

# Coastal Review

NEWSLETTER OF THE NORTH CAROLINA COASTAL FEDERATION

Volume XII, Number 4, Winter 1993

Price: Priceless (NCCF Memberships are \$15.00 a Year. Please Join!).



Photo by Leslie Miller

## Making Plans for Their Future:

*"We all love it. We all care about it. Now is the opportunity to do something for it and for our people."*

Gov. Jim Hunt on the future of the NC coast in an address to the Coastal Futures Committee, October 14, 1993

## The Future

### *New State Committee Studies CAMA*

In this issue we take a look at the Coastal Futures Committee, which will be meeting over the next several months to evaluate how to improve the North Carolina Coastal Management Program. Find out who's on the committee, when and where they will be meeting and how you can get involved. **Pages 2-3.**

### APES Gets Mixed Reviews

The new draft management plan of the Albermarle-Pamlico Estuarine Study is an improvement over previous drafts, but is it worth the \$11 million dollars that it took to produce? **Page 8.**

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# Our Future

## New Committee Studies CAMA's Effectiveness

Celebrate the Coastal Area Management Act's accomplishments and identify its deficiencies were the tasks Gov. Jim Hunt gave the Coastal Futures Committee at its first meeting in October.

"We all love it. We all care about it. Now is the opportunity to do something for it and for our people," Hunt said in reference to the coast.

The committee needs to stress good stewardship of North Carolina's coastal resources as it studies and recommends changes to the Coastal Area Management Act, or CAMA, Hunt said.

"We must make sure our regulations help us to be good stewards. We have to balance our desire to protect and enjoy the coast with our need to share it with others," he said. "I think we have a moral

responsibility to do the right thing for our people and for our land.

"Everyone from the fisherman in Ocracoke to the family in Charlotte--they're all going to depend on you," he told the committee.

Richardson Preyer, committee chairman, urged the group to "listen to the voices of the public, take a whole new look and attempt to capture their vision of the North Carolina coast."

Preyer, a former congressman, reiterated the governor's point that by accepting the challenge of plotting the future of North Carolina's coastal resources, committee members accepted a public trust. "We are expected to represent the public interest, not the interest of special interest groups," he said.

The CFC should cast a wide net, he added, and chart a clear course for the future.

### Getting To Work

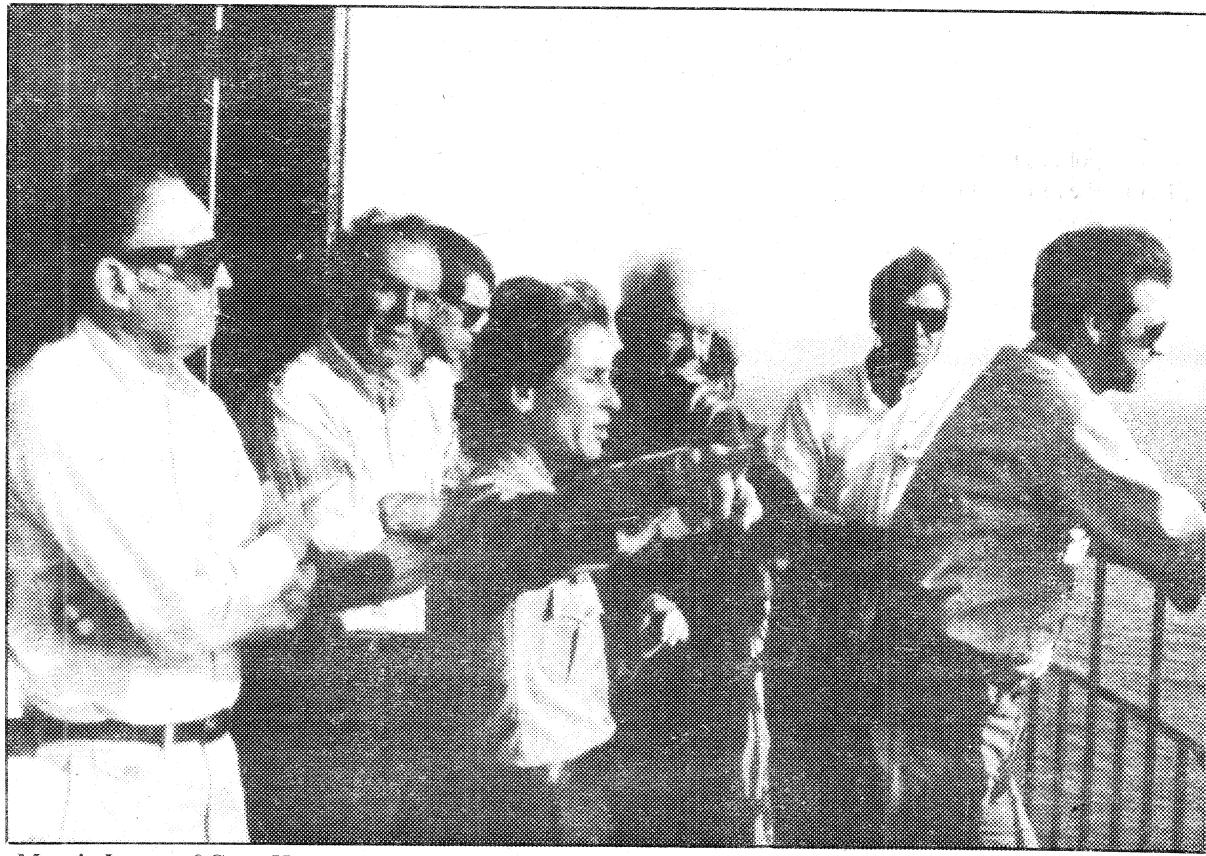
Land-use planning was quickly targeted as the committee identified key areas of interest for its evaluation of CAMA.

Eugene Tomlinson, committee member and chairman of the N.C. Coastal Resources Commission, said that in the land-use planning process there needs to be an increased emphasis on cumulative impacts of development and "carrying capacity," or the number of people that local services and nature can handle.

CAMA may have to be amended to strengthen the land-use planning process in this manner, Tomlinson said.

Besides evaluating the land-use planning process, committee members will seek to enhance coastal growth management efforts by examining better ways to manage "special environmental areas," and by taking a close look at the coastal management program's administration.

See Committee, Page 10



Marcia Lyons of Cape Hatteras National Seashore talks with the Coastal Futures Committee about Hatteras Island from atop the lighthouse in Buxton.

## Who's Who on Coastal Committee

The following people were appointed by Gov. Jim Hunt to the Coastal Futures Committee:

**Justus "Jud" M. Ammons** -- A resident of Raleigh, Ammons is involved in enterprises including nursing homes to coastal development and is a member of several trade and professional organizations, including the N.C. Homebuilders Association.

**Dr. Jo Ann Burkholder** -- An associate professor of biology at N.C. State University, Burkholder is known worldwide for her research in marine biology. She is a member of the N.C. Marine Fisheries Commission and a member of the NCCF Board of Directors.

**J. Parker Chesson** -- He was chairman of the N.C. Coastal Resources Commission and brings first-hand experience of CAMA ad-

ministration to the committee. Chesson, the former president of the College of the Albemarle in Elizabeth City, now is the executive vice president of the N.C. Department of Community Colleges and lives in Raleigh.

**W.B. "Will" Fowler** -- A coastal developer, Fowler lives in Emerald Isle and serves on the N.C. Environmental Management Commission.

**John Greene** -- Greene retired as general manager of WRAL-TV and now teaches at UNC-Chapel Hill. He is the driving force behind WRAL's annual Save Our Sounds celebration. He is a certified boat captain.

**Milton Heath** -- The committee's executive secretary, he helped draft the Coastal Area Management Act and currently teaches at the Institute of Government at UNC-Chap-

el Hill.

**Stephen "Steve" H. Hicks** -- A former Emerald Isle developer and business owner, Hicks lives in Jones County and is the president and CEO of the New Bern Area Chamber of Commerce. He is active in several organizations including the N.C. Wildlife Society and the Neuse River Foundation.

**James Holshouser** -- He was governor during the enactment of the Coastal Area Management Act in 1974. He lives in Southern Pines where he practices law.

**Anne-Marie Kelly** -- Town manager of Edenton, she belongs to the International City Management Association and the Albemarle Environmental Association.

**Alex G. MacFadyen Jr.** -- He is communications director for First Citizens Bank and owns a home and other property in Emerald Isle. MacFadyen is on the board of the Aquarium Society and is vice chairman.

See Members, Page 10



Richardson Preyer

## Get Involved. It's Your Coast, Too

The Coastal Futures Committee was mandated by Executive Order 20 issued in July. Through the order, Gov. Jim Hunt also proclaimed 1994 as Year of the Coast in honor of CAMA's 20th anniversary.

A Year of the Coast subcommittee, co-chaired by CFC member John Greene and Hugu Morton of Grandfather Mountain, has been charged with providing publicity and educational outreach to en-

courage public involvement in the evaluation process and to coordinate the Year of the Coast anniversary activities.

Funds have been provided by the General Assembly, Mary Reynolds Babcock Foundation, Z. Smith Reynolds Foundation, Fish and Wildlife Foundation, NOAA, and Smith Richardson Foundation.

The Coastal Futures Committee is encouraging public input. Citizen

comments are being solicited and will be considered as the committee prepares recommendations to give the governor next fall.

Citizens can attend CFC meetings or write CFC Chairman Richardson Preyer, P.O. Box 4429, Emerald Isle, N.C., 28594.

For more information on the Coastal Future Committee's work or Year of the Coast activities, call 1-800-232-6210.



# Nonpoint Sources Remain Top Pollution Threat

It's as elusive as its name: non-point source pollution. And although William K. Reilly, the former chief of the U.S. Environmental Protection Agency, called it "one of the most serious remaining threats to our nation's water quality," anti-pollution programs, including those in North Carolina, still don't fully have a handle on it.

Like its name suggests, non-point source pollution, or NPS, is contamination that can't be linked to specific sources, although there are many culprits.

Consider:

□ Between 50 and 70 percent of impaired or threatened surface waters nationwide are affected by NPS from agriculture

activities, according to the EPA. Sediments erode from crop and grazing lands, fertilizers that feed algal growth run off cropland and animal wastes drain into coastal waters and close shellfishing beds.

□ Pollutants carried by runoff from urban areas such as streets, commercial sites and parking lots impact 5 to 15 percent of surface waters, the EPA reports.

□ Shade tree auto mechanics pour down storm drains or send to landfills 180 million gallons of used motor oil annually, the equivalent of more than 16 Exxon Valdez oil spills.

Much of this pollution makes its way to coastal waters in North Carolina through runoff from rainwater. Fishermen know it

best as the shellfish closures issued by the N.C. Division of Marine Fisheries after heavy rains. In a wet year, clambers and oystermen can be out of work for weeks or months at a time as officials wait for pollution to dissipate from rivers, estuaries and sounds.

"Gross pollution of the nation's rivers, lakes and coastal waters by sewage and by industrial wastes is largely a thing of the past," says a report in the November/December 1991 issue of *EPA Journal*. "It is clear that our success in combatting the gross pollution of yesteryear -- however incomplete -- is largely the result of tackling the easy things first."

See Nonpoint, Page 10

*The N.C. Coastal Federation organized a symposium on "integrated coastal wastewater management" on Dec. 2 and Dec. 3 at Coastline Convention Center in Wilmington. The seminar was in conjunction with meetings of the Coastal Futures Committee, and was partially supported by a grant from the Mary Reynolds Babcock Foundation. Results will be reported in our next newsletter.*

## Many Events Will Mark Year of Coast

Governor Jim Hunt has designated 1994 as the Year of the Coast in honor of the 20th anniversary of North Carolina's Coastal Area Management Act.

A Coastal Futures Committee subcommittee has been named to oversee next year's anniversary celebration. The Year of the Coast subcommittee, co-chaired by John Greene and Hugh Morton, is planning a wide variety of projects and events to celebrate coastal resources.

At the CFC's first meeting, Greene gave an overview of the subcommittee's plans. "Although the proposed activities run from entertainment to education, they are all aimed at focusing attention on the work and ultimate goals of the Coastal Futures Committee," said Greene.

"Part of our state's wealth lies in its residents, who share the common bond of esteem for coastal resources while maintaining individual views that sometimes put their visions at odds with each other," said Greene.

"The governor has recognized the need to include all these varying opinions into the CFC's process. The ultimate goal is that a common ground can be reached which will foster public support of the committee's final report."

Subcommittee staffing is being provided by NCCF through the hiring of Sandy Semans. Semans, a former research director and environmental writer for the Louisville-based *Business First* news journal, will coordinate and assist implementation of the subcommittee's celebration plans. She also is getting the word out on the CFC's work with releases sent to media, organizations, local governments and interested parties.



Draining freshwater wetlands for pine tree plantations causes more runoff into coastal estuaries.

## BMPs Discussed

### Methods to Control Pollution From Farm Runoff Examined

When the N.C. General Assembly passed the Coastal Area Management Act in 1974, the law was hailed as a major step in curbing land-development practices that can destroy the coastal environment.

But today, developers regularly question why they continue to be targeted by the act's rules when studies show that agriculture is the leading polluter of North Carolina's waters.

