicates "sprawl development has adverse impacts on traditional local industries such as agriculture, fisheries, forestry and tourism [and therefore] can weaken economic diversity in the overall regional economy."

Throughout the nation, local governments are studying the additional costs of sprawl development. Many localities are requiring "tax impact statements" to fully understand the costs and benefits of new residential developments. If the costs outweigh the taxes, localities often consider impact fees for utility and water hook-ups in order to protect the public purse.

Merrily We Grow Along

For North Carolina, the fun has just begun. Seemingly incapable of controlling or directing growth over the past few decades, state and local officials are about to face the challenge of a lifetime. If they fail again, the result will likely be high taxes and a compromised environment; the very things people are trying to get away from.

According to Burchell, an especially important trend will be the relocation of retirees to the coast. The year 2010 should be a landmark as the "baby boom" generation retires. A Brookings Institution study released this year views the NC coast as a coveted retirement spot. Between 1990 and 1998,

Jacksonville placed seventh and Wilmington came in ninth for metropolitan growth of US elderly populations. The study found that Brunswick and Dare counties were also very popular with elderly growth rates of 55 and 45 percent respectively.

Land use planning is often cited as the key to effective growth management. In the coastal region, 71 municipalities and all 20 counties prepare land use plans or updates every five years. Land use planning was added to the state Coastal Area Management Act (CAMA) in 1974. Under the program, counties and towns receive grants to develop land use plans "to insure that the development or preservation of the land and water resources of the coastal area proceeds in a manner consistent with the capability of the land and water for development, use, or preservation based on ecological consideration."

Unfortunately, CAMA land use planning has been unraveling for the past 25 years. Lax implementation of the CAMA planning program has produced plans that are paper exercises of little value to local government or citizens.

According to Dick Bierly, executive director of the environmental group Carteret Co. Crossroads, "An extensive bureaucracy has emerged which perpetuates the [land use planning] process without any culpability for the degradation of coastal water quality." In an effort to address the disconnect between plans and actions, the state Coastal Resources Commission (CRC) approved a two-year moratorium in November 1998 and convened a review team charged with restructuring the land use planning program.

The review team is recommending tiered funding levels for different types of plans and a land suitability analysis to determine areas that have land use compatibility problems. In addition, the team is proposing new management objectives to create a better link between the goals of the CRC and the local plans. Although the team's recommendations are a good first step toward improving local accountability and disclosure, it will be up to the CRC to adopt effective rules to re-energize the program.

The Oregon Trail

Many states have antiquated or forgotten land use planning laws on the books. Pennsylvania's local land use law is 32 years old; North Carolina's Land Policy Act was passed 26 years ago in 1974.

North Carolina's law, which is still on the books, was established to "undertake the

continuing development and implementation of a State land-use policy, incorporating environmental, esthetic, economic, social, and other factors so as to promote the public interest, to preserve and enhance environmental quality, to protect areas of natural beauty and historic sites, to encourage beneficial economic development, and to protect and promote the public health, safety, and welfare." However, the implementing agency known as the NC Land Policy Council was abolished by the legislature in 1981.

The State of Oregon passed its statewide planning program in 1973. It established 19 planning goals on topics such as citizen involvement, housing and natural resources. State law requires that every city and county develop comprehensive plans to achieve the goals as well as the zoning and land-division ordinances needed to put the plan into effect. The state Land Conservation and Development Commission reviews local plans for consistency with state goals. Once approved, the document becomes the controlling mechanism for local land use.

Goal 14 is probably the best known. It requires each city to adopt an urban growth

POPULATION GROWTH IN NC 1990 TO 2000*

State Rank	County	% Growth
2	Pender	39.8
3	Brunswick	38.9
7	Dare	30.0
8	New Hanover	29.4
9	Currituck	28.1
	NORTH CAROLINA	16.6

• Office of State Planning projections

boundary (UGB) in cooperation with the county that surrounds it. The land inside the UGB is considered "urbanizable land" where water, sewer and other services will be extended to accommodate future growth over the next 20 years. Goals 3 and 4 require the land outside the UGB to remain rural farmland or forests. Services like access roads and sewers are not extended to these areas.

Thus far, a dozen states have enacted smart growth legislation. Maryland enacted a law in 1997 that requires the state to withhold or limit

funding for new roads, sewers or schools that are outside state-designated growth areas. Tennessee has required cities and counties to establish growth boundaries and produce growth management plans.

Most of these states have adopted a “carrot and stick” approach. This has included state land use goals that direct growth and protect natural resources, combined with comprehensive local land use plans that are consistent with state goals. If local governments do not follow through on their plans, states can withhold grants and loans for infrastructure as an incentive. State legislation often includes provisions for local governments to assess impact fees and transfer development rights to make their plans work.

