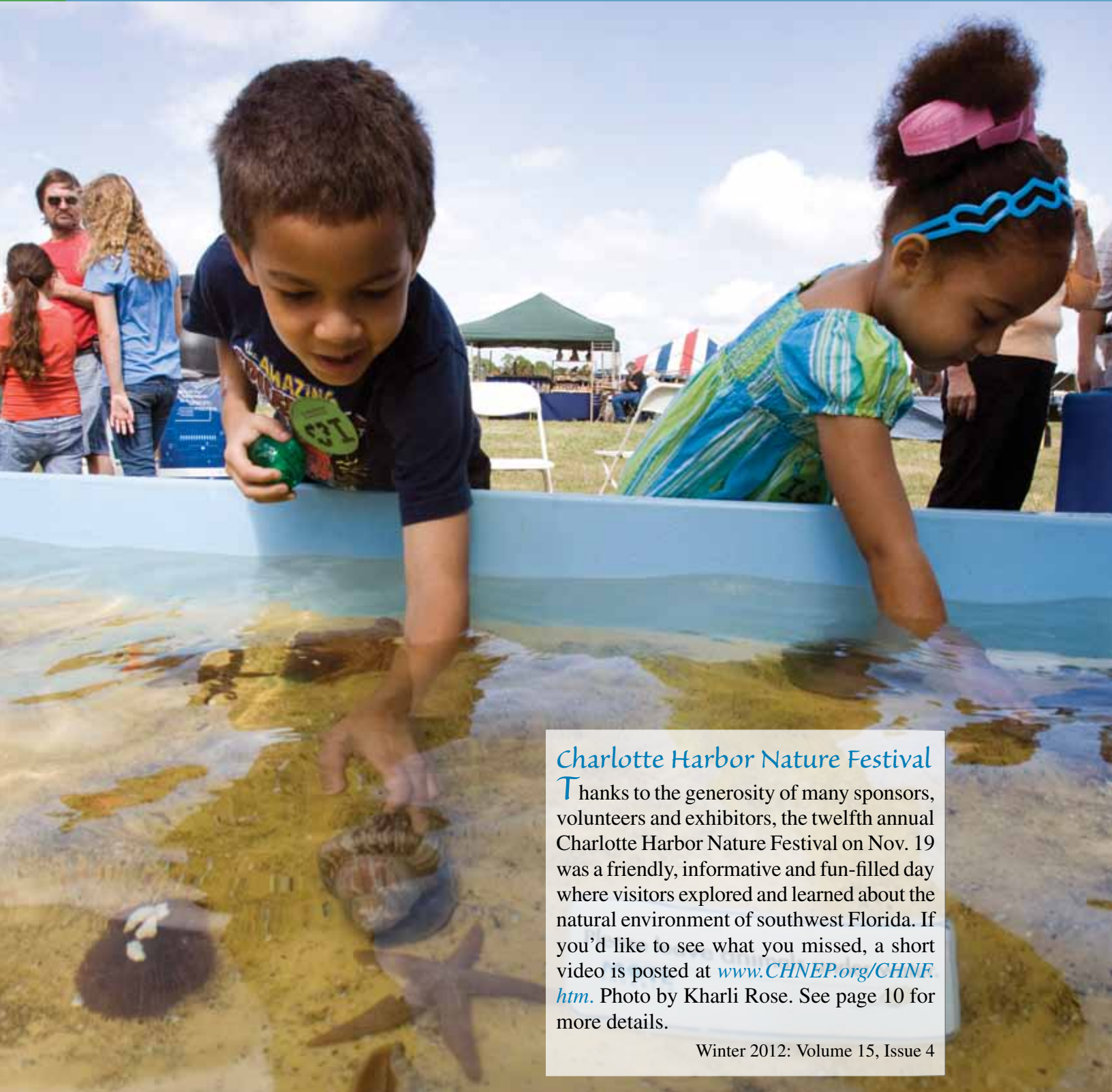




HARBOR HAPPENINGS

Working together to protect the natural environment from Venice to Bonita Springs to Winter Haven



Charlotte Harbor Nature Festival

Thanks to the generosity of many sponsors, volunteers and exhibitors, the twelfth annual Charlotte Harbor Nature Festival on Nov. 19 was a friendly, informative and fun-filled day where visitors explored and learned about the natural environment of southwest Florida. If you'd like to see what you missed, a short video is posted at www.CHNEP.org/CHNF.htm. Photo by Kharli Rose. See page 10 for more details.

Program update

by Dr. Lisa B. Beever, CHNEP Director

Our economic health is dependent on our environmental health.

Economists, environmentalists, business people, elected officials and other citizens have been echoing this sentiment throughout the Charlotte Harbor area and Florida. I had the opportunity to participate in the new Department of Economic Opportunity (DEO) strategic planning effort on Nov. 29. Conserving clean water for people and the environment emerged as an important strategy at the planning meeting. Tourism, real estate development and agriculture (Florida's traditional three legs of our economy) all require a healthy environment to prosper. Emerging economies such as technology, creative arts and manufacturing all require a healthy environment to attract and grow such businesses.

Earlier in November, the Estero Bay Agency on Bay Management hosted its third Cela Tega (overview workshop) to present the Economic Value of Conservation Lands. This Cela Tega was inspired by our *Comprehensive Conservation and Management Plan* priority action FW-J: Provide information on the economic, social and environmental benefits of protected land. There were many outstanding presentations (<http://itech.fgcu.edu/faculty/ndemers/CelaTega%202011/index.htm>). Here is just a taste of some of the fabulous and interesting information:

- Dennis Gilkey presented the economic benefits of conservation lands to real estate values. Based on several studies, proximity

Conservation lands provide wealth beyond measure. We are absolutely dependent on healthy ecosystems. This is the world we cherish and the world that gives us so much.

to parks and open space increases real estate values. I have also identified increased real estate values adjacent to wetland preserves compared with nearby real estate values. Conserved wetlands and uplands are the new waterfront property!

- I unearthed a study that I conducted as director of the Charlotte County-Punta Gorda Metropolitan (Transportation) Planning Organization. My findings were published in the CHNEP's 1997 *Proceedings of the Charlotte Harbor Public Conference and Technical Symposium*. (Without the CHNEP, this work may have been lost.) For every \$1 spent on acquiring the Florida Forever proposals of the time, \$50 was probably saved on needed road improvements, mostly in right-of-way costs. By purchasing and preserving conservation lands, the expense and human consequences of eminent domain purchases of homes and businesses was avoided.
- Tamara Pigott, Lee County Visitor & Convention Bureau (VCB), presented the role that the environment plays in tourism. This is so evident that the VCB mission includes "Preserve and protect the area's unique attributes for the continual benefit of its residents and the travel and tourism industry." In 2010, visitors spent \$2.5 billion, and 73 percent said a clean, unspoiled environment influenced their selection of Lee County as their destination, up from 71 percent in 2009.
- Betty Staugler and Chuck Adams, Florida Sea Grant, discussed the economic activity associated with fishing. In 2007 in southwest Florida, recreational saltwater fishing accounted for more than 14,530 jobs and more than \$2 billion in economic activity.
- Tatiana Borisova, Laila Racevskis and Ed Hanlon, University of Florida Institute of Food and Agricultural Sciences Extension, presented results from their 2008–2009 public survey of Floridians. Eighty-six percent believed that preserving agricultural lands and open spaces were important to protecting our water resources.
- Jim Beever, Southwest Florida Regional Planning Council, estimated the total economic value of mangroves in the CHNEP study area at more than \$45 billion, seagrass beds at more than \$5 billion and salt marsh at \$74 million.
- Jennifer Hecker, Conservancy of Southwest Florida, and Karen Bickford, Lee County, both presented the water quality benefits provided by conservation lands. These benefits will reduce the need for constructed water quality treatment systems.

