



SC Beach Preservation Stakeholder Workgroup Beach Nourishment Meeting Summary July 15, 2022

OVERVIEW

The SC Department of Health and Environmental Control's (DHEC) Office of Ocean and Coastal Resource Management (OCRM) convened the SC Beach Preservation Stakeholder Workgroup on Friday, July 15th at James Island Town Hall in Charleston, SC to discuss the topic of beach nourishment.

This workgroup brings together representatives of diverse stakeholder groups including residents of coastal communities, state and federal government agency representatives, academic professionals, conservation organizations, consulting engineers and policy experts with a commitment to actively participating in this process. Meetings scheduled in the coming months will present resources and information to promote further dialogue and solution-based discussions. The group was encouraged to maintain the perspective of the full SC coastline and to strive for consensus. DHEC OCRM staff will value all perspectives and take all discussions consideration in determining the agency's recommendations which will be outlined in a final report as the stakeholder process concludes.

There will be opportunities for broader stakeholder and members of the public to provide comment throughout the process and a webpage will be established to provide updates and seek additional feedback. The public participation process and opportunities to comment would extend into any subsequent process of drafting regulations related to the issues discussed by the workgroup.

WELCOME & INTRODUCTIONS

At 9:30 a.m., S.C. DHEC OCRM Chief Elizabeth von Kolnitz welcomed the Workgroup members and noted the importance of this process and the perspectives they bring.

Adam Bode, Coastal Planner for DHEC's OCRM introduced himself as facilitator for the meeting, provided a brief summary of the previous meeting, and highlighted the Workgroup goals, stakeholders, and interests identified during the first meeting (see below).

The following Stakeholder Workgroup members were in attendance:

Jenny Brennan, Southern Environmental Law Center
Blanche Brown, DeBordieu Colony Community Association, Inc.
Alex Butler, SC Office of Resilience
Emily Cedzo, Coastal Conservation League
Nicole Elko, SC Beach Advocates
Justin Hancock, South Carolina Department of Parks, Recreation & Tourism
Jack Smith, Nelson Mullins Riley & Scarborough, LLP—Attorneys and Counselors at Law
Steven Traynum, Coastal Science & Engineering
Don Thomas, Peace Sotheby's International Realty
Amy Armstrong, South Carolina Environmental Law Project
Keith Bowers, Biohabitats
Aaron Pope, City of Folly Beach

A full list of stakeholder workgroup members is included as an appendix to this meeting summary. DHEC facilitators and staff will follow-up with those unable to attend to gather perspectives to be shared with the group.

Also in attendance were members of the DHEC's OCRM staff Jessica Boynton, Coastal Services Section Manager; Matt Slagel, Beachfront Management Section Manager; and Tara Maddock, Program Coordinator. India Mackinson and Eric Lutz attended as observers.

During introductions, workgroup members who were in attendance for the first time were asked to share goals they hope to accomplish as part of this workgroup. The following is an updated summary of these goals (new addition in **bold**):

Group Goals of this Process

Discussions reflected in policies and regulations	Have the outcomes of these meetings and discussions reflected in updated policies or regulations <ul style="list-style-type: none">• Ensure state flexibility in processes and enforceability• Policy recommendations and changes as straight forward as possible• Help DHEC OCRM do their jobs in a more effective way to help better define and place boundaries on the existing regulations
Balancing needs	Balance the needs of the beachfront communities, economic benefit from tourism, value of beachfront infrastructure and the natural systems. <ul style="list-style-type: none">• Ensure not only threatened and endangered species but also the beach dependent shorebird and species are represented.• Public trust resources• Look at how beach preservation differs locally

Proactive planning and management	Thinking proactively about short- and long-term threats and impacts to the SC Coast. <ul style="list-style-type: none"> • Rather than planning and managing on the emergency scale and timeframe, begin long-term planning in an orderly matter.
Learning and sharing information	Provide clarity on specific beach preservation topics and issues so that everybody is operating from a clear set of standards for permitting and planning. <ul style="list-style-type: none"> • Identify forum(s) and innovative methods for knowledge transfer and information (best practices, for example) sharing
Tools for beach preservation	Increase the number of tools in the toolbox for beach preservation for the state and all involved <ul style="list-style-type: none"> • Identify management tools for both short- and long-term needs
Funding and implementation	Discuss how these policy changes may impact the assistance provided to the state. <ul style="list-style-type: none"> • Consider funding for any potential changes

