



THE MAGAZINE OF THE CHARLOTTE HARBOR NATIONAL ESTUARY PROGRAM

HARBOR HAPPENINGS

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

Summer 2018: Volume 22, Issue 3

Habitat Protection & Restoration to sustain Florida's amazing wildlife

Florida is home to an amazing variety of wildlife. With increasing pressure on their habitat, the home ranges and corridors they rely upon for eating, sleeping and raising their young are becoming smaller and more fragmented. Learn some of the ways CHNEP is working to ensure that they and their habitats are protected for generations to come.



Dawn Witherington



Executive Director Update

Jennifer Hecker

Recently, the Charlotte Harbor National Estuary Program (CHNEP) went out with partners to initiate a Citizen Seagrass Gardening project in the Caloosahatchee River, Ft. Myers, Florida. The energy from the volunteers was infectious. They were literally wading in to help restore the lost aquatic habitat that our sea turtles, manatees and other aquatic life are waiting for, and loving every minute of it.

That incredible day was just one of the great monthly events that CHNEP staff and Citizen Scientists have been doing lately related to the restoration and protection of wildlife and wildlife habitat. In addition to working directly on restoration projects, we have also been working with our partners to create new forward-looking regional habitat protection and restoration plans .

In this issue, you will read about some of these habitat projects that are using cutting edge technology to predict and map projected habitat changes in relation to sea level rise and other climate factors. This information helps resource managers and policymakers know where and what type of

restoration and resiliency measures to invest in, as well as land conservation or management opportunities to aid habitat migration.

There's little that is more gratifying than seeing the first documented oystercatchers or beautiful spoonbills foraging on oyster reefs we helped create. It is living proof that restoration works and that we can make a difference. Planting more oysters and seagrasses not only creates habitat, but improves water quality and builds resiliency. Healthier ecosystems are better able to cope with changes and recent research shows that seagrasses can even help to counteract the negative effect of ocean acidification.

But it can only happen with us all pooling our time, energy and resources together. Some waterways in our region are experiencing toxic algae blooms and fish kills as we speak. We are working to try to keep these areas on environmental life support until more projects come online to store, cleanse and convey clean water at the right amounts and right time of year to sustain the grasses, oysters, fish and other aquatic resources.

You are invited to participate in our August/September CHNEP Management Cycle, when we will be updating the Fish and Wildlife Protection component of the regional Comprehensive Conservation and Management Plan. This plan defines the short and long-term strategies and actions that are needed — guiding future local, state and federal funding. We hope you can attend one of the meetings to lend your voice and ideas.

We all look forward to the day when through our collective hard work, we have healthy waterways and sufficient habitat to see all our wildlife thrive. Thank you for all you do to protect our water and wildlife,



American Oystercatchers on created oyster reef habitat.

Fall CHNEP Technical (TAC) & Citizens Advisory Committee (CAC) Mtgs.

We welcome you to join our next TAC and CAC meetings where we will be gathering input on how we can better protect fish and wildlife and engage the public.

Both meetings will be held at Rotary Park, 5505 Rose Garden Road, Cape Coral, FL.

TAC Mtg. 9 am — 4:30 pm,
Thursday, August 23rd

CAC Mtg. 9 am — 1 pm,
Wednesday, September 5th

More information available at
<https://www.chnep.org/governance>



August CHNEP Volunteer Monthly Event

Come join us to learn about, and help our natural mosquito eaters—bats! We will be building houses to put up around our area.

Saturday August 28th, 9:30—11:30 am

Charlotte Harbor Environmental Center
2300 Placida Road
Englewood, Florida 34224

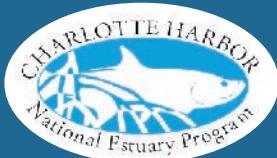
To learn more and sign up, go to <https://www.chnep.org/monthly-volunteer-events>

\$ Available!

The CHNEP offers grants to fund projects that implement the Comprehensive Conservation and Management Plan (CCMP). In our 20+ years, we have supported more than 850 projects with grant funding. We awarded funds to more than 25 individual environmental projects in 2018 alone. Overall, there are three categories of available funding:

- ♦ **Micro-grants** are offered year-round until the budget for them is exhausted (which it has been until October 1). They fund projects that can be completed in a short time-frame and cost up to \$1,000.
- ♦ **Public Outreach Grants** are for larger more complex projects that may take months to initiate, organize and complete. Public Outreach Grants have an application period – for projects that will occur from December 2018 through December 2019, the final application is due October 12, 2018.
- ♦ **Sponsorships:** New in 2018, the CHNEP is providing sponsorship funds for qualifying environmental events, conferences, workshops and festivals.

If you have a project or event that furthers CCMP objectives for which you would be interested in seeking funding from CHNEP for, please go to <https://www.chnep.org/partner-grants> for more information.



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CHNEP publishes this free educational magazine. Photographs and story ideas are welcome. Sign up for a free subscription on our website — www.CHNEP.org

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Aquatic Habitat Restoration



The Charlotte Harbor National Estuary Program (CHNEP) is currently working with its partners to restore the Tidal Caloosahatchee River's submerged aquatic vegetation (SAV). SAV, including seagrass, is an important part of estuarine ecosystems, providing vital reproductive and nursery habitat for fish in addition to food for wildlife such as manatees and turtles. It also improves water quality and clarity by removing nutrients and sediments. The Caloosahatchee River had historically supported vast seagrass beds; however, much of it has been lost in recent years due in part to alterations in water flows to the Tidal Caloosahatchee River.

With grant funding obtained by the CHNEP, this project will (1) help restore the distribution of tape and widgeon seagrasses in the Caloosahatchee River by establishing their seed-sources, (2) monitor the achievement of the seagrass restoration methods and create transferable restoration success monitoring procedures for future endeavors, and (3) Enhance public understanding and stewardship of seagrass within CHNEP study area.

CITIZEN SEAGRASS GARDENING



Importance of Seagrass

Provide food source: seagrass beds are among the most productive ecosystems and are food for a large number of herbivores including urchins, manatees, and sea turtles.

Stabilize sediment: seagrass beds efficiently hold sediments in place, preventing resuspension and movement of sediment deposits.

Reduce nutrient pollution: seagrass beds absorb and transform nutrients in the marine environment.

Provide habitat: seagrasses are often called ecosystem engineers because they modify their environments to create unique habitats that support biodiversity and commercial fisheries.

Photos from lower left to lower right: CHNEP Citizen Scientist volunteers and Calusa Waterkeeper Rangers ride to seagrass planting location, (2) Volunteers plant grasses and ready exclusion cage with media filming, (3) Florida Representative Heather Fitzenhagen providing remarks at media kick-off event, (4) Seagrass planting volunteers, (5) Exclusion device used to help seagrasses get established and grow, (6) CHNEP Executive Director Jennifer Hecker and Calusa Waterkeeper President Gene Gibson give remarks at kick-off event, (7) Volunteers celebrating a completed install at one of the five site locations, (8) CHNEP's Jennifer Hecker and Calusa Waterkeeper John Cassani training volunteers ahead of planting day, (9) Lee County Commissioner Cecil Pendergrass providing remarks at media kick-off event.

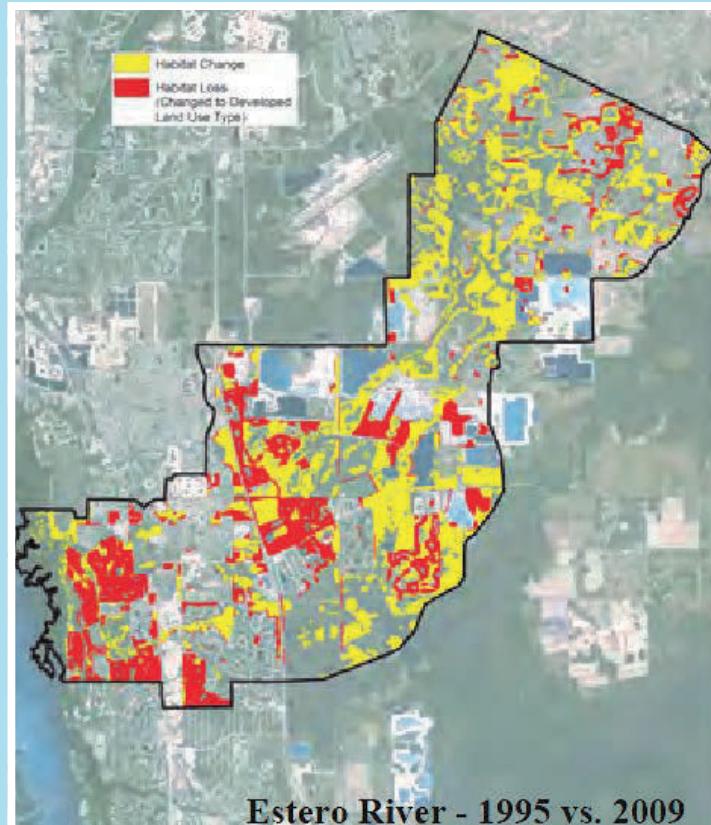


A Habitat Restoration Plan for the Future

The Charlotte Harbor National Estuary Program (CHNEP) has initiated a large-scale effort to identify regional habitat restoration needs and resiliency opportunities. This planning effort will be used to guide habitat conservation, sustainability, resiliency and connectivity initiatives throughout the CHNEP study area. The project entails refining the habitat restoration vision for the next 50 years, defining regional habitat restoration goals for the next 20 years, identifying habitat restoration opportunities, and conservation and land acquisition priorities to reach the habitat vision and goals.

Thus far, the planning effort has inventoried and analyzed habitat changes in the CHNEP area from Venice to Bonita Springs to Winter Haven, Florida. Some of the interesting initial findings have been:

- ◆ Across the entire CHNEP watershed, 7,452 acres (1%) of wetlands were gained from 1995 to 2009 — likely due to created wetlands. Freshwater Marsh is the largest wetland habitat type within the CHNEP watershed, totaling 145,687 acres (4.8%), and Mixed Wetland Hardwoods had the greatest acreage loss of 15,358 acres (-84%).
- ◆ In total, the CHNEP watershed lost 97,400 acres (-27%) of native uplands (total excludes nuisance/exotic and artificial/agriculturally modified land uses) from 1995 to 2009.
- ◆ Pine Flatwoods is the largest habitat type within the CHNEP watershed, totaling 273,201 acres (9%), and had the greatest acreage loss, totaling 77,652 acres (-28%).
- ◆ Longleaf Pine and Sand Pine Scrub were the two rare/unique habitats mapped, with Sand Pine Scrub being the native upland type experiencing the greatest percentage loss of -94% (from 515 acres to 33 acres) from 1995 to 2009.
- ◆ The following native uplands exceeded 15% or greater loss: Sand Pine Scrub (-94%), Live Oak (-87%), Upland Coniferous Forest (-56%), Pine Flatwoods (-28%) and Hardwood-Conifer Mixed (-23%).
- ◆ The following wetlands exceeded 15% or greater loss: Wetland Hardwood Forests (-91%), Mixed Wetland Hardwoods (-84%), Cypress/Pine/Cabbage Palm (-84%), Bay Swamps (-43%), Wetland Forested Mix (-42%) and Cypress (-32%).



Example of one of the maps generated from the CHNEP Habitat Restoration Plan Project, mapping habitat losses in Estero Bay watershed.

Additionally to date, the project has compiled a database of already completed, ongoing and planned habitat restoration, conservation and land acquisition projects. The process of defining habitat targets for preservation, restoration and reservation areas that protect all existing important habitat and corridor areas, as well as areas that could be useful in aiding future habitat migration in relation to sea level rise has begun. If you are interested in learning more about this or other CHNEP habitat restoration projects, please go to <https://www.chnep.org/wildlife-habitat-restoration>.



Volunteers learning to do seagrass planting

All are Welcome at Our Monthly Volunteer Events

Looking for unique opportunities in your area that benefit the environment and address resource concerns? Or perhaps you just wish to learn more about the CHNEP. Consider participating in some of our Monthly Volunteer Events! Each month will focus on a different topic, where volunteers learn about an issue and take action to address it.

At March's "Wild about Water Quality", in honor of National World Water Day on March 22nd, CHNEP Volunteers took part in the EarthEcho Water Challenge, learning about water quality parameters before going out to test water quality in Trabue Park. Each volunteer went home with a

kit to test surface waters in their area and report the information online.

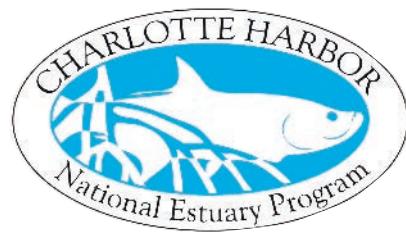
April's "All about Horseshoe Crabs" event was timed for the March-April peak spring spawning season for horseshoe crabs. CHNEP Volunteers were out surveying the beach at the Cedar Point Environmental Center for nesting pairs.

May was focused on amphibians as important indicators of an ecosystem's health. Often, heard rather than seen, monitoring networks have been keeping an ear out for population changes over the years. The program coordinator of the Southwest Florida Amphibian Monitoring Network was on hand for this event to teach CHNEP Volunteers call identification so they may further support monitoring efforts in our region.

Want to get involved? Sign up to be added to the volunteer list and receive notifications on upcoming opportunities at <http://www.chnep.org/get-involved>.

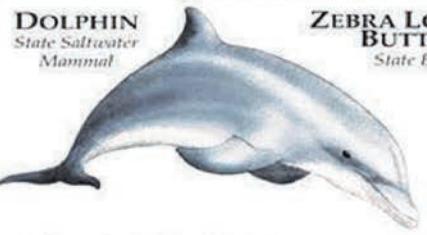


Volunteers are all smiles after taking their FrogWatch call quiz.



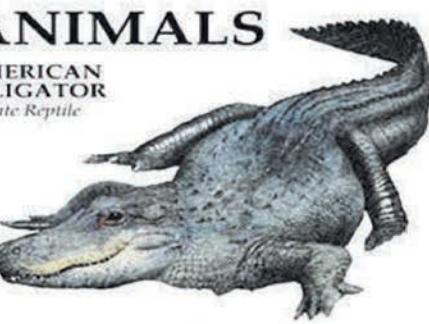
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FLORIDA STATE ANIMALS



ZEBRA LONGWING BUTTERFLY
State Butterfly

AMERICAN ALLIGATOR
State Reptile



GOPHER TORTOISE
State Tortoise



LARGEMOUTH BASS
State Freshwater Fish



ATLANTIC SAILFISH
State Saltwater Fish



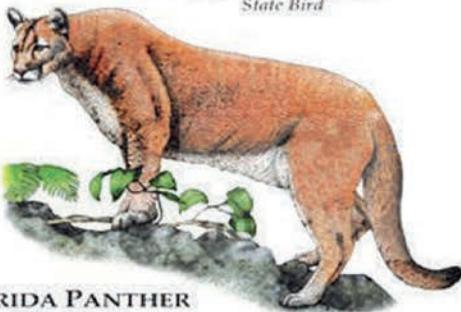
MANATEE
State Marine Mammal

MOCKINGBIRD
State Bird

FLORIDA HORSE CONCH
State Shell



LOGGERHEAD SEA TURTLE
State Saltwater Reptile



FLORIDA PANTHER
State Animal