

OYSTER CATCHER

A publication of the Apalachicola National Estuarine Research Reserve

Special Edition - 2021/2022 Annual Report



This issue of the Oystercatcher is chock-full of program successes, so I'd like to use this space to recognize our hard-working staff. Over the last year we had both of our administrative staff, Carla Watkins and Debbie Gowens, retire after many years of service. These two positions handle all of the human resources, operations, and budget oversight for the Reserve. We were very lucky to hire Paula Cudie as our new budget coordinator and Amy Marable as our new Human Resources lead. They have both been doing a fantastic job and everything has been running smoothly!

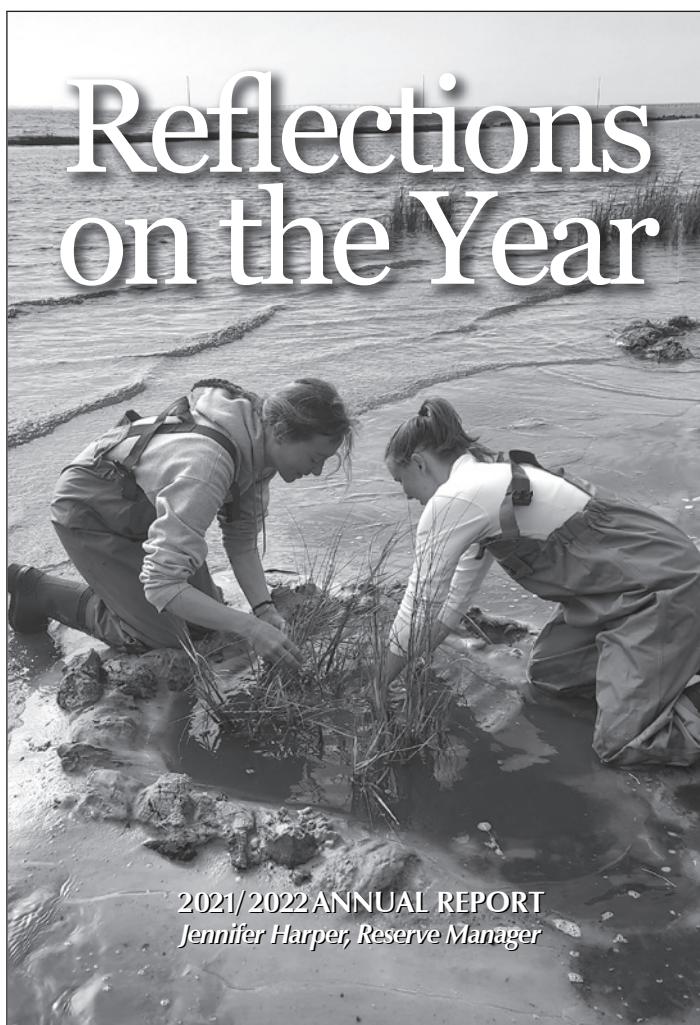
Volunteers are integral to the operation of the NERR, and our volunteers assist us in many ways. Periodically we find a volunteer that has expertise that aligns perfectly with our mission and program goals. This past year we were able to fill positions at the NERR with two such long-time volunteers. Scott Shepherd has joined our research program and Melanie Humble has just joined our education program. Both bring a tremendous amount of experience to the Reserve, but also a high level of enthusiasm and positive energy. Over last winter, we were able to recruit Morgan Whitmer as our GIS/Stewardship Specialist and Alicia Bruno as our Coastal Training Program Specialist. Both ladies have

a diverse background and bring unique skills to the ANERR team. We are excited to see all that they can do.

Many of the staff have been able to participate in leadership training, professional development and cross-training opportunities this year. I applaud them in their efforts to

continue learning and striving to improve their skills. We have a few staff moving positions and some promotions. Caitlin Snyder will be shifting responsibilities to be at the Lake Jackson Aquatic Preserve full time. We are sorry to see Cait go, but excited to see what big plans she has for the LJAP. Megan Lamb will be filling the Stewardship Coordinator position that Cait leaves. Coming from the research program, she has extensive knowledge of the Reserve's natural resources and our programs and will do an excellent job leading the stewardship program. And lastly, Samantha Lucas has been promoted into Megan's Environmental Specialist II position.

I would also like to take this opportunity to congratulate all of the staff on a very productive and successful year. In addition to accomplishing everything that we laid out in our annual grant application, we were able to initiate new research collaborations, build new partnerships, and participate in new outreach events. Everyone has done a great job this year.