Workgroup members reviewed the list of stakeholders and common interests identified during the initial meeting. The following is an updated list of stakeholders (new addition in **bold**):

Stakeholders

Conservationists & Natural Resources (habitat, species)	Property Owners (oceanfront, non-oceanfront)	Regulatory & Resource Agencies (State & Federal)
Business Owners / Commercial	Industry / Coastal Engineering	Future Generations
Academics	Tourists	Realtors
Developers	Local Governments	Public Beach User
Elected Officials	General Public	Non-human Species
Utilities / Infrastructure		

PANEL DISCUSSION

An informal panel discussion was held to provide an opportunity for workgroup members to gain an understanding of the current state of beach nourishment from the state, local, and private sector perspective. The following panelists participated in this session:

- Matt Slagel, DHEC's OCRM Beachfront Management Section Manager
- Justin Hancock, South Carolina Department of Parks, Recreation & Tourism
- Nicole Elko, SC Beach Advocates
- Steven Traynum, Coastal Science & Engineering

Panelists were asked to provide their perspective on the following questions:

1. What is the current state of beach nourishment in South Carolina?
2. How can beach nourishment serve as an effective solution for beach preservation?

The following provides a summary of the information provided by each panelist as well as questions received from workgroup members:

Matt Slagel provided workgroup members with a DHEC OCRM Beach Nourishment Fact Sheet (Appendix B), which provides information on the following:

- OCRM's beach nourishment policy
- OCRM's definition of beach nourishment
- Current OCRM beach nourishment regulations
- Summary information on the SC Beach Restoration and Improvement Trust Fund
- Facts and statistics on the geographic distribution and cost of beach nourishment projects

Discussion:

- How would the State categorize other activities such as inlet stabilization/relocation or navigational projects? These activities may stabilize the beach but wouldn't fit into the current definition of beach nourishment. Should that definition be tweaked or updated?
 - Even without modifying the definition, OCRM would still be able to apply the regulations and implement the project in a similar fashion.
- What are the recent local projects?
 - The beach nourishment projects on Debordieu and Litchfield are nearing completion. There are current no other renourishment applications pending in front of Department.
- The beach will exist if you let it, if you don't block it. Beach nourishment stabilizes a specific location, rather than to preserve the function of the beach. If you let the beach move, there will always be a beach. The workgroup should continue to consider what we are seeking to preserve; the location of the beach or the function of the beach dune system.
- When understanding addressing a beach issue at a property, we identify the issue and seek to understand why it's occurring. We then provide options, including doing nothing. In some locations, without nourishment, property owners will put emergency orders in place, houses will eventually be located on active beach, marine debris will follow, litigation may ensue, and the beach will erode into the marsh.

Justin Hancock utilized a series of presentation slides to highlight the importance of the beach as it relates to parks, recreation, tourism, and the film industry.

- Parks: Four State Parks provide public beach access for recreation and education: Myrtle Beach, Huntington Beach, Edisto Beach & Hunting Island
- Recreation: SC PRT provides assistance to local governments through grants, including \$2.3 million in Land and Water Conservation Fund funding for beach-related recreation projects since 2018.
- Tourism: In 2019, Domestic Visitor Spending in the state's five coastal counties totaled \$15.1 billion, accounting for 63% of all visitor spending in the state. Domestic Visitor Spending in the five coastal counties has increased 77.6% since 2005 (\$8.5 billion).
- Although not often considered, in FY 2022 the South Carolina Film Commission recruited two television series (*Righteous Gemstones*, *Outer Banks*) and three feature films (*Harvest Moon*, *Girlfriend's Getaway*, *If I Had Legs I'd Kick You*). Combined, these five productions will generate an estimated \$141.3 million in total spending in South Carolina and result in the hiring of an estimated 1,930 South Carolina cast and crew. They are all filmed on the coast.
- SC PRT has awarded \$46 million in non-recurrent state grant funds between 2017-2019. Funded projects include the following:

R1 North Myrtle Beach	\$890,848
R2 Myrtle Beach	\$307,500
R3 Surfside/Horry County	\$2,400,000
Horry County (Arcadian Shores)	\$4,291,250
Pawleys Island	\$5,889,411
Isle of Palms	\$2,982,603
Folly Beach	\$1,319,739
Edisto Beach	\$6,070,842
Edisto Beach State Park	\$3,126,037
Hunting Island State Park	\$17,600,000
- Grant Requirements
 - Eligibility - local government with state-approved Local Comprehensive Beach Management Plan (LCBMP)
 - Funding - 50% of project cost or non-federal share; available and committed to project
 - Approved Permit/Copy of Permit Application - permit must be obtained prior to award
 - Provide "Full and Complete Access" - As defined in S.C. Code Ann. 30-21)
- Future Considerations
 - Need a dedicated source of State funding. Without this funding, beach nourishment will remain reactionary.
 - Should continue to explore local funding, including the source and level of funding match
 - Where feasible, explore cost-share projects
 - Continue to enhance the level of post-project compliance & stewardship.

Discussion

- Would like to see the definition of “full and complete” access better defined. What does it mean with respect to parking? Do parking spaces need to be free or do paid parking spaces count toward “full and complete” access as well? We should consider standardizing “access” definitions across regulatory state agencies (e.g. DOT’s definition) to assist with beachfront management.
 - Charging a reasonable fee doesn’t prohibit you from having provided full and complete access. If the general public has access (whether free or fee) to these spaces, they can contribute to the definition of full and complete.

Steven Traynum provided his perspective on beach nourishment as Coastal Science & Engineering, Inc. assists with renourishment projects, including design and implementation. The following provides a summary of his remarks:

- Communities are trying to transition from reactionary to a more planning approach to beach nourishment. CS&E encourages communities to plan ahead to address issues in order to avoid emergency situations when sandbags and other approaches are necessary but less desirable or effective.
- Funding is the biggest issue for communities. Some want a long-term approach but haven’t established a pathway to gather funding. For example, residents of Folly Beach do not currently fund nourishment efforts. It is critical to get local residents invested in preserving the beach as it is not sustainable to fully rely on state or county funding.
- It is worth considering how to approach addressing hot spot areas of erosion. Should communities wait until they have the funding for a large project or execute smaller efforts to address these areas.
- Long range planning can be challenging as it is often difficult to focus the quantity of sand needed, identifying borrow areas with beach quality sand, and identifying funding resources. If communities are able to get permits in place early, they are able to act quickly when funding becomes available, but this also leads to more permit modifications, which can lengthen the process.
- Regional approaches, ie multiple communities coordinating efforts, can be challenging due to the increased size of the projects, which makes the window to accomplish the project longer. This is often challenging given sea turtle, shorebirds, and other marine mammal migration and nesting seasons.
- Sediment quality is another big topic and issue. Finding nearshore sand sources is often challenging. A large number of sand borings are often needed and these are costly. Also introduces the question of whether to dig deeper and cover less area or dig shallow but cover a larger area.

Nicole Elko, Executive Director of the SC Beach Advocates and Science Director for the American Shore and Beach Preservation Association (ASBPA) provided her perspective on the current state of beach nourishment as it relates to local beach communities.

- The ASBPA has created a national beach nourishment database.
- Over the last 100 years, 1.2 billion cubic yards of sand has been placed nationwide with over 475 beach communities involved in these efforts.
- As it relates to the temporal scale for planning and discussion of beach nourishment, 20-40 years is a good timeframe to consider.
- Nationwide, funding is a topic that communities talk about a lot. Not an issue specific to South Carolina.
- There are a number of other coastal states that have dedicated funds for beach nourishment. Once a dedicated source is identified and codified, the program shifts dramatically.
 - **Key Point** - Without dedicated state funding, you cannot effectively have a beach preservation program for the state.
- ASBPA defines beach nourishment as the placement of sand on the beach to address erosion issues. Nearshore placement is not included and the definition does not reference "dry sand" or other approaches such as sand sharing or moving sand across and within a single beach.
- Suggests developing general permits for certain aspects of beach nourishment, such as sand fencing.
- Communities often take different approaches to deal with beach nourishment. In general, there are three types of projects:
 - Federal
 - State / Local
 - Home Owner Associations
- In addition to temporal scale, the spatial scale needs to be considered, ie whole state or erosional hot spots. The community scale is the right spatial scale for planning.
- The other differences between the three projects types include:
 - Funding (federal, combination of state and local, local only)
 - Project Management
 - Level of Control