North Carolina has a long way to go in its efforts to grow smart. In January 1999, Godschalk told the CRC, “North Carolina is surrounded by states with state planning laws, while [NC] still only requires planning in the coastal counties.” He went on to say, “If North Carolina were to get a broader state law, many of the issues of consistency in CAMA planning would be addressed.”

The process of evaluating options is underway. In 1999, the State Legislature created a Smart Growth Commission, a 41-member body consisting of outside interests and state lawmakers. The recommendations of this commission, due in January 2001, may help forge a path for growing smarter. Burchell is hopeful when he says, “North Carolina has always been viewed as one of the real leaders of the South, in education and economically. Now it needs to step forward on land use controls.”

ENR

Want to Learn More on the Web?

The H. John Heinz III Center for Science, Economics and the Environment features reports including *Evaluation of Erosion Hazards* (June 2000), and *The Hidden Costs of Beach Erosion* (April 1999), as well as information on global climate change.

www.heinzctr.org

Planning Commissioners Journal contains a Sprawl Guide along with articles on solutions written by professional planners.

www.plannersweb.com/sprawl/home.html

Sierra Club “Challenge to Sprawl” Campaign Tool-Kit includes a number of interesting pages providing advice, for example, on how to make sprawl an issue in local elections, and how to conduct a “tour de sprawl.”

www.sierraclub.org/sprawl/

NC Smart Growth Alliance provides useful information about the economic, environmental, and fiscal advantages of planned growth.

www.ncsmartgrowth.org



GEORGE MITCHELL, www.lighthouse-aerials.com



Sewer “Lines”

“Today we’re taking another step toward a cleaner environment and greater economic prosperity in North Carolina,” Gov. Jim Hunt proudly proclaimed as he signed into law a bill allowing a statewide referendum on an \$800 million bond issue.

Hunt wasn’t praising the Million Acres Plan or the Clean Water Management Trust Fund; he was hawkling Clean Water Bonds to provide grants for local water supply and wastewater projects. The 1998 press release promised the initiative “will help North Carolina clean up its rivers, help local governments deal more effectively with water quality issues and help improved local economies if votes approve the measures at the polls in November.” The voters bought it.

Sewers are the darlings of politicians. But new sewer systems seldom live up to their claims when it comes to improving water quality. It is true that old sewer systems having reached capacity are prone to overflowing or leaking due to pinholes in corroded pipes buried underground. In 1998, the state Division of Water Quality received 3,497 reports of sewage spills accounting for 230 million gallons of sewage, of which 191 million gallons reached surface waters. In the near term, a new sewer system can reduce such problems as well as lower the concentration of pollutants flowing into a receiving stream.

But life isn’t that simple. Once online, new sewer systems and water systems serve as the engine for unrestrained growth in fragile coastal areas. As new residential developments and industries hook up to the system, the water quality benefits soon disappear and become worse due to stormwater pollution. In the end, water quality suffers throughout the entire sewage service area.

When New Hanover County extended sewer lines in 1986, only 16 percent of the Howe Creek watershed was developed. Howe Creek was classified as an Outstanding Resource Water in 1989 by the state in order to protect water quality and the shellfish resource. Planning consultant Bill Farris studied the impact of sewer extensions in the Howe Creek watershed and found that the county “proceeded without benefit of a comprehensive plan that addresses both the quantity and quality of stormwater runoff,” according to his report.

By 1996, 82 percent of the Howe Creek watershed had been peppered with houses, driveways and garages. Much of this later development occurred in areas that were unsuitable for septic tanks due to poor drainage of soils and the proximity of extensive wetlands. But it didn’t take ten years for the sewer system to take its toll. In 1991, Howe Creek was closed to shellfishing due to stormwater runoff caused by too much growth in too small an area.

Dr. William Sisson, a former New Hanover County Commissioner, set the record straight when he said, “Our sewer system has not stopped the closing of one creek. In fact, since we installed the system, we have closed the remaining pristine waters to shellfishing. We have not cleaned up any of the creeks that were closed to shellfishing before we installed the sewer, and we have not seen any improvement in our surface waters as a direct result of the system.”

After two rounds of funding, the Clean Water Bond has provided nearly \$42 million to 17 coastal communities, primarily for sewer improvement. Given the Howe Creek debacle, it will be a wonder if any shellfish waters are open by the time these new systems are operating at full throttle.

COASTAL REPORT CARD

NCCF publishes these grades each year so the public will not be lulled into a sense of complacency by politicians promising to do good by the environment.