Both the DEO Strategic Plan meeting and the Cela Tega highlighted the importance of a healthy environment to our economy. Conservation lands provide wealth beyond measure. We are absolutely dependent on healthy ecosystems. This is the world we cherish and the world that gives us so much.



CHNEP Friends

PO Box 2245 • Fort Myers FL 33902-2245

www.CHNEPfriends.org

The CHNEP enjoys the assistance of the 501(c)3 not-for-profit known as the Friends of Charlotte Harbor Estuary (aka CHNEP Friends).



Charlotte Harbor National Estuary Program

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The CHNEP is a partnership that protects the natural environment from Venice to Bonita Springs to Winter Haven.

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Harbor Happenings Winter 2012: Volume 15, Issue 4

The CHNEP Friends publishes this free quarterly newsletter on behalf of the CHNEP to provide information about the environmental "happenings" in the CHNEP study area. News items, photographs and letters are welcome and may be submitted to the editor by mail or email. Deadlines are February 1, May 1, August 1 and November 1. The newsletter is typically distributed in January, April, July and September.

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

Request a free subscription by contacting the editor.

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CHNEP 2012 calendar

Another gorgeous display of nature's beauty and your generosity

Thanks to the generosity of the 180 people who submitted images, the CHNEP's 2012 calendar once again displays spectacular images showcasing the beauty of the natural environment of southwest Florida. The calendar also provides the curious reader with information about the Program's committees, partnerships, management plan, grants, events, conservation landscaping initiatives, videos and printed materials.

Mailed in November to those who receive the free *Harbor Happenings* newsletter, supplies of the calendar are also available for pickup at locations throughout the seven counties that participate in the program.

Support the CHNEP by donating

The CHNEP would like to thank those who already responded to the request for financial support. If you would like to make a donation, please do so through The Friends of Charlotte Harbor Estuary, Inc., also known as CHNEP Friends, a 501(c)3 not-for-profit organization. Donations can be made by visiting www.CHNEPfriends.org to use PayPal or a credit card, or you can mail a check (made payable to The Friends of Charlotte Harbor Estuary, Inc.) to CHNEP Friends, P.O. Box 2245, Fort Myers, FL 33902-2245. *Thank you for considering this request.*

Support the CHNEP as a sponsor

Over the years it has been suggested that we accept sponsorships to offset costs. We offered this opportunity for the first time with the 2012 calendar. For \$2,500, a sponsor could place a 27" ad in the calendar. Both Mosaic and CF Industries generously sponsored the 2012 calendar. Given budget

concerns, this additional \$5,000 was very much appreciated.

For the 2013 calendar, the sponsorship opportunities will again be available — and the possibilities are greater with placement sizes in 1" increments (\$100/inch), ranging from 1"x1" for \$100 up to 12" wide x 9" high for \$10,800. If you are interested in sponsoring the CHNEP 2013 calendar, please contact Maran Hilgendorf (866/835-5785, ext. 240; mhilgendorf@swfrpc.org).

Send us your opinions

If you haven't already, please take a few minutes to send us your thoughts on the calendar by completing the online survey. (So that more images could be included, we did not include a survey in the calendar itself.)

CHNEP 2013 calendar

By July 14, 2012, you are invited to submit images for the 2013 calendar. Have you captured an image of the beauty of the natural environment? The image could have been captured today or 50 years ago in any medium within the CHNEP study area from Venice to Bonita Springs to Winter Haven. Whether you are young or old, professional or amateur, you may submit up to three digitized images either on a CD or by email.

In August 2012, all entries that comply with the requirements will be posted online for public viewing and voting. Images with the highest votes are recognized in the calendar as "people choices."

By November 2012, the 2013 calendar will be distributed to everyone who subscribed to *Harbor Happenings* prior to Sept. 14.

Visit www.CHNEP.org to complete the calendar survey, obtain submittal guidance, learn how to donate or become a sponsor, subscribe to the newsletter and view PDF files of the first seven calendars and featured images (suitable for framing).

130 reminders of beauty, wonder and significance

Two of many reasons the CHNEP began creating calendars depicting the beauty of the natural environment was to showcase your talents and because many people asked for more posters from the CHNEP. Each featured 12" x 9" image in the calendar is suitable for framing.

An 11"x17" poster has been included in each *Harbor Happenings* issue since the winter 2007 issue.

From the very beginning of the CHNEP, art has played an important role in the CHNEP's efforts to protect the natural environment of Florida from Venice to Bonita Springs to Winter Haven. In 1998, the CHNEP commissioned Diane Pierce and Shelly Castle for two pieces of art that became two of its very popular posters. In 2001 and 2002, Clyde Butcher donated two of his black-and-white photographs.

With the first eight calendars and newsletter posters, our collection of art expanded from 4 to 130! The posters created from the calendars and the newsletters are now only available as PDF files and can be accessed at www.CHNEP.org. The larger posters are available for a donation to The Friends of Charlotte Harbor Estuary, Inc.

CHNEP supports nine new projects with public outreach grants

Since 2000, the CHNEP has supported 147 projects with public outreach grants.

The CHNEP offers grants to help its partners protect the environment and solve issues of concern as identified in the Program's *Comprehensive Conservation and Management Plan* (CCMP). These grants are offered to further partnerships to protect and restore the greater Charlotte Harbor estuarine system and watershed from Venice to Bonita Springs to Winter Haven. Citizens, organizations, businesses, government agencies, schools, colleges and universities may apply for grants to support projects that occur within the CHNEP study area.

The CHNEP is pleased to award nine additional projects with public outreach grants. Brief descriptions are provided below. Since 2000, the CHNEP has supported 147 projects with public outreach grants. These grants are available once a year, with applications due in September. Information about the grant-making process for public outreach grants and micro-grants and project descriptions are available at www.CHNEP.org.

Estuary Interdependence

Port Charlotte Middle School

The 270 seventh-grade students at this school will participate in one of four educational field trips to Ponce de Leon Park to facilitate a deeper understanding of the Charlotte Harbor region. Each student seines in the water and examines organisms, tests water, observes the water environment, takes a guided tour through the Peace River Wildlife Center, responds to a scavenger hunt of questions about the mangrove boardwalk and creates a sand art painting of wildlife of the area. To ensure the success of this effort, students complete supplemental bookwork focusing on conservation issues, local flora and the importance of wetlands. This is an interdisciplinary project that involves math, language arts, geography and science classes.