Full Panel Discussion

- Do they have beach erosion on West Coast?
 - Yes, especially in Southern California
- Have there been any studies about communities that have and have not done nourishments to look at economic impacts?
 - Yes, there are quite a few case studies and examples. Comparisons are often done following storms, for example Hurricane Sandy and its impacts to New York and New Jersey
- Do most beachfront communities have funds for planning?

- Traynum - Some are better positioned and have executed planning more than others. Debordieu and Hilton Head Island have good plans. Other communities are setting aside funds but they are not enough to cover large scale projects. Most communities are conducting monitoring, which is important for federal funding.

SMALL GROUP DISCUSSION: BEACH NOURISHMENT FUNDING

Following the informational panel discussion, Workgroup members worked in small groups to discuss the following topics with respect to beach nourishment funding:

1. Cost and Dedicated Funding Source(s)
2. Funding Responsibility
3. Requirements

The following provides a summary of the information shared during small group reports and full group discussion:

Costs and Dedicated Funding Source(s)

- The state needs more future looking analysis of costs (20-40 years)
- Additional cost benefit analysis needs to be conducted. This analysis needs to be integrated into funding requirement.
- State and local accommodations tax(es) could be expanded to provide funding
 - State (2- 3%) and Local (1%)
 - Broaden allowable uses from marketing and tourism to beach preservation
- Fund from beachfront real-estate transaction fees. Example – Wild Dunes on Isle of Palms.
- Explore approaches to split funding for short-term (nourishment) projects while setting aside funds for long-term efforts such as property buyouts or removal.
- Offshore renewable energy could serve as a source of funding.

Workgroup Recommendation – The state of SC need to establish a dedicated funding source for beach preservation (Beach Preservation Fund)

Funding Responsibility

- Local residents who benefit the most from beach nourishment and other preservation approaches need to bear more responsibility for funding beach preservation.

Workgroup Recommendation – Establish a tiered level of funding responsibility based on location (beachfront & community).

Requirements

- Need to continue to discuss whether a bond should be required for down drift impacts from beach nourishment. Impact analysis is currently required for groins.
 - Unclear whether the bond requirement and impact analysis need to be part of policy or an internal project analysis process.
- As noted in the panel discussion, timing windows for nourishment projects can often be challenging and needs to be further discussed.
 - **Action** – Identify timing windows based on species (sea turtles, for example) and document mitigation approaches by project type

SMALL GROUP DISCUSSION: BEACH PRESERVATION FUND

Based on the Workgroup's recommendation to create a Beach Preservation Fund, members discussed various aspects of the Fund, including requirements, funding allocation and linkages to coastal resilience. The following summarizes those discussions:

- By broadening the applicability of the fund from nourishment to preservation, it will be more palatable as nourishment is not the only technique for beach preservation. The Fund could include coastal access funding.
- Although the Fund could include resources for property buyouts, need to ensure that these funds don't preclude communities from access to other funding opportunities.
 - Need to discuss how funds would be allocated (percentage) for nourishment, buyout and other approaches.
- Eligibility
 - Private communities are often the most vulnerable and need funds for beach preservation.
 - **Action** - Considering the number of visitors and the economic benefit of short-term rentals in private beach communities, the Workgroup needs to discuss whether these communities would be eligible for a percentage of state funds based on rentals and other access
- Fund could provide an opportunity highlight beach preservation and its relationship to overall climate and coastal resilience.
- Ensure that this Fund doesn't compete with Office of Resilience funding. Currently, resilience funding has been strictly focused on riverine rather than coastal environments. Looking to develop best management plans and provide tools to communities to help with overall resiliency.
- As funding requirements, eligibility and criteria are defined, this provides as an opportunity discuss various state and local planning documents. These include:
 - Local Comprehensive Beach Management Plans (LCBMP)

- Comprehensive Plans (City, County)
- Resilience Plans
- Sea-level Rise Plans
- Marsh Management Plans
- Other Plans (example, Dune Management Plan)

- **Workgroup Recommendations**
 - Evaluate the current required elements of LCBMPs and provide recommendations to modernize and enhance the utility of Plans.
 - Discuss how private communities can be better represented in LCBMP or where possible, create a similar Plan.
 - Evaluate plans to identify opportunities for effective linkages across common elements.
 - Example, Resilience element in Comprehensive Plans

Appendix A

SC Beach Preservation Stakeholder Workgroup

Ross Appel
Attorney & Charleston City Council Member

Amy Armstrong
South Carolina Environmental Law Project

Keith Bowers
Biohabitats, Inc.

