

NORTH CAROLINA COASTAL FEDERATION

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COAST

STATE OF THE

R E P O R T



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NORTH CAROLINA COASTAL FEDERATION

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NCCF's Seventh Annual State of the Coast Report

Acknowledgments

North Carolina Coastal Federation

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 7,000 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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North Carolina
Coastal Federation

GRAPHIC DESIGN BY: Anita Lancaster, Jacksonville, NC



2001 State of the Coast Report

This is the NC Coastal Federation's 2001 Annual Report on the State of the Coast. Each year we release grades that rank how well we think decision-makers protected our coast. To put our grades into context, this report includes feature articles, vital statistics and calls-to-action to involve citizens in protecting our coast. — Todd Miller, Executive Director, NCCF

One magnificent summer day, I decided to take the day off and go out in the boat with my seven-year-old son. It was his last Friday of vacation before school started. What better way to end his summer (or my work week)? The tide is ebbing in Bogue Sound as we head off towards Bogue Inlet and Bear Island. My son Vance sits in the bow of our 16-foot flat bottom wood skiff with his overgrown puppy Sounder – a 115-pound Chesapeake Bay Retriever.

The trip down the Sound covers about ten miles. This short voyage illustrates the beauty and challenges we face in protecting our coast.

Even with our slow moving skiff, we catch and pass a pontoon boat. Aboard are two people who are obviously enjoying the day. Their feet up on the rails – and cold drinks in their hands, they throw a big smile at our barking dog as we pass.

Suddenly, a Harrier jump jet roars off the runway at Bogue Airfield. The fighter jet turns sharply through the docile clouds over Bogue Sound. It's gone in seconds – much like the tranquility we had been enjoying.

Near the Emerald Isle Bridge, there are a mass of new houses lining both sides of the Sound. Built close to one another and the water, all of these houses, driveways and yards leave little natural area to absorb rain.

Heavy thunderstorms yesterday mean the sound is closed today for the harvest of clams because of too much polluted stormwater runoff. We cut through the marshes near Cedar Point at the mouth of the White Oak River. Two kayakers quietly paddle up to a pair of great white herons fishing along the edge of the marsh. We slow and try not to create too much disturbance with our outboard. The birds fly off anyway.

After winding through a narrow tidal channel, we skip across a few final sandbars and make our way to Bear Island. We anchor near the mouth of a tidal creek that cuts almost all the way through the east side of the island to the beach. Only a couple of years ago, this creek was deep enough to navigate with good size boats. Now it's almost completely shoaled.

That's the nature of these islands – constantly changing. The creek was Bogue Inlet in the 1950's. Then the inlet migrated west. As it moved, a sand spit formed that became the banks of the creek.

Vance points to dead trees that have fallen into the water along the backside of Bear Island. He asks why? I tell him that sea level is rising and shorelines just about everywhere are eroding. He thinks for a moment, and then says he's hungry.

After eating lunch, we take our small skiff right across the very middle of the inlet over the sandbars that make up its ebb tidal delta. We make it to deep water near the "Point" at Emerald Isle. Sandbags line the west side of the inlet, put there to protect several private vacation houses and a town street.

The White Oak River acts like a spigot of water, causing the inlet to wag back and forth over time. The inlet is still migrating west under the bags until it elects to move east again. The line of bags keeps getting longer and higher – now a wall about eight-feet high for several hundred feet of what was once a sandy beach. As we motor into the inlet, there's at least a mile of beach that is now inaccessible to the public because sand bags form a roadblock for walkers and surf fishermen.

Heading back toward home, I look at Vance and think about my experiences growing up on Bogue Sound as a kid. It's changed a lot. My dad used to take me out in the boat to Emerald Isle before the bridge was built. There were just a few houses then and no mansions. Back then the beach was so wide we once saw a small airplane land right on it. Today huge houses line the advancing narrow beach, prompting calls for an expensive beach renourishment project.

As we get close to our house, I remember seeing a manatee here in the channel just a couple of weeks ago. It looked healthy, but had scars from propellers on its back. It would be exciting to see it again.

Then it struck me.

Just like no one wants to injure a manatee, almost no one intentionally sets out to degrade and pollute our

beautiful coast. But with 826,000 permanent residents and untold numbers of seasonal residents, the health of the coast is inevitably declining.

Everyone wants to take advantage of the natural wonders of our coast. The paradox is that the beauty and productivity of our coastal ecosystem may eventually be its downfall if we are not careful.

That's why this year's *State of the Coast Report* is dedicated to – and meant for – the people who truly love our coast. There are a lot of us out there.

The feature stories in this *2001 Report* follow a set of four basic goals we set in last year's *Report*. These four basic goals are central to our advocacy and conservation work – (1) Keep our beaches public and unspoiled; (2) Develop, promote and achieve environmental law and order; (3) Protect and restore water quality and habitat; and (4) Develop, promote and achieve cost-effective land use practices.

As you read through this report, you'll see that environmental challenges facing our coast are increasing at the same time our ability to manage these challenges is declining – a lethal combination for the health of our coast. Even worse, many political leaders show little interest in taking the necessary steps to reverse the decline.

There are dozens of laws and more than 90 government programs that should help to achieve these goals. But as you'll read, many of these programs aren't working very well because they aren't adequately funded, staffed, and enforced.

You'd get really mad if someone or something you cherished were harmed. It's time for the millions of people who love our coast to feel that same type of outrage.

Let's face it. Most politicians will act responsibly when they are pressured to do so by public opinion. It's time to turn up the heat. Let your passion for the coast be felt by the people who represent you. It's time to show your love for the coast.



Coastal Report Card



Each year the Coastal Federation issues grades on how well governments and citizens have protected and restored our coast. This year's grades reflect a growing dynamic of increased demands on coastal resources and decreased capacity of government agencies to enforce coastal protection laws.

Gov. Easley and His Administration*

1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
C-	C+	I	B	D+	C+	I

*Note: 1994 - 2000 grades reflect Gov. Hunt's administration

■ **COMMENTS:** As a candidate for Governor, Mike Easley promised in his Comprehensive Clean Water Plan that within two years of taking office, he would implement his *River Back* approach to identify pollution sources and clean them up. He said that no source of contamination could be excused from the responsibility of cleaning up our waters, and that "adequate borders, buffers and wetlands, along with other 'best management' strategies will be a necessary part of curbing 'non-point' source pollution." Governor Easley also pledged to abolish swine waste lagoons, strengthen environmental enforcement, and inform state and local environmental agencies about proposed sitings of industrial facilities early in the process.

Shortly after Easley assumed power, the state's budget crisis was revealed to the public. The new governor began to slash the budgets of most state agencies and environmental programs, froze staff, cut travel and reduced the number of meetings of regulatory commissions. It can be argued that the Governor had no choice but to cut back on spending. Even so, the Easley administration's lack of initiative to move forward with his environmental agenda sends a loud and troubling message. The one encouraging note is that he has three years to fulfill the expectations created during his campaign. This year, we are giving Gov. Easley an **Incomplete**.

■ **AREAS FOR IMPROVEMENT:** The Governor needs to develop a coastal agenda that provides a clear blueprint for accomplishment. We hope his agenda includes the adoption of an effective CAMA land use planning program, enhanced wetlands protection, good use of the EPA Phase II Storm Water Program, a long-term management strategy for NC's migrating barrier islands, and adoption of Coastal Habitat Protection Plans. The Governor needs to increase funding for state regulatory agencies, and fully fund the Clean Water Management Trust Fund. He also needs to make visionary appointments to state environmental regulatory commissions and not just fulfill political favors. Above all, he'll need to make protecting the environment a priority issue.

NC Senate

1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
D	B	B+	B-	B	C	C

■ **COMMENTS:** Under the leadership of President Pro-Tempore Marc Basnight, the Senate has championed the Clean Water Management Trust Fund (CWMTF) since its inception in 1996. If this were the only issue on which we graded the Senate, we would have given them an **A+**. We give the Senate a **B** for passing the Clean Smokestacks bill (SB 1078), and a **D** for cutting more than 50 positions in DENR. However we give them an **F** for passing a bill (SB 1037) at the last minute that would allow industries to construct new plants before securing air permits. Overall, it's been a lackluster year and our final grade is a flat **C**.

■ **AREAS FOR IMPROVEMENT:** The CWMTF is slated to receive \$40 million this year and \$70 million next year. Environmental agency staffing is suffering and desperately needs reinforcements. If the economy continues to sink, the pressure will mount to cut the budget even deeper. Next year, the Senate will need to insure that the CWMTF is fully funded and increase the number of environmental agency staff.

NC House

1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
D	C-	B+	C	C-	C-	D

■ **COMMENTS:** We are disappointed with the State House. Although the Senate included \$40 million for the CWMTF, the House cut this amount in half in its approved budget. For not fully recognizing the value of the CWMTF, but finally agreeing to the Senate's mark of \$40 million, we give the House a **C**. For holding up a Senate air quality bill (SB 1078) that could reduce mercury emissions and hence concentrations in coastal fisheries, we give the House a **D**. And for proposing a bill (HB 418) that would create a commission and funding mechanism to push scads of beach nourishment projects, we also give them a **D**. Overall, we charitably give the House a **D**.

■ **AREAS FOR IMPROVEMENT:** It is not clear why the House Environment Committee is dominated with legislators who do not seem to favor environmental protection. We would like the House to prove us wrong. They could do that by not tinkering with Phase II stormwater rules, new

wetland rules and land use planning rules that are slated to go into effect next year, and by sticking with \$70 million for the CWMTF in next year's budget.

Local Governments

1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
D+	D+	D+	D+	C	D+	D

■ **COMMENTS:** Only a handful of the nearly 100 local governments on the coast have figured out that they are in the best position to protect their environment. Instead, too many counties and towns complain that federal and state agencies are intervening in their business by imposing stricter environmental laws and regulations. *What do they expect?* If local governments don't step up to the plate and do their jobs effectively, someone else will have to take control of these natural resources.

■ **AREAS FOR IMPROVEMENT:** Get busy implementing the new CAMA land use planning rules and the EPA Phase II stormwater program. Hats off to the counties that have voluntarily embraced the new rules. Failure by others to do so will be at the peril of the local governments themselves since new federal requirements make them responsible for protecting and restoring water quality.

Citizens

1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
B	A	A	B+	B+	B+	C-

■ **COMMENTS:** Normally, we're accused of being self-serving when it comes to the grades we give to citizens. Quite simply, the willingness of so many people to share their talents, limited time, and resources to help protect their coast never ceases to amaze us. We're still impressed. But we must face facts. Rapid development and intensive land uses are causing environmental problems on our coast to grow faster than citizens are working to resolve them.

■ **AREAS FOR IMPROVEMENT:** Plenty of people care about the coast. There are more than a million full-time and seasonal residents who depend on the coast as a place for work and play. We must have more vigorous public participation to hold decision-makers accountable for how they manage our coast if there is any hope that government will be effective in coastal protection.





Planning for the Next Generation

Planning can help communities direct development to appropriate areas with minimal impact on the environment. But plans must be well thought-out and carried out to make a positive difference.

We've all heard the expression, "The whole is greater than the sum of the parts." On the whole, water quality in the coastal region is suffering. You can't simply blame the Wakemans who installed a bulkhead to protect their soundside lot. And it's hard to point the finger at the Halls who filled in the wet spot on their land to build a new driveway. The foresters who ditch the land before harvesting the trees aren't the only ones at fault either. Nor are the farmers who use canals to keep their cropland dry.

So, who's the culprit? It's the cumulative impacts of poorly planned and poorly implemented development and land use activities.

As more and more people move to the coast, the pressure increases to build homes, roads and shopping centers in poorly drained areas. Before you know it, shellfish beds and beaches are closed, and each rainstorm turns that creekside view into a stream of mud.