DeSoto County Fourth-Grade Classes Meet Charlotte Harbor: School District of DeSoto County

The 120 fourth-grade students travel to Charlotte Harbor to learn about watersheds

and the biological importance of Charlotte Harbor as an estuary. While on a boat trip, they will identify habitats, wildlife and test the water quality. Participants will write essays about their experiences.

Cooperative for Conservation

Kay Thorpe Bannon

Venice High School Zoology Club students will teach students in fourth-grade classrooms at Garden Elementary about gopher tortoises and habitat loss. Dr. Bannon will read from her book, *How Gimble Gopher Tortoise Found a New Home*. Under the guidance of Master Gardner Lu-Ann Rhoten and with the assistance of the South Venice Garden Club and local church and parent volunteers, students will construct a picture dictionary of Florida native plants and create a native plant garden. The students will create a flier for adults on the values of replacing lawns and exotic invasive plants with native plants. Their work will be chronicled in school newspapers and featured in local papers.

Display Signs at Fort Meade Outdoor Recreation Area: Lakes Education/Action Drive

The Peace River, a major tributary to Charlotte Harbor, has its headwaters in Polk County. While the people are enjoying the recreational and aesthetic opportunities of the river, they can become more aware of how the Peace River watershed connects with the entire Charlotte Harbor watershed.

Wildflower Preserve Interpretive Trail Network: Lemon Bay Conservancy

An 80-acre overgrown and abandoned golf course on the Cape Haze peninsula in Charlotte County is being transformed into a nature preserve. This project will further develop trails to accommodate people with a range of fitness levels and interests, create a small wildflower meadow, place interpretive signs, create brochures and evaluate effectiveness of the new materials.

Strolling Science Seminars CREW Land & Water Trust

Six half-day strolling science seminars for adults will be developed. Subject experts will lead each walk that will also provide hands-on activities. These programs will provide citizens with information about wildlife and watersheds and give them skills that will enable them to conduct citizen science projects. (See separate article on page 5 for details.)

Sea Turtle Overnight Adventures 2012

Workshops for Teachers Coastal Wildlife Club

Since 2005, the Coastal Wildlife Club has provided workshops for teachers to learn more about sea turtles and the importance of healthy habitats. In 2006, the program was expanded to a two-day workshop, which provided opportunities to cover additional species and provide more outdoor activities and time for networking. The programs are held in mid-July in Englewood.

Student Stewards

School District of Lee County

Because of this project, twice as many fourth-grade students will have authentic field experiences in Lee County's estuarine grass flats. Students will investigate the food webs of an estuarine environment. A total of 120 classrooms of 2,600 students, approximately 40 percent of the fourth-grade student population, will be able to have this field experience.

Vermicomposting for the Classroom

Pine Forest Fruit & Flower Farm

Seventeen Lee County elementary schools will learn about vermicomposting and how kitchen and paper scraps can be composted. Worm farming gives the students, teachers and parents an alternative fertilizer that reduces ground pollution and saves water.



The CHNEP is pleased to support Port Charlotte Middle School's efforts to teach their students about the environment.

CREW Strolling Science Seminars



The first strolling seminar was held Dec. 2, 2011. Kathleen Smith, FFWCC biologist, spoke on Florida black bear ecology. Photo by Deb Dorsett Hanson.

The CREW Land & Water Trust is excited to offer CREW Strolling Science Seminars, a new environmental education series for adults only. Thanks to a Public Outreach Grant from the Charlotte Harbor National Estuary Program, CREW (Corkscrew Regional Ecosystem Watershed) is able to bring in some fabulous experts to facilitate these strolling seminars at the CREW trails. The series includes six half-day scholarly and hands-on hikes. Each seminar engages participants on a specific topic related to the watershed and wildlife of CREW. Gain in-depth knowledge and hands-on field experiences and obtain access to online resources. Then go home and engage in a citizen science project of your choosing.

Registration is required. Each seminar will begin at 23998 Corkscrew Road in Estero and will be held from 9 A.M. to noon. There is a registration fee of \$10 CREW members/\$15 non-members or \$50/\$75 for the whole series. More details are posted at <http://crewtrust.org>. Contact CREW (ecrew@earthlink.net, 239/657-2253) with questions.

- Jan. 6, 2012: Fire Ecology for Species Management with Ayouna Riddick, SFWMD, and Roger Clark, Lee County Land Stewardship
- Feb. 4, 2012: CREW through Animals' Eyes with Dr. Billy Gunnels, FGCU
- March 2, 2012: The Fascinating World of Insects with Dr. Clyde Sorenson, NC State University
- April 6, 2012: Fun with Frogs with Dr. Win Everham, FGCU
- April 28, 2012: Pollinators with Dr. Billy Gunnels, FGCU



Ernesto Lasso de la Vega participated in the scallop search. Photo provided by Brian Cotterill.

CHNEP micro-grants

Do you have an idea on how to protect the natural environment?

Since 2002, the CHNEP has supported 470 projects with micro-grants. The CHNEP offers these grants of up to \$250 to assist others in their efforts to help implement the CCMP, a plan to protect the natural environment from Venice to Bonita Springs to Winter Haven. Guidance and an online application form are at www.CHNEP.org, as well as a listing of completed projects. While all projects help implement the CCMP, they are varied in their purpose and scope. Two projects are scallop searches in Lee and Charlotte counties (see below).

Annual search for scallops

Joy Hazell and Betty Staugler, Florida Sea Grant

More than 240 volunteers donated their time, vessels and fuel to participate in scallop searches in southwest Florida. On Aug. 13, volunteers took to the waters in Pine Island Sound for their second annual search, while Lemon Bay and Gasparilla Sound held their third annual search on Aug. 27. These searches complemented events held in Sarasota Bay and Tampa Bay. Bay scallops are very sensitive to changes in water quality and salinity. Once abundant in southwest Florida, bay scallop populations essentially disappeared from the region.

The results this year were mixed. Pine Island Sound volunteers counted 1,026 scallops, up from 335 last year. Lemon Bay and Gasparilla Sound volunteers found 24 scallops, compared to 163 in 2010, although that may be due in part to difficult weather conditions. Sarasota Bay and Tampa Bay scallop searches found 10 and 5 bay scallops each. These results demonstrate the importance of conducting research, education, restoration and monitoring of bay scallop populations in southwest Florida using a uniform and coordinated approach across the entire southwest Florida region.

The scallop searches are made possible by many organizations and people. These two searches are organized by Florida Sea Grant, Florida Fish and Wildlife Conservation Commission and Sanibel-Captiva Conservation Foundation, with support from the CHNEP and others. Community members, avid snorkelers, first timers and all-around saltwater enthusiasts donate their time, boats, skills and fantastic energy to make these events a huge success. If you'd like to volunteer for the August 2012 search in Pine Island Sound, contact Joy Hazell (jhazell@ufl.edu) or in Charlotte County, contact Betty Staugler (staugler@ufl.edu). If you'd like to volunteer for projects in Sarasota County, contact René Janneman (rjannema@scgov.net).

See www.CHNEP.org for additional information.
CHNEP Harbor Happenings Winter 2012



Bay Scallops, *Argopecten irradians*. Photo provided by Florida Sea Grant.

