



Rachel Carson Reserve
 Local Advisory Committee Meeting
 12/13/2022, 3pm
 101 Pivers Island Road, Beaufort with a WebEx option

Attendance

LAC Partner Organization Members	Present
Ben Fleming, N.C. Div. of Parks and Recreation	Yes
Ben Wunderly, N.C. Maritime Museum	Yes
Greg Piniak, NOAA's National Centers for Coastal Ocean Science	Yes
Todd Clark, Town of Beaufort Administration	Yes
Paul Burdette, Town of Beaufort Police Department	No
Brenda Wichmann, N.C Natural Heritage Program	No
Sue Stuska, Cape Lookout National Seashore	No
Albemarle-Pamlico National Estuary Partnership	No
NC Wildlife Resources Commission	No
Community Members	
Miriam Sutton	Yes
Susan Schmidt	Yes
Ann Carter	Yes
George Everett	Yes
John Fussell	No
Perry Barrow	No
Stan Rule	Yes
Dan Rittschof	Yes
Janina Millis	Yes
Jeff Benoit	Yes
Others Present	
Paula Gillikin, Reserve Central Sites Manager	
Rebecca Ellin, Reserve Program Manager	

Reserve-wide Administrative Update - Rebecca Ellin

The Reserve-wide Update, which includes a range of reserve activities was shared with committee members prior to the meeting. The update in its entirety is included as Appendix A. Rebecca added that there is a continuing resolution for the federal government for one week.

Greg Piniak suggested the idea that Reserve fellows provide science briefings to the Local Advisory Committee (LAC).

Janina Millis, a committee member and former intern, provided a testimony about her internship being a very positive and impactful experience.

Rachel Carson Reserve Business – Paula Gillikin

Local Advisory Committee Member Terms

Members Barrow, Carter, Fussell, and Rittschof are serving terms that expire at the end of 2023. These members will be contacted individually in 2023 and reminded that they are able to apply again to serve on the committee during the next application period.

Site update

- **Educational Activities**

2022 educational activities relevant to the Rachel Carson Reserve or conducted on the site included two teacher workshops (22 participants), K-college field trips (168 participants), and summer camps (63 participants).

- **Debris Clean-ups**

Marine debris clean-ups occurred to celebrate Earth Day and National Estuaries Week and 775 pounds of debris were removed. 161,705 pounds have been removed since 2007.

- **Carrot Island Boardwalk Signs**

Updated interpretive signs are currently being installed at the Carrot Island boardwalk.

- **Bird Surveys**

The following surveys and focal species monitoring activities were conducted during 2022: International Shorebird surveys, tri-annual American oystercatcher breeding survey and fall roosting surveys, surveys focused on documenting least terns, piping plover, and Wilson's plover, Christmas Bird Count (upcoming).

- **Wild Horses**

Currently, the herd size is 26 including nine males and 17 females. At least one death occurred in 2022. The National Park Service and Foundation for Shackleford Horses agreed to transfer one stallion to the Rachel Carson herd in accordance with the horse management plans and policies of all three organizations. The transfer will help support the genetic integrity of the Rachel Carson Reserve herd.

- **Research**

Currently 12 permitted research projects are being conducted by external entities at the site. Research affiliations include the University of North Carolina at Wilmington, University of Georgia, East Carolina University, Duke University Marine Lab, University of North Carolina at Chapel Hill, National Centers for Coastal Ocean Studies (NOAA), and North Carolina State University. Recently, a NERRS Science Collaborative project was awarded to Celso Castro-Bolinaga (N.C. State University) to study sediment dynamics for the site and surrounding Beaufort Inlet area.

Special Activity Authorization

- Special Activity authorizations are required for organized events, commercial activities, and other special activities or uses within the boundaries of any Reserve site and not included in the primary uses of research, education, and compatible traditional uses. Six entities applied and were authorized.
- Miriam Sutton inquired about the application of the authorization to commercial fishing. Paula Gillikin explained that this use is regulated by the N.C. Division of Marine Fisheries.
- Jeff Benoit requested clarification about whether the authorized activities were pre-existing and if they occur on land and/or water. Paula Gillikin explained that all of the authorized activities are pre-existing and most of the activities are on land, but some are land and water.
- Paula Gillikin addressed Stan Rule's question about where the special activity authorization is applicable, which is within the waters and land inside of the boundary.