"Congratulation to the Reserve's Staff on a very productive and successful year."

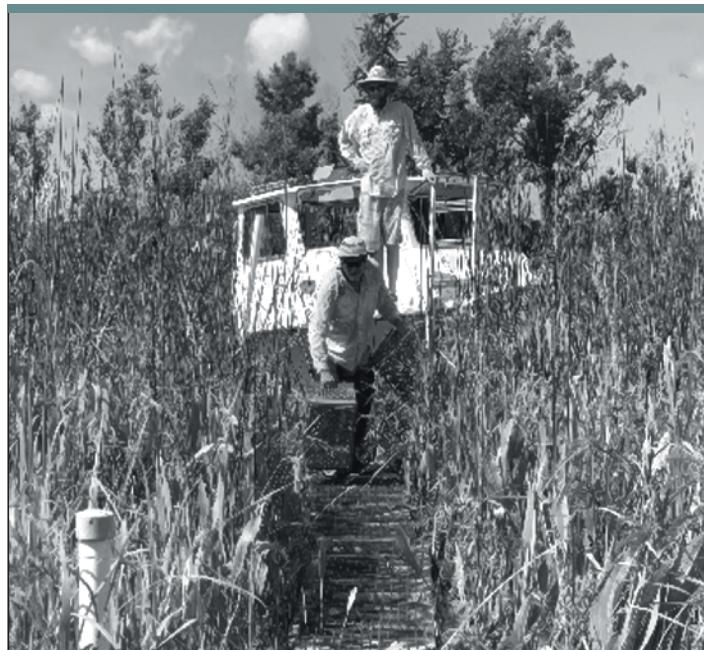


RESEARCH & MONITORING

To say that a lot has been happening in the Research department since the last annual Oyster Catcher Publication would be an understatement. Old collaborations have continued, and new ones have sprouted and begun to flourish. The lower river marsh collaboration with Auburn University, which was mentioned in our last publication, concluded in the spring of 2022. At the same time Research kicked off a new collaboration with Pennsylvania State and Notre Dame Universities to study estuarine metabolism and bay acidification. Additionally, the Research Coordinator collaborated with multiple NERRs and universities around the world to publish Reserve data sets in one of the world's leading peer-reviewed Journals. The manuscript, titled "Global drivers of tidal marsh response to sea level rise to accelerating sea level rise" is being published in the Journal Science in July 2022.

During the same time period there were changes in staffing of the Research Team. We're excited to announce that Megan Lamb, who's been working in the Research department since 2004 has left the Research section where she served as the lead biologist, has been promoted to the Reserve's new Stewardship Coordinator. Although we're saddened to lose her as a Research team member, we know she will be a great asset to the Stewardship Team. Luckily the two sections work very closely at the Reserve, so we'll still be able to collaborate on new and exciting initiatives. The transition put Research in need of a new biologist, and we didn't have to look far. In July 2022 Research promoted Samantha Lucas, the Reserve's water quality technician, to be our new biologist and is now working fervently to hire a new water quality technician to replace Samantha. So, more changes are to come in the future.

Even though there have been a lot of changes on the staffing front, the Research team continues to maintain the projects they've always had while managing to grow and develop our program, and we wanted to take the opportunity to highlight just a few of the many accomplishments below.



Top: Research staff Scott Shepherd and Ethan Bourque install the newly constructed marsh friendly boardwalks. Middle: eDNA intern Tina Hennig uses a YSI handheld to collect water quality data. Right: Jenny Bueno, Margaret A. Davidson Fellowship Recipient,



Research Installs Marsh Friendly Boardwalk System at Little St. Marks

at Little St. Marks - The Research Section has been developing a system of marsh friendly boardwalks in an effort to mitigate the potential for damage to the marsh sediments and vegetation at the Little St. Marks climate and sea level rise study site. Adapted from a design used at Great Bay NERR in New Hampshire, we've developed a type of structure that literally floats on the surface of the marsh while remaining in place. The open grates, which provide the surface to walk on will also allow for light penetration as well as sufficient openings through which the marsh plants can grow. Another benefit of the system is that it can be easily removed in the event removal would be necessary. Research has installed the first "leg" of boardwalk along the vegetation and pore water transects at the Little St. Marks site. If the initiative proves successful, we plan to add to the system connecting the remaining field site. We hope to expand to other sites in the future.

