Attendance

<table>
<thead>
<tr>
<th>LAC Partner Organization Members</th>
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<tbody>
<tr>
<td>Town of Beaufort Police, Chief Paul Burdette</td>
<td>Yes</td>
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<td>Town of Beaufort Administration, Charles Burgess</td>
<td>Yes</td>
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<tr>
<td>NC Maritime Museum-Beaufort, Ben Wunderly</td>
<td>No</td>
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<td>NC State Parks, Randy Newman</td>
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<tr>
<th>Community Members and Community Organizations Members</th>
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<tr>
<td>Ann Carter</td>
<td>Yes</td>
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<tr>
<td>Perry Barrow</td>
<td>Yes</td>
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<tr>
<td>Robin Newton</td>
<td>Yes</td>
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<td>John Fussell</td>
<td>Yes</td>
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<td>Dr. Stanley Rule</td>
<td>Yes</td>
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<tr>
<td>Margaret Garner</td>
<td>Yes</td>
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<td>Dr. Dan Rittschof</td>
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<tr>
<th>Others Present</th>
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<tr>
<td>Paula Gillikin, DCM/NCCR &amp; NCNERR Central Sites Manager</td>
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<tr>
<td>Whitney Jenkins, DCM/NCCR &amp; NCNERR Coastal Training Program Coordinator</td>
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<tr>
<td>Rebecca Ellin, DCM/NCCR &amp; NCNERR Reserve Program Manager</td>
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<td>Dr. Brandon Puckett, DCM/NCCR &amp; NCNERR Research Coordinator</td>
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<td>Lori Davis, DCM/NCCR &amp; NCNERR Education Coordinator</td>
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<td>Rodney Guajardo, DCM/NCCR &amp; NCNERR GIS Specialist</td>
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<td>Daniel Govoni, DCM</td>
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<tr>
<th>Public in Attendance</th>
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<tr>
<td>David Cessna</td>
<td>Yes</td>
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<td>Dr. Ken Riley</td>
<td>Yes</td>
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<td>Dr. James Morris</td>
<td>No</td>
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<td>Dr. Najat Elmouchou</td>
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<td>Tom Roller</td>
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Welcome and opening remarks – Rebecca Ellin

The Reserve Program Manager welcomed the committee members and members of the public in attendance. A brief introduction was provided to describe the purpose and objectives of the meeting and how the input received will be incorporated into policy development.

Staff heard at the fall local advisory committee meetings that there was considerable interest in the topic of shellfish cultivation at N.C. Coastal Reserve and National Estuarine Research Reserve (Reserve) sites and in having a more in-depth conversation about lease activity and management within Reserve boundaries. As a result, staff held local advisory committee meetings this week for sites that are currently open to shellfish harvesting. A similar advisory committee meeting was held January 18 in Wilmington for the Masonboro Island and Zeke’s Island Reserves.

The objectives of the meetings were to:

- Brief committee members on Reserve-related shellfish lease activity and policy development, including potential conflicts Reserve considered and draft conditions required for future leases that may be sited within Reserve boundaries, and
- Gather input on shellfish lease activity within Reserve boundaries in general and specific aspects to be incorporated in the policy.

The input gathered from the local advisory committee meetings will be summarized and used to inform internal discussions regarding shellfish cultivation policy within Reserve boundaries.

Background presentation – Paula Gillikin

The Central Sites Manager provided a presentation to provide context for the discussion including background about shellfish cultivation in N.C. and information about the Reserve’s process to develop a draft shellfish cultivation policy.

Introduction

The N.C. Division of Marine Fisheries (DMF) classifies shellfish cultivation as commercial fishing and regulates shellfish cultivation through its shellfish leasing program. Commercial fishing is allowed within Reserve boundaries and as such, shellfish cultivation may be allowed within Reserve boundaries; however, the activity must be considered in the context of all of the existing authorities and policies that affect the Reserve sites.
The North Carolina General Assembly, the Department of Environmental Quality, and various partner organizations have taken an increased interest in facilitating the production of aquaculture in N.C. The General Assembly called for several legislative studies related to this industry and increased funding to expand the DMF’s lease program. Interest in shellfish cultivation has increased as evidenced by 43 applications DMF received for shellfish leases in 2016 compared to the 12 applications received in 2015.

The Division of Coastal Management (DCM) understands and fully appreciates the value of the environmental and economic opportunities that can be gained through increased shellfish cultivation, and is obligated to consider shellfish cultivation activities and policies in accordance with the N.C. Coastal Area Management Act (CAMA), the federal Coastal Zone Management Act (CZMA), and the N.C. Administrative Code (NCAC) as staff considers the future role of this activity within Reserve boundaries. As demand for leases has increased, there has been interest in siting shellfish leases within the boundaries of the Reserve sites, demonstrated by the three applications for new leases within the Masonboro Island Reserve in 2015. Two leases at this site were granted by the DMF and include special conditions mutually agreed upon by both Divisions and the applicants. One lease was previously granted at the Zeke’s Island Reserve in 2012 that included no special conditions.