Gov. Hunt Administration

1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000
C-	C+	I	B	D+	C+

■ **COMMENTS:** Last year's *State of the Coast* report card raised some eyebrows and ire from Administration officials for the **D+** we gave the Governor. Some felt we'd been unfair – that we had focused too much on the loss of nearly 9,500 acres of wetlands from illegal ditching in coastal counties, and the give-away of environmental permits to Nucor Steel Corporation. This year we wanted to give the Governor every opportunity to do well. In our autumn newsletter we identified the subjects that we would grade the Governor on in his final year in office. Here's how he's done based upon the criteria we set: (1) Qualified appointments to CRC: **A** for excellent appointments to this key committee that guides coastal management; (2) Implement CRC shoreline and water quality stakeholder recommendations: **C** for some progress and support; (3) Enforcement of wetland and water quality standards: **F** for failing to close forestry exemptions for wetland drainage and for allowing the Division of Water Quality to cover up the condition of polluted shellfish waters on the state's 303(d) list to EPA; (4) Phase out hog lagoons: **C** for some motion, although nothing firm has been accomplished; (5) Fix CAMA Land Use Planning: **INCOMPLETE** since reforms can no longer be accomplished in this Administration; (6) Adopt strong water quality rules for the Tar-Pamlico River Basin: **B** for getting there; (7) Adequate funding for state environmental programs: **C** for making modest requests, but not fighting hard enough to win them; (8) Reforming development rules and growth policies to make NC more resistant to hurricane disasters: **C** for arranging funding for new flood plain mapping, but wasting other opportunities in the aftermath of Floyd.

■ **AREAS FOR IMPROVEMENT:** Time's up! NC's coast is now largely in the hands of the next governor. Recommendations for the new governor appear on pages 10 and 11.

NC Senate

1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000
D	B	B+	B-	B	C

■ **COMMENTS:** Perhaps we should blame this lackluster legislative year on the budget woes the State faces. Lack of money meant that the environment was not a big priority for Senators last summer. The Senate gets an **A+** for fully

funding the Clean Water Management Trust Fund at \$30 million and expanding future annual appropriations to the Fund up to \$100 million in 2003. We'll also give the Senate a **B** for adopting the statewide goal of preserving an additional million acres of open space by 2010. We think the Senate deserves an **F** for not fully funding the Governor's meager request for staffing environmental regulatory programs, and a **D-** for further weakening the flood plain management bill passed by the House.

■ **AREAS FOR IMPROVEMENT:** It's time to focus on the fundamentals – fully funding existing programs and the staff to run them so that rules are implemented and enforced in accordance with legislative mandates. The budget woes of 2000 may have been bad, but they are likely to get much worse if we don't take steps soon to grow North Carolina in cost-effective and environmentally sound ways. Funding for the Clean Water Management Trust Fund is a step in the right direction.

NC House

1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000
D	C-	B+	C	C-	C-

■ **COMMENTS:** The House gets an **A** for going along with full funding for the Clean Water Management Trust Fund, for putting \$1.7 million into the Farmland Preservation Trust Fund, and for supporting the "million acre" open space goal. It also gets an **F** for not supporting the very modest enforcement expansion requested by the Governor. For proposing "special provisions" to the budget, the House gets a **D** as environmental agencies must now spend valuable time making studies on relocating their offices, speeding up the issuance of permits, and finding ways to save beachfront development from sea level rise – all without any additional funding. The House gets a **B** for authorizing the Environmental Review Commission to consider and make legislative recommendations on the Estuarine Shoreline Protection Stakeholders report. Finally, the House gets a **D** for pushing a bill to allow corporations to make deals on polluting the water more, in exchange for polluting the air less, or vice versa. Fortunately the bill died.

■ **AREAS FOR IMPROVEMENT:** Next year the House needs to draft and pass legislation implementing the NC Estuarine Shoreline Protection Stakeholders' recommendations. It is also high time for it to take the lead on passing Smart Growth legislation for our state. The House and Senate would do well to drop its so called "Environmental Excellence" bill, and instead require greater reductions in pollutants from companies, not less.

Local Governments

1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000
D+	D+	D+	D+	C	D+

■ **COMMENTS:** Local governments get an **F** for allowing the North Carolina League of Municipalities as well as the Association of County Commissioners to oppose passage of a strong flood plain management law. Local governments also earned an **F** for weakening the CRC's 30-foot buffer rule. Up and down the coast, there are just a few local governments we award an **A** for making good faith efforts to come to grips with their environmental problems – but they are still too few. We are encouraged that environment and growth management issues are becoming a bigger factor in local elections.

■ **AREAS FOR IMPROVEMENT:** Get ready to deal with protecting water quality at the local level. Many coastal governments will need to get federally authorized permits from the State – and these permits can't be issued unless a local government demonstrates it can protect water quality from polluted stormwater runoff. Local governments should see these permits as an opportunity to protect the goose that laid the golden egg.

Citizens

1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000
B	A	A	B+	B+	B+

■ **COMMENTS:** It may sound self-serving, but it's simply inspiring to witness the fine job so many citizens do to protect our coast. Thousands of citizens have adopted the coast as their "special interest," and they are working hard to counteract the polluting influence of vested and powerful interests. They turned out in force to protect forested wetlands, push for strong permits for PCS Phosphate and Nucor, and stronger growth management in New Hanover County, and voted loudly on the proposed sand tax in Carteret County.

