



Harbor Happenings

The newsletter of the Charlotte Harbor National Estuary Program

Winter 2002-2003: Volume 6, Number 4

Working together to protect estuaries and watersheds from Venice to Bonita Springs to Winter Haven

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This Public Conference will bring public and private stakeholders together to discuss critical environmental issues.

Caloosahatchee River Public Conference

Wednesday, March 5, 2003

Harborside Convention Center * Fort Myers, Florida

Do you want to continue to use clean and abundant water? Do you fish in local waters? Is your business dependent on a healthy environment? Come to this Public Conference to help protect and restore these natural resources.

The Caloosahatchee River Public Conference is a forum for the public to confront issues affecting the natural resources of the region and the public uses of these resources. The general public is encouraged to take an active role in the management of these important resources by participating in this one-day conference.

Three sessions will be offered to stimulate discussion among the participants on ways to solve problems confronting water quality and flow, fish and wildlife's need for healthy habitats and businesses' need for a healthy environment. The conference focuses on waters in Lee County, specifically the Caloosahatchee River, Pine Island Sound, Matlacha Pass, San Carlos Bay and Estero Bay.

9:00-11:30 A.M.

Water Quality, Flow and Timing: The necessities of clean and abundant water

3:00-5:30 P.M.

The Health of our Watery Habitats: Making waterways habitable for fish and wildlife

6:00-8:30 P.M.

A Healthy Environment is Good for Business: Making the connection between a clean and beautiful natural environment and a business' bottom line

Each session will begin with local experts providing a brief overview to stimulate participants discussion of ways to solve problems. Participants will then join a small group to discuss solutions. Each discussion group will offer preferred conclusions to the entire audience as to how to solve the problems.

All suggestions offered will be compiled in a written report that will be shared with the Charlotte Harbor National Estuary Program Management Conference for its members who represent cities, counties, agencies, businesses and environmental groups to consider. It will help to develop plans for Comprehensive Everglades Restoration Plan (CERP), Southwest Florida Feasibility Study, water supply plans, minimum flows and other plans that impact the health and value of the natural environment and the people who live or enjoy southwest Florida.

BY MARCH 1 please sign-on to the Charlotte Harbor NEP web site (www.charlotteharbornep.org) to (1) let us know what issues you think should be

In addition to the three sessions of the public conference, two other programs will be offered, the Division of County Lands will present information on the **Conservation 2020 Program** from **11:30 to noon**. See page 4 for details.

The South Florida Water Management District will hold a public meeting on establishing **minimum water flows and levels** for the Caloosahatchee River from **1:00 to 2:30**. See page 12 for more details.

The Caloosahatchee River Public Conference is the kickoff program of the 12-day **Caloosahatchee River Basin Festival**. For additional details, see page 3.

considered during the discussion groups at these three sessions on water quality and flow, fish and wildlife's need for healthy habitats and businesses' needs for a healthy environment.

(2) register for this *free* conference. Refreshments will be served.

If you don't have Internet access, call 239/995-1777 ext 240.

continued on page 3

Program Update

It's a great day for Charlotte Harbor!

On February 13, 2003, the South Florida Water Management District (SFWMD) Governing Board adopted a resolution naming lower Charlotte Harbor a Surface Water Improvement and Management (SWIM) waterbody.



This action is incredibly important. Since the 1980s, the portion of Charlotte Harbor within the Southwest Florida Water Management District (SFWMD) has been designated a SWIM waterbody. The SWIM designation on the northern part of the harbor has yielded many wonderful results. Through SWIM, the SFWMD restored thousands of acres, are improving water quality, and helped establish the Charlotte Harbor National Estuary Program! SWIM has been a key element to implementing our *Comprehensive Conservation and Management Plan* (CCMP) in the northern portion of the harbor.

Because of the results we have witnessed from SFWMD, the Charlotte Harbor NEP requested that SFWMD designate lower Charlotte Harbor a SWIM water body on February 15, 2002. Many of our partners followed suit, including the J.N. "Ding" Darling National Wildlife Refuge, Ellen Hawkinson and Peace River Audubon Society. My thanks go to Trudi Williams, SFWMD Chair, for her leadership in fostering SWIM designation. Carol Wehle, Akin Owsina, Mark Hammond and the SFWMD SWIM staff were also instrumental.

What comes next? A SWIM Plan for lower Charlotte Harbor. Lower Charlotte Harbor includes Pine Island Sound, Matlacha Pass, the Caloosahatchee estuary, San Carlos Bay and Estero Bay. This will be an exceptional opportunity to implement our CCMP and to expand the approaches from the Charlotte Harbor SWIM plan to lower Charlotte Harbor. I am thrilled to be



Lisa B. Beever

involved in drafting the plan for lower Charlotte Harbor. It was 15 years ago that I met many CHNEP members working on the Charlotte Harbor SWIM Plan.

SWIM designation for lower Charlotte Harbor is an example of the kind of advocacy that the CHNEP is pursuing. On

December 7, 2001, the CHNEP adopted a position to "assume the lead role in being the advocate for the Charlotte Harbor ecosystem and its watersheds." On February 21, 2003, the CHNEP Policy Committee will consider adopting an Advocacy and Review Procedures. Through these procedures, we will implement our CCMP, provide policymakers with a source of review representing the diverse interests, and provide a voice for natural systems within the study area based on the best scientific information available.

Through our partnerships, we are making tremendous progress to protect our watersheds. We are drafting legislation, hosting public celebrations, identifying restoration needs, and proposing scientific endeavors. With the designation of lower Charlotte Harbor as a SWIM waterbody, we are one step closer to our goal of safeguarding the water quality and habitats of our home. Congratulations to South Florida Water Management District for taking this important step.

Dr. Lisa B. Beever
Director

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THE CHARLOTTE HARBOR NATIONAL ESTUARY PROGRAM is a *partnership* that protects the estuaries from Venice to Estero Bay. This partnership gives citizens, elected officials, resource managers, and commercial and recreational resource users in the 4,400-square-mile study area a voice to address diverse resource management concerns, including fish and wildlife habitat loss, water quality degradation and water flow.

The program Management Conference is composed of the Program Office and the Management, Policy, Technical Advisory and Citizens Advisory committees. Each committee serves a specialized role in supporting the program goals and objectives.



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Request a free subscription by contacting the NEP Office.

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News items, photographs, and letters are welcome and may be submitted to the Charlotte Harbor NEP office by mail or email (mhilgendorf@swfrc.org). Deadlines for future issues are February 15, May 15, August 15 and November 15.

The views expressed herein are those of the authors and do not necessarily reflect the views of the Charlotte Harbor NEP or its cooperating agencies and associations. The mention of trade names or commercial products does not in any way constitute an endorsement or recommendation for use.