The DCM enacted a suspension of shellfish leases within Reserve sites from November of 2015 through December of 2016 during which no new shellfish lease applications were accepted by DMF. The purpose of the suspension was to provide time to develop a policy on shellfish cultivation within Reserve sites to best meet the purposes and rules of the Reserve program. The DMF will not be accepting new lease applications until March 2017, as federal environmental law dictates that site investigations must take place between April and October for the best detection of submerged aquatic vegetation. These additional months will be used to complete the policy and staff are seeking your input on key policy questions today.

**Guiding Documents**

The Reserve purposes as defined in the 15A NCAC 07O were provided:

- Preserve coastal ecosystems representative of the various biogeographic regions and typologies in North Carolina and to make them available for continuous future study of the processes, functions, and influences which shape and sustain the coastal ecosystems;
- Provide new information on coastal ecosystem processes to decision makers as a basis for the promotion of sound management of coastal resources;
- Provide a focal point for educational activities that increase the public awareness and understanding of coastal ecosystems, effects of man on them, and the importance of the coastal systems to the state and the Nation;
- Accommodate traditional recreational activities, commercial fishing, and other uses of the Reserve as long as they do not disturb the Reserve environment and are compatible with the research and educational activities taking place there.
The fourth purpose includes commercial fishing and states that this activity is accommodated as long as it is compatible and does not disturb the environment. The Reserve is currently engaged in a collaborative research project conducted by UNCW researchers at the Masonboro Island Reserve to assess the ecosystem services of shellfish cultivation. Results of this study will help resource managers and shellfish growers make informed decisions about locations and scales of future shellfish cultivation operations, thereby meeting the second purpose listed above.

There is no specific mention of shellfish cultivation in the Reserve’s Use Requirements in the 15A NCAC 07O but as the Reserve works to develop the policy, it is obligated to interpret the full NCAC associated with the Reserve.

The Reserve must also consider the dedication letters that dedicate Reserve sites as State Nature Preserves. The dedication letters are legal documents that include requirements for natural resource protection to meet 15A NCAC 12H. The Reserve is working with the Natural Heritage Program, the program responsible for overseeing the State Nature Preserve program, to ensure that legal requirements for protecting the dedicated preserves are being met as the Reserve develops its policy regarding this activity within Reserve boundaries.

Types of Shellfish Cultivation
The two basic types of shellfish leases in N.C. were discussed – water column and bottom. Water column leases are suspended off of the bottom; bottom leases are established directly on the bottom. In 2016, approximately one-third of lease applications to DMF were for water column leases. This shift represents the evolution of the industry from earlier years when cultivation primarily involved planting seed on the bottom with little to no infrastructure to more recent methods which are typically more intensive and may involve significant infrastructure.

Potential conflicts
While developing the Reserve’s draft shellfish policy, staff identified the following list of uses or areas of concern that could potentially be impacted by shellfish aquaculture operations within Reserve boundaries: commercial and recreational fishing; commercial activity (tours, ferries); navigation; hiking and paddling trails; constructed/research reefs; research infrastructure; research activity areas; research sanctuaries; marsh; recreational use areas; egret and heron rookeries; shore/water bird nesting, feeding, loafing areas; Important Bird Areas; submerged aquatic vegetation; natural shellfish; primary nursery areas; duck blinds; and existing shellfish leases. For clarity, navigation includes both motorized and non-motorized boats; recreational use areas focus on high use areas; and Important Bird Area is not a legal designation but the designation acknowledges the importance of some areas as essential bird habitat. Each of these potential conflicts has been taken into account to meet the Reserve’s guiding document requirements and utilize a cautious approach when considering shellfish cultivation activity as research is still needed to more fully answer questions about this activity’s ecological effects.
Proposed conditions

If shellfish cultivation operations continue to be allowed in Reserve sites, the Reserve proposes to include the following conditions in future lease contracts for those sited within the Reserve boundaries.

- Only bottom lease activities shall be allowed.
- All lease operations must be contained within the lease boundary or conducted on private property.
- No pesticides shall be applied at lease sites or on infrastructure to be deployed at lease sites.
- Bags and cages must be labeled with the leaseholder's name and lease number.
- The lease duration shall be five years with the opportunity for renewal if the terms of the lease are met. Lease conditions shall be evaluated as part of the five-year review conducted by DMF in consultation with DCM.
- The lease is not transferable.

Shall not be allowed:

- Infrastructure extending more than 18 inches off the bottom.
- Semi-permanent or permanently moored infra-structure.
- Permanent lights.
- Observation cameras that are directed outside the immediate lease area.
- Lease activities shall avoid conflicts with Reserve site resources and uses.
- Cultivation of non-native shellfish.
- Floats attached to bottom lease gear.