■ **AREAS FOR IMPROVEMENTS:** Environmental laws are designed for active citizen participation so as to balance the influence of the regulated community. The number of people working to protect our coast keeps getting bigger – it just needs to keep on growing until the noise they make can no longer be ignored.



YEAR IN REVIEW

While Hurricane Floyd made headlines, many other events were equally news worthy. Here's how key coastal issues continued to transform our coast during the past 12 months.

PROTECTING WATER QUALITY

Autumn 1999

■ The Environmental Management Commission (EMC) voted unanimously to uphold their ban on the destruction of wetlands by developers, but exempted agriculture and forestry. In response, the NC Home Builders Association, NC Citizens for Business & Industry, NC Aggregates Association, NC Farm Bureau Federation, Inc. and individuals followed with a lawsuit that challenged the State's wetlands rules.

Spring 2000

■ After three years of debate, New Hanover County voted to require developers to identify the location of wetlands in building site plans submitted to the county for approval.

■ Sixteen model projects were initiated or expanded by the Federation to demonstrate natural techniques to control erosion and restore water quality and habitat along the shore. Sites include Hammocks Beach State Park, NC Maritime Museum Gallant's Channel site and Wrightsville Beach Community Park.

■ Huggins Island was permanently protected through a grant from the NC Clean Water Management Trust Fund. The island's 2.8 mile shoreline and 110-acre maritime live oak forest was spared from development and incorporated into the NC State Parks System in May.

■ The Coastal Federation and NC Environmental Defense helped organize a forum at the Duke

University Marine Lab for the Habitat and Water Quality Committee of the NC Marine Fisheries Commission (MFC) to discuss water quality protection needs for oysters and clams. The Federation and Environmental Defense proposed a

set of recommendations and resolutions which were adopted by the committee and will be included in the Fishery Management Plans for oysters and clams.

■ Coastal Resources Commission (CRC) member David Beresoff offered a resolution asking the secretary of the Department of Environment and Natural Resources (DENR) and EMC to conduct a formal review of the way in which conditionally approved shellfish waters are categorized and prioritized relative to the State's 303 (d) List. In response, the Division of Water Quality announced its plan to form a workgroup to review DENR's policies with regard to shellfish waters.

■ Following this resolution, the Coastal Federation was asked to host a meeting with two state division directors, representatives of four state divisions and members of the CRC, EMC and MFC to discuss what to do about polluted shellfish waters. The Federation is promoting the requirement of a Phase II NPDES stormwater permit for all coastal local governments with shellfish waters. A follow-up meeting will be held in the fall of 2000.

Summer 2000

■ The Environmental Management Commission proposed that forestry projects be required to inform the Division of Water Quality before constructing ditches in wetlands. The prior notification provision was defeated by the EMC on a split vote. Gov. Hunt's staff was nowhere to be seen. Some development interests are now claiming the forestry exemption, opening the door for continued ditching and draining of wetlands.

■ The Estuary Habitat Restoration and Partnership Act, HR 1775, was approved by the US House and Senate. The Federation has worked for six years with ten other estuary groups from around the country to develop and push for passage of this legislation which will set a national goal of restoring one million acres of estuarine habitat by 2010 and authorize \$200 million of federal matching funds over five years for estuary restoration.

■ Working with NC Sea Grant, the Federation received a Major CAMA permit for up to 30 construction sites. The permits will be used for natural shoreline stabilization projects and will help to expedite the permitting process.

■ The Federation joined with the Southern

Environmental Law Center and other environmental groups and appealed to the US EPA to reject the adequacy of the state's 303 (d) list. The list should identify all polluted water bodies and sources of impairment, and establish total maximum daily loads (TMDLs) to restore water bodies to their intended uses. Instead, the list ignores many impaired water bodies. For those contaminated shellfish waters it does identify, the State says it has no idea how to go about cleaning them up and therefore no action will be taken. More than 56,000 acres of shellfish waters are permanently closed along coastal NC, and virtually all the coastal waters from Carteret County to South Carolina are closed to shellfishing after a heavy rainfall. The Coastal Federation has made it a priority to monitor the Division of Water Quality's documentation of the condition of our waters.

ACHIEVING ENVIRONMENTAL LAW AND ORDER

Winter 1999

■ The CRC voted unanimously to approve a 30-foot buffer between development and all coastal waters. The CAMA rule became permanent on August 1, 2000. Several exemptions are being considered that might water down the rule's effectiveness.

■ The temporary 50-foot buffer rules to protect riparian buffers in the Tar-Pamlico River Basin became effective on January 1, 2000. The Environmental Management Commission also approved permanent rules for the Neuse River and Tar-Pamlico River basins that went into effect on August 1.