To some extent it depends on how one reads the studies. While agricultural runoff is a major problem, the state also has found that agricultural pollution does not damage waters as severely as runoff from urban areas.

These facts, coupled with farmers being exempt from permit requirements under the Coastal Area Management Act, doesn't mean the state is ignoring pollution from farms. But there is always room for improvement in existing programs.

#### A Look at the Numbers

A 1990 study by the N.C. Division of Environmental Management found that 7.1 percent of estuarine waters here have been degraded to the point that they no longer

*A symposium, "Rural Best Management Practices and Coastal Water Quality Management," is scheduled 9 a.m. to 4:30 p.m. Jan. 13 at Vernon James Center near Plymouth. The symposium is being held in conjunction with meetings of the Coastal Futures Committee.*

supported their traditional uses, such as fishing or swimming.

Agriculture accounted for 60.7 percent of the degradation, while runoff from development-related activities was responsible for 8.6 percent.

But the study also found that water pollution varies by cause and severity in different regions of the coast. North of the Neuse River, where farming is big business, agriculture accounted for 36 to 46 percent of water quality degradation, but more than 90 percent of the waters in the region still supported their uses.

On the more urbanized southern coast,

where urban runoff was responsible for 40 percent of water quality degradation and sewage treatment 24.4 percent, 75.6 percent of waters supported their traditional uses. Twenty-three percent were partially supporting and 1 percent were non-supporting.

#### Dealing With the Problem

North Carolina has dealt with pollution from cropland and animal operations with what are commonly known as best management practices, or BMPs. With technical and financial assistance from the state, farmers are asked to voluntarily limit the use of fertilizers and chemical poisons and install systems to control runoff.

On cropland, that means scheduling the application of fertilizers and chemicals so that excessive amounts are not deposited. Devices and alternative methods of farming, such as buffer strips, also may be used to control water and sediment runoff.

Those methods are still used on crop

See BMP, Page 10

**Become a Celebrant**  
**Call 800-232-6210**

# Nature Trail, Education Center Get Rave Reviews

"Extremely well-done." "Beautiful." "Spectacular views." These were the kinds of comments heard Nov. 6 when NCCF opened its new education center and improved nature trail.

About 70 people came to the dedication, which was hosted by Skip Waters, well-known weather man from WCTI-TV 12 in New Bern.

"It's a great trail," said NCCF member Charles Delu. "The information signs are informative, the marsh overlook is beautiful, and trail brochure is very educational."

Thanks to the dedication and hard work of volunteers including Steve Warner, owner of Hadnot Creek Farm, the trail was expanded another 2.5 miles. Unobtrusive information markers were placed along the trail to help visitors identify plants and animals. Overlooks and bridges were added at key locations to help visitors get a better look at the natural environment.

Perhaps the biggest aid to the trail is a new, colorful, comprehensive guide prepared by Jacob Roquet of Digital Arts in New Bern. Despite being in the middle of a busy season, Jacob donated hours of work worth about \$3,000 in preparing the guide. It was a big hit and Jacob's work is much appreciated.

Also especially helpful in improving the trail were Wayne Williams, George Carter, Ann Carter, Carl VonMisenbug, Floyd Clark, Donnie Hult and Carolyn Hoss. Thanks to them and all the wonderful volunteers who unselfishly give their time to NCCF projects.

The new education center at NCCF is also a sight to behold. Museum-quality panels tell the story of the N.C. Coastal Federation and the important work that it is doing. There are examples of plants and animals for visitors to see and touch, plenty of reading material and a huge map pinpointing key areas along the coast.

Special thanks for development of the education center goes to the N.C. Maritime Museum in Beaufort, Gerry Heiser, Elizabeth Murray, Connie Mason, Karen Baggot, Irv Hooper and Carolyn Hoss.

NCCF also thanks the Kathleen Price and Joseph M. Bryan Foundation, which provided a \$15,000 grant to help pay for improvements to the trail and education center.

## Setting Goals

Before the dedication of the nature trail and education center, the NCCF board of directors and advisory council held a productive meeting to discuss their hopes for the Coastal Futures Committee, a panel appointed by the Gov. Jim Hunt to review the N.C. Coastal Area Management Act.

About 50 board members from across the state divided into groups to brainstorm about problems along the coast that need to be addressed. Key issues cited during discussions were the need to consider carrying capacity and sustainable development. Board members also cited a need for better enforce-

## NCCF at Work



ment of existing rules, elimination of loopholes in rules, improved stormwater controls, better nutrient standards, public input and a pre-determined standard for water quality and plan to insure that standard is met.

Joining the discussion was NCCF board member JoAnn Burkholder, who is also a member of the Coastal Futures Committee.

In other business, the board welcomed new member Bernie Gyant, a fisheries biologist with the U.S. Forestry Service at Croatan National Forest.

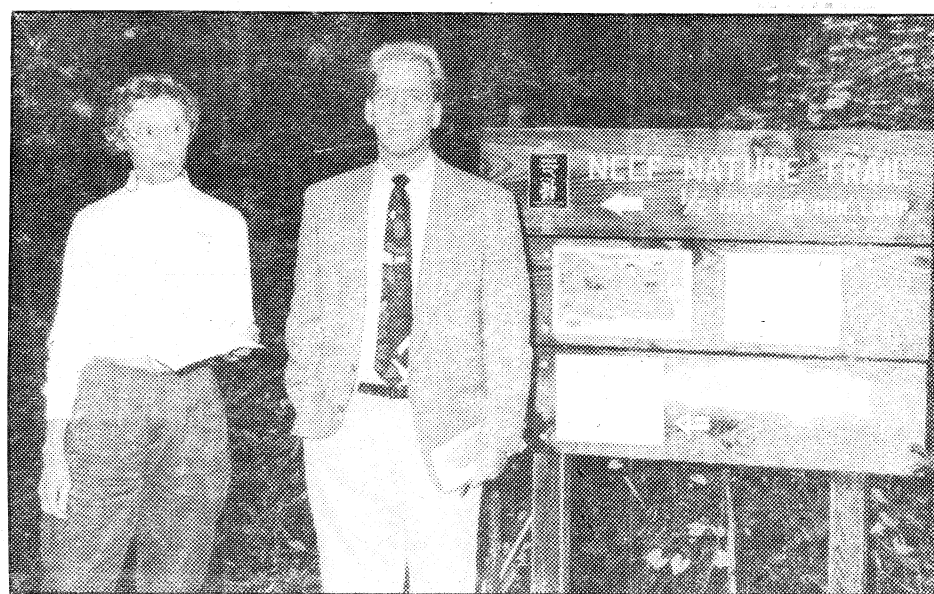
## Our Greatest Asset

NCCF was reminded again during fall and summer how important it members and volunteers are. They went out of their ways to make various events big successes and spread the word about the importance of environmental protection on our coast.

Volunteers headed by Cindy Blackwell of Swansboro got the message out and sold NCCF promotional items at the October Mullet Festival in Swansboro. Volunteers organized by Jim Wylie did the same at the September Wildlife and Sportsman Show in New Bern. Hank Fitchet got folks together for the October Chrysanthemum Festival in New Bern.

But perhaps NCCF's biggest festival event this year was participation in "Coastal Today: What About Tomorrow?" an educational tent at the October Seafood Festival in Morehead City. NCCF helped provide educational materials, displays and lined up speakers who talked about North Carolina's coastal heritage and natural resources. Hundreds of people visited the tent.

Special thanks go to Ted Odell of Beaufort. He organized volunteers and oversaw much of NCCF's role in the event, which was also sponsored by WRAL-TV and the Core Sound Waterfowl Museum.



Alvin Morris, left, proudly claims his prize in the NCCF boat raffle. Above, Ann Carter and Skip Waters welcome guests to NCCF's new nature trail.

NCCF members Dot and Larry McGee held a successful fund-raiser at their beautiful home on Bogue Sound in eastern Carteret County. With planning assistance from NCCF President Ann Carter, the McGee party raised \$4,910 for NCCF. NCCF thanks them and everyone who came out.

NCCF volunteers also played a huge role in helping NCCF sell tickets for its boat raffle. Over \$5,000 was raised, and the winner of the 17-foot Bateau boat with 25 horsepower Yamaha Outboard and long trailer was Alvin Morris of Sneads Ferry. Television announcer Bill Hitchcock drew the winner on WFXI-TV's Coastal Carolina Fishing.

## Bird Island Update

Development will be restricted on Bird Island thanks to zoning adopted by the Sunset Beach Town Council in October.

The new conservation reserve zoning district will limit development to 30 to 35 single-family dwellings with a maximum of six bedrooms per home.

The zoning also limits density to one single-family home per acre of total "Net Buildable Area," states that each lot must contain a minimum of at least one-half acre of Net Buildable Area, and requires that no more than 30 percent of the total lot area be covered by buildings and impervious surfaces.

According to an Oct. 7 report in the *Brunswick Beacon*, Reese Poag, the son of the island owner Janie Price, was disappointed. "I feel these are arbitrary limits on the rights of the property owner," he told the newspaper. "Anything that we do with Bird Island will be an improvement over what's happening there now, with a thousand people tramping all over the island on a weekend and damaging it."

See At Work, Page 5

**Coastal Review**  
Quarterly Newsletter of the N.C.  
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Regional Coordinator: Lauren Kolodij  
Operations Manager: Randy Mason  
Office Manager: JoAnn Marsh  
Communications Director: Liz Biro  
Year of the Coast Coordinator: Sandy Semans

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The N.C. Coastal Federation is a nonprofit, tax-exempt organization dedicated to involving citizens in decisions about managing coastal resources. Its aim is to share technical information and resources to better represent present and long-term economic, social and environmental interests of the N.C. coast.



## At Work

Continued From Page 4

But Bill Ducker, chairman of the Bird Island Preservation Society, applauded the new zoning. "It is a kind of milestone to me," he told the *Beacon*. "I think it will go a long way toward protecting what is pristine here. The town could have legally set much more severe restrictions, but the planning board had compassion for everyone involved in this thing."

The zoning may be the first step in reactivating the state permit application Ms. Price has had on hold since summer 1992. She wants to subdivide the island and build bridges and causeways to it. The zoning may also help state Rep. David Redwine, D-Brunswick County, better determine how much the state should pay for the island if it decides to make the purchase.

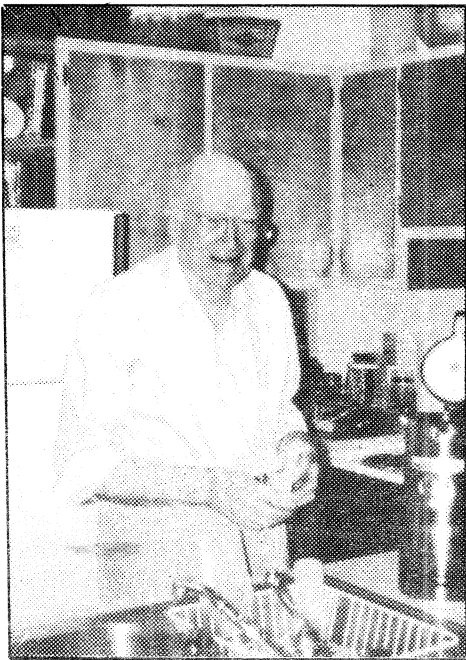
### New Hanover Land Plan

Hundreds of people in summer and fall attended two public hearings on the update of the New Hanover County/Wilmington land-use plan. Most urged officials to incorporate recommendations from NCCF and the Wilmington Cape Fear Homebuilders Association into the plan.

NCCF worked closely with homebuilders on the recommendations, which call for wise growth and environmental protection.

After an August public hearing, attorney Ken Kirkman was hired by a group of developers to review the plan. He suggested weaker policy statements for shoreline and marina development, weaker safeguards for underground drinking water supplies, and elimination of a local environmental impact statement ordinance.

After an October public hearing, recommended safeguards for groundwater protection were kept in the plan, but weaker policies on shoreline development were adopted and a local environmental impact



## Our Volunteers

*Bob Huntington of Morehead City and Sarah Whisnant Cape Carteret have spent hundreds keeping NCCF's files. They are among the hundreds of people who have found ways to contribute to our work.*

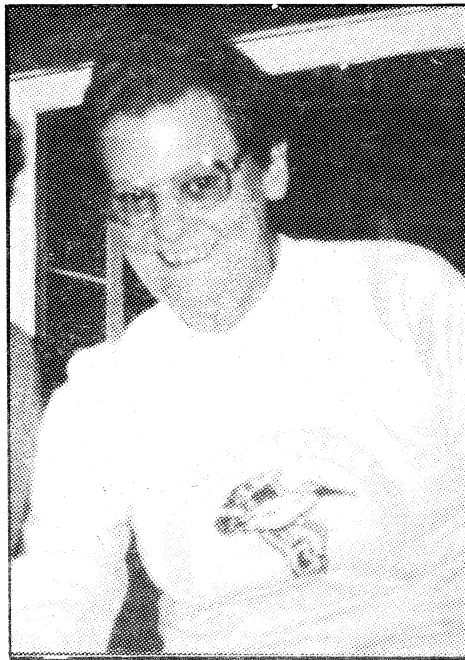
statement ordinance was dropped.

### Look at It Again, Sam

It looks like Uncle Sam is listening to his constituents. NCCF Vice President Melvin Shepard has been working to keep the government and citizens informed about how a proposed sewage treatment system at Camp Lejeune could endanger the already threatened New River in Onslow County.

