2023 calendar

Alligator at Circle B Bar Reserve | *Jeffrey Spence*

Coastal & Heartland National Estuary Partnership

Coastal & Heartland National Estuary Partnership

Uniting Central and Southwest Florida to protect water and wildlife

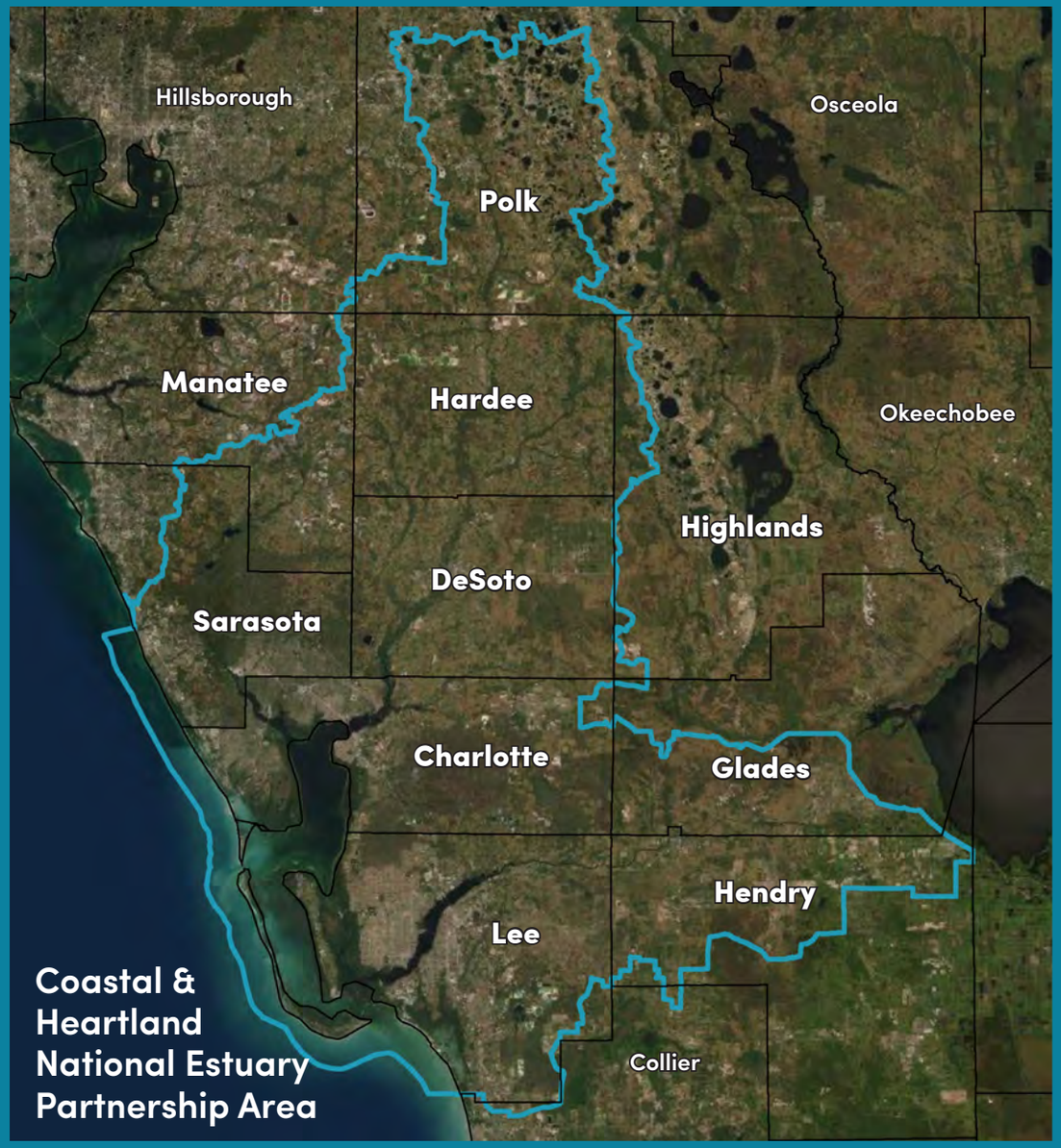
CHNEP COMMITTEE MEMBERS

ABOUT US

Formed in 1995, the Coastal & Heartland National Estuary Partnership (CHNEP, formerly the Charlotte Harbor National Estuary Program) was designated by Congress to protect the exceptional estuaries and water resources in a 5,416 square mile area that includes the Peace, Myakka, Caloosahatchee, and Estero Rivers and the coastal waters of Dona and Roberts Bays, Lemon Bay, Charlotte Harbor, the Caloosahatchee, Pine Island Sound, and Estero Bay. CHNEP is a non-regulatory, science and consensus-based organization, and is strongly supported by the state and local governments within its boundaries.

PURPOSE OF CHNEP

- To protect and restore water quality to swimmable and fishable standards in the CHNEP area
- To restore healthy abundant fisheries and shellfish harvesting for commercial and recreational use
- To foster public-private partnerships between diverse stakeholders, including industry, governmental, and non-governmental organizations for restoration purposes
- To protect federal resources in our study area including National Wildlife Refuges and numerous federally endangered species
- To leverage limited federal dollars with state and local funds, as well as private contributions, to implement more projects
- To provide environmental education experiences to youth, adult, and underserved populations
- To support local economies tied to our water resources

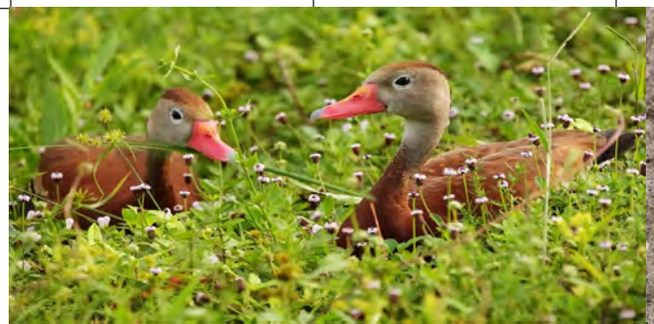


Coastal & Heartland National Estuary Partnership

1050 Loveland Blvd.
Port Charlotte, FL 33980
941-833-6580
www.CHNEP.org

Pine Island Sound | ***Steve Russell***

January 2023

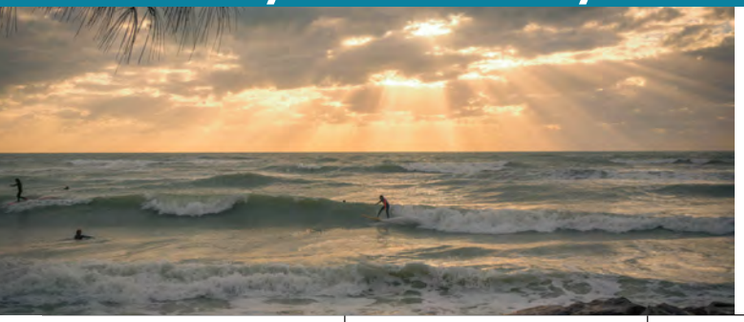
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 NEW YEAR'S DAY	2	3	4	5	6 ○ FULL MOON	7
8	9	10	11	12	13	14 ☽ LAST QUARTER
15	16 MARTIN LUTHER KING JR. DAY	17	18	19	20	21 ● NEW MOON
22	23	24	25	26	27	28 ☾ FIRST QUARTER
29	30	31				

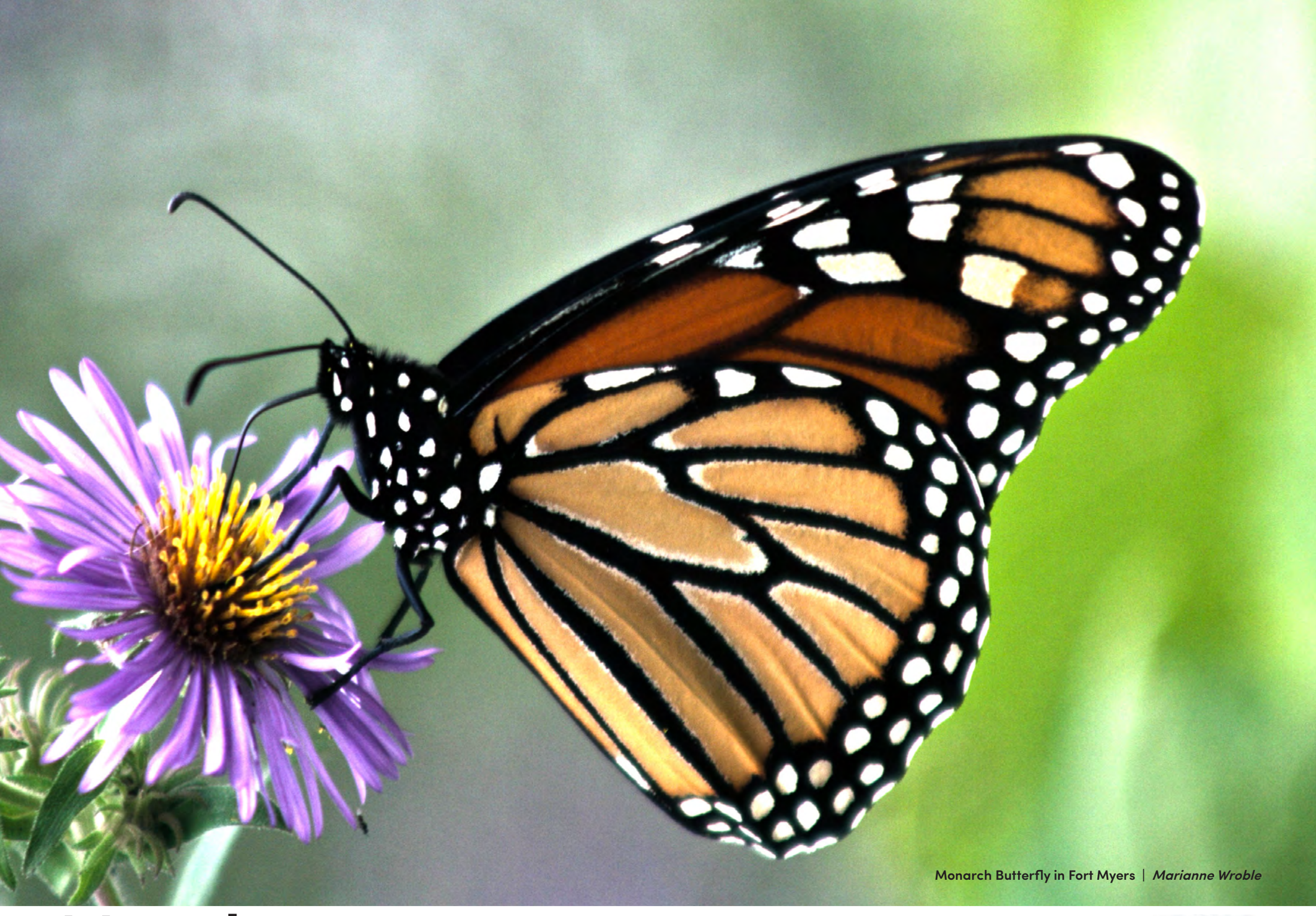
Left: Black bellied Whistling Ducks
Eileen Fonferko

Right: Blue Crab
Kathleen Colligan

Roseate Spoonbills in Myakka River State Park | *Ira Ochomma*

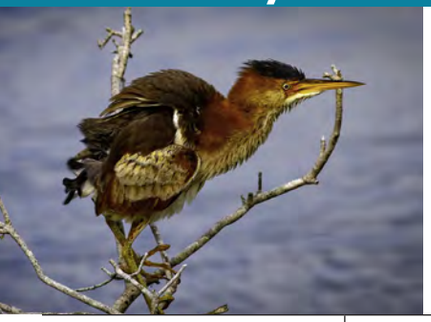
February 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		Left: Surfing at Sunset at the Jetty *Lynne Pedlar*	1	2 ☽ LAST QUARTER	3	4
5 ○ FULL MOON	6	7	8	9	10	11
12	13 ☽ LAST QUARTER	14 SHOREBIRD SEASON STARTS	15	16	17	18
19	20 ● NEW MOON PRESIDENT'S DAY	21	22	23	24	25
26	27 ☾ FIRST QUARTER	28				



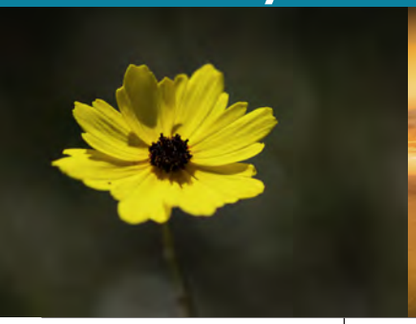
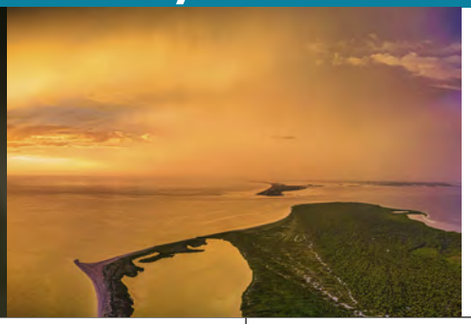
Monarch Butterfly in Fort Myers | *Marianne Wroble*

March 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
 Left: Immature Green Heron at the Venice Rookery *Sheri Nadelman*			1	2	3	4
5	6	7 ○ FULL MOON	8	9	10	11
12 DAYLIGHT SAVING TIME BEGINS	13	14 ☽ LAST QUARTER	15	16	17	18
19	20 VERNAL EQUINOX	21 ● NEW MOON	22 WORLD WATER DAY	23	24	25
26	27	28 ☾ FIRST QUARTER	29	30	31	**CALENDAR OF CHNEP EVENTS** chnep.org/events

Sandhill Crane at Harns Marsh | *John Courtney*

April 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6 ○ FULL MOON	7	8
9	10 GOPHER TORTOISE DAY	11	12	13 ☽ LAST QUARTER	14	15
16	17	18	19	20 ● NEW MOON	21	22 EARTH DAY
23 / 30	24	25	26	27 ☾ FIRST QUARTER	28 NATIONAL ARBOR DAY	29

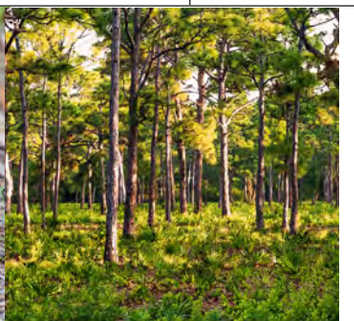
Left: Leavenworths Tickseed
Robin Hagan

Right: North End of Cayo Costa and Boca Grande Pass
Steve Russell

Fawn Running in the Woods in Sarasota County | *Sheri Nadelman*

May 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 SEA TURTLE SEASON BEGINS	2	3	4	5 ○ FULL MOON	6
7	8	9	10	11	12 ☽ LAST QUARTER	13
14	15	16	17	18	19 ● NEW MOON	20
21	22	23	24	25	26	27 ☾ FIRST QUARTER
28	29 MEMORIAL DAY	30	31			



Left: Northern Bobwhites at Lemon Creek
Eva Furner

Right: Pine Island
Kathleen Colligan

THE MAGAZINE OF THE COASTAL & HEARTLAND NATIONAL ESTUARY PARTNERSHIP

HARBOR HAPPENINGS

Uniting Central and Southwest Florida to protect water and wildlife

Historic Hurricane Ian Hits Our Region

2022 was one of the Earth's warmest years on record, with intense storms, droughts, fires and floods spreading across the globe - as well as the historic Hurricane Ian hitting and devastating our region. Climate change, once thought of as a future event, is now documented as already underway here and all around the world. Warming waters are fueling larger and more powerful stoms with stronger winds and more intense rainfall. Tidal flooding worsened by sea level rise has led to almost $500 million in lost real estate value from 2005 to 2016 in Miami-Dade alone, requiring the County to raise roads and build stormwater pumps. Florida's coral reefs are bleaching and dying as temperatures rise, resulting in up to $55 billion in reef-related tourism money estimated to be lost by 2100. Now there are tens of billions of economic losses right here in our area.

The Southeast United States has warmed 1 degree F on average over the past three decades. Averages don't tell the real story because what really creates the most serious problems are the extremes that come with those higher averages. Heatwaves, previously a 1 in 10 chance of occurring, are now nearly three times as likely. Just another 1.5 degrees F of warming globally would make North America's hottest days 5 to 7 degrees warmer.

A Note from our Executive Director

The CHNEP is leading efforts to enhance climate adaptation and community resiliency throughout our 10-county area.

We have completed two very sophisticated modeling efforts to simulate climate change impacts to ground and surface waters in Charlotte and Lee counties, in order to undertake hydrological restoration projects that bring more natural water levels and flows to environmentally sensitive lands, rivers and estuaries. Restoration enhances the ability of plants and animals to thrive and adapt - an important step to building environmental resiliency.

These intense heat changes can disrupt rainfall patterns, causing occurrences of very heavy rainfall to be more common and more intense in some areas due to the warmer air holding more moisture such that storm clouds are "heavier" with more rain before they eventually break. Other areas are left without any water as it evaporates quicker, instead of running downstream to rivers and lakes. Another documented effect is changes to storm patterns and intensity. Tropical storms are becoming more intense and even stalling over land, where they can deliver more rain on a single area.

New weather extremes are creating unprecedented conditions that our human infrastructure was not built for – causing overloading of electrical grids and storm systems, more extreme flooding and erosion, and other significant factors affecting public health and safety. Recognizing that these climate changes are already underway means immediate action is needed.

CHNEP also continues to facilitate collaboration and a regional approach to tackling environmental and climate issues; recently planning and hosting the second annual Southwest Florida Climate Summit. This year, we are embarking on unprecedented efforts to create Comprehensive Vulnerability Assessments for each CHNEP county – to identify their individual climate vulnerabilities and ways to reduce those risks. We hope you will read this issue of Harbor Happenings and be inspired to join resiliency efforts in our region.

Thank you for your efforts to protect our water and wildlife,

Jennifer Hecker

The Path Forward towards Climate Stability

These changes do not have to continue to worsen. There is a path forward that can slow climate change and avert its most serious potential future impacts. Worldwide experts and scientists agree that this would entail controlling the carbon dioxide (CO_2) entering the Earth's atmosphere - as carbon dioxide traps heat that would otherwise be released out into space. This changes global temperature and weather patterns. Carbon dioxide is rising in large part to fossil fuels used for energy. Fossil fuels such as coal, gas, and oil, contain carbon that plants have pulled out of the atmosphere through photosynthesis over many millions of years, and which we are now returning to the atmosphere in just a few hundred years. The amount of carbon being released has tripled over the last 50 years, and currently, the average global carbon levels are at an all-time high - twice the amount of what is needed to prevent climate change from becoming catastrophic.

Natural ecosystems can help to capture carbon and keep it locked up naturally. However, because we put more carbon dioxide into the atmosphere than natural processes can remove, the amount of carbon dioxide in the atmosphere increases every year. The more we overshoot what natural processes can remove in a given year, the faster carbon dioxide increases in our atmosphere. Natural processes are being reduced as we lose rainforests, mangroves, seagrasses and other plant communities that naturally absorb and utilize carbon. At the same time, we are also increasing the amount of human-related carbon being released. The annual rate of increase in atmospheric carbon dioxide over the past 60 years is about 100 times faster than previous natural increases. That is why it is important that we both preserve these natural ecosystems, at the same time as we reduce the amount of human-related carbon being released into our atmosphere.

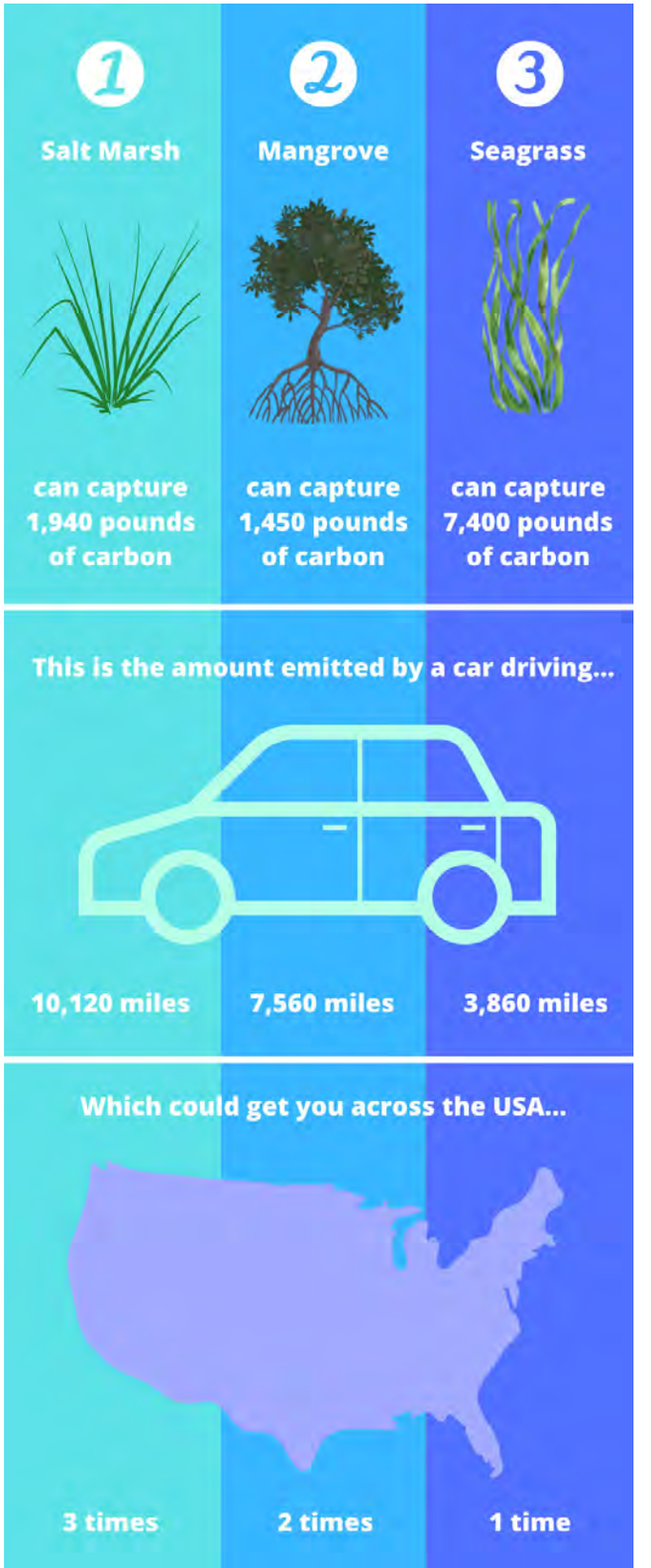
A Blue Carbon Strategy to Lessening Impacts

Blue carbon is the carbon captured by the world's oceans and coastal ecosystems. As the CHNEP works to protect and restore seagrasses, mangroves, and salt marshes, we are improving and increasing the natural processes that remove and lock up excess carbon as a method of combatting climate change. Though much smaller in size than the planet's forests, these coastal ecosystems sequester carbon at a much faster rate, and can continue to do so for millions of years. Most of the carbon taken up by these ecosystems is stored below ground where we can't see it. The carbon found in coastal soil is often thousands of years old! When these systems are damaged, a large amount of carbon is released to the atmosphere, where it can then contribute to climate change. So protecting and restoring coastal habitats is an effective way to reduce climate change. Protecting healthy coastal environments also provides many other benefits to people, such as recreational opportunities, storm and flood protection, and nursery habitat for commercial and recreational fisheries.

Salt Marshes and other Natural Carbon "Sinks"

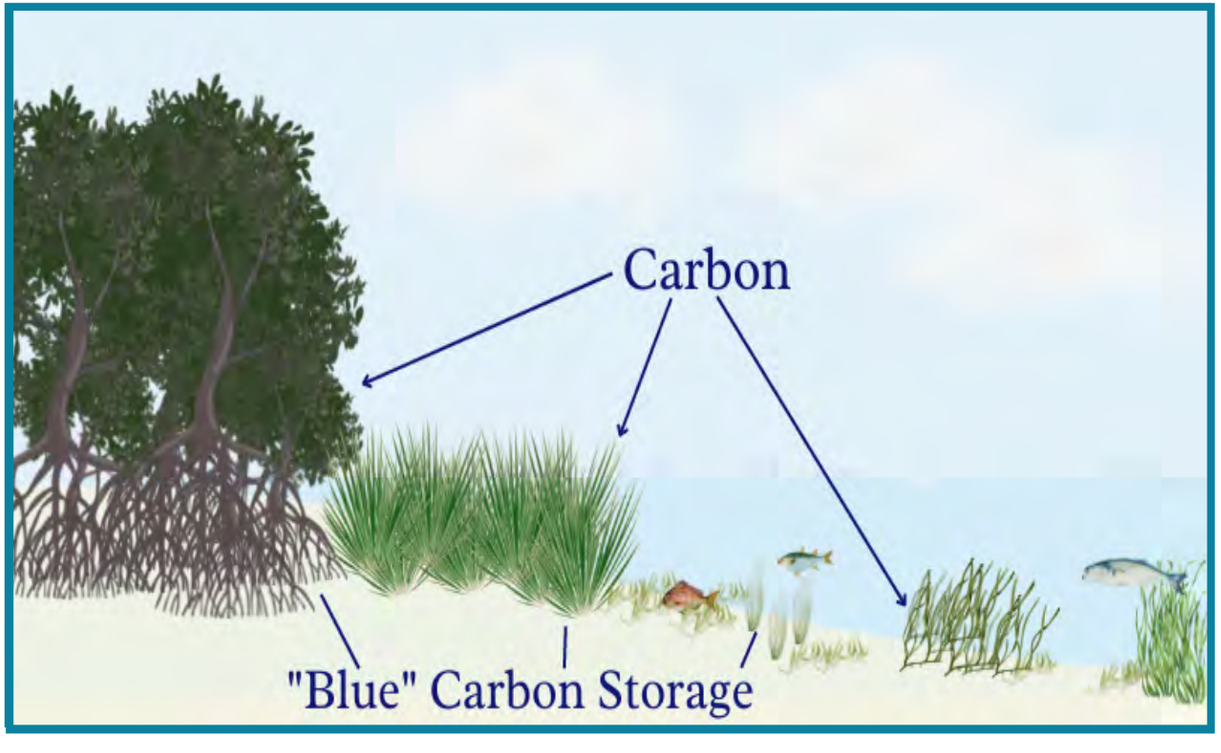
Carbon "sinks" are areas that store more carbon than they release, sinking the carbon back into the earth and reducing the amount in the atmosphere. Coastal habitats and the world's oceans are the most effective carbon sinks on the planet. Scientists around the globe have been studying "the big three": salt marshes, mangroves, and seagrasses, and what they find, might surprise you. Every one of these aquatic systems outperformed their terrestrial counterparts in locking up more carbon, faster.

Marshes have been called the "kidneys of the landscape" because they clean pollutants from water. They also protect communities against storm surges and erosion. In fact, it is now known that salt marshes are one of the most effective carbon sinks in the world, absorbing up to 130 million tons of carbon a year. Though far smaller in area than the world's temperate forests, they actually take up over forty-times more carbon per square kilometer. And this is not limited to saltwater. Florida, home to one of the world's largest freshwater marshes – the Everglades – is a huge carbon sink. However, restored freshwater flow is needed to keep the carbon from being released through fire or peat soil loss. Everglades restoration helps to keep carbon in the soil and increase the huge marsh's capacity to capture and store even more carbon.



Mangroves uptake more carbon than tropical humid forests, though they only account for a small amount of total carbon storage in forests world-wide. Therefore, all forests are needed to combat the excess carbon entering our atmosphere. Mangroves lock up a lot of that carbon underground in the soil and their roots. It is estimated that two and a half acres of mangrove forest store over one thousand tons of carbon. However, a study done in Naples, Florida however emphasized that mangroves along a hydrologically disturbed tidal creek captured and stored less carbon than did mangroves along an adjacent undisturbed creek. Thus, restoring and maintaining healthy mangrove forests is key to maintaining their carbon storage superpowers. Scientists have even put a price tag on the value of mangroves in South Florida's Everglades when it comes to storing carbon - and it's between U.S. $2 billion and $3.4 billion.

Seagrasses also make up a powerful carbon storage system, covering about 0.1% of the ocean globally but providing 18% of its carbon storage. They take up large amounts of carbon by trapping it in their leaves and stems, as well as in the soil they accumulate and grow in. As a carbon sink, seagrasses are fast in capturing and storing carbon – up to 35 times faster than a rainforest. They can literally pull carbon dioxide from the water as part of photosynthesis, and trap it in the mud. This is especially important in combatting one particular climate change impact – ocean acidification. In the ocean, absorbing carbon changes its chemistry to make the water more acidic and harder for shellfish to grow their shells. A recent study in Tampa Bay, Florida found that seagrass pulling carbon out of the water can lessen drivers of ocean acidification and improve the water chemistry, making water conditions more favorable for shellfish and other aquatic life.



While rainforests, peatlands and other habitats on land are well known for their importance in the climate crisis, coastal wetlands often remain undervalued. The Intergovernmental Panel on Climate Change (IPCC) includes them in national greenhouse gas inventories, but they are also among the most threatened ecosystems on the planet. If salt marshes, mangroves, and seagrasses are lost, that carbon they were storing is released. The climate resiliency role that these ecosystems play underscores the importance of their protection and restoration – actions the Coastal & Heartland National Estuary Partnership supports as part of our Comprehensive Conservation and Management Plan.

Mangrove Diversity

- Most of the seafood we eat relies on mangroves at some stage in their lives.
- Mangrove roots provide a complex environment to help shelter juvenile fish from predators.
- Mangrove ecosystems support ecotourism activities such as catch-and-release fly fishing, snorkeling, birdwatching, and kayaking.
- Mangroves provide a buffer zone from heavy waves and storms which is important for juvenile fish.
- Mangroves make excellent roosting habitat for birds.
- Mangroves serve as sinks for carbon, reducing carbon dioxide in the atmosphere.
- Mangroves filter run-off from the land, helping to keep our seas clean and clear.
- Mangroves and other native coastal plants reduce shoreline erosion and help protect upland property, lessening the effects of storms and hurricanes.

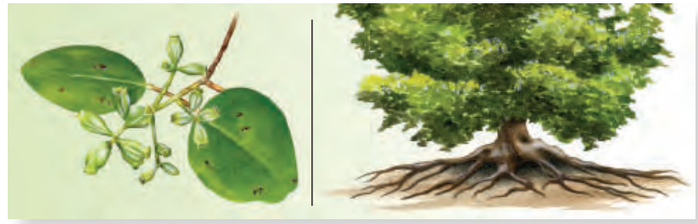
Mangrove Manners

Mangroves are bushes and trees that can live in saline waters. They form a crucial component of the coastal realm by supporting biodiversity, serving as a nursery for juveniles, and protecting shorelines from storm damage and erosion.

Mangrove Species

Red Mangrove – Most common mangrove in The Bahamas, found nearest to the coast. Identified by characteristic arching prop roots.

Black Mangrove – Found immediately inland of red mangroves. Roots extend outward underground and send up pneumatophores, which often stick out above the water like little snorkels.



White Mangrove – Common in high marshes, upland of red and black mangroves. Leaves are rounded at the base and tip. Two salt glands at the base of each leaf appear as small bumps.

Connections to Mangroves

Many juvenile fish and other sea life that grow up in mangroves move to seagrass beds and coral reefs as they mature. As such, mangroves and coral reefs are inextricably linked through the movements of animals. We must take care of mangroves to ensure fish populations remain healthy enough to support our food needs.

Your Good Habits Can Save Our Mangroves

Properly dispose of solid and liquid wastes

Solid waste, sewage, and fuel are damaging pollutants that should be properly disposed of at a local landfill or waste processing facility.

Support sustainable development

Build sustainably by choosing a location and style that will not interfere with sensitive wetland areas.

Prevent and report oil spills

Learn about local boating laws and methods for proper oil disposal.

Follow fishing regulations

Fishing regulations are in place to help ensure the sustainability of important species – don't break the law!

Remove derelict traps and lines

This good deed will help ensure that no fish are needlessly killed in "ghost" traps.

Remove fishing line from snagged baits

Fishing line left in the ocean can be mistaken for food by animals. Properly dispose of fishing line when you reach the shore.

If trimming mangroves, follow guidelines

Because mangroves grow below the high water mark they are regulated by The Government. Contact your local government for advice.

Participate in coastal clean-ups

Contact your local conservation group to find out how you can become involved in beach, shoreline, and underwater clean-ups.

Be a mangrove steward

Get involved with mangrove conservation projects such as planting and helping to protect seedlings. Tell your friends and family about the importance of mangroves.

Help your community and the environment by removing unsightly and damaging trash from your local mangrove wetland.

FRIENDS of the ENVIRONMENT
ABACO, BAHAMAS
www.FriendsoftheEnvironment.org

Disney's ANIMALS, SCIENCE and ENVIRONMENT

Wood Storks at Pine Island | *Kathleen Colligan*

June 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	Left: Manatee in Lemon Bay *Robin Hagan*			1 HURRICANE SEASON BEGINS	2	3 ○ FULL MOON
4	5	6	7	8	9	10 ☽ LAST QUARTER
11	12	13	14	15	16	17
18 ● NEW MOON	19	20	21 SUMMER SOLSTICE	22	23	24
25	26 ☾ FIRST QUARTER	27	28	29	30	**2024 CALENDAR IMAGE DEADLINE** visit chnep.org for details

Baby Alligator | *Sally Weigand*

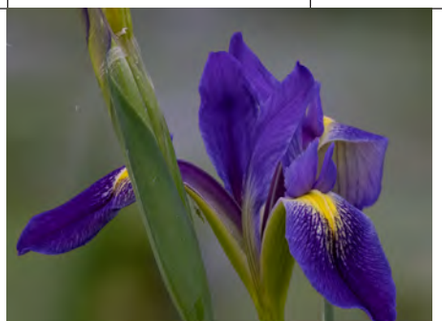
July 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3 ○ FULL MOON	4 INDEPENDENCE DAY	5	6	7	8
9 ☽ LAST QUARTER	10	11	12	13	14	15
16	17 ● NEW MOON	18	19	20	21	22
23 / 30	24 / 31	25 ☾ FIRST QUARTER	26	27	28	29

Left: Loggerhead turtle nest hatching on Manasota Key
Linda Moreau

Tricolored Heron with a Fish at Lake Morton | *Art Nadelman*

August 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	Left: Ceranus Blue Butterfly at Myakka River State Park *Jerry Waters*	1 ○ FULL MOON	2	3	4	5
6	7	8 ☽ LAST QUARTER	9	10	11	12
13	14	15	16 ● NEW MOON	17	18	19
20	21	22	23	24 ☾ FIRST QUARTER	25	26
27	28	29	30 ○ FULL MOON	31		Left: Blue Flag Iris in Lakeland *Lynette Spence*

Early Morning at Saddle Creek | *Jeffrey Spence*

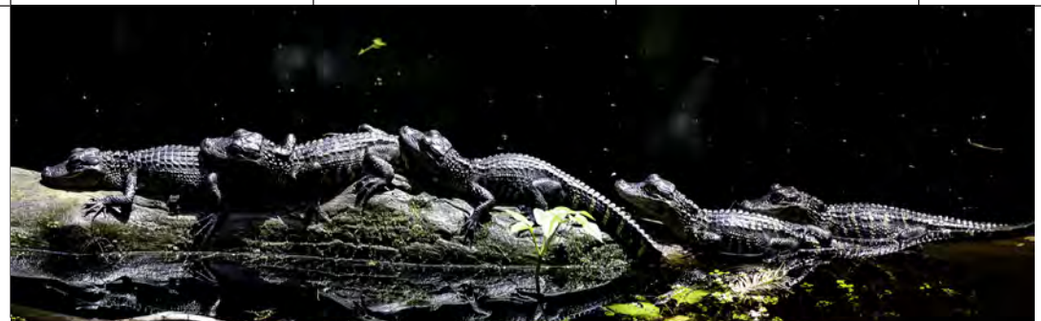
September 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
 Left: Great Egret in Venice Area Audubon Society Rookery *Ira Ochomma*					1 SHOREBIRD SEASON ENDS	2
3	4 LABOR DAY	5	6 LAST QUARTER	7	8	9
10	11	12	13	14 NEW MOON	15	16 NATIONAL ESTUARIES WEEK INTERNATIONAL COASTAL CLEANUP DAY
17	18	19	20	21	22 FIRST QUARTER	23 AUTUMNAL EQUINOX
24	25	26	27	28	29 FULL MOON	30

Sunrise over Lake Hancock | *Jeffrey Spence*

October 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6 LAST QUARTER	7
8	9 COLUMBUS DAY	10	11	12	13	14 NEW MOON
15	16	17 INTERNATIONAL SAWFISH DAY	18	19	20	21 FIRST QUARTER
22	23	24	25	26	27	28 FULL MOON
29	30	31 SEA TURTLE SEASON ENDS				



Left: Logjam of Baby Gators at Highlands Hammock State Park
Art Nadelman

Male Northern Harrier at Myakka River State Park | *Art Nadelman*

November 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	Left: Mullets at J.N. Ding Darling *Terry Baldwin*		1	2	3	4
5 LAST QUARTER DAYLIGHT SAVING TIME ENDS	6	7	8	9	10	11 VETERAN'S DAY
12	13 NEW MOON	14	15	16	17	18
19	20 FIRST QUARTER	21	22	23 THANKSGIVING	24	25
26	27 FULL MOON	28	29	30 HURRICANE SEASON ENDS		

Calico Crab | *John Courtney*

December 2023

COASTAL & HEARTLAND NATIONAL ESTUARY PARTNERSHIP

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
 Left: Catch of the Day White Pelicans at Sanibel *Edward J. Pelegrino*			BECOME A Citizen Scientist SIGN-UP AT CHNEP.ORG		1	2
3	4	5 LAST QUARTER	6	7	8	9
10	11	12 NEW MOON	13	14	15	16
17	18	19 FIRST QUARTER	20	21 WINTER SOLSTICE	22	23
24 CHRISTMAS EVE 31	25 CHRISTMAS	26 FULL MOON	27	28	29	30

Calendar Image Contributors

Names of those who submitted images within the CHNEP area include: Alan Shaw, Art Nadelman, Barbara Brooks, Barbara Gurney, Barbara Morris, Beth Palm, Betty G Madison, Beverly Stancel, Captain.Richard Damianos, Cara Czecholinski, Clara Carroll, Connie Griglin, Deborah Papineau Gregory, Donna J Whalen, Doreen Barbara Steinhauser, Edward J. Pelegrino, Eileen Fonferko, Elizabeth Krumholtz, Eva Furner, Gabriele Starrach, Gary Walker, Irina Pigman, Jamie Pipher, Jeffrey Martin, Jeffrey Spence, Jerry Waters, John Armstrong, John Courtney, Joshua Olive, Justin Pelegrino, Karen Mathis, Kathleen Colligan, Kathleen Davis, Kathleen Y. Futch, Lakshman Watawala, Laurel Adelmund, Leeza Fox, Leslie Turner, Linda Moreau, Linda Wroble, Lisa R Rogers, Lynette Walters Spence, Lynne Pedlar, Marcia Horne, Marianne Wroble, Melissa Herrick, Meredith Blain, Merle Smith, Mike Leffler, Miriam Pepper, Norris Carroll, Pamela Jones-Morton,PhD, PriscilIla Jean McDaniel, Robin Hagan, Ryan Schwaner, Sally Weigand, Sandra Poore, Sarah Vessey, Savannah Winstanley, Scott Stone, Sharon Fumei, Sheri Nadelman, Stanley Glowacki, Steve Russell, Steven Richardson, Terry Ryan, Theresa Baldwin, Thierry L Butler, and Tim Brusoe.

CHNEP Donors

Donors who contributed $50 or more in 2022 and whom are amenable to being acknowledged include the following: Linda & Mark Ball, Kathryn & Robert Ball, Bonitavideo, LLC, Lucy Breitung, Steven Canton, Cathy Chestnut, Todd Dary, John & Kathleen Deheer, Gene & Claudia Duncan, Alisha Feezor, Patricia Giordano, Patricia Green, Gloria Hansen, Mort Harkey, Damon D. Hickey, PhD, Dorothy Kenyon, Linda Kimman, Dieter Lehmann, Tom Lindsey, Sheree Marlow, Paul Martis, Shannon McGinnis, Thomas L. & Ruth L. Meinhart, Jennifer Meiser, Wayne Meland, Sal Carl Mellon, Nancy W. Mitchell, Judy R. & Arthur W. Moles, Monta Montgomery, Jess Morton Harkey Jr TTEE, Mike Murray, Paul & Priscilla Nichols, Carolyn R. Perrone, Layne Prebor, Carol Rose, Christine Saberton, Lucia Schatteleyn, Naomi Slifkin, Roger Smith, George & Yvonne Stevens, Sharon Taylor, James Traynor, David & Mamie Weiss, and Patricia Worch.

CHNEP Volunteers

Thank you to those who volunteered in 2022 including: Adele Dornheim, Alan Barnhart, Alexandria Grant, Alice Burton, Allie Robinson, Ann Vinkler, Art Salas, Arya Muppavarapu, Barbara Presner-McKane, Barbara Zittel, Bob Zittel, Bruce Cooper, Bruce Wojcik, Caleb Lawson, Catherine Weber, Cathy Barnette, Charlene Demetrops, Charles Kuhens, Cheryl Rudin, Cheryl Tough, Clifford Kewley, Collique Rawlings, Connor Lawson, Cynthia Dunham-Derheimer, Dakota Whelan, Danika Fornear, Dawn Johnson, Debbie Krebs, Debbie Sigle, Debora Ziegler-Bopp, Debra Brown, Dianna Whitman, Donald Shaunette, Dorthoy Ziegler, Edward Pelegrino, Ernesto Lasso de la Vega, Eva Kelly-Cubells, Gaby Placido, Gayle Sheets, Gillian Beck, Gillian Beck, Helen Buonviri, Herb Grommeck, Hilary Dahms, Jan Hahn, Jane Collingwood, Janee Robinson, Janet Wilson, Jeff Moore, Jerry Markussen, Jim Austin, Joan Wilson, John Hinnenthal, Joyce Laubach, Kate Rose, Kathleen Kuhens, Kathleen Narnhart, Kealy McNeal, Keira Heltsley, Ken Rolland, Kristian Dunda, Kristin Hoffschmidt, Kristine Lawson, Laura Ferrell, Linda Britton, Linda Garvey, Loretta Ivey, Louise Raterman, Margaret Gufmann, Mark Thompson, Marlou Bezems, Merry Shaurette, Michael Walters, Ovid Rawlings, Owen Pelegrino, Patricia Schindler, Pete Diamond, Phyllis Wojcik, Rae Bush, Renee LePere, Richard Bothmer, Richard Schreep, Richard Whitman, Robert Barrett, Scott Podboy, Scott Story, Shelby DeCapite, Solemi Hernandez, Sue Wills, Susie Derheimer, Tamara Reinke, Theresa Woodworth, Thomas Gramza, Tim Rawlings, Tony Flores, Vanessa Lee, Will Monroe, and William Woodworth.

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Coastal & Heartland National Estuary Partnership

2024 CALENDAR

JANUARY

SU	MO	TU	WE	TH	FR	SA
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

FEBRUARY

SU	MO	TU	WE	TH	FR	SA
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

MARCH

SU	MO	TU	WE	TH	FR	SA
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

APRIL

SU	MO	TU	WE	TH	FR	SA
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

MAY

SU	MO	TU	WE	TH	FR	SA
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26	27	28	29	30	31	

JUNE

SU	MO	TU	WE	TH	FR	SA
						1
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23	24	25	26	27	28	29
30						

JULY

SU	MO	TU	WE	TH	FR	SA
	1	2	3	4	5	6
7	8	9	10	11	12	13
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21	22	23	24	25	26	27
28	29	30	31			

AUGUST

SU	MO	TU	WE	TH	FR	SA
				1	2	3
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18	19	20	21	22	23	24
25	26	27	28	29	30	31

SEPTEMBER

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8	9	10	11	12	13	14
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22	23	24	25	26	27	28
29	30					

OCTOBER

SU	MO	TU	WE	TH	FR	SA
		1	2	3	4	5
6	7	8	9	10	11	12
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20	21	22	23	24	25	26
27	28	29	30	31		

NOVEMBER

SU	MO	TU	WE	TH	FR	SA
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
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24	25	26	27	28	29	30

DECEMBER

SU	MO	TU	WE	TH	FR	SA
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

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2022 CHNEP BY THE NUMBERS

80,000
acres within the Charlotte Harbor Flatwoods Initiative (CHFI) modeled for hydrological restoration

79,000
acres further protected within the CHNEP area

24
underserved students received scholarships to attend an Environmental Education camp

309
hours volunteers have given back during monthly events

232,320
acres within the South Lee County Watershed modeled for hydrological restoration

13,663
sampling locations on the CHNEP Water Atlas

5,969
subscribers to CHNEP educational publications

150
attendees & 25 presenters at the 2nd Southwest Florida Climate Summit