CHNEP Offers Chance to Explore Estuaries Up Close

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. The Charlotte Harbor National Estuary Program is pleased to have sponsored wading trips through several local environmental organizations since 2003. To register, contact the organization that is offering the program of interest to you. Dates are subject to change due to weather, etc. An updated list will always be posted at www.CHNEP.org.

Ponce de Leon Park in Punta Gorda at 9:30 A.M. Call CHEC Alligator Creek Site at 941/575-5435.

- Friday, March 2, 2012
- Friday, March 9, 2012
- Friday, March 16, 2012
- Friday, March 23, 2012
- Friday, March 30, 2012
- Friday, April 6, 2012

Cedar Point Park in Englewood at 9 A.M. Call CHEC Cedar Point Environmental Park at 941/475-0769.

- Tuesday, January 3, 2012
- Wednesday, January 11, 2012
- Thursday, January 19, 2012
- Thursday, February 2, 2012
- Monday, February 20, 2012
- Wednesday, March 14, 2012
- Friday, April 13, 2012
- Thursday, May 17, 2012
- Tuesday, June 12, 2012
- Saturday, July 14, 2012
- Wednesday, August 1, 2012

Lovers Key State Park north entrance at 10 A.M. Call the ranger station at 239/463-4588.

- Thursday, January 12, 2012
- Thursday, February 9, 2012
- Tuesday, March 20, 2012
- Thursday, April 12, 2012
- Thursday, May 10, 2012
- Thursday, June 21, 2012
- Tuesday, July 24, 2012

Pine Island Sound on Pine Island at 9 A.M. Call Randell Research Center at 239/283-2157.

- Saturday, April 7, 2012
- Saturday, April 21, 2012
- Saturday, May 5, 2012
- Saturday, May 19, 2012



Joey LaMountain inspects an animal found during a wading trip.

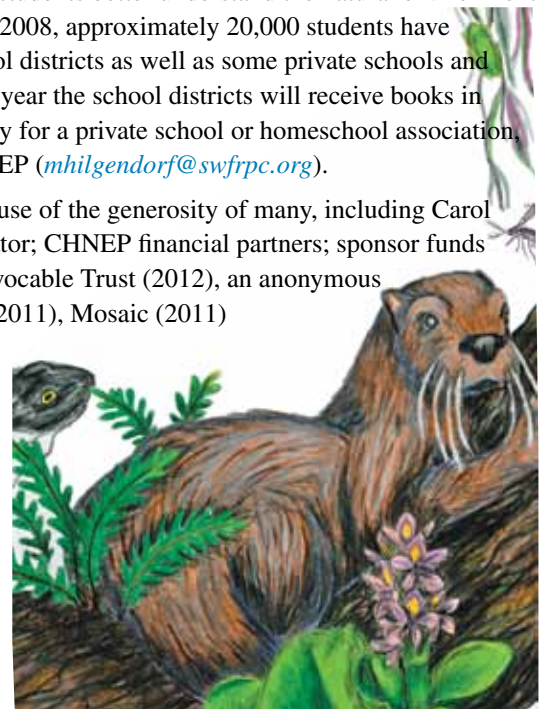
CHNEP book is now available as videos

Thanks to Lee County School District, the CHNEP's *Adventures in the Charlotte Harbor Watershed: A Story of Four Animals and Their Neighborhoods* book is now available as 16 videos!

The CHNEP created the book to help students better understand the natural environment of southwest Florida. Each year since 2008, approximately 20,000 students have received the book through seven school districts as well as some private schools and homeschool associations. This school year the school districts will receive books in late January. If you would like a supply for a private school or homeschool association, contact Maran Hilgendorf at the CHNEP (mhilgendorf@swfprc.org).

The book has only been possible because of the generosity of many, including Carol Mahler, author; Rachel Renne, illustrator; CHNEP financial partners; sponsor funds received from the Hildred Schloss Revocable Trust (2012), an anonymous donor in memory of Virgil Pitschick (2011), Mosaic (2011) and the Jelks Family Foundation (2009); many educators and others who produced videos, curriculum and other materials to make the book even more useful.

Visit www.CHNEP.org to view these videos or to request a DVD of them, find PDF files of the book in English and Spanish, resources provided by teachers and guidance on how to purchase the book.



Sea Life in Southwest Florida Estuaries

Animals in the fresh and salt water mix

The CHNEP has eight new videos of a “virtual wading trip” featuring the animals that live in the waters of our estuaries. Estuaries—where fresh and salt water mix—are important habitats for a variety of sea life. The longest video features 18 experts and nearly 50 animals. Seven other videos range from 1 to 3 minutes in length and feature megafauna, sharks eye, univalves, crabs, the importance of creeks to fish, sea hairs and invertebrates. The CHNEP contracted with WGPU Public Media to produce this set of videos.

Visit www.CHNEP.org for a link to each video posted on the CHNEP1995 Channel of YouTube and to order your DVD of videos. (CHNEP’s first DVD includes 21 other videos.) The CHNEP will be providing DVDs to the libraries within the seven counties that participate in the program. WGPU Public Media and government access channels will also broadcast each video. The CHNEP is developing a companion website to learn more about the animals that live in the waters of our estuaries.

Thanks to the following experts for participating in this project:

- Aaron Adams, Ph.D., Senior Scientist, Mote Marine Lab
- Suwana Blakey, Education Coordinator, Nature's Academy, Bradenton
- Jim Culter, M.S., Senior Scientist, Benthic Ecology Program Manager, Mote Marine Lab
- Michael Doane, Naturalist, Tarpon Bay Explorers
- Shane Dooley, Commercial Fisherman and Charter Captain, Dooley Charters
- Stephanie Erickson, Environmental Specialist, FDEP Estero Bay Aquatic Preserve
- Susie Hassett, Science Teacher, Robinson Littleton Elementary School
- Joy Hazell, Florida Sea Grant Agent, UF/IFAS Lee County Extension
- René Janneman, Environmental Specialist II, Sarasota County
- Pamela Jones-Morton, Ph.D., Florida Master Naturalist and Volunteer Naturalist, Lovers Key State Park
- Bryan Kaczmarek, Park Ranger, Lovers Key State Park
- José H. Leal, Ph.D., Director and Curator, The Bailey-Matthews Shell Museum
- Kayton Nedza, Teacher, Hardee Outdoor Classroom
- Bobbi Rodgers, Environmental Resource Manager, Charlotte Harbor Environmental Center, Inc.
- Philip Stevens, Ph.D., Fisheries Research Administrator, Florida Fish and Wildlife Conservation Commission
- Aswani Voley, Ph.D., Director, Vester Marine Field Station, Florida Gulf Coast University
- Toni Westland, Supervisory Refuge Ranger, USFWS J. N. "Ding" Darling National Wildlife Refuge

See page 6 for a list of free guided wading trips that you can join to see some of these creatures up close and personal.



FWC estimates fish abundance and population trends. Pipefish (left) and rock boring sea urchin (right). Photographs by Maran Hilgendorf.