Research Hires a Summer Intern to work on Environmental DNA in Apalachicola Bay

Apalachicola Bay - Research received \$25,000 in grant funds through a collaboration with eDNA scientists at University of New Hampshire and several other NERRs to conduct eDNA Research in Apalachicola Bay. We have decided to use the funds to hire an undergraduate intern as a research assistant to help us conduct field preparations and laboratory processing. Tina Hennig joined us in May of 2022 and hails from Milwaukie, Wisconsin. Tina will be working with us to collect DNA from our water samples during our nutrient trips and she will be in charge

of processing the samples in the laboratory. Tina will also assist us with our many field operations this summer.

Research Collaborates with DEP's Office of Environmental Accountability and Transparency on a State Funded Graduate Fellowship - ANERR Research collaborated with DEP's Office of Environmental Accountability and Transparency (OEAT) and Dr. Mark Rains, the State's lead scientist to develop a state funded graduate fellowship. We were successful in securing \$9,875 in funds for the fiscal year 2021- 2022 to bring on a graduate student to assist the Reserve in developing digital image libraries for our FlowCam microscopic image recognition system, which is used to identify zooplankton samples collected by the Research department. This spring, Research was successful in securing an additional \$45,000 in funds for the 2022-2023 fiscal year. The funds have enabled us to recruit a master's level graduate student to conduct the work while obtaining their degree. The Research team is excited to announce it's first state funded fellow, Katherine (Kat) Neilson at the University of South Florida. Kat will be working under the direction of Dr. Kendra Daily and Research Coordinator, Jason Garwood to develop a master's project while assisting the Research department with processing their plankton samples.

ANERR Announces the 2022 Margaret A. Davidson Fellowship Recipient

It's hard to believe that ANERR has already hosted a successful federally funded (NOAA) graduate research fellow for the 2020 cohort, but it's even harder to believe that we've already began hosting and conducting field operations with our new 2022 Margaret A. Davidson Fellowship candidate, Jenny Bueno. Ms. Bueno is a Master of Science Candidate at Florida State University working on a project titled "Using high resolution aerial imagery to quantify rates of mangrove encroachment into estuarine habitats in Apalachicola Bay." Jenny is working under the Direction of Dr. Sarah Lester at FSU as well as both the Research and Stewardship sections of the Reserve. Jenny's work will add to the project of former Stewardship Coordinator, Cait Snyder, who was the first to map the extent of mangroves throughout the Apalachicola system. Jenny's research aims to use high resolution aerial imagery to quantify mangrove expansion. Additionally, I also aim to use unoccupied aerial systems (also known as drones) to understand the drivers, such as elevation or marsh plant presence, that may be influencing mangrove establishment. We're excited about this new project and we're excited about the opportunity to collaborate between the two Reserve sections.

These are just a few of the many important and interesting projects our research staff have been up to. If you're interested in learning more, or if you'd like to join us in the field, please reach out to Jason Garwood, Research Coordinator at 850-670-7705 or jason.garwood@floridadep.gov.

STEWARDSHIP

The Stewardship Program's primary goal is to protect and restore resources on Reserve-managed lands from factors which degrade natural communities and affect adjacent water quality. The team focuses on habitat management and mapping, listed species monitoring, invasive species control, land acquisition, protection of cultural resources, facilitation of public use and access, outreach, restoration, and several other system-wide efforts. The Stewardship sector, along with the other Reserve programs, take care in managing upland and aquatic resources and promote conservation of the area's natural biodiversity through applied research and education. The program relies on partnerships with local land managers and regional agency groups to meet the common goals of conservation across a unique landscape.

Resource Management - The Stewardship team continues to work towards reintroduction of prescribed fire where possible and reducing wildlife risk on Reserve-managed lands. Recently staff has been focusing on mechanical reduction of fuel in critical areas of Unit 4, where prescribed fire cannot be applied at the current time. Over the winter staff coordinated with the Conservation Corps of the Forgotten Coast to remove dangerous snags from fire lines that could affect nearby houses.



Prior to nesting season, staff participated in a workday on the St. George Island Causeway site helping install signage and conducting a pre-season clean-up.

Stewardship staff and interns continue to mark and monitor sea turtle nesting on Little St. George Island annually. The 2021 season ended with 137 loggerhead and one green sea turtle nest, and 77 nests were evaluated for hatching and emergence success for inclusion in FWC's Nest Productivity Assessment Program. The 2022 nesting season is underway at the time of this publication. Staff are collaborating with researchers studying microplastic presence in non-viable sea turtle eggs, Northern Gulf of Mexico green sea turtle genetics, and sand and nest incubation temperatures.