The base has indicated that it prefers to continue discharging wastewater into the river. But some Onslow residents, including Shepard, think other options should be considered, namely land application and waste reduction efforts.

Shepard's work is obviously paying off. In October, Congress mandated the base present a detailed study of land application to the House Armed Services Committee by Feb. 1.



## Committee Reports

### Triangle Committee

They survived the fair! Triangle Committee members represented NCCF at the N.C. State Fair in October in Raleigh. Lori Hawkins and Lewis Piner recruited volunteers and worked out all logistical details for the ten-day event. A special thanks to all the folks who volunteered at this event.

The committee met at the WRAL-TV studios in Raleigh Sept. 27 to discuss the 1994 Coastal Celebration with John Greene, chairman of the Year of the Coast subcommittee of the Coastal Futures Committee. Triangle members plan to make the Coastal Futures Committee's efforts and Year of the Coast the focus of the celebration. Vicky Poole and Lori Hawkins will work closely with Greene and others who have organized the Coastal Celebration in the past.

### Northeast Committee

The Northeast committee is gearing up for the Jan. 13 symposium on rural best management practices and coastal water quality (see story on Page 3). The committee is helping plan and publicize the event.

Residents of Northeastern North Carolina who want to participate in local federation events should call Lauren Kolodij, (919) 393-8185.

### Central Committee

The Central Committee met Sept. 13 at Sanitary Seafood Market in Morehead City. The committee planned for local events, including the Morehead City Seafood Festival and Swansboro Mullet Festival. NCCF Operations Manager Randy Mason and members of the committee helped organize the educational tent at the Seafood Festival and sold more than \$1,000 in NCCF promotional items.

Committee members also helped with logistics for the joint meeting of the board and advisory council Nov. 6 at Hadnot Creek Farm. They helped with improvements to the educational facilities and nature trail.

### Southeast Committee

The Southeast Committee met Oct. 5 at UNC-Wilmington. Eugene Tomlinson, chairman of the N.C. Coastal Resources Commission, discussed his vision for the future of North Carolina's coast. Tomlinson suggested that land-use plan guidelines used by the CRC be evaluated and improved to allow a broader approach to regional planning and consideration of carrying capacity and cumulative impacts.

Tomlinson stayed for the entire meeting, and members of the committee had an opportunity to have one-on-one conversations with him.

The committee helped plan and attended the December wastewater symposium being sponsored by NCCF.

## We've All Got Something To Lose

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# Wetlands Threatened by CRC Proposal

Wetlands are being threatened again, this time by the N.C. Coastal Resources Commission's proposal to weaken permit requirements for construction on some wetlands.

State rules require what are known as "major" permits to build on wetlands in North Carolina's 20 coastal counties, but some members of the CRC have suggested that "general" permits may be adequate for bulkheads built in non-coastal wetlands.

Major permits mandate a more complete review of environmental impacts of a project and that review can take up to 150 days. General permits can be approved in as little as a day.

Commissioner Richard Hargitt said the CRC is trying to simplify the permitting process, while Commissioner Ernie Carl said state staffers are overburdened and this is one way to ease the load. Carl noted that other state and federal agencies already review such projects.

NCCF Executive Director Todd Miller said an easy-to-obtain permit will lead to more development on small amounts of wetlands, which are inadequately protected.

The CRC should be looking at measures to protect wetlands, rather than ways to expedite the permit process for developers. Because of concerns about the permit, final action on sending it to a public hearing has been delayed until March.

## Breakwaters Are Allowed

Free-standing, wooden breakwaters would be allowed in estuarine waters and public trust areas of environmental concern under a new general permit being considered by the N.C. Coastal Resources Commission.

Breakwaters -- shallow wooden structures built offshore to break wave action -- are currently allowed only with a major permit.

During a public hearing on the matter at the CRC's September meeting in Wilmington, engineer Spencer Rogers of UNC Sea Grant suggested that breakwaters are an environmental asset because they encourage new growth of marsh grass.

But NCCF Executive Director Todd Miller emphasized that before any decision is made to lessen permit restrictions, certain issues must be addressed. For instance, since breakwaters are located 10 to 20 feet offshore in public trust waters, would the state have to grant easements for construction on state property? Also, with a breakwater on public property, who would be liable if someone was injured on one of the structures -- the state or the person who built the breakwater?

Plus, if vegetation grows between the breakwater and the shore, it could make it easier to fill traditional public trust waters. Fill would increase shore front property for the owner.

Concerns over navigation and traditional use of waters also were raised by Miller.

Structures may interfere with navigation in public trust waters and impede access for fishermen. Another public hearing on the General Permit is scheduled for January.

## Public Comment Period

Many citizens spoke at the CRC's public forums in September and November. New Hanover County residents, including NCCF board members Wink Winkemeier and Mildred Harris, commented about the lack of progress toward adoption of the Wilmington-New Hanover County land-use plan update. At the November meeting in Dare County, leaders of the Surfrider Foundation expressed concerns over the fact that sandbags were now being used as permanent protection against oceanfront erosion.

## New Hanover County Plan

The CRC approved the Wilmington-New Hanover County Land Use Plan Update at its meeting in November. This approval came after delay's in adopting the plan became the focus of the CRC's public comment period during its September meeting. The plan should have been adopted in 1991. Bobby Greer, Chairman of the New Hanover County Board of Commissioners, who has served on the County Commission throughout the entire plan update, told the CRC that the CAMA planning process was "Greek to me."

Local land use plans are supposed to be updated every five years. The CRC may take over the update process if a local government does not follow state guidelines for completion.

## Bald Head Shore Reclassified

The CRC reclassified the shore of Bald Head Island from the island's marina to the mouth of Bald Head Creek from "inlet hazard area" to "estuarine shoreline." The action, requested by Bald Head Island Limited, relaxes development restrictions.

The inlet hazard designation prohibits bulkheading or hardening of the shoreline; requires that all development be set back from the first line of stable vegetation a distance equal to the setback required in the adjacent ocean hazard area; and allows just one commercial or residential unit per 15,000 square feet.

Ken Stewart, former director of the N.C. Division of Coastal Management and a consultant for Bald Head Island, has said that erosion at the marina is the greatest concern. The reclassification could allow bulkheading the shoreline surrounding the marina.

NCCF warned the CRC that the reclassification would dramatically change the character of future development. Instead of 15,000-square-foot lots, the area will be developed at a much higher density.

# Hurricane Emily

## A Reminder of Our Vulnerability

The North Carolina coast in late August had another brush with disaster, perhaps leaving some wondering how long the state will be spared.

The talk here is of hurricanes, and "the big one" hasn't hit here for about 33 years.

Hurricane Emily looked as if its 115-mph winds would bring devastating damage to the coast Aug. 31. The storm appeared to be heading for Swansboro, then Atlantic Beach, then the Outer Banks. Thousands of people evacuated from coastal areas that appeared to be in Emily's path, but the storm was sidetracked by the Jet Stream, causing it to curve slightly back out to sea so that it just brushed Cape Hatteras.

Some said the damage could have been a lot worse. Emily was certainly no Hazel, but its 15-foot waves caused massive erosion, roofs were blown off, some trailers and boats were overturned and trees and limbs littered the area. The worst damage was caused by flooding, officials reported. Homes, businesses and public buildings suffered, and water and electrical service were lost for days.

Two swimmers visiting from Texas also died in the rough surf after the storm.

By Oct. 22, a disaster assistance office at Avon had closed and 444 checks totaling

more than \$1 million had been distributed for housing assistance; 153 checks totaling \$405,750 for individual and family grants. Additionally, the Small Business Administration had received 812 requests for help.

While the storm did its share of damage, it was nothing compared to Hurricane Andrew last year in southern Florida or Hurricane Hugo in Charleston. That probably has many folks thanking their lucky stars. Although, Cape Carteret's land use plan notes studies that say a major hurricane hits North Carolina about every 17 years, for the most part, the state's coast has only had brushes with storms.

The situation may give some folks a false sense of security, especially those whose homes are located near inlets or on fragile barrier islands. But they should heed the words of noted coastal geologist Orrin Pilkey of Duke University. If a major storm does hit our coast, Pilkey says, the damage would be more devastating today than when Hazel hit in 1954.

The problem is massive development on the coast. There would be millions of dollars in damages, not to mention what the state and federal government would have to shell out for clean up and restoration. Resorts such as St. Regis in Onslow County would become islands, while others would fall into the sea, Pilkey says.



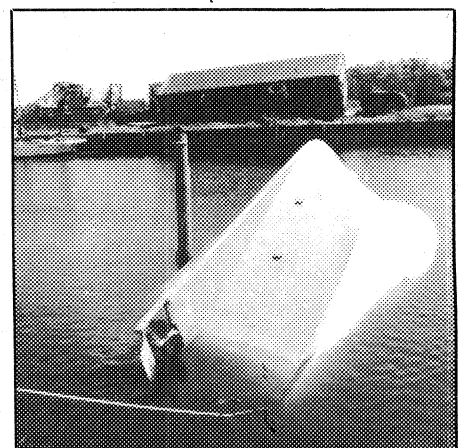
While it's certainly true that no good comes from hurricanes, they do make for some special moments in the calm after the storm. Ocracoke resident James T. Cheatham put it this way:

"It is the day after Emily and even though the wind is out of the southwest at about 20 knots, Ocracoke seems peaceful with no tourists allowed on the island. The only sounds are the wind and crickets.

"Electricity has just been restored with the aid of a generator since power is not available from the mainland. This is one reason tourists still are not allowed. Another is that this island, 30 miles out in the sound, is fragile and needs time to recoup before the influx of tourists begins again. Even one of the motel owners was overhead to say, 'Now we have the island back to ourselves.'"

**Scott Boatyard in Buxton suffered heavy damage. Frisco resident Mark Nash indicates tide line on his house for which he has no flood insurance. The house was a near total loss.**

Photos by Mike Halminski.





# Judge Revokes Permit To Drill in Buxton Woods

Buxton Woods Coastal Reserve was saved from development in October when a Superior Court judge revoked a permit issued by the N.C. Coastal Resources Commission last year.

The CRC issued the permit in November 1992 authorizing Cape Hatteras Water Association to build roads, utilities and a well field in the reserve on Hatteras Island.

Friends of Hatteras Island, represented by the Southern Environmental Law Center in Chapel Hill, appealed the permit. The group contended that the project would harm the maritime forest, destroy wetlands within the reserve and was contrary to laws and regulations on state coastal reserves.

Judge William C. Griffin agreed that the permit should not have been issued. His ruling was a big win for Friends of Hatteras Island, which has been fighting construction of wells in the woods, the largest remaining maritime forest on the North Carolina coast.



Pine trees in Buxton Woods snapped like toothpicks in Hurricane Emily. The forest can handle natural disasters if left alone to heal itself. Photo by Mike Halminski.

## Coastal Roundup

### Southern Coast

#### Bostic Released From Jail

Marlow Bostic, a North Topsail Beach developer, was released from the New Hanover County Jail Oct. 15 after spending 70 days there for refusing to abide by a court order.

Judge James Fox of U.S. District Court jailed Bostic for not providing the court with information about his assets. The information is needed for Bostic to pay a multi-million-dollar judgment awarded to property owners who say they were not given amenities and sewer hookups promised at Bostic's Ocean Ridge development in North Topsail Beach.

Bostic and F. Roger Page of Winston-Salem lost a \$13 million judgment last year in the Ocean Ridge case. A U.S. Court of Appeals reduced the judgment to \$5.3 million in mid-October.

Bostic, who is not commenting on the case, was to be back in court in December to provide information about his assets. Attorneys for the plaintiffs in the Ocean Ridge case claim Bostic has transferred assets in an attempt to hide his wealth so he will not have to pay the judgment.

#### Trespassing Charged Dropped

Charges of trespassing against two *Wilmington Morning Star* reporters were dropped in September.

Reporter Kirsten Mitchell and photographer Gray Laughridge were charged May 24 for trespassing on a lot on North Topsail Beach's Alligator Bay. Donald Mercer of Jacksonville filed the charges. He claims he owns the land, but the state contends the lot belongs to North Carolina. The reporters had gone on the property to ask questions about the dispute.

Charges were dropped because of the ownership question.

The State Property Office contends the

lot was formed by a U.S. Army Corps of Engineers dredging project in the 1930s. Since spoils that formed the lot were dumped into waters of the state, the land belongs to North Carolina, the office says. The Attorney General's office has notified Mercer of the state's position.

Mercer says he bought the lot in 1989 from Golden Acres Inc., a development business owned by F. Roger Page and Marlow Bostic.

#### Mining Proposals Raise Ire

Rock quarries proposed by Martin Marietta Aggregates in Brunswick and Pender counties have raised the ire of citizens who fear the mines will damage groundwater and the quality of life.

The Brunswick County Anti-Mining Alliance opposes a mining plan north of Southport and has asked county commissioners to change the zoning law to ban mining. Critics fear that groundwater will be contaminated and that blasting and ground-hollowing could lead to problems at the nearby nuclear plant operated by Carolina Power and Light and Sunny Point Army depo. The mine proposes to discharge 10 million gallons of freshwater each day into the Cape Fear estuary.

