



Harbor Happenings

The newsletter of the Charlotte Harbor National Estuary Program

Fall 2001: Volume 5, Number 3

In This Issue

- 2 A Word From the Director
 - 3 Grants Available: Mini-Grants and Research & Restoration Partners Charlotte Harbor NEP's Management Conference are Dedicated Volunteers
 - 4 National Environmental Award Received by Local Water Supply Authority Visit e-bay and Bid to Support Estuaries
 - 5 NEP Supports Restoration at Frannie's Preserve and Hands-On Training of Pine Island Youth
 - 6 Coastal Corridor to Provide Passageway for Wildlife U.S. Postal Stamp for Estuaries Needs Your Support
- Insert
- National Estuaries Day
Enjoy activities that celebrate our Estuaries
- 7 Caloosahatchee Update River of Words Poem: Water Flows
 - 8 NRCS Protects Estuaries River "IQ" Taken
 - 9 Wonderful Place in the Watershed Water Quality Data to be Analyzed
 - 10 Florida's Bromeliads River of Words Poem: The River
 - 11 Wildlife Refuges Boundaries Estuaries Report

Charlotte Harbor NEP: Transitioning to Implementation

In 1995 Charlotte Harbor was recognized as an "estuary of national significance" and a National Estuary Program was created. From October 1996 to April 2000, more than 200 individuals who represent organizations interested in preserving Charlotte Harbor estuary used a cooperative decision-making process based on sound science and assessment to identify diverse resource management concerns in the study area. These individuals serve on one of four committees that, with the Program Office, is collectively known as the Management Conference. (See page 3.)

The Management Conference developed a Comprehensive Conservation and Management Plan (CCMP) that identified the region's priority environmental issues and actions to solve those issues. The completion of the management plan and its subsequent acceptance by the Management Conference (April 2000), the State of Florida (November 2000), and U.S. EPA (June 2001) marked the beginning of action to restore and protect the estuary and its watershed.

The Management Conference now reviews progress and identifies concerns not consistent with the plan's goals – continuing to use a cooperative decision-making process based on sound science and assessment. The Management Conference addresses these concerns and, if consensus is reached, then the Charlotte Harbor National Estuary Program — backed by the counties, cities, and numerous businesses, environmental organizations, government agencies, and citizens of the watershed — presents its position.

Early issues of *Harbor Happenings* documented the development of the CCMP. Upcoming issues will inform readers of efforts to fulfill the management plan.

Three issues were identified in the CCMP, a 20-year plan, as the priority environmental concerns in the region: water quality, hydrology, and fish and wildlife habitat loss. Recently the Management Conference identified objectives within the CCMP as priority for the next three years. These objectives follow.

Hydrologic Alterations

HA-1: Establish values for minimum seasonal flows for select rivers and achieve these minimum seasonal flows by the year 2020.

HA-2: Identify, establish, and maintain a more natural seasonal variation in freshwater flows by the year 2010 for the Caloosahatchee River; upper Peace River and its tributaries from Tenoroc to Zolfo Springs; and the upper Myakka River with special attention to Flatford Swamp.

Water Quality Degradation

WQ-1: Identify those waterbodies that do not meet their designated water quality standards and develop a plan to meet those standards.

WQ-2: Develop Total Maximum Daily Loads (TMDLs), except for mercury, for high priority 303(d) listed water segments by 2004 and for all remaining 303(d) waters in the study area by 2009.

WQ-6: Meet or exceed designated water quality standards throughout basins of the study area by the year 2015 with possible exceptions for natural and/or site-specific conditions.

Fish & Wildlife Habitat Loss

FW-1: Achieve a 25 percent increase (from 1998 levels) in conservation, preservation, and stewardship lands in the study area by the year 2018.

FW-2: Meet the stated objectives for the target extent, location, and quality of habitats in the study area, including native submerged aquatic vegetation, intertidal unvegetated habitats, mangroves, saltwater marsh habitats, freshwater wetland systems, oyster bars, and upland communities.

Program Update

What a difference some rain makes! The tensions surrounding many of the meetings I have attended over the past six months seems to have dissipated with July's rains and hope springs eternal that more will come before the rainy season is over. While the "crisis" mode that characterized a fair share of these meetings no longer exists, water resource managers are moving cautiously and know that yesterday's extreme drought conditions may be experienced again in the future. Planning efforts to address the region's long-term water needs continue, with the recognition that conservation will play an important part of the overall effort. Let's listen to what these planning efforts are telling us and be careful not to waste this most precious resource.

The Charlotte Harbor National Estuary Program is first and foremost a partnership. Like any partnership, there are times when the partners work very well together and other times when they don't. In the year that I have been here I can say that I am truly impressed with the level of commitment that the NEP partners have shown towards our watershed management process. With the exception of an unfortunate major release of freshwater from Lake Okeechobee and the ongoing controversy over the expansion of phosphate mining, the partners who signed the CCMP for Charlotte Harbor have worked cooperatively and diligently to address our priority problems of water quality degradation, hydrological alterations, and fish and wildlife habitat loss, thereby helping to improve the water quality and ecological integrity of the greater Charlotte Harbor watershed. But let me say there's still other groups — and by this I am specifically thinking of a number of industries such as agriculture, residential development, marine industries, and tourism — that we need to more actively engage in our implementation process if we truly want to have a partnership that reflects the diversity of our watershed and its many users.

There are hundreds of important actions included in our CCMP that need to be undertaken to help us realize our goals, some of

which are being implemented, others are ready to be implemented, and yet still others require that background information be gathered before moving onto the next step. In an effort to focus our actions, the NEP has been working diligently over the past several months to "prioritize" the quantifiable objectives and priority actions and initiatives to focus on during the next three years, beginning with the fiscal year that starts this October. Our sincere thanks go out to everyone that has participated in this process. Yet, even as we work to finalize our "prioritization" process, we find that we are dealing with a moving target. New priorities arise, ongoing and anticipated projects and studies direct us down different paths, and people and agencies commitments wax and wane as time and budget constraints often necessitate. Meanwhile, development marches on, the region's population grows, and the watershed is under increasing strain. Thus, the NEP finds itself in a position of constantly adjusting to this moving target, filling in the gaps where we can, informing the public about what's happening, and ever cognizant of the bigger picture.

The call for proposals for our Mini-Grants and Research and Restoration Partners grants has been released. We encourage you to spread the word and let people know about this once-a-year opportunity to apply for funds to further the implementation of our Comprehensive Conservation and Management Plan and help the watershed.

