AN EVALUATION OF MARINE EDUCATION FACILITIES IN CARTERET COUNTY, NORTH CAROLINA

by

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Abstract

Public outreach and education is crucial to environmental policy because management decisions directly affect the public, and public support of public sector initiatives depends on properly understanding challenges and issues to successfully provide potential solutions. It is important to relate scientific discoveries and research to people’s everyday lives so that they understand the importance of, as well as alternatives for, proper environmental management and how it relates directly to them.

The first major focus of this client-based project involved a comprehensive review of the major marine education facilities in Carteret County, North Carolina, which included the development of a written questionnaire and a focus group meeting with local educators. The second major focus of this project was to assist in the development of a strategic plan for the education branch of the North Carolina Maritime Museum, the major client of this project.

The overall purpose of this project is to help local educators collaborate and network to build relationships and open lines of communication with one another. To help do so, a set of recommendations was developed to help promote future collaboration.
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I) Introduction

According to the United Nations Educational, Scientific, and Cultural Organization, “Environmental education is a learning process that increases people’s knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations and commitments to make informed decisions and take responsible action” (UNESCO, Tbilisi Declaration, 1978).

Marine education, specifically, is important to teach people about the value of the ocean, with which most people do not come into regular contact and therefore they do not realize its importance as an ecosystem. It is critical to relate scientific discoveries and research regarding the ocean to people’s everyday lives so that they understand the value of proper ocean environmental management. Public outreach and education is a crucial part of environmental policy because management decisions about the ocean directly affect the public, and because public support of public sector initiatives depends on public understanding of problems, issues, and potential solutions. Many interpretive facilities throughout eastern North Carolina have education programs that are devised to teach people the value of the ocean and more specifically, the coastal waters of the state. However, these education facilities do not necessarily communicate with one another about their environmental programs and there is potential for more collaboration between them.

This project examines marine education in Carteret County at two different levels. One part broadly examines seven marine education facilities in Carteret County, North Carolina, focusing on the many different education programs and opportunities for additional collaboration among the facilities. All facilities have a public building that supports these education programs, including the North Carolina Maritime Museum, the North Carolina Aquarium at Pine Knoll Shores, the Core Sound Waterfowl Museum and Heritage Center, Fort Macon State Park, Cape Lookout National Seashore, the North Carolina Coastal Reserve at the Rachel Carson Reserve site, and the North Carolina Coastal Federation (Figure 1). The other part of the project looks in depth at the organization of the North Carolina Maritime Museum, and includes a draft of a strategic plan for the education branch of the museum.
This master’s project evolved over the course of multiple discussions the author had with Dr. Michael Orbach, Professor of the Practice of Marine Affairs and Policy at the Nicholas School of the Environment, and Allison Besch, Curator of Education at the North Carolina Maritime Museum. Originally the author set out to develop a strategic plan for the education department of the North Carolina Maritime Museum and to explore how the museum collaborates with other local marine education facilities. After examining the issue of regional collaboration a bit further, it became clear that there are several marine education programs in Carteret County that overlap with one another. This is a timely and relevant policy project in lieu of impending state budget cuts across North Carolina (OSBM, 2011). Marine education facilities are looking at budget cuts, including staff and programming, and they need to offer unique programs or partner with regional educators so that there is not too much overlap in
programming in one region. Thus, the project developed into its current state, which encompasses the details of the North Carolina Maritime Museum, how it relates to the other local marine education facilities, and how all of the facilities relate to one another. The author developed a written questionnaire and led a focus group meeting with nine local educators from the previously mentioned education facilities in Carteret County. The results of both are included in this report, and the recommendations were partially developed from discussions during the focus group meeting.

II) Description of the Marine Education Facilities

In coastal North Carolina, specifically Carteret County for the terms of this project, there are a wide variety of marine education facilities with many different programs targeting a range of audiences (Figure 1). One way to group the marine education facilities are by their governing institutions—the federal government, the North Carolina state government, and private partnerships (Figure 2). Some of the major facilities include:

- North Carolina Aquarium at Pine Knoll Shores (NCA)
- North Carolina Maritime Museum (NCMM)
- Fort Macon State Park (FMSP)
- North Carolina Coastal Reserve at Rachel Carson Reserve site (NCCR)
- Cape Lookout National Seashore (CALO)
- North Carolina Coastal Federation (NCCF)
- Core Sound Waterfowl Museum and Heritage Center (CSWMHC)

The following is a short description of each of the education facilities and some of their major marine education programs (See Appendix 1).
Figure 2. Depicts the institutional organization of Carteret County marine education facilities.

**North Carolina Aquarium**

The state government facilities include the North Carolina Aquariums, the North Carolina Maritime Museum, and Fort Macon State Park. The aquarium system includes three facilities (Pine Knoll Shores, Roanoke Island, and Fort Fisher), all governed by the North Carolina Department of Environment and Natural Resources (DENR). All three aquariums are financially supported by the North Carolina Aquarium Society, the non-profit entity that helps fundraise for programs and expansion projects (North Carolina Aquarium Society, 2010).

The NC Aquariums have a mission of “inspiring appreciation and conservation of North Carolina’s aquatic environment” (NC Aquarium Homepage, 2010). However, each aquarium has its own theme—“North Carolina’s aquatic life from the mountains to the sea” at Pine Knoll Shores, “The Waters of the Outer Banks” at Roanoke Island, and “The Waters of the Cape Fear” at Fort Fisher (NC Aquarium at Pine Knoll Shores, 2011). The major goal of the aquariums is to promote an awareness, understanding, appreciation, and conservation of the diverse natural
and cultural resources associated with North Carolina’s ocean, estuaries, rivers, streams, and other aquatic environments (NC Aquarium Homepage, 2010). The Pine Knoll Shores education curator has been quoted to state, “Ultimately, education is at the core of everything that our staff does at the aquarium,” (Dagnino, 2010). They serve more than 60,000 school students and offer 5,000 opportunities annually, including a new on the road outreach program and many aquarium-based programs such as Behind the Scenes—Aquarium Close Encounters, Breakfast with Rays, and Creature Features (Dagnino, 2010, Kilgore, 2008).

To focus in on the Pine Knoll Shores facility (the facility the author worked with)—their main building is 93,000-square-feet, which includes the displays and classrooms (NC Aquarium at Pine Knoll Shores, 2011). There are three other buildings on site used for maintenance and small green house. Additionally, the aquarium is located next to the 265-acre Theodore Roosevelt Natural Area, which showcases the barrier island ecology in a self-guided nature trail that visitors can explore. The aquarium has 75 employees, 44 of those are permanent and in 2010, the state appropriated over $3.3 million for their working budget (NC Aquarium personal communication, 2011). Some of their major programs include interpretive animal programs, Get Hooked Fishing School, and many School Group Programs (NC Aquarium Homepage, 2011). As previously mentioned, they have an on the road outreach program, in which the educators travel to schools and events to showcase animals of the North Carolina waters.