Paper Tiger

Concerns about runaway growth imperiling the coastal environment and economy aren't new. The October 20, 1967 edition of the *Carteret County News-Times* contained a full page entitled, "What's Going to Happen? The Land Development Plan Gives you a Peek Into the Future." This plan prepared by the county planning board was quite forward thinking and ahead of its time.

It included bold policies, such as the need to buy the western end of Bogue Banks for a public park to provide adequate public access to the beach. It also recommended maintaining open space and wildlife areas around fragile coastal estuaries, and even encouraged "unoffensive industrial" development.

Few of the policies recommended by the county in this plan ever materialized. In fact, ineffective environmental protection by coastal local governments fueled national and statewide concern that runaway growth would spoil the North Carolina coast.

This 1967 plan set out to accomplish many of the same goals envisioned for local land use plans as a result of the Coastal Area Management Act (CAMA) enacted in 1974. CAMA uses a two-pronged approach of regulations and planning in the 20 coastal counties that border North Carolina's sounds or river estuaries.

Under state law, all coastal counties are required to produce periodic land use plans that balance economic

development with resource protection. Land use plans (LUP) were intended to be a vehicle for local governments to perform long range planning for their communities. They are also to serve as a guide for state and federal agency decisions regarding grants, loans and permits.

The second tool is the CAMA permit that sets standards to limit environmental impacts caused by development within Areas of Environmental Concern (AEC). The state Coastal Resources Commission (CRC) establishes standards for CAMA permits.

Permitting is a reactive approach that responds to the development project of the day; while planning is proactive and has the capacity to address cumulative impacts before it's too late. When enacted by the General Assembly in the early 1970s, CAMA was one of the first efforts in the country to combine local-level land use planning with state level regulations to protect natural resources. But it didn't quite work out as planned.

Richard Norton spent years pouring over CAMA land use plans. While at the University of North Carolina at Chapel Hill (UNC-CH), Norton wrote his doctoral dissertation evaluating the effectiveness of CAMA in protecting natural resources.

"Despite the enactment of such a sophisticated growth management program, North Carolina's coastal water quality, the coastal region's resilience to catastrophic storms, and its unique character have all continued to decline over time. This decline reflects a collective-action or 'tragedy of the commons' problem attributable to land development activities taking place throughout the coastal region that create negligible impacts individually, but that taken together are resulting in substantial cumulative and secondary impacts," concludes Norton.

As he investigated the cause, Norton determined that local land use plans had separated the dual objectives of development and resource protection. Local governments were using the plans to "focus on the economic and community development issues of greatest concern to localities ... without giving comparable attention to resource protection issues," he reported. Resource protection issues were "almost uniformly" left to the state. The result is a "fragmented intergovernmental growth management program," according to Norton.

Dick Bierly, president of Carteret County Crossroads, agrees with Norton's assessment. "What was intended to be a cooperative effort between local governments and

state officials has turned into a bureaucratic, complex, superficial and consultant-driven process," says Bierly. He contends that, "Often, plans simply echo state regulations on matters like stormwater runoff control despite localized problems needing attention."

After two and a half decades of local plans, the state CRC called a halt to the charade. In September 1998, the CRC enacted a two-year moratorium on land use plans and established an external Review Team to reinvent land use planning.

Politically Incorrect

The bulk of pollutants that degrade coastal waters come off the land every time it rains. Stormwater flushes pet and wildlife wastes and fertilizer from lawns, oil and anti-freeze from roads and parking lots, and sediment from construction sites and delivers them directly into streams.

Stormwater pollution is a product of developed land. Without buildings and pavement and without ditches for agriculture and forestry, rainwater would naturally absorb into the land. As areas become more developed, impervious surfaces and ditches serve to accelerate the flow of polluted stormwater into nearby waterways.

In the coastal region, stormwater contaminates estuaries with fecal coliform bacteria and associated pathogens. After a hard rain, most shellfish beds in Carteret, Onslow, Pender, New Hanover and Brunswick counties are closed. Stormwater also closes beaches up and down the coast as pollutants flow through pipes from the streets to the ocean, making it unsafe to swim.

Recognizing the role stormwater plays, the state Environmental Management Commission (EMC) enacted coastal stormwater rules in 1988. When the rules were initially discussed, they were based on the best available science. The proposed rules established a maximum 10 percent built upon area (houses, driveways, garages, etc.) for low-density development using no stormwater controls within ½ mile (2,640 feet) of shellfishing waters.

Then politics entered the picture and the rules were watered down. The built upon limit was increased to 25 percent and the area covered by the rule was decreased to 575 feet from shellfish waters. In addition, higher density development projects were allowed to use engineered stormwater control systems, unless they were within 575 feet of Outstanding Resource Waters (ORWs). High-density



Plan It Earth

No one fully knows what the future will hold. That is part of the mystery of life.

But trends can be plotted, based on the past events, which allow scientists to come pretty close to predicting what will happen.

While the Bush Administration is questioning the validity of global warming, there is no one disputing the phenomenon known as sea level rise. Why? Because the old shorelines are available as evidence.

Sea level rise is a complex process involving melting ice, land sinking under the weight of added water on the continental shelf and oceans that expand as water temperatures rise. Geologists have plotted the rise and fall of oceans which seems to happen every 100 thousand years or so.

The last peak in sea level occurred 125-130 thousand years ago. When the sea finally receded, it left in place the old barrier islands. These former islands are now known as Beaufort, Morehead City and Harkers Island, among others. What is interesting is that sea level today is almost at the same point it was back then.

During the last century, sea level along the mid-Atlantic coast has risen 12 to 16 inches, depending on local conditions. Jim Titus, a sea level expert with the US Environmental Protection Agency (EPA), advises, "It is reasonable for US planners to assume a one to four foot rise in the next 100 years, with two feet most likely." Sea level takes a very long time to recede, but it rises very quickly. Titus believes that global warming could accelerate that rise even faster.

Unlike geologists who think in ages, urban and community planners tend to think in planning cycles. "We tend to use these five year increments in planning," said Walter Clark with NC Sea Grant. For almost a decade, state guidelines have directed coastal governments to develop policies for restricting development in areas susceptible to sea level rise.

NC Sea Grant Program looked at the issue last year and found, "After examining the 20 county plans and several municipal plans, it is clear that most local governments have all but ignored this charge." Most county plans simply point to the state for solutions and to scientists for more exact information on the rising sea.

But the repercussions of waiting could be catastrophic, "more so in the north than it is in the south because in the southern area the slope is steeper," says Dr. Stan Riggs, a coastal geologist at East Carolina University. Riggs points out that the slope of the land on the southern coast of NC rises 10 to 20 feet almost immediately. But on NC's northern coast, elevations remain very close to sea level up to 50 miles inland. As a result, sea level rise could cause vast areas of land to be submerged by the end of the century.



projects contribute lots of increased runoff into coastal waters, while engineered stormwater control systems they employ are not designed to control bacteria in runoff.

Politics won out and coastal waters continued to degrade. Since the stormwater rules went into effect, more than 1,000 acres of ORWs, so designated because of their superior water quality, have been closed to shellfishing and classified as impaired. The NC Division of Water Quality found that 28,058 acres of shellfishing waters are impaired because of pollution in the White Oak River Basin alone.

Be Part of the Plan

Citizens of the coastal region take heart! There are two new tools to protect and restore water quality. And both tools require your active involvement.

The CRC is putting the finishing touches on new, improved rules for CAMA land use plans (LUP). A diverse stakeholder group helped the CRC develop the proposed LUP rules, with significant input from the Coastal Resources Advisory Council (CRAC).

As a result, local governments may soon have new tools for managing growth, including a land suitability analysis and six resource management goals on which to base local policies. The new LUP rules are scheduled to go into effect on August 1, 2002.

The second tool is a new National Pollutant Discharge Elimination System (NPDES) permit that requires small municipalities and counties to develop comprehensive stormwater management plans. The new permit and plan, also known as Phase II stormwater requirements, will be administered by the state Division of Water Quality (DWQ) and take effect on March 10, 2003.

The NPDES stormwater permit and plan will be required of municipalities with populations of 10,000 or more, densely developed areas with at least 1,000 people per square mile, and small watersheds that are not meeting all water quality standards. The NPDES stormwater permit also applies to construction sites disturbing an acre or more of land.

The LUP and stormwater plans will provide new effective tools for local governments to manage growth in fragile coastal areas. The two plans go hand-in-hand. In fact, local governments that prepare an Advanced Core LUP may use their plan to help meet the requirements of other planning programs, such as Phase II Stormwater requirements, that address the CAMA goals.

Most importantly, both plans contain specific requirements for substantial and continuous citizen involvement in developing the plans and making sure they are carried out. Citizen involvement is the critical component of any planning effort, according to Dr. Ray Burby with the Department of City and Regional Planning at UNC-CH. Burby says, "Good plans stem from planning processes that involve a broad array of stakeholders."

The challenge to planners, Burby says is "to stimulate broader involvement by stakeholders by directly inviting more groups to take part in the planning process and by providing opportunities for dialogue in which planners both inform citizens about planning issues and listen to citizen concerns."

But plans must also be implemented. On that count, Burby has found, "Good plans accompanied by broad stakeholder involvement are needed if plans are to make a significant difference to the actions of local governments."



New tools for coastal restoration and protection

NEW CAMA LAND USE PLAN:

- Improved Citizen Participation Plan
- Land suitability analysis to evaluate natural features
- Three choices of plans: workbook, core, or advanced core
- Local policies must mirror six state goals, including water quality
- Five-year action schedule, with status report every two years
- Future funds tied to implementation

PHASE II STORMWATER PERMIT & PLAN:

- Public education and outreach
- Public involvement and participation
- Illicit wastewater discharge detection and elimination
- Construction site run-off controls
- Post-construction stormwater management and monitoring
- Pollution prevention and good housekeeping measures

True to Plan?

Noted economist Dr. Marion Clawson once remarked, "Bad as the plans have been, their implementation has been worse."

Curious to know how existing stormwater plans are working, NCCF dispatched its summer Doris Duke intern into the field. Allison Castellon examined reams of stormwater plans late into the night, crawled through thickets of high weeds to locate stormwater ponds, and trounced all over Carteret County "ground-truthing" state approved stormwater permits.

We randomly selected 39 permits out of 201 issued in Carteret County. We evaluated 13 low-density development projects, and 26 high-density projects. Of the high-density projects, 12 relied primarily on infiltration techniques to control stormwater, and 14 used wet detention ponds as their primary stormwater control mechanism. Although a small survey, it does show some interesting trends.

Overall, our survey found that almost 95 percent of the randomly selected projects we reviewed failed to comply with one or more requirements of their stormwater permit, which included both infrastructure and maintenance criteria. We also found that one in four projects failed to fully install the stormwater control infrastructure required by their permits.

Low-density development can have a maximum built upon area of 25 percent within ½ mile of SA (shellfish) waters or 30 percent beyond ½ mile of SA waters. SA waters are important because they can support commercial shellfishing, swimming and boating activities. State rules exempt these low-density sites from using stormwater controls because the runoff is presumed to be absorbed by the remaining undeveloped land.

The survey found that three of the 13 randomly selected low-density sites appeared to have more impervious surface on the ground than approved in the blueprint. Almost half (46.2%) of the low-density sites installed extra stormwater controls that were not approved by the state Division of Water Quality (DWQ). Controls included additional grassed swales, catchment basins, piped conveyances transporting drainage water, and infiltration basins.