In Pender County, citizens are fighting a 1,500-acre mine near the intersection of N.C. 210 and U.S. 17. Martin Marietta officials have said that the mine would draw millions of gallons of groundwater a day and put 250 to 300 trucks on the highway each day.

A third mine is proposed in the Catherine Lake area of Onslow County.

All the mines would require a state mining permit.

### Central Coast

#### Where's the Fish?

Despite claims from Carteret County fishermen and some researchers that it would hurt

fall fishing, the U.S. Army Corps of Engineers proceeded in October with a beach nourishment project at eastern Bogue Banks.

Sand dredged from the state port at Morehead City is being placed on beaches between Atlantic Beach and Pine Knoll Shores to control erosion.

Mullet fishermen, especially, point to studies that show dumping sand on the beach in the fall will cover up food sources that attract fish close to shore, where they can be reached by commercial and recreational fishermen.

But the corps says the project is safe and a delay could cost up to \$40,000 a day. Some researchers say any impacts would be short-lived.

#### Wetlands Lose Again

Carteret County once had perhaps the strictest land-use plan guideline for wetlands development in the state. But that changed this fall when the county deleted a section that prohibited development in wetlands.

The Coastal Resources Commission approved the change to the county's land-use plan in September. The amendment allows construction that is permitted by state law in wetlands as long as any damaged wetlands are replaced with an equal amount of wetlands.

County officials said problems were cropping up for land owners who could not obtain state permits for construction on wetlands due to the rule in the land-use plan. The state may not grant a permit for construction that is inconsistent with a local land-use plan.

NCCF members fought the proposal, which originally did not make any provisions for replacing lost wetlands. Their arguments did persuade county commissioners to include the mitigation policy.

#### South River Update

The N.C. Division of Environmental Man-

agement has completed a draft study of problems in South River, and the document is now being reviewed by top state environmental officials.

How long the review will take is not known, said Stephanie Petter of DEM, who compiled the report. Comments from the review will be used to make any necessary revisions to the document. Once the process is complete, the document will be released to the public. Petter said she did not know when the public would be able to view the document.

The state has closed 1,375 acres of South River to shellfishing. Pressure from fishermen and NCCF persuaded the state to study what caused the pollution.

Steve Levitas, Deputy Secretary of the Department of Environment, Health and Natural Resources promised State action to clean up the river when he toured the waterway in August. Local citizens are still waiting to see the results of his promises.

### Northern Coast

#### Center on Its Way

The House Committee on Merchant Marine and Fisheries in September approved legislation that authorizes construction of the Walter B. Jones Center for the Sounds in Columbia.

The center would be on 110,000-acre Pocosin Lakes National Wildlife Refuge in Tyrrell, Hyde and Washington counties. It would provide public opportunities, facilities and resources to study the Albemarle-Pamlico region's natural resources and history. Federal, state and local money would fund the center.

The authorization bill was introduced by Rep. Martin Lancaster, D-Goldsboro.

The center is part of a plan to make the Albemarle-Pamlico peninsula one of the nation's prime tourist destinations by the year 2000.

#### Thorny Old N.C. 12

State highway officials are disputing a coastal engineer's criticism of a plan to build up N.C. 12 at the Outer Banks with sand dredged from Pamlico Sound.

Spencer Rogers, a coastal engineer with the University of North Carolina Sea Grant program, said dredging in the sound at Canadian Hole would increase chances for a new inlet to cut through the Outer Banks. It would make more sense to move the road farther from the ocean, he told the *News and Observer* of Raleigh.

But Archie Hankins, a hydraulics engineer with the N.C. Department of Transportation, says the amount of sand the state intends to move would not be enough to threaten Hatteras Island. The N.C. Division of Coastal Management granted an emergency permit for the dredging in mid-October. Two federal agencies are still objecting to the project.

# APES Draft Plan Gets Mixed Reviews

The fact that farmers and foresters at a Morehead City hearing hailed a management plan to protect the Albemarle-Pamlico Estuarine System would seem to indicate trouble.

But the plan has also been applauded to some degree by conservationists.

It's the third draft of the Albemarle-Pamlico Estuarine Study's Comprehensive Conservation Management Plan, or CCMP. The plan is intended to clean up and protect the estuarine system, and is the focus of the more than \$10 million study.

Farmers and foresters at the Carteret hearing commended study officials for removing mandates and regulations from the plan and replacing them with goals and recommendations.

But that move has some conservationists worried. Dave McNaught, executive director of the Pamlico-Tar River Foundation, says specifics were taken out to make the plan more politically correct.

But he noted that the plan has its good side. It identifies problems and generates ideas that will benefit the environment.

Doug Rader, senior scientist for the N.C. Environmental Defense Fund, told *The Daily News* of Jacksonville that a less specific plan may actually be stronger because it can be tailored to local needs.

NCCF President Ann Carter sits on the APES Pamlico Citizens Advisory Committee, which helped prepare the draft. She reminded those at the hearing that everyone has a responsibility to see recommendations through.

"Some of us want particular regulations to protect our resources, and usually those affected don't like them, but we all have to restrict ourselves," she said. "No one group is responsible for all the problems. We're all in this."

Other public meetings were held in Greenville, Raleigh, Edenton and Kill Devil Hills. A final plan is to be drafted by the APES policy committee for submission to Gov. Jim Hunt and the U.S. Environmental Protection Agency. If it is approved, it will be up to state and local leaders to implement measures suggested by the plan.

## Plan Highlights

Following are highlights of the third draft of the Comprehensive Conservation Management Plan. Management actions would apply to the counties in and around the Albemarle-Pamlico region, which stretches along the coast from Currituck to Carteret Counties, and inland to the Piedmont.

**To restore, maintain or enhance water quality in the Albemarle/Pamlico Region, a "basinwide" approach to water**

**quality management is suggested. That means looking at how pollution is impacting the entire system instead of just individual waters that make up the system. Runoff pollution**

**as well as specific discharges would be addressed. Clean up of contaminated waters is proposed along with development of techniques to gauge pollution so that it can be addressed as soon as possible. Management actions would include the following:**

□ Developing plans for each river basin in the Albemarle-Pamlico Region by 1999. Plans would include basinwide wetlands protection and runoff pollution control strategies.

□ Renewing all discharge permits on a simultaneous schedule by river basin by 1999.

□ Considering the potential for long-term growth and its impacts when determining how much pollution a basin can handle.

□ Increasing funding to restore wetlands and help farmers, foresters and developers employ methods that control pollution.

□ By 1995, requiring logging operators to submit a notice of intent to harvest.

□ By 1995, strengthening existing rules and developing new rules to control stormwater runoff pollution.

□ By 1995, adopting a state marina policy to determine the best places for marinas and to show how to construct marinas with an eye on environmental protection.

**To conserve and protect fish and wildlife habitats and the area's natural heritage, promote regional planning and maintain, restore and enhance vital habitats. Management actions would include:**

□ Developing protection and restoration plans for each river basin in the Albemarle-Pamlico region by 1999.

□ Mapping wetlands, fish habitats and natural communities that show the most vital areas.

□ Public ownership and/or management of the most important natural areas.

□ Offering incentives such as technical assistance to help landowners, local government and others be better stewards of the environment.

□ Developing and implementing a wetlands restoration program by 1995.

**To restore or maintain fisheries and provide for the long-term use, control over-fishing with fishery management plans, reduce bycatch and promote practices fishermen could use to help protect resources. Management actions would include:**

□ Developing fishery management plans that would include recovery objectives for severely depleted stocks by 1999.

□ Modifying the marine fisheries license structure to increase revenues for fisheries management and improve data collection on

landings, effort and demographics.

□ Aiming to reduce bycatch in the inside trawl, long-haul seine, pound net and gill net fisheries by at least 50 percent by 1995. Require bycatch reduction gear proven to work.

□ Initiating a state program to teach fishermen and help them pay for methods that reduce bycatch and negative impacts on fisheries.

**To promote responsible stewardship of the Albemarle-Pamlico's natural resources, promote planning that protects the environment and allows for economic development; increase public understanding of environmental issues and public involvement in environmental policy-making; and ensure school students are exposed to environmental education. Management actions would include:**

□ Providing funding and economic incentives to local governments to integrate economic and environmental planning by 1999.

□ Implementing a comprehensive, coordinated and proactive approach to managing public trust waters by 1996.

□ Increasing opportunities for citizens to

communicate with members of environmental agencies and policy-making commissions, and enhance opportunities for local public involvement in issues affecting the estuary.

□ Creating a citizen ombudsman position at the N.C. Department of Environment, Health and Natural Resources.

□ Supporting development of a comprehensive environmental science and education curriculum for schools, and providing teachers opportunities to gain renewal credits in workshops on environmental and estuarine issues.

**Implement the Comprehensive Conservation Management Plan in a fair and cost-effective manner that offers the highest level of environmental quality. Management actions would include:**

□ Coordinated implementation.

□ Annually reviewing progress on implementation.

□ Regularly assessing the health of the estuary and how effective management measures have been.

## Fishing Families Speak About Their Future

**Susan West, president of the Hatteras-Ocracoke Auxiliary of the N.C. Fisheries Association, spoke to the Coastal Futures Committee when it visited Hatteras Island. The following are excerpts from her talk.**

In all coastal areas of North Carolina, commercial fishing families are wondering if the future of our coast will include room for our activities.

Our area has witnessed significant growth and development since the 1980's. This growth has changed not only our physical environment but our social and cultural environment also. As our county has courted development, the tourism industry has become king here. All other economic activities are viewed as less important.

It's easy to see why commercial fishing families are starting to feel extremely threatened.

As more people are attracted to our area, our concern is that there may come a day when there is no room for us. With escalating values of waterfront property, there may be no docking space for commercial boats. If our fish buyers decide to retire and to sell their valuable waterfront property, it is likely that their property will be put to some other use and there will be no place for commercial boats to unload their catch.

On your way down here today, you came across the bridge from Manteo to Nags Head. There used to be commercial boats docked in a canal that ran parallel to the bridge. That canal was filled in and the small commercial boats that had docked there for years were pushed out. We hear a lot of talk about providing recreational access to our waters but no talk of providing commercial access.

Fishing families are deeply concerned about our physical environment and water quality. The more cynical among us don't feel that we can have development and maintain water quality. Perhaps you noticed the large vacation homes in Avon. Not long ago people shellfished in the sound there. Now it is polluted.

Everyone tells us that we live on a fragile barrier island. Everyone tells us that our island and our natural resources need to be protected. The APES Study has made nearly everyone more aware of the value of our sounds. 1994, as The Year of the Coast, will pay particular attention to our area.

The commercial fishing industry is undergoing immense change at this time. Our historical methods of fishing are being changed in order to protect our marine resources or so we're told. We see more restrictions on our industry every day.

If the commercial fishing industry is willing to change and in some cases make sacrifices in order to protect our environment, we feel that all citizens and industries and governments must also do their fair share to protect our environment. When we see restrictions on our industry increase and at the same time we see a relaxation of the restrictions on the development of wetlands, it only serves to make us even more cynical.

Our area has a strong heritage of commercial fishing. We are a part of the culture here but we area also a strong, healthy economic activity. Our concern is that we will become relegated to just a part of the history of our area and will no longer be an important industry.



## NCCF Bulletin Board

### Granting the Coast a Bright Future

In recent weeks, two foundations and a federal agency have decided to help NCCF raise funds for the work of the Coastal Futures Committee and Year of the Coast activities.

The Z. Smith Reynolds Foundation awarded \$85,000, the National Fish and Wildlife Foundation gave \$20,000 and the National Oceanic and Atmospheric Administration provided \$20,000. To date, NCCF has raised \$220,000 for the project. The North Carolina General Assembly has appropriated an additional \$50,000.

### Our Wish List

Tis' the season for giving and NCCF can always use some presents. We've all been very good and on our wish list this year is a laptop computer that NCCF staffers can take with them to important meetings and events. We also need a portable public address system to take to public meetings that we organize.

### Memorial Contributions

The following memorial contributions were made to NCCF:

**Joyce Jenner** by Donald and Carolyn Hoss of Beaufort, N.C..

**Col. Ezra H. "Easy" Arkland** by Larry, Cherrie and Scott Bell of Smyrna, Ga.

**Bob Shambaugh** by Cindy Blackwell of Swansboro, N.C.; NCCF staff members.

**Pearl Schreiber** by Frances Hall of Salisbury, N.C.

### Our Newest Member

NCCF's newest member, Vance Barden Miller, was born Friday, Nov. 5, to Todd Miller and Julie Shambaugh. He was a keeper, weighing in at eight pounds, 14 ounces and measuring 20 1/2 inches long.

Baby and mother are doing well and Todd is catching up on his sleep at the office. That's why we need that P.A. system!

### Events:

December 18, 1993, Dawn to dusk survey of birds -- Southern Shores, Kitty Hawk, Kill Devil Hills, Northend of Roanoke Island. Sponsored by Outer Banks Audubon. Must register by Dec. 11 to be assigned a team and area to survey. Call Lee Yoder at (919) 441-5101.

### Meetings:

December 7, 3 p.m., National Audubon Society -- Outer Banks Chapter Board Meeting at Outer Banks Presbyterian Church. Call H. David Leake, 261-6850.