**North Carolina Maritime Museum**

The North Carolina Maritime Museum system is another state museum system with three facilities found in Beaufort (North Carolina Maritime Museum), Cape Hatteras (Graveyard of the Atlantic Museum), and Southport (Southport Maritime Museum). For the purpose of this report and strategic planning, the author will focus on the Beaufort museum facility, the North Carolina Maritime Museum, since it is still uncertain how the maritime museum system will develop as a whole.¹

The mission of the North Carolina Maritime Museum is to collect, preserve, research,  

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¹ The North Carolina Maritime Museum system is currently considered a system of three facilities under one director. Each facility maintains its own portion of a state budget allocation and separate friends support groups. While each museum operates independently, staff and resources may be shared within the system.
document, and interpret the maritime history, culture and environment of coastal North Carolina (NC Maritime Museum Homepage, 2010). The Maritime Museum is a unique museum because it educates people about the maritime history as well as the coastal environment and barrier island ecology of the surrounding waters of North Carolina. It is a cultural experience to visit this museum since it provides exhibits and programs that explore the people and history of the state’s coastal communities as well as the area’s natural history. Curators are interested in teaching the people of North Carolina about how the coastal land and waters were used in the past. Therefore they have different programs that target the different aspects of the maritime history and culture and focus on issues such as local maritime trades, the history of Beaufort as a fish town and the natural science of the local barrier islands such as Shackelford Banks and Carrot Island. According to the maritime museum facility guidelines, the museum’s 22 permanent staff members try to reach a broad and diverse audience of families, children, the elderly, ethnic minorities, and the physically challenged (Besch, 2011). The maritime museum receives over 180,000 visitors a year, including sixty percent North Carolina residents, thirty-five percent out of state, and five percent foreign visitors (NC Maritime Museum Homepage, 2010). These visitors most likely end up at the main museum on 315 Front Street which is 18,000-square-feet or the 5400-square-foot Watercraft Center across the street (Besch, 2011). The museum also owns 36 acres at Gallants Channel that includes four buildings that support offices, classrooms, and storage, plus waterfront dockage (Besch, 2011).

Working on an operations budget of approximately $1 million annually (for all three museums), the museum offers a broad variety of education programs to target many different audiences throughout the year (Besch, 2011). The museum has programs offered regularly such as the Brown Bag Gam, which is a lecture series with different themes to teach the general public about maritime history and the coastal environment. Recent lectures include, “Clams and Clamming”, “Heritage Watercraft”, “Sea Turtles”, and “North Carolina Steamboats” (NC Maritime Museum Homepage, 2010). The museum’s Summer Science School (a joint program with the NC Coastal Reserve) teaches children from pre-school age up to eighth graders every summer about their local coastal environment and the maritime history of North Carolina. Lesson themes range from pirates, boat models and mariners, all the way to underwater
archaeology, seashore life, and fishing (NC Maritime Museum Homepage, 2010). There are also overnight and field trip classes that teach students about barrier island wildlife and sea turtles. Throughout the year the museum provides special group marine science programs for all ages from pre-kindergarten to adults. Groups can request one of the programs and learn about local geology, marine mammals, oceanography, or a number of other marine science-related topics. Additionally, the maritime museum also offers teacher workshops and outreach programs that travel to school classrooms (NC Maritime Museum Homepage, 2010).

**Fort Macon State Park**

As the second oldest state park, Fort Macon State Park is a historic landmark governed by the North Carolina Division of Parks and Recreation (Fort Macon State Park Homepage, 2010). Their mission is to *conserve and protect representative examples of the natural beauty, ecological features and recreational resources of statewide significance; to provide outdoor recreational opportunities in a safe and healthy environment and to provide environmental education opportunities that promote stewardship of the state's natural heritage* (Fort Macon State Park Homepage, 2010). Their facilities include the 424-acre remodeled civil war fort, nature trails, and a beach access area with a bathhouse (Fort Macon State Park personal communication, 2011). Additionally, they have a new 22,547-square-foot LEED gold certified coastal education and visitor center that includes an exhibit on the natural barrier island environment (Ledford, 2010). Nine permanent staff organizes programs upon requests annually by people such as private tour groups, school classes set up by travel agencies, or military groups from local bases (Fort Macon State Park personal communication, 2011). Educators offer a wide variety of programs that combine history, natural resources, and scientific knowledge such as musket demonstrations or talks about sea turtles (Fort Macon State Park personal communication, 2011). All of the educational programs offered by Fort Macon have a strong historical base.

**North Carolina Coastal Reserve**
The North Carolina Coastal Reserve at the Rachel Carson site is part of the National Estuarine Research Reserve System (NERRS), which has three other sites in North Carolina and many others around the country. The North Carolina Coastal Reserve is jointly managed by NERRS, under the National Oceanic and Atmospheric Administration (NOAA), and the Division of Coastal Management, under DENR (NC Coastal Reserve Homepage, 2010). Their target audience includes students, teachers, visitors, and researchers and their mission is to promote informed management and stewardship of North Carolina’s estuarine and coastal habitats through research, education, and example (NC Coastal Reserve Homepage, 2010). Going to the North Carolina Coastal Reserve is a site-based learning experience. People can visit the 2315-acre Rachel Carson site to see how research, stewardship, and education at a national reserve affect them and in turn the affect humans have on the coastal environment (NC Coastal Reserve Homepage, 2010). The North Carolina Reserve is supported by a large number of state and national-level professionals (NC Coastal Reserve Homepage, 2010). The permanent staff of seven at the Rachel Carson Reserve site offers a number of programs throughout the year including guided nature hike tours, boat rides and board walk field trips, teacher workshops, kindergarten through high school lesson plans for teachers, and the Summer Science School in conjunction with the North Carolina Maritime Museum (NC Coastal Reserve Homepage, 2010). Education staff also runs programs in the large classroom the reserve maintains in the NOAA building on Pivers Island.

Cape Lookout National Seashore

The National Park Service governs Cape Lookout National Seashore, located on the southern most part of the Outer Banks. Cape Lookout is a 56-mile barrier island with an outdoor classroom and laboratory (Cape Lookout National Seashore Homepage, 2010). A permanent staff of 15 to 20 (which temporarily increases seasonally) maintains over 80 historic buildings on the barrier island (Cape Lookout National Seashore personal communication, 2011). Their large visitor’s center is located on Harker’s Island and has a theatre, offices and storage space. The mission of the Seashore is to conserve and preserve for the future the outstanding natural resources of a dynamic coastal barrier island system; to protect and
interpret the significant cultural resources of the past and contemporary maritime history; to provide for public education and enrichment through proactive interpretation and scientific study; and to provide for sustainable use of recreation resources and opportunities (Cape Lookout National Seashore Homepage, 2010). They have a number of collaborations with local education facilities including Cape Lookout Camp, which was implemented with the Core Sound Waterfowl Museum and Heritage Center in the summer for middle school children. Cape Lookout also runs the Cape Lookout Studies Program with the NC Maritime Museum, which is a field program that students can enroll in during the summer. The National Park Service allocates them a budget on average over $1.7 million annually (Cape Lookout National Seashore personal communication, 2011).

