Meeting Summary

Bureau of Ocean Energy Management (BOEM), Marine Minerals Program
South Atlantic Sand Management Working Group

Monday, September 19, 2016
1:00 pm – 5:00 pm
Charleston, South Carolina

I. Introduction

BOEM staff convened the South Atlantic SMWG meeting on September 19, 2016, at the South Carolina Department of Health and Environmental Control in Charleston (SC DHEC), South Carolina. As part of BOEM's collaborative engagement, this meeting was also webcast to support remote participation. Forty participants, including 15 from BOEM, attended the meeting in person, and 28 participated via webinar. Participants included representatives from Federal and state agencies, academic and research institutions, and non-governmental organizations.

The meeting's objective was to collectively discuss BOEM Sand Management activities, including leasing, regional sediment inventory efforts, and environmental studies.

The meeting agenda is available as Appendix A.

This meeting summary document summarizes key outcomes and next steps from the meeting. It focuses on discussions and SMWG input received rather than the formal presentations made. It is not intended to be a detailed transcript. The meeting was facilitated by Kearns & West (K&W).

II. Discussion Highlights

A. Welcome (Jeffrey Reidenauer, BOEM, and Dan Burger, SC DHEC)

Dr. Jeffrey Reidenauer, Chief, Marine Minerals Branch at BOEM, commenced by welcoming participants and describing the purpose of the meeting, which was to discuss South Atlantic offshore operations, environmental studies that BOEM is conducting, and to relay an update on cooperative agreements. Dan Burger, Director, Coastal Services Division at SC DHEC, commented that he appreciated the opportunity for DHEC to participate in the dialogue around offshore resources and the importance of inter-governmental coordination. Mr. Burger also noted the importance of linking science to management, especially considering the impact of management decisions on coastal communities and beaches.

B. Marine Minerals Program Overview and BOEM Operations

1. Lease Updates

Dr. Paul Knorr, BOEM, began by discussing the composition of the Marine Minerals Program (MMP) team, noting that it is a matrixed organization with staff located in several Atlantic states as well as in Louisiana. MMP receives input from BOEM staff located in the Pacific Region, although there are not active leases in the Pacific. BOEM has the authority to issue negotiated non-competitive agreements (i.e., leases) under the Outer Continental Shelf Lands Act (OCSLA). The OCS begins 3 nautical miles out from the shoreline; land that is less than 3 miles out primarily falls under state jurisdiction (although there are some instances where this is not the case). Dr. Knorr noted that BOEM also has the authority to issue competitive leases (e.g., for mining operations) but that they have not yet needed to issue one.

There are three active leases in the South Atlantic region:

- Dare County, North Carolina
- South Carolina State Ports Authority

- Myrtle Beach, South Carolina

Paul Knorr and Leighann Brandt, BOEM, provided an overview of each of the three projects. Dr. Knorr noted that in areas where wind energy is also being considered (e.g., Dare County, NC), BOEM needs to account for transmission lines running into the borrow area (the lines require a 1,000 foot buffer). This is a consideration BOEM will need to incorporate in leases in the future. MMP will coordinate with BOEM's Office of Renewable Energy Programs on projects of this nature.

Ms. Brandt noted that the Myrtle Beach project is broken into three reaches, so that in the case where one reach receives funding and the others do not, the first area will not be prevented from moving forward. The Myrtle Beach area is also a Wind Energy Call area, which highlights the importance of ocean planning to accommodate different interests.

2. Marine Minerals Rule Update

Ms. Brandt provided an update on the Marine Minerals Rule, noting that BOEM is in the process of drafting responses to comments received on the draft Rule. Once all revisions are made to the Rule, it will be published and made effective 60 days later. Ms. Brandt noted that there is currently not a Rule that codifies BOEM's processes but that 30 CFR Part 583 addresses the use of OCS sand, gravel and shell.