January 4, 1994, 3 p.m., National Audubon Society -- Outer Banks Chapter Board Meeting at Outer Banks Presbyterian Church. Call H. David Leake, 261-6850.

January 13, 1994, 9 a.m., Emerging Laws, Regulations and Incentives: Rural Best Management Practices and Coastal Water Quality, Vernon G. James Center, Plymouth. (See story, Page 3.)

January 14, 1994, 8:30 a.m., Monthly meeting of N.C. Coastal Futures Committee, Edenton Town Hall.

January 17, 1994, 7:30 p.m., National Audubon Society - Outer Banks Chapter, General Meeting at Outer Banks Presbyterian Church. Call H. David Leake, 261-6850.

## Clinton Plan to Reform Wetland Policy Gets Mixed Public Reviews

After two years of uncertainty over what the Bush Administration would do about wetlands protection, President Bill Clinton in August released a plan that he says will "break the gridlock that has paralyzed wetland policy in the past and represents a major advance in reforming and improving the wetlands program nationwide."

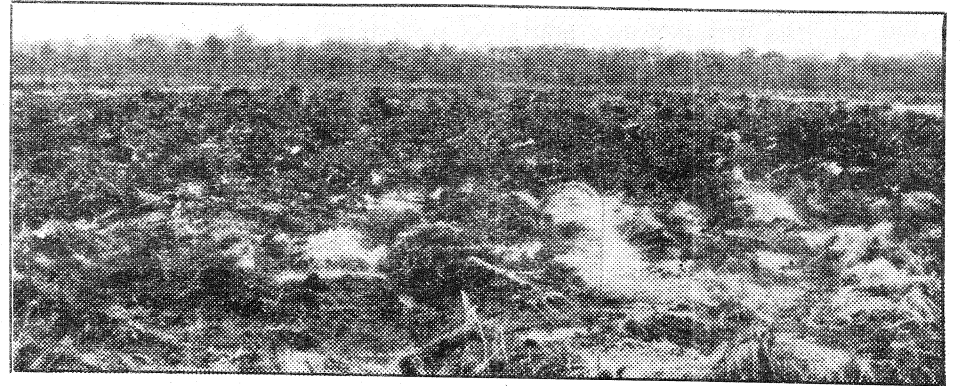
Titled *Protecting America's Wetlands: A Fair, Flexible and Effective Approach*, the plan has been praised by farmers, developers and conservationists as a step in the right direction. But there are still major concerns.

The plan was developed by a working group chaired by the White House Office on Environmental Policy and included participation of the Environmental Protection Agency, the U.S. Army Corps of Engineers, the Office of Management and Budget and the departments of Agriculture, Commerce, Energy, Interior, Justice and Transportation.

The following principles guide the new policy:

A goal of no overall net loss of the nation's remaining wetlands and a long-term goal of increasing the quality and quantity of wetlands have been set.

Regulatory programs must be efficient, fair, flexible and predictable and must be administered to avoid unnecessary impacts on private property and the regulated public while providing effective protection for wetlands.



Fifty-three million acres of wetlands get no protection under Clinton's plan.

Non-regulatory programs, such as planning, wetlands restoration and public/private cooperative efforts must be encouraged to avoid reliance on regulations.

Federal wetlands policy should be based on the best scientific information.

The policy includes a number of reforms, some of which took place immediately. Others have scheduled deadlines and some must be authorized by Congress.

One of the concerns of conservationists is a policy that removes 53 million acres of former wetlands converted to croplands from wetlands regulations. This was done, the policy states, because those areas no longer exhibit wetlands characteristics.

"North Carolina has large areas of prior converted wetlands that now could be devel-

oped," The Southern Environmental Law Center's Derb Carter told the *News and Observer* of Raleigh. Those wetlands could one day be restored to replace wetlands that have been destroyed, ecologists say.

Another worry is a section that gives the Soil Conservation Service, a division of the U.S. Department of Agriculture, authority for ruling on agricultural wetlands. As Environmental Defense Fund senior scientist Doug Rader noted, the SCS "has never seen a farm field it considered wet."

The N.C. Farm Bureau, however, endorsed the moves. "For too long farmers have dealt with the confusion caused by four federal agencies: the EPA, the Army Corps of Engineers, the Fish and Wildlife Service and the SCS in making decisions on wetlands," the bureau reported in its October issue of *Farm Bureau News*.

Other reforms include:

The Army Corps of Engineers is to establish within a year an administrative appeals process so that landowners can seek speedy recourse without going to court if permits are denied.

The Clinton Administration endorses the use of "mitigation banks," which set aside wetlands that can be used to replace destroyed wetlands.

The administration supports incentives for states and localities to engage in watershed planning. Congress should endorse the development of state wetland plans.

A loophole that allowed the clearing and draining of some wetlands without a permit has been closed. Only small projects with minor environmental impacts will be subject to less vigorous permit review.

## Center of Attention

### Wetlands Are at Crux of Clean Water Act Debate

Many components of the Clinton Administration's new wetlands policy depend on the federal Clean Water Act, and wetlands have been at the center of debate as Congress attempts to reauthorize the act.

The reauthorization was to be completed this year, but probably won't be done until next spring, said Dan Ashe, a senior staff member with the House Merchant Marine and Fisheries Committee.

"Wetlands have definitely been one of the most controversial issues in the

reauthorization," Ashe said.

Congress is looking at what impacts wetlands, permits for construction on wetlands, penalties for wetlands violations, how local watershed planning can be used to protect wetlands and other issues.

Hearings on the reauthorization are finished. Now the Senate and House will each devise a new version of the Clean Water Act, then meet in a conference committee to reach a compromise. Afterward, Congress must vote on the act. If it passes, it will go to

President Clinton for approval.

The committees also are reviewing ways to control nonpoint source pollution and discharges of toxic chemicals. Better enforcement of the Clean Water Act is also being studied.

"Money is the big question," Ashe said. Agencies don't have enough money to effectively implement and enforce the act and may not get more funding since lawmakers are trying to trim the federal budget and reduce the deficit.

## Nonpoint

Continued From Page 3

Easy means those sources of pollution that can be traced. Sewage discharge or industrial outfalls, for instance, can be regulated. Government can limit the amount of contaminants in the discharge, how much can be discharged each day and where discharges can take place.

But with NPS, pollution results from a broad range of activities over a wide geographic area.

"Clearly, the problem is enormous," Reilly reported in the *EPA Journal*. "Yet because this type of pollution is so hard to pinpoint and because almost everybody contributes to the problem, it largely defies traditional command-and-control regulatory approaches that have brought so much success in curbing pollution from specific plants or pipes over the past 20 years."

## Back Home

North Carolina is not ignoring non-point source pollution. The state Department of Environment, Health and Natural Resources has programs to help farmers and foresters voluntarily control runoff pollution from their operations. And the Coastal Resources Commission and Environmental Management Commission have adopted rules, such as mandatory buffers and limits on impervious surfaces in coastal areas, to help control runoff. Most recently, rules have been adopted to deal with wastes from animal farms.

But is the state looking at the big picture or participating in crisis management? Is it time that officials looked at an overall strategy to control both point and non-point sources, an idea known as "integrated coastal wastewater management?"

According to some, the answer is yes, and it's not just conservationists who are touting such a plan.

Gov. Jim Hunt recently heard from nine

local governments in Brunswick County. In a letter to Hunt, officials said, "Due to the extremely fragile shellfish water resource we have, we feel that stormwater runoff control must be integrally addressed simultaneously with sanitary waste disposal for us to achieve the desired level of environmental protection."

## Ideas for a Plan

NPS control is not a new problem. As far back as 1985, the state was advising the Coastal Resources Commission, which regulates shoreline development, to adopt measures to control runoff pollution. Stream buffers to absorb pollution, setback requirements and limits on impervious surfaces were suggested.

As for NPS from agriculture and forestry, some observers say the next step is to take North Carolina's voluntary program for farmers and make it mandatory. Farmers would still get technical and financial assistance to

help them implement plans to control NPS from their operations.

Reilly, the former EPA head who served under President George Bush, noted in 1991 that education is also key. Farmers, those shade-tree mechanics, gardeners, construction firms and all citizens must understand their contribution to NPS pollution and how they can help control the problem.

Reilly called for attention to construction sites and requiring catch basins and buffers at the local level. The federal government, he said, needs to provide basic scientific information, incentives, technical expertise and some funding to states for NPS control programs.

Incentives is an idea worth exploring, said Dr. David Moreau, director of the Water Resources Institute at the University of the North Carolina and chairman of the state Environmental Management Commission, the regulatory body charged with protecting water quality in North Carolina.

## BMPs

Continued From Page 2

land, but new rules have been adopted for animal operations.

Animal operations using BMPs were building lagoons where wastes were stored and later used to fertilize fields, again on a set schedule to avoid overfertilizing.

But public outcry over pollution from animal operations and an increase in the number of hog producers in North Carolina persuaded the N.C. Environmental Management Commission to adopt rules to control pollution from animal farms.

As for cropland, environmentalists, farmers and state officials think voluntary BMPs may still be the best answer.

## Program Growing

Since North Carolina's Agriculture Cost-Share Program was initiated in 1984, the state has contracted with hundreds of farmers said Jim Cummings, BMP coordinator at the N.C. Division of Soil and Water Conservation.

The program has tackled the problem of sediment runoff, Cummings said, and today is emphasizing controlling herbicides, pesticides, fertilizers and animal waste.

It received a big boost in the 1990 federal Food Service Act, better known as the "Farm Bill." The law required that any farmer who wanted to receive federal financial assis-

*"We have two and a half to three times the number of requests that we can handle."*

*- Jim Cummings*

tance would have to develop a plan to control sediment runoff.

The voluntary program has been successful and is preferable, Cummings said, because farmers are open-minded to its methods, which actually save them money.

Just this year New York and Texas adopted North Carolina's concept. And a 1989 Harvard study showed that North Carolina's voluntary program is actually more effective than voluntary programs in other states.

## Legitimate Complaints

Critics who want closer attention paid to agricultural pollution "do have a legitimate complaint because agriculture does cause coastal water quality problems in North Carolina," Cummings said. "But just because you don't have a permit does not mean you are a polluter."

He explained that farmers often change what they grow, and different crops need different best management practices. Requiring a permit would be costly and time consuming. The state also would have to pinpoint specific pollution sources to be regulated, a difficult task when dealing with runoff that contains all kinds of contaminants from different sources.

Even the new rules on animal operations

are not all they are cut out to be, Cummings said. Many are aimed at new, huge livestock, hog and poultry operations that already use modern technology. It's the small family operations that may be causing the most problems and that need the most financial and technical assistance, he said.

## Room for Improvement.

Cummings, however, is not saying BMPs are OK as they are.

"The demand (for assistance with BMPs) is still out there. We have two and a half to three times the number of requests we can handle for technical and financial assistance," he said.

Besides being understaffed and underfunded -- the program's \$8 million annual budget hasn't changed in years -- Cummings would like to see a better defined program.

"From my standpoint, it would be better if we defined the objective of practices to ensure that any BMP is installed for its stated purpose," he said.

That means defining exactly what a BMP is, when it is to be used and its intent, and then making those things clear to farmers who request financial and technical assistance under the Agriculture Cost-Share Program.

More research is needed on how individual agriculture operations affect adjacent waters. Cummings hailed a state study on how Open Grounds Farm in Carteret County is affecting nearby South River.

## Committee

Continued From Page 2

The program's administration needs to be examined, and the CRC should begin applying rules "in a more managerial way," said Tomlinson, a 17-year veteran of the CRC.

Periodic review of every CAMA program also would be beneficial, said Stephen Hicks, committee member and president of New Bern Chamber of Commerce.

Many ideas were tossed around at the first meeting, but Preyer said that he intends for the panel to operate much as a congressional fact-finding committee. Whatever it recommends, "let it be with dignity, fairness and with the best interests of North Carolina in mind," he said.

## Committee's Schedule

The committee's next meetings are scheduled Dec. 2-3 in Wilmington. NCCF has organized a symposium on wastewater management to be held in conjunction with the meeting. Scientists, engineers, government officials and policy makers will present views on wastewater and stormwater management strategies for the coast.

On Jan. 13, the committee will be in Plymouth at the Vernon James Agricultural Experiment Station to learn about the effectiveness of best management practices for agricultural and forestry activities. The committee will convene Jan. 14 in Edenton.

Discussions of special areas management planning and Areas of Environmental Concerns will be held during the committee's next meeting in Carteret County. The meeting will be held Feb. 24 and 25 in Carteret County.

The committee will meet in Brunswick County March 17 and 18 to delve into integrated land-use planning and growth management.

## Members

Continued From Page 2

of the Southeast Raleigh Improvement Commission.

**L. Richardson "Rich" Preyer** -- A former congressman and a retired federal judge, he is chairman of the committee. Preyer lives in Greensboro and owns prop-

erty on the coast.

**Smith Richardson** -- Retired board chairman of Richardson-Vicks Inc., Richardson now lives in Wilmington and is active in numerous civic organizations.

**Alice Mills Sadler** -- A resident of Washington, N.C., Sadler is assistant superintendent for personnel for Beaufort County Schools and on the Beaufort County Board of Commissioners.

**Eugene (Gene) Tomlinson** -- A retired engineer and marine surveyor, Tomlinson is chairman of the N.C. Coastal Resources Commission. He lives in Southport.