Rachel Carson Reserve Habitat Resilience Plan

- The Reserve is currently in the process of hiring contractors to assess restoration feasibility and draft basic conceptual plans for addressing vulnerability of west Bird Shoal where it may breach in the future. West Bird Shoal was identified as a highly vulnerable area during the initial plan stakeholder meeting.
- Miriam Sutton explained that it's important to consider the past shoreline position (e.g. 1950s) and also the new dunelets that are currently forming at west Bird Shoal.
- Dan Rittschof explained that if left alone, the embayment will fill in with sand and marsh and no water will be left. Dan asked for clarification on the end goal for restoration. Paula Gillikin explained that, generally, the Reserve would like the area to continue to function as piping plover critical habitat while providing physical protection for the Town of Beaufort.
- Jeff Benoit requested information on the process for hiring a project engineer. Paula Gillikin explained that it will be conducted through a bid process and that collaborators, including the LAC members, will have an opportunity to review the draft plans before they are finalized. Jeff also addressed what restoration could mean for this site, actions related to ecosystem services and not restoring to a former state.

Roundtable Discussion

- Ben Fleming stated that Fort Macon State Park will install a living shoreline and they are discussing a potential plan for post-implementation drone monitoring.
- Todd Clark explained that the Town is working with the U.S. Army Corps of Engineers (USACOE) on a plan to dredge Beaufort Harbor and he will make sure the Reserve is involved as early as possible.
- Stan Rule questioned if there is a coordinated approach to addressing local areas that may need shoreline stabilization. Paula Gillikin and Rebecca Ellin commented that the need is recognized but no collective work is currently underway. However, the Reserve provided comments on the U.S. Army Corps of Engineers Dredge Disposal Plan, including the need to better understand how dredging activities in the Inlet impact the Rachel Carson Reserve and the surrounding areas.

Also, Dr. Castro Bolinaga's sediment dynamics study around Beaufort Inlet may help to reveal more opportunities for a coordinated approach.

Public Comment

- None.

Final comments, Action Items, and Wrap-up

- Paula Gillikin will send out draft meeting minutes for the committee to review and poll the committee for a spring meeting date.

Adjourn

- The meeting was adjourned at 4:23pm.

N.C. Coastal Reserve and National Estuarine Research Reserve Fall 2022 Local Advisory Committee Meetings Reserve-wide Update

Local Advisory Committee Membership

Thank you for your continued service to the Reserve's Local Advisory Committees! A number of community member appointments will expire at the end of 2023. As a reminder, community members may apply to serve consecutive or non-consecutive terms per the [Local Advisory Committee Operating Procedures](#). Details on a 2023 application period will be provided in the spring.

Program Highlights

- The Coastal Reserve partnered again with the NC Maritime Museum this summer to offer “**Summer Science School**”. The Reserve took the lead on 3 camps: Seashore Life 1, Seashore Life 2, and Coastal Adventures. A total of 62 students ranging from first grade to ninth grade participated in the camps. Favorite activities included field trips to the Rachel Carson Reserve, plankton viewing, and squid dissections.
- Earlier this month, partners and supporters of the **Masonboro Island Explorers** program gathered in Carolina Beach to celebrate the 10,000th student going to the Masonboro Island Reserve since the program's inception in 2013. This program aims to take every 5th grade student in New Hanover County to the Reserve to experience hands-on learning and exploration in a natural barrier island ecosystem. The Reserve partnered with Carolina Ocean Studies early on to create the curriculum that has been taught by Richard Cecelski and his staff for nearly 10 years. This program is funded through donations to Masonboro.org by corporations, businesses, and grass roots support from the public at various events. Masonboro.org's persistence for continuing this program has resulted in over 1,000 volunteer hours and a lasting impact on participating students. The Reserve is pleased to be a part of this program and thankful for the great partnerships and individuals that provide fulfilling experiences and education to New Hanover County 5th grade students. Congratulations on reaching this exciting milestone!
- The Reserve hosted summer and fall **educator workshops** and 30 participants received continuing education credits for attending.
 - In June, Carteret County teachers participated in the Reserve's free TOTE or Teachers On The Estuary Program. The day included a field trip to the Rachel Carson Reserve to explore North Carolina's coastal habitats, learning about local research projects, and conducting curricular activities for use in the classroom. TOTE is a teacher education program implemented at all 30 reserves in the National Estuarine Research Reserve System.
 - In October, educators joined Reserve and N.C. Maritime Museum staff for a free Coastal Explorations workshop to learn about estuaries and local maritime history. Classroom activities and a field trip to the Rachel Carson Reserve were provided for participants to bring lessons to their students.
- The **Coastal Training Program** continues to offer trainings in partnership with Division regulatory staff to support management of estuarine shorelines and barrier islands.
 - “*Promoting Living Shorelines for Erosion Control - A Virtual Workshop for Real Estate Professionals*” was held on September 9. Close to 100 participants learned about the benefits and limitations of using living shorelines for erosion control; different shoreline stabilization techniques, including living shorelines; living shoreline permitting process; and living shoreline projects in North Carolina. This workshop supported the Division's [estuarine shoreline strategy](#) and the [recent Coastal Habitat Protection Plan amendment](#).
 - An in-person “*Living on a Barrier Island*” workshop was hosted in partnership with Cape Fear Realtors Association in Wilmington on September 28. One hundred one participants learned about barrier island ecology and geology; the rules and policies that govern