Following the presentation, meeting participants had an opportunity to ask clarifying questions. Key clarifications included:

- Generally, BOEM issues 3-year leases. Leases can be amended and extended for a longer time if needed.
- The typical application time takes approximately 6 months on the leasing side but can take longer on the environmental side. Length of time depends on the National Marine Fisheries Service's (NMFS) biological opinion; if the area has an existing biological opinion, the process can be much shorter. If not and a regional biological opinion is needed, the typical time frame is 12 months, though there can be some overlap in these processes, where BOEM works on the National Environmental Policy Act (NEPA) requirements concurrently while NMFS works on the biological opinion.
- BOEM hopes to release the final Marine Minerals Rule this fall.

C. Atlantic Sand Assessment Project

Joe Maloney, BOEM, presented on the Atlantic Sand Assessment Project (ASAP) and provided an update on where ASAP currently stands and BOEM's next steps for the project. Funding for ASAP came in response to Hurricane Sandy. BOEM's goal for the project is to collect a single comprehensive dataset to share with cooperative agreement partners that can be used to identify potential sand borrow areas.

With the work on ASAP having to be completed within 2 years, BOEM has held scoping meetings for data acquisition and to listen to states about where BOEM should direct reconnaissance studies. BOEM's contractor, CB&I, has developed a data acquisition plan that identifies hot spots for data acquisition. At present, the vibracore analysis report has been completed and will be sent to Lamont Doherty, a research unit affiliated with Columbia University.

Moving forward, BOEM will complete the final report of findings from Reconnaissance and Design level surveys, include these data in the MMP Geographic Information System (GIS), and will continue sending data to states and stakeholders. From this project, BOEM has learned that even after a large data collection effort, there are still areas that could prove to be suitable sand borrow areas on the OCS. This provides potential for future studies to identify resources in data gaps.

Following the presentation, meeting participants were provided with an opportunity to ask clarifying questions. Key clarifications included:

- ASAP data will include U.S. Army Corps of Engineers (USACE) photos.

- As part of the data acquisition effort, BOEM tries to coordinate and align with states so they are clear about where near-term projects are being conducted. BOEM now has this inventory off of coastal states, which is a step closer towards having a more regional and national inventory of resources.
- Stakeholders want BOEM to include best practices about their experiences and lessons learned in working with tight vs. large grids, from a regional standpoint. In areas where a state already had a lot of data, BOEM didn't have to go as far out on borrow sites.
- Some states decided to take a more regional approach and wanted to do a concentrated survey where there was a community at risk.
- Doing reconnaissance in areas where little information is known allows geologists to develop best practices. BOEM does not necessarily want to do more geophysical studies than are required, but if it is a critical area, BOEM will consider carefully.

D. Cooperative Agreements

Jeff Waldner, BOEM, introduced this session by reviewing the background and purpose of cooperative agreements. BOEM has worked with 13 state cooperative agreements. These agreements are a result of Hurricane Sandy and have a regional and national perspective. BOEM's work is driven not just by leases but also coastal planning and national disaster preparedness. BOEM has a responsibility to manage this use and has to know what they have in order to best manage the resource.

Mr. Waldner reviewed the four thematic elements of state cooperative agreements, noting that there are efficiencies in adhering to these elements because they consider a state's capacities, interests, and available technology. BOEM wants the scientists to do the science.
The four thematic elements are:

1. Develop a database of existing geologic and geophysical data
2. Determine states' need for sand based on:
    a) Communities at Exposure
    b) Infrastructure
    c) Critical Habitat
3. Compile and analyze existing sand resources data
4. Identify data gap areas where future information needs to be collected

BOEM wants to find communication avenues for sharing this information (e.g., through MMP's geospatial database) not just for its own use but also for inter-disciplinary uses.

Mr. Waldner noted that states have authority for sand resources inside of three nautical miles. BOEM is interested in increasing communication with state agencies and stakeholders so that BOEM can be more proactive in helping these entities. After an emergency, communication lines tend to shut down and BOEM needs lead time to go into recovery mode.

Following Mr. Waldner's introduction, panel members provided updates on the Cooperative Agreements from North Carolina, South Carolina, and Georgia, and updates on the ASAP Cooperative Agreement Data Management.