**John F. Wilson IV** -- An architect from Manteo, this native of the Outer Banks is on the boards of the Outer Banks Conservationists and the Whalehead Preservation Trust.

**David H. Womack** -- He lives in Greenville where he owns an electrical supply firm.

Recycle This Newsletter



## Salvaging APES

A revised management plan for "Environmental and Economic Stewardship" is being circulated by the Albemarle-Pamlico Estuarine Study.

The plan results from an \$11 million, six-year cooperative effort sponsored by the N.C. Department of Environment, Health and Natural Resources and the U.S. Environmental Protection Agency. If everything goes according to schedule, the plan is to be accepted by Governor Jim Hunt early next year, and then \$12.5 million will be spent annually by various government agencies to administer the plan.

What have we bought for \$11 million dollars and has the money been used wisely? We probably won't know for another six years.

Almost all the citizens who have participated in the program have felt their blood pressure rise whenever they think back over the past six years of the study.

Many remember the kick-off meeting that was attended by more than 600 people. Spirits and expectations were high, and everyone felt excited by the prospects of a "Chesapeake Bay-style protection initiative" about to take place for North Carolina's two largest estuaries.

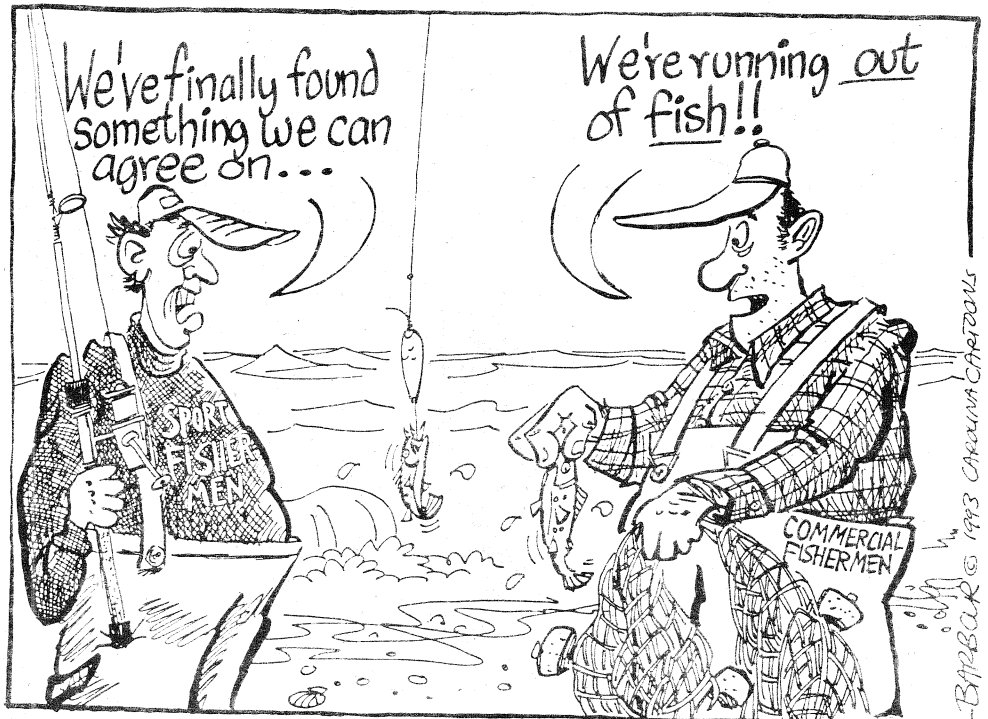
Then the program suffered a lack of committed leadership. Staff directors came and went. Committee members became disenchanted and lost interest. Research covered the waterfront, and there were good studies, but they lacked focus. "Just another study," or "We are studying our coast to death," were regular comments from the public.

As for the study's cornerstone, the Comprehensive Conservation Management Plan, several drafts were circulated, all of which received widespread criticism from interested groups.

In the midst of all this turmoil, a new administration inherited the program, and it has attempted to salvage the management plan. The latest version deals with many of the concerns, but has generated very little excitement or fanfare. The reason is simple. Rather than recommending specific new laws, rules and management actions, the new plan establishes goals for research, rule-making, staffing and funding to be achieved over the next six years.

It provides the type of strategic guidance that should have, and could have, been developed six years and \$11 million dollars ago. The plan will now serve as the "marching orders" for the Hunt Administration once accepted by the governor.

There is no question that the Albemarle-Pamlico Estuarine Study did not live up to initial expectations. But if the salvage job attempted by the Hunt Administration succeeds, then perhaps the effort will not have been completely wasted.



5-13-93

### The Right Path

The Morehead City Women's Club had such a nice time walking the Hadnot Creek Farm. Thanks to you we learned even more about our coastline.

We took up a collection and have enclosed a check for \$28. Please use it where needed.

Frances B. Williams  
Morehead City

### Helping Our Friends

We just completed the most successful board meeting in 23 years of existence and started our strategic planning process with tremendous enthusiasm.

The key to this was the extraordinarily useful and thoughtful presentation that you made to the board and the discussions you sparked.

Thank you for taking the time to join us.

Frederick A.O. Schwarz Jr.  
Chairman, Natural Resources  
Defense Council  
New York, N.Y.

### Park It

We, too, are very excited about the advent of a \$35 million bond

### NCCF Mailbag

referendum for the N.C. state parks. Hammocks Beach State Park is indeed an excellent location to have an interpretive visitor center. The park has many visitors and at present, the experience at Hammocks Beach is largely passive. It will provide an excellent opportunity for us to inform visitors of the unique ecosystem that this park represents.

We are, however, concerned about sound planning. The long-term plan for this park includes a visitor center on the mainland portion of the park. At present, there is very little land owned by the state on the mainland. We are reticent to include the construction of the visitor center with this program because it is our general policy not to include development that is land dependent and we don't want to force facilities into a location that may not be in the best long-term interest of the park. We want to be sure that we are able to expedite the acquisition and construction associated with these bond funds as much

as possible.

Prior to submission of a final list for proposal to the General Assembly, we will reconsider this issue. Staff from the Division of Parks and Recreation will meet with you to discuss these issues and possible alternatives with you before we make our final recommendation.

Thank you for sharing your perspective on this matter with us, and most importantly, thank you for your continued support for the state parks system.

Jonathan B. Howes  
Secretary, N.C. Department  
of Environment, Health and  
Natural Resources

*Editor's note: NCCF has asked the state to consider using its state parks bond money to provide for a visitor's center at Hammocks Beach State Park.*

### Drop Us a Line

Hadnot Creek Farm  
3223-4 Highway 58  
Swansboro, N.C. 28584

## By Working Together We Could Solve Old Problems

It is nice to visit and compare notes with old friends, even if only by telephone. What is less pleasant, but not surprising, is to find a recurrence of similar problems in all parts of the country.

Neil Armingeon, formerly of NCCF and now assistant director of the Lake Pontchartrain Foundation, talked with me recently of a major battle brewing in his area. It seems the U.S. Army Corps of Engineers has an \$80 million plan to divert the course of the Mississippi River. Environmental concerns are major but have little impact with the corps.

In Carteret County, there has been significant scientific and commercial concern about a corps project to renourish Atlantic Beach during the peak fall fishing season. Then, there is the proposal to dredge Pamlico Sound for sand to

shore up N.C. 12. All are projects with real and potentially devastating environmental impacts, none of which seem to have deterred plans.

These comments are not intended as "corps bashing" but as an illustration of the determined obliviousness to environmental consequences still seen far too often.

At NCCF, we are not anti-growth by any means. We do strongly support and promote truly comprehensive and realistic evaluation of long-term impacts and costs prior to project

commitment. We believe that short-term benefits may ultimately have very high long-term costs if not addressed appropriately. We are willing to work cooperatively and in partnership to address potential consequences and plan for a mutually acceptable and beneficial outcome. It certainly would seem much more cost effective to work together before committing huge amounts of private or tax money to proposals, only to have them delayed by legal means or denied after the fact.

Cooperation and planning will benefit us all. It is up to all of us as citizens and NCCF members to continue to remind elected officials and area leaders that protection of our environmental heritage is a significant investment in future prosperity.

### President's Message By Ann Carter



Need a ideal gift for that *special* person on your list, NCCF has the answer.



### Memberships

This truly is a special gift and it will help sustain the work of the Federation. Memberships start at:

**Regular\*** \$15; **Sustaining\*** \$25; **Maintaining\*** \$50

**\*Benefits:** Coastal Review, the Coastal Federation's quarterly newsletter; periodic updates and alerts concerning special issues and events; a 'No Wetlands, No Seafood' bumper sticker; a membership card that entitles you to use the nature trail at Hadnot Creek Farm.

**Patron\*\*** \$100-\$500; **Sponsor\*\*** \$500 or greater

**\*\*Benefits:** All membership privileges plus special gift and invitations to sponsor events.



### Other NCCF Gifts

**T-Shirts:** \$12.40  
Size: SM\_\_\_ MED\_\_\_ LG\_\_\_ XL\_\_\_ XXL\_\_\_  
Colors: Red\_\_\_ White\_\_\_ Gray\_\_\_

**Sweatshirt:** \$16.40  
Size: SM\_\_\_ MED\_\_\_ LG\_\_\_ XL\_\_\_ XXL\_\_\_  
Color: Red\_\_\_ White\_\_\_ Gray\_\_\_  
NCCF Embroidered Caps: \$10.00  
Colors: White\_\_\_ Navy\_\_\_ Gray\_\_\_

**Books:**  
*Troubled Waters* by Glenn Lawson \$12.40  
*Baykeeper* by Glenn Lawson \$14.95  
*Insider's Guide to North Carolina's Coast* \$15.00

**Mobiles:**  
Great Egret, Snowy Egret, Flamingo, Ibis, Tropical Fish,  
Pelican, Sea Gull, Great Blue Heron and Dolphin. \$6

Gray Whale, Orca Whale, Humpback Whale and Manatee.  
Scarlet Macaw, Horned Puffin, Moorish Idol. \$8

**Misc.**  
Carolina Swamp Sauce \$8  
Blue Tick Dressing \$8  
Canvas Shopping/Boating Bags \$14  
NCCF Stickpins \$6  
Holiday Notecards, assorted design \$14

Send order to: NCCF, 3223-4 Highway 58, Swansboro, NC 28584. All prices include shipping.

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, Zip \_\_\_\_\_  
Phone Number: \_\_\_\_\_



# The Pelican's Page

*A Newspaper Especially for Young People  
Who Care About the Environment*

An educational supplement published by the North Carolina Coastal Federation

## Ahoy, Mates!

I'm Pelican Pete. Come join me in these pages as we explore the world around us and discover its secrets.

We'll read some stories, try some exciting activities, do puzzles and have a lot of fun learning about our coastal lands and all the critters living there.

This first time together, let's explore our incredible wetlands. Wet-

lands are places where water and land meet to create homes for many unique plants and animals. Hundreds of kinds of animals depend on wetlands as a source of their food at some time in their lives. They could not survive without the soggy swamps, marshes, ponds and mudflats we call wetlands.