The Wrack Community

The centerfold poster in this issue was designed by artist Dawn Witherington for Inwater Research Group (IRG). Dawn is the graphic artist who created the loggerhead and oyster posters in the last issues of *Harbor Happenings*. IRG is a non-profit devoted to marine research and conservation. Printed posters (24" x 36") are available from IRG (www.inwater.org/POST-ER-1.html or Inwater Research Group Inc., 4160 NE Hyline Dr., Jensen Beach FL 34957). Donations are appreciated.



Beach Wrack Life



The Wrack COMMUNITY

The wrack is stuff cast ashore by the sea. Much of this once grew in the sea, like seaweeds and seagrasses. These marine castaways foster protective dunes and allow assembly of a unique natural community that brings life to the beach.

Base of the Wrack Community

Most energy for the wrack community comes from a variety of marine plants. In their death, these plants form the base of a widely influential food web.



Manatee and shoal grass



Brown algae



Marsh grasses



Turtle grass



Red algae



Woody materials

What's in the Wrack?

Hidden in the wrack are many items that take part in the wrack community and that have their own interesting stories to tell. Sea beans drift from the dunes, dune plants rise to future beach

The Dunlin's Journey A Mega-marathon Fueled by Snacks from the Wrack

Dunlin sandpipers (below) often migrate over 6000 miles each year between their feeding and breeding areas. On their journey, the birds depend on pit stops where



wrack and other food sources provide refueling energy. Without these options, the birds can starve to death.



Migration route



Sea beans



Dune plant seeds



Mollusk shells



Marine invertebrates



Soft corals



Hard coral and sponge fragments



Seaglass



Plastic bits and shards



INWATER RESEARCH GROUP

A 501 c(3) not-for-profit organization

www.inwater.org

Poster Series No. 1



Threats to the Wrack Community

Some of our efforts to "clean" the beach include the mechanized removal of wrack from the beach. Unfortunately, the barren shores left by beach cleaning and grooming machines are not hospitable to beach life. Without wrack, some of the most interesting attributes of a beach are also absent.



You Can Help

Mechanized removal of beach wrack is often aimed at removing the human litter we leave behind. Most of this could be picked up by hand. Freeing beaches of plastic debris reduces threats to wildlife from mistaken ingestion and entanglement, and abates the temptation to tidy the beach by more heavy-handed means. When you visit the beach, bring a re-used shopping bag to fill with the litter you find.

Did You Know?

Picking up trash almost doubles the calories you burn walking down the beach. As you stoop, you'll discover treasures; common in wrack are more than 300 kinds of sea shells and 60 kinds of sea beans. Other gleaners of wrack include rare piping plovers, which are currently threatened with extinction.



Charlotte Harbor Nature Festival

Since 2002, the Charlotte Harbor Nature Festival has been an annual event held in Charlotte County for residents of and visitors to southwest Florida.

While the CHNEP has taken the lead in organizing the festival since 2004, it has always been a success because of the cooperation of many individuals, organizations and businesses.

Thanks to the sponsors listed below, the Charlotte Harbor Nature Festival in 2011 was again a free event for exhibitors and visitors alike.

Eagle (\$2,500+): Charlotte Harbor National Estuary Program • Charlotte Sun • Mosaic

Florida Panther (\$1,000+): Charlotte County Community Services • CF Industries • Mote Marine Laboratory • Tents & Events • WGPU Public Media

Osprey (\$500): Fish Florida • Lemon Bay Conservancy • Peace River Audubon Society • South Florida Water Management District • Waste Management

Sea Turtle (\$250): Charlotte County Utilities • Coastal Wildlife Club • Four Circles Learning • Janicki Environmental • Peace River Manasota Regional Water Supply Authority • Punta Gorda-Port Charlotte Association of Realtors

Dolphin (\$100): Aquatic Plants of Florida, Inc. • Berntsson, Ittersagen, Gunderson, Walksler & Widekis, LLP • Butwell Stone & Soil • Friends of Charlotte Harbor Aquatic Preserves • Florida Native Plant Society Mangrove Chapter • Sierra Club Charlotte Harbor Chapter • U.S. Coast Guard Auxiliary Flotilla 9-2

Saturday, Nov. 17, 2012

10 A.M. to 3 P.M.

**Charlotte Sports Park
in Port Charlotte**

Charlotte County will hold a trail run at Tippecanoe Preserve in conjunction with the 2012 festival. Guided walks and wagon rides are also held in the Preserve. Visit www.CHNEP.org/CHNF.htm for details if you'd like to help plan, promote, sponsor or exhibit at the next festival.

Photographs by Kharli Rose Photography.



**CHARLOTTE
HARBOR**
nature festival



Since 2007, visitors to the festival have received a tote bag. These bags help remind people of their great time and can be used to replace plastic bags. Doug MacGregor donated the illustration (above) that was used in promotion and printed on the bag for the 2011 festival.

Would you like to donate art for the 2012 festival?

- During annual coastal cleanups in Florida, plastic bags are often the fourth most commonly found item.
- Only 12 percent of plastics bags in Florida are reused, commonly for pet waste and trash liners. Only another 12 percent are recycled.
- Using a tote bag for groceries can replace 56 to 315 plastic bags each year.

As part of the Energy, Climate Change, and Economic Security Act of 2008, the Florida Legislature directed the Department of Environmental Protection to undertake an analysis of the need for new or different regulation of auxiliary containers, wrappings, or disposable plastic bags used by consumers to carry products from retail establishments. The report, submitted to then Governor Crist in February 2010, is posted at www.CHNEP.org. The Florida Legislature has not enacted any new legislation regarding regulation of retail bags, and Florida statutes prohibit others to do so.



Conservation Landscaping Workshop and native plant sale Saturday, February 11, 2012

Registration begins at 7:45 A.M. Program begins at 8 and ends at noon.

Turner Center, 2250 Roan St, Arcadia

Each attendee will receive a free plant.



Photos by Al Smoke.

- Add to your knowledge on how to use plants adapted to Florida.
- Transform your property into a beautiful oasis for people *and* wildlife.
- Conserve precious water resources and reduce pollution.
- Save time and money.
- Get your questions answered during an Ask-the-Experts session.

This *free* workshop for residents of Hardee, DeSoto and Highlands counties has been organized by the CHNEP, in cooperation with Southwest Florida Water Management District and many others, since 2005. Find out about these workshops and those that serve other counties at www.CHNEP.org. Did you attend a previous workshop? Let us know how you have incorporated what you learned into your yard.

www.CHNEP.org • Toll-free 866/835-5785, ext. 240

CHNEP Environmental Education Program

More than 50 people participated in the CHNEP environmental education program held in Punta Gorda on Dec. 2. It was an opportunity for those who conduct environmental educational programs to network, collaborate, brainstorm and learn. The program covered:

- CHNEP outreach efforts: Maran Hilgendorf, CHNEP
- CHNEP grant assistance: Liz Donley, CHNEP
- CHNEP water atlas: Jan Allyn, USF
- QR readers: Toni Westland, J. N. "Ding" Darling National Wildlife Refuge
- FDEP initiatives for environmental educators: Romina Sola, Florida Green School Network
- What teachers want: Melissa Nell, Manatee County Natural Resources
- Partnerships with schools: Anji McStravic, Imaginarium
- Citizen's guide to southwest Florida: brainstorming session involving all participants

Visit www.CHNEP.org/ee.asp to review the presentations and handouts and to register to receive future emailed messages. Thanks to Mosaic for sponsoring this program.