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Caloosahatchee River Public Conference (continued)

The Caloosahatchee River Public Conference is an important step in the NEP process of bringing public and private stakeholders together to discuss critical environmental issues facing the river and receiving estuaries of Pine Island Sound, Matlacha Pass, San Carlos Bay and Estero Bay.

The Charlotte Harbor NEP is a *partnership* that protects the Charlotte Harbor estuaries from Venice to Estero Bay by improving the ecological integrity of the watershed. This partnership gives citizens, elected officials, resource managers, and commercial and recreational resource users in the 4,400-square-mile study area a voice to address diverse resource management concerns including fish and wildlife habitat loss, water

quality and water flow. The watershed in the study area includes all or parts of Lee, Charlotte, Sarasota, Manatee, Polk, Hardee and DeSoto counties.

This program is supported by Charlotte Harbor National Estuary Program with funds from the counties of Charlotte, DeSoto, Hardee, Lee, Manatee, Polk and Sarasota; the cities of Sanibel, Cape Coral, Fort Myers, Punta Gorda, Bartow, Venice and Fort Myers Beach; the agencies of Southwest Florida Water Management District, South Florida Water Management District, Peace River/Manasota Region Water Supply Authority, Southwest Florida Regional Planning Council, Central Florida Regional Planning Council, Florida Departments of Environmental Protection and Community Affairs, Florida Fish and Wildlife Conservation Commission,

The **Caloosahatchee River Public Conference** focuses on the southern portion of the Charlotte Harbor NEP study area. In 2004 another public conference will be held elsewhere in the seven-county study area. A technical symposium on issues in the entire study area is tentatively planned for February 2005.

U.S.D.A. Natural Resources Conservation Service, the U.S. Environmental Protection Agency and others.

Volunteer facilitators are being sought to assist each discussion group. Training will be offered. To volunteer, please contact Maran Hilgendorf (mhilgendorf@swfrcp.org, 239/995-1777 ext 240).

Caloosahatchee River Basin Festival: March 5-16, 2003

The 2003 Caloosahatchee River Basin Festival celebrates the river, its people and the history of Southwest Florida through exhibits, events, music and food designed to educate, entertain and enlighten attendees. The festival is organized by the Calusa Nature Center and Planetarium and sponsored by the South Florida Water Management District's Institute for the Western Everglades, Charlotte Harbor National Estuary Program, Bonita Bay Group, Gaea Guides, Caloosahatchee River Citizens Association and Heinz Frozen Food.

A few of the *many* events scheduled are listed below. For a complete list, visit the Internet at www.calusanature.com/ or call Todd Cordisco, Festival Coordinator, at 239/275-3435.

Wednesday, March 5

Charlotte Harbor National Estuary Program Public Conference – see page 1

Thursday, March 6

Collier County Day

Friday, March 7

Charlotte County Day

Admission is free to the Calusa Nature Center and Planetarium to residents in Collier and Charlotte counties on their respective days with proof of residency such as a valid Florida driver's license.

Sunday, March 9

Free cruises of the Caloosahatchee River to discover its history, tour the scenic oxbows and look for manatees. Explore the history of Ft. Myers and its early pioneers through exhibits, food and music. 239/694-3850.

Monday, March 10 - Friday, March 14

Canoe/kayak down the Caloosahatchee River from Lake Okeechobee to Gulf of Mexico. Reservation are required. 239/275-3435.

Field Trips: Travel with us to various locations around Southwest Florida. Reservations are required by March 7. 239/275-3435

March 10: Babcock Wilderness Adventures

March 11: Manatee Park

March 11: Historical walking tours of downtown Fort Myers

March 12: Tour of US Sugar fields, mill, refinery and packaging plant

March 12: Hickey's Creek Mitigation Park

March 13: Caloosahatchee Regional Park

Friday, March 14

Smart Growth Workshop on Environmental and Water Recommendations Workshop
Contact Wayne Daltry at 239/335-2840 for details.

Saturday, March 15 - Sunday, March 16

Caloosahatchee River Days at the Calusa Nature Center and Planetarium

Join us for some good old-fashioned fun at the Calusa Nature Center and Planetarium! Admission includes kids' fishing clinic, many exhibitors, Planetarium shows, miles of trails and native animals. Kids' fishing clinics, sponsored by Bait -N- Wait on Fort Myers Beach, will be March 15 from 10:00 A.M. to noon and 2:00 to 4:00 P.M. and March 16 from 2:00 to 4:00 P.M. Each clinic includes knot tying and bait rigging, casting and fish identification contests and conservation tips. Each clinic is open to the first 80 children from 6 to 12 years of age. Register for the clinics by calling 239/275-3435 before March 10.

The **Calusa Nature Center and Planetarium Natural** includes a History Museum with more than 100 animals, a Planetarium and miles of nature trails. The Center is located at 3450 Ortiz Ave. in Fort Myers. Hours are 9:00 A.M. to 5:00 P.M. Admission is \$7.00 for adults and \$4.00 for children ages 3-12. For directions or additional information, call 239/275-3435 or visit the Internet at www.calusanature.com/.

Come celebrate a great natural resource —
the Caloosahatchee River Basin!

Conservation 2020: Striking a Balance in Lee County

Colleen Reynolds and Lynda Riley

Southwest Florida's natural beauty from pine flatwoods, marshy swamplands and secluded creeks to pristine white sand beaches is known throughout the world. The challenge, as in most popular destinations, is to strike a harmonious balance between wildlife and humans.

In addition to the natural beauty they provide, wetlands are important for maintaining the quality of our water supply, storing excess floodwaters, sustaining a vibrant habitat for fish and wildlife and biological productivity. In fact, wetlands are comparable to tropical rain forests and coral reefs in terms of productivity and the diversity of species they support.

Uplands are obviously an important resource for humans. We need dry land to build homes. However, less obvious is its crucial role in the life of the diverse animals and plants indigenous to our area such as scrub jays, barred owls, live oak trees and many other rare and beautiful species.

The natural appeal of the area has always been recognized as important to our growth. However, that appeal attracted more growth than we were ready for. In the 1980s Lee County's conservation land was relatively sparse. However, several forward thinking community leaders made great strides in preserving some very important areas. A few of the most notable are:

- Six Mile Cypress Preserve
- The Corkscrew Regional Ecosystem Watershed (CREW)
- U.S. Fish and Wildlife Services' Ding Darling National Wildlife Refuge

In 1990, the State of Florida provided funding for a statewide ten-year land acquisition program. There were four areas targeted for acquisition in Lee County, lands that represented some of the most valuable ecological habitat available.