1. North Carolina Cooperative Agreement Update

Dr. J.P. Walsh, East Carolina University (ECU), presented on North Carolina's progress and future needs regarding sand resources. Dr. Walsh noted that he has appreciated engaging with BOEM and BOEM's focus on assisting communities. Because of chronic erosion in North Carolina, there has been an increasing need for nourishment projects, with a focus on local towns. Towns in North Carolina typically become more pro-active in addressing beach nourishment needs after major hurricane events.

North Carolina is working on a new version of their Beach and Inlet Management Plan (BIMP), which was originally released in 2011. ECU has created its own reference base, which it has provided to BOEM and will make available on its website. Dr. Walsh noted that Cape Lookout, North Carolina was part of a large U.S.

Geological Survey (USGS) study and provided good data for the northern part of the state, but data for the southern region of the state is still needed.

In his presentation, Dr. Walsh compared data (e.g., seismic) analyzed by USGS and Coastal Planning & Engineering (CP&E) and noted that while the data were similar qualitatively, there were some differences, perhaps impacted by interpretation of the data.

ECU is planning to distribute their data via the North Carolina Coastal Atlas and is holding courses in which these data are incorporated in the field. In closing, Dr. Walsh reviewed short- and long-term data needs for North Carolina, listed below:

- In the long term, the state needs to understand how natural systems are changing and how to respond.
- There is a need for design-level work and more interaction with USACE (USACE has done a lot of work in state waters off of southern North Carolina).

2. South Carolina Cooperative Agreement Update

Katherine Luciano and Andrew Tweel, South Carolina Department of Natural Resources, spoke to South Carolina's cooperative agreement status. As a product of BOEM's grant, the state has developed a database and is working to continue identifying existing geophysical and geotechnical data. Of note, the state has added 10,000 km of trackline in their database, which has helped them pinpoint where datasets are. The ASAP project provided a good opportunity to get together with other state partners (North Carolina, Georgia, CB&I, and USACE) to discuss data needs.

The state of South Carolina asked BOEM to run reconnaissance lines off of Cape Romain, which is an important ecological area with lots of habitat. From this, the state acquired a good dataset, in addition to other tracklines that were run for the state. South Carolina is processing these data and will make them available online once they are compiled.

Mr. Tweel noted that the identified data gaps help inform priority focal areas for the state. He also commented that there is an upward trend in the offshore borrow cost over time and that Folly Beach and Hilton Head are historically the greatest sand users. The increase in offshore borrow cost emphasizes the importance of advance planning to address these needs.

Moving forward, South Carolina will continue integrating historical datasets into its database and will analyze all data collected offshore of South Carolina by CB&I. The state will also integrate historical and ASAP data to help identify potential areas of beach-compatible sand materials in the 5- to 8-nautical mile OCS.

3. Georgia Cooperative Agreement Update

Dr. Clark Alexander, Skidaway Institute of Oceanography, presented on Georgia's cooperative agreement status, noting that the state's progress varies significantly from that of North Carolina and South Carolina. Due to the lower frequency of hurricanes in Georgia, there is limited understanding of sand resources that are available. However, there will be a time when Georgia coasts that have not yet been hit by a hurricane will experience a need for sand. Dr. Alexander is working with the state to help it understand where its resources are and to start pulling together the data that currently exists. There is little data for state waters along the Georgia coast. It would be helpful to leverage BOEM money to help fill in these gaps.

Most of the Georgia coast is not developed, so stakeholders are not as proactive about asking for sand to protect infrastructure. However, there are many federally and state managed lands that are critical habitat for endangered species; these may drive future needs for sand. Dr. Alexander noted that there are trends in grain size along the small sampling zone along the coast, and that Georgia does not have high quality, high resolution data. SonarWiz will help the state share data across borders. In addition, the Georgia Sea Grant program was able to provide a large set of existing samples in state waters. Sea Grant has been funded to assess the beaches and the three nautical mile offshore zone; this will provide geological data but not geophysical data. These data might give the state an idea of where they have thicker or thinner sand deposits to target in the future.