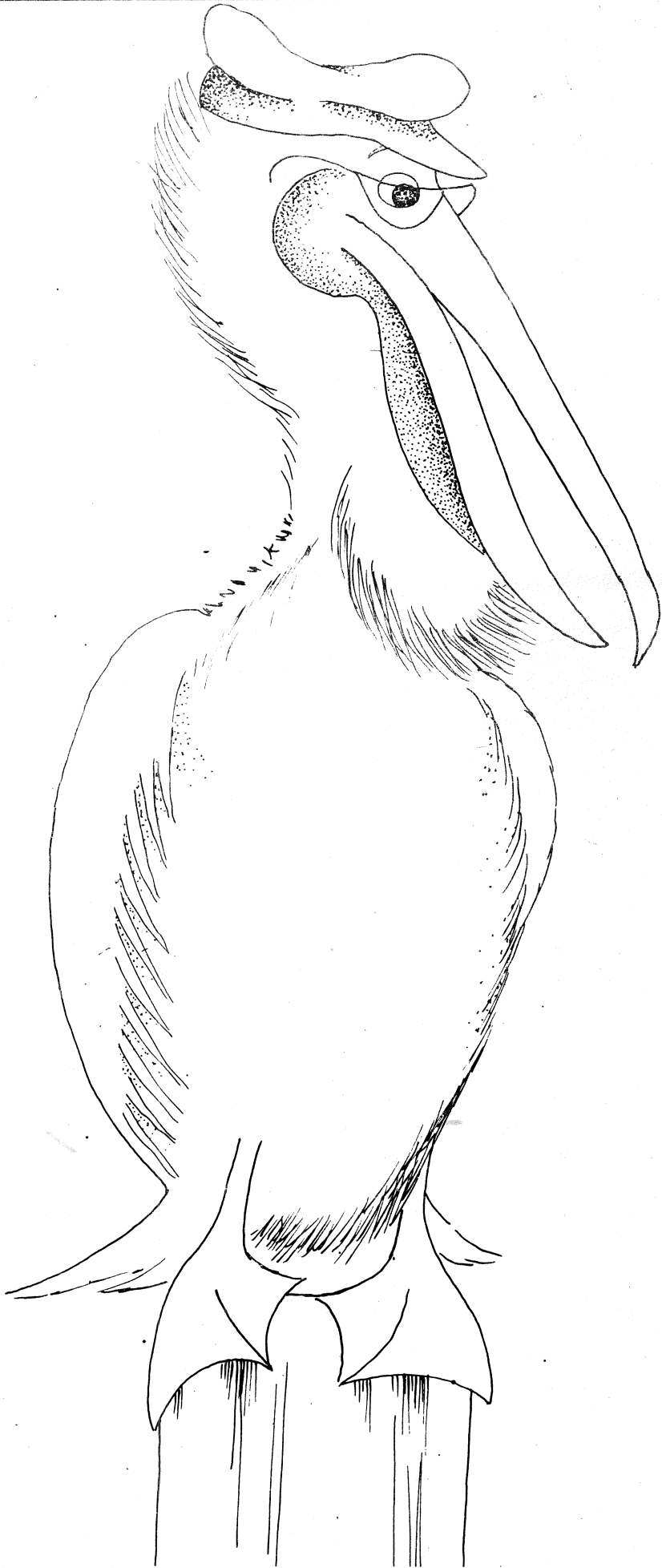


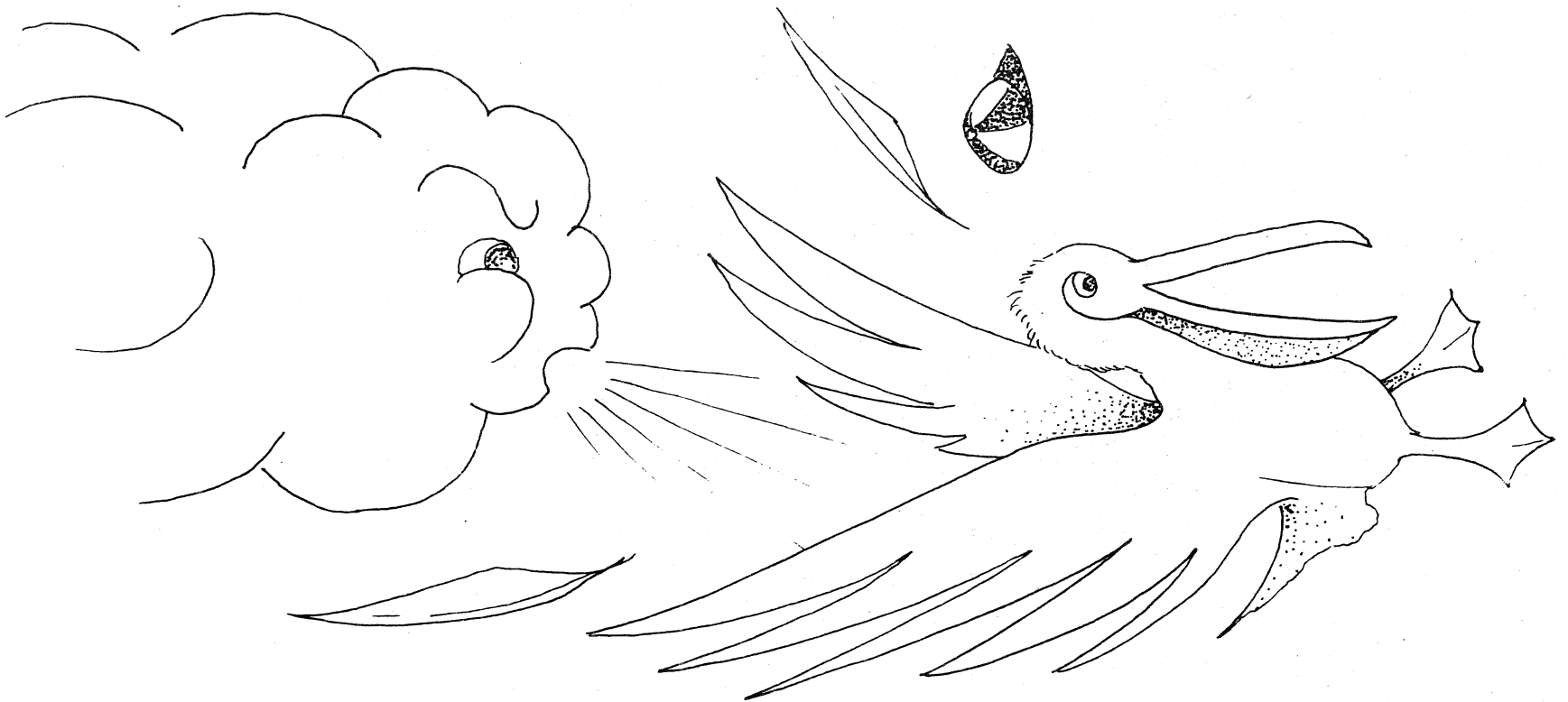
A feral horse grazes on coastal marsh grasses in this saltwater wetland.

## Meet Willy

Meet my grandson, Willy. He wants to come with us on our adventures. He would like to tell you what

happened when a hurricane blew him off course last August. Turn the page to read his story.





# Willy's Windy Wetland Adventure

Hurricane Harry hit the coast with a roar! Shore birds, sensing the storm's approach, had long ago headed for safety. Except one pelican. Willy was a young pelican very proud of his flying. He was sure he could out-fly any wind that came along. He would not listen to the elder pelicans; he was going to stay on the coast and find out what a hurricane was really like.

And he did! The hurricane wind very soon had Willy completely at its mercy. The wind tossed him hither and yon, turning and flapping, his flying ability doing him no good at all. The wind blew him many miles inland. Willy was a very tired, frightened and bedraggled pelican.

Daylight came and Willy looked about in dismay. He had no idea where he was! Willy had landed in a small inland marsh pond, deep within the Piedmont of North Carolina. As he looked around he noticed cattails, bulrushes and a shore covered with tall grasses and sedges. Mosquitos buzzed about and their larvae wiggled in the water. Dragonflies darted about eating the unwary mosquitos. Bullfrogs harumphed from the shore. Willy took a cautious sip of pond water. It was fresh! He caught a flickering glimpse of fish below the surface. After several tries, Willy managed to catch some small fat bream and a bass for a much-needed meal. The fish didn't taste quite like those he usually ate, but who could be choosy at a time like this?

Willy found the inland marsh pond that had given him food and shelter was a home to marshwrens and pintail ducks. The ducks arrived just at sunset, quacking and with wings flapping. They settled into the calm pond waters. Surprised, they looked at the great, strange bird resting in their midst. "Where did you come from? What kind of bird are you?" they asked. Sheepishly, Willy explained about the hurricane and getting lost. He apologized for coming uninvited to their marsh pond.

However, he was very thankful to have landed where he could have food, water and shelter.

Would the ducks tell him about the pond where he was? The pintail ducks were helpful. They were eager to tell him that he had landed in an area known as a wetland or freshwater marsh. "What is a wetland?" asked Willy. Surprised, the ducks answered him. "Wetlands are transitional areas between land and water. There are many kinds of wetlands. Some are freshwater and some are saltwater. Without water there would be no wetlands. But wetlands do not always look wet."

Confused, Willy asked, "How can that be?" The ducks explained patiently, that some wetlands had standing water all the time and some only for part of the year. There doesn't have to be standing water

for an area to be a wetland. The ducks went on to say that wetlands filter water to help keep rivers, lakes and streams clean. They prevent flooding by holding water during heavy rains and provide food and shelter for a great variety of animals. They told him wetlands are the spawning place for almost 90 percent of the commercial and sport fishes. Wetlands provide valuable areas for recreation. Willy was impressed.

Then the ducks told him how the wetlands are disappearing. They explained that many acres are being lost each day because people just didn't understand how valuable these areas are. The ducks told Willy that some people thought wetlands were waste lands. These people think that swamps should be drained, filled and used for farming or building. The ducks said sadly, "We are having more and more trouble finding a place to raise our young and get food." This made Willy very upset. He was just a youngster and had never thought that one day he

might not have a place to live and fish. Willy decided that he must do something to help.

Willy and the ducks talked a long time. They came up with a plan for Willy. He could learn all about wetlands, then tell people what these valuable lands do. Maybe he would teach them to care about wetlands. Then, as ducks gave him directions to fly home, they plotted a course that would take him from one wetland to another.

Early next morning, Willy said goodbye to the ducks and started on his journey home.

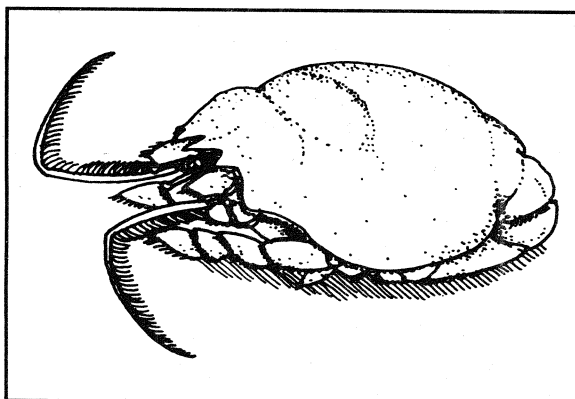
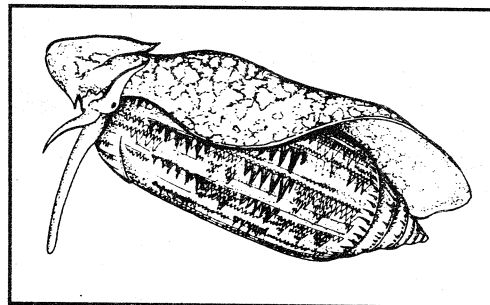
He flew for several hours, over

houses and highways, fields and factories. He passed tall smoking chimneys and coughed from the smoke. He coasted low over streams and rivers, too often seeing oil, scum and trash in the water. Drain pipes pouring stormwater directly into the rivers made Willy wonder if people knew what they were doing to wildlife. Did they know what they were doing to themselves?

Eventually, Willy stopped in a place the ducks said was a forested wetland. This freshwater wetland was often dry during summer but waterlogged in winter and early spring, according to the ducks. Today, it is wet thanks to a recent storm. This forested wetland of mainly tall trees, has many bald cypress trees with knobby knees projecting up from the wet soil. Willy saw raccoons, opossums and was told that even a few alligators were around. He found that leaves and other organic matter collected on the forest floor, forming deep layers of peat. The spongy ground soaks up water during heavy rains and releases it slowly so erosion and flooding is avoided.

A friendly raccoon told Willy how much of the bottom land hardwood forest is being lost. He said trees are cut for timber, the land drained and converted to farming. Then he sent Willy to a nearby area called by the Indian name of "pocosin." Willy learned pocosin meant "swamp on a hill." This wetland is covered with

Turn to Page 4 for the rest of Willy's Tale





# Pete's Puzzle

## Down

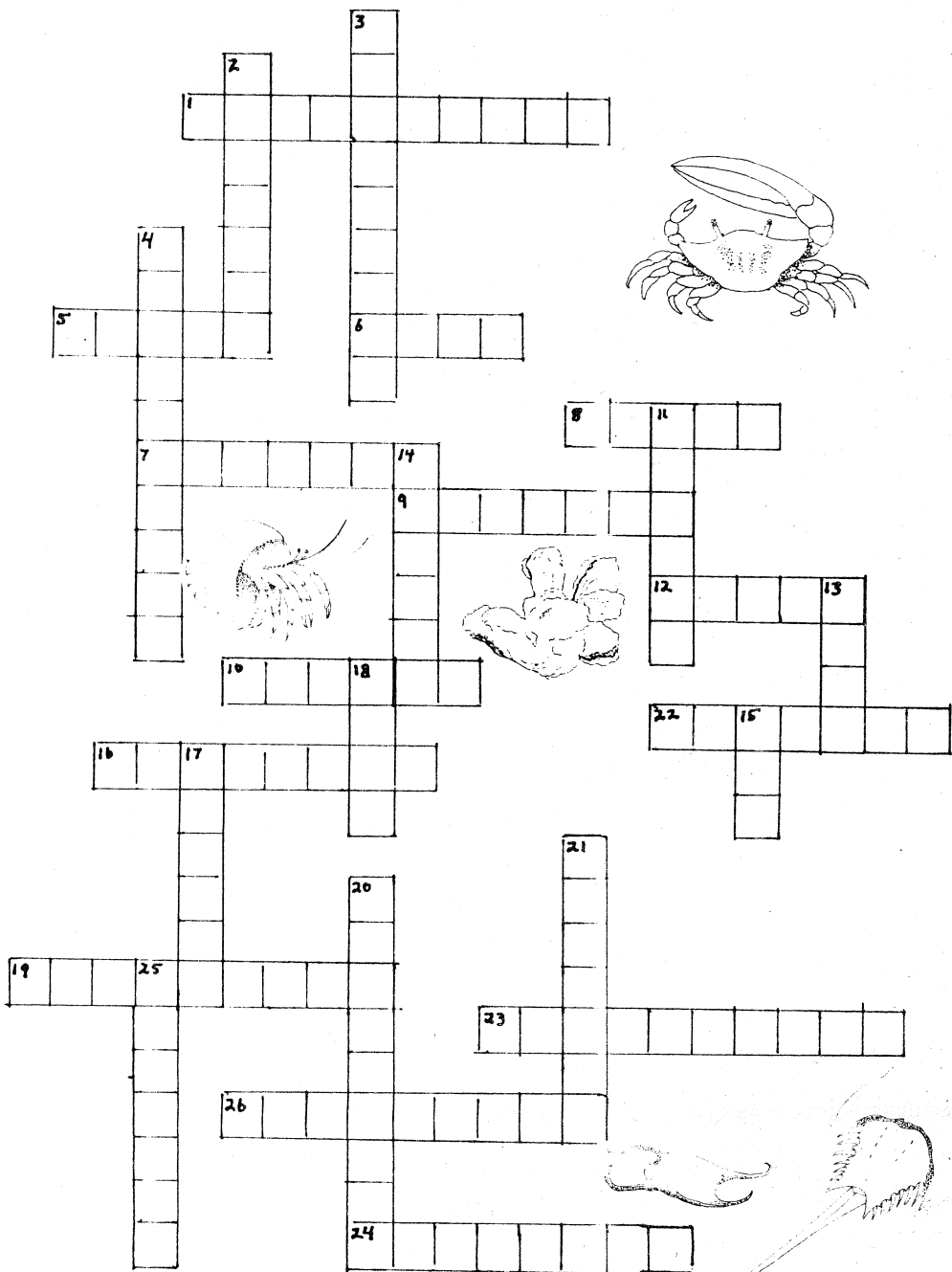
- 2. Wetlands are necessary for much of the source of this food.
- 3. These are clams, oysters and scallops that need salt water wetlands for part of their life cycle.
- 4. Producing in abundance.
- 11. This has happened to 54 percent of our wetlands.
- 13. Spongy organic soil from decaying plants.
- 14. Characteristic of peat-like soil that holds water.
- 15. Wetland without a pond, usually nutrient poor.
- 17. Commercial crop from wetlands.
- 18. In-and-out movement of water controlled by the moon.
- 20. Harmful substances filtered out of the water by wetlands.
- 21. What wetlands provide for aquatic animals and wildlife.
- 25. Land-wasting caused by water that is reduced by wetlands