- Charlotte Harbor Buffer Preserve
- Cayo Costa State Park
- Estero Bay Buffer Preserve
- expansion of CREW

In all of Lee County in 1994, according to the comprehensive plan review, about 44,000 acres or approximately 8 percent of

total lands, was set-aside as conservation lands under County, State, Federal and private ownership.

The rapid pace of development was surpassing conservation efforts much more quickly than anticipated; it became apparent that additional concentrated efforts were needed before too many important conservation lands were developed.

In 1996, a referendum was added to the ballot asking Lee County residents if they would be willing to tax themselves up to a 1/2 mil annually for seven years with the sole intent of purchasing conservation lands. The referendum passed with a majority of Lee County citizens voting to approve the Conservation 2020 Referendum.

The overall goal of Conservation 2020 was to carefully utilize taxpayers' money to acquire environmentally sensitive County lands for preservation by the year 2020. From the goals set forth in the referendum, five main conditions are considered before each purchase. While no lands are required to meet all objectives, those with most compliance or potential are considered. Conservation 2020 land is most desirable if it has the potential to:

- sustain native plant and animal populations
- protect people and property from flooding
- replenish underground drinking water supply
- help improve or sustain water quality of coastal bays, inlets and sounds
- provide outdoor recreation and environmental educational opportunities.

Conservation 2020 is a willing seller program, which means the county does not enforce eminent domain rights over any properties. No property is purchased unless the owner is willing to sell.

The Division of County Lands handles the selection and acquisition of Conservation 2020 lands. The Conservation Land Acquisition & Stewardship Advisory Committee (CLASAC), a 15-member group of citizen volunteers selected by the Lee County Board of County Commissioners, carefully

Learn more. . .

March 5

**Caloosahatchee River
Public Conference**

11:30 to noon

Harborside Convention Complex
See page 1 for additional details.

considers each purchase. CLASAC reviews all criteria and makes recommendations to the commissioners for purchase of the land. County Commissioners review the data compiled and presented by CLASAC and approves land purchases.

Once land is approved and purchased, the Department of Parks and Recreation handles restoration and management of the properties. Because precious little pristine land is still available in Lee County, at times, massive land management projects are undertaken to restore lands to their natural state.

The Ad Valorem Tax has yielded \$63 million dollars so far for the Conservation 2020 program of which 90 percent is spent on land acquisition and 10 percent on land management and restoration. More than 10,000 acres have been acquired. Site improvements made include controlled burns, exotic plant removal, building canoe and kayak launch sites and creating trail systems for public access.

Approximately 90,000 acres or 18 percent of the County is now set aside for conservation, which includes private, county, state and federal ownership

What's Next? Growth in Lee County is going to continue at a record pace. The acquisition of conservation lands is not expected to keep pace with the growth. It will be up to the citizens of Lee County to determine the next moves.

In 2004 the voluntary tax to fund Conservation 2020 ends. A survey is currently being conducted to determine if the public things the program has been worthwhile and to interest in continuing it. For additional information or to complete the survey, visit the program web site at www.lee-county.com/countylands/Cons2020/cons2020.htm.

Three Programs Help Farmers Protect the Environment

FARMS Program Aims to Help Conserve Water

The Southwest Florida Water Management District's Governing Board and Florida Department of Agriculture and Consumer Services approved an agricultural program with funding designed to protect and conserve water resources in the Southern Water Use Caution Area (SWUCA).

The Facilitating Agricultural Resource Management Systems (FARMS) Program is a public/private partnership program designed to assist the agricultural communities in the Upper Myakka River Watershed and the Shell, Prairie and Joshua Creek basins. The goal is to help implement water conserving irrigation systems or other best management practices (BMPs) to reduce water usage and improve water quality. The Upper Myakka River Watershed includes portions of Manatee and Sarasota counties. The Shell, Peace and Joshua Creek basins include portions of Charlotte and DeSoto counties. Both regions are in the SWUCA.

FARMS is an agricultural BMP cost-share reimbursement program. Projects developed for the program must include one or more of the following resource benefits: water quality improvement, reduce Floridan aquifer withdrawals, conserve, restore, or augment the area's water resources and ecology. Applicants will be required to sign a 5- to

The fundamental philosophy of EQIP is to assist agricultural producers to install conservation practices to provide environmental benefits.

20-year contract to be approved for the FARMS program.

For more information on how to apply, call Ed Craig at the Department of Agriculture at 941/377-3722 or David Brown at the District's Sarasota Service Office at 800/320-3503. The Program will be jointly funded and run by the District and the Department of Agriculture and Consumer Services. Combining both agencies' fiscal resources will amount to \$2.2 million of cost-share monies available to growers.

Of the District's \$550,000 contribution to the Upper Myakka River Watershed program, \$300,000 will come from the District's Manasota Basin and \$250,000 will come from a state grant. The Department will contribute \$300,000 to the program. The District will contribute \$1,250,000 to the Shell, Prairie and Joshua Creeks program, which will come from a state grant, and the Department will contribute \$100,000. The Department will be the lead agency on the Upper Myakka Program and the District will be the lead agency in the Shell, Prairie and Joshua Creeks Program.

SOURCE: Steven A. Minnis, SWFWMD

Wetlands Reserve Program

The Wetlands Reserve Program is a voluntary program offering landowners the opportunity to protect, restore, and enhance wetlands on their property. The USDA Natural Resources Conservation Service (NRCS) provides technical and financial support to help landowners with their wetland restoration efforts. The NRCS goal is to achieve the greatest wetland functions and values, along with optimum wildlife habitat, on every acre enrolled in the program. This program offers landowners an opportunity to establish long-term conservation and wildlife practices and protection.

"This program is to restore then preserve wetlands that have been impacted. It is not to preserve existing pristine wetlands." LeRoy Crockett, USDA NRCS.

SOURCE: LeRoy Crockett, USDA NRCS

WRP helps landowners address wetland, wildlife habitat, soil, water, and related natural resource concerns on private lands in an environmentally beneficial and cost-effective manner.

Environmental Quality Incentives Program

The Environmental Quality Incentives Program (EQIP) was reauthorized in the Farm Security and Rural Investment Act of 2002 (Farm Bill) to provide a voluntary conservation program for farmers and ranchers that promotes agricultural production and environmental quality as compatible national goals. EQIP offers financial and technical help to assist eligible participants install or implement structural and management practices on eligible agricultural land. EQIP offers contracts with a minimum term that ends one year after the implementation of the last scheduled practices and a maximum term of ten years. These contracts provide incentive payments and cost-shares to implement conservation practices. Persons who are engaged in livestock or agricultural production on eligible land may participate in the EQIP program. EQIP activities are carried out according to an environmental quality incentives program plan of opera-

tions developed in conjunction with the producer that identifies the appropriate conservation practice or practices to address the resource concerns. The practices are subject to NRCS technical standards adapted for local conditions. The local conservation district approves the plan.