Dr. Alexander noted that stakeholder engagement is an important part of the process in Georgia. In many communities, there is resistance to beach renourishment from the public. Additionally, some partners in the state do not anticipate needing sand to rebuild beaches, although they may need it to rebuild habitat. For the Jekyll Island renourishment project, a borrow site has not yet been identified, so there may be an opportunity here to work with them on maintaining a dataset.

In the future, the state is looking to do additional surveys that would delineate sand thickness, and to assess the sand distribution outside of the three to eight nautical mile nautical range (the area under BOEM's authority).

4. ASAP / Cooperative Agreement Data Management

Lora Turner, BOEM, provided a brief update on ASAP and data management as it relates to cooperative agreements. BOEM's goal is to map partners' data along with its own and to have a consistent, comprehensive dataset. This includes state partners as well as data from other federal agencies, including NOAA and USGS. In addition to recent data, BOEM is also looking at data from the past 20 years. BOEM is also seeking to capture vibracore data visually.

To date, BOEM has migrated 67% of its files to its digital MMP GIS and is working with states to determine which files might be a priority when it comes to determining possible sand resources.

BOEM recognizes that one size does not fit all regarding data management tools; it is working to acquire and maintain the integrity of data.

E. Panel Discussion

Following the updates from state Cooperative Agreement partners, presenters formed a panel and took questions from meeting participants. Key takeaways from this discussion included:

- **Data storage:** Efforts are underway in Georgia to develop a schema for data storage in their database. The database can be tailored, and it depends on how much of the data collected fills the database slots. BOEM noted that their data model is in development and that the schema can still be adjusted. BOEM is using ESRI ArcGIS.

- **Data gaps and key BOEM investments:**
    - BOEM has done a nice job of letting states work independently; at the same time, states are approaching research differently because of different resource needs and data availability. States appreciate opportunities for collaboration with each other to share information. They can learn from each other regarding analysis, among other things.
    - BOEM could help build capacity for states to do the studies they want and need to do, which can help states make investments in infrastructure and equipment.
    - The capacity to address data gaps has increased for some states. South Carolina has started collaborating more with universities, which has been helpful.
    - Education around sand resources is still needed at the community level, so that local stakeholders in each state better understand the scope of sand assessment and what it means to them (e.g., community planning). One reason for why data gaps exist in databases is because states have not always asked for the data.
    - Resiliency hubs will be critical moving forward, as money becomes more targeted and projects become more difficult. A resiliency hub is a vulnerable habitat that is adjacent to a community and has nowhere to expand because of development. The National Fish and Wildlife Foundation (NFWF) has devised a system looking at where these resiliency hubs and vulnerabilities exist, based on population and natural resource needs; one resiliency hub was designed for the Southeast. This type of approach is important for habitat restoration. It would be beneficial to look at the location of resiliency hubs in concert with where data needs exist.
    - Since Georgia, North Carolina, and South Carolina all have good databases looking at where shoreline armoring occurs, it would be a fairly easy exercise to look at where shores are receding. This is something states could follow up on.

- Prioritization will be key in the future, and this should be a factor when BOEM considers where data collection should occur (e.g., Sand Wars).
- BOEM needs to understand the broad, regional components of sand resources and what the role of that sand is aside from renourishment, because as a maximum yield is reached, the sand will have to be stretched further. It is important for BOEM to understand the system as a whole and how it is working. Some sand losses are gains elsewhere. Furthermore, all borrow sites are habitat for something, and BOEM and its partners need to understand how important those habitats are, in addition to the importance of the beaches themselves. It would be good to have more inter-disciplinary teams conducting ecological studies on bottom disturbance during projects.
- The environment of the OCS should be considered biologically and geologically before deciding that it should be protected. The OCS has not been mapped to the extent needed. Europe is taking strategic efforts to do this. It would be good to see a coordinated effort in the U.S. for mapping the OCS, and now is a good time for agencies to push this.

- **BOEM as stewards of the resource:** Part of BOEM's mission is to be a steward of the resource. In this light, BOEM has a number of biologists on staff that look at habitat on the OCS. In addition to this, BOEM spends a lot of money on environmental studies and the impacts of dredging.