## Across

- 1. Fun activity such as canoeing or hiking.
- 5. Danger from too much water, controlled, in part, by wetlands.
- 6. Fine soil filtered out of the water by wetlands.
- 7. A deciduous conifer of the swamp.
- 8. Marshes help slow the force of this wave action.
- 9. Indian for "swamp on a hill."
- 10. How wetlands clean water.
- 12. Early term used to describe marshes.
- 16. A variety of wet, all or part of the time, environments.
- 19. Ducks and water-loving birds of wetlands.
- 22. A place where animals, birds, fish, etc. live and feed.
- 23. Wetland with hardwood forest.
- 24. Nitrogen and phosphate in water that stimulates algal growth.
- 26. Water containing dissolved salts and minerals.

## Words

silt	erosion	shelter	waves
nutrient	timber	flood	tide
saltwater	shellfish	pollution	vanish
cypress	bog	filter	habitat
seafood	wetlands	sponge	peat
pocosin	swamp	bottomland	productive
recreation	waterfowl		



## Pelican Facts

### The Brown Pelican (*Pelecanus occidentalis*)

□The range of the brown pelican is the coasts of North America, Central America and northern South America.

□On the east coast of North America, the pelican nests from North Carolina to Florida.

□By late March, the pelican builds nests and lays eggs in North Carolina. It builds nests on the ground, usually on deserted islands. Nests made of shells and sand are about 1 1/2 feet high.

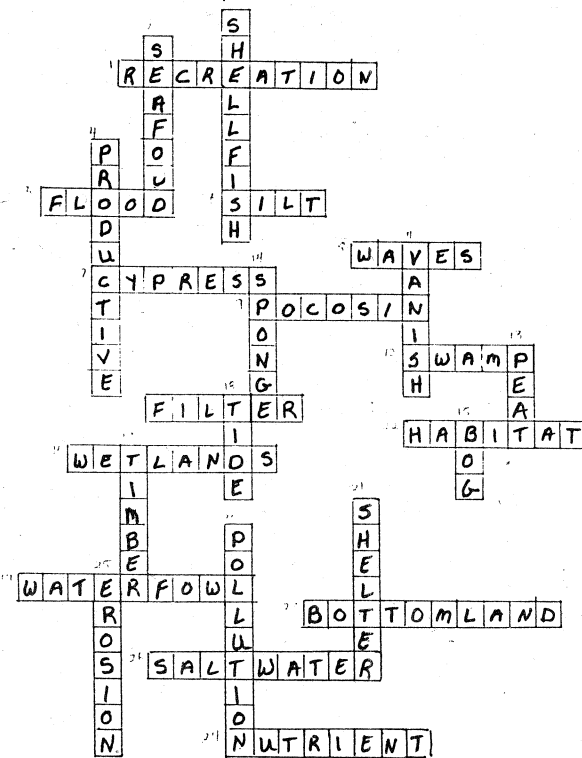
□Pelicans can have a wingspan of 6 1/2 feet or more.

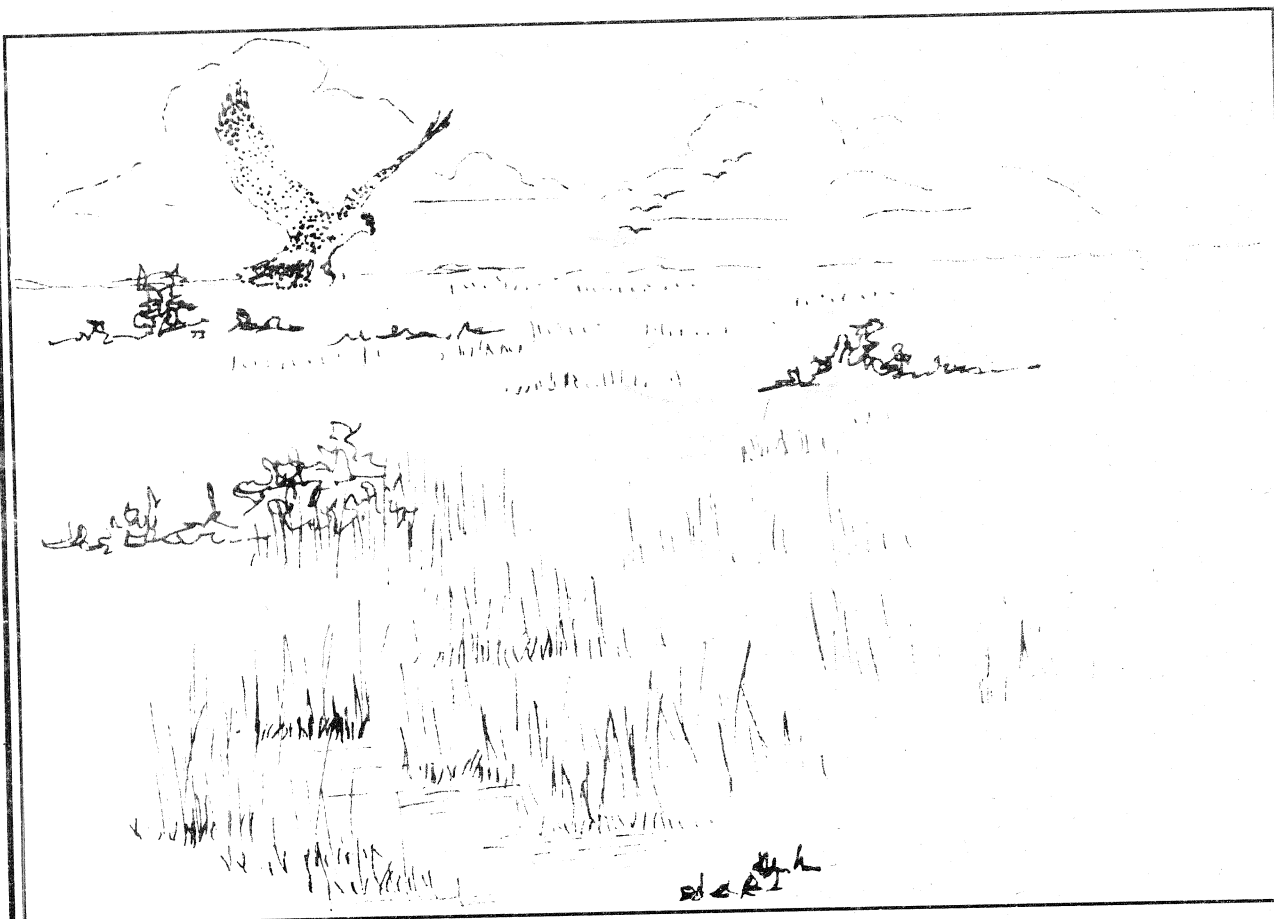
□Pelicans can spot fish from as high as 60 feet and dive to catch them. They can hit the water going faster than 60 miles an hour. A thick bone on its breast protects the pelican.

□A pelican's pouch below its bill can hold three gallons of water.



## Puzzle Answer





# Willy's Adventure

Continued From Page 2

evergreen trees and shrubs. Pocosins control the flow of water into nearby coastal estuaries to protect the productive fisheries of nearby sounds. Pocosins are destroyed for agriculture and peat mining. A small squirrel shook his head sadly as he talked of the loss of such critical habitat. "I hope you have good luck telling people how important these wetlands are while there are still some left," he told Willy.

Willy continued toward home. He flew over streams and lakes, farm ponds and swamps, recognizing all of them now as wetlands. He flew over inland marshes and saw how water from fields and hillsides filtered through the marsh grasses before it entered the river. He saw the dirt and silt filtered from the water. He knew then if we continue to disrupt this natural cycle, we will only be hurting ourselves.

Willy was nearing the coast. He could smell the salt breezes. His heart gave a great leap of joy. Willy was almost home. Soon the green salt marshes came into view. Willy knew these grassy expanses were important wintering areas for waterfowl and breeding grounds for many wading birds. He had learned that coastal marshes were key nursery areas for most fish and shellfish. He saw how the fish he ate started their life journeys. Now, coastal marshes receive some protection. Saltwater wetlands are not filled and drained as in earlier years. His adventure has given Willy knowledge he will use to save wetlands and their habitats.

At last, Willy was home. All the pelican flock gathered to welcome him back. They had been sure the hurricane had taken Willy away forever. Willy spent many days telling of his adventure. He talked of all he had learned about wetlands and his plan to help save them from destruction. He promised that he wasn't going to stick around for the next hurricane. Willy will need your help to carry out his plan. If you will learn about wetlands and how valuable they are to all of us, you will help Willy save the vanishing wetlands.

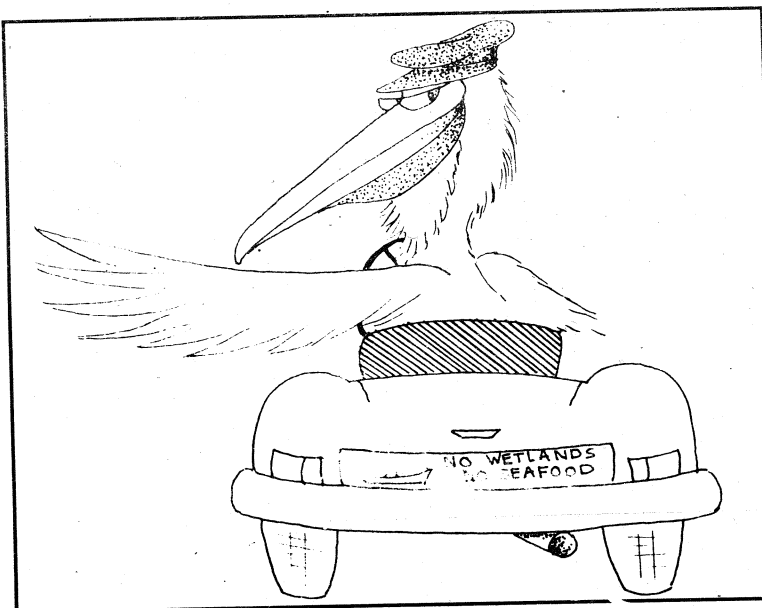
## Wonderful Wetlands

Now that you have read Willy's story and have tried some of the activities on Page 3, I'm sure you have a better understanding of wetlands and why they are important to all of us. These places that are too wet to build on, yet too shallow for fishing and swimming, are still very valuable to us. They provide

habitats for birds, young fish and shellfish, serve as buffer areas that protect higher lands from flooding, and can also filter polluting materials before these enter the groundwater. Altogether, wetlands certainly add to the quality of our lives because of their unusual beauty and abundance of life.

## Pelican Pete Wants to Hear From You

The Pelican's Page is a newspaper just for you and we'd like it to be by you, too. Please send us your drawings, poems or letters so we can put them in our next paper. We'd like to see pictures of some of the plants and animals you've seen in wetlands near you. Or, tell us in a poem or story about experiences you might have had in a coastal marsh or freshwater pond.



## Here's a Gift From Pete

As Pelican Pete waves goodbye, you can see he has a great bumper sticker on his car. Would you like one for your family's car? Get your free "No Wetlands/No Seafood" bumper sticker by sending a self-addressed, stamped envelope to: N.C. Coastal Federation, Hadnot Creek Farm, 3223-4 Highway 58, Swansboro, N.C., 28584.