Finally, don't forget to join us in one of the many activities our partners have planned for National Estuaries Day, September 29!



Robert (Rudy) Rudolph, Director

Charlotte Harbor

National Estuary Program

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The Charlotte Harbor National Estuary Program is a partnership of citizens, elected officials, resource managers, and commercial and recreational resource users working to improve the water quality and ecological integrity of the greater Charlotte Harbor watershed. A cooperative decision-making process is used to address diverse resource management concerns in the 4,400 square mile study area. The program Management Conference is composed of the Management, Policy, Technical Advisory, and Citizens Advisory Committees and the Program Office. Each committee serves a specialized role in supporting the program goals and objectives.

Harbor Happenings

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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@swfrpc.org). Deadlines for future issues are **November 15**, February 15, May 15 and August 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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Grants Available from the Charlotte Harbor NEP

– Mini-Grant Applications and Research & Restoration Partners Proposals Due October 26, 2001 –

To further the partnership to protect the Charlotte Harbor estuary by improving the water quality and ecological integrity of the greater Charlotte Harbor watershed, Charlotte Harbor National Estuary Program offers grants to Florida residents, organizations, businesses, government agencies, schools, colleges and universities.

This year the Charlotte Harbor NEP is requesting Mini-Grant applications and Research & Restoration Partners proposals.

Each year proposals are reviewed and selected on a competitive basis by the Charlotte Harbor NEP Management Conference. The Citizens Advisory Committee (CAC) reviews education and outreach proposals. The Technical Advisory Committee (TAC) reviews research, monitoring and restoration proposals. These committees then recommend proposals for funding to the Management and the Policy Committees, which make the final decisions as to which projects are supported. Contract awards will be announced in February 2002. Each project may begin as soon as a contract is signed.

Additional guidance and instructions are provided in two information packets available on the Program web site (www.charlotteharbornep.com) and by calling 941/995-1777.

Mini-Grant projects that serve as models for addressing environmental education and resource management issues, have long-term applicability, and that relate to the NEP's priority issues will receive priority consideration. Any Florida resident, organization, agency, business, or school may apply for up to \$3,000 per project. Matching funds are not required but are encouraged. Mini-Grant projects must address at least one NEP goal and one priority problem, and must occur in the Charlotte Harbor watershed.

The deadline to submit Mini-Grant applications and Research & Restoration Partners proposals is 5:00 P.M. Friday, October 26 to the Charlotte Harbor NEP Office at 4980 Bayline Drive, 4th Floor, North Fort Myers FL 33917-3909.

Mini-grant and research & restoration partners projects have varied from biological surveys, wetland restoration projects, and volunteer water quality monitoring to curriculum development and environmental education activities.

Directory of Projects

Since 1996, the Charlotte Harbor NEP has funded 58 projects throughout the greater Charlotte Harbor watershed. These projects provide immediate benefits to the watershed's natural resources, enhance our technical knowledge, and improve community awareness. Projects the NEP has supported vary greatly in scope and scale, ranging from biological surveys, wetland restoration projects, and volunteer water quality monitoring to curriculum development and environmental education activities. A directory of grant-supported projects initiated from 1997 to 2001 is available from the Program Office. Because many of these projects are ongoing, the directory will be updated frequently. The most recent version will always be available from the program web site at www.charlotteharbornep.com.

Charlotte Harbor NEP Management Conference

The Management Conference is composed of four committees and the Program Office. Committee members represent citizens, elected officials, resource managers, and commercial and recreational resource users in the entire watershed. The watershed covers 4,400 square miles of Charlotte, DeSoto, Hardee, Highlands, Lee, Manatee, Polk and Sarasota counties. Each committee serves a specialized role to fulfill the goals and objectives in the Comprehensive Conservation and Management Plan.

The **Policy Committee** is the bridge between the Management Conference and local governments of the region. The Committee establishes general policy and has ultimate authority in program administration. This committee appoints members to the Management Committee and approves budgets.

The **Management Committee** serves as a liaison between the committees and provides strong institutional support for the program by staffing, funding and facilitating projects. This committee reviews work plans, contracts and proposals, work schedules and products. It ensures that program milestones and objectives are met.

The **Citizens Advisory Committee (CAC)** provides a mechanism for citizens to advise the Charlotte Harbor NEP. The CAC distributes relevant information to the public and helps develop work plans and public participation strategies, provides input on public education programs, and develops requests for and reviews public education (mini-grant) applications. Membership is open to those interested in furthering the goals and objectives of the Charlotte Harbor NEP.

The **Technical Advisory Committee (TAC)** identifies environmental issues and goals for their resolution, helps develop work plans, develops requests for and reviews research and restoration proposals. It also assists with information management and coordinates agency research. Membership is open to those who have technical expertise and who are interested in furthering the goals and objectives of the Charlotte Harbor NEP. The TAC has created a Water Quality Quantifiable Objectives Subcommittee (WQQOS) to determine performance/biological indicators for the water bodies in the study area, the Charlotte Harbor Regional Ambient Monitoring Program (CH RAMP) to coordinate water quality monitoring programs, and the Habitat Conservation Subcommittee to address the four fish and wildlife habitat loss objectives in the management plan.

Peace River-Manasota Regional Water Supply Authority

Receives National Environmental Award

Eight national environmental excellence awards were announced at the National Association of Environmental Professionals (NAEP) Conference on June 26. The winners included both private and government entities and were drawn from around the country. Awards were given in a variety of categories ranging from Environmental Management to Public Involvement and Partnership to Environmental Stewardship. The NAEP has conducted the National Environmental Excellence Awards competition for the past five years, singling out projects and programs that model excellence in the environmental profession, meet or exceed stringent award criteria, and stand out as significant contributions.

“NAEP’s award program provides an opportunity for us to recognize individuals and programs that exemplify the profession,” explained Bruce Hasbrouck, NAEP President. “The award winners are selected after a detailed review of the application package, the background information, and the impact on the environment. Finally, the awards program provides insight for our members and conference participants for opportunities to increase their knowledge and understanding.”

The Peace River/Manasota Regional Water Supply Authority was one of six winners of the 2001 National Environmental Excellence Awards. The award was given in the category of environmental stewardship for the Peace River Option. (This project was profiled in the winter 2000-2001 issue of *Harbor Happenings*.)

In developing and implementing the Peace River Option, the Peace River/Manasota Regional Water Supply Authority has shown that the combination of innovative technology, sound engineering, a concern for maintaining existing natural resources, and a comprehensive monitoring program can provide a water supply system that has met both the needs of an emerging population and increasingly sensitive environmental resources for more than a decade. According to David Rathke, Governmental Affairs Coordinator for the Authority, “The Peace River Option utilizes the Peace River and

aquifer storage and recovery technology to supply safe and affordable drinking water to more than 100,000 people in southwest Florida.”

