



Meeting Summary

Bureau of Ocean Energy Management Marine Minerals Program
Gulf of Mexico Offshore Sand Management Working Group

Thursday, December 5, 2019

9:00 a.m. – 4:00 p.m.

New Orleans, Louisiana

I. Introduction

The Bureau of Ocean Energy Management (BOEM) convened a Gulf of Mexico (GOM) Offshore Sand Management Working Group (SMWG) meeting on December 5, 2019 at the InterContinental Hotel in New Orleans, Louisiana. As part of BOEM’s collaborative engagement, this meeting was also webcasted to support remote participation. Participants included representatives from federal and state agencies, industry, academic and research institutions, and non-governmental organizations (NGOs).

The meeting’s objectives were to:

- Receive updates on BOEM Marine Minerals Program (MMP) and Sand Management Working Group (SMWG) efforts
- Discuss outcomes from recent industry coordination efforts
- Share information on gulf-wide sand inventory initiatives and lay the foundation for future interstate coordination
- Discuss lessons learned from recent sand management efforts
- Identify opportunities for continued GOM SMWG activities

A recording of the webinar is available to the public at the following link:

<http://kearnswest.adobeconnect.com/prk0uzwb0phx/>. The meeting agenda is available as Appendix A, and the PowerPoint presentations from the meeting are available on BOEM’s SMWG project webpage.

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).

This meeting summary is organized into the following sections:

- I. Introduction
- II. Discussion Highlights
 - A. Welcome and Introductions
 - B. MMP Program Updates
 - C. Industry Coordination
 - D. Gulf-Wide Sand Inventory Initiatives and Cooperative Agreements
 - E. Project Updates, Lessons Learned and Next Steps

A. Welcome and Introductions

1. Welcome and Introductions. Tershara Matthews, Unit 2 Supervisor in the Environmental Assessment Section of BOEM's Gulf of Mexico Region, opened the meeting by welcoming participants, introducing BOEM staff and leadership in attendance, and by welcoming Eric Poncelet, a facilitator from Kearns & West. Mr. Poncelet reviewed the meeting objectives before previewing the agenda for the day. He presented ground rules for the meeting, underscoring that the sessions should be treated as a dialogue, with time and space reserved for question and answer periods. Approximately 96 participants attended the meeting, about 85 in person and 11 via webinar.

2. MMP Program Update. Barry Obiol, Deputy Regional Director of BOEM's Gulf of Mexico Region, explained that the Marine Minerals Program is actively involved in interagency and industry collaboration to advance coastal restoration efforts and mitigate stressors on coastal communities, such as wetland loss, sea-level rise, and tropical storms. He noted that over the next five-to-ten years, BOEM is aiming to grow its Marine Minerals Program to provide more coordinated research and data identification initiatives. Mr. Obiol shared project updates on Louisiana Coastal Protection and Restoration Authority (LACPR), Coastal Texas Protection and Restoration Feasibility study, Sand Search Environmental Assessment (EA) approval process, pipeline removal efforts, Significant Sand Resource Areas (SSRAs), and continued collaboration with agency and industry partners.

B. Industry Coordination

1. Offshore Operators Committee Update. Greg Southworth, Associate Director of the Offshore Operators Committee (OOC), offered an overview of recent OOC efforts. Mr. Southworth explained that the OOC is a Technical Trade Association that convenes industry, agencies, subject matter experts (SMEs), and academia to collaborate on industry issues within the Outer Continental Shelf (OCS). Representing more than 90% of U.S. production in the OCS, the OOC has 11 standing subcommittees, ranging from marine safety and security, GOM air quality, and environmental sciences to the newly created renewables subcommittee.

Mr. Southworth underscored the progress being made in relation to coastal restoration and the protection of industry infrastructure within the GOM. He noted that there have been important advances in planning ahead for pipeline decommissioning, closing data gaps, identifying high priority areas for sediment resources, as well as recognizing technical issues within the industry.

2. Crimson Midstream Pipeline Coordination Case Study. Eric Lyons, Engineering Manager at Crimson Midstream, and Beau Suthard, Client Program Manager at APTIM Environmental & Infrastructure, Inc., detailed the decommissioning process for a pipeline within the GOM. They analyzed 70,400 feet of Crimson Midstream pipeline crossing several significant sediment resource areas. The project was undertaken based on a BOEM request for information to determine if the pipeline should be abandoned in place or removed.

Mr. Suthard explained that APTIM conducted a desktop study using publicly available data to assess the geologic baseline near the pipeline. The initial study found that there was the potential for sand in the area, causing the team to collect additional data using sub-bottom data and vibracores. Ultimately, the data indicated that the geology was mostly very soft and soft clay, with no evidence of large sand deposits surrounding the pipeline. Mr. Suthard noted that the team found a mixed clay wedge towards the southern region of the pipeline; however, it is not compatible or economically viable for marsh

creation or beach restoration. APTIM recommended to BOEM and BSEE that the pipeline be abandoned in place as it is not impacting any significant sediment resource areas.

- *Question: What was the price tag for removing the entire segment or parts of the pipeline?*
 - *[Crimson Midstream Response]:* Crimson Midstream had some high-level estimates, but it would have cost upwards of \$2 million to remove the full section. Crimson Midstream contracted APTIM for \$200,000, so we had significant savings for a small company.
- *Question: When these pipelines are abandoned, is there any chance through BOEM or BSEE to get closer to the pipeline to collect geophysical and geotechnical data than the 500-foot buffer?*
 - *[APTIM Response]:* According to the study, that's a needed discussion. The channel complexes were quite small, and there were some areas that had climate forms that we would have liked to test but were too close. Additional case studies should include this topic in their discussion.
- *Question: When conducting surveys during the technical investigation, did APTIM apply for an official permit through BOEM for acquiring those samples?*
 - *[APTIM Response]:* APTIM had pre-applied for the geophysical and geological permit. BOEM required APTIM to initiate exploration for a resource permit and describe its process. BOEM granted APTIM a permit beforehand.

3. Management of Use Conflicts. Jessica Mallindine, a Marine Biologist with BOEM MMP in the GOM Region, offered a federal perspective on how BOEM and BSEE coordinate regarding the management of use conflicts. Ms. Mallindine explained that BOEM MMP is responsible for facilitating access to and managing the OCS's non-energy marine minerals. Through the Outer Continental Shelf Lands Act (OCSLA), BOEM is responsible for identifying and managing resources, while BSEE is responsible for regulating those resources. She emphasized that the two agencies are continuing efforts to advance processes and communications.

Ms. Mallindine explained that BOEM and BSEE have established significant sediment resources areas (SSRAs) within the OCS to facilitate access to mineral resources needed to address coastal restoration demands. As of early December 2019, 93 new blocks have been flagged as SSRA blocks with the bulk of these blocks located within the Louisiana area. Ms. Mallindine noted that this is the fourth SSRA update since 2014.

Ms. Mallindine explained that BOEM and BSEE are also coordinating on the removal of abandoned pipelines within the GOM. She noted that these efforts are evolving from case-by-case analyses towards identifying high priority areas and proactively coordinating with industry to remove them.

- *Question: What is the typical timeline from when an operator receives a letter to when BSEE asks the operator to remove their abandoned pipeline?*
 - *[BOEM Response]:* BOEM does not ask for removal based on a particular project; rather they attempt to proactively address anticipated needs. Planners for coastal restoration won't plan to use the material if there is infrastructure that's blocking access at the time of project initiation. They only plan to use the material after the infrastructure is removed.
 - *[BSEE Response]:* A company must respond to BSEE within 30 days of receiving a letter to remove their pipeline. We're requesting the application for removal also be

submitted within the 30 days. However, we will grant extensions if a company needs to conduct fact-finding on the condition of the pipeline first.

- *Question: Can you provide a timeline update for data that is being collected and published to BOEM's Marine Minerals Information System (MMIS)? Is data currently being collected?*
 - *[BOEM Response]:* MMIS has been live since February 2019, so that database is constantly being populated as data comes in. The sand inventory is the highest MMP priority. As far as industry data is concerned, BOEM is working with OOC on ways to access and crosswalk the data. There are a couple data sets not currently included in the database that we would love to have, such as the data set that APTIM presented today and the geologic and geophysical data that is collected prior to a pipeline being installed. While pipeline data collected by industry is proprietary, BOEM is working with Crimson Midstream and APTIM to publish their data and surveys on MMIS.

C. Gulf-Wide Sand Inventory Initiatives and Cooperative Agreements

1. RESTORE Funding Overview – Commitment, Planning, Support Grant. Tershara Matthews provided an update on her presentation to the 2018 Sand Management Work Group meeting. She explained that the program has successfully reached cooperative agreements and funded activities in Florida, Louisiana, and Alabama. Research activities in these three states will focus solely on collecting legacy data and integrating it into existing state and regional databases. Ms. Matthews elaborated on the objective of future RESTORE funds, saying they will aim to collect and analyze data outside the OCS.

2. Gulf of Mexico Alliance Update. Ray Newby, Coastal Engineer at the Texas General Land Office (GLO) and Texas Co-Lead for the Gulf of Mexico Alliance (GOMA) Habitat Resources Team, began by offering a history of GOMA, explaining that the partnership was designed to address regional issues within the GOM that were driving coastal stressors. Mr. Newby outlined their current efforts, which includes:

- Advancing the Louisiana Sediment Availability and Allocation Program (LASAAP) decision support tool;
- Conducting educational outreach efforts on dredged material testing criteria for restoration projects; and,
- Offshore infrastructure coordination with BOEM and OOC to address resource conflicts with sediment sources.

Looking towards 2020, Mr. Newby explained that GOMA plans to start work on the Northern Gulf Sediment Availability and Allocation Program, provide support for LASAAP implementation, advance discussions on dredged material testing criteria for restoration projects, participate in cross-team initiatives, and provide continued coordination for both BOEM and OOC on GOM infrastructure and USACE South Atlantic Division (SAD) on South Atlantic Coastal Study regional sediment management (RSM) components.

3. Mississippi COOP Update. Dr. Davin Wallace, Professors of Marine Science at the University of Southern Mississippi (USM), provided an update on the Mississippi COOP. Dr. Wallace underscored the vulnerability of Gulf of Mexico states to sea level rise and, as a result, emphasized that the need for sand will only continue with rapidly changing ecosystems. His presentation focused on means of quantifying sand resources on the Outer Continental Shelf (OCS).

Drawing insights from changes in sea level during different geological eras, Dr. Wallace explained how his research team was able to develop a model to evaluate sand resources. Dr. Wallace and his colleagues explored the boundary of Marine Isotope Stages (MIS) 2 and 6 to determine the age of the deposits and the genetic relationships between the deposits and the modern-day barrier. Dr. Wallace noted that mapping the incised valleys and determining their genetic dissent is one way of locating potential sediment resources.

Specifically investigating the Mississippi-Alabama Border Island Chain area, Dr. Wallace and his team collected and analyzed new geological and geophysical data to develop an evolutionary model for offshore sand deposits. Dr. Wallace noted that, through extrapolation from river valley's modern equivalents, assumptions can be drawn about the location of accessible sand and the quality of the deposits. From this data, Dr. Wallace and his team were also able to produce paleogeography maps of the area, genetically relating modern day barrier islands to understand how they respond to coastal stressors over time. Dr. Wallace closed his presentation by highlighting that his team recently collected 45 new vibracores from the mid-shelf area. Dr. Wallace indicated that the team intends to conduct detailed sedimentological analyses and radiocarbon dating to help locate sand and sediment resources within the incised valleys.

- *Question: Do you communicate closely with the Geological Survey of Alabama (GSA)? Do you share that information with Alabama Department of Conservation and Natural Resources?*
 - *Response: Yes, we've been working closely with GSA. They were instrumental, letting USM sample many of their cores from Dauphin Island. The USM team has mostly used already gathered data, much of which was originally gathered by GSA. There are still data gaps beyond the Alabama study area and, as a result, that is where the study has focused.*

4. Texas COOP Update. Dr. Chris Lowery, a Research Associate at the University of Texas Institute for Geophysics (UTIG), explained how he, along with other UTIG researchers, conducted coring in estuarine sections of drowned river valleys within the Trinity River Paleo-valley to identify sediment resources. Dr. Lowery detailed that his team conducted both qualitative and quantitative analyses of grain size in cores to determine the core description and percentage of sand. Additionally, they assessed microfossils, specifically foraminifera, which offers paleoenvironmental interpretations to determine depositional environment of the OCS.

From the data collected, Dr. Lowery and his team determined that there are extensive sand deposits within the shallow estuarine section of the drowned Trinity River valley. Dr. Lowery added that the microfossils showed that most estuarine sands are associated with an outer bay environment, such as tidal deltas and washover fans behind the barrier islands; however, it was not clear whether a substantial bayhead delta exists in their study area. He noted that high-contrast seismic facies in the estuary appear related to interbedded sands; low-contrast seismic facies are muddier, which is important for future exploration.

5. Sediment Analysis in Resource. Tom Bjerstedt, a Geologist at BOEM, provided an update on BOEM efforts related to the inshore near-shore surface geology of the Northern GOM. Mr. Bjerstedt began his presentation by offering an update on resource evaluation activities in support of BOEM MMP,

explaining that several programs offering spatial tools, shallow hazard reports, and inshore 3D surveys have advanced.

To understand the inshore near-surface geology within the Gulf, Mr. Bