

VELADOR

Science-Based Sea Turtle Conservation Since 1959

Issue 2, 2023

Panama and Florida Enact New Laws to Protect Sea Turtles



STC Researchers measure a critically endangered hawksbill turtle in Bocas del Drago, Panama. Photo credit: Karolina Cambrono.

Panama has demonstrated its commitment to protecting sea turtles by enacting new legislation aimed at safeguarding these beloved creatures and their habitats. This new law is designed to promote the conservation of sea turtles throughout the country's territory, while also preventing pollution and degradation of their habitats, ensuring their

survival and recovery. With this law, Panama now possesses a robust legal framework that aligns with previous commitments it has made, including Law 8 from 2008, which established Panama's adherence to the Inter-American Convention for the protection and conservation of sea turtles.

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Sea Turtle Grants Program

... from cover

To guarantee successful implementation, the law establishes a “Committee for the Protection, Conservation, and Sustainable Management of Sea Turtles.” The Committee’s objective is to incorporate all relevant stakeholders to implement programs that protect sea turtles, promote conservation, encourage rehabilitation, raise awareness, conduct research, and develop tourism activities. It will also handle financing, monitoring, and surveillance, and will work with the Ministry of Environment and Public Security to monitor compliance with the law and ensure that penalties are levied when rules are broken. This committee’s formation is a significant step forward in the protection of sea turtles and their habitats and will be instrumental in achieving the goals outlined in Panama’s new law.



Legislators and representatives from the Ministry of Environment and non-profit organizations show the signed legislation document after the Sea Turtle Bill was approved in the third debate. From L to R: Ricardo Torres (legislator), Marino Ábrego (Ministry of Environment), Fernando Arce, Ariel Broce, Gabriel Silva, Miguel Fanovich and Petita Ayarza (legislators), Margaret Von Saenger (Panatortugas), Cristina Ordoñez (STC), Ana Rosas (legislator), Callie Veelenturf (The Leatherback Project) and Xavier Ow Young (STC).

Since 2020, the Sea Turtle Conservancy has been an integral part of process to develop this new legal framework on behalf of sea turtles. The project was initiated during the pandemic when the consumption of sea turtles began to increase, causing concern among all the organizations that work towards the conservation of sea turtles in Panama. As a leading member of Panatortugas, an ad-hoc network of NGO’s and community-based organizations that collaborate on sea turtle conservation efforts in Panama, Sea Turtle Conservancy worked tirelessly with Panamanian Senators to find like-minded officials who share our concerns about the plight of sea turtles in Panama. Working with elected officials and our NGO partners, STC helped launch the initiative to pass the new law, reviewed and commented on various drafts, attended numerous meetings among stakeholders, and engaged with Senators and government officials to guarantee the project’s success in protecting sea turtles and their habitats.

One of the most noteworthy aspects of this new law is that it guarantees

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In Caribbean cultures, *Velador* translates as “one who stands vigil” —referring to turtle hunters who waited at night for turtles to come ashore. STC claims this title for its newsletter, and around the world STC’s researchers and volunteers are replacing poachers as the new veladors. The *Velador* is published for Members and supporters of the nonprofit **Sea Turtle Conservancy (STC)**. STC is dedicated to the conservation of sea turtles through research, advocacy, education and protection of the habitats upon which they depend.

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Representatives from the Ministry of Environment, the Leatherback Project, STC and Panatortugas are in Congress supporting the creation of the Sea Turtle Law answering questions and doubts from the legislators regarding sea turtles, their habitats and how this bill can help sea turtles.

an NGO from the Caribbean region of Panama a seat at the table to discuss issues, solutions, and challenges concerning sea turtles. The Sea Turtle Conservancy will bring its years of expertise to the table, gained through its conservation efforts in collaboration with the indigenous communities along several beaches. With the Committee's establishment, the conservation of sea turtles and their habitats in Panama should improve considerably, creating a brighter future for these species in Panama and throughout the Caribbean. 🌊

By Xavier Ow Young
Panama Outreach Coordinator

Meanwhile in Florida, STC is thrilled to announce that Florida House Bill 1489, a bill designating the southern barrier island of Brevard County as an "Area of Critical State Concern," was signed into law by Florida's Governor in June. Brevard County's south beaches join only five other areas in Florida with this unique designation, including the Florida Keys, Key West, Big Cypress, the Green Swamp and the Apalachicola Bay area.

This new protection area contains the entirety of the Archie Carr National Wildlife Refuge, a 20.5-mile section of shoreline between Melbourne Beach and Wabasso Beach – the most important sea turtle nesting beach in the United States. It also contains the Indian River Lagoon, an important estuary, recreational fishery, and developmental habitat for sea turtles.

The law requires state, regional, and local government agencies to prevent the adverse impacts of development on resources critical to sea turtle habitat. This includes prohibiting new shoreline hard armoring, reducing nutrient pollution to improve water quality, supporting nature-based solutions to restore habitat, ensuring that development is compatible with the barrier island's natural resources, and more.

After learning about efforts to increase development density on Brevard's South Beaches earlier this year, Sea Turtle Conservancy worked with Barrier Island Protection and Preservation Association (BIPPA), 1000 Friends of Florida and Brevard County legislators to help draft and advocate for this legislation. At every committee stop, including the full House and Senate, the bill passed unanimously. We believe this was due to the overwhelming feedback legislators received from community members and supporters about the bill.



A green turtle returns to the Atlantic Ocean after nesting in the Archie Carr Refuge. Photo credit: Betty Gonzalez.

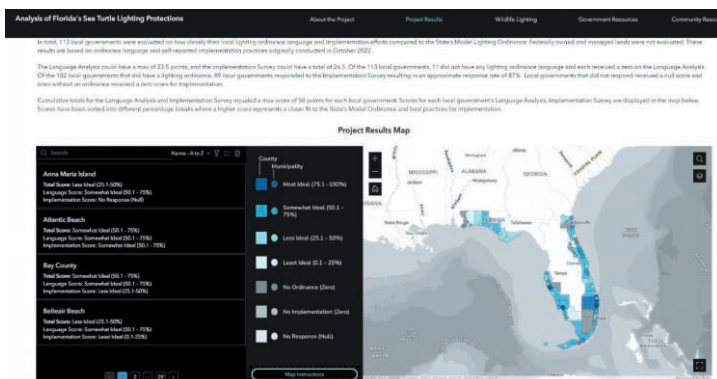
We thank Representative Thad Altman and Senator Tom Wright for filing this legislation, as well as their staff aides who helped usher the legislation through the process. The bills had strong support from the entire Brevard County legislative delegation. We are also grateful to our conservation partners, legislators, local community members, and our dedicated supporters who helped contribute to this victory for sea turtles! 🌊

By Stacey Gallagher
Development & Policy Coordinator

New tool available to help Florida communities improve lighting for sea turtles

Sea Turtle Conservancy (STC) and National Wildlife Federation (NWF) are thrilled to share the release of an exciting new tool to help local governments and the general public to better protect sea turtles! In Florida, more than 100 local governments have enacted and enforce beachfront lighting ordinances during sea turtle nesting season. A majority of these ordinances are based off of the State's 1993 Model Lighting Ordinance for Sea Turtle Protection. A decade ago, the University of Florida Levin College of Law and partners created a system to score the language of local lighting ordinances for sea turtle protection in Florida based on this 1993 Model. Since that time, there have been significant advances in technology and our understanding of sea turtle disorientations. To reflect these advances, the State adopted an updated Model Lighting Ordinance for Sea Turtle Protection in December 2020.

As a result, STC, NWF, and Florida Fish and Wildlife Conservation Commission have been working to update and expand upon the 2013 study and create an interactive online tool that allows viewers to determine how well their local lighting ordinance language and implementation strategies compare with ideal standards set in the 2020 Model. This tool, which has been supported by grants from the National Fish and Wildlife Foundation, Disney Conservation Fund, and the Archie Carr Center for Sea Turtle Research, also provides resources for local governments and community members looking to improve lighting conditions for sea turtles on their nesting beaches.




“Along the coast, strong lighting ordinance language and implementation strategies help create darker night skies which benefit both people and Florida’s sea turtles,” said Rachel Tighe, STC’s Lighting Project Manager. “However, with advances in technology and better understanding of sea turtle disorientations, many communities have outdated language. Our goal with the website is to make it simple for leaders and constituents of coastal governments to learn about the status of their existing ordinance

language and enforcement and become inspired to improve.”

The website allows users to learn more about their local lighting ordinance and offers community members knowledge about how to bring their properties into compliance to better improve sea turtle nesting habitats and increase protections for sea turtles.

“Florida’s coast alone represents more than 90% of all the sea turtle nests in the United States, but sadly artificial lights are one of the biggest threats to sea turtles,” said Melissa Hill, NWF’s Gulf Program Manager. “Using clear language in local lighting ordinances helps protect our globally important beaches for sea turtle nesting.”

The website also includes additional guidance for residents and local governments working to update or enact a new local lighting ordinance. As development pressure continues on Florida’s coastline, we hope that local governments will use this tool to strengthen their sea turtle protection ordinance language and enforcement. To view the tool, visit conserveturtles.org/beachfront-lighting-how-you-can-help. 