The next environmental education program will be held in **April 2012 at the Circle B Bar Reserve in Polk County.**

CHNEP public conference support is available

The CHNEP is a partnership working to protect the natural environment of Florida from Venice to Bonita Springs to Winter Haven. The *Comprehensive Conservation and Management Plan* (CCMP) is the CHNEP's 20-year plan to protect the environment.

The Charlotte Harbor Watershed Summit is an important step in the CHNEP process of bringing public and private stakeholders together to discuss current and emerging issues affecting the Charlotte Harbor watershed. It is also an opportunity to review progress. The first symposium/conference was held in 1997. Summits have been held every three years, beginning in 2002.

The CHNEP has supported public conferences on the following watersheds:

- 2003: Caloosahatchee River
- 2004: Lemon Bay
- 2005: Cape Coral Canals
- 2006: Peace River
- 2007: Estero Bay (held in 2009)
- 2008: Everglades

The CHNEP currently has up to \$2,000 available for public conferences that further the CCMP and that will be held between Feb. 15 and Aug. 31, 2012. Requests must be received by Jan. 15. Details on how to apply are available at www.CHNEP.org.

Reaching ecotour operators through e-learning

The CHNEP is again drawing on the strength of its partnership with government agencies, businesses and environmental organizations to develop an e-learning program about habitats and animals protected by federal and state laws and local ordinances. E-learning programs use technology to enable people anytime and anywhere to partake in online educational videos, instructional materials and more.

Funding for this pilot project is provided in part by National Geographic. Contact Maran Hilgendorf (mhilgendorf@swfrpc.org) if you would like to help with project development. If the pilot is successful, the topics will expand beyond the initial four and the targeted audience may also be expanded.

The Imaginarium Science Center Opens “Watershed Wonders”

Phase I of an outside exhibit — Watershed Wonders: Caloosahatchee Connections — at the Imaginarium Science Center in Fort Myers was recently unveiled. This comprehensive scale model of the southwest Florida watershed will replicate the Caloosahatchee from Lake Okeechobee to the Gulf of Mexico. Guests can open the Moore Haven lock and dam to control a freshwater release from Lake Okeechobee into the Caloosahatchee and then move down river

to navigate a boat through the Ortona lock. Phase II of the large-scale exhibit will open in Spring of 2012 and will feature aquarium displays of the animal and plant life found in Lake Okeechobee. Future phases will follow the river all the way to the Gulf of Mexico where the freshwater lagoon will be transformed into a saltwater aquarium. Along the way, exhibits will explore the engineering of bridges and filter marshes, examine the ecology of the river and edu-

cate visitors about what a watershed is and how important it is that everyone considers where every drop of water will go, all in the interest of protecting the Caloosahatchee. Phase I was supported by West Coast Inland Navigation District and Ogden Brothers Construction.

CHNEP exhibit at Lee County Northwest Regional Library

The CHNEP received an invitation to create an exhibit at one of Lee County’s newest libraries. The CHNEP was invited because it is an “organization that could enrich our community . . . The CHNEP came to mind as a great organization whose mission serves our region by addressing issues important to us now and into the future.”

The CHNEP exhibit, which will include displays, videos and presentations, will run from Jan. 3 to Feb. 15 at the Northwest Regional Library (519 Chiquita Blvd. N, Cape Coral) on Mon., Wed. and Thurs. from 10 A.M. to 6 P.M.; Tues. from noon to 8 P.M.; and Fri. and Sat. from 9 A.M. to 5 P.M. Presentation topics and dates are provided here. Complete descriptions are posted at www.CHNEP.org.

Tuesday, Jan. 3, at 4 P.M.

Partners in action: Protecting and preserving southwest Florida’s natural environment

Saturday, Jan. 7, at 11 A.M. and Saturday, Jan. 28, at 11 A.M.

Adventures in the Charlotte Harbor Watershed

Tuesday, Jan. 10, at 4 P.M.

Neighbor-to-Neighbor Florida-Friendly Landscaping

Tuesday, Jan. 17, at 4 P.M.

Sea Life in Southwest Florida Estuaries: Animals in the fresh and salt water mix

Tuesday, Jan. 24, at 4 P.M.

Adventures in the Charlotte Harbor Watershed video

Tuesday, Jan. 31, at 4 P.M.

CHNEP calendars

Tuesday, Feb. 7, at 4 P.M.

Understanding the salt marsh ecosystem

Monday, Feb. 13, at 4 P.M.

The City of Cape Coral and the environment



Children’s Museums

Two excellent children’s museums are in the CHNEP study area: The Imaginarium in Fort Myers and the Explorations V in Lakeland.

The Imaginarium Science Center (www.imaginariumfortmyers.com, 239/321-7420) is now in its 16th year of operation. The mission was recently revised to reflect the center’s growth over the years and the importance of technology and engineering in our society. The mission is to engage guests in the exploration of science, technology, engineering and math (STEM) through hands-on exhibit experiences and educational programs that further the understanding of the natural and human-made world, foster an appreciation for southwest Florida’s unique environment, and nurture intellectual curiosity, discovery and innovation.

Explorations V (www.explorationsv.com, 863/687-3869) provides a hands-on, fun-filled adventure of the five senses in learning for children and their families. Exhibits stimulate the child in all ages by fostering creativity, encouraging imaginative play and devising interactive learning opportunities. There are three floors of kid-powered exhibits and educational programs in the arts and sciences that celebrate the five senses, facilitate learning through interactive, imaginative play, support the idea of multiple intelligences, enhance brain development and foster a life-long love of learning!

The CHNEP supported the creation of Explorations V’s “Water Matters!” exhibit with a public outreach grant. Children plunge into this liquid exhibit focusing on water conservation. They can also explore water cycles and create a rainstorm.



Rain Gardens: A Beautiful Garden Solution

Anne Yasalonis, Florida Yards & Neighborhoods UF/IFAS Polk County Extension

Looking for an attractive way to control rainwater in your yard? A rain garden might be just what you are looking for! A rain garden is a depressed area in the landscape that will catch water during rainfall and slowly filter it over a few hours to prevent it from running off into nearby lakes and ponds. Rain gardens help prevent polluted *stormwater* runoff from entering into our water systems and help replenish the aquifer beneath us. These attractive gardens can be a showcase or focal point in your landscape, provide habitat to butterflies, aid in drainage problems and protect the environment.

Rain gardens are not ponds. They are garden areas that are planted with Florida-friendly plants that can tolerate being very wet as well as being dry. They will hold water (sometimes for up to a day) in very rainy situations, but the water will always filter through. A rain garden can be any size and should be easy to install and maintain.

If you would like to install a rain garden in your landscape, the first thing you must do is determine where to put the garden. It should be located away from the house and in a gently sloping area of the yard where water flows and/or collects during a rain event. If you are having a hard time determining where this area might be, watch the yard closely during and after a heavy rainfall. A full sun location is perfect, but a shady location will also work. Just make sure that you choose plants that will be appropriate to the situation.