North Carolina Coastal Federation

The North Carolina Coastal Federation, with over 350 volunteers and 10,000 members, is the only 501 C (3) non-profit organization in the state that focuses solely on preserving and restoring the coastline (NC Coastal Federation Homepage, 2010). The dedicated staff of 19 educates thousands of students annually on the value of the North Carolina coast on a budget of over $1.4 million (Steele, 2011). The Coastal Federation is governed by a diverse, statewide board of directors that meets quarterly, and is composed of teachers, lawyers, developers, fishermen, small business owners, and philanthropists (NC Coastal Federation Homepage, 2010). The mission of the Coastal Federation’s education program is to provide educational experiences and resources that will produce an understanding and appreciation of North Carolina’s coastal areas, motivating participants to make informed decisions and become active stewards (NC Coastal Federation Homepage, 2010). The coastal federation pledges to offer accurate, non-biased, and non-advocacy oriented educational experiences such as the Oyster Education Program they offer throughout the school year to high school students. The goal of this organization is to create informed decision-makers instilled with a sense of responsibility, ownership, and stewardship toward North Carolina’s estuaries, their tributaries, and all of their inhabitants (NC Coastal Federation Homepage, 2010). They also offer marine education programs such as Coastal Connections, a middle school classroom curriculum (NC Coastal
Federation Homepage, 2010). Their headquarters are located in Ocean and they have two regional offices in Manteo and Wilmington. The buildings they own in Ocean and Manteo are a total of 8400-square-feet, but they have also have conservation easements on 2,015 acres of coastal land and have purchased by deed another 4,801 acres (Steele, 2011).

**Core Sound Waterfowl Museum and Heritage Center**

The Core Sound Waterfowl Museum and Heritage Center is a private museum on Harker’s Island located next to a variety of coastal environments including, Core Sound, salt marshes, a maritime forest and fresh water pond, and Cape Lookout National Seashore (Core Sound Waterfowl Museum and Heritage Center Homepage, 2010). With a strong Down East community involvement and grassroots support, the staff of this museum *envisions coastal communities of eastern North Carolina in which culture, community, education, economy and the environment are fully integrated for a high quality of life for all residents* (Core Sound Waterfowl Museum and Heritage Center Homepage, 2010). They have a very large museum space and their educational programming is a combination of cultural traditions and natural resources. They offer a variety of marine educational programs including "Raising the Story" Menhaden program offered to local middle school students. Due to their close proximity to Cape Lookout National Seashore, they collaborate on a number of projects including Cape Lookout Camp and curriculum development for kindergarten, fourth, sixth, and eighth graders (Core Sound Waterfowl Museum and Heritage Center Homepage, 2010).

**III) Internal dynamics of North Carolina Maritime Museum and Strategic Planning**

**Strategic Planning**

*Planning helps to translate intended strategies into realized ones, by taking the first step that can lead to effective implementation.*

*Henry Mintzberg, 1994*

Strategic thinking, acting, and planning are becoming more important to the success and effectiveness of governments, public organizations and all kinds of non-profit entities. Strategic
planning helps organizations successfully face the many challenges that are presented daily, over the short- and long-term (Rowley & Sherman, 2002, Bryson, 1988). Some experts believe that the completion of a strategic vision is one of the most crucial activities that an organization does, besides its formation (Schaw, 2004). It can be defined as a disciplined effort to produce fundamental decisions and actions shaping the nature and direction of an organization’s (or other entities) activities within legal bounds—essentially its purpose is to help an organization effectively respond to new types of situations (Olsen & Eadie, 1982). In its simplest form, strategic planning is a group of discussions and decisions amongst the organizations leaders and managers about what is most important to the organization. However, it is often hard for organizations to develop strategic plans as they take a lot of time, commitment, and one must get all of the busy decision makers to sit down together in one place and spend an appropriate amount of time to effectively develop the plan itself.

Strategic planning is a complex and dynamic event, and the actual plan can incorporate many different parts but it has to allow for fluidity and flexibility or it will fail (Mintzberg, 1994). The main components include a mission, vision, goals, objectives, and action steps or strategies. One may also add priorities or outcomes to a strategic plan as well. Most organizations include their mission at the beginning of a strategic plan, which according to experts clarifies the purpose of a facility (Bryson, 1989, Schaw, 2004). All parts of the strategic plan should relate back to this mission and should try to carry out parts of it. The vision of the organization defines what it looks like and how the organization acts as it carries out its mission (Bryson, 1989, Schaw, 2004). The goals are the outcomes that are necessary to achieve the underlying mission and the objectives are the specific plans to help the organization reach those goals (Schaw, 2004). The action steps or strategies are a crucial part of the plan since they represent immediate steps the organization must take in order to implement the necessary objectives (Schaw, 2004).

According to many, the biggest challenge in strategic planning is implementing the plan and making it work in the organization (Rowley & Sherman 2002). Mintzberg argues that the developing process of planning should be open and the implementation should be “closed-ended and convergent” (Mintzberg, 1994). Some options to help with implementation include:
implementation through participation, using force to implement the plan, establishing goals and key performance indicators, using a reward system, and building on successful systems (Rowley & Sherman 2002). It is also very important to evaluate, change, and re-examine the strategic plan every three years since priorities and opportunities change over time (Schaw, 2004).

Even though strategic planning takes time and can often be a difficult exercise, the benefits greatly outweigh these costs. For one, it gets managers and organization leaders to stop and evaluate all facets of their organization. Additional benefits include: starting to think strategically; help to clarify future direction; develop a coherent and defensible bias for decision making; exercise maximum discretion in the areas under organizational control; solve major organizational problems; improve performance; deal effectively with rapidly changing circumstances; and build teamwork and expertise (Bryson, 1988).

The education branch of the Maritime Museum does not have a current strategic plan. The author carried out numerous discussions with the education curator and researched comparable interpretative and strategic plans with the goal of developing a draft of what a strategic plan for the education branch may look like. This draft is a seven-year plan, which would be in effect 2018 when the Maritime Museum is set to implement a major expansion to another location (Gallants Channel).

**Seven-year Strategic Plan for the Education Branch, North Carolina Maritime Museum**

**Mission of North Carolina Maritime Museum**

“...Collect, preserve, research, document, and interpret the maritime history, culture and environment of coastal North Carolina.”

**Mission of Education Branch**

*To provide a public interface with museum artifacts and interpret the maritime history, culture, and environment of coastal North Carolina in a meaningful way to reach a diverse audience.*

The primary purpose of the education branch is to provide interpretation to the public about coastal North Carolina’s maritime history, culture, and environment through lectures, field trips, tours, demonstrations, special events, exhibits and object interpretation, publications, and other public information services. The programs of the education branch shall support the
mission of the museum and respond to the concerns, interests, and needs of society relating to North Carolina’s natural history and maritime history. Their strength is to be able to tie in cultural history to the maritime environment story. Programs and staff try to emphasize the link between cultural development and natural resources of coastal North Carolina.

Museum programs will:
- Be founded on scholarship and intellectual integrity
- Be accessible and encourage participation of the widest possible audience consistent with the museum’s mission and resources
- Respect pluralistic values, traditions, and concerns
- Ensure that revenue-producing activities and collaborations with other organizations and agencies are compatible with the museum’s educational mission and support its public trust responsibilities
- Provide community services

It is important to remind the community about the vast resources and uniqueness of the museum resources include:
- School group programs and field trips
- General public programs and field trips
- Building available for community use, when consistent with the museum’s mission
- Watercraft Center classes
- Watercraft Center boat building and restoration
- Staff knowledge on maritime history and coastal natural history
- Large piece of waterfront property (Gallant’s Channel)
- Boat accessibility
- Large crowd accessibility for larger events
- Community service needs that the museum can fulfill

Vision and Goals
The vision of the education branch is to promote the museum’s mission and themes through interpretation and programming so that it educates a diverse audience and enlightens visitors in a meaningful way. The branch’s primary goals are to:

1. Offer a variety of programs that appeal to a wide audience.

Objectives:
- Outreach to develop long-term relationships with schools by reaching out to all local teachers yearly in August (during their in-service planning time)
- Remind teachers about free education materials
• Outreach campaign to local community and coastal North Carolina to promote the uniqueness of the museum and the great services the education branch provides for all visitors (you are the only museum in the country to offer programs such as shipwreck and archaeology programs for k-12 school groups)
• Eventually consider implementing special private events
• Improve school and summer programming by updating technology (i.e.: GPS units in mapping classes, digital cameras in photography, etc.)