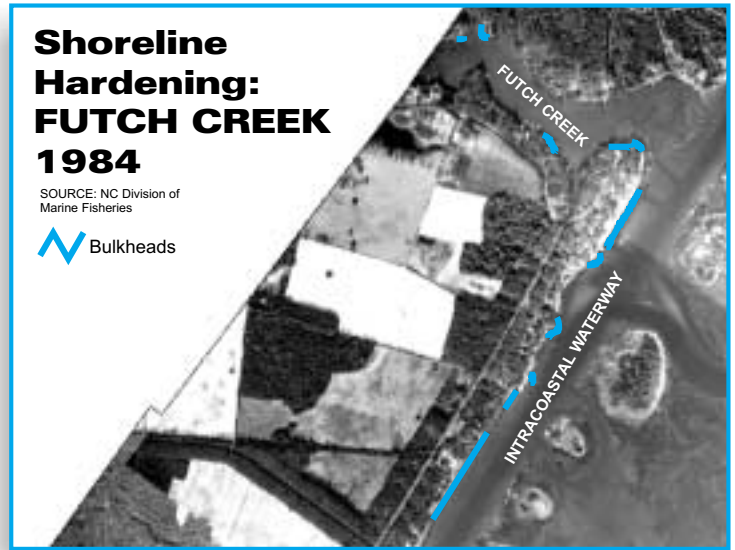
The use of additional controls for low-density sites further demonstrates that a 25 percent built upon area is too high to adequately control stormwater. In addition, over three-fifths (61.5%) of the low density sites failed to record all required deed restrictions to both limit the built upon area to 25 percent and prevent the filling of swales by future owners. Here today, gone tomorrow.

Every type of stormwater system has an efficiency rating for removing pollutants. The efficiency rating is based on proper maintenance of the system. The survey showed that only 10.3 percent of all stormwater project sites visited had met all maintenance requirements of their permits.

Shoreline Hardening: FUTCH CREEK 1984

SOURCE: NC Division of
Marine Fisheries

 Bulkheads



Maintenance includes mowing vegetation regularly, keeping grassed swales and detention and infiltration basin vegetated, inspecting and repairing eroded areas, and removing built-up sediment from detention ponds, infiltration systems and grassed swales. Here's what we found:

- Only 12.8 percent of all sites had stormwater systems that were satisfactorily vegetated. Poorly vegetated sites can increase erosion.
- Two-fifths (41%) of all sites had severe erosion problems that had not been repaired.

Erosion causes sedimentation in streams, which can be harmful to aquatic life, and cause increased flooding.

- Only 35.7 percent of the detention basin systems and 33.3 percent of the infiltration systems bothered to mow vegetation so that it did not exceed six inches high as required. Out of sight, out of mind.

Stormwater runoff pollutes shellfish and swimming waters. According to Patti Fowler of NC Shellfish Sanitation, there are 56,152 acres of saltwater that are permanently closed to shellfishing and another 30,000 to 40,000 acres that close after hard rainstorms. Lack of enforcement of existing stormwater control permits is undoubtedly a contributing factor.

Raleigh. We think we've got a problem.

CALL TO ACTION ...

Don't wait to be asked to the ball, start dancing now! Citizens will make the crucial difference between good and bad plans, as well as plans that sit on the shelf and those that are carried out.

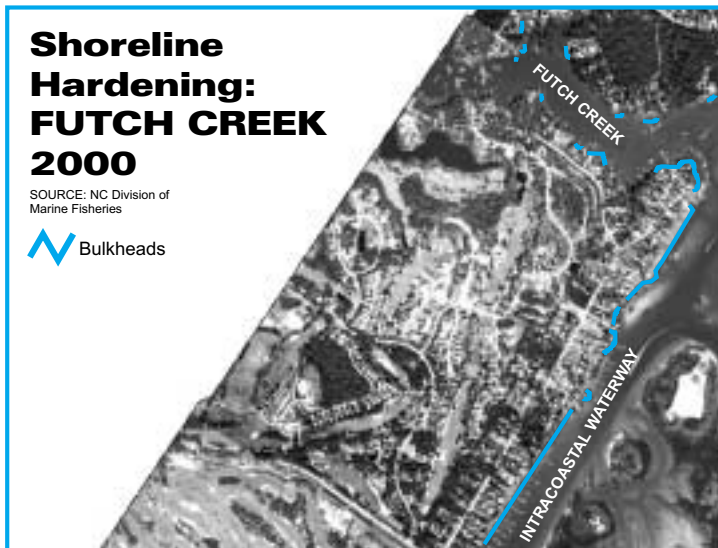
There are at least a dozen planning efforts that can have an impact on water quality in your community. They range from basinwide plans to transportation plans. We have prepared a list of these opportunities and posted it on our website along with links to each plan. To read it online, point your web browser to: www.nccoast.org.

NC Coastal Federation is developing a model Phase II stormwater permit and plan for coastal planners and citizens to use in their communities. The model permit and plan is designed to meet all EPA Phase II stormwater requirements. We expect to release it in early 2002. If you would like a copy of the model Phase II stormwater permit and plan, send us an email at nccf@nccoast.org or call us toll-free at 800-692-8102.

Shoreline Hardening: FUTCH CREEK 2000

SOURCE: NC Division of
Marine Fisheries

 Bulkheads





GEORGE MITCHELL, www.lighthouse-aerials.net

In Praise of The White Oak

There are too few places in the coastal region with pristine natural features. The White Oak River is a place worth preserving for future generations.

In the quiet solitude of a canoe, the hustle and bustle of the everyday world melts away. One's private thoughts are interrupted only by a fish jumping or birds taking flight. Man's handiwork is not as evident on the White Oak River. No dams and few bridges cross it. The river is a place where the wild things are. The American alligator calls these waters home, as does the osprey, wading birds and waterfowl. Even the endangered manatee makes an occasional visit.

The White Oak River stretches 48 miles from its freshwater source in Hoffman State Forest to the ocean's edge in Bogue Inlet. Along the way, there are 70 known historical and archaeological sites, remnants of 10,000 years of habitation.

"The river is symbolic of all the mystery and serenity of the South. Native Americans and settler families have fed and raised their children on the river. Wildlife moves safely between nearby areas, and we have a resource for personal renewal and closeness to all things natural," explained Lauren Hillman, the district ranger at the Croatan National Forest.

Weetock River

The Weetock Indians called the river "Weetock." Maps from the first half of the 1700's used the name Weetock River. Around 1770, the name White Oak River began appearing on maps. There are no existing groves of white oak trees near the river.

Unique among coastal river systems, the White Oak both begins and ends in the coastal plain. Most coastal rivers, like the Neuse, Tar-Pamlico, Roanoke and Lumber trace their headwaters to the Piedmont region.

The river's source is at the east end of the White Oak Pocosin in northern Onslow County. A pocosin is a raised bog or swamp containing black organic muck. Moving downstream, mature forests dominate the landscape as magnificent cedars, pines and cypress trees tower towards the sky. The river above the Town of Maysville is narrow, shallow and fast moving. Beavers favor it and their dams make transport by boat a challenge.

Below Maysville, the river is navigable all the way to Bogue Sound, making it a delight for canoeists or kayakers. The river flows through a series of five quarry lakes and then meanders slowly through the depths of a blackwater swamp.



"It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations."
— Wild and Scenic Rivers Act

A Paddler's Guide to Eastern North Carolina rates the river between Maysville and Haywoods Landing an "A", and the section between Haywoods Landing and Stella an "A-AA". The double A rating means the river is "Unusually beautiful even to the spectacular, generally remote and wild." The A rating denotes "Generally remote and wild. Perhaps some signs of civilization but mostly uninhabited."

Yet threats of over-development abound in coastal North Carolina. Population in the 322 square mile area near the White Oak River rose from 27,748 in 1970 to 39,388 in 1990, an increase of 42 percent. Population density followed suit. In 1990, there were 122 people per

square mile living near the river.

Population density causes increased stormwater runoff, carrying fecal coliform bacteria, nutrients, toxic chemicals and sediment from the landscape. The result in the White Oak has been the closure of shellfish beds on a temporary or a permanent basis. Most of the shellfish beds in the White Oak River are currently rated as impaired by the state Division of Water Quality. The only waters that are rated as fully supporting commercial shellfishing are located in Bogue Sound.

Even so, the White Oak River is endowed with a diverse ecological base worthy of protection. It contains five distinct natural communities, including Tidal Red Cedar Forest, Brackish Marsh, Coastal Plain Bottomland Hardwood Forest, Tidal Cypress Marsh and Tidal Freshwater Marsh. The Tidal Red Cedar Forest is considered extremely rare.

Near the Stella Bridge, the river widens considerably and the fresh water from upstream meets the salt water from downstream. Saltwater marshes, consisting of black needlerush, sea ox-eye, spike grass and smooth cordgrass, line the sides of the river all the way to Swansboro.

Jewel of the Coast

The US Forest Service owns and manages the Croatan National Forest with an expanse of 159,832 acres within Carteret, Craven and Jones counties. The Croatan National Forest straddles both the Neuse and the White Oak river basins, including seven contiguous miles of shoreline on the eastern bank of the White Oak River.

With the hope of preserving the natural resource values of the White Oak, the US Forest Service conducted studies to determine whether portions of the river would be eligible and suitable for designation under the Wild and Scenic Rivers Act. This federal law, passed by the US Congress in 1968, provides safeguards from federal water resource projects that can cause a river to lose the scenic beauty and recreational opportunities that make it so unique.

If designated by Congress, the White Oak would become the first coastal blackwater river to gain Wild and Scenic status. Designation would accomplish several things. First, it would prevent the federal government from constructing dams or other obstacles that significantly impede the natural flow of the river. In a tidal river like the White Oak, water flows both ways. Salty water from the

Atlantic Ocean moves upstream, driven by tides and wind, until it mixes with fresh water flowing downstream from inland areas. Where they meet they form a brackish estuary that provides important habitat for shellfish and finfish.

Designation also serves as a magnet for federal, state, and private funds to purchase and forever preserve the natural areas adjacent to the river. Funds could also be sought to provide public access and promote the recreational enjoyment of the river.

Lastly, designation requires the development of a management plan based on local input from citizens to insure that the river never loses its scenic or recreational values. The management plan covers an area ¼ mile from each shore, but does not prevent landowners from utilizing their property as they have in the past.

The US Forest Service currently owns 28 percent of the 3,584 acres under study for Wild and Scenic designation. The remaining 72 percent of the area is in

private hands. As a result, any effort to preserve the White Oak must involve active participation by local residents.

According to Kristen McDonald with the conservation group, American Rivers, "Today, the chief benefit of wild and scenic river designation is it launches a unique community-driven process of creating a comprehensive river management plan that ensures the river can be enjoyed by future generations."

A broad group of stakeholders has joined together to inform citizens and generate community support for the designation. Consisting of a canoe and wildlife club, local restaurants and Realtors, environmental groups, and government agencies, the group plans to approach the US Congress to add the White Oak River to the Wild and Scenic River System.

Gene Heath, who owns a restaurant overlooking the White Oak, believes, "Obtaining a Wild and Scenic River designation will benefit tourism, the environment, business, and future generations of coastal Carolinians."

Preserving the White Oak River

The White Oak is a relatively unspoiled river system, which lends itself to preservation. By comparison, nutrient sensitive rivers like the Neuse, Tar-Pamlico, Chowan or New require a comprehensive regulatory approach and restoration plan in order to improve degraded water quality.

The North Carolina Coastal Federation (NCCF) has undertaken two land preservation projects on the White Oak.

White Oak Buffer Acquisition

In 1999, NCCF was awarded a grant from the state Clean Water Management Trust Fund (CWMTF) to secure purchase options for property along the White Oak River. NCCF identified a property and was awarded a \$2.1 million grant from the CWMTF to purchase a 776.6-acre parcel of land bordering the west bank of the White Oak above Swansboro in 2001. A portion of the property may continue to be used for agriculture, forestry and extremely low intensity residential home sites so long as any use is compatible with maintaining a healthy river system. Funds derived from the remarketing of the land for these uses will be used for additional land purchases along the river.