EQIP may cost-share up to 75 percent of the costs of certain conservation practices. Incentive payments may be provided for up to three years to encourage producers to carry out management practices they may not otherwise use without the incentive. However, limited resource producers and beginning farmers and ranchers may be eligible for cost-shares up to 90 percent. Farmers and ranchers may elect to use a certified third-party provider for technical assistance. An individual or entity may not receive, directly or indirectly, cost-share or incentive payments that, in the aggregate, exceed \$450,000 for all EQIP contracts.

NATIONAL PRIORITIES AND MEASURES OF EQIP

- Reduction of nonpoint source pollutants in impaired watersheds consistent with TMDLs where available as well as the reduction of groundwater contamination and the conservation of ground and surface water resources
- Reduction of emissions
- Reduction in soil erosion and sedimentation from unacceptably high rates on highly erodible land.
- Promotion of at-risk species habitat recovery.

The first batch of applications will be accepted until March 28, 2003. The expiration of this program is September 30, 2003. Contact Tim Hafer, the EQIP Program Specialist in Florida at 352/338-9510, for more information or visit the Internet at www.nrcs.usda.gov/programs/farmbill/2002.

SOURCE: LeRoy Crockett, USDA NRCS

Seagrass Coverage in Charlotte Harbor Continues to be Stable

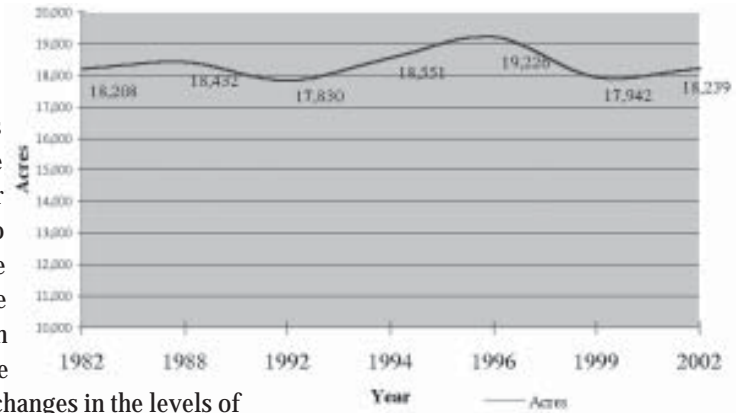
Dave Tomasko, SWFWMD SWIM Program

Seagrass Coverage in Charlotte Harbor (SWFWMD Data)

Seagrass meadows play an important role as a place of food and shelter for a variety of estuarine organisms as diverse as shrimp, juvenile fish, ducks, green sea turtles and manatees. Seagrass coverage in Charlotte Harbor north of Pine Island Sound has been mapped by the Southwest Florida Water Management District in 1982, 1988, 1992, 1994, 1996, 1999 and 2002. Seagrass coverage is estimated through the use of aerial photography shot in late fall, the time of the year that ensures both water clarity and sufficient seagrass biomass for meadows to be visible. (The 2002 date is from a flight taken January 7 so it mostly reflects seagrass coverage at the end of the 2001 calendar year.) Meadows are delineated and mapped using a Geographic Information Systems (GIS) approach and final maps are “ground truthed” to ensure the accuracy of the maps.

While coverage can increase or decrease by several hundred acres from year to year in Charlotte Harbor, overall coverage appears to be relatively stable. Lack of significant change in seagrass coverage over the past 21 years may be because seagrass coverage may not be a good indicator of human-induced changes in water quality or because

humans haven't yet significantly degraded the Harbor's water quality. Seagrass coverage may not be a sensitive indicator of human impacts to water quality in the Harbor, because the majority of variation in water clarity in the Harbor is related to changes in the levels of dissolved organic matter (e.g., tannins) rather than variation in the amount of phytoplankton. Phytoplankton are floating microscopic algae that give water a greenish tinge, and they oftentimes respond to the amount of nitrogen and/or phosphorus entering into a water body. That is, water clarity in Charlotte Harbor mostly varies as a function of how “brown” or “red” the water is, not how “green” it is. Other issues, such as the area of bottom water with low dissolved oxygen levels, might be better indicators of human impacts to water quality in Charlotte Harbor. SWFWMD will continue to map seagrass coverage as part of its ongoing efforts to preserve and protect the natural resources of the Harbor.



Seagrass Mapping Results for Southern Harbor

Seagrasses in southern Charlotte Harbor, including Pine Island Sound, Matlacha Pass, tidal Caloosahatchee River and Estero Bay were mapped in 1982 and 1999 by the Florida Marine Research Institute and South Florida Water Management District (SWFWMD). SWFWMD obtained aerial photography for their 2002 seagrass maps in January, and hopes to have mapping results by this Fall. SWFWMD staff hope to coordinate another seagrass mapping effort with the SWFWMD's effort this Fall.

Venice is Pilot Community for Strengthened Planning Efforts

Martin Black, City of Venice

The 2002 Legislature, with the support of Governor Bush, expanded the scope of local government comprehensive plan requirements to strengthen the relationship of water supply planning and land use planning. The City of Venice and four other local governments have joined with the five Water Management Districts, the Department of Community Affairs and the Department of Environmental Protection to act as a pilot community to complete these new requirements.

The fundamental requirement of the new standards provides for the development of a Water Supply Facilities Work Plan that will ensure the construction of water supply facilities that are necessary to serve existing and new development for at least a 10-year

planning period. These facilities include all of the infrastructure needed to withdraw water from its source, treat it to meet consumption standards, transmit it throughout a system, store it to meet peak demands and to distribute it to end users.

The City of Venice owns and operates a full range of water supply facilities to meet the needs of a growing urban area. Included are potable water, wastewater treatment and reclaimed water facilities.

The City has recently completed expansion of its Eastside Wastewater Treatment Plan as a joint project with Sarasota County to meet local needs for wastewater treatment and to produce additional reclaimed water.

As part of the regional analysis and planning effort required to meet the new stan-

dards, the City of Venice and any other local government that owns or is responsible for water supply facilities will now demonstrate adequate water supply sources that reflect consideration of the Regional Water Supply Plan as adopted by the Water Management District. Amendments to several components of each local government's Comprehensive Plan will also be necessary for the Potable Water Element, Conservation Element, Intergovernmental Coordination Element and the Capital Improvements Element.

For more information and to view the complete guidelines visit www.dca.state.fl.us/fdcp/DCP/WaterSupplyPlanning/water_supply_planning.htm.

Charlotte Harbor “Discovery Year” is Complete

E.D. Estevez, Mote Marine Laboratory

The first year of fieldwork in a five-year research initiative of the Mote Marine Laboratory has been completed in Charlotte Harbor. Designated as the “Discovery Year,” the past 12 months saw significant progress in all five of Mote’s research centers that are participating in the program. The research centers are the Center for Coastal Ecology, Center for Ecotoxicology, Center for Fisheries Enhancement, Center for Marine Mammal and Sea Turtle Research and Center for Shark Research. Progress was aided greatly by a new Harbor fleet, the Charlotte Harbor Field Station at Pineland, extramural funding, partnerships and interns.

The scientific objective of the Charlotte Harbor Program is to understand and predict how natural and human-caused changes to freshwater quantity and quality will affect the structure, function and condition of the estuary and its valued ecosystem components.

Last year’s fieldwork included:

- Studies of chemical contaminants and the current status of chemical pollutants
- Changes in phytoplankton distribution and phytoplankton community composition
- Surveys of red tide outbreaks and comparisons to historical data
- Studies of benthic invertebrates within the tidal Peace River
- Fish use of seagrass ecosystems of differing quality
- Passive acoustic surveys to measure invertebrate and fish populations, locate the spawning sites of sound-producing fishes, and to identify areas of the harbor used by dolphins and/or manatees
- The ecological role of sharks in Charlotte Harbor involvement placement of 21 acoustic hydrophones within the Harbor to monitor the movement patterns and presence of several different shark species
- Studying bonnethead sharks as a bio-indicator of environmental contamination and general health for the Charlotte Harbor region

“We are fortunate to be able to collaborate with these fine institutions and look forward to continued work with partners to understand Charlotte Harbor fully and its role as an estuary.”

– Dr. Mahadevan, Executive Director
Mote Marine Laboratory

“Charlotte Harbor is a large, relatively healthy estuary that is vulnerable to projected future population growth and land development. Mote Marine Laboratory believes the most effective response to this need in the long run will be to develop the ability to *predict* how the estuary will respond to human-caused stress through studies of how the estuary presently responds to natural stress. Mote wants to develop the ability to forecast the estuary’s condition similar to hurricane forecast models employed by the National Weather Service.”

— Dr. Ernest D. Estevez, Director, Center for Coastal Resources at Mote

- Historical changes in freshwater fish diversity in the Peace River
- How habitat utilization patterns of fishes may vary with river flow and/or development of hypoxic conditions in the Harbor
- The functional value of cover, an essential feature of fish habitat
- Manatee use of warm-water refuge in Charlotte Harbor, assessing habitat features used by manatees for survival
- Manatee distribution and habitat use
- Wastewater contaminants and human pathogens in the Charlotte Harbor estuary
- Bottlenose dolphin abundance, distribution and population structure in Charlotte Harbor
- Preliminary analysis of ecology and mortality patterns of bottlenose dolphins
- Ecological modeling of food webs in Charlotte Harbor

Significant progress was made on all research fronts. Work next year will continue to coordinate the independent projects. Next year’s work will see substantial additions to the technology employed in the Charlotte Harbor, especially for real-time measure-

ment and observation. Next year will also feature a special Charlotte Harbor internship program sponsored by the National Science Foundation.

Mote scientists are conducting these research projects with the help of several research partners, including colleges and universities, Florida Departments of Agriculture and Environmental Protection, Florida Fish and Wildlife Conservation Commission, Harbor Branch Oceanographic Institution, Lowry Park Zoo, Chicago Zoological Society and Brookfield Zoo, U.S. Department of Agriculture, U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration. The Mote Scientific Foundation provides core funding for the Charlotte Harbor Program.

SOURCE: *Mote News* 43(3) Fall 2002.

Mote Marine Laboratory is an independent, non profit marine research and education facility established in 1955. It is headquartered in Sarasota with field stations in Pineland and the Florida Keys. For more information, visit www.mote.org.

A FEW FINDINGS BY MOTE AND OTHER SCIENTISTS WORK IN CHARLOTTE HARBOR DURING THE “YEAR OF DISCOVERY”

- Contaminant levels in Charlotte Harbor sharks were generally lower than those observed in sharks in Tampa Bay.
- Under stress-free conditions, manatees in Charlotte Harbor exhibit robust immune functional responses indicative of a healthy population.
- Hypoxic (without oxygen) conditions occurred every year from 1993 to 2000 in Charlotte Harbor no matter what the amount of water flowed from the rivers.
- Fifty species of fresh water fishes are candidates for historically occurring in the Peace River watershed but studies have found only 39.
- High levels of fecal indicator bacteria were found concentrated near area of high septic system density, particularly in the upper reaches of the study area under less tidal influence.
- As top-level predators in the Charlotte Harbor ecosystem, Bottlenose dolphins can provide an indication of ecosystem health. Early results suggest that organochlorine contaminant concentrations are found at lower levels than in those dolphins in Sarasota Bay. Dolphins forage in both seagrass beds and near mangrove systems.

SOURCE: *Charlotte Harbor Conference Program: Discovery in 2001-2002*, Mote Marine Laboratory, October 9-10, 2002

Charlotte Harbor Nature Festival: Fantastic Event for the Region

For the third year, festival-goers took time to explore and enjoy the incredible wildlife and natural environment of the Charlotte Harbor estuary through the exhibits and activities that were available at the Charlotte Harbor Nature Festival. The event was held Saturday, February 1 at Tippecanoe Scrub Environmental Park at the Charlotte County Sports Park in Port Charlotte with approximately 1,400 attending! The regional festival included wonderful music, a fantastic children's area, guided walks, presentations and more than 60 exhibits provided by environmental organizations, businesses and artists.

Sponsors included:

Bald Eagle Level (\$2,500)

Charlotte Harbor National Estuary Program

Osprey Level (\$500-\$999)

Peace River Audubon Society • Wilson Miller, Inc. • Mote Marine • Charlotte Sun Herald • Serbin Printing

Sea Turtle Level (\$250-\$499)

Babcock Wilderness Adventures • Johnson Engineering • Vanasse Daylor • Sarasota County

Dolphin Level (\$100-\$249)

Charlotte County Economic Development Department • Charlotte Engineering and Surveying • Dufresne-Henry • Friends of the Charlotte Harbor Aquatic Preserves, Inc. • Kimley-Horn and Associates, Inc. • Southwest Florida Land Development Corp. • Stuart & Associates • W. Dexter Bender & Associates • The Weiler Engineering Corporation

In the **kid's area**, younger nature enthusiasts were able to make bat masks and eagle puppets, color in a mural, learn to identify shells and fossils, and discover how bubbles are made. Also, they could try their hand

at writing nature poetry, dig for their very own fossils and touch underwater creatures at Mote Marine's mobile exhibit.