2. Use program themes and venues to focus in more detail on specific, relevant aspects of maritime history, culture, and environment.

Objectives:

• Do not create new programs, due to budget constraints and a small staff—evaluate and update current programs
• Implement a community advisory group to address various programs and issues, as well as evaluate current programming
• Develop major themes for the museum that all education programs try to promote (i.e.: small crafts, coastal environmental protection, barrier island life, etc.)

3. Provide a link between other museum departments/resources and the public.

Objectives:

• Establish a working relationship with the education branches at Southport and Graveyard of the Atlantic museums
• Utilize more of the museum complex
• Establish how all departments can work together better to best meet the needs of the public and the mission
• To increase public access to museum information—add all educational publications to the museum website and increase volunteer training to better prepare them to serve the museum and public

4. Provide museum resources to enhance community partnerships and collaborations with other organizations in the Carteret County area.

Objectives:

• Develop programs that address needs of the community
• Collaborate with local scholars to create programs
• Continue to collaborate with other marine educators on grants
Meet with community leaders and teachers to define current public and special groups needs

**Immediate Action Steps:**

- Review and adjust strategic plan internally to add deadlines, etc.

This plan is just a starting point for the education branch of the NC Maritime Museum. The author suggests that the education staff and director of the museum review and adjust the plan throughout the summer of 2011, as well as adding internal deadlines, so that a plan can be passed to an advisory committee by the fall of 2011.

- Form an advisory committee to review strategic plan (includes staff, Friends of the Museum members, and other local educators)

The education staff should form an advisory committee to help review and advise them on their seven-year strategic plan. This committee should be made up of all major stakeholders including individuals representing teachers (K-12), a collaborating organization, the general public, Friends of the Museum members, and non-education branch museum staff. The advisory committee should be assembled by the fall of 2011.

- Finalize seven-year strategic plan and implement

After the director and the advisory committee review the seven-year strategic plan, the education staff should meet again to finalize the plan and start to implement its goals. They should step back and evaluate their current programming to make sure that it is in line with their seven-year strategic plan. This should take place during winter 2012.

- Review the strategic plan annually to make sure it is advising the education branch and revises according to the changing outside environment (visitors, other marine education facilities, etc)

The education staff should set up an annual date to review the strategic plan to make sure that it is still up to date and revise it accordingly. This will allow them a chance to step back from their programming and gain perspective to make sure they are on target to meet their goals. A logical review date is December 1, which is 2 weeks before the Friends of the Museum annual review and six months through the state’s fiscal year.

The exercise of developing a seven-year strategic plan helped the education branch of the North Carolina Maritime Museum clearly identify their purpose and the direction they want to take their programming in the future. This draft will be modified and implemented over time. It was a difficult, but extremely useful process to develop a mission and vision statement.
The Maritime Museum as a whole does not have a strategic plan. In 2009 the staff of the museum redefined the mission statement and started the strategic planning process, but a plan was never fully developed. The author thinks it will be critical for the museum staff to develop a strategic plan for the museum as a whole before the American Association of Museums reaccredits them in 2015.

The Maritime Museum System and the Aquarium System: A Comparison

This section of the report is a comparison between two very different state systems of marine education facilities—the North Carolina Maritime Museum system and the North Carolina Aquarium system. Both are governed by the state, Department of Cultural Resources (DCR) and DENR respectively, but they were developed very differently over time and are therefore currently managed on different scales. The aquariums originally started out as a statewide system, with a statewide friends support group. In comparison, the maritime museum system has just recently become a system, but it’s still being run as three separate facilities, with three different friends support groups.

The North Carolina Maritime Museum in Beaufort collects, preserves, researches, documents, and interprets the maritime history, culture and environment of coastal North Carolina (NC Maritime Museum Homepage, 2010). The maritime museum is part of the Division of State History Museum, Office of Archives and History, under DCR (NC Maritime Museum Homepage, 2010). DCR receives operating funds for state museums through the State General Assembly, oversees compliance with state and federal regulatory guidelines, and sets policies compatible with the museum’s missions, long-range goals, and financial stability. However, maritime history and marine education are a minute part of the North Carolina’s overall museum system. According to Allison Besch, curator of education at the museum, the only guidelines provided to the maritime museum from DCR is to serve the public and protect and preserve maritime history (Besch, 2010). How the museum exactly goes about serving its 200,000 annual visitors with relevant programs fall to the director and staff to decide. Although they are not required to serve a certain number of people annually, the museum staff works hard meet the guidelines and goals they have established for serving the greater public as best
as possible. The museum has 1200 members and conducts around 300 public programs with different education programs rotating quarterly, including museum exhibits and events, coastal culture programs, on-the-water programs, watercraft center programs, and educational programs (Besch et al., 2010).

The North Carolina Maritime Museum has a long history with different governing agencies in the area and actually started in 1904 as a small assortment of natural history artifacts (Besch et al., 2010). In the 1950’s the North Carolina Department of Conservation and Development took responsibility of the collection, moved it from Pivers Island to Morehead City and named it the Hampton Marine Museum. By 1959, the Hampton Marine Museum was put under the leadership of the Department of Agriculture under the North Carolina Museum of Natural History. Finally, in 1970, the museum was renamed the Hampton Mariners Museum and moved to Beaufort. Charles McNeill expanded the mission of the museum to encompass maritime history and coastal natural history in 1975. Eventually in 1984, the museum officially became the North Carolina Maritime Museum and in 1985 it moved to its now home base on Front Street in downtown Beaufort. Here the museum completed the accreditation process for the American Association of Museums and was transferred to be governed under DRC in 1997 (Besch et al., 2010).

In 1999, the museum expanded to include the Southport branch and in 2008 the Graveyard of the Atlantic Museum was added to complete the current North Carolina Maritime Museum system. The mission of the NC Maritime Museum at Southport is “to tell the story of the Lower Cape Fear region’s people and their relationships to the water... a tale of tides, wind, and ocean” (North Carolina Office of Archives and History, 2010). The Graveyard of the Atlantic Museum, located in Hatteras, is “dedicated to the preservation, advancement and presentation of the maritime history and shipwrecks of the North Carolina Outer Banks from the earliest periods of exploration and/or colonization to the present day, with particular emphasis on the period from 1524 to 1945” (Graveyard of the Atlantic, 2010). Both of these additional branches are just starting to fill their facilities with exhibits as the Southport branch recently moved into a new building and the Graveyard of the Atlantic is just getting established (Creelman, 2011).
As previously stated, this report will focus on the Beaufort museum facility since it is still uncertain how the maritime museum system will develop as a whole.