■ The Federation, Environmental Defense and the Pamlico-Tar River Foundation (PTRF) reached an agreement with the State regarding permits issued to build a steel mill on the Chowan River. (The groups sued the State for approving environmental permits before completing an environmental assessment of the Nucor project and for issuing an air permit that did not comply with Best Available Control Technologies. In a second lawsuit, the groups challenged the State for issuing a CAMA permit to Nucor for the construction of a docking facility on the Chowan River.) The settlement resulted in a change in the way the State does business with industry. In the future environmental permits and plans will be



DENNIS SHULTZ



held in abeyance until the environmental review process has been completed.

■ PCS Phosphate requested an Air Quality Permit from the State to increase emissions of sulfur dioxide and sulfuric acid mist at its sulfuric acid plant along the Pamlico River Estuary in Beaufort County. The Federation and PTRF worked to turn out the public for a hearing on the PCS Air Quality Permit and submitted detailed comments on the application.

Summer 2000

■ The CRC appointed a subcommittee to evaluate the current CAMA shoreline stabilization rules, identify CRC goals, and make recommendations for rule changes. The NCCF President and Vice President were appointed to this subcommittee.

LIVING IN HARMONY WITH A RESTLESS SEA

Autumn 1999

■ Hurricane Floyd was one of the worst disasters in the state's history. Nearly 6,600 square miles of eastern North Carolina flooded when Floyd made landfall on September 15, 1999. Sixty-six of the state's 100 counties were declared disaster areas and 52 citizens lost their lives.

■ Following Hurricane Floyd (the state's sixth major hurricane in four years) the Federation and eight other environmental groups developed *Principles to Guide Disaster Relief to Reduce Future Damage and Protect the Environment*. The recommendations include: removing sources of pollution from 100-year flood plains, reducing subsidies of risk, enhancing our natural defenses against disaster, and improving future planning.

■ Gov. Hunt requested \$76.7 million in federal aid for beach nourishment as part of his "emergency package" following Hurricane Floyd. All told, Congress spends \$85 million per year on beach nourishment for projects throughout the country. Congress refused the request. Meanwhile, the US Army Corps of Engineers is hard at work looking at the feasibility of pumping sand on beaches along 83.5 miles of the state's

beaches in 11 communities.

Winter 1999

■ At the annual meeting of the North Carolina Shore and Beach Preservation Association some speakers attacked the Coastal Federation for standing in the way of efforts to pump sand on beaches. Following the meeting, Federation board and staff met with Association leaders to examine their claims that beach renourishment has a positive economic benefit with few negative environmental impacts.

■ The State Legislative Study Commission on Coastal Beach Movement – Beach Renourishment and Storm Mitigation was formed. The 18-member Commission is charged with studying beach erosion issues and preparing recommendations for action by the State Legislature. In addition to investigating the placement of dredged spoils on beaches as a potential solution, the Commission was directed to look into real estate disclosure and land acquisition.

Spring 2000

■ In spite of a massive and expensive campaign conducted by the Carteret County Chamber of Commerce, local governments and the Carteret County Economic Development Council, county citizens overwhelmingly rejected a bond referendum to use county funds for beach nourishment.

■ Dr. Doug Wakeman, professor of economics at Meredith College, prepared an analysis entitled *The Economics of Beach Replenishment in North Carolina: What We Don't Know Can Hurt Us*. His study concludes that the financial data used to promote the economic benefits of renourishment is flawed in its analysis.

■ The NC General Assembly attached a "special provision" to the state's budget mandating that the Department of Environment and Natural Resources prepare a funding plan to conduct beach renourishment projects on the NC coast by next May. The Division was given no money to prepare the plan.

Summer 2000

■ Marine geologist Stan Riggs addressed the NC Coastal Resources Commission and stated that changes in sea levels and the current hurricane cycle, combined with the underlying geology of many of the barrier islands, has begun to rapidly erode the islands. He predicts that Pamlico Sound will soon become a "bay" as the chain of islands that form the Outer Banks break apart, and other barrier islands like Topsail and Figure Eight are doomed to virtually disappear.

GROWING SMART

Winter 1999

■ Following the Coastal Resources Commission's (CRC) decision to impose a moratorium on the preparation of new Coastal Area Management Act (CAMA) land use plans, the Coastal Federation and the Neuse River Foundation were appointed to serve on the Land Use Plan Technical Review Team. The team was charged with reviewing the current program and submitting recommendations to the CRC for improvement. A final report was submitted to the CRC in September. A consultant is now charged with preparing a set of draft rule language to be based on the Team's recommendations.