Musical entertainment was provided by Miles Gibson, Bob Demboski, David Reilly, Lisa Phillips and Bean Depot Bluegrass Band.

Nature walks in the Tippecanoe Scrub Environmental Park included:

- Bird Walks led by Dave Smith of the Peace River Audubon Society
- Native Plant Walks led by Denny Girard of the Florida Native Plant Society- Mangrove Chapter
- Wee Walk for Wee Folks led by Maria Clemente, Charlotte Harbor Environmental Center (CHEC)
- Nature hike led by Bobbi Rodgers, CPRE

Nature presentations included:

- Shells of the Barrier Islands with Sally Falkenburg of the Cayo Costa State Park
- Ethnobotany: Uses of Native Plants with Dick Workman of the Florida Native Plant Society-Coccoloba Chapter
- Protecting Sea Turtles (especially for children) with youngster Zander Srodes
- Snakes of Southwest Florida with Laura Wewerka of the Lee County Parks & Recreation
- Butterflies with Kathi Rader-Gibson of the Sarasota County Lemon Bay Park
- A Century of Conservation with Toni Westland of the J.N. Ding Darling National Wildlife Refuge

The festival is **organized**

by a committee of volunteers who are dedicated to making the festival an exciting and informative occasion for everyone interested in our local natural resources. The organizations represented by the committee include Charlotte Harbor Aquatic and State Buffer Preserves, Charlotte Harbor NEP, Charlotte

Local Education Foundation, Florida Bat Center, Florida Marine Research Institute, Mangrove Chapter of the Florida Native Plant Society and Peace River Audubon Society. Special thanks to Cathy Olson who served as



Lisa B. Beever



Wilma Katz

committee chair, Bill and Betty Coombs, Miles Gibson, Maran Hilgendorf, Carla Kappmeyer, Peggy Kampert, Joy and Larry Linn, Cyndi Marks, Kathi Rader-Gibson, Tish Thomas, Inga Williams and Toni Yard.

Plan to attend next year and, if you'd like to volunteer to serve on the planning committee or participate in next year's festival, call 941/743-1239.

Thanks to . . .

- the organizations, businesses and agencies who provided information to festival-goers and
- the volunteers with the **AmeriCorps** National Civilian Community Corps who helped at the Festival. The volunteers have been working on exotic plant removal, shell mound restoration and coastal clean up for the Charlotte Harbor Aquatic and State Buffer Preserves field office.

Wonderful Places in the Greater Charlotte Harbor Watershed

St. Jude Nature Trail – St. James City, Pine Island

The St. Jude Nature Trail in St. James City on Pine Island as a wonderful place to visit. This linear trail runs from an upland entrance on Stabile Rd. down a 0.5 mile long nature walk to a boardwalk and viewing platform that overlooks St. James Creek. The hiker experiences a gamut of native vegetation ranging from lantana, long leaf pine saplings, buttonwood, sea grape, sabal palm, palmetto, and many other signed specimens, as well as white, black and red mangrove in their natural transition from higher lands to the brackish creek at trails end. There are comfortable resting benches spaced along the trail and a primitive canoe launch and chickee about half way down the trail for hanging out in the shade.

The St Jude Trail is a showcase of the Calusa Land Trust, a non-profit, grass roots charitable organization. It has, with its partners in preservation, preserved over 2,000 acres of environmentally sensitive land on and around Pine Island. "We're happy to show others what we have accomplished and let them experience the beauty of our many Preserves and invite them to join our cause," wrote Richard M. Little of St. James City.

More information about the Calusa Land Trust and this walking trail is available on the Internet at www.calusalandtrust.org.

Chickee means house in the languages of the Seminole and Miccosukee Native Americans, the closest relatives of the Calusa Indians. Made from cabbage palm fronds or palmetto thatch over a cypress log frame, the open-air styling of the chickee was designed to accommodate for warm, humid weather.



Carla Kappmeyer

YOU CAN NOMINATE A LOCATION. Send (1) the name of the natural site in the greater Charlotte Harbor watershed others should visit, (2) your name and (3) an explanation of why you want to encourage others to visit that particular site to Maran Hilgendorf at the NEP office (see page 2 for contact information). Nominated sites will appear in a future issue of *Harbor Happenings* and on the program web site. Sites featured to date include:

- Paynes Creek State Historic Site
- J.N. "Ding" Darling National Wildlife Refuge
- Myakka River State Park
- IMC-Agrico Peace River Park
- Barrier Islands GEOPark: Gasparilla and Cayo Costa
- Fort Meade Outdoor Recreation Area
- Four Mile Cove Ecological Preserve in Cape Coral
- Charlotte Harbor Environmental Center – Cedar Point and Alligator Creek
- Highlands Hammock State Park

Charlotte Harbor NEP Provides Free Wading Trips – Chances to Explore Estuaries Upclose and Personal

Muck about in the shallow waters of our local estuaries to see for yourself some of the aquatic critters that call these shallow waters home and you'll quickly understand the importance of these waters. Charlotte Harbor National Estuary Program is pleased

to sponsor 36 wading trips through September 2003 through several local environmental organizations.

To register, contact the organization that is offering the program of interest to you.

San Carlos Bay near bridge to Sanibel:

Call the Sanibel-Captiva Conservation Foundation at 239/472-2329.

- March 7 at 9:00
- March 14 at 3:30
- April 11 at 3:00
- April 25 at 3:30

Caloosahatchee in Cape Coral at 8:00

A.M.: Call the Calusa Nature Center at 239/275-3435.

- Tuesday, February 27
- Sunday, March 9
- Friday, March 28
- Monday, April 21
- Saturday, May 17

Lemon Bay in Egglewood:

Call the CHEC Cedar Point Environmental Park at 941/475-0769

- Wednesday, January 29
- Wednesday, February 26
- Wednesday, March 26
- Wednesday, April 30
- Wednesday, May 28
- Wednesday, June 25
- Wednesday, July 30
- Wednesday, August 27
- Wednesday, September 10

Estero Bay near Lover's Key: Call the Estero Bay Aquatic Preserve at 941/463-3240.