These conditions are designed to minimize conflict with other uses and support protection of natural resources. These conditions have been refined over time as Reserve staff. The lease at Zeke’s Island Reserve does not include these conditions; the two leases at Masonboro Island Reserve include some to most of them.

Discussion – Whitney Jenkins

A facilitated discussion occurred in which committee members were invited to respond to the following four questions. Committee member responses are generalized below each question.

Question 1 – What are your general thoughts on this activity occurring at the sites of the Reserve? What do you see as the benefits and concerns about leases being sited within the Reserve boundaries?

General thoughts:

- Shellfish lease activities will likely not interfere with passenger ferry routes.
- There is no precedent for commercial leases.
• Each Reserve site should have a separate shellfish policy or one policy for the entire Reserve with site-specific considerations.
• There are other areas outside of Reserve sites where shellfish leases can be sited.

Benefits:
• Concern that there is a lack of information about the benefits.

Concerns:
• Leases could conflict with recreational access and activities.
• Leases could exclude traditional shellfishing activities.
• Problems could arise with the protection of the lease, public safety, debris, and abandonment.
• The Reserve needs to fully analyze whether or not the use is legally allowed, because it appears to be an incompatible use that conflicts with the primary purposes of protection.
• The uniqueness of the site would likely be impacted.
• An inadequate amount of research exists to determine the potential impacts.
• Bird and other species could be impacted directly (by the structures) or indirectly.
• Light pollution could affect species that are sensitive, especially sea turtles on nearby nesting beaches.
• Using areas that have been open to non-commercial individuals could cause conflict.
• It is not appropriate to grant a lease on public lands for private profit, especially when others might be excluded from the area.
• Lease size could impact Reserve sites differently, given that some Reserves are smaller and some larger.
• Supporting the commercial fishing industry is important, but the Reserve is supposed to be a natural field laboratory and leases could affect the use of the site as a research control site.
• Other public lands do not grant commercial leases.
• Investigators from various institutions are using Middle Marshes heavily as a research laboratory; leases will affect this work.
• Middle Marshes does not offer much area for shellfish leases to be placed.
• The impacts could become apparent after the use is already established.
• Does the Reserve have the tools, capability, and resources to monitor the leases for impacts?
• Bringing in shellfish from other areas could potentially introduce non-native plant and animal species.
Question 2 – If new leases are to be allowed within the Reserves going forward, what are your thoughts on how it should be limited or managed to balance this use with other uses and protection of site natural resources?

- If the committee is not supporting commercial shellfish leases as a use, then the other questions (2-4) should not be addressed.
- Leases need to evaluated on a case-by-case basis with consideration given to existing Reserve resources and uses.
- Leases should not trump any existing uses.
- Business use of the Reserve should be given a lower priority than priority uses outlined in the Reserve’s mission and goals.
- Maps are needed to determine this.

Question 3 – What are other uses or concerns we should be taking into account when deciding where leases should be allowed to be sited?

- Current and future research areas
- Recreational fishing areas

Question 4 – How should we decide how many leases or how much area is appropriate to use for this activity? What are your thoughts on how we will know when there is too much aquaculture activity?

- It could be too late when it is realized that there is too much aquaculture activity.
- The question is difficult to answer given that there is opposition to the idea of leases being allowed in the Reserve.
- Developing a threshold would be difficult given the lack of information about commercial shellfish lease impacts.

Public Comments

David Cessna, oysterman, pointed out that Middle Marshes has a very limited area for shellfish leases to be established. He would prefer to establish a lease outside of the boundary for this reason and to avoid Reserve oversight. He described lease infrastructure and costs to the committee and pointed out that the Reserve could inherit oyster reef habitat when the area is no longer used for a lease.

Dr. Ken Riley, National Marine Fisheries Service Fisheries Biologist, provided information on some federal laws that govern siting of shellfish leases. He expressed concern that committee
members have not been exposed to the scope and diversity of commercial shellfish lease activities, such as restoration.

Judy Ratcliff, NC Natural Heritage Program Zoologist, explained that the Reserve’s draft shellfish policy includes conditions that would protect site resources and this would not change even if DMF laws that govern shellfish operations changed.

**Wrap up – Rebecca Ellin**

The Reserve Program Manager discussed the next steps the Reserve will be taking to complete development of the shellfish lease policy. The input gathered at this meeting and the Masonboro Island and Zeke’s Island Reserves’ committee meeting will be summarized and used to inform internal discussions regarding policy on leases within Reserve boundaries. Minutes will be developed for the committee meetings per standard practice. The intent is to complete the policy prior to March 1 to coincide with when DMF begins accepting lease applications. Staff will share the policy with the advisory committees once it is complete. If lease activities are allowed to continue moving forward, DMF’s proclamation notices regarding leases within Reserve boundaries will be shared with the committees so that members are aware of leases proposed and can weigh in through the DMF process. Committee members and other participants were thanked for their input and engagement at the meeting.