An important event in the management and history of the maritime museum was the formation of the Friends of the North Carolina Maritime Museum (Friends) in 1979. This private, non-profit organization “forges a public/private partnership between supporters of our state’s rich maritime heritage and the state of North Carolina” (Friends of the NC Maritime Museum, 2010). The Friends essentially offer all types of support to enhance the Maritime Museum including fundraising for programs, manpower, equipment, and donations. They help raise a lot of the money that goes to support the variety of programs the museum offers annually and they also play somewhat of a role in museum decisions (Creelman, 2011). The Friends also own Gallants Channel, 36 acres of waterfront land, where the Maritime Museum currently runs the Junior Sailing Program every summer. This property may also be used in the future to expand current facilities for additional educational and cultural programs (NC Department of Cultural Resources, 2008). The Maritime Museum at Southport and the Graveyard of the Atlantic Museum both has their own Friends support group. As the NC Maritime Museum System is state funded, all three museums rely heavily on the support of their respective Friends group, which help to involve many of the local community members and truly keep the museums going from day to day.

It is interesting to compare the institutional history of the maritime museum system to the North Carolina Aquarium system, which is also made up of three facilities, but it has evolved quite differently since it was established in 1976 (Kilgore, 2008). The North Carolina Aquarium at Fort Fisher, the North Carolina Aquarium at Pine Knoll Shores, and the North Carolina Aquarium on Roanoke Island, all started out as three multi-purpose marine centers built to “enhance coastal environmental education for the public, schools and teachers, and to boost the coastal and state economies” (Kilgore, 2008). These three marine centers were managed by the North Carolina Office of Marine Affairs and had a total of 341,000 visitors the first year they were open in 1976. They were renamed in 1986 to their current names to better identify the educational mission and the public aspects of the facilities and have had over one million annual visitors since then (Kilgore, 2008).
Also in 1986, the North Carolina Aquarium Society was established (Kilgore, 2008). This statewide non-profit group, based in Raleigh, has a mission to support all three aquariums through memberships, funding, and other services. Currently, through this public-private partnership, the Aquarium Society provides over $2 million to the aquarium system annually and in 2010 they were ranked by Charity Navigator as the best zoo and aquarium charity in the United States. Charity Navigator, a non-profit watch group based in New Jersey, is nation’s largest evaluator of charities, evaluating over 5500 charities around the United States on their efficiency and effectiveness (North Carolina Aquarium Society, 2010).

In 1990, the Association of Zoos and Aquariums accredited all three aquariums and in 1993 they became a division in DENR (Kilgore, 2008). Starting in 1994, the aquariums implemented an admission fee for the general public and this money is put towards new exhibits, repairs, regular maintenance, and seasonal staff. All school groups, Aquarium Society members, and children under six are admitted free. More recently, from 1998 to 2006, all three aquariums were shut down for a period of time for major renovations and expansions that more than tripled the size of each facility, as well as the full time staff (Kilgore, 2008). The state’s General Assembly and The Aquarium Society funded these improvements, which have allowed the aquariums to service more patrons and offer additional programs (NC Aquarium at Pine Knoll Shores, 2011).

To summarize the comparison—both establishments are systems (one under development), but the way they evolved and are organized currently, are quite different. The North Carolina Maritime Museum is currently viewed as a state museum system with three facilities and three separate non-profit Friends groups that provide invaluable community support to each of their respective facilities. However, it started out as one smaller facility and has obviously expanded its niche over time to grow into a system. However, is it really a system? It is a different from what one might think of as a system since all three facilities are truly only related by the fact that they have the same director. Currently they do not work together too much, but that might change in the future as the Southport branch and the Graveyard of the Atlantic become established. The NC Aquarium system started out as a system of three facilities with one statewide Friends support group, based near the legislature.
in Raleigh. Additionally, the NC Aquarium has an advantage over many other state museums, simply because they charge for admissions and can make a profit at the door throughout the year allowing them to have more staff, resources, and technologies.

IV) Broader Relationships Among Regional Facilities in Carteret County

In order to explore the broader relationships among the regional marine education facilities in Carteret County, the author developed a short written questionnaire and organized and facilitated a focus group meeting with local educators. The purpose of the questionnaire was to gather information about needs for collaboration used for the focus group discussion and background information about each of the facilities, including their education programs strengths and future goals (See Appendix 3).

The author collected a lot of helpful information about collaboration and partnerships from the questionnaire, including a list of all of the marine education facilities past and current collaborating organizations (See Appendix 2). This was included in the focus group agenda information so that all educators were made aware of the collaborations that were going on around Carteret County before the focus group meeting.

There are a number of different reasons that marine education facilities may want to collaborate, besides the fact that one can split the amount of work in an equal partnership.

- Educators collaborate together to share new knowledge, ideas, perspectives, and to gain useful feedback from one another.

- Collaboration leads to better and more diverse programming that allows facilities to reach a larger audience.

- Multiple organizations working together can offer larger programs and events, helping an education facility to go beyond their usual target audience.

- Facilities may want to collaborate with other organizations to fill in where a lack of resources exists, including funding or staff.

- If two facilities have very similar missions, it makes sense to develop a partnership that promotes their vision to as many people as possible.
Collaboration can help to reduce competition and redundancies between programming, especially in a small region such as Carteret County.

The bottom line for marine education facilities is that they are all trying to educate as many people as possible, and sometimes it helps to do this job together. However, there are also a few challenges inherent in collaboration that the Carteret County marine educators pointed out during the focus group.

- Coordination is a big part of successful collaboration—sometimes it is just too difficult to coordinate the time, schedules, people, or funding for a collaboration to work.
- Smaller facilities may have limited resources and not enough to share with others.
- There can be typical communication and administration problems between different facilities that are all trying to work together, and sometimes their missions are just too different to justify forming some type of partnership.
- One of the most important pieces to keep in mind when collaborating is the location of the multiple facilities—ones that are too far apart are going to be less likely to cooperate together.
- The location of the actual collaborative event matters since when one facility hosts the event, they are essentially “the face” of the event. Visitors will not get to see the facilities of the others involved in the partnership. Collaboration is not perfect—it is a compromise, but when it is successful, all partners benefit.

The purpose of the focus group was to help local educators collaborate and network to build relationships and open lines of communication with one another. It is important that all regional educators know the other educators at their neighboring marine education facilities so that they have a contact for collaboration ideas. The focus group meeting also allowed regional educators the opportunity to think about their own facility’s programs and where they could potentially work with other educators by sharing exhibits, facilities, and programs. They learned about the strengths and goals of each other’s facilities, as well as upcoming education programs. Most importantly, the focus group allowed for a facilitated discussion of the challenges and benefits of regional collaboration, as well as what educators would like to see happen in Carteret County in the future.
Levels of Collaboration

It appears that all of the selected marine education facilities in Carteret County collaborate with one another because of good working relationships. However, there is a broad spectrum of facilities collaborating that ranges from independent facilities, to cooperation among facilities, to formal partnerships, and finally consolidation. There are several levels of collaboration:

- A facility is independent is when it acts completely on its own. The facility might be a private, non-profit organization or part of a large, public agency that works alone, without outside assistance, on a goal or objective. Independence is the absence of sharing resources.

- Cooperation or an informal partnership is most common among facilities and doesn’t involve exchanging staff or money.

- Partnerships are formal agreements that usually involve sharing staff or funding. Permits and documents may need to be signed by agency heads and this process can be difficult due to constraints put on educators by their governing agency.