- Friday, March 21 at 9:30
- Thursday, May 22 at 9:30
- Monday, June 9 at 12:30
- Thursday, July 31 at 9:30
- Wednesday, August 20 at 12:30

Pine Island Sound on Pine Island: Call the Charlotte Harbor Aquatic Preserve

- Saturday, February 15
 - Saturday, March 1
 - Saturday, March 22
 - Tuesday, April 22
 - Saturday, September 27
- These wading trips are already full!*

Charlotte Harbor from Ponce de Leon

Park in Punta Gorda: Call the CHEC Alligator Creek Site at 941/575-5435

- Tuesday, February 25
- Tuesday, March 25
- Tuesday, April 22
- Tuesday, May 27
- Tuesday, June 24
- Saturday, July 5
- Tuesday, July 22
- Tuesday, August 26
- Tuesday, September 9

Operation Cleansweep Continues to Properly Dispose of Unused Pesticides

Cancelled, suspended, and unusable pesticides can be costly for farmers, nursery operators, golf course operators and pest control services who may have once used them to safely and economically dispose of them. Operation Cleansweep program provides the solution.

Operation Cleansweep began in Florida in 1995 with a statewide collection of more than 70,000 pounds of lead arsenate, a widely used pesticide for citrus operations that was banned from use by the U.S. Environmental Protection Agency. A subsequent statewide survey identified substantial quantities of stored cancelled, suspended and unusable pesticides. Through May of 2002, Operation Cleansweep events collected and disposed of pesticides ranging

from A (alachlor) to Z (zineb) and included chlordane, 2,4-D, DDT, Thimet, and more lead arsenate.

This program is conducted with funds from the Florida Legislature to the Department of Environmental Protection, which acts in partnership with the Department of Agriculture and Consumer Services and with the help of local governments and professionals be dispatched to each participant's farm or business facility to pick up the pesticides.

For additional details contact Keith Myhre of the Department of Agriculture and Consumer Services toll-free at 877/851-5285 to sign up.

SOURCE: www8.myflorida.com/waste/categories/cleansweep-pesticides/default.htm

A pesticide is any substance that prevents, destroys, repels or mitigates any pest. Pesticides have long been an important factor in Florida's agricultural productivity and in protecting public health. At the same time, a number of pesticides can pose risks to human health and the environment. Many pesticides have been banned, canceled or suspended by the U. S. Environmental Protection Agency because of their potential risk to human health. Those who used these chemicals store them until affordable disposal options are available but long-term storage can pose risks, which is why Operation Cleansweep was created.

Conference Replicated as College Course

Warren Gardner liked what he learned during the Public Conference of the Charlotte Harbor Watershed Summit on February 9, 2002. He liked it enough to suggest that the program be offered as a course by the Charlotte County Foundation.

The Foundation meets at Edison Community College in Punta Gorda and is affiliated with Elderhostel. The class is geared to those older than 50 years of age. Mr. Gardner serves on the Curriculum Committee of the Charlotte County Foundation.

During May 2003, four two-hour courses will be offered. The classes will cover:

- estuaries, watersheds, issues of common concern, water flow and quality, uses of land and water by commercial and residential development, agriculture and mining
- Charlotte Harbor National Estuary Program and its partnership approach to protecting local estuaries watersheds
- Actions citizens can take to protect the environment

For additional information about this course, contact Caryl Sprague with the Charlotte County Foundation at 941/637-0077.

Florida Native Plant Society's Annual Meeting: Symbiosis – The Power of Partnerships

The Coccoloba Chapter of the Florida Native Plant Society is hosting the 23rd annual conference from May 8-11, 2003 in Fort Myers. The Coccoloba Chapter is proud to present Mike Duever, Dr. Doug Jones and Dr. Michael Amaranthus as three conference speakers, 21 presenters to small groups, 5 workshops, an evening program featuring Janesse Ray, award winning author and environmentalist, and 15 field trips.

For more info and registration information visit the FNPS web site at www.fnps.org.

10  Charlotte Harbor National Estuary Program *Harbor Happenings*

Survival Skills for Managing Coastal Resources

Are you a coastal resource professional who knows the resources but struggles with the people part of the equation? South Florida Water Management District and Charlotte Harbor NEP are pleased to offer a four-day "Survival Skills for Managing Coastal Resources" course designed for you!

June 17-20, 2003

South Florida Water Management District Lower West Coast Service Center

2301 McGregor Blvd in Fort Myers, Florida

"Survival Skills for Managing Coastal Resources" provides practical information and teaches new skills. Each topic includes web-based and person-to-person instruction. (Participants are required to complete six hours of web-based training prior to attending.) Course topics include:

- Coastal Management Framework: the different roles and responsibilities of coastal resource management individuals, organizations, and legislation (4 hrs + 2 hrs on-line)
- Collaborative Processes: designing and managing productive stakeholder meetings (12 hrs + 2 hrs on-line)
- Information Survival Skills: finding, assessing and managing information (6 hrs + 2 hrs on-line)

Registration is limited. For additional information about the course, visit the NOAA Coastal Service Center's web site at www.csc.noaa.gov.

For more information and to register please contact Tomma Barnes with the South Florida Water Management District (239/338-2929 ext 7771, tbarnes@sfwmd.gov).

NEP Educates Citizens: Aquatic Nuisance Species Surveillance and Education Network

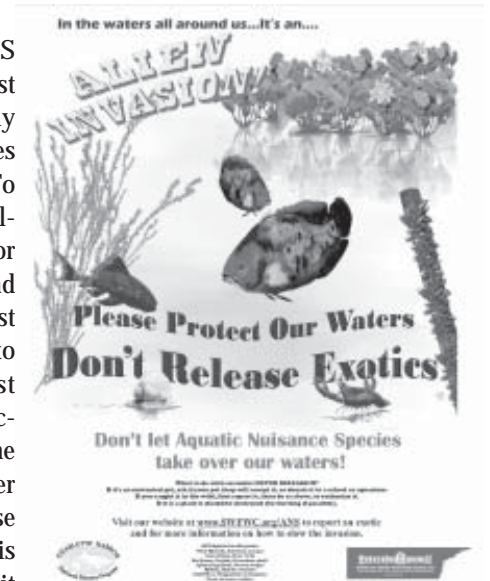
John Cassani, Southwest Florida Watershed Council

Nonindigenous plants and animals associated with aquatic resources are significant threats to native ecosystems worldwide. In addition to ecosystem damage, invasive non-native species can have enormous economic impacts and also negatively affect human health. A recent study at Cornell University estimated that invasive species of all types cost Americans about \$137 billion every year.

In southwest Florida there are many examples of nonindigenous plant and animal invaders of aquatic resources represented by plants, fish, mollusks and other invertebrates. In fact, Florida, especially south Florida, has one of the highest rates of invasion and establishment of nonindigenous fishes compared to other areas of the U.S. However, our understanding of their distribution and overall impacts are poorly understood. To address this concern, the Southwest Florida Watershed Council developed the Aquatic Nuisance Species Surveillance and Education Network that is funded by a \$2,960 mini-grant from the Charlotte Harbor NEP mini-grant.