Huggins Island

With a grant from the CWMTF, Huggins Island near Bogue Inlet at the mouth of the White Oak River was purchased in 2000. The island was under heavy pressure to be developed. NCCF worked to submit the funding proposal in cooperation with the NC Coastal Land Trust and the NC Division of Parks and Recreation. The 110-acre island is now part of Hammocks Beach State Park.



Planning to visit the White Oak River?

If you would like to see first-hand the beauty and ecological diversity of the White Oak River, you can find information on planning your trip in the following resources.

Exploring North Carolina's Natural Areas, edited by Dirk Frankenber. In this book, Frankenberg outlines a 30-mile road and ferry tour that follows the White Oak River from its source to the sea. The tour takes a full day, or half a day if you skip the ferry trip to Hammocks Beach State Park on Bear Island.

Our advice is: **Don't skip it!**

A Paddler's Guide to Eastern North Carolina, by Bob Benner and Tom McCloud. The authors describe two paddling trips on the White Oak River. One begins at Belgrade, near Maysville, and continues to Haywood's Landing. It takes three to five hours to complete. The second trip begins at Haywood's Landing and ends at the Route 1442 bridge. This part takes three to four hours. Both segments are appropriate for beginners with river instructions.

The Crystal Coast Canoe and Kayak Club has produced a map of paddle trails along the White Oak River. For more information, point your web browser to www.cckc.org or call the Carteret County Tourism Development Bureau at 252-726-8148.

CALL TO ACTION ...

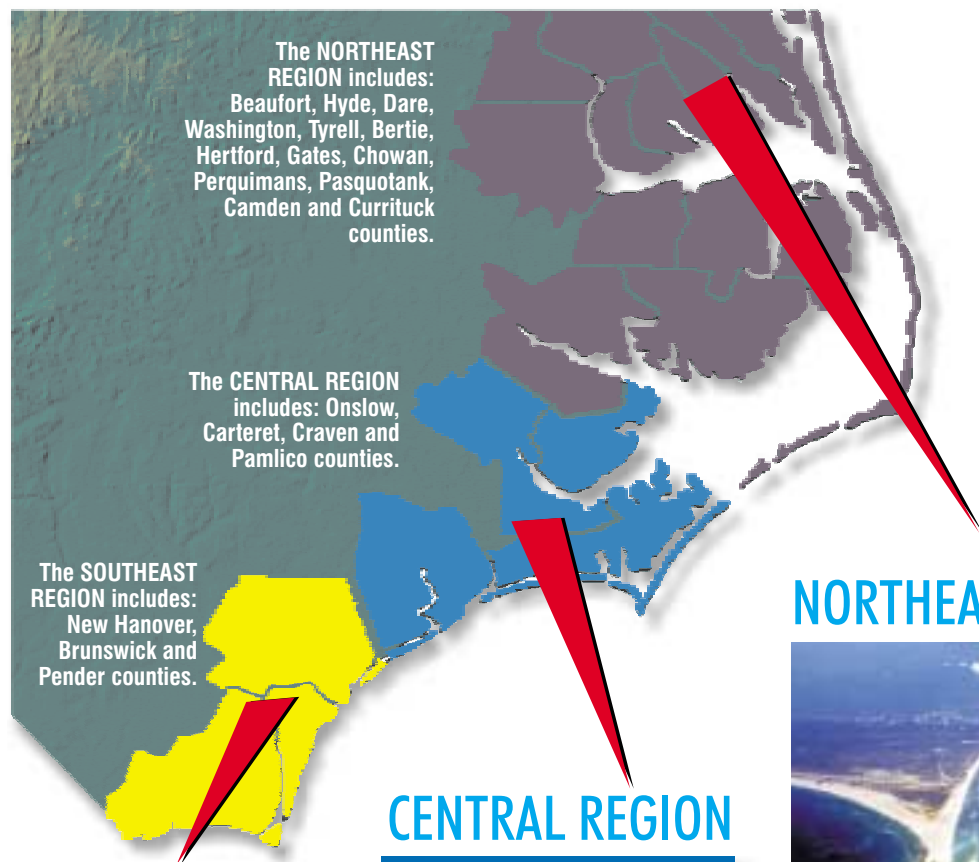
You can help to preserve the White Oak River for future generations. It's as easy as 1, 2, 3.

1. It's possible that Senator John Edwards will be willing to introduce legislation to designate the White Oak River as a recreational and scenic river under the National Wild and Scenic River System. Please write a letter to Sen. Edwards telling him that you support such a designation and ask for his help. You might also request that additional funds be provided to the Croatan National Forest to purchase land bordering the White Oak River.
2. Address the letter to:
The Honorable John Edwards
US Senate
225 Dirksen Senate Office Bldg.
Washington, DC 20510-3306
3. Find a stamp and mail it off.

You can also send an electronic letter to Senator Edwards, by pointing your browser to: <http://edwards.senate.gov/mailform.html>

Remember, it takes a community to protect and restore a river!





The **NORTHEAST REGION** includes: Beaufort, Hyde, Dare, Washington, Tyrell, Bertie, Hertford, Gates, Chowan, Perquimans, Pasquotank, Camden and Currituck counties.

The **CENTRAL REGION** includes: Onslow, Carteret, Craven and Pamlico counties.

The **SOUTHEAST REGION** includes: New Hanover, Brunswick and Pender counties.

NORTHEAST



For the most part, the northeastern part of the coast has grown very slowly over the last ten years. A pair of inland counties, Washington (-2%) and Bertie (-3%), actually lost population during the last decade, while Currituck (32.4%) and Dare (31.7%) counties were two of the top dozen fastest growing in the state. On top of the permanent population increase, seasonal housing in Dare County more than doubled, increasing by almost 7,000 buildings. Seasonal housing in Currituck County tripled, bringing even more seasonal visitors to a small strip of land.

■ **Public & Unspoiled Beaches:** Dare County is planning what could be the most expensive beach renourishment project in the nation at \$1.8 billion over 50 years. These beaches have high erosion rates, so the sand is not likely to stay around for long. Federal and state governments should think long and hard about throwing that much cash into the sea, when they could move houses back for less than a quarter of the cost.

In Currituck County, several beachfront residents in the Whalehead Club Subdivision near Corolla have filed a lawsuit challenging the public's right to use the dry sand beach above the mean high tide line. Governor Easley should vigorously defend the public's right to the beach, just as he did as Attorney General.

In the southern portion of Dare County, the NC Department of Transportation is trying to figure out how to protect Highway 12 from an active ocean that has bludgeoned the road, forcing it to be rebuilt time after time over the last 50 years. It is hard to imagine a workable solution that won't cost taxpayers an arm and a leg.

■ **Water Quality & Habitat:** Water, water everywhere, but not a drop to drink – without treatment. Reverse osmosis treatment plants are springing up in almost a dozen northeast communities. The effluent from these plants could change the salinity of creeks, making them uninhabitable for spawning fish. The Division of Water Quality should require a comprehensive environmental review of all desalination and reverse osmosis plants before issuing permits.

While the Tar-Pamlico and Neuse rivers have 50-foot riparian buffers protecting streams, the other rivers in the northeast only have 30-foot buffers, which are inadequate to protect water quality. The Environmental Management Commission should enact 50-foot buffers for all coastal river basins. In addition, the Division of Water Quality should do a better job of enforcing its buffer rules.

■ **Environmental Law & Order:** PCS Phosphate has requested state and federal approval to destroy 2,530 acres of wetlands and 49 acres of surface waters to extract phosphate near its existing mine on the Pamlico River. Meanwhile decades of mining have caused levels of cadmium in reclaimed soils and ponds to concentrate at more than 300 times background levels. Naturally, we are concerned about the negative impact on wildlife. PCS needs to clean up its act first and then look toward upland areas to mine phosphate.

Three new sites are being considered for ethanol plants on the Chowan, Pamlico and Pasquotank rivers. It's time for the NC Department of Environment and Natural Resources (DENR) to live up to its name. DENR should demand rigorous alternatives to plans that locate industries next to coastal rivers, as well as to completely examine secondary and cumulative impacts of new industries.

■ **Land Use Practices:** The northeast is characterized by gently sloping land as far as 50 miles inland. Sea level rise will continue reclaiming some of these lands each year. Local planners need to prepare for sea level rise and direct construction away from areas that may no longer be there in fifty to a hundred years.

The state Environmental Management Commission, Coastal Resources Commission and Marine Fisheries Commission are jointly preparing coastal habitat protection plans for all coastal river basins and sounds. The initial plans to be developed are for the Chowan River and Coastal Ocean, followed by the Roanoke and Tar-Pamlico rivers and Southern Estuaries. Citizens should become involved in the development of these plans as they have a significant potential for improving water quality and fisheries habitat.

CENTRAL REGION



Population growth in the central region has been low overall. But census figures are deceiving. While county populations have lagged behind the state average (21.4%) during the last decade, towns within the counties grew much faster, such as: Emerald Isle (43.3%), Newport (33.1%) and Morehead City (27.2%) in Carteret County; Trent Woods (77.2%), New Bern (33.2%) and River Bend (21.4%) in Craven County; and Jacksonville (119.5%) in Onslow County. Add in a 31.5% increase in seasonal structures in Carteret County and place one or two families in each of those 13,333 seasonal structures. The result is a burst in seasonal population that transforms sleepy coastal towns into urbanized metropolises during the peak summer months.

■ **Public & Unspoiled Beaches:** The Bogue Banks beaches face south, with low erosion rates and significant sources of sand offshore. Who could ask for anything more? But finding suitable sand with low carbonate material and without large shell fragments to use for beach renourishment has proven difficult. The end result could be a spoiled beach that does not look, feel or serve as habitat like the natural beach it replaces. If beach renourishment does proceed, citizens should demand that Bogue Banks towns enact ordinances to prevent new or improved structures that cannot be moved back from the sea from being built near the ocean, as well as provide numerous public access points and parking near the beach.

■ **Water Quality & Habitat:** In the White Oak River Basin, 28,058 acres of shellfishing waters are classified as impaired. Unless we confront stormwater pollution head on, this number will only rise in the future. Towns and counties need to begin thinking and planning on a watershed level. The best way to do this is through Phase II stormwater permits. Citizens should demand that their local elected officials apply for Phase II stormwater permits to protect and restore water quality.

■ **Environmental Law & Order:** It's a sad day when the state snubs citizens and ignores environmental rules. That's what we saw when the NC Ports Authority signed an option to lease with El Paso Merchant Energy to build a liquefied natural gas (LNG) terminal on Radio Island in Carteret County. The Council of State, chaired by Governor Easley, approved the lease option over the objections of the Town of Beaufort, an industry expert and local citizens. NC Coastal Federation argued that state law requires an environmental review before proceeding with the lease option. It turns out that the NC Ports Authority knew all along that Radio Island was a Significant Natural Heritage Area due to the existence of a rare butterfly with few known colonies.

It's often been said that North Carolina has a collection of strong environmental laws. As our survey of state stormwater permits in Carteret County demonstrates, environmental laws were made to be broken. (See "True to Plan" on page 7.) With so few State enforcement officers in the field, they just don't get around to check on projects very often. When we looked around at projects, we found stormwater violations almost everywhere. Governor Easley needs to make increasing his monitoring and enforcement staff a top priority.

■ **Land Use Practices:** There are too few places in the coastal region with pristine natural features. The White Oak River presents a unique opportunity to preserve the habitat of this coastal blackwater river. Citizens throughout the state should rally around securing a Wild and Scenic River designation for the White Oak River.