- Consolidation is when two organizations or a position literally become one in the same, with one streamlined budget.

During the focus group, a portion of the discussion was devoted to talking about the different levels of collaboration and developing the advantages and disadvantages at each level (Table 1).

- Independent facilities have the benefit of no coordination problems, but are disadvantaged since they have to do everything themselves and they simply may not have enough resources to do something.

- If facilities do not collaborate they may face budget cuts if they are offering programs that are similar to a competing facility. For example, if two state-funded facilities offer the same program, the state legislature is more likely to cut one of them out to reduce the overall budget.

- Cooperation is something that all educators practice in Carteret County and would like to see more of because it is mutually beneficial to all and there are fewer boundaries to cross than formal partnerships. No formal paperwork is required for cooperation between facilities, however planning and logistics could become burdensome.
Formal partnerships can be difficult due to the boundaries of some state and federal agencies and there is a point where partnerships can become a burden instead of being helpful. There can be liability and budget issues with formal partnerships that involve sharing exhibits or programs. However, with partnerships, one is has a dependable agreement and product outcome, and that is not always the case with cooperation. With formal partnerships, resources are usually supplemented and there is a division of labor among the institutions.

- Both cooperation and formal partnerships can help educators reach a wider audience and assist each other with professional development.

- Consolidated facilities do not have to worry about competition or repetition of educational programming, but it requires less staff to educate and therefore jobs are usually cut.

Table 1. Represents the advantages and disadvantages of the four levels of collaboration developed at the focus group meeting.

<table>
<thead>
<tr>
<th>Options</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent</td>
<td>no coordination problems</td>
<td>do everything yourself</td>
</tr>
<tr>
<td></td>
<td></td>
<td>may not have enough resources to do something</td>
</tr>
<tr>
<td>Cooperation</td>
<td>reach a wider audience</td>
<td>logistics/planning</td>
</tr>
<tr>
<td></td>
<td>fewer boundaries than</td>
<td>may not work with everyone</td>
</tr>
<tr>
<td></td>
<td>partnerships</td>
<td></td>
</tr>
<tr>
<td></td>
<td>no formal paperwork</td>
<td>can't always count on product</td>
</tr>
<tr>
<td></td>
<td>professional development</td>
<td></td>
</tr>
<tr>
<td>Partnerships</td>
<td>reach a wider audience</td>
<td>bureaucracy issues</td>
</tr>
<tr>
<td></td>
<td>supplement resources and</td>
<td>boundaries of agencies</td>
</tr>
<tr>
<td></td>
<td>division of labor</td>
<td>complicates everything</td>
</tr>
<tr>
<td></td>
<td>dependable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>products/agreement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>professional development</td>
<td></td>
</tr>
<tr>
<td>Consolidation</td>
<td>less repetitive</td>
<td>jobs may be cut</td>
</tr>
</tbody>
</table>

As mentioned previously, location of facilities can play a major role in how often cooperation or partnerships take place. Facilities such as the NC Maritime Museum and NC Coastal Reserve have a great partnership but they are also located next to each other. Facilities that are located farther away may not cooperate as much or might be out of the local educators loop.

One of the great examples of cooperation among all of the marine education facilities in Carteret County is the Crystal Coast Earth Day Festival. This festival was established in 2010, by a core group of eight education facilities and has expanded in 2011 to include over 20
facilities such as the Division of Marine Fisheries, the Coastal Environmental Partnership, Carteret Community College, and local waste management services. It is a large, successful event with live music and a variety of environmental educational activities. This is one successful example of an informal partnership between all of these facilities that allows them to host a bigger event, reaching a wider audience than their usual targeted audience. As the marine educators in Carteret County seem to have good working relationships, there are also a number of smaller informal partnerships. For example, the North Carolina Aquarium often uses Fort Macon’s park for programming.

One of the more established, formal partnerships in Carteret County is between the North Carolina Maritime Museum and the North Carolina Coastal Reserve at Rachel Carson. These two education programs share resources, staff, and boats to offer joint programming such as the Summer Science School. One of the reasons these two facilities have such a great formal partnership may be that they are located right next to each other in Beaufort, but also, they complement each other quite well. The Maritime Museum gives the NC Coastal Reserve a face on Front Street, a popular destination for visitors of Beaufort. The NC Coastal Reserve gives the maritime museum access to an outdoor classroom—their site is a barrier island that can be used to teach people about many different aspects of coastal North Carolina. They also share their boats with the Maritime Museum for programming and events.

From the above we see that formal partnerships are possible and can be very successful, but it really depends on the environmental facilities situation and the actual environmental educator. Collaborations are formed from good working relationships and it is truly up to the individual educators to seek out collaboration opportunities to better their educational programming. The different levels of collaboration involve different amounts of work and commitment, and as the local environmental educators discussed in the focus group—there is a tipping point where in some situations it is simply too much work to collaborate with others, mostly due to the boundaries of bureaucracies. Therefore, it is wise for environmental educators to think about additional options such as cooperating on grants together to fund larger programs.
V) Recommendations for the Future

Following the focus group meeting and various discussions, the author developed a list of recommendations for the local Carteret County marine educators. This list is a starting point, which will hopefully inspire additional collaboration among marine education facilities in the future.

1. **Resurrect the annual local environmental educators (EE) meeting.**

   In the early 2000’s, a local environmental educators meeting was held annually in Carteret County, but it stopped after 2005 when the original organizer left the area (Besch, 2011). It would be beneficial for all educators to resurrect the local EE meeting. This meeting should be conducted twice a year, once before the busy season in March, and once during the slow season when educators have time to re-evaluate their programming. It should simply serve as a way for educators to touch base with their regional peers and to continue to communicate the types of programs they offer. Perhaps each meeting could have a theme, such as “future collaboration options” or “different methods to educate the public about NC barrier island ecology”. The location of the meeting could rotate to be held at all of the facilities involved at some point since they all have large building space and classrooms. The local EE meeting could also serve as a place to share crucial information such as when each facility may be holding professional development workshops. This first recommendation is the most important and truly serves as a basis for a number of other following recommendations as their details need to be discussed among the educators and the local EE meeting is the perfect place to accomplish this. Perhaps the first meeting could be held at Fort Macon since they have a large, new LEED certified education center. The success of the local EE meeting really depends on the marine educators and how willing they are to meet and cooperate with one another. A lot of collaboration depends on the state of the working relationship that marine educators have with one another and establishing an annual local EE meeting will only help to strengthen these important working relationships as it keeps the lines of communication open among the educators.
2. Establish a listserv for local EE to share information, program updates, conferences, etc.

Another beneficial recommendation for local EE’s would be to develop a listserv that would enable simple communication throughout the year when everyone is busy and does not have time for additional meetings. A listserv is a simple way for EE’s to share information about their facilities and upcoming programs. Educators could also post information about upcoming conferences people might want to attend or useful documents from conferences previously attended that would benefit other Carteret County marine educators. The idea of a listserv seems simple but a person with specific expertise and funds would need to be allocated for the listserv to be properly maintained. After evaluating all education facilities involved, the author feels that the North Carolina Aquarium has the most staff, best technological capabilities, and funds to allocate a small amount to the upkeep of a listserv that may provide major benefits to all involved. However, this is only a suggestion, and it would have to be discussed between all educators most likely at the annual local EE meeting.