- **Holistic solutions:** BOEM's purview covers huge ecosystems. The coastal environment is a dynamic region, and solutions will need to be holistic. It is important to understand where the sand is but it's also important to know where sand is not. BOEM needs to be conscious of the live bottom habitat.

- **Stakeholder engagement:** There is no single place for BOEM to go to ascertain if stakeholders are getting what they need in terms of sand resource management. BOEM should consider how best to get stakeholders engaged. For instance, North Carolina has the North Carolina Beach and Inlet Waterway Association, which brings many stakeholders together. It is also important for BOEM and states to connect with towns to hear their needs and frustrations. In many cases, stakeholders are looking for help. This may be accomplished by getting involved in as many ways and venues as possible, thinking about the economic angle of this work, and communicating with stakeholders.

F. Environmental Studies

Dr. Jennifer Culbertson, Deena Hansen, and Doug Piatkowski, BOEM, concluded the presentations by providing an overview of BOEM's Environmental Studies.

The presenters noted that BOEM has been investing in offshore resource evaluation, which is supported by BOEM's Environmental Studies Program (ESP). Ms. Hansen explained where ESP funding comes from and how the process is initiated. BOEM receives stakeholder input on recommended research efforts and studies via targeted email solicitations, interactions at conferences, and other methods. This input helps identify data gaps and feeds into BOEM's Studies Development Plan (SDP), which is BOEM's planning tool.

Ms. Hansen and Mr. Piatkowski highlighted proposed studies in the pipeline and the outcomes of current studies, specifically the Essential Fish Habitat Mapping Tool, which will ultimately be integrated into the MMP GIS. Mr. Piatkowski described the "Sediment Sorting During Coastal Restoration Projects," noting that across the Atlantic, most states have defined compatibility criteria for sand. It is important to consider the tradeoffs of putting different types of sediment in different places, as, nationally, sources of sand may be discounted even though they could actually be placed on the beach. Mr. Piatkowski also highlighted the "Development of a Decision Support Tool to Reduce Sea Turtle Dredging Entraining Risk" study, where he noted that the goal is to work with industry and sea turtle experts to pool resources in order to evaluate the risk to sea turtles on an individual project scale.

Dr. Culbertson concluded this session by asking meeting participants to share their research needs with BOEM. BOEM will be releasing a notice to stakeholders in October 2016 to collect research ideas. BOEM will prioritize these needs based on resource management implications and regional interests.

G. Wrap Up & Next Steps

Eric Poncelet, Kearns & West, concluded the meeting by summarizing key points shared. He also noted that this summary of the meeting would be available on BOEM's website.

Dr. Reidenauer closed the meeting by thanking guests for their participation and noting BOEM's intent to have another South Atlantic Sand Management Working Group meeting within the next year to continue regional collaboration.

Appendix A – Meeting Agenda

Agenda
South Atlantic Sand Management Working Group Meeting

September 19, 2016—1:00-5:00 p.m.
South Carolina Department of Health and Environmental Control
1362 McMillan Avenue, Third Floor, North Charleston, SC 29405

Meeting Purpose/Objectives:

- Discuss BOEM Sand Management activities, including leasing, regional sediment inventory efforts, and environmental studies.