■ The US Environmental Protection Agency issued final rules for the NPDES Phase II Stormwater program. This program requires local governments to obtain permits to control stormwater runoff in urbanizing areas by 2003, shifting the burden of water quality protection to the local level. The Federation is serving on the Statewide Stormwater Initiative stakeholder group along with the Neuse River Foundation, Environmental Defense, and Sunset Beach Taxpayers Association. This group is charged with addressing the state's stormwater management problem and will prepare recommendations that will be presented to the Environmental Management Commission.

Spring 2000

■ The Federation staff served on the Central Coastal Plain Capacity Use Area (CCPCUA) Stakeholder Committee. The Committee created draft rules for permits of those using more than 100,000 gallons of water per day in the "Area" and a system of monitoring for withdrawal of more than 10,000 gallons per day. After the rules were drafted, several local governments and the hog industry have worked to weaken them, prompting the formation of a legislative committee. Meanwhile, water levels in coastal plain aquifers continue to drop.



MIKE HALIMINSKI, Waves, NC



LEGISLATIVE YEAR IN REVIEW

The Short Session of the General Assembly convened in May 2000 with a glaring problem — too many needs with too little revenue. Several unfavorable court judgments against the State, as well as the destruction wrought by Hurricane Floyd led to a \$450 million shortfall.

FROM A BUDGETARY STANDPOINT, THE YEAR

2000 was not a glorious success. Gov. Hunt proposed little for the environment, and for the most part the legislature gave even less. The only bright spot was land and water conservation.

Although Hunt recommended no funds for the Clean Water Management Trust Fund, the program did receive a \$30 million appropriation, the minimum required by law. In addition, the Farmland Preservation Trust Fund (FPTF) received \$1.7 million, a threefold increase over last year.

In the realm of environmental enforcement, the budget failed miserably. Gov. Hunt requested nine positions for stormwater management and three for sedimentation and erosion control. The Department of Environment and Natural Resources (DENR) needs the stormwater positions to implement Phase II of EPA's new stormwater program for small cities. The legislature ignored the request.

Special Budget Provisions

Tacked on to the budget (H1840) are items known as special provisions. In 2000, special environmental provisions were greeted with celebration and trepidation.

The most jubilant item involves the future viability of the Clean Water Management Trust Fund (CWMTF). The special provision expands funding for the CWMTF to \$40 million in July 2001, \$70 million in 2002, and \$100 million in 2003. The CWMTF supports land acquisition to protect and restore water quality, and finances repairs to faulty wastewater treatment plants, among other projects.

A second budget provision with mixed implications is the One Stop Permit Assistance Pilot Projects. Legislators are seemingly concerned about delays in permitting and lack of coordination between agencies. Rather than providing DENR with adequate staff to review new permits, the legislature is requiring DENR to provide each permit applicant with a timeframe for agency action. If DENR fails to approve or deny the permit within 60 days of its estimate, then it's automatically approved. The pilots will be tested in the Wilmington and Mooresville regions. A report to the legislature is due on April 1, 2001.

Under another budget provision DENR must develop a multi-year plan for conducting and funding beach nourishment projects on barrier islands. The plan must also recommend policies or legislation to make moving structures back from the ocean more feasible for landowners, and improve public beach access through acquisition of properties in ocean hazard areas. The plan is due by May 1, 2001.

Don't get too comfortable. The budget contains a requirement that DENR examine the feasibility of relocating the Division of Coastal Management's Central Office from Raleigh to one of the twenty coastal counties. A report on the study is due on January 15, 2001, just prior to next year's budget process.

Last, but not least, the House and Senate Appropriations Subcommittees on Natural and Economic Resources inserted a provision that allows them to study, and potentially overrule, the proposed rules for the Central Coastal Plain Capacity Use Area. The Capacity Use Area encompasses 15 eastern counties that tap underground rivers, known as aquifers for water. Most aquifers are depleting faster than they are recharging. The report is due sometime in 2001.

Good, Bad & Ugly Legislation

Perhaps the most ambitious-sounding law passed by the legislature was Gov. Hunt's Million Acres Plan (S1328). The plan establishes a statewide goal of preserving an additional million acres of open space and farmland by the end of 2009. Increased funding for the CWMTF and farmland preservation will help to meet this goal.

The legislature approved the Mountains-to-Sea State Park Trail (S1311) to support the development of a trail traversing the width of the state from Clingman's Dome in the Great Smokey Mountains to Jockey's Ridge on the Outer Banks. A bill (H1617) adding Lea Island to the state parks system was also passed. Lea Island is a 200-acre barrier island in Pender County that will be managed by the NC Audubon Society.

Each year, the General Assembly passes a bill outlining studies it will perform. This year's legislative study bill (S787) contains a good provision that requires the Environmental Review Commission (ERC) to review and make legislative

recommendations on the Estuarine Shoreline Protection Stakeholders Report. The ERC is made up of 14 lawmakers from the House and Senate. The stakeholder's report was developed in 1999 by a diverse group appointed by the Coastal Resources Commission (CRC) to design a comprehensive plan to restore coastal waters.