Tour de Turtles

STC recently kicked off its 16th annual Tour de Turtles migration marathon! The Tour de Turtles is a fun, educational journey that follows the migration of sea turtles from their nesting beaches to their foraging grounds. Through the use of satellite telemetry, STC is tracking 22 sea turtles, including leatherbacks, loggerheads, greens and hawksbills to determine how far they swim. The one to swim the furthest distance by October 31 “wins.”

Each turtle is also swimming to raise awareness about the threats sea turtles face. These threats include light pollution, beach erosion, marine debris, oil spills, commercial fisheries, illegal hunting, invasive species predation, climate change and more. The data collected during the Tour de Turtles helps researchers, conservationists and governing agencies make more informed decisions about sea turtle conservation methods and policies. Since the launch of the Tour de Turtles in 2008, STC has tracked more than 200 turtles. Meet this year’s turtles and their sponsors below!



Leatherbacks

- Centennia - Turtle
- Turtina - Certina
- Samana - Atlantis
- Moana - Shark Reef Aquarium
- Dr. Turtle - Supercell
- Opal - Fahlo
- Leo - GXS Bank
- Mikey - GXS Bank
- Tello - GXS Bank
- Pedro PaSCALE - Graft Cider



Chelonians

- Suzi - Coastal Wildlife Club & Anna Maria Island Turtle Watch
- Cheddah - Gimme Seaweed
- Mamacita - cinder & salt
- Kiwi - Fahlo
- Marcia - The Turtle Hospital
- Marigold Puddlefoot - Gideon’s Bakehouse
- Kelpy - SEALIFE Trust
- Tippi - Four Seasons Nevis
- Bella - Four Seasons Nevis
- Harriet - Disney Conservation Fund
- Madame Leota - Disney’s Cruise Lines
- Zee - Howard & Susan Zemser



You can support the turtles by “adopting” them or sharing on social media to help raise awareness! Learn more about each turtle and follow their migrations at www.tourdeturtles.org. 

Sea Turtle Grants Program

Sea Turtle Grants Program (STGP) awards over \$500,000 to support turtle research and conservation in Florida

The Sea Turtle Grants Program (STGP), funded by the sale of Florida's "Helping Sea Turtles Survive" specialty license plate, awarded \$490,892 to 30 projects benefiting Florida sea turtles as part of the 2023-2024 grant funding cycle. Additional funding was made available for emergency grants and to support the annual Sea Turtle Permit Holders meeting. Each year the STGP, which is administered by STC, distributes money to coastal county governments, educational and research institutions and nonprofit groups through a competitive application process. The sea turtle specialty license plate also is the primary source of funding for the Florida Fish and Wildlife Conservation Commission's Marine Turtle Protection Program.



The following organizations received grants for the 2023-2024 cycle:

- Clearwater Marine Aquarium: Endoscopy Equipment
- Florida State University: Determining Exposure Levels of Marine Turtles to Vessels in North-Western, Florida
- Loggerhead Marinelife Center (LMC): Support for Critically Ill Sea Turtles in Rehabilitation
- Sea Turtle Conservancy: A Legal and Policy History of Sea Turtle Conservation in Florida
- Inwater Research Group: Information to Protect Sea Turtles from Vessel Strikes
- Brevard County Environmentally Endangered Lands Program: Displays at the Barrier Island Center telling the interconnecting stories of Doc Ehrhart, his students, sea turtles and the Carr Refuge
- Nova Eisenhower Elementary: Student Scientists for Sea Turtle Conservation
- Gulfarium C.A.R.E. Foundation: Gulfarium C.A.R.E. Center Flexible Endoscope
- Friends of St. Joseph State Parks: UTV for St. Joseph Peninsula State Park Sea Turtle Surveys
- Inwater Research Group: Characterizing the Diet of Pier-Hooked Green Turtles
- Stella Maris: Crawl Scene Investigation (CSI): Measuring Hatchling Mortality from Artificial Lighting
- Zoo Miami Foundation: Water Quality and Hospital Equipment
- Loggerhead Marinelife Center (LMC): Investigating clutch frequency and inter-nesting habitat for a globally important loggerhead rookery: Year 4
- Sea Turtle Conservancy: Threats to Sea Turtles Mobile Educational Display
- UCF: Equipment to continue a long-term juvenile marine turtle population structure and abundance study.
- The Florida Aquarium: Expanding Temporary Capacity at The Florida Aquarium's Sea Turtle Rehabilitation Center
- The Turtle Hospital: Sea Turtle Rehabilitation Ultrasound System
- Florida State Parks Foundation: Sea Turtle Data Collection UTVs
- Florida State Parks Foundation: Sea Turtle Education Kits
- Loggerhead Marinelife Center (LMC): Global positioning system units for LMC's nesting beach monitoring
- Mote Marine Lab: Bacterial Dynamics of Newly Identified Dermatitis in Green Turtles on Florida's Gulf Coast
- Gulfarium C.A.R.E. Foundation: Gulfarium C.A.R.E. Center Necropsy Suite and Rehab Bins
- Florida Atlantic University: Swimming kinematics to understand neonate sea turtle dispersal
- University of Florida: Integrative assessment of Fibropapillomatosis dynamics in free roaming green turtles (*Chelonia mydas*) from the Northeastern Gulf of Mexico
- University of Central Florida: Late-Season Sea Turtle Nesting in Central and South Brevard County, FL Year 3
- City of Miami Beach: Turtle Friendly Lighting Education Campaign
- Miami-Dade County Parks & Rec Dept: Sea Turtle Conservation Program Mobile Education Unit
- University of Florida – Whitney Lab: Critical Surgical Equipment for Intensive Care
- East Coast Biologists, Inc: Keep on tracking! Passive acoustic telemetry is a vital tool for detecting movement patterns and resource-use by east Florida's immature sea turtles