3. Update ncocoast.com with accurate information about education facilities programs.

The consistency of information that education facilities are sharing with the public is important—all facilities may not be relaying the same message and it is difficult to keep track of a large number of facilities. It would be a good idea to consolidate all of the information about marine education programs onto one website—ncocoast.com was identified by the local educators to be a popular website for tourists to get information about visiting Carteret County. At a local annual EE meeting, educators could finalize a list of information that each facility should give to the point person at the Crystal Coast Visitor Center who could consolidate it on ncocoast.com. This would benefit all of the facilities targeted audiences as most of them probably get a lot of their information from the internet. Each educator would be responsible to get their facilities proper information to the point person who is updating the website.

4. Establish an annual summer training session for new education staff and seasonal employees about the many facilities.
As there are a large number of marine education facilities with different programming in Carteret County, it would be beneficial to establish a short summer training session every year for new education staff and seasonal employees to learn about what the county offers in terms of marine education. This training session may only have to last a few days with a field trip to visit some of the facilities, but it would greatly benefit seasonal employees such as summer interns, as well as new staff as they could learn about the different environmental facilities in the area. The details of this summer training session would most likely be worked out at an annual local EE meeting, but the responsibilities could be shared among all institutions—every summer a different environmental institution could organize and host the short training session. The benefits of having educated staff and volunteers could include increased collaboration among the education facilities since their staff would be aware of all the other regional programming.

5. Cooperate on grants for marine education programs.

Most, if not all of the marine education facilities currently cooperate together on grant proposals to fund marine education programs. However, the author feels that additional cooperation on grant proposals would enhance all facilities marine education programming and would help to build partnerships while avoiding the boundaries of bureaucracy imposed on state and federal institutions. By working together, facilities could develop stronger working relationships and the additional benefits from increased collaboration including reaching a wider audience. When facilities received grant money, they would be able to offer the public additional valuable education programs, which seem to be the bottom line for all of the previously mentioned regional education facilities. This recommendation can be implemented by all marine educators and would involve seeking out funding and writing proposals with other educators.

6. Establish interpretive planning workshops to help with career development.

Career development is a crucial aspect of any job, especially a marine educator’s job since they are constantly interacting with the public and translating important environmental
policy and scientific research. Some of the facilities in Carteret County hold development workshops annually for teachers—it is important that fellow educators from other institutions attend these as well. Announcing these workshops could take place on the local EE listserv if it is established. In the past, Cape Lookout National Seashore hosted a yearly interpretive planning workshop for regional environmental educators. The local marine educators could work together in the future to recruit planning experts and design a three-day workshop to be held at a local facility or retreat center. The author feels that it would be beneficial to all educators to reestablish this workshop as educators learn by speaking with other educators and sharing information about the best way to reach an audience. The regional education facilities may be able to apply for a group grant to get this program funded and it could occur every few years.

The author would like to note the current status of some of these recommendations as they are already being implemented. During the last week of March 2011, the first annual local EE meeting was held at Fort Macon State Park following the Annual Crystal Coast Earth Day Festival preparation meeting. Educators discussed the purpose of the local EE annual meeting and some ideas for the group beyond networking and information sharing. One idea was for this group to actually take on the sponsorship and implementation of the Annual Crystal Coast Earth Day Festival. Another idea discussed was the need for staff professional development especially in the tight state budget situation. Educators discussed holding half-day sessions where they could present different training information that they have learned previously at professional development workshops they attended. They also stressed the importance of including other local environmental educators in their own facilities training workshops where appropriate. This relates to recommendation number four and six. Overall it will help to utilize the valuable resources located in Carteret County at a low cost.

VI) Conclusion

Both in order to develop more effective and efficient programs and in light of current state budget cuts, regional marine education facilities should be considering collaboration where possible. This report is meant to offer suggestions for ways that these seven institutions
could collaborate more in the future. However, collaboration can be a compromise and sometimes it is more work to establish collaboration than what educators will reap from the final results. In this case it may not be advisable to collaborate. In the end, a lot of collaboration depends on the state of the working relationships educators have with one another. Therefore it is important for local environmental educators to keep the lines of communication open so that they know what the programming of neighboring marine education facilities.

Strategic planning is a difficult, active process. The seven-year strategic plan developed by the author for the North Carolina Maritime Museum education branch is meant to be a working draft to guide the educators in a formal development of a plan within the next year. It will take regular maintenance to make sure the educators and programs are on track with the plan. For now, all three of the maritime museums should have separate strategic plans since they have different goals, audiences, and resources to work with to implement programs. The educators should communicate their visions and plans with one another, but a collaborative, inter-facility plan is out of the question for now.

Finally, relationships among marine education facilities are not always simple. At first glance it appears that the educators should be collaborating on similar programs all the time to eliminate competition and redundancies in the programs they offer—and this is true to some extent. However, on closer inspection, it becomes clear that there are many levels of collaboration and informal partnerships or cooperation happen frequently due to strong working relationships among the local educators. The formal partnerships are more difficult to establish and therefore there are not as many examples of such. The recommendations in this report will hopefully help to facilitate future collaborations among the talented and diverse group of marine educators in Carteret County.
Acknowledgments

I would like to thank my two advisors—Mike Orbach and Allison Besch for their helpful support and guidance throughout the year on this project. I would also like to thank the local marine educators who participated in my focus group meeting and provided a lot of valuable insight into the world of marine education. Thank you Janil Miller for helping me secure some of the background research materials and finally to my fellow MEM’s in Durham and Beaufort—thanks for making my experience at Duke a fun and memorable one!
References:


Creelman, Brent, Personal communication, Friends of the Maritime Museum, March 9, 2011.


Cape Lookout National Seashore, Personal communication, April 21, 2011.


Fort Macon State Park, personal communication, April 20, 2011.


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Steele, Sally. Personal communication, North Carolina Coastal Federation, April 20, 2011.