Big brother is watching! Legislators also passed bills that undermined previous decisions made by the CRC. The legislature directed the CRC to extend rules allowing developers to build on urban waterfronts (H1218) and to allow construction of houses within the new 30-foot buffer on previously platted lots of 5,000 square feet or less in intensively developed areas (S1272).

Efforts to control development in floodplains started out good, but ended up in the bad column. In response to inland flooding caused by Hurricane Floyd, the Hunt Administration sought to require structures in the 100-year flood plain to sit two feet above the ground. A compromise bill requiring a one-foot rise passed the House, only to be stripped out in the Senate. The final Flood Hazard Prevention Act (S1341) makes it optional for local governments to adopt building restrictions in the 100-year floodplain, but provides minimum requirements and modest incentives if they do.

The prize for the ugliest bill belongs to one that goes by the pseudonym Environmental Excellence (S1132). Under the proposed legislation, the Secretary of DENR would be empowered to enter into agreements with companies that propose to pollute one medium more (like water) in exchange for polluting another less (like air). Currently, DENR is required to seek the maximum reduction of pollutants from all sources. The House leadership recognized the controversial nature of the bill and buried it in the House Rules Committee. Although dead for now, expect Environmental Excellence to be resurrected by its supporters in 2001.

The 1999-2000 legislative session ended in July 2000. In November, the general election will anoint a new governor and could also change the make up of the House and Senate. Whatever happens and whoever wins, the General Assembly will be back in the saddle for the Long Session that begins at high noon on January 24, 2000.



2000 GOVERNOR'S RACE

For the 2000 State of the Coast Report, we decided to ask the Democratic and Republican candidates for governor to tell us about their priorities for the coastal environment and how they would achieve them in 900 words or less. Here are their unedited statements.



Mike Easley (D)

North Carolina faces an array of environmental challenges. From promoting water and air quality and reducing wastes to making mass transit succeed and preserving open spaces, we must take a smart, safe, sustainable approach to our air, water, and natural resources. Above all, we must remember that we do not inherit the earth from our parents, we hold it in trust for our children. Better protection of our precious unique coastline and

coastal region is critical. I am particularly sensitive to coastal issues having lived in Southport for fifteen years while working as a prosecutor and District Attorney.

As a child, I spent long hours walking along the rivers and sounds of North Carolina. I spent afternoons tramping through the backwoods of Nash and Edgecombe counties. As an adult, I still do. After Hurricane Floyd, my brother Sandy and I set out on a trek across areas devastated by the recent flooding. We were shocked at the filth and garbage we saw swirling in the waters and left on the land after the rivers receded. That spectacle made a lasting impression on me about the consequences of development in floodplains and on river banks.

I am concerned when my opponent dismisses the environmental challenges we face. He suggests that air and water pollution need not be a critical concern. It's true we have made progress in protecting the environment by strengthening environmental safeguards, but critical challenges remain. Pollution from urban development and agriculture continues to degrade our coastal water quality. Now is not the time to say we've made progress and that's good enough. As Governor, I will make aggressive, comprehensive environmental protection a hallmark of my administration.

I believe the most important environmental issues facing the coast are our needs for: (1) a comprehensive approach to water quality; (2) better marine resources protection; (3) smart, sustainable land use; and (4) vigorous environmental enforcement.

I am a person who likes to zero in on big problems and find a solution. I am not impressed by empty promises or small plans that tinker around the edges. That is the way I feel about the clean water issue. So I have developed a comprehensive clean water plan. My plan calls for implementing comprehensive, up-to-date, safety and quality standards for every body of water in this state. We need to control all sources of pollution. We need to test our rivers for harmful pollutants and then look back upstream to develop an enforceable plan that identifies the pollution sources and gets them under control.

The comprehensive clean water plan I released last March starts with the goal of abolishing the open air hog lagoons and sprayfields that now pollute so much of the air and water in eastern North Carolina. Throughout my tenure as Attorney General, my office has been battling and shutting down polluting hog farms. Now is the time for bold action to require hog lagoons to be phased out in favor of newer and cleaner technologies for managing hog waste and we have taken the first critical step. I was proud to announce recently a major agreement between my office and Smithfield Foods that will set the stage for phasing out open-air lagoons and sprayfields in North Carolina.

I also believe that, to meet the environmental challenges we face at the coast, state and local governments must vigorously enforce sedimentation, wetlands, and other environmental protection laws. Punishment for illegal draining, dumping, or run-off must be swift and substantial. Developers should be required to submit detailed information about potential threats to wetlands, floodplains, or other sensitive areas before permits are granted, and loopholes in state and federal wetlands protection laws must be closed. I will push for greater support for coastal land trusts, environmental scientists and academics, and volunteer monitoring groups, as well.