Jenny Brennan
Southern Environmental Law Center

Blanche Brown
DeBordieu Colony Community Association, Inc.

Alex Butler
SC Office of Resilience

Emily Cedzo
Coastal Conservation League

Melissa Chaplin
U.S. Fish & Wildlife Service

Nicole Elko
SC Beach Advocates

Paul Gayes
Coastal Carolina University

Justin Hancock
South Carolina Department of Parks, Recreation & Tourism

Iris Hill
Town of Edisto Beach

Lindsey Jackson
SC Realtor's Association

Michelle Pate
SC Department of Natural Resources

Aaron Pope
City of Folly Beach

Queen Quet (or designee)
Gullah/Geechee Nation

Jack Smith
Attorney

Don Thomas
Peace Sotheby's International Realty

Steven Traynum
Coastal Science & Engineering

Rod Tyler
Industry - New technology/Living shoreline products/Property Owner on Marsh in Murrels Inlet

Robert Young
Western Carolina University

Beach Nourishment

Beach Nourishment Policy

One of South Carolina’s coastal policies is to “promote carefully planned nourishment as a means of beach preservation and restoration where economically feasible” (SC Code §48-39-260(5)).

Beach Nourishment Definition

“The artificial establishment and periodic renourishment of a beach with sand that is compatible with the existing beach in a way so as to create a dry sand beach at all stages of the tide” (SC Code §48-39-270(4)).



Current Beach Nourishment Regulations from R.30-13(N)(2)

- Careful study given to the type (grain size and quality) of material most suitable for nourishment of a particular beach;
- Borrow areas and sand for nourishment carefully selected to minimize adverse effects;
- Where possible, nourishment shall be performed in concert with inlet stabilization or navigation projects;
- Dredging in borrow areas shall not be in conflict with spawning seasons or migratory movements of significant estuarine or marine species;
- Nourishment of beach areas shall be scheduled so as not to interfere with nesting and brood-rearing activities of sea birds, sea turtles, or other wildlife species; and
- All policies concerning dredging and filling cited at R.30-12(G) are applied to nourishment proposals.

SC Beach Restoration and Improvement Trust Act (SC Code §48-40-10 et. seq.)

Established the SC Beach Restoration and Improvement Trust Fund for the purposes of:

- Providing matching funds to qualifying municipal and county governments for the restoration of eroded public beaches and improvement and enhancement of public beach access;
- Restoring beaches and protective sand dunes on an emergency basis after significant storm damage; and
- Evaluating erosion rates and hazard areas annually for all state beaches.

Although the trust fund has been established, state nourishment funds have been distributed through supplemental appropriations rather than routed through the trust fund. For municipal and county governments to qualify for state nourishment funds, they must adopt and enforce a Local Comprehensive Beach Management Plan and provide “full and complete” public access to the portions of the beach that are being nourished with state funds.

Geographic Distribution and Costs of Nourishment Projects

Based on DHEC-OCRM data, at least 38 nourishment projects have occurred in South Carolina since 1985, with a total of over 47.5 million cubic yards of sand added at a price of almost \$500 million (not adjusted for inflation). The federal projects along the Grand Strand and Folly Beach have combined for 19,525,000 cubic yards, or 41% of the state’s total. The projects in these areas have cost a combined \$252.4 million, which is 51% of the entire amount that has been spent in the state for nourishment. Of the ~\$500 million spent on nourishment projects, \$58 million came from private funds (12%), \$136 million from local funds (27%), \$86 million from state funds (17%), and \$220 million from federal funds (44%).

South Carolina DHEC – Beach Preservation Stakeholder Workgroup

The beach nourishment projects below can also be viewed on DHEC-OCRM's S.C. Beach Renourishment web application: <https://gis.dhec.sc.gov/renourishment/>

South Carolina Beach Nourishment Projects, 1985-2022								
Area	Year	Length (miles)	Sand Volume (cubic yards)	Private Cost ¹ (millions of \$)	Public Cost (millions of \$)			Total Cost (millions of \$)
					Local	State ²	Federal	
Myrtle Beach	1986-1987	8.6	854,000		4.5			4.5
Seabrook Island	1990	1.1	700,000	1.5				1.5
Debidue Beach	1990	1.0	200,000	1.0				1.0
Hilton Head Island	1990	6.6	2,000,000		2.0	8.0		10.0
Hunting Island	1991	1.5	800,000			2.9		2.9
Folly Beach	1993	5.3	2,500,000			3.5	11.5	15.0
Edisto Beach	1995	2.0	150,000		0.5	1.0		1.5
Grand Strand ³	1996-1998	26	5,000,000		9.0	9.0	36.0	54.0
Hilton Head Island	1997	7.0	2,000,000		11.0			11.0
Sullivans Island	1998	0.5	35,000			0.2		0.2
Debidue Beach	1998	1.5	250,000	1.5				1.5
Pawleys Island	1998	2.5	250,000			1.3		1.3
Daufuskie Island	1998	3.5	1,400,000	6.0				6.0
Arcadian Shores	1999	1.1	446,000		3.1	1.0		4.1
Hilton Head Island	1999	0.8	200,000		1.2			1.2
Folly Beach	2005	5.3	2,300,000		1.0		11.5	12.5
Edisto Beach	2006	3.5	875,000		3.0	4.7		7.7
Debidue Beach	2006	1.5	600,000	5.6				5.6
Hunting Island ⁴	2006	3.0	570,000			8.5		8.5
Hilton Head Island	2007	6.0	2,700,000		19.0			19.0
Folly Beach	2007	1.9	485,000				7.5	7.5
Grand Strand	2008	26	3,000,000		4.8	4.8	31.1	40.7
Isle of Palms	2008	1.8	885,000	7.1	1.8	1.0		9.9
Arcadian Shores	2009	1.1	332,000		3.4	0.7		4.1
Hilton Head Island	2012	1.0	1,134,000		9.2	0.8		10.0
Folly Beach (PRC)	2013	0.4	415,000		2.3			2.3
Folly Beach	2013-2014	5.3	1,440,000		5.0	1.0	24.7	30.7
Debidue Beach	2015	1.5	650,000	10.0				10.0
Edisto Beach	2016	3.6	1,006,000		7.0	9.3	2.5	18.8
Hilton Head Island	2016	8.0	3,410,000		31.9			31.9
Grand Strand	2017-2019	26	3,600,000				77.0	77.0
Folly Beach	2018	2.0	1,200,000				15.0	15.0
Isle of Palms	2018	3.6	2,285,000	5.4	2.4	3.5	3.0	14.3

South Carolina Beach Nourishment Projects, 1985-2022 (continued)								
Area	Year	Length (miles)	Sand Volume (cubic yards)	Private Cost (millions of \$)	Public Cost (millions of \$)			Total Cost (millions of \$)
					Local	State	Federal	
Arcadian Shores	2019	1.1	475,000		4.7	4.3		9.0
Hunting Island	2020	2.2	1,170,000			14.7		14.7
Pawleys Island	2020	3.1	1,132,000		9.1	5.8		14.9
Debidue Beach	2022	1.5	650,000	11.3				11.3
S. Litchfield Beach	2022	0.7	450,000	8.3				8.3
TOTALS:		179.1	47,549,000	57.7	135.9	86.0	219.8	499.4

¹ The private cost values are estimates.

² State money allocated to the SC Beach Restoration and Improvement Trust Fund, which was created in 2001, can be used to fund beach renourishment, improved public access, and beach erosion monitoring.

³ The Grand Strand project includes North Myrtle Beach (renourished in 1996), Myrtle Beach (renourished in 1997 and 1998), and Surfside Beach and Garden City Beach (renourished in 1998).

⁴ The Hunting Island 2006 project includes \$4.5 million for sand renourishment and \$4 million for new groin construction.