Staff continue to partner with Audubon Florida and volunteers to monitor important shorebird nesting areas across the reserve, including Little St. George Island, Bird Island, the St. George Island Causeway, L-Bar, and Nick's Hole. Prior to nesting season, staff participated in a workday on the St. George Island Causeway site helping install signage and conducting a pre-season clean-up. Staff are members of the Florida Panhandle Shorebird Working Group, which includes partners from federal, state, local governments, non-governmental organizations and individuals.

Biannual emergent marsh vegetation monitoring was completed in 2021 at Little St. Marks and Pilot's Cove. These sites are part of the NERRs Sentinel Site program designed to understand the effects that changing water levels will play in our marshes. In 2022, a new vegetation site was added at Unit 4, and monitoring was changed from biannual to a once annual frequency. The first six years of monitoring data was compiled and submitted to the NERRs Central Database Management Office, where it is available publicly.

Staff completed annual monitoring of mangrove transects in 2021 and are currently beginning 2022 transect monitoring. Staff are collaborating with multiple researchers interested in our local mangrove population, including the Reserve's Davidson Fellow, Jenny Bueno (Florida State University).

Staff have continued to monitor for invasive species in managed areas, mainly treating Popcorn trees and Camphor trees. Last summer staff conducted a windshield survey, driving over forty miles on St. George Island in search of Brazilian Peppertree and Beach Vitex. These two invasive plants have had multiple recent reports around our reserve lands; however, none have been found inside the Reserve boundaries at this time.

Staff are participating in a NERR Pilot study of Wildlife in Our Coastal Wetlands ("WOW") by using camera traps. Camera traps have been deployed at Nick's Hole, Little St. George, and Rodrigue. The project goals are to characterize animal use of different habitats and serve as educational tools to engage the public.

Last winter and spring the US Army Corp of Engineers dredged the Apalachicola River and Sikes Cut channel, utilizing Bird Island and the eastern Gulf-front end of Little St. George Island as spoil placement areas. Staff worked with the Corps to coordinate spoil placement to allow for habitat continuity with neighboring areas, access to recreational areas, and reduce negative impacts to organisms that utilize these areas. A colony of Least terns is now nesting on the Little St. George spoil, and we hope they fledge many chicks this season.

Stewardship staff also completed annual cultural and historic resource site visits within the Reserve. Staff continue to conduct biannual photopoint monitoring at 31 stations. New StoryMap tools are being developed to visualize this information.

Public Use and Facilities - Stewardship staff maintain eleven kiosks at access points across our managed areas. These kiosks provide maps, brochures, and interpretation signage indicating recreational opportunities available at each area. The Reserve's popular Roadmap to Recreation has been updated with even more opportunities for recreation in our local area. It is available at the Nature Center upon request, from partners across the area, and online at ANERR's Friends of the Reserve website (www.apalachicolareserve.com).

Geographic Information System (GIS) Support - ANERR's GIS specialist provides support to many resource management, administrative, and other projects. Staff created a new storymap, "Welcome to the Apalachicola NERR," available online: <https://fdep.maps.arcgis.com/apps/MapJournal/index.html?appid=711999f42f6246dfb7a5c638a2b3c15a>. In 2022 staff updated more than thirty maps for inclusion in ANERR's Management Plan update, which is currently under review and slated for a late year release. The Reserve's GIS database was converted from ArcMap to ArcPro to keep up with technological updates. Burn databases, property maps, and supports for resource management monitoring were updated throughout the year. While less visible to the public, these undertakings assist all ANERR sectors in keeping up-to-date and running smoothly.

Restoration - Reserve staff continue to coordinate with the Conservation Corps of the Forgotten and Emerald Coasts and have enhanced the co-managed native plant nursery at ANERR's shop site. The enhanced nursery will now be able to support the growth of over 30,000 Spartina alterniflora marsh species that will be used for living shoreline projects.

Central Panhandle Aquatic Preserve staff, along with ANERR, Duke Energy, University of FL/IFAS, FDEP and the Conservation Corps, teamed together to restore the marsh at the Cat Point Living Shoreline. In 2022, the team planted 11,592 plants along the shoreline at ANERR's headquarters. Since 2001, approximately 27,000 plants have been harvested and planted along the shoreline to supplement the project and, along with the oyster breakwaters, help to prevent further erosion along the shoreline.