development on barrier islands; updates to the National Flood Insurance Program; and native plantings for the coastal landscape.

Participants in both workshops received continuing education credits from the NC Real Estate Commission and workshop content is available on the Reserve's website [here](#).

- The Reserve began implementing the **Special Activity Authorization** when the Reserve rule amendments became effective February 1, 2022. To date, 26 authorizations have been issued with 3 applications pending. Information about the Special Activity Authorization is available [here](#).
- The Reserve is committed to working with the NC Wildlife Resources Commission on **permit hunts** at the Reserve sites, yet this work is currently on hold until several vacant staff positions are filled.
- The State recently closed on the **Primland tract** (260 acres) for inclusion in the Buckridge Reserve. Funding for the acquisition was provided by the NC Land and Water Fund (previously the NC Clean Water Management Trust Fund), the Department of Defense Readiness and Environmental Preparedness Initiative, and The Nature Conservancy. Planned future site improvements at the tract include an improved boat ramp, fishing pier and educational signage. The Division will make a public announcement about the acquisition once the Reserve boundary is updated on the website.

Upcoming Student Opportunities

Application periods for Summer 2023 student opportunities in the Beaufort office are currently open.

- The Friends of the Reserve (FOR) is requesting applications for the **2023 NC Coastal Reserve Undergraduate Internship Award**. This internship encourages promising and talented students from traditionally underserved and underrepresented populations to pursue study and careers in coastal and estuarine science by gaining professional experience working with the Coastal Reserve for the summer. The 2023 intern will work with staff at the Rachel Carson Reserve in the Beaufort office. More details are available on FOR's website [here](#) and the deadline for submitting applications is **December 15, 2022**. FOR is a 501(c)(3) nonprofit organization that supports the N.C. Coastal Reserve and National Estuarine Research Reserve, including its sites and programs.
- Two **State of NC Internship** opportunities are available at the Beaufort office for summer 2023. Applications are due **January 9, 2023**, and more details are available [here](#). One intern will work with the Education Coordinator on summer camps, field trips and classroom activities and the other will work with the Coastal Training Program Coordinator on living shoreline communication products.

Wilmington office opportunities will be shared on our website in early 2023.

Research Fellowships Awarded

- **2022 NC Coastal Research Fellows Announced**

Madison Lytle and Andrew McMains are the 2022 North Carolina Coastal Research Fellows. Their research will look at reduced water clarity's influence on seagrass growth; and the effects of dredging on inlet-inhabiting fish, respectively. [North Carolina Sea Grant](#) and the [N.C. Coastal Reserve and National Estuarine Research Reserve](#) jointly fund this opportunity, which is open to graduate students across North Carolina. With funding for one year, recipients conduct research within one or more of the Coastal Reserve's 10 sites. Learn more about this year's fellows and projects [here](#).