Businesses and municipalities need a clean and abundant source of water to thrive. Generally there are three sources to tap: rivers, lakes or groundwater. Groundwater levels on the coastal plain are falling dramatically, at rates of up to 6-feet per year. Combine a high demand for groundwater with sea level rise, and saltwater intrusion of groundwater can occur. Coastal communities need to live within their means and develop growth management and land use plans that are sustainable over the long haul.

SOUTHEAST



In a word, growth! Brunswick (5th), Pender (6th) and New Hanover (9th) were among the fastest growing counties in the state during the last decade. New Hanover is also the second most densely populated county in the state, with 805.83 persons per square mile. Only Mecklenburg County, which contains Charlotte, is more densely populated. Brunswick, Pender and New Hanover also led the coastal region with the largest growth in new permanent housing in the coastal region since 1990, at 51.67%, 44.47% and 41.64% respectively.

■ **Public & Unspoiled Beaches:** With the exception of Sunset Beach, which is gaining sand, every beach in the southeast region is seriously eroding. With only a couple of exceptions, it does not appear that there are enough sand deposits to sustain renourishment efforts in this region for very long. Sea level rise and storms have already taken their toll on oceanfront development, costing taxpayers billions of dollars in disaster relief. Beach towns should begin planning a staged retreat from the sea rather than spend money on sand like there's no tomorrow.

■ **Water Quality & Habitat:** More and more houses, along with roads, schools and shopping centers are being built. It all adds up. These roads and structures cause stormwater to rush off the land which pollutes streams and floods low-lying areas. Brunswick County leads the southeast growth bonanza with a 43.5 percent increase in permanent population since 1990.

Two new wastewater systems are planned for Brunswick County: one serving the southern area was required to seek a Phase I NPDES stormwater permit; and another serving east and west Brunswick County has refused to seek a Phase I stormwater permit or even to conduct a rigorous Environmental Impact Statement.

There's no use pretending. New wastewater treatment systems are a catalyst for more growth, and new growth will cause more violations of federal and state clean water standards. Brunswick County government needs to take responsibility for stormwater prevention now, rather than pay through the nose for flood mitigation and stream restoration later.

■ **Environmental Law & Order:** Wetlands are being ditched and drained at an alarming rate. In 1998 the state Division of Water Quality publicly announced it would not enforce its own wetlands rules for five months. This prompted a free-for-all in which more than 80 landowners drained almost 10,000 acres of wetlands in southeastern NC. Ever since that fiasco, state and federal regulators have been chasing down developers who in their haste violated the federal Clean Water Act and state Sedimentation and Erosion Control rules. Some of these developers drained wetlands under the disguise of timbering their land. The state should get serious and throw the book at these lawbreakers, including the ones who contributed heavily to Governor Easley's campaign.

■ **Land Use Practices:** Southeastern NC is being bulkheaded to death. Bulkheading or hardening of estuarine shorelines results in loss of wetlands, leaching of toxic chemicals into marine environments, and increased erosion to areas adjacent to the walls that kills the marsh. When the marsh disappears, so do numerous estuarine-dependent fish and shorebirds that depend upon these coastal fringes for their survival. Just look at Futch Creek in New Hanover County on page 7 of this report. Preliminary data from an NC Division of Marine Fisheries study indicate a two-thirds increase in bulkheading and riprap in 16 years. Bulkheads and riprap covered 21 percent of the Futch Creek shoreline in 1984; it now covers 35 percent. The Division of Coastal Management needs to hold the line on bulkheading and create a general permit for natural alternatives to shoreline protection, along with incentives for property owners to do it.



Business As Usual

Surprise announcements and poor siting of industries result in heartburn for citizens and headaches for economic developers. Can citizens really be blamed for challenging projects that are designed to fail?

The mystery phone call from the Department of Commerce came in mid-June 2000. Adrienne Cole, the executive director of the Carteret County Economic Development Council, had been invited to a meeting in Raleigh with an unnamed company that was looking at a site on Radio Island. On June 27, she hopped in the car and headed west.

When Cole arrived, she was greeted by representatives of the DFI Group, who described their plans to build several ethanol plants in the coastal regions. Ethanol is an additive to gasoline that helps it to oxidize and burn cleaner.

In the room were representatives from Greene, Onslow and Martin counties and the Department of Commerce. Nearby stood an artist's rendering of a large ethanol plant situated on a parcel owned by the NC State Ports Authority on Radio Island. It was the first time Cole had heard of the project.

Several months before, Governor Jim Hunt made an announcement that DFI Group planned to develop three ethanol plants in eastern North Carolina, including Greene, Onslow and Martin counties. By the time June 27 rolled around, Onslow and Greene counties were on terminal hold. DFI had changed course and was now focused on Radio Island in Carteret County and a site on the Roanoke River near Jamesville in Martin County.

What really changed was the source of energy. DFI's original scheme depended upon a South Carolina natural gas company building a pipeline to the north to provide energy for the ethanol plants. When the pipeline deal fell through, DFI scrambled to find another source of energy and alternative sites for its ethanol plants.

DFI determined it could arrange to have liquefied natural gas (LNG) imported to Radio Island to fuel its ethanol plant there and then barge LNG up the Atlantic Intracoastal Waterway (ICW) to fuel another plant in Martin County.

Repeating History

In Carteret County, local citizens have been wary of hazardous substances ever since the USNS Potomac exploded on September 26, 1961. The tanker was carrying aviation gasoline and JP-5 jet fuel when it caught fire while discharging its load to storage tanks on Radio Island. Nancy

Russell, a Beaufort Town Commissioner recalls, "Many of us well remember that early fall evening when the sound of an explosion was heard, the earth shook, and soon sirens pierced the air."

In the spring of 1978, Gov. Jim Hunt flew to the coast to make a surprise announcement that a Texas firm planned to build the second largest liquid propane gas (LPG) facility in the nation on Radio Island. According to an account in *The News and Observer*, "There had been no public discussion of the question before Hunt's announcement here. At least one local mayor had no idea why Hunt was in town before he joined the governor on the podium."

John Costlow was on sabbatical as director of Duke Marine Laboratory, so he spent the summer researching LPG and then educating citizens about its dangers. His concerns were backed up by a US General Accounting Office report released in August 1978. According to *The News and Observer* story, the GAO report cautioned, "Liquefied energy gas storage tanks, ships, trucks and railroad cars were dangerously vulnerable to catastrophic fires and explosions that could result from accident or sabotage. Large storage facilities for LPG and liquefied natural gas (LNG) should be built away from populated areas, the study said; if built in urban areas, they should be built and guarded as securely as nuclear power plants."

That fall, Costlow hosted a public forum that drew over 300 concerned citizens to the Duke Marine Lab auditorium to discuss the hazards of LPG. Shortly thereafter, Gov. Hunt withdrew his support for the project and it was never built.

When news of DFI's plans to build an ethanol plant and companion LNG receiving terminal on Radio Island hit the streets of Beaufort in November 2000, citizens rallied against it. Beaufort is the second oldest town in the state and property values are high. Citizens viewed the ethanol/LNG project as dangerous, smelly, and overly consumptive of groundwater. Like the LPG project in 1978, the ethanol/LNG project appeared to be in conflict with Carteret County's economic base of tourism, commercial and sports fishing, and marine research facilities.

A new group was formed called Carteret Citizens Allied to Protect the Environment (C-CAPE) which held informational meetings throughout the county to generate

opposition to the project. In mid-January 2001, Carteret County Crossroads and Duke Marine Lab held a standing room-only forum at Duke Marine Lab auditorium that was attended by over 300 people. Within weeks, the Carteret County Commissioners passed a resolution at the request of C-CAPE opposing DFI's plans for the ethanol/LNG project. The towns of Beaufort and Emerald Isle followed suit. State legislators were not far behind.

At a hastily planned luncheon on February 13, the NC State Ports Authority made a surprise announcement that DFI Group's plans for an ethanol plant on Radio Island had been scrubbed. Instead, the Ports Authority announced plans to execute an "option to lease" with an unnamed Fortune 500 company to build an LNG terminal on Radio Island.

One week later and without citizen input, the Ports Authority approved the "option to lease" with El Paso Merchant Energy to build a receiving terminal to store the equivalent of 3.5 billion cubic feet of vaporized natural gas. The project includes a pipeline that El Paso would build or cause to have built to transport 250 million cubic feet of natural gas per day to places unknown.

Déjà vu All Over Again

The Roanoke River is nationally known for its striped bass fishing. Each spring, adult stripers migrate upstream to Weldon to spawn, releasing as many as a million eggs each that flow with the current toward the Albemarle Sound. Once an abundant resource, striped bass underwent a serious decline during the 1980's and early 1990's, caused by a combination of restricted flow from upstream dams, habitat degradation and pollution from a large paper mill upstream. One of the great natural resource success stories has been the Roanoke's resurgence of its striped bass populations.

When the Department of Commerce announced plans in January 1999 to locate a paper-recycling mill on the Roanoke River near Weldon, conservationists had reason to wonder. Halifax County economic developers had picked a site, known as Mush Island, for the Wisconsin Tissue plant. Mush Island has been targeted for inclusion in the Roanoke River National Wildlife Refuge.

Tom Earnhardt, an attorney and fly fisherman told *The Charlotte Observer*, "You couldn't put a laser dot on a particular location more sensitive to fish and wildlife than



The Nucor Story



that stretch of the Roanoke." Although the Wisconsin Tissue plant was never built, it sent a signal that even our most precious natural resources were for sale.

So when the DFI Group announced plans to barge LNG to its proposed ethanol plant on the Roanoke River, the environmental community reacted quickly. A coalition of environmental groups, led by PBS TV Carolina Outdoor Journal personality Joe Albea stated its opposition to the project unless DFI agreed to conduct an environmental impact statement (EIS) and abstained from using barges. The concern with barges is that they stir up bottom sediments that hold decades of pollution and cause a negative impact on fisheries habitat.

DFI finally agreed not to barge LNG and released a draft EIS for its plant in Martin County in April 2001. However, the EIS failed to realistically examine alternatives to the Roanoke River site and all but ignored potential impacts to shad and river herring. The NC Wildlife Resources Commission commented, "Location of a facility of this type, directly adjacent to such an environmentally sensitive area as the Roanoke river, presents unacceptable risks to fish, wildlife, and their habitats."

It now appears that DFI is looking at alternative waterside sites on the Pamlico River in Beaufort County, on the Chowan River in Hertford County, and on the Pasquotank River near Elizabeth City. Stan Crowe, the

Perhaps the most infamous economic development project in recent times involved the State's recruitment of Nucor Steel to the banks of the nutrient sensitive Chowan River. The Department of Environment and Natural Resources (DENR) allowed the company to conduct an environmental assessment and finding of no significant impact (EA/FONSI), instead of a more rigorous environmental impact statement (EIS) for the project. DENR also approved several environmental permits and plans for the company before finishing work on the EA/FONSI.

Three environmental groups, including NC Coastal Federation, sued DENR over its handling of the Nucor project. The lawsuit was resolved through a settlement agreement that set a higher standard for future industrial projects. The agreement requires DENR to hold all permit and plan approvals in abeyance until the completion of the environmental review process. This requirement applies to development projects that utilize public waterways, public land or public funds.

Another provision of the agreement commits DENR to "provide to the NC Department of Commerce a compilation of information about sites statewide (1) with known environmental limitations or restrictions; (2) which contain significant natural resources; or (3) which have been identified for acquisition as state parks or reserves." The list was due on September 30, 2000. We're still waiting.

economic developer for Martin County, told the Greenville *Daily Reflector*, "Based on the challenges DFI has faced in Martin County, I question the likelihood that they will locate here."

Is there no better way?

Citizens are generally left out of economic development decisions. While state law provides citizens with access to public records, including documents, letters, photos, tapes or emails; the law draws the line at industrial development projects that are considered to be confidential. Until the surprise announcement is made that a new industry is coming to town, citizens are kept in the dark.