To learn more about the Sea Turtle Grants Program and the "Helping Sea Turtle's Survive" License Plate, visit helpingseaturtles.org 

Barrier Island Center Update

A Continuum of Sea Turtle STEM Education Programs in the Archie Carr Refuge

The Sea Turtle Conservancy at the Archie Carr National Wildlife Refuge, in collaboration with our partners in the Archie Carr Working Group, have built a continuum of hands-on, immersive STEM (Science, Technology, Engineering and Math) educational opportunities for all ages and backgrounds. Through creative real world integrative STEM programming, we have expanded our reach and impact in the

community to inspire stewardship of our globally significant sea turtle populations and their habitats.



Students designed boat strike prevention devices for boat propellers to prevent sea turtle strikes.

In 2019, STC launched the Sea Turtle TECH STEM Mentorship and Conservation Career Training Program to train middle schoolers, teens and college students from diverse, underserved backgrounds in the tools, technologies and techniques used in sea turtle science and natural resource management through immersive, hands-on STEM workshops. Over three years, STC and our partners have trained 130 youth and teens in both Brevard and Indian River Counties through Sea Turtle TECH. STC has also hosted 11 high school and college interns at the Barrier Island Center (BIC) for nine week paid summer internships

in the Conservation Career Training Program. This innovative STEM and career training program has improved student confidence in STEM principles, knowledge of sea turtles and their habitats and the likelihood of students to participate in pro-conservation behaviors. The Disney Conservation Fund, The Community Foundation for Brevard, Quail Valley Charities, The Sea Turtle Grants Program and The Conservancy Friends of Aquarina have all been generous supporters of these programs.

In 2022, we expanded our STEM offerings during the school year for study trips to the BIC in partnership with the Brevard County Environmentally Endangered Lands Program. STC adapted the Sea Turtle TECH STEM Workshops to create programs available to private groups and classes with a minimum of 10 students. We hosted eight Sea Turtle STEM programs during the 2022-2023 school year for homeschool, charter and public middle and high schools. In fall 2022, our team launched the new “Sea Turtle Academy STEM: Building Solutions to Sea Turtle Threats” follow up outreach program for K-5 students participating in our Sea Turtle Academy (STA) school study programs at the BIC. STC also provided bus scholarships to Title-1 classes who participated in the Sea Turtle Academy field study trips and the new STA STEM Outreach Program.


The curriculum design, educational materials, and bus scholarships for the new STA STEM Outreach Program were supported by a grant from the Sea Turtle Grants Program. We reached 304 students from four Title-1 schools who used their ingenuity and problem solving skills to address the threats sea turtles face from boat strikes, fishing nets, disorientation caused by white lights and predator risk on the nesting beach. All students built an innovative solution to each threat. Students improved their knowledge of the threats sea turtles face and what they can do to help them survive.

Through innovative new STEM programs, STC and our collaborators are reaching new audiences, diversifying programming and expanding our reach to inspire the future generations of stewards of the Archie Carr Refuge to protect our globally significant sea turtles populations and their habitats. 🌊



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Florida Staff Update

STC recently welcomed two new staff members, Kate Miller (below left) and Margaret Lilyestrom (below right) to the team. Kate joins our Accounting Department while Margaret becomes a Research Assistant after interning for STC the last year. Kate graduated with her B.A.S. in Accounting this Spring from Santa Fe College in Gainesville, FL. She grew up in Florida State Parks as both her parents are park rangers. In her free time she enjoys hiking, visiting Florida's springs, and weightlifting.



Margaret recently graduated from the University of Florida with a bachelor's degree in marine sciences, and has had previous experiences working with stone crabs, sea urchins, and sea turtles. In her free time, she enjoys swimming, roller-skating, and making pottery. Margaret has always loved learning about sea turtles and is extremely excited to continue working with the STC in their efforts towards sea turtle conservation. Please join us in welcoming them to the STC family!