- **Margaret A. Davidson Fellow announced for the NC Reserve for 2022-2024**

Daniel Bowling, a PhD student at North Carolina State University, is assessing the effectiveness of using remote sensing to monitor intertidal oyster habitat as a Margaret A. Davidson Fellow at the NC Reserve. Daniel will also develop a model to generate sample designs to support future coast-wide population assessments and for Reserve sites to be able to quickly detect and respond to changes in habitat health. This fellowship will advance his dissertation research working to develop methods for a fishery-independent survey program for oysters in North Carolina. The [Margaret A. Davidson Graduate Fellowship](#) provides funding to graduate students to conduct estuarine research within one of the 30

reserves in NOAA’s National Estuarine Research Reserve System. Fellows address a key coastal management question to help scientists and communities understand coastal challenges that may influence future policy and management strategies.

Upcoming Grant-funded Projects

- **NC Reserve to benefit from 2 NERRS Science Collaborative-funded projects**

The [NERRS Science Collaborative](#) announced its awarded projects for the 2022 funding cycle. The NC Reserve is benefiting from 2 projects that address management needs identified by the program - see details below. Reserve staff are partnering with NC State University and other reserves in the region for the projects and will serve as collaborative leads for the projects, bringing together project stakeholders and end users. The projects will begin this fall and last for 2 years. More detail is provided [here](#).

PI/Host Institution	Project Title	Reserves Involved
Celso Castro-Bolinaga, <i>North Carolina State University</i>	Improved Understanding of Sediment Dynamics for the Rachel Carson Reserve, North Carolina	North Carolina (NC)
Peter Kingsley-Smith, <i>South Carolina Department of Natural Resources</i>	Collaborative Development of Novel Remote Sensing Workflows for Assessing Oyster Reef Condition to Inform Management and Restoration	ACE Basin (SC); North Inlet-Winyah Bay (SC); North Carolina (NC); Sapelo Island (GA); Guana Tolomato Matanzas (FL)

- **NC partners funded to develop engagement strategy to support the Scuppernong Regional Water Management Study**

The NC Reserve, Albemarle-Pamlico National Estuary Partnership, The Nature Conservancy, and NC Sea Grant have received Digital Coast Connects funding from the [NOAA Digital Coast Partnership](#) to develop an “Engagement Strategy to support the Scuppernong Regional Water Management Study”. The Study was requested by local governments and land managers to help with water related issues in the Albemarle-Pamlico region. This grant will develop a collaborative stakeholder engagement process that is recognized as a need by the Study partners. The Engagement Strategy will be centered around equity and inclusion, assist with communication and potential conflict resolution, provide opportunity for stakeholders to shape Study development, and support development and implementation of a collaborative, regional water management strategy. The Engagement Strategy will rely on connections with multiple NOAA Digital Coast partners and use Digital Coast data, tools, facilitation guides, and training resources to inform the Strategy and workshop development and implementation. The project begins this fall.

- **NC Reserve participating in multi-Reserve wetland migration pathway project**

“Wetland Migration Pathway Planning, Prioritization and Community Engagement (FL, MA, NC, NJ, RI, SC)” is an America the Beautiful Challenge project awarded to the Narragansett Bay, RI Reserve by the

National Fish and Wildlife Foundation. The project will create a pipeline of tidal wetland migration pathway protection projects in areas served by National Estuarine Research Reserves in the Northeast, Mid-Atlantic and Southeast regions of the US. Working with communities and partners, the NC Reserve will convene those interested in wetland migration pathway protection, share existing information, and identify technical products such as maps and models that are needed to support pathway planning. This will inform future steps of product acquisition and identification and prioritization of pathway projects. Information and lessons learned through project activities will be shared with all 30 Reserves within the National Estuarine Research Reserve System and their partners. More information is located [here](#). This work will begin shortly and supports the NC Reserve's focus on habitat and coastal hazards resilience, the Coastal Habitat Protection Plan, and the NC Climate Risk Assessment and Resilience Plan.