I am proud of my record of coastal protection as Attorney General but it has been frustrating to see enforcement agencies handcuffed at times by inadequate resources and certain weak laws. As Governor, I look forward to putting in place policies that strengthen enforcement, and shield coastal waterways and marine life before damage is done.

The good, hardworking families of North Carolina have a right to a clean, safe coast. As Governor, I will fight hard to guarantee it.



Richard Vinroot (R)

It is the Governor's responsibility to help the public preserve and protect the environment.

There are critical environmental issues facing North Carolina – especially our coastal region where our growing population creates special pressures on the ecology.

My first priority will be to make sure all environmental decisions are based on science, not politics. It is very tempting for politicians to play politics with the environment by pitting one group against another, by blaming one small group for all environmental problems while allowing more politically powerful groups to avoid their responsibility to protect the environment. But that is wrong.

I will support scientific research to identify environmental problems, their causes, and their real solutions. For example, we know pollution going into our rivers has been reduced by 65 percent in the last 20 years. We know even some of our particularly stressed rivers, like the Neuse, are slowly improving. However, significant problems remain.

We must have sound, science-based research to identify the causes of these problems and correct them. We don't need to play politics, which will only lead to ill-founded solutions that will create more problems. For example, recall how the EPA mandated the use of MTBE in gasoline to reduce smog, only to find out later that it was actually creating water pollution and cancer risk.

When there is a need for resources to clean up environmental pollution, my principle is simple. The polluter must pay to clean up the mess. Too often, general taxpayers have been called on to pay while polluters have escaped their responsibility.

As Governor, I will provide leadership. However, I will not be a governor who dictates to local coastal communities in areas like zoning where local communities should be allowed to rule their own affairs. I will encourage regional cooperation in areas like water and sewer as I did as Mayor. Regional cooperation must be voluntary and grounded in local governments closest to the people.

If we all work together, we can protect our environment and enhance the quality of life in North Carolina.



Want to Learn More on the Web?

Your Voice, Your Vote is a partnership of North Carolina newspapers and broadcasters whose goal is to promote substantive discussion of important issues in major statewide elections. The website contains full transcripts of interviews with gubernatorial candidates talking about their environmental views.

www.yyyv.com



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REPORT

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NC Division of Water Quality

910-395-3900 Wilmington
252-946-6481 Washington
Emergency 800-858-0368

Call to report fish kills, algae blooms, surface water discoloration or odors, groundwater contamination, sewer or stormwater runoff, and tree cutting near water in the Tar-Pamlico or Neuse river basins.

NC Division of Land Resources

252-946-6481 Washington
910 395-3900 Wilmington
Call for info on sediment plumes in surface water from construction, and land clearing of one acre or more for development.

NC Division of Marine Fisheries

800-682-2632 ext. 201
Call to report coastal fishing violations.

NC Division of Coastal Management

252-808-2808 Morehead City
910-395-3900 Wilmington
252-264-3901 Elizabeth City
252-946-6481 Washington

Call for info on dredging or filling in of coastal wetlands (tidal); and coastal construction, (i.e. house, bulkhead, pier or dock).

NC Division of Air Quality

910-395-3900 Wilmington
252-946-6481 Washington

Call to report on burning of tires or synthetic material, burning of log piles close to public roads or to dwellings, or offensive odors from hog farms.

US Army Corps of Engineers

910-251-4511 Wilmington
Call for info on dredging or filling in any non-coastal wetland.

NC Wildlife Resources Commission

800-662-7137
Call to report inland fishing and hunting violations.

NC Division of Shellfish Sanitation

252-726-6827 Morehead City
Call for info on shellfish or recreational beach closures.

US Coast Guard

800-424-8802
Call to report oil or chemical spills and littering of the waterways.

NC Department of Transportation

877-DOT-4YOU
Call for info on highway or road construction.

Learn More About NCCF on the Web

Visit the North Carolina Coastal Federation's (NCCF) web site to keep up with our activities, find out about meetings and action alerts, volunteer to help or become a member.

Members of NC Coastal Federation can also sign up for our electronic Action Alert network. To sign-up, just send an email to nccf@nccoast.org. Please include your full name, physical address and phone number in the body of the note.

www.nccoast.org

Send an email or call your legislators

You can find the email address and phone number of your state representative(s), state senator and US Congressmen on the NC General Assembly web page. At the top of the web page, click on "Representation," and then click on "Who Represents Me?"

The web site contains the text of all the bills listed in the article on page 18. Just click on "Bill Info," then click on "Bill Look-Up" and enter the bill info. You can also listen to real-time floor debates when they're in session.

www.ncga.state.nc.us

Help us evaluate the effectiveness of environmental agencies. We want to know how well agencies respond to citizens' requests for information and assistance. Call the NCCF to receive an evaluation form to use when you contact an agency for help, or find a form on our web site at www.nccoast.org.