When kept out of a process that affects their community, citizens often become agitated. During the Wisconsin Tissue debate, the economic developer in Halifax County sent a letter to the Secretary of Commerce. The letter read, "If North Carolina is to continue to recruit and locate quality companies like Wisconsin Tissue, then some protocol, some process, must be put in place so that we can address all environmental issues in a calm, unemotional factual manner."

Site selection is the most important early decision an industry makes. Yet environmental issues and community concerns are often glossed over in the site selection process. Even though the Wisconsin Tissue project failed

and the Nucor Steel mill in Hertford County faced significant environmental hurdles, the Northeast Partnership for Economic Development received a prestigious award from Site Selection magazine for its efforts in attracting these companies.

One technique being used by states is to conduct detailed environmental reviews of potential sites before marketing them to new industries. An early environmental review can help determine the suitability of the site and sift through industries that would be a good fit. Although industries may still have to conduct their own environmental reviews, they would have greater assurance that the site is appropriate for the intended use.

Attracting industry to an ecologically sensitive region like eastern North Carolina requires extra care. The coastal area has a wealth of wetlands, rivers, shellfish and finfish. The environmental suitability of an industrial site must be evaluated in advance, not after the surprise announcement has been made. And citizens need to be involved every step of the way when major industrial projects are being planned for their hometowns. It would make the process go smoother for citizens and economic developers alike.

CALL TO ACTION ...

The sixteen-year legacy of Gov. Jim Hunt set the standard for surprise announcements of major economic development projects. Like a firewall, this technique kept local citizens and environmental protection agencies in the dark until all the deals had been made.

In an effort to change this pattern, the NC Coastal Federation prepared a *Position Statement to Involve Citizens In and Provide Environmental Safeguards for Economic Development*. The position statement, signed by 17 environmental groups and two individuals, was sent to the secretaries of Environment and Natural Resources and of Commerce.

The position statement calls upon the two secretaries to form a working group of business leaders and environmental leaders to develop a new protocol for industrial recruitment that better involves citizens and includes upfront environmental reviews.

We need your help to convince Governor Easley to make industrial recruitment more environmentally and citizen friendly. Please review the position statement on our website at www.nccoast.org, and send a letter of encouragement to:

The Honorable Mike Easley
Office of the Governor
20301 Mail Service Center
Raleigh, NC 27699-0301

You can also send Gov. Easley an electronic message by pointing your web browser to:
<http://www.governor.state.nc.us/Contact.asp>





MICHAEL HALMINSKI, Waves, NC

Southern Exposure

Along the southeastern coast of North Carolina, sand is being sloughed on to beaches like there's no tomorrow. But short sand supplies and storms could spell trouble for an erosion strategy based on beach renourishment alone.

In a somewhat futile attempt to combat the forward march of the Atlantic Ocean, communities up and down the Atlantic seaboard are looking to long-term beach renourishment for their new lease on life.

Driven by sea level rise and increasingly violent storms, beaches are disappearing in front of oceanfront structures. By contrast, uninhabited barrier islands are allowed to migrate and have wider beaches, because there are no structures preventing their landward movement.

In the year 2000, sand was dredged and pumped on a little over 34 miles of beach in North Carolina. The sand comes primarily from offshore mining or the dredging of inlets, harbors or the Atlantic Intracoastal Waterway (ICW).

There are now four 50-year beach renourishment projects that have been constructed by the US Army Corps of Engineers, including Wrightsville Beach, Carolina Beach, Kure Beach and new this year, Ocean Isle Beach. The beaches are then renourished every three to five years. There are another dozen or so beach towns in the feasibility or design stage for the 50-year program.

The cost of these projects falls primarily on the shoulders of the federal and state governments with the smallest contribution coming from the localities that benefit the most.

Combining all projects – public and private, short and long term, existing or under study – the total miles of renourished beaches could reach 122.4 in the next 12 years. This comprises almost two-fifths of North Carolina's 320-mile coast.

Many scientists and environmentalists are concerned about the cumulative impact that so many projects will have on a variety of organisms, including the invertebrates that make up the food chain that sustains healthy and productive fisheries. The body of science surrounding the impact of smothering invertebrates beneath new sand on the beach and sucking up invertebrates with sand on the ocean bottom is still growing. But the impact upon sea turtles is well known.

False Crawls

Protecting sea turtles is a tricky business. Sea turtles spend the bulk of their lives in the water. A number of traumas beset sea turtles, which can drown in fishing nets, be

vacuumed up in dredges, and choke or starve to death by eating plastic bags and balloons thinking they are jellyfish.

Every few years, a female turtle crawls ashore, instinctively returning to the same beach where she was born. There she digs a hole up to two feet deep where she lays her clutch of about 120 soft shell eggs about the size of ping-pong balls. Once the nest is covered up with sand, she heads back to the ocean. A turtle will lay eggs several times during a season and then wait several years before nesting again.

After an incubation of about two months, the eggs hatch, releasing three-inch long turtles that make a mad dash to the sea. A small fraction of hatchlings will reach adulthood. These magnificent creatures have a potential lifespan that is similar to humans.

From May through mid-November, the beach serves as a nesting ground for sea turtles. Threatened 300-pound loggerhead turtles frequent North Carolina beaches, while threatened green turtles and endangered 2,000-pound leatherback turtles are rare visitors.

Steve Johnson, the NC Wildlife Resources Commission sea turtle program coordinator, has noticed that "false crawls" can be a problem with renourishment projects. "If the sand is not compatible, they have trouble digging and decide not to nest," he said. Sand containing too much silt or fine shell material can become compacted over time, which makes nesting difficult. It can also affect the ability of hatchlings to emerge from the nest.

Escarpments are also worse on renourished beaches. These steep slopes of sand prevent sea turtles from crawling to preferred nesting sites. Other factors that impede nesting include excessive lighting on the oceanfront, along with dredging pipes and heavy equipment on the beach during nesting season.

A seven-year study at Juniper Island, Florida has shown that nesting success for loggerhead turtles on renourished beaches was significantly lower than on the natural beach for two seasons after project completion. While nesting success improved after two seasons, the proportion of hatchlings that failed to exit the nest continued to be significantly greater at renourished beaches than at undisturbed areas. The Florida Atlantic University researchers concluded that renourishment has a negative effect on nesting.

Oak Island Experiment

When the US Army Corps of Engineers and the Town of Oak Island announced they were planning a 1.7-mile beach nourishment project to protect sea turtles, there were more than a few skeptics. Oak Island had been battered by three hurricanes in recent years, leaving almost no beach at high tide.

Clearly the situation could not have been much worse. Tides were lapping under oceanfront properties and septic tanks had become exposed by the storm surge from Hurricane Floyd in 1999. In search of suitable nesting sites, some turtles dug nests below high tide, while others nested under houses or ventured across the roadway to higher ground. Sea turtles had never seen it so bad.

Almost \$5 million in federal funds, \$4.3 million in state funds and \$1.7 million from Oak Island property owners funded the Long Beach Sea Turtle Habitat Restoration Project. The US Army Corps of Engineers hired Bean Stuyvesant of New Orleans to do the job.

The US Army Corps of Engineers and its contractor began work on an awkward note by earning two Notices of Violations from state environmental agencies. The Corps of Engineers, a permitting agency itself, had neglected to prepare and ensure implementation of a sedimentation and erosion control plan for the project. The Corps' contractor violated its Coastal Area Management Act (CAMA) permit by illegally dumping sediment into the Intracoastal Waterway (ICW), prompting the State Division of Coastal Management (DCM) to issue a Notice of Violation, a Cease and Desist Order and a small fine.

The violations occurred when the contractor began construction without adequate sedimentation and erosion control practices in place. In addition, the contractor pushed a spit of land into the ICW while building an unauthorized earthen causeway on Yellow Banks, the disposal site along the ICW from which sand would be taken for the project. The contractor's action caused a turbidity plume, carrying crud and scum, to extend over much of the waterway.

"Yes, the Corps informed the agencies of the violation and problems, but they shouldn't have let it happen in the first place," chided Dan Samms, regional supervisor of the state's Land Quality Section. Donna Moffitt, director of DCM, sent a letter to the Corps, which stated, "[DCM] wishes to express its concern and disappointment regarding recent unauthorized activity associated with the



Corps of Engineers Sea Turtle Habitat Restoration Project at Oak Island, Brunswick County, NC.”

The project proceeded to extract sand from Yellow Banks using a large dredge that pumped the slurry (mix of sand and water) through a large pipe. The pipe extended across the ICW and Oak Island where the slurry was pumped on the beach. The dredge chewed through much of the borrow area, and then hit rock. A series of equipment breakdowns and delays caused the project to miss its completion deadline. As a result, the project was extended into May, the first month of sea turtle nesting season.

After sand had been placed on the beach and the dredges and pipes were removed, the ocean began the natural process of reclaiming the sand. Soon large chunks of marl rock the size of a fist were exposed, until large fields of marl appeared from beneath the tides. The contractor had sucked up a considerable amount of marl at Yellow Banks and deposited it on the beach. To fix the problem, a bulldozer was dispatched to collect the rocks. Yet rocks continued to surface as the tide went out.

The project included the construction of an 11-foot high dune that ended before meeting up with oceanfront structures. As everyone knows, water drains to the lowest point. As the wet slurry of sand in the dunes began to dry, a 1.8-mile moat spontaneously formed between the front row structures and the dunes.

The Town of Oak Island initially pumped the water into the ocean. But water from the dunes, tides and rain continued to fill the moat. The Town then pumped the water into large septic tank trucks, but water still filled parts of the moat. Finally the Town purchased sand and hauled it in with dump trucks to fill the moat.

Rupert Riley, a longtime resident of Oak Island, said, “I don’t think the project came out as people envisioned.”

For Man or Beast?

To make the beach more turtle friendly, the Town of Oak Island installed low sodium bulbs in all public street

lamps and prohibited homeowners from constructing private walkways onto the beach, at least until the dune grass is established. In addition, the Town plans to till and grade the beach as necessary prior to each nesting season to counteract compaction of the beach and escarpments.

Time will tell the success of this project for sea turtles, but it is already evident that it is helping the humans who cling to the edge of the sea. To save the Town the extra time and expense of securing easements from all oceanfront property owners, the Corps of Engineers drew the project line below mean high water and just short of private property lines. When the sand was pumped onto the beach, it pushed the new mean high water line further seaward, without impinging on oceanfront property.

Brunswick County Health Department (BCHD) is now able to issue septic tank permits for oceanfront structures that were on the brink of high tide. According to Dwayne Varnum, environmental health inspector with BCHD, “The beach nourishment project benefitted some homes that could not previously meet the minimum set back requirements of 50 feet from mean high water. If it had not been for the beach nourishment project, these home owners would have had to use off-site disposal, wait for sewer or possibly demolish the house.”

The decision not to move or demolish threatened structures in order to construct the project above the previous mean high water line may prove to be penny-wise and pound-foolish. All of the Corps’ 50-year beach renourishment projects require easements of oceanfront property owners and are built above mean high water to provide better protection to private property and improve the longevity of the beach.

A new citizens group, Oak Island Property Owners Association (OIPOA) has sprung up to contest the Town’s decision to limit access to the beach. To its credit, the Town erected sand fences to protect newly planted vegetation on the dunes and established a network of beach access points at the end of and within every block. The OIPOA claims that its members have been damaged

Who Owns the Beach?

“In general, the public trust waters are the ‘navigable waters’ in a State, and the public trust lands are the lands beneath these waters, up to the ordinary high water mark,” according to David Slade’s book *Putting the Public Trust Doctrine to Work*. As applied in ancient Roman times, citizens have the right to travel unimpeded on oceans and rivers, as well as to fish from the shore and dry their nets on the beach.