Rain gardens can be large or small and any shape will work. A kidney bean shape is nice and works well with most existing landscapes. You can use a garden hose to try out some different shapes before you start digging. When you are ready to dig the area, heap some of the soil on the side of the garden that is the furthest from the flow of water. This will create a small hill (or berm) that will help stop water that is

running very quickly. If you have an area of very fast-moving water, you may need to secure the berm with stones or create a larger berm. The berm should be compacted and secure so that it will not fail in a large rain event. Rocks, ground cover or even sod will work to secure the berm.

After the site preparation is complete and the berm is built, it is time to install plants. Choose plants according to your site conditions. Choose plants that require minimal to no irrigation after establishment and minimal maintenance. Add compost to the planting area and apply 2"-3" of mulch over the entire area.

Once complete, this attractive garden will turn an area that was once problematic into a beautiful solution!

Visit www.CHNEP.org for more on rain garden design, installation, plants and demonstration sites. The last issue of *Harbor Happenings* included guidance on how to make and install a rain barrel.



This rain garden is in Winter Haven. Sites of other rain gardens are posted at www.CHNEP.org.

Areawide EIS

for Continued Phosphate Mining in the Central Florida Phosphate District

In accordance with regulatory authorities and the National Environmental Policy Act (NEPA), the U.S. Army Corps of Engineers, Jacksonville District, is developing an Areawide Environmental Impact Statement (AEIS) to address phosphate mining in the Central Florida Phosphate District (CFPD).

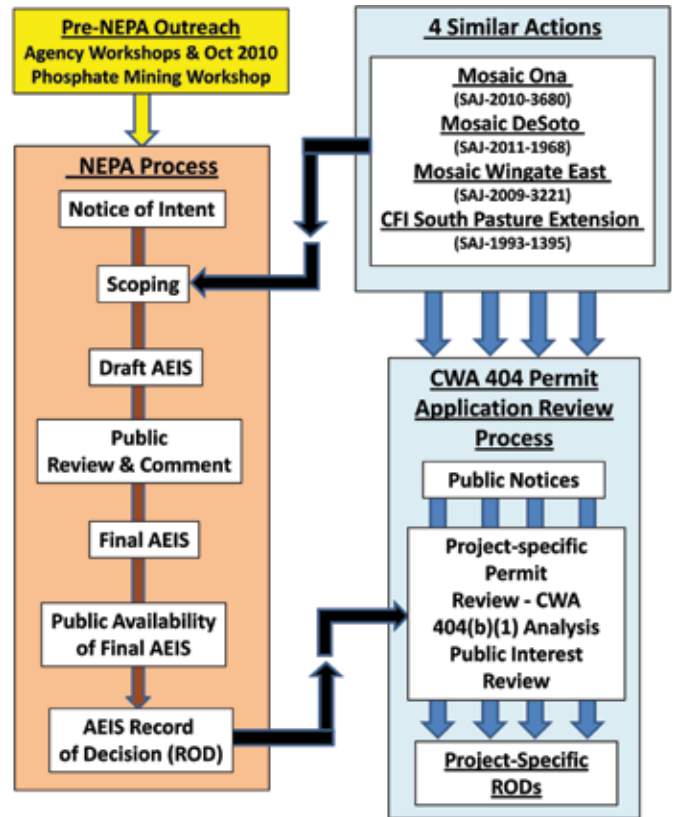
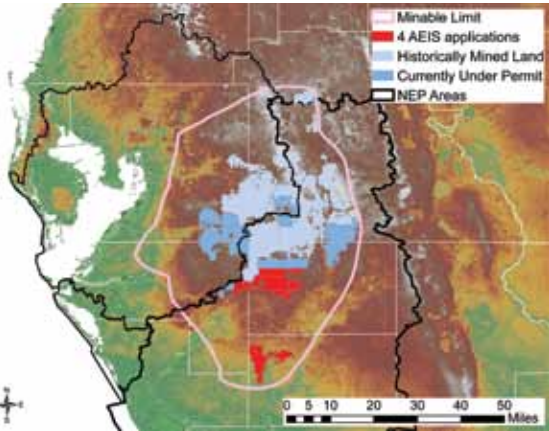
have been summarized and the methods to be used to evaluate those issues are being developed by the Corps with input from the U.S. Environmental Protection Agency and Florida Department of Environmental Protection.

The Corps has received four specific mine project permit applications, which will be the primary focus of the AEIS. The AEIS will also address other mining projects that might be promoted within the reasonably foreseeable future in terms of their potential contribution to cumulative impacts within the CFPD and to downstream watershed areas, primarily the Myakka River and lower Peace River watersheds, which flow to the Charlotte Harbor estuary. The graphic shows the pathways of the NEPA/AEIS review and individual permit application reviews and the connections between those pathways.

The U.S. Army Corps of Engineers is committed to open, transparent, two-way communication and an inclusive and collaborative approach that engages as many stakeholders and interested members of the public as possible. The U.S. Environmental Protection Agency and Florida Department of Environmental Protection are cooperating agencies on the AEIS. Six federal, two state and four regional agencies and representatives from eight counties and one city are serving as participating agencies on the AEIS. Public participation opportunities during the standard NEPA process will be available at scoping meetings, during review of the draft AEIS and at the time of issuance of the final AEIS. Beyond the minimum requirements of NEPA, the Corps is committed to providing AEIS status briefings on a regular basis to increase communications and process transparency. This will be accomplished through the project website, the CHNEP newsletter and

Content and format revisions to the AEIS website, www.phosphateaeis.org, were made in response to constructive feedback received from the public. Revisions also reflect AEIS project developments that have occurred since the start of the NEPA process in February 2011. The AEIS will be based on credible and defensible data and associated evaluations that use the best information possible during the defined time frame.

The primary areas of environmental concern to be addressed in the AEIS are the potential loss of wetland functions and services, mitigation of such losses, the effect of proposed mining on groundwater and surface water quality and quantity, and potential cumulative effects on these natural resources. During scoping, additional issues of concern to the public included the economic effects of phosphate mining on the local, regional and state economy, and questions regarding phosphate mining effects on land uses and human health concerns following mine reclamation. Cumulative effects evaluations will consider regional effects of mining, agricultural activities, urbanization and other factors that could contribute to environmental and socioeconomic conditions in the CFPD and in downstream watersheds during the reasonably foreseeable future. The issues of concern



other means. (Additional information was provided in the previous two issues of *Harbor Happenings*, which are posted at www.CHNEP.org.)

EIS: Tool used for certain actions "significantly affecting the quality of the human environment"

The National Environmental Policy Act (NEPA) requires federal agencies to integrate environmental values into their decision-making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions. To meet NEPA requirements, federal agencies prepare a detailed statement known as an Environmental Impact Statement (EIS).

The EPA maintains a national filing system for all EISs. Visit www.CHNEP.org for a link to learn more about the EIS process and to search the database for any EIS filed since 2004.

CHNEP Protection Plan

The Charlotte Harbor National Estuary Program (CHNEP) is a partnership working to protect the natural environment from Venice to Bonita Springs to Winter Haven. The partnership works as an advocate for the 4,700-square-mile estuarine system by building consensus that is based on sound science.

The partnership of citizens, elected officials, resource managers and commercial and recreational resources users have been hard at work protecting the greater Charlotte Harbor watershed. The 20-year plan, known as the *Comprehensive Conservation and Management Plan* (CCMP), was adopted in 2000. It identifies the common environmental issues that affect the health of the environment as well as actions to solve the issues. This plan includes diverse resource concerns of fish and wildlife habitat loss, water quality degradation, hydrologic alterations (changes to the water flow) and, new in 2008, stewardship gaps. The approval of the first plan marked the beginning of action to protect and restore these estuaries and their watersheds. The CCMP 2008 update identifies research needed to address management questions, restoration activities, legislative changes and public outreach needs. It expresses a vision, quantifiable objectives and priority actions with strategies. The CCMP includes a series of graphic vision maps, quantifiable objectives, priority actions and many support documents.

The CHNEP welcomes your input on the next update of the CCMP. The CCMP and guidance are posted at www.CHNEP.org.

Introduction to Coastal GIS Training

Tuesday–Thursday, May 1–3, 2012, from 8:30 A.M. to 5 P.M.
Florida Gulf Coast University in south Fort Myers
Academic Building 7, Room 445

The CHNEP is pleased to host the three-day, instructor-led “Introduction to Coastal GIS” course, which will provide students with knowledge and skills to successfully use ArcGIS desktop software. Framed in a coastal management context, the course begins with geographic information system (GIS) fundamentals and introduces tools and techniques useful for addressing coastal issues. In addition to lectures, demonstrations and exercises in ArcGIS, the course incorporates small group activities and class discussion to reinforce concepts learned in lecture and exercises.

After completing this course, participants will be able to:

- Recognize and describe basic GIS concepts and terms.
- Display, query and edit spatial and attribute data.
- Recognize the benefits of metadata.
- Understand coordinate systems and projections.
- Create a map layout and customize symbology.

The CHNEP is hosting this training to help its partners in their efforts to protect the natural environment and to fulfill the CHNEP management plan. This training is offered through the generosity of NOAA Coastal Services Center, who is teaching the course, and Florida Gulf Coast University, who is providing the facility.

To reserve your seat, please complete the online registration form. There is a registration fee of \$60. Refreshments and lunches will be provided. The registration fee may be waived for those who are unable to pay. The agenda, registration form and additional guidance are posted at www.CHNEP.org.

In 1995 Congress recognized the estuaries from Lemon Bay to Estero Bay as an “estuary of national significance,” one of only 28 areas so recognized. With this designation, a National Estuary Program (NEP) was created. The protection of these systems depends on the proactive and cooperative efforts of local citizens, elected officials, resource managers and commercial and recreational resource users. A partnership — known as the Charlotte Harbor National Estuary Program — brings these diverse groups together to identify the region’s common priority environmental issues and the actions needed to solve them and then acts to protect and restore the estuary and its watershed

CHNEP 2012 Meetings and Events

The CHNEP partnership is guided by its Management Conference of four committees. The Policy Committee establishes general policies and goals for the Program and executives ultimate authority in program administration. The Management Committee develops and reviews work plans, funding requests, work products and other activities. The Citizens Advisory Committee (CAC) provides a mechanism for citizen input and helps develop and promote public information and education programs. The Technical Advisory Committee (TAC) is the scientific and technical voice of the program.

All meetings are open but the public is encouraged to join the Citizens Advisory Committee.

Membership is open to all who are interested in protecting the natural environment bounded by Venice, Estero Bay and Winter Haven.

These dates are tentative. Confirm dates and obtain locations and agendas at www.CHNEP.org. Additional meetings and events are also posted on this website, as are grant deadlines.

Technical Advisory Committee (TAC)	February 8
Conservation Landscaping Workshop	February 11
Citizens Advisory Committee (CAC)	February 15
Management	March 2
Policy	March 19
Technical Advisory Committee (TAC)	April 11
Environmental Education Workshop	April TBD
Citizens Advisory Committee (CAC)	April 18
Introduction to Coastal GIS Training	May 1-3
Management	May 4
Policy	May 21
Technical Advisory Committee (TAC)	July 11
Citizens Advisory Committee (CAC)	August 1
Management	August 3
Policy	August 20
Public outreach grant applications due	September 5
Technical Advisory Committee (TAC)	October 10
Citizens Advisory Committee (CAC)	October 17
Management	November 2
Policy	November 16
Charlotte Harbor Nature Festival	November 17



PO Box 2245
Fort Myers FL 33902-2245

Not receiving *Harbor Happenings* in the mail? Request a free subscription. Visit the website at www.CHNEP.org for details.

Please let us know of any address corrections by sending an email to mhilgendorf@swfrpc.org.

Harbor Happenings en Español: Cada publicación de *Harbor Happenings* será traducida al español y publicada en el website del Charlotte Harbor National Estuary Program www.CHNEP.org. Por favor anime a sus amigos que hablan español a darle un vistazo.

Water Atlas Connects Citizens With CHNEP Water Resources

Jan Allyn, USF Florida Center for Community Design & Research

A new tool is now available to help residents in the CHNEP study area to better understand its watersheds and ecological systems. Funded by the CHNEP and the Southwest Florida Water Management District, the Charlotte Harbor Water Atlas (www.chnep.wateratlas.usf.edu/) is a repository for regional water resource data and much more! The Water Atlas helps the CHNEP implement its long-term monitoring and data management strategies, and it presents geographic and scientific information in meaningful ways for the general public. The Water Atlas is the latest in a collection of similar websites developed and maintained by the Florida Center for Community Design & Research at the University of South Florida in Tampa. The websites provide the public with a single source for water resource data, delivering it via a user-friendly, web-based interface that employs interactive maps, graphs and charts, and easy-to-understand explanations of scientific concepts and processes. Water Atlas software collects the data from multiple sources—water management districts, counties, cities, federal and state environmental agencies, volunteer groups—and stores it in a single database. The CHNEP Water Atlas database alone has, as of this writing, more than 31 million individual data samples, and it continues to grow daily!

GIS computer technology is used extensively throughout the Water Atlas, with lakes, streams, oceans and bays organized geographically into eight watersheds. Tabbed

webpages deliver resource overview/characteristics, water quality, hydrology, habitats/ecology and recreation information for each water resource as well as photographs. Interactive tools allow users customized access to information as well—water quality contour maps, layered interactive GIS maps, data download and graphing, and near real-time data mapping/downloading tools are all available to users. These are all freely available to everyone, with no login or other authorization required. All the software needed is provided on the site. Two volunteer water monitoring groups, CHEVWQMN and Cape Coral Canal Watch, have their own pages. A stormwater education section offers conservation advice for homeowners, businesses, the construction industry and children. A climate change page has links to regional, state and national resources that explore different facets of this important issue. This is only a sampling of the information available. We encourage you to explore the many features of the Charlotte Harbor Water



Atlas and to provide your feedback. Online forms allow users to make comments, suggest documents for the library, report water pollution or other environmental issues, volunteer and submit photographs. You may also send questions and suggestions to the Water Atlas content manager, Jan Allyn (813/579-3381, janallyn@usf.edu).