### Appendix 1: Marine education facility programs

<table>
<thead>
<tr>
<th>Facility</th>
<th>Location</th>
<th>Marine Education Programs</th>
<th>Program Audience</th>
<th>Type of program</th>
<th>Timing of Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC Maritime Museums</td>
<td>Beaufort</td>
<td>Brown Bag Gam &lt;br&gt; Summer Science School (with NC Coastal Reserve) &lt;br&gt; group marine science programs—Museum or Field programs &lt;br&gt; teacher workshops &lt;br&gt; traveling programs to local schools &lt;br&gt; Junior Sailing Program</td>
<td>general public &lt;br&gt; pre-school to 8th grade &lt;br&gt; pre-school-adults &lt;br&gt; adults (teachers) &lt;br&gt; k-8 grade &lt;br&gt; school age</td>
<td>lecture series &lt;br&gt; summer school &lt;br&gt; interactive classroom or field programs &lt;br&gt; interactive lecture &lt;br&gt; classroom lessons &lt;br&gt; outdoor activity</td>
<td>throughout the year &lt;br&gt; June-August &lt;br&gt; throughout the year &lt;br&gt; throughout the year &lt;br&gt; throughout the year &lt;br&gt; June-August</td>
</tr>
<tr>
<td>NC Aquarium</td>
<td>Pine Knoll Shores</td>
<td>Get Hooked Fishing School &lt;br&gt; School Group Programs (Discovery Programs, Field Experiences, etc.) &lt;br&gt; Outreach Program &lt;br&gt; Interpretive Animal Programs &lt;br&gt; Behind-the-Scenes Tour</td>
<td>general public &lt;br&gt; pre-k-12 grade &lt;br&gt; all ages &lt;br&gt; all ages &lt;br&gt; ages 6 and up</td>
<td>interactive classroom lessons/lectures &lt;br&gt; interactive classroom or field programs &lt;br&gt; traveling exhibits &lt;br&gt; traveling exhibits for community or school events &lt;br&gt; interactive lesson</td>
<td>one all day session &lt;br&gt; throughout the year &lt;br&gt; throughout the year &lt;br&gt; throughout the year &lt;br&gt; throughout the year</td>
</tr>
<tr>
<td>NC Coastal Reserve (Rachel Carson Reserve)</td>
<td>Beaufort</td>
<td>Summer Science School (with maritime museum) &lt;br&gt; Guided Nature Hike tour &lt;br&gt; Boat Ride/Boardwalk Field trip &lt;br&gt; teacher workshops &lt;br&gt; lesson plans</td>
<td>preschool, 1,2,5,6 grades &lt;br&gt; k-12 grade &lt;br&gt; k-12 grade &lt;br&gt; adults (teachers) &lt;br&gt; k-12 grade</td>
<td>summer school &lt;br&gt; field program &lt;br&gt; field program &lt;br&gt; workshop &lt;br&gt; classroom lessons</td>
<td>June-August &lt;br&gt; throughout school year &lt;br&gt; throughout school year &lt;br&gt; annually &lt;br&gt; school year</td>
</tr>
<tr>
<td>Cape Lookout National Seashore</td>
<td>Cape Lookout</td>
<td>Cape Lookout Camp (JOINTLY managed with Core Sound Museum) &lt;br&gt; Cape Lookout Studies Program (with the Maritime Museum)</td>
<td>middle school students</td>
<td>summer camp field program</td>
<td>1 week, July 2010 seasonal</td>
</tr>
<tr>
<td>Ft. Macon State Park</td>
<td>Bogue Banks</td>
<td>Environmental Education Learning Experience (ELE) &lt;br&gt; Nature Tours and Talks</td>
<td>5-8 grade &lt;br&gt; general public</td>
<td>curriculum guide on barrier islands field program</td>
<td>throughout the year throughout the year</td>
</tr>
<tr>
<td>NC Coastal Federation</td>
<td>Ocean</td>
<td>Coastal Connections (a supplemental classroom curriculum) &lt;br&gt; Oyster Education Program &lt;br&gt; NCCF Publications (State of the Coast Report, Coastal Review) events: i.e Build an Oyster Reef</td>
<td>middle school students &lt;br&gt; high school students &lt;br&gt; general public &lt;br&gt; general public</td>
<td>classroom lessons classroom &amp; field program news publication field program</td>
<td>school year school year annually summer, spring, fall</td>
</tr>
<tr>
<td>Core Sound Waterfowl Museum and Heritage Center</td>
<td>Harkers Island</td>
<td>Cape Lookout Camp (JOINTLY managed with Cape Lookout) &lt;br&gt; Wildlife Education Programs &lt;br&gt; Curriculum development for Cape Lookout &lt;br&gt; &quot;Raising the Story&quot; Menhaden program &lt;br&gt; Downeast Community Partnership (with Duke University)</td>
<td>middle school students &lt;br&gt; general public &lt;br&gt; kindergarten, 4th, 6th, 8th grade &lt;br&gt; middle school students &lt;br&gt; downeast citizens</td>
<td>summer camp classroom &amp; field program classroom lessons classroom lessons workshop/research partnership</td>
<td>1 week, July 2010 throughout the year school year February 1, 2010 ongoing</td>
</tr>
</tbody>
</table>
Appendix 2: Collaboration among local education facilities

<table>
<thead>
<tr>
<th>Local Marine Education Facilities</th>
<th>Collaborating Facilities/Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CALO NCMM NCA NCCR CSWMHC FMSP NCCF Caretet County Schools Hyde County Schools Carteret Community College The Boys &amp; Girls Club NC Division of Marine Fisheries NC State Parks NOAA Local Marine Labs NC Wildlife Resources Commission Summer Camps Outer Banks Wildlife Shelter Trinity Center Don Lee Center NC Center for Advancement of Teaching NC Dept. of Env. Education</td>
</tr>
<tr>
<td>Cape Lookout National Seashore (CALO)</td>
<td>X X X X X X X</td>
</tr>
<tr>
<td>NC Maritime Museum (NCMM)</td>
<td>X X X X X X X</td>
</tr>
<tr>
<td>NC Aquarium (NCA)</td>
<td>X X X X X X</td>
</tr>
<tr>
<td>NC Coastal Federation (NCCF)</td>
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<tr>
<td>NC Coastal Reserve (NCCR)</td>
<td>X X X X X</td>
</tr>
<tr>
<td>Core Sound Waterfowl Museum &amp; Heritage Center (CSWMHC)</td>
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</tr>
<tr>
<td>Ft. Macon State Park (FMSP)</td>
<td>X X X X X</td>
</tr>
<tr>
<td>NC Center for Coastal Studies (NCCS)</td>
<td>X X X X</td>
</tr>
<tr>
<td>NC Division of Marine Fisheries</td>
<td>X X X</td>
</tr>
<tr>
<td>NC State Parks</td>
<td>X X</td>
</tr>
<tr>
<td>NOAA</td>
<td>X</td>
</tr>
<tr>
<td>Local Marine Labs</td>
<td>X X</td>
</tr>
<tr>
<td>NC Wildlife Resources Commission</td>
<td>X</td>
</tr>
<tr>
<td>Summer Camps</td>
<td>X</td>
</tr>
<tr>
<td>Outer Banks Wildlife Shelter</td>
<td>X</td>
</tr>
<tr>
<td>Trinity Center</td>
<td>X</td>
</tr>
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<td>Don Lee Center</td>
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<td>NC Center for Advancement of Teaching</td>
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Appendix 3: Survey Questions for Environmental Educators

1. Are you currently involved in partnerships with other educational or interpretive facilities (in Eastern NC)? Have you had partnerships in the past? Please list them. (Partnerships include joint programs, sharing staff, exhibits, communications, etc.)

2. What are your major reasons for collaborating and not collaborating with other environmental education institutions or programs?

3. What do you think are the advantages and disadvantages of partnerships?

4. What are the major strengths of your programs and facilities?

5. What do you want or need in a partnering program or facility?

6. What is your strategic plan or your program or facility goals for the upcoming years?

7. Please come prepared to the focus group meeting with an idea of at least one partnership opportunity you would like to explore with another education or interpretive facility or program.

Appendix 4: Websites of Local Marine Education Facilities in Carteret County

North Carolina Aquarium at Pine Knoll Shores
{http://www.ncaquariums.com/pine-knoll-shores}

North Carolina Maritime Museum
{http://www.ncmaritimemuseums.com}

Fort Macon State Park
{http://www.ncparks.gov/Visit/parks/foma/main.php}

North Carolina Coastal Reserve (Rachel Carson Reserve site)
{http://www.nccoastalreserve.net}

Cape Lookout National Seashore
{http://www.nps.gov/calo/index.htm}

North Carolina Coastal Federation
{http://www.nccoast.org}

Core Sound Waterfowl Museum and Heritage Center
{http://coresound.com}