A Reserve staff member serves as the Chair of the Panhandle Estuarine Restoration Team (PERT) Steering Committee. This year, PERT hosted their fourth

annual membership meeting to provide participants with an opportunity to network with restoration professionals in the panhandle and to share information about projects, lessons-learned, resources, funding and technologies. Staff also hosted the first meeting with Florida's five other Estuarine Restoration Teams (ERTs) Steering Committees in Northeast Florida, East Central Florida, Southwest Florida and Tampa Bay, to collaborate on common goals, effective communication platforms, future needs, and data gaps as well as ideas to enhance collaboration and share information state-wide.

EDUCATION

Over the past year, 22,500 people visited the Reserve Nature Center or took part in educational programs provided by Reserve staff. Participation was primarily from walk-in visitors who accounted for about 21,000 visitors. Visitation was about 20% below pre-pandemic numbers.

Staff-facilitated educational programs for student and adult groups accounted for the additional participants and represented another busy year working to foster stewardship of the Apalachicola Estuary. Following is a summary of education programs activities over the previous fiscal year.

School Programs - The primary focus of the ANERR Education Program is our formal education field activities with K-12 students and teachers in Franklin County. The rural nature of the district provides a unique opportunity to reach every student every year in grades Pre-k, 1st, 3rd, 5th and 7th. These students

1st grade; Beach Scavenger Hunt, 3rd grade; Saltmarsh Seining and Oyster Discovery Dig, 5th grade; Living Shoreline Restoration and Monitoring, 7th grade; Salt Marsh Food Webs, the Ecological Adaptations of Spartina and the Life of Monarchs.

Formal programming also includes the facilitation of activities for school groups from other regional districts and various organizations. Over the previous year, 684 students participated in formal programming facilitated by education staff at ANERR.

Special thanks to our Friends of the Reserve citizen support organization for providing funding for transportation and substitute teachers that allow our local schools to participate in ANERR Education Programs.

Group Programs and Outreach - Programs for the general public were well attended with nearly about 800 visitors taking in one of our summer Turtle Talks or Reserve Wednesday Public Lectures. Special topics included: Living Shorelines, Monarchs, Fishing the Bay, Manatees, Artificial Reefs, Oyster Research and the History of St George Island.

Participation in outreach programs was limited over the initial six months of the grant period due to various sponsors canceling events with covid concerns. The Apalachicola Seafood Festival was an important exception as it is an annual event that attracts a wide range of visitors. Staff hosted an information table that included a live-animal touch tank and met with over 1000 visitors.

Attendance at outreach programs was significant over the remainder of the grant period with multiple sessions at the Apalachicola Library, H'COLA (the Hillside Coalition of Laborers for Apalachicola - which specifically serves the African-American Community in Franklin County), Shrimp Festival (a new festival fundraiser for the St George Lighthouse)

and the Florida State Coastal and Marine Laboratory Open House. ANERR Outreach programs reached nearly 2,700 people over this grant period.

Teacher Training - A specific task of the ANERR grant award requires facilitation of a Teachers on the Estuary (TOTE) workshop each year. These professional development programs are a component of the National Reserve System and part of the National Oceanic and Atmospheric Administration (NOAA). The goal of TOTE is to improve teachers' and students' understanding of the environment using local examples and to provide resources and experience to support the incorporation of estuary and watershed topics into classroom teaching. For the 2022-2023 school year,



Rescheduling Estuaries Day to May was a significant success and the plan is to continue this schedule in coming years. 850 people attended this year's event.

participate in standards aligned ANERR Education in programs that focus on the ecology of Apalachicola Bay, the value of preserving its productivity and its importance to quality of life in the community.

Over the previous year, education programs maintained a steady pace (given the national health crisis with K-12 programming) and returned to their pre-pandemic schedule. The majority of student activities occur in the field working with home school groups, summer camps, after school programs and our yearly sessions with all students in Franklin County. Specific grade level activities are as follows: Pre-k, A Home for Hermit Crab,

TOTE was conducted across the academic year and specifically targeted teachers that bring their students to ANERR for education programming. This approach was a new and unique plan that was allowable due to recent changes to TOTE requirements as a result of covid restrictions. Every student program in grades 3, 5 and 7 was captured on video and edited into five minute summaries that depicted grade level content within the student program. Teacher input on the content was an essential component of their participation in the workshop. The anticipated use of these videos, with every student in the district represented, include providing students with focused reviews of the science standards taught during the field trip and expanding the content in each video across multiple disciplines (math, LA, civics, art, history). These videos are also designed to establish a curriculum library that can be used across multiple grade levels by any teacher at any grade level across the district, as well as share the content with extended family and for public relations (ANERR and the district).