TIME	ITEM
12:30-1:00 p.m.	***Registration***
1:00-1:15 p.m.	**Welcome and Introductions** (Jeffrey Reidenauer, BOEM, and Dan Burger, SC-DHEC)
1:15-1:35 p.m.	**MMP Overview and BOEM Operations** (Paul Knorr and Leighann Brandt, BOEM) ● Lease Updates ● Marine Minerals Rule Update ● Stakeholder Feedback/Questions
1:35-2:05 p.m.	**Atlantic Sand Assessment Project** (Joe Maloney, BOEM) ● Introduction: Superstorm Sandy Appropriation — How We Got Here ● Atlantic Sand Assessment Project (ASAP) Update ● Next Steps —Where We Go From Here
2:05-3:45 p.m. *(15 min break around 3:00 p.m.)*	**Cooperative Agreements** ● Introduction (Jeffrey Waldner, BOEM) ● North Carolina (J.P. Walsh, Ph.D., East Carolina University) ● South Carolina (C. Scott Howard, Ph.D., South Carolina Geological Survey) ● Georgia (Clark Alexander, Ph.D., Skidaway Institute of Oceanography) ● ASAP / Cooperative Agreement Data Management (Lora Turner, BOEM)
3:45-4:15 p.m.	**Panel Discussion** (BOEM and Cooperative Agreement Partners) ● Are stakeholders getting what they need? What's missing? What work could BOEM address in the future?
4:15-4:50 p.m.	**Environmental Studies** (Douglas Piatkowski, Jennifer Culbertson and Deena Hansen, BOEM) ● Introduction ● Newly Completed or Ongoing Relevant Projects ● Upcoming Relevant Projects ● Call for New Study Ideas
4:50-5:00 p.m.	**Questions, Wrap Up & Next Steps**
5:00 p.m.	***Adjourn***

Minor changes to the timing of breaks or discussions may occur.

Appendix B – Meeting Participants

In-person

- Clark Alexander, Skidaway Institute of Oceanography
- Joan Barminski, BOEM
- Adam Bode, NOAA
- Leighann Brandt, BOEM
- Jesse Brass, NOAA
- Dan Burger, SC DHEC
- Kristine Cherry, Governor's South Atlantic Alliance
- Ian Conery, East Carolina University
- Mary Conley, The Nature Conservancy
- Jennifer Culbertson, BOEM
- Rick DeVoe, Sea Grant
- Rheta DiNovo, SC DHEC
- Bridgette Duplantis, BOEM
- Nicole Elko, Elko Coastal Consulting
- Katie Gronsky, Kearns & West (facilitation team)
- Deena Hansen, BOEM
- Scott Harris, College of Charleston
- Scott Howard, SC DNR
- Curtis Joyner, SC DHEC
- Erin Koch, SC DNR
- Paul Knorr, BOEM
- Katie Luciano, SC DNR
- Jessica Mallindine, BOEM
- Joe Maloney, BOEM
- Mike Miner, BOEM
- Kara Nave, Kearns & West (facilitation team)
- Barbara Neale, SC DHEC
- Renee Orr, BOEM
- Doug Piatkowski, BOEM
- Eric Poncelet, Kearns & West (facilitation team)
- Jeff Reidenauer, BOEM
- Will Salters, SC DHEC
- Denise Sanger, SC DNR
- Margaret Thomas, BOEM
- Lora Turner, BOEM
- Andrew Tweel, SC DNR
- Rich Viso, Coastal Carolina University
- Jeff Waldner, BOEM
- J.P. Walsh, East Carolina University

Webinar

- Jill Andrews, Georgia DNR-Coastal Zone Management
- Mark Caldwell, USFWS
- Heather Coats, North Carolina Division of Coastal Management
- Jennifer Coor, USACE-SAJ
- Cate Fox-Lent, USACE-ERDC
- Allison Hernandez, NMFS
- Marlon Hibbert

- Shana Kinsey, Florida Department of Environmental Protection
- Kelie Moore, Georgia DNR-Coastal Resources Division
- Bill O'Beirne, NOAA
- Gene Olmi
- Deniz Ozkan, Atlantic Grid Development
- Paul Paris
- Luke Pratt, USACE
- Alfonso Quagmire
- Ken Richardson, North Carolina Division of Coastal Management
- Brad Rosov, CB&I
- Jennifer Steele, Florida Department of Environmental Protection
- Mickey Sugg, USACE-Wilmington, Regulatory Division
- Beau Suthard, CB&I
- Chris Taylor, NOAA
- Megan Treml, NOAA
- Christine Voss, UNC Institute of Marine Sciences
- Elizabeth von Kolnitz, SC DHEC-OCRM
- Priscilla Wendt, SC DNR
- Scott White, University of South Carolina
- Ken Willson