In addition, “this project preserves ground water supplies in an area of critical concern and reduces saltwater intrusion while protecting the downstream Charlotte Harbor estuary,” continues Samuel Stone, the Authority’s Environmental Affairs Coordinator. The ability to integrate federal and state agency regulatory requirements, community and infrastructure development, environmental sensitivity and needs, public issues and concerns, and recreation and commercial interests into a long-term functioning system is an example of outstanding Environmental Stewardship.



David Rathke (left), Governmental Affairs Coordinator, and Samuel Stone (center), Environmental Affairs Coordinator, accepted the National Environmental Excellence Award for the Peace River/Manasota Regional Water Supply Authority.

NAEP is a non-profit professional association of some 5,000 environmental professionals representing public and private sectors throughout the world. For more information, visit their web site at www.naep.org.

Exciting On-line Auction to Help Protect our Nation's Bays and Estuaries

Have fun becoming the highest bidder and win an exciting outdoor adventure or mini-vacation while you help protect and restore our nation’s bays and estuaries! It’s easy to participate in the Association of National Estuary Program’s (ANEP’s) on-line auction found on www.ebay.com, the popular Internet auction house.

Ebay.com is hosting an on-line auction where you can bid on fun and unique donated auction items. The auction will continue with new items added on a continual basis, so keep checking the site!

How do I Find ANEP’s E-Auction? Just go to www.ebay.com and see how easy it is! Type “ANEP” in the “search” box located under the EBAY logo on the top left corner, and all our ANEP items will appear. Click on those that interest you, and have fun bidding!

Where do the Proceeds Go? The proceeds from the sale of the tax-deductible donations will go to support the nation’s 28 National Estuary Programs (NEPs) and their

Help restore and protect Charlotte Harbor and have fun too!

Association of National Estuary Programs (ANEP). Together, the NEPs and ANEP (a 501(c)(3) nonprofit) provide local and national efforts to restore and protect our nation’s estuaries, bays and lagoons.

this is a great auction for finding a unique birthday present, an anniversary present for your parents, or a fun adventure for you and your family. Examples are boat rides, fishing trips, a 14-person party on board the *Glory*, a replica of a Victorian fantail electric launch, lobster hunts and kayaking trips in your local bay or estuary. Pamper yourself and a special companion with a weekend stay in your choice of Bed & Breakfast locations. Or, why not buy a weekend trip for some friends, as a present they will never forget?

Questions? For more information on the e-auction and ANEP, please contact Dawn Volk at 703/333-6150 or drvolk@erols.com, or visit their website at www.anep-usa.org.

NEP Supports Restoration: Frannie's Preserve on Sanibel Island

In 1999, the Sanibel-Captiva Conservation Foundation (SCCF) purchased the 167-acre parcel known as Frannie's Preserve, the "keystone" property of the Sanibel River Corridor Restoration Project. The land is located in the middle of four existing preserves and borders the Sanibel River in the interior of Sanibel Island. The largest intact coastal strand habitat on the island is located on the property as is a variety of upland and wetland habitats, including rare coastal scrub and *Spartina*-dominated wetlands.

The project is now complete after having removed virtually all of the invasive exotic Brazilian pepper (*Schinus terebinthifolius*), Australian pine (*Casuarina equisetifolia*) and a few melaleuca (*Melaleuca quinquenervia*) trees. In dense areas the trees were removed mechanically, using a tracked vehicle with root rake. In sensitive upland areas with gopher tortoises, the trees were removed by hand.

Volunteers from local real estate companies have cheerfully assisted in the replanting of native shrubs, wetland trees and herbs as

well as clean up of old dump sites. Some tropical hardwood species have been planted and 13 nest boxes have been installed to supplement the loss of cavity trees for woodpeckers, screech owls and flycatchers. Recently piles of exotic trees that had been stacked and drying for nearly a year were burned.

The partners in this project have carefully documented all locations of active and inactive gopher tortoise burrows with GPS during and after the exotic removal, developed descriptions of plant communities with species lists for all major habitat types, and conducted an exhaustive literature review of historical plant communities for species by habitat for comparative and restoration planning purposes. Replanting of native species has been modified based on these findings. SCCF Biologist Brad Smith conducted one year of migratory and breeding bird surveys before, during and after exotic removal and SCCF Restoration Ecologist David Ceilley collected aquatic macroinvertebrate and fish sam-



Wetland areas are now flooded and supporting a variety of wading birds including great egrets, white ibis, tricolor herons and wood storks (above).
Photo by David Ceilley.

ples from wetland swales and ponds along with audible frog surveys before and after initial restoration.

This restoration project has involved several entities. Charlotte Harbor NEP has supported this effort as a restoration partners project.

NEP Supports Hands-On Training: Junior Ranger Program

Exotic vegetation is invading Pine Island at a rate faster than it is being eradicated. The Calusa Land Trust and Nature Preserve of Pine Island, Inc. (CLT) developed a Stewardship/Ranger Program to, among other things, safely and effectively eliminate exotic invasive species from CLT preserves on Pine Island. With support provided by a \$2,000 mini-grant from Charlotte Harbor NEP, nature trail signs were placed to identify vegetation and a Junior Ranger Program was created to prepare students and accompanying adults to act as restorers of fish and wildlife habitats.

"The Charlotte Harbor NEP grant motivated us to start our Junior Ranger program," explained CLT member Bill Spikowski. "It has become our primary educational program for kids, training the next generation of stewards for our nature preserves."

The Junior Ranger Program includes instructional learning, hands-on learning about the natural environment of pine flatwoods,

coastal strands, scrubby flatwoods, oak scrub and mahogany hammocks, and a hands-on phase to learn about the tools and chemicals used to eradicate invasive exotics.

Contact Ed Chapin (beeper 941/392-0090) for more information.



Ed Chapin (left), chief ranger with the Calusa Land Trust, presents a badge to Brian Jaffrey, the first student to complete the Junior Ranger Program. Brian was a student at Pine Island Elementary School in Pat Tumiat's fifth grade class during the 1999-2000 school year.

CALUSA LAND TRUST AND NATURE PRESERVE OF PINE ISLAND, INC. is one of 13 land trusts acquiring conservation land in the Charlotte Harbor watershed. Since 1976 CLT has acquired 1,882 acres on and around Pine Island. The purpose of the Calusa Land Trust is to protect the natural diversity and beauty of the Pine Island region by acquiring, managing and preserving in perpetuity environmentally sensitive or historically important land and to foster appreciation for and understanding of the environment and our past. The Land Trust currently has 750 members who form a broad coalition of individuals, families, and businesses who agree that the acquisition and protection of natural land is important if we are to retain the quality of life which makes the Pine Island region so attractive to people and to wildlife. The Land Trust is supported entirely by people who donate their time, talent, and financial support to protect irreplaceable natural resources.

Passageway for Fish and Wildlife Planned

by Jim Beaver, Florida Fish & Wildlife Conservation Commission

The Southwest Florida Conservation Corridor effort focuses on the conservation of contiguous coastal ecosystems along the west coast of Florida to provide habitat for wildlife resources, improve hydrologic and enhance water quality. This involves the protection of coastal resources, including barrier islands and estuaries, as well as their watersheds.

The goal is to establish a managed, multi-jurisdictional contiguous coastal corridor system including coastal wetlands, scrub habitat, maritime forest, riverine transition habitat, and other native communities to benefit all species of fish and wildlife in western south Florida. The results of this effort will establish a multi-jurisdictionally governed partnership composed of refuges, aquatic preserves, estuarine research reserves, wildlife management areas, county and city owned lands, conservation easements, private nature preserves, parks, and others located from the Crystal River south through Shark River Slough that will operate under an established, coordinated conservation plan. (Editor's note: The entire Charlotte Harbor NEP study area is included in this plan.)

The Southwest Florida Conservation Corridor will ensure a cooperative, balanced effort between government agencies, private groups and citizens. The resulting benefit would be several geographically and biologically defined corridor systems for fish, wildlife and passive recreational opportunities.

The plan will provide new opportunities for federal, state, and regional governments to work together with local governments and the public sector in exploring and developing innovative programs for the protection of fish and wildlife resources.

The Conservation Corridor is a realistic goal. There is a substantial amount of land already in public ownership, a substantial amount of planning has already been initiated and on the ground implementation is underway. This may be the only place in the state where such a project can be achieved, partly because of the proven public support

The goal of the Conservation Corridor is to create a contiguous coastal corridor — tract of land forming a passageway — from Crystal River south through Shark River Slough to benefit fish and wildlife.

and partly because of the amount of ecologically significant land still undeveloped. In 1997, the U.S. Fish and Wildlife Service completed a strategic plan to conserve, protect, and enhance fish and wildlife and their habitats. Goal two of that plan is to establish an ecologically diverse network of land and waters of various ownerships to provide habitat for listed species. In partnerships with state and local governments, this goal could be expanded to include all fish and wildlife resources, including those resident species under state jurisdiction. The conservation of coastal resources along the Gulf Coast is unattainable without the support and unified efforts of both public and private sectors. A unified planning effort with state and federal agencies, local governments, private land owners, non-governmental organizations and businesses will lead to improved coordination and cooperation and better implementation of all acts to protect coastal resources. This framework docu-

The Coastal Conservation Corridor Map — in color with a key — is available on the Internet at www.charlotteharbornep.com.

ment will provide a partnership vehicle to synchronize comprehensive planning efforts by a host of independent partners. Numerous formal agreements currently existing between agencies and partners along the southwest coast of Florida and new formal agreements will help to consolidate the planning efforts. Furthermore, this initiative will identify current actions that are ongoing to acquire, enhance, or protect coastal wetland resources and species that depend on them. This collaborative planning approach will provide a multi-jurisdictional framework to involve more partners in the cooperative management of coastal habitat.

This project has the support of federal, state and regional agencies; local governments; private organization and citizens.



U.S. Postal Stamp Campaign for Estuaries

The U.S. Postal Service has received a request to develop a series of postage stamps celebrating estuaries — areas of environmental, economic, and cultural importance. If selected, the America's Estuaries series would illustrate bays, inlets, and harbors from across the nation, while possibly highlighting the most ecologically significant plant and animal life found in the 28 National Estuaries and 25 National Estuarine Research Reserves.

The proposal was submitted to the U.S. Postal Service Citizens Stamp Advisory Committee in Washington D.C. by the Long Island Sound Study in cooperation with the U.S. Environmental Protection Agency, the National Oceanic Atmospheric Administration, the Association of National Estuary Programs and the National Estuarine Research Reserve Association. The Citizens Stamp Advisory Committee will decide whether America's Estuaries is chosen to become a series of postage stamps. The Advisory Committee meets quarterly to decide on stamp subjects and makes recommendations to the Postmaster General.

Show your support for this initiative! Please send a postcard or letter to Citizens Stamp Advisory Committee, c/o Stamp Development, U.S. Postal Service, 475 L'Enfant Plaza SW, Room 4474E, Washington DC 20260-2437.

All Eyes on the Caloosahatchee

by Matt Giles, South Florida Water Management District

This summer's sudden onslaught of rainfall in Lee and Hendry counties provided much needed fresh water to our prized Caloosahatchee Estuary. During the driest months, salinities reached 17 to 21 parts per thousand (ppt) on the downstream side of the W.P. Franklin Lock and Dam, where salinities are normally 0 to 4 ppt that time of year. High salinities at the lock brought a few rare visitors to the area including cobia, redfish, and sharks, and the fishing pier at the structure turned into a hot spot for months. Once the rains arrived, discharges from the Franklin Lock and runoff from areas around the estuary pushed back the saline waters from San Carlos Bay fairly quickly and returned the upper estuary to oligohaline (0.5 to 5 ppt) conditions.

The estuary had a challenging year. Recent fluctuations in water quality and quantity entering the estuary were abrupt and frequent. Irregular, high discharges and drought conditions produced highly variable salinity plots. Nutrients made their presence known as well, with sporadic cyanobacterial blooms adding a touch of green to the river and the estuary's dark waters. In-place monitoring projects recorded the impacts of these events on key components of the ecosystem.

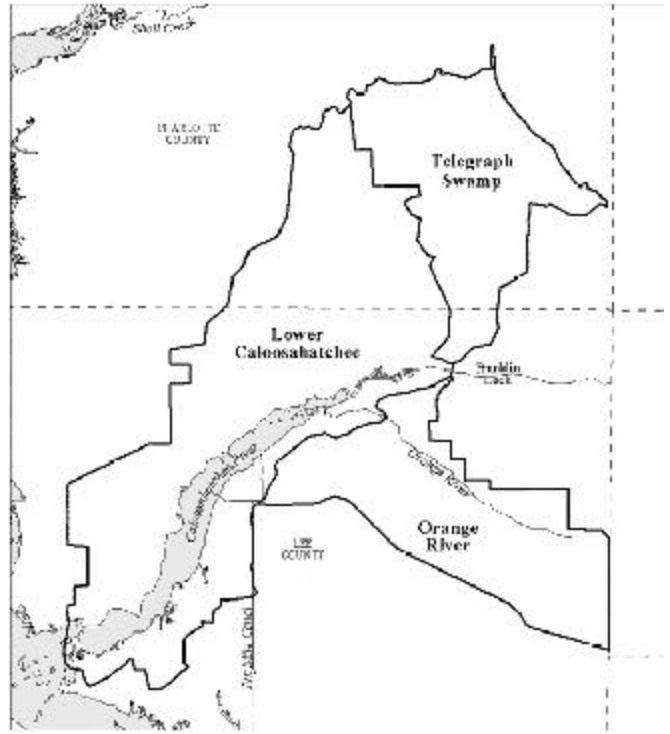
The South Florida Water Management District (SFWMD) monitors several components of the ecosystem that are considered key indicators of the estuary's overall health. One component that is being monitored by SFWMD is the freshwater angiosperm *Valisneria americana* (tape grass). Numbers of plants dropped considerably soon after salinities remained above 13 to 15 ppt around Beautiful Island this year. Salinities favorable to *V. americana* growth (less than 6 ppt) returned to this area in July following almost record-setting rainfall. Monthly grass samples supported by a huge base of salinity data will help determine the inflow limits of *V. americana* in this system. This ecosystem component provides a reference point by which overall estuarine condition can be inferred.

In addition to tape grass abundance and morphometrics, SFWMD monitors water quality in the Caloosahatchee River and

Estuary and San Carlos Bay. Water quality data are used to produce annual technical reports on the current status and trends of several nutrients and physical attributes of the system, provide supporting data for water supply modeling, and contribute to a growing body of regional data made available to all interested parties.

Another component of the ecosystem that provides a reference point to assess the health of the estuary is the American oyster (*Crassostrea virginica*). Florida Gulf Coast University is conducting research that provides SFWMD with information on the current recruitment and survival rates of oysters in the estuary and bay. (Editor's note: This project is also supported by Charlotte Harbor NEP.) Combined with distribution and inflow data, this information helps to determine the inflow limits that promote healthy oysters in this system. Hydroacoustic (sonar) mapping of submerged aquatic vegetation (SAV) continues in the estuary, San Carlos Bay and Pine Island Sound. System-wide SAV maps and continuous salinity data provide a means of assessing the performance of scheduled inflows to the estuary.

With mandated minimum flows and levels (MFLs) for the Caloosahatchee Estuary being implemented by SFWMD, monitoring selected components of the ecosystem is as critical as ever. Water managers will be able to adjust MFLs based on how the ecosystem responds. This adaptive management is an important part of the MFL schedule's success. At this time of ever-increasing water supply demand (with increasing water runoff), it is critical that we determine the estuary's inflow limits to successfully balance water supply, flood protection and environmental enhancement. SFWMD is committed to the preservation and enhancement of this dynamic and vital system.



The South Florida Water Management District is a regional agency covering 16 counties in central and south Florida. The mission of SFWMD is to manage and protect water resources by balancing and improving water quality, flood control, natural systems, and water supply. Visit www.sfwmd.gov or call 561/686-8800 for more information. Matt Giles (mgiles@sfwmd.gov) works in the Coastal Ecosystems Division.

Water Flows

Water flows
Along the streams
All the while carrying
Carrying the waste we feed it.

Water flows
Along the brooks
All the while taking
Taking what is poison.

Water flows
Along the canals
All the while dying
Dying out because of us,
Feeding it this filth.

by Theresa Julien, Sixth Grade Student
L. A. Ainger Middle School
Second Prize Winner of the Charlotte County Arts & Humanities Council's 2000-2001 River of Words Contest (See page 10 for more details.)

Natural Resources Conservation Service (NRCS) Plays Role in Protecting Water Quality of Charlotte Harbor

by Kendal Hicks, Natural Resources Conservation Service

In partnership with other federal, state, county and local entities, from October 1999 to September 2000 the NRCS has provided the following services to protect water quality of the Charlotte Harbor.

- NRCS technical assistance to private landowners in the Charlotte Harbor Watershed has resulted in more than 7,525 acres in Resource Management Systems that include rotational grazing to improve vegetative cover, control brush and reduce the accumulation of animal wastes in piles.
- NRCS technical assistance for the delineation of wetlands has ensured over 100 acres of protective buffers to surround healthy, properly functioning wetlands, which in turn enhance water quality.
- NRCS provides technical assistance in developing and implementing nutrient management plans that prevent

over-fertilization or improper fertilization on over 5,813 Charlotte County acres. Nutrient management decreases the nutrient load into Charlotte Harbor.

- With NRCS technical assistance, irrigation water management plans have been implemented on 551 acres in 2000 to conserve water, enhance water quality and protect the aquifers.
- With NRCS technical assistance, pesticide management was planned and applied on more than 5,813 acres during 2000.
- The NRCS in partnership with Charlotte and Lee Soil and Water Conservation District's offered educational assistance and technology transfer through the Environment and the Land Judging Contest.
- Through funding from the Wildlife Habitat Incentives Program (WHIP) and Environmental Quality Incentives Program

(EQIP) and technical assistance from NRCS staff, more than 512 acres of wetlands and 300 acres of uplands have been enhanced or protected from development. The permanent cover of the wildlife habitat lands provides a source of high quality runoff and recharge waters for the Charlotte Harbor estuary.

The Natural Resources Conservation Service (NRCS), formerly the Soil Conservation Service, provides leadership in a partnership effort to help people conserve, improve, and sustain our natural resources and environment. In Florida the NRCS is organized to help land users solve natural resource problems by providing them with accurate resource data that will help them make wise land use decisions. The foundation of NRCS is field office staff, located in most counties in Florida. Kendal Hicks (941/995-5678 ext. 3) is a soil conservationist in the Lee County NRCS Office.

Americans' "River IQ" is Shallow

A new national poll shows the public is overwhelmingly supportive of protecting and conserving rivers, but most people lack basic knowledge about America's waterways and are unaware that many of their daily actions may have negative effects on rivers and watersheds.

Although Americans' concerns for rivers runs deep, the study, conducted by the polling firm Penn, Schoen and Berland Associates Inc. for the National Geographic Society, found the public's "River IQ" to be rather shallow and respondents largely unaware of the extent to which our rivers are in peril.

National Geographic commissioned the study as part of "Geography Action! Rivers 2001," a six-month nationwide program aimed at preserving rivers and watersheds and conserving water. The program was developed in partnership with The Coca-Cola Company, The Conservation Fund and the River Council, a consortium of five river conservation groups: American Rivers, Izaak Walton League of America, River Network, Trout Unlimited and Waterkeeper Alliance.

"The River IQ study showed that 98 percent of respondents feel that conserving and protecting rivers is an important environmental priority," said John Fahey, president of the National Geographic Society.

A key finding of the study was the respondents' lack of awareness that we are all part of a larger system, interconnected to rivers through watersheds, and that individual and collective actions have a profound effect on the health of rivers.

Only one in seven (15 percent) polled knew that the greatest source of river pollution is people's actions in the watershed. Nearly three times as many (44 percent) incorrectly identified industrial sources as the biggest culprit in polluting waterways. Only one-third (35 percent) correctly identified land use and urban sprawl as the most serious threat to watersheds.

Other findings include:

Although all Americans live in a watershed – an area through which all surface and underground water flows to a river or other body of water – only slightly more than half

Unlike other estuaries in western Florida that are mostly influenced by the Gulf of Mexico, Charlotte Harbor is mostly influenced by its large rivers, the Peace, Myakka and Caloosahatchee.

the respondents (56 percent) could correctly define the term and nearly two-thirds (65 percent) believed that a watershed and a wetland are the same thing.

When asked how large an oil slick is created by dumping a quart of oil down a storm drain, three-quarters severely underestimated the extent of the spill, with almost half saying 100 feet or less when the actual figure is two acres (87,120 square feet).

Two-thirds were unaware that water is a nonrenewable resource, and most underestimated the amount of water it takes to perform simple household tasks. For instance, it takes 15 gallons to run a dishwasher (average estimate was 9) and 30 gallons to use a washing machine (average estimate was 15).

Wonderful Places in the Greater Charlotte Harbor Watershed

Barrier Islands GEOpark: Gasparilla Island and Cayo Costa State Parks

by Marilyn Hoeckel, Barrier Island GEOpark

The barrier islands lying to the west of Lemon Bay and Charlotte Harbor are not only home to people who have chosen the allure of island life over the more prosaic mainland life, they are home to four gems of the Florida State Park system. Known collectively as the Barrier Island GEOpark (GEO: Geographical Efficiency Operation), the four parks, from north to south, are Stump Pass Beach State Park, Don Pedro Island State Park, Gasparilla Island State Park and Cayo Costa State Park.

Gasparilla Island State Park lies at the southern end of Gasparilla Island, 2 miles south of the village of Boca Grande, in Lee County. The park contains 144 acres of uplands and a mile of beach. It is accessible via the Boca Grande Causeway off CR 775, also known as Placida Road. There are four separate parking areas in the park. The northernmost and southernmost areas offer picnic pavilions, restroom facilities, picnic tables and grills. At the tip of the island, in the park, is the Boca Grande Lighthouse Museum. The headquarters of the GEOpark is in the building next door to the lighthouse, the

former "Assistant Lightkeeper's House." The Lighthouse Museum is operated by the Barrier Island Parks Society (BIPS), a volunteer Citizen Support Organization for the GEOpark.

The museum, opened to the public in 1999, features exhibits on the long and colorful history of Gasparilla Island and Charlotte Harbor's commercial and recreational fishing industries. The museum also devotes an entire room to nature and conservation exhibits, including exhibits on the barrier island parks. The museum is open Wednesday through Sunday from 10:00 A.M. to 4:00 P.M. It is closed the month of August and major holidays and extends its hours to include Tuesdays during the months of February, March and April. The museum is accessible to persons with disabilities.

Just across Boca Grande Pass from Gasparilla Island State Park is Cayo Costa State Park. With 2,360 acres, Cayo Costa, accessible by boat only, is the largest of the local state parks. It is one of the largest undeveloped barrier islands in the state. It has 12 rustic cabins available to rent and 30 campsites for tent camping. There are restrooms, fresh running water, picnic tables and grills, hiking trails and

the most pristine beaches anywhere in Southwest Florida.

Call 941/964-0371 for more information on any of the four parks of the Barrier Islands GEOpark. Call 941/964-0060 for information about BIPS or the Lighthouse Museum. (Photo courtesy of Boca Beacon.)



YOU CAN NOMINATE A LOCATION.

Send (1) the name of the natural site in the greater Charlotte Harbor watershed you deem worthy of others visiting, (2) your name and (3) an explanation of why you want to share that particular site with others 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 include:

- Paynes Creek State Historic Site
- J.N. "Ding" Darling National Wildlife Refuge
- Myakka River State Park
- IMC-Agrico Peace River Park

Charlotte Harbor NEP to Analyze Water Quality Data

"Water quality data in many areas within the Charlotte Harbor study area have not been analyzed on a consistent basis," said Catherine Corbett, Charlotte Harbor NEP environmental projects manager. "While many government agencies and citizen groups have the resources to collect water quality data on either a quarterly or monthly basis, they often do not have the resources to analyze the resulting data and/or make it accessible to others."

The Charlotte Harbor NEP Technical Advisory Committee (TAC) recognized this dilemma and initiated a call for proposals to provide water quality data analysis and a report for the Charlotte Harbor NEP. Two proposals were received and evaluated by the Management Conference. The contract will be awarded to Janicki Environmental, Inc.

The project will analyze the water quality data that has been collected through the year 2000 and compare it to previous trends in water quality for the major tributaries to Charlotte Harbor and water bodies within the Charlotte Harbor study area. It will include status and trends analysis and report of all surface and groundwater quality data within the study area collected and analyzed under institutionalized standard operating procedures. Data for CCMP-listed core parameters will be compiled from Charlotte Harbor NEP member agencies and STORET, analyzed and synthesized into a report. The final report, expected during the summer of 2002, will analyze these water quality parameters collected through 2000 for major Charlotte Harbor water bodies and compare the results to existing analyses of those water bodies to provide a long-term composite of the analyzed parameters. If additional information is needed to provide a complete analysis for a

specific water body that is not currently being collected, such as nutrient data for a specific segment in the Myakka River, *for example*, the report will describe the type of information necessary to complete the analysis in similar future endeavors. This report will provide the basis for prospective biannual water quality updates.

"This study is a wonderful example of how the NEP can help fill the gaps by bringing the collected efforts of many partners together to provide an analysis addressing one of our identified priority problems—water quality," said Robert (Rudy) Rudolph, Charlotte Harbor NEP director. "By providing this valuable information to resource managers, local governments and the public, we will be in a much better position to clearly articulate the health of our watershed and identify areas for future work."

Florida's Native Bromeliads in Grave Danger

by Barbra Larson, University of Florida

Habitat destruction in southern Florida is a continual threat to the 16 species of bromeliads, commonly known as airplants, that are native in Florida. Ten species have been listed by the state as endangered or threatened. However, for more than a decade a greater menace has been killing our airplants on both protected and private lands.

The state has recently declared two more species to be endangered because the insect pest known as the Mexican bromeliad weevil has devastated populations of *T. utriculata* (giant airplant) and *T. fasciculata* (cardinal airplant). The threatened or endangered species are either now under attack or at risk of attack once the pest reaches them.

The Mexican bromeliad weevil (*Metamasius callizona*) apparently immigrated to Florida on bromeliads imported from Mexico. Upon its discovery in Broward County in 1989, it was too late for chemical eradication since the weevil had already become established in natural areas. The weevil moved to southwest Florida, appearing in North Fort Myers in 1990, probably as a result of movement of infested bromeliads from the east coast. It is now attacking native bromeliads in 16 counties. The weevil is now found in five state parks, including Myakka River State Park, and numerous local parks. It has become established in bromeliads along the Caloosahatchee, Peace, Myakka and Manatee rivers, among others.

The weevil's preference for large, mature bromeliads and the lack of natural enemies in Florida mean that few, if any, breeding plants are left behind. Entire populations of *T. utriculata* have been wiped out from some parks in Broward County, one of the areas hardest hit so far.

The Florida Council of Bromeliad Societies (<http://fcbs.org>) developed the *Save Florida's Native Bromeliads* project, whose goals are to foster a greater appreciation of native bromeliads and contribute to their conservation through weevil management and seed collection.

FCBS has been working with the University of Florida to manage the weevil by biological control. A parasitic fly (*Admontia* sp.)



ABOVE: Adult *Metamasius callizona*, the Mexican bromeliad weevil.

LEFT: The giant airplant, *Tillandsia utriculata*, is the species most devastated by the Mexican bromeliad weevil.

from Honduras has been identified as a potential biological control agent. Further testing is needed before a release permit may be issued. Myakka River State Park is one of the proposed target sites for eventual fly releases because of the heavy weevil damage the bromeliads are suffering.

A second component of the project involves collection of seeds of the bromeliads at risk. Once the weevil is no longer a threat these seeds will be grown out and reintroduced. FCBS maintains a database with information on each plant from which seed is collected to ensure that all seedlings are returned to their respective places of origin.

There are several ways land managers and the public can become involved in helping to protect Florida's native bromeliads. They can collect bromeliad seed (or arrange to have the project volunteers collect seed on their property), report presence of bromeliad weevils to help in monitoring its spread, educate others about the valuable roles of our native bromeliads, and avoid unnecessary spread of the weevil by minimizing movement of untreated bromeliads. More information on biological control progress, seed collection procedures, and ways to get involved are available at <http://savebromeliads.ifas.ufl.edu>.

Barbra Larson is a Postdoctoral Associate in the laboratory of Dr. Howard Frank, Entomology and Nematology Department at the University of Florida. Dr. Frank, whose research programs focus on biological control of insect pests, has been collaborating with the Florida Council of Bromeliad Societies since the Mexican bromeliad weevil was first discovered in Florida.

The River

The hazy water churns before me,
I feel it lapping against my soul,
Beckoning me in seductive tones,
Tannic acid from the leaves of a million
trees,

Have left their mark on you, the river,
So dark and rich your heart, your soul,
Plentiful are the secrets,
Intertwined throughout you,
You enthrall me,

I am overwhelmed with awe,
You whisper to me,
beg me to come to you,
I come,

possessed by your beauty,
Unable to stop the sensation of you,
With your secrets and love,
So full you are!

Deep and teeming with life,
I cannot begin to comprehend you,
Your water, life, love, soul, and heart,
I am your servant,
Serving your every wish,
For I am obsessed with you,
The River.

by Rachel Renne, Ninth Grade Student
Charlotte High School

Lyle Danielson Land and Sea Connection
Prize Winner of Charlotte County's Arts &
Humanities Council's 2000-2001 River of
Words Contest

The Charlotte Harbor National Estuary Program is proud to be one of the many local sponsors of the River of Words Poetry and Art Contest. For more information, contact the Charlotte County Arts and Humanities Council at 941/613-0053.

Boundaries being Established for Area's Five National Wildlife Refuges

by Susan Trokey, "Ding" Darling National Wildlife Refuge

The U.S. Fish and Wildlife Service has begun a planning effort to protect additional fish and wildlife habitats in Lee and Charlotte counties on lands and waters near or adjacent to five existing national wildlife refuges — the J.N. "Ding" Darling, Pine Island, Matlacha Pass, Island Bay (Cape Haze area) and Caloosahatchee National Wildlife Refuges. These refuges are administered collectively as the J.N. "Ding" Darling National Wildlife Refuge Complex.

A series of public informational meetings were held in May in order to solicit ideas, suggestions and recommendations into an environmental assessment and land protection plan. The purpose of the plan is threefold: establish clearly delineated refuge boundaries to enable Fish & Wildlife to protect fish, wildlife and their habitats, protect the environmental and aesthetic quality of these habitats for the continuous enjoyment of present and future generations of Americans, and provide greater opportunities for compatible outdoor recreational and environmental educational activities.

On August 7 the Refuge Complex hosted a workshop where representatives of state agencies, boating organizations, and private citizens shared their ideas and concerns. To everyone's delight the group unanimously agreed to a scenario that should work to benefit both the people and wildlife of the area. Some adjustments were made to the land portion of the maps distributed in May, but more importantly, it was decided that the vast majority of water areas would be excluded from the proposal.

Once established, all lands and waters within the boundaries will not be acquired. The Service will enter into cooperative management agreements with those who already own conservation land within the boundaries, including state, county and local agencies and nonprofit organizations, and will purchase private lands only from those willing to sell their property.

A great deal of controversy surrounded the proposal mainly because many thousands of acres of water were included within the Service's original study area. Much of the concern was due to the fact that the expansion

Public workshops will be held again in November to review the protection scenarios that were developed as a result of the first round of public workshops. For meeting information, call 800/419-9582.

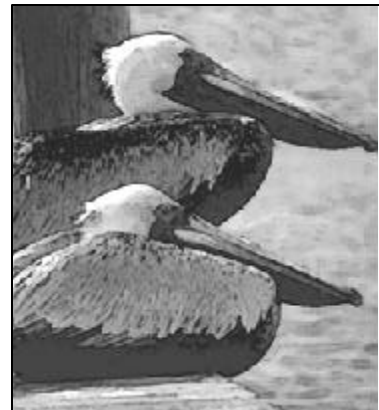
meetings closely followed other public meetings dealing with numerous efforts to create manatee refuges, sanctuaries and speed ones. The expansion of the refuges was seen by many as another way of preventing boaters from enjoying the local waterways.

Originally the Service included waters within the study area but the purpose was never to prevent the use of the waters but to avoid a mapping nightmare and to gain the ability to protect certain buffer zones surrounding known nesting sites of colonial nesting birds such as long-legged wading birds and pelicans. Refuge wildlife surveys have documented a greater than 50 percent decline in nesting efforts during the past 10 years.

Maps have been redrawn and forwarded to the Regional Realty staff for input. The draft environmental assessment is currently being written, and the Service anticipates releasing the document to the public in late Octo-

ber. A second round of public meetings is planned for November and an additional comment period of 60 days will be granted. The plan will include three or four protection scenarios, including the "Preferred Alternative" which will reflect the decisions agreed upon at the workshop. To receive notices of future meetings, call 800/419-9582.

Staff members of the J. N. "Ding" Darling National Wildlife Refuge wish to publicly thank the following members of the workshop committee for their hard work, encouragement and dedication to this effort: Robert Repenning, DEP; Nancy Douglas, FFWCC; Phil Buchanan, Calusa Land Trust; Ken Stead and Pat Riley, South Florida Marine Industries, Vance Hurd, Standing Watch, as well as John Cassani and Ellen Garten.



Estuaries

by Marilyn L. Thompson

Estuaries are places of remarkable beauty. They are born when the fresh water from the river, discovering their route and creating their wonders flowing back toward the sea, meets and mixes with the tides of briny seawater. Together with the lands that surround them they create an original ecosystem that bears the modest name of estuary. A very simple definition of an estuary is where the fresh water of rivers meets the salt water of the sea forming brackish waters. Estuaries are much more complex and fragile than this simple definition. They are of utmost importance as transitional areas that provide our crucial coastal ecosystems.

Estuaries provide habitat for and support a wonderful abundance and diversity of wild

life and plants, they are nurseries and protection for many species which makes them an important supplier to our seas and oceans, they produce an abundance of organic matter, their wetlands act as a water filtration system, they are a natural buffer between the land and the sea, they provide a natural environment for research in biology, geology and chemistry and they provide aesthetic, recreational and economic value.

This article is excerpted from a term paper Ms. Thompson prepared for an oceanography class held at Florida Southern College that was taught by Dr. Jay Leverone from Mote Marine Laboratory. Copies of the paper are available from the Program Office (941/995-1777).

Mark your calendars now!

29-30 September 2001: National Estuaries Day

Celebrate the importance of estuaries! Thanks to our host organizations, this year 14 events will be held in the Charlotte Harbor watershed – so many the events will be offered over the weekend. *See brochure included with this issue for details.*

20 October 2001: “Ding” Darling Day

October 20 is “Ding” Darling Day, the official dedication of the new exhibits in the Center for Education. The three Hautman brothers — Jim, Joe and Bob — all of whom have won the Federal Duck Stamp competition more than once will be signing, exhibiting and selling their work. Bob, the 2001-2002 Duck Stamp artist, will also give a short presentation and be available to sign Duck Stamps. David Allen Sibley, author of the National Audubon Society’s *The Sibley Guide to Birds* will be on hand to autograph his book. In addition, the Peabody Ducks from Orlando will be gracing the boardwalk and assorted VIPs will be on hand for this landmark achievement of the recent federal Volunteer Community & Partnership Enhancement Act. Call 941/472-1100 for details. For more on the J.N. “Ding” Darling National Wildlife Refuge see last winter’s issue of *Harbor Happenings* on the program web site.

7-9 February 2002: Charlotte Harbor Watershed Summit

It is time to review the progress made under the guidance of the CCMP and to discuss the current and emerging issues affecting our watershed and Charlotte Harbor. The three-day summit (rescheduled from October 18-20, 2001) will be held at the Best Western in Punta Gorda.

Presentations during the [technical symposium](#) on Thursday and Friday will be grouped into four areas: hydrology, fish and wildlife, restoration, and water quality.

The [public conference](#) presentations on Saturday will cover land use, fish and wildlife, and water quality. Other activities include native plant/gardening demonstrations, water conservation, boat rides, poster signings and much more.

Abstracts will be accepted until October 5. Sponsors are being sought. Please visit the program web site for more information.

2 March 2002: Charlotte Harbor Nature Festival

A wonderful time was had by all at the first festival on March 29. Planning is underway for next year. If you’d like to volunteer or to provide an exhibit, call 941/255-3318.

Harbor Happenings

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



—Calendar of NEP Meetings—

For a more complete list of events, call 941/995-1777 or visit the Charlotte Harbor NEP web site at www.charlotteharbornep.com.

September 2001

- 1 *Request for Mini-Grant Applications and Research & Restoration Partners Proposals Released – see page 3*
- 18 Charlotte Harbor NEP Citizens Advisory Committee, 10:00 to noon, Fort Myers
- 26 Charlotte Harbor NEP Technical Advisory Committee, phosphate tour
- 29 National Estuaries Day, see brochure for details

October 2001

- 5 *Deadline to submit abstracts to be considered for presentation at the Charlotte Harbor Watershed Summit to be held February 7-9, 2002*
- 16 Charlotte Harbor NEP Citizens Advisory Committee, 10:00 to noon, Wauchula
- 26 *Deadline to submit Mini-Grant Applications and Research & Restoration Partners Proposals*

November 2001

- 9 Charlotte Harbor NEP Management Committee, 9:30, Port Charlotte
- 12 Veterans Day: The office will be closed.
- 15 *Deadline for Harbor Happenings newsletter Winter 2001-2002 issue.*
- 20 Charlotte Harbor NEP Citizens Advisory Committee, 10:00 to noon, Port Charlotte
- 22-23 Thanksgiving. The office will be closed.
- 30 Charlotte Harbor NEP Policy Committee, 9:30, Port Charlotte

December 2001

- 18 Charlotte Harbor NEP Citizens Advisory Committee, 10:00 to noon, Arcadia
- 24-25 Christmas. The office will be closed.

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