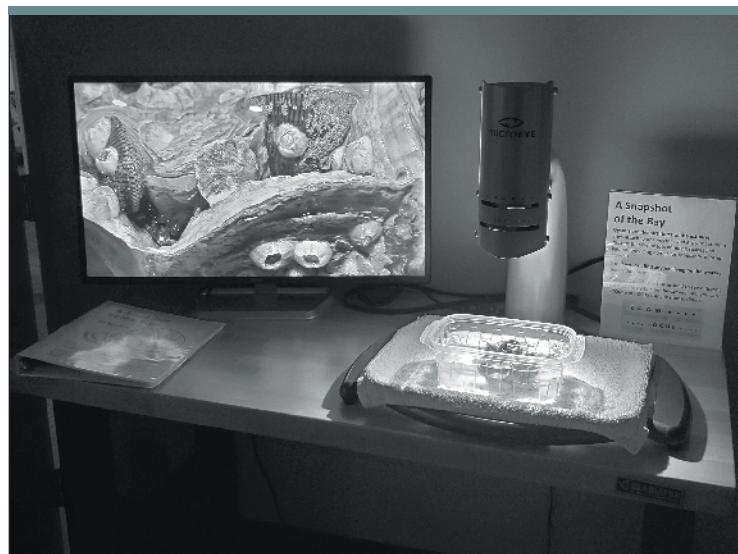
ANERR also partnered with the Mississippi State University Coastal Research & Extension Center to facilitate a teacher workshop called Sea Level Rise in the Classroom. This workshop was curriculum focused and designed to foster science, civics literacy and community driven solutions.

Through the 2021-2022 grant period, 27 teachers participated in professional development facilitated by ANERR Education staff.

Estuaries Day - The primary program at the Reserve designed to focus on local residents during seasonally low visitation periods.

Normally held the first Friday in September, this year's event planning was especially difficult because some agencies, volunteers and sponsors were reluctant to participate due to covid concerns. Rather than cancel a major community event that includes a half-day off for students to attend, the event date was moved to spring. This schedule change was a significant success and the plan is to continue holding Estuaries Day in May every year going forward. 850 people attended Estuaries Day.

A New Exhibit - A new permanent exhibit has been installed in the Nature Center designed to provide high resolution microscope projections onto a monitor. Visitors are able to manipulate the scope to magnify a wide range of objects as well as engage with various prompts to learn about interesting and important topics such as shell predation clues and microplastic issues. An unanticipated application has become a real highlight for visitors. Individual oyster substrate is collected for observing the diverse array of fauna that inhabit an estuary. Referred to as a "snapshot" of the bay, this new exhibit is especially effective at providing visitors an opportunity to see the productivity of an estuarine system. Additionally, the scope and screen have been used successfully for public outreach events, as well as for K-12 student programs.



A new permanent exhibit has been installed in the Nature Center designed to provide high resolution microscope projections onto a monitor.

COASTAL TRAINING PROGRAM

The Reserve's Coastal Training Program (CTP) section is staffed by Coastal Training Program Coordinator Anita Grove, and the Coastal Training Program Specialist Alicia Bruno. Together we bring resources, technical assistance, and trainings to decision makers, appointed leaders, and their staff to assist them in implementing sound coastal management policies to protect Apalachicola Bay and River resources vital to health of our estuary, our economy, and our quality of life. The Coastal Training Program Coordinator regularly attends meetings of the Franklin County Commission, Apalachicola City Commission meetings, and monthly Apalachicola Planning and Zoning meetings to stay up to date on area needs and issues and to strengthen partnerships. We also consult documents such as the Northwest Florida Water Management District Surface Water Improvement Plan and the Apalachicola Area of Critical State Concern Workplan to help assess needs in the watershed.

CTP fosters working relationships with local businesses and professionals, including city and county planners, land managers, the tourism industry, seafood dealers and harvesters, real estate

professionals, landscapers, developers/builders, and recreational fishing and tour guides to help increase stewardship of local resources and increase the resilience in our coastal communities. This year we held 24 formal trainings for 223 people which equated to 80.5 hours of training. Courses included Culture/Historic Resource Protection, "R" Workshops and Sharing Sessions, a living shorelines workshop and our popular stewardship series that offers courses to residents to create better understanding of coastal ecosystems and build a strong stewardship ethic in the community. The Stewardship Series is designed to expand knowledge and result in increased preservation of

habitats, in addition to natural and cultural resources. Courses include Oyster Ecology, Apalachicola River and Floodplain, Estuary Ecology, and Bay-Friendly Landscaping.

Our Sci-Café Series went virtual during Covid-19 and has worked well as a virtual program. Monthly we offer topics about the science and restoration being conducted in and around Apalachicola Bay in an informal setting that allows residents and scientist engage on the topics. Programs offered during this period included: Tate's Hell Restoration, Micro-Plastics in Apalachicola Bay and River, Update on the Apalachicola Bay System Initiative, Status of the ABSI Oyster Restoration, Measuring Water Quality in Apalachicola Bay, Chapman's Orchid, Sea Level Rise in Apalachicola Bay, and the Oyster Corps Aquaculture Project. The one-hour webinars were shared with 248 people.

Collaborations - The CTP lead a new aquaculture collaboration this year with the Conservation Corps of the Forgotten Coast,

the Florida Department of Agriculture, Division of Aquaculture and Shellfish, and Rattlesnake Cover Oyster Company. Through a NOAA/eeBlue grant, we implemented the Apalachicola Bay Aquaculture Demonstration Pilot Project. The project engages the Corps students in learning about aquaculture, developing an oyster aquaculture lease, growing the oysters, then making presentations for the community to advance a deeper understanding of shellfish aquaculture in Apalachicola Bay. We served some of the newly grown oysters at Estuaries Day to help raise awareness about the program which has been very successful, and we are researching avenues to expand it. We are also developing an aquaculture work group to help support the burgeoning industry.

The CTP's collaboration with the OysterCorps on the oyster shell recycling program continues. Local restaurants save oyster shells, and the Corps recycles the shell for use in shoreline stabilization, keeping them out of our landfill. The Corps also reseeds oysters in the Apalachicola Bay by placing spat from the FSU Marine Lab hatchery on the recycled shell. OysterCorps now has four paid interns at the hatchery. Next time you dine at The Station, Half Shell's, Blue Parrot, or Indian Pass Raw Bar thank them for participating in the oyster shell recycling project.

The CTP Coordinator along with county and city staff are on the workgroup for the TNC's on Scaling Up Nature-Based Solutions (SUNS). The project is identifying nature-based solutions that will increase resilience and improve water quality. The project was spearheaded by the Nature Conservancy (TNC) after a study that

examined how gray and green infrastructure in the area responded to Hurricane Michael in 2018. The study resulted in a program to help Franklin, Gulf and Bay counties understand nature-based features and help them develop a prioritized list of nature-based projects that can be advanced for federal and state funding. The work group identified 140 project ideas to be prioritized and

refined down to 65 project ideas that will comprise a regional portfolio of nature-based solutions projects to be implemented over the next few years. The final phase will help communities advance projects by providing additional support to refine

planning and implementation strategies, identify funding opportunities, and develop funding proposals.

Staff also kept Franklin County and City of Apalachicola staff informed about new legislation in Florida and nationally concerning resilience, mitigation, green infrastructure and stormwater infrastructure. Florida funds are tied to updated vulnerability studies and developing adaptation action plans. We assisted the city in submitting a grant to update its 2017 Vulnerability Study and create an adaptation action plan. Once the plan is updated the city will be eligible to receive funds to improve infrastructure, which will result in increased water quality and increased resilience to storms and SLR. The plan will also be critical in seeking FEMA BRIC mitigation money and guiding the city and county in upgrading infrastructure and incorporating additional green infrastructure with the new federal funding.

CTP continues to work with the Panhandle Estuarine Restoration Team (PERT), a community of practice designed to share techniques, best management practices, and lessons learned among restoration practitioners. We held the 4th annual meeting virtually in March and produced four webinars relevant to restoration practitioners—Franklin 98 Shoreline Restoration project, Alternative Restoration Materials for Shoreline Restoration, Low Cost Wave Gauges, and OysterCorps Projects in the Panhandle.



Top: OysterCorps members splitting bags as oysters grow.
Photo: Todd Brackin. *Bottom:* Sea turtle nesting season coincides with the busiest time for visitors of the year.

We coordinated with the Franklin County Tourist Development Council staff to produce two articles for their June and July newsletters that focused on endangered nesting sea turtles and leave no trace practices such as remove beach gear, fill holes, turn off lights and night beach walking. Sea turtle nesting season coincides with the busiest time for visitors of the year. In addition,

we produced a 90 second daily radio segment that highlights measures summer vacationers can take to lessen their impacts on endangered sea turtles and worked with our Friends of the Reserve and Oyster Radio to develop a summer long social media campaign to give away turtle safe flashlights. We also worked with Janice Becker, the sea turtle monitoring coordinator, to produce and distribute 1,300 magnets with the message to leave the beaches Clean, Flat and Dark. Magnets were distributed to vacation rental companies to be placed in rental homes.

The CTP Coordinator serves as vice chair on the Local Mitigation Strategy (LMS) Committee to help build capacity and mitigate issues to increase resilience. The LMS enables municipalities to qualify for FEMA HMGP mitigation funds if projects are listed on the LMS prior to a disaster. This year we received \$170,000 to fund emergency backup generators to run stormwater/wastewater Apalachicola infrastructure during emergencies.

We also participated in the Hurricane Safety Day May 21st, where over 200 5-gallon buckets were distributed 300 residents who filled the buckets in with information and supplies to help them prepare for storms and wildfires.

Engagement with National, Regional and Local Partners - CTP staff attended the National Estuarine Research Reserve annual conference in November and the CTP national spring meeting virtually. We collaborate with the two other Florida Reserves at



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Friends@apalachicolareserve.com to indicate such.

GTM and Rookery, on a quarterly basis. This year's projects include collaborating a year-long Gulf NERR "R" user's group and training sessions and sharing climate communication techniques for the DEP press office in hope that sharing these techniques would result in department wide increase in skills to create positive, productive communication about climate change. The CTP coordinator serves on the national Digital Coast Partnership Community Rating System (CRS), a committee addressing flood risk reduction, ecosystem conservation, and climate change resilience in coastal communities through the National Flood Insurance Program's (NFIP) CRS program.

Performance Measures - Participants fill out a two-page evaluation after formal courses which are analyzed to gauge the effectiveness of our programs. The evaluations are submitted to the NOAA Coastal Training Program Performance Database. Participants are also asked to share ideas for future trainings they would like to see offered.

Getting the Word Out - Coastal Training Program and Communications staff use a variety of methods to engage potential and past participants. We post workshops to Eventbrite, email target audiences, share on the Friends social media, and on web-based calendars including ApalachicolaReserve.com, area community calendars with the chambers of commerce, and the PERT listserv. Calendar announcements on upcoming programs are also sent to the local newspaper and Oyster Radio.

Information may be obtained from the Division of Consumer Services by calling toll-free (800-435-7352) within the state. Registration does not imply endorsement, approval or recommendation by the state.
 Solicitation of Contributions Act Registration No. CH48389: A copy of the official registration and financial

<input type="checkbox"/> Individual @ \$15/yr	<input type="checkbox"/> Family @ \$25/yr	<input type="checkbox"/> Lifetime @ \$250	<input type="checkbox"/> Donation @ \$	<input type="checkbox"/> City _____	<input type="checkbox"/> State _____	<input type="checkbox"/> Zip _____	<input type="checkbox"/> Email Address _____
Information about Corporate membership, email Friends@Apalachicolareserve.com .							Name _____
<input type="checkbox"/> Corporate @ \$300/yr - includes \$150 Estuaries Day sponsorship. For more information about Estuaries Day sponsorship, email Friends@Apalachicolareserve.com .							Address _____

join the Friends of the Reserve, a non-profit organization providing support to the Apalachicola National Estuarine Research Reserve. Be part of a group dedicated to: Friends of the Reserve, P.O. Box 931, Apalachicola, FL 32329.

The Reserve was established in September 1979 as a cooperative effort between Franklin County, the State of Florida and the National Oceanic and Atmospheric Administration. Visit the Reserve online at Apalachicolareserve.com, or drop state fl.us/ go/Apalachicolareserve.htm, or Apalachicolareserve.com/mesa.noaa.gov. The Reserve's purpose is to support research relating to the Apalachicola River & Bay Estuarine System, disseminate research information, educate the public about estuarine processes, and encourage resource protection. Visit the Reserve's website for details on programs, to join, complete and mail this form, along with your dues to: Friends of the Reserve, P.O. Box 931, Apalachicola, FL 32329.

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