The goal of the Network is to create a greater public awareness of what an aquatic nuisance species (ANS) is and a

better understanding of the threats ANS pose to the water resources of Southwest Florida. An additional goal is to potentially reduce the number of intentional releases and establishment of ANS in our region. To achieve these goals a web-based surveillance network (www.swfwc.org/ANS) for tracking the occurrence, distribution and relative abundance of ANS in Southwest Florida is being developed. The intent is to have resource managers in Southwest Florida report their observations or collections of non-indigenous species through the web based network. An educational poster (to the right) alerting residents to not release their aquatic pets has been produced and is being distributed to pet shops, schools, bait shops and marinas in the region.



The impacts of many non-native aquatic species appear benign but may have impacts that are associated with their presence largely due to our poor understanding of complex ecosystem dynamics. There are now however many examples worldwide where invasive species have disrupted nearly every type of aquatic resource. Estuarine systems are particularly vulnerable due to the high rate of shipping commerce located near ports associated with coastal rivers and estuaries. Every minute 40,000 gallons of foreign ballast water is dumped into U.S. harbors. This water contains a multitude of non-indigenous organisms that could alter or destroy natural marine ecosystems. Examples include San Francisco Bay with at least 234 nonindigenous species present and Chesapeake Bay with more than 120 species.

NEP Helps Partners Implement Management Plan: Micro-Grants

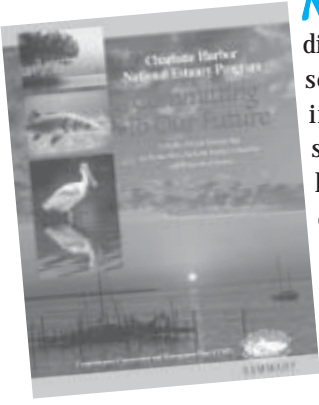
Last year Charlotte Harbor NEP began offering microgrants. These small grants of up to \$250 help further partnerships with Florida residents, organizations, businesses, government agencies, schools, colleges and universities. Grants awarded help implement the program's *Comprehensive Conservation and Management Plan (CCMP)*.

With the six micro-grant awards made during in January 2003, 54 projects have been supported through microgrants. Applications are accepted until funds are no longer available. Funds to support microgrants will not be available again until October 2003.

For a complete list of the projects supported by Charlotte Harbor NEP through microgrants, visit the program web site at www.charlotteharbornep.org. The following are a few of the projects that have been supported.

- **Charlotte County Arts & Humanities Council:** \$250 for four middle schools in Charlotte County to purchase supplies for the River of Words poetry and art contest
- **Joshua Black:** \$250 for his Boy Scout Eagle Project to create gopher tortoises signs along the Venetian Waterway Park and Intracoastal Waterway
- **Cape Coral Friends of Wildlife:** \$250 to support the First Annual Burrowing Owl Festival that is planned for February 15, 2003
- **Lee Soil and Water Conservation District:** \$250 to sponsor the Southwest Gulf Coast Regional Environthon December 6, 2002. This is the 4th year of this event with up to 100 competing from Charlotte, Lee and Collier counties.
- **Paynes Creek Preservation Alliance:** \$250 to preserve red-shouldered hawk for display as bird of prey in educational programs
- **Wings of Hope Program** in partnership with Fort Myers Alternative Learning Center: \$250 to buy plants and signs for students to create a butterfly garden on school property

Summary of Program Management Plan Available



More than 200 individuals who represent organizations interested in preserving the Charlotte Harbor estuarine system used a cooperative decision-making process to identify the region's common priority

environmental issues and the actions needed to solve them. These concerns were developed into a 20-year *Comprehensive Conservation and Management Plan* (CCMP). Volume 1 (272 pages) outlines the management plan, including objectives and priority actions. Volume 2 (448 pages) describes preliminary implementation projects as provided by more than 40 organizations that participated in the development of the plan.

A 24-page summary of the 720-page plan is now available. If this newsletter is mailed to you, a copy of the *CCMP Summary* will be mailed to you shortly. For those who aren't mailed the newsletter or who would like a supply of the *CCMP Summary* to distribute, visit the Internet at www.charlotteharbornep.org or contact the Program Office (239/9951-1777 ext 240).

Public Meeting Notice: MFL

The South Florida Water Management District announces a public meeting to which all interested parties are invited to discuss the update of information concerning recent studies of the Minimum Flows and Levels (MFL) Criteria for the Caloosahatchee River and Estuary on Wednesday, March 5, 2003 from 1:00 to 2:30 P.M. at the Harborside Convention Center (1375 Monroe St.) in Fort Myers.

Water Management Districts are required by law to conduct research and analysis on important Florida water bodies to determine that level and flow of water below which harm can occur to the natural system over time. The "minimum flows and levels" are then set by the governing boards of the water management districts. Public hearings where interested parties have input into the process are legal requirements of the process. The public hearing for the Caloosahatchee Minimum Flow and Level will be part of the Public Conference. (page 1).

The meeting agenda and the document Technical Documentation to Support Development of Minimum Flows and Levels for the Caloosahatchee River and Estuary - Draft 2003 Status Update Report can be obtained by contacting Kurt Harclerode or Akin Owosina at 800/248-1201 or by visiting the SFWMD website at www.sfwmd.gov/org/wsd/mfl/calmfl/index.html.

- Calendar of NEP Meetings -

For a more complete list of events, visit the Charlotte Harbor NEP web site at www.charlotteharbornep.org. Watch for more details in future issues of *Harbor Happenings*.

March 2003

26 Charlotte Harbor NEP Technical Advisory Committee

28 Charlotte Harbor NEP Citizens Advisory Committee

April 2003

16 Charlotte Harbor NEP Citizens Advisory Committee

23 Charlotte Harbor NEP Technical Advisory Committee

May 2003

7 Charlotte Harbor NEP Management Committee

21 Charlotte Harbor NEP Policy Committee

Dates to remember in 2003

March 5: Caloosahatchee River Public Conference, page 1

March 5-16: Caloosahatchee river Basin Festival, page 3

2003: Seagrass Wading Trips, page 9

May: Course offered at ECC, page 10

May 8-11: FNPS Annual Meeting, page 10

June 17-20: Survival Skills for Managing Coastal Resources, page 10

Harbor Happenings

Charlotte Harbor National Estuary Program
4980 Bayline Drive, 4th Floor
North Fort Myers FL 33917-3909



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