Staffing News

- Hope Sutton, Reserve Stewardship Coordinator, started a new job in August with the NC Wildlife Resources Commission, focusing on species of interest. We thank Hope for her tireless work in establishing a stewardship program for the Reserve and management of the four southern sites during her many years with program.
- Michelle Brodeur, Reserve Communications Specialist, started a new job with Division of Marine Fisheries as their Outreach and Communications Specialist in August. We thank Michelle for her work in elevating the visibility of the Reserve and its work and partnerships through various communications efforts over the years.
 - We look forward to collaborating with both Hope and Michelle on mutually beneficial projects moving forward, and wish them both the best of luck in these new endeavors.
 - We are currently working to fill the vacant Research Coordinator and Communications Specialist positions. Work to fill the vacant Stewardship Coordinator position will begin after these positions are filled.

Staff Awards

Congratulations to Reserve award winners!

- **Paula Gillikin**, Central Sites Manager, received a **DEQ Distinguished Employee Award** in November for the Division for her leadership on the externally funded project awarded to the Division to clean up Hurricane Florence-related large marine debris and abandoned vessels from public lands and waters along the coast. 1,254,280 pounds of debris and 24 vessels were removed from Brunswick through Carteret, including Craven and Pamlico Counties and 4 of the Reserve sites managed by the Division as part of this project. This project was highly visible with high impact, and was part of the largest coordinated coastal debris removal effort in the State's history. Paula's leadership on all aspects of this project, from facilitating new partnership agreements to identifying Florence-specific debris to protecting coastal habitats during debris removal, guaranteed its success and significant on-the-ground impact.
- **Rebecca Ellin**, Coastal Reserve Program Manager, received the 2022 National Estuarine Research Reserve Association/National Estuarine Research Reserve System's **Award for Outstanding Achievement**. This national award honors leaders that demonstrate sustained commitment to the National System. Rebecca was instrumental in the development of NOAA's Margaret A. Davidson Fellowship that supports all 30 Reserves within the System. She works with NOAA to problem-solve administrative, staffing, and partnership challenges the System is facing. As a past NERRA President, she developed the national non-profit organization's strategic plan that continues to serve as a guiding document today. Locally, the NC Reserve addresses a range of complex coastal management topics with partners to guide management of the sites and the state's coastal resources, and collaborates at local, regional, and national levels to leverage its work. Since 2005, Rebecca is a recognized leader at the NC Reserve and in the national system, working at multiple levels to advance coastal management.

Federal Budget

- The budget table below is a summary of the current status of the federal budget* for fiscal years 2020-2023 as it relates to the NC Reserve. A budget for FY2023 has not yet been passed and a continuing resolution is in place for FY2023 through December 16, 2022. Thank you to the National Estuarine Research Reserve Association and Friends of the Reserve for their work to educate Congress on the value of the national system and the NCNERR.

Federal Budget Lines	FY2020 Enacted	FY2021 Enacted	Final Omnibus Appropriations FY2022	FY2023 President's Request	FY2023 House Mark	FY2023 Senate Chair Mark
NERRS Operations	\$27.5M	\$28.5M	\$29.7M	\$28.5M	\$31.5M	\$34.5M
NERRS Procurement, Acquisition, & Construction (PAC)	\$4.5M	\$4.5M	\$6.5M	\$4.5M	\$7.5M	\$8.5M
CZM Grants	\$77 M	\$78.5 M	\$79M	\$78.5M	\$89M	\$84M

- The [Infrastructure Investment and Jobs Act](#) includes \$77M for the NERRS for habitat restoration to be spent over five years. The Act states that equal amounts of funding shall be provided in Fiscal Years 22-26, approximately \$15.4M annually for the NERRS. All Reserves are eligible to receive \$100k annually for 5 years to build capacity for habitat restoration. The NC Reserve anticipates receiving these funds in early 2023 and will develop habitat resilience plans and implement projects on the ground at the national sites of the Reserve.

* The federal fiscal year is October 1-September 30. The National Estuarine Research Reserve System (NERRS) budget line provides funding to the 30 reserves within the System through cooperative agreements that are matched by the states, and supports national coordination of programs and implementation of system-wide and competitive projects. The Coastal Zone Management (CZM) grants budget line provides funding to coastal states with approved coastal management programs through cooperative agreements that are matched by the states. The Division of Coastal Management (DCM) receives funding from both budget lines to operate the N.C. National Estuarine Research Reserve (NCNERR) and N.C. Coastal Management Program. The CZM cooperative agreement that DCM receives provides funding for Reserve staffing, state site operations, and administrative support.