As barrier islands erode, public ownership of the beach migrates inland with the mean high tide, thereby keeping beaches open and available to the public. Oceanfront structures that are left below high tide due to hurricanes or long-term erosion may be in violation of the public trust doctrine since they limit the public’s access to the beach.

In North Carolina, the publicly owned area of natural beaches is the foreshore or “wet sand beach”, i.e. the area exposed at low tide and covered by water at high tide. Because public ownership stops at the mean high water line, the public must retreat to the dry sand beach to recreate when the tide is high.

The “dry sand beach” is the flat area above the high tide line and below the dunes (or bulkhead) that can be flooded by storm tides or unusually high tides. It is considered private property, but is impressed with public rights of use so that the public may enjoy the beach and the ocean. As beaches erode and high tides move closer to oceanfront buildings, the area of dry sand beach regularly used by the public disappears.

On renourished beaches, North Carolina law firmly establishes the public’s right to the sections of state beaches that have been renourished with public funds. In response to a legislative study committee report, the General Assembly passed a law in 1985 to ensure the public can continue to enjoy the beach after a publicly financed renourishment project.

According to state law, “The title to land in or immediately along the Atlantic Ocean raised above the mean high water mark by publicly financed projects which involve hydraulic dredging or other deposition of spoil materials or sand vests in the State.” NCGS §146-6(f). It is interesting to note that the 1985 law also applies to beach bulldozing.

By placing ownership of the renourished beach with the State, the public’s right to use both the wet and the dry sand beach is assured, at least until the beach erodes away again. As the 1985 law states, “All such raised lands shall remain open to the free use and enjoyment of the people of the State, consistent with the public trust rights in ocean beaches, which rights are part of the common heritage of the people of this State.”

Who owns the beach? We all do!



A bulldozer sculpts newly-placed sand on Oak Island’s beach.



since they have been denied direct access to the beach from their oceanfront properties.

That doesn't sit well with the Town Council. Town councilor Horace Collier said "Those folks have gained a lot of valuable real estate just by the determination of the Corps of Engineers." Councilor J.K. Somers seconded that view by stating, "They've gotten over \$100,000 worth of sand placed in front of their property for \$1,000," referring to the average amount oceanfront property owners were taxed by the Town.

Sand Starved South

A question that looms large is whether there is even enough sand to go around. Dr. William Cleary, a geologist with the University of North Carolina at Wilmington, has conducted sand surveys throughout the southern half of the NC coast. "On a regional basis, there's not a lot of

sand available," Dr. Cleary admits.

In 2001, sand was or will be pumped onto Kure Beach, Figure Eight Island, and along every developed beach in Brunswick County, except for Sunset Beach. Ocean Isle Beach used the spoils of a dredging project in nearby Shallotte Inlet, while a portion of Oak Island utilized the Yellow Banks spoil site. The remaining Brunswick County beaches benefited from the one-time spoils of the Wilmington Harbor deepening project.

Ongoing renourishment projects will face high hurdles. In one small area, there is an enormous amount of high quality sand. It can be found in the ancient Cape Fear River channel, near the current beach renourishment projects of Kure Beach and Carolina Beach in New Hanover County.

The beaches in Brunswick County appear to have fewer choices. Jaybird Shoals at the entrance to the current Cape Fear River channel contains 120 to 150 million cubic feet of sediment, of which perhaps 20 to 30 million cubic feet is beach quality sand. Dr. Cleary estimates there is only enough sand to last through about one nourishment cycle. "When you take that volume and divide it by the number of miles in Brunswick County that would want it, you see that they've got a real problem."

Brunswick County is a relatively low-energy system. As a result, Cleary thinks the new sand may stay on the beach, while additional sand could be mined

from some of the inlets to maintain the beaches. At least in the absence of hurricanes, Cleary cautions.

The hurricane picture for the Atlantic and Gulf coasts is not pretty. Scientists at the National Oceanic and Atmospheric Administration (NOAA) have determined that a cyclical rise in surface water temperature in the Atlantic Ocean and a change in wind patterns will result in high hurricane activity for another 10 to 40 years.

If the long-term prospect for sand is dim for Brunswick County, it's downright bleak for the beaches in Pender and Onslow counties. Dr. Cleary has mapped the entire shoreface, which extends just outside the surf zone all the way out seaward three or four miles. While there is some sand out there, "it's not some nice blanket of sand or this layer cake kind of thing people envision. It's very site specific," Cleary said.

Most of what can be found off Topsail Island is rocks. The area offshore is primarily composed of hard limestone and is "silt rich." Cleary believes, "Some areas have absolutely zero potential (for beach renourishment) in my opinion. One of them is North Topsail Beach. Surf City is not far behind."

Apparently North Topsail Beach, Topsail Beach and Surf City have not seen the light. The three towns recently asked the General Assembly for the power to raise occupancy taxes for the purpose of funding beach renourishment projects. Dr. Cleary politely characterized their efforts as "wishful thinking."



To the dismay of residents and tourists, large chunks of marl rock were deposited on Oak Island Beach during the Sea Turtle Habitat Restoration Project.

"Unacceptable"

Reprinted from *The State Port Pilot*

To the Editor:

I just returned home from a week in a front-row cottage near Middleton. The weather was beautiful, and so was the beach. However, I was shocked to see the condition of the beach restoration project in the east of Ocean Crest Pier. I have been reading about the project in this newspaper over the Internet, but I was not prepared for the foul-ups I saw in person.

First, the standing water in front of many cottages is a slap in the face to the tourists who spend big money to come to Oak Island every year. Worse than that are the endless piles of rocks that have been mixed in with the new sand. Didn't the Army Corps of Engineers do an analysis of the sand before it was piped to the beach? Those rocks are sharp and unsightly. And they are totally unacceptable.

I, for one, am not coming back. And from what I heard on the part of the beach where the restoration work is done, many more people say they are going elsewhere.

The project may be great for turtles, but unfortunately they do not spend money.

Jim Mills
Middletown, Ohio

CALL TO ACTION . . .

While beach renourishment may be a temporary remedy for some communities where sand is plentiful and erosion rates are low, it is clearly not for everyone. Where beach renourishment is not an option, beach towns must prepare for that day of reckoning when sea level rise and violent storms sweep the sand from beneath their feet.

Where beach renourishment is done, citizens should demand that beach towns pass local ordinances to increase setbacks and limit the density and footprint of new structures on or near the oceanfront. Citizens should make sure that rigorous environmental monitoring is a condition of the permits and that permit requirements are followed and enforced. And last but not least, adequate parking and facilities to serve peak demand must be provided at least every ½ mile, so that citizens can enjoy the public beach.

As beach towns fight their never ending battle with the ocean, local officials need to be reminded that strategic retreat is not the same as surrender. And it's a lot smarter than losing the war.

NC Coastal Federation has developed seven criteria that we use to evaluate the viability of beach renourishment projects. Citizens may find it to be a useful tool in evaluating projects on your favorite beach. To read it online, point your web browser to: www.nccoast.org.





Legislative Year In Review

The General Assembly made little progress on coastal (or other environmental) issues this year, pouring its energies instead into the state's budget problems.

The General Assembly made little progress on coastal (or other environmental) issues this year, pouring its energies instead into the state's budget problems. The legislature enacted a few minor coastal bills, but all the key bills remain cliffhangers as this goes to press, and seem likely to carry over to the short session (May 2002 through August 2002). Whether these bills pass or fail then depends on the work of coastal advocates over the next six months.

Beach engineering

The most significant coastal cliffhanger is HB 418, the Beach Preservation & Restoration Act, introduced by Rep. Nurham Warwick (Sampson-D). This misleadingly named bill would partially strip the existing Coastal Resources Commission (CRC) of its authority to regulate beach engineering and create a new Beach Preservation and Restoration Commission with the power to plan, oversee, and promote beach engineering projects. The bill also would create a new Beach Preservation and Restoration Fund to pay for projects, and make private contributions to the Fund tax-deductible as charitable contributions. A clause in the bill would allow the Beach Commission to overrule environmental laws at the Governor's discretion.

HB 418 has faced strong environmental and taxpayer opposition. Failing to recruit the aid of mountain legislators, Warwick opted in June to leave the bill for the short session next year, when he intends to bring it back up for debate in the House Environment Committee. In the meantime, Warwick has moved ahead with a companion bill, HB 419, Study Tourism Industry. The bill would authorize an inter-session study committee on beaches and mountain tourism, offering engineering supporters another chance to woo mountain legislators.

Two smaller pieces of legislation that touch on beach engineering have actually passed into law. SB 92, Various Local Occupancy Taxes, introduced by Sen. David Hoyle (Gaston-D), authorized a slew of local governments across the state to introduce or modify taxes on hotel customers. The bill explicitly states that the towns of North Topsail Beach, Surf City, and Topsail Beach, and Dare County can apply the revenue from their occupancy taxes to beach engineering project costs. Similarly, HB 698, Carteret Occupancy Tax Changes, introduced by Rep. Ronnie Smith (Carteret-D), diverts somewhat less than half of that county's hotel tax revenues (up to a cap at any given time

of \$15 million) to fund beach engineering on the Bogue Banks. HB 698 also allows Carteret County to increase occupancy taxes by another one percent in 2006 to fund a new convention center that is being contemplated for Bogue Banks.

Mercury

Another key bill that may have to wait for the short session is SB 1078, Improve Air Quality/Electric Utilities, introduced by Sen. Steve Metcalf (Buncombe-D) of Asheville. Dubbed the Clean Smokestacks bill, this bill would set emissions caps for the state's 14 dirtiest coal-burning power plants. Power plants account for 65% of mercury emissions; once released, mercury accumulates in fish and other wildlife. In fact, bowfin and large king mackerel are under a statewide consumption advisory in NC for mercury contamination. Each year, pre-natal exposure to mercury threatens an estimated 1,800 newborns in the state with lasting neurological damage; more than one in 10 women of childbearing age have blood levels of mercury sufficient to injure a fetus. Although it does not explicitly target mercury, SB 1078 would cut mercury emissions by an estimated 60% as a by-product of its other requirements. However, intense lobbying by manufacturers has stalled the bill in the House Public Utilities Committee, chaired by Rep. Ronnie Smith (Carteret-D).

Water quality

A gang of bills this session took pot shots at various riparian and estuarine buffer rules. HB 1257, introduced by freshman Rep. Alice Underhill (Craven-D), will allow the state government's registered foresters to substitute for state water quality staff in identifying protected streams on private timberlands. In the Tar-Pamlico basin, an agricultural rule intended to reduce inflows of excess nutrients into the Pamlico estuary spent this year in limbo, but in early August the General Assembly passed a compromise bill (HB 570) that allowed a milder version of the rule to take effect.

On the Senate side, the Agriculture, Environment and Natural Resources committee, chaired by Senator Charlie Albertson (Duplin-D), unveiled legislation (HB 189) to extend temporary buffers on the Catawba (good), speed up an exception to coastal setback requirements (fair) and

to create special exemptions to pier width limits (bad). The primary purpose for HB 189's weakening of pier rules seems to be to excuse a specific, well-connected owner for a violation he committed within the last year. Now it will be up to the Coastal Resources Commission to show their mettle.

Hogs

The State's moratorium on new or expanded hog waste facilities expired at the end of June, but was promptly extended for another two years. While Rep. Pryor Gibson (Montgomery-D) hailed his bill extending the moratorium (HB 1312) as an environmental victory, the bill made no progress towards phasing out lagoons, tightening enforcement, or strengthening protections for groundwater.

Budget

Against the backdrop of partisans wrangling over the State's budget for 2001-2003, conservationists have kept a sharp eye fixed on the State's natural resource trust funds. Despite leadership by Governor Easley and Senate President Pro Tempore Marc Basnight (Dare-D), the State's budget woes nearly found a victim in the Clean Water Management Trust Fund (CWMTF). This crown jewel of the State's natural resources spending was slated to receive \$40 million this year, yet the House proposed cutting it to \$20 million in its budget. When the day was done, the CWMTF was funded at \$40 million this year and \$70 million in 2002-03. On the downside, the Department of Environment and Natural Resources took a huge reduction in staffing, losing 58 positions. Although all but a handful of these slots were vacant, an already stressed agency now has no relief in sight.

Conclusion

Under the General Assembly's rules, it is hard for legislators to introduce new bills in the short session. So, the major issues for next year are already evident: beach engineering, mercury emissions, riparian buffers, and funding for both the natural resources trust funds and coastal regulatory programs. Please stay in touch, and we'll be sure to let you know how you can lend your hand to efforts to protect our coast and estuaries.



Year in Review

Four major goals were highlighted and distributed by the Coastal Federation in the 2000 State of the Coast Report. The goals were originally established to help citizens evaluate the effectiveness of our political leaders. Unfortunately, we've seen few tangible products from leadership so far. However, here's what the Coastal Federation, citizens and other environmental groups have accomplished over the past 12 months.

Protect and Restore Coastal Water Quality and Habitat

■ The Estuaries and Clean Waters Act of 2000 was passed by Congress on October 25, 2000. The legislation set a national goal of restoring one million acres of estuarine habitat by the year 2010 and authorizes \$275 million of federal matching funds over five years for estuary restoration. Six years ago NCCF helped form a national coalition of 11 nonprofit coastal groups called Restore America's Estuaries (RAE) that developed the proposed act, and then worked for its adoption.

■ Shellfish beds were offered protection when 1,991 acres next to the North River were purchased by the NCCF in November 2000 with a \$1,071,000 grant from the NC Clean Water Management Trust Fund (CWMTF). Major portions of the property will be restored to wetlands, developing one of the more significant forested wetland restoration projects in the nation.

■ In January 2001, the NC CWMTF provided \$2.1 million to purchase a 780-acre parcel along the White Oak River between Swansboro and Stella in Carteret County. Options are being explored for the best protection of the relatively pristine river, while offering opportunities to leverage additional funding for future waterfront property purchases.

■ In partnership with Restore America's Estuaries, NCCF is helping to create a National Strategy for Coastal Habitat Restoration. Staff developed and submitted the blueprint for the southeastern US including NC, SC, GA FL, PR and the US Virgin Islands.

■ NCCF began an effort with the Croatan National Forest to coordinate activities among environmental and governmental groups to designate the White Oak River as Wild and Scenic.

■ NCCF is working closely with state agencies to develop habitat protection plans for the 2.2 million acres of coastal and marine waters that serve as nursery grounds for the State's commercial and recreational fisheries. The 1997 Marine Fisheries Reform Act provides a new mandate for environmental regulators to work together to carry out Coastal Habitat Protection Plans (CHPPs). The CHPP process was mandated by state law to



The North River will be one of the largest wetland restoration projects in the nation.

protect wetlands, spawning areas, shellfish beds, submerged aquatic vegetation, nursery areas and threatened/endangered species. Plans for the Chowan River and coastal ocean are being created now.

■ In July, NOAA announced a \$3.4 million restoration grant to be distributed through Restore America's Estuaries. NCCF will receive \$325,000 over three years to conduct restoration projects. A portion of these funds is being used to initiate a cost-share program for coastal waterfront property owners, offering grants to conduct natural erosion control projects.

■ \$2.4 million was approved by the CWMTF for the

town of Emerald Isle's \$4.8 million project that involves buying 40 acres of undeveloped barrier island property to treat stormwater. The Carteret County vacation spot is often flooded after heavy rains. It must now raise the remaining funds from local sources.

■ CWMTF announced approval of a \$1.25 million proposal submitted with the Neuse River Foundation to acquire a conservation easement around Gum Thicket Creek on the Neuse River in Pamlico County. This acquisition is part of an overall development plan for an open space subdivision designed to protect water quality and habitat in the Neuse River.

■ NCCF worked to obtain an important change in the way the State evaluates and rates shellfish waters. The Division of Water Quality revised its methodology for determining which shellfish waters will be listed on NC's 303 (d) list of impaired waters. The new system will result in more accurate reporting of water quality problems. As an example: the White Oak River will increase from 9,000 impaired acres to 28,058. This list is prepared by the State every two years and sent to the EPA for approval.

Develop, Promote and Achieve Environmental Law and Order

■ In November 2000 the NCCF was approved by the Water Keeper Alliance to license three CoastKeepers. These full-time professionals will serve as public advocates for coastal waters within their regions all along the NC coast. NCCF is the only organization in the nation to be granted coast-wide licensing.

■ Ted Wilgis became NCCF's first CoastKeeper and began duties as the Cape Fear CoastKeeper in January. Headquartered in the Wilmington field office, Ted focused on monitoring of the Oak Island Sea Turtle Habitat Restoration project along with other renourishment projects.

■ The Southern Environmental Law Center filed a lawsuit on behalf of the NCCF and the NC Shellfish Growers Association against Holly Ridge Associates in early 2001, claiming that drainage ditches were polluting Stump Sound – an area known for its productive oyster beds. (Citizens are allowed to sue suspected polluters





Bobby Kennedy (second from right) launched NCCF's CoastKeeper Program in May.

under the Clean Water Act if the citizens believe the government isn't adequately enforcing the law.) In August this year, the US Environmental Protection Agency stated that Holly Ridge Associates LLC violated the federal Clean Water Act with its draining of 1,262 acres of swamp in Onslow County.

■ In February the NC Ports Authority announced that El Paso Merchant Energy plans to site a liquefied natural gas terminal on Radio Island in Carteret County. NCCF is encouraging public participation in workshops and hearings. While conducting research on the proposed



Students continued to expand the shellfish beds at Hoop Pole Creek.

terminal, NCCF staff discovered documentation of the presence of a unique butterfly on the island. The status of the butterfly is being researched by scientists, and depending upon the outcome of this research, the presence of the small brown butterfly may alter future development on the island.

■ Robert F. Kennedy, Jr. officially launched the CoastKeeper Program at the Center for Marine Science on May 3, generating statewide and national coverage of NCCF's new program which will provide regional CoastKeepers and citizen volunteers to monitor the state's coastal waters.

■ With funding from the Educational Foundation of America, NCCF hired its second CoastKeeper for the Cape Lookout region. The Keeper will begin work January 2002 and work with citizens between Camp Lejeune and Cedar Island.

Develop, Promote and Achieve Cost-Effective Land Use Practices

■ "After the Perfect Storm" – A Coastal Stormwater Management Workshop was conducted by Tom Schueler, Executive Director of Center of Watershed Protection, at UNC-Wilmington on October 25. This workshop was part of NCCF's effort to alert citizens and government officials to the legal mandates of the EPA Phase II NPDES Stormwater Program.

■ The Southern Environmental Law Center filed a petition on behalf of NCCF and the Sunset Beach Taxpayers Association with the NC Division of Water Quality in November. The petition requested that a Phase I storm water permit be issued prior to the construction of a ten million gallon a day wastewater treatment system in East and West Brunswick County. This request will serve as a major precedent to help shape the future of stormwater management along the coast nationwide. The project remains under review by the State.

■ At their May meeting, the Coastal Resources Commission voted to send the draft CAMA land use plan rules to public hearing. The new rules are simpler, require a land suitability analysis to determine areas that are most and least suitable for development, and offer different levels of planning for communities that take into consideration growth rates and whether or not a planning jurisdiction has fragile coastal resources. NCCF staff served on the committee to revise the rules. Public hearings were held through October.

■ Natural alternatives to bulkheading were promoted by the Coastal Federation, and a total of six shoreline restoration projects were completed. In addition, students continued to enhance the oyster beds at Hoop Pole Creek. Nine other projects are underway up and down the coast.

■ NCCF has developed a model Phase II NPDES Stormwater Permit for coastal communities. The model permit is written so that a local government can use it as a template to submit application for permit coverage.

Keep Our Beaches Public and Unspoiled

■ An invitational workshop on May 7 and 8 was organized by NCCF to discuss the status of scientific knowledge regarding beach renourishment. The workshop brought together more than 75 scientists, engineers, economists and policymakers to examine and discuss scientific findings and research gaps regarding renourishment of NC's beaches. A position paper is being produced for distribution.

■ NCCF along with other environmental groups opposed the Beach Preservation & Restoration Act (HB 418) that

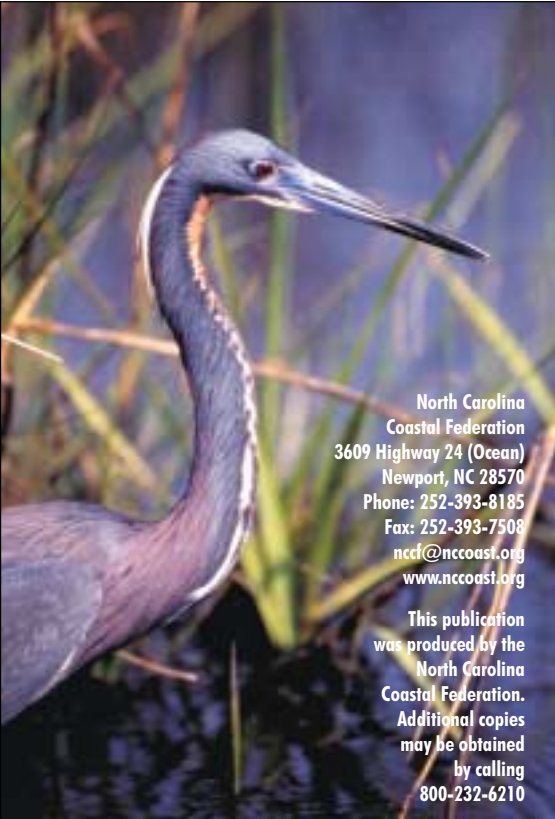


Bird Island has biological, educational and recreational values of statewide significance. Photo by CONRAD H. LOWMAN.

would establish a Beach Preservation and Restoration Commission to administer beach renourishment projects and create a dedicated Beach Preservation and Restoration Fund. NCCF and others believe that the bill duplicates the authority of the Coastal Resources Commission and would stimulate wasteful spending on projects that do not meet long-term standards set by the US Army Corps of Engineers.

■ The NC Division of Coastal Management, the NC Coastal Land Trust and NCCF submitted a joint \$1.5 million request to the Clean Water Management Trust Fund to help purchase Bird Island near Sunset Beach in Brunswick County. NCCF has worked with the Bird Island Preservation Society for nine years to deter development of the pristine island that is home to 13 species of birds and animals that are rare, endangered or deemed to be of special concern. The island is one of the few remaining undeveloped barrier islands in the state and has a price tag of \$4.2 million.





COAST

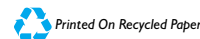
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MICHAEL HALMINSKI, Waves, NC

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CALL TO ACTION DIRECTORY

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

US Army Corps of Engineers

910-251-4511 Wilmington
252-975-1616 Washington

Call for information about 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 information about 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 (368-4968)
Call for information on highway or road
construction.

Your Legislators

The email address and phone number of your
state representative(s), state senator and US
congressmen are located on the NC General
Assembly web page. Click on "Representation"
and then on "Who Represents Me?"

Email your representatives to inform them of
problems in their region and ask for their help in
solving environmental problems.

NCCF Cape Fear CoastKeeper

3806-B Park Avenue
Wilmington, NC 28403
Phone: 910-790-3275
Fax: 910-790-9013
Call for information on becoming more involved in
coastal restoration and protection efforts, and
when you are unable to solve problems relating to
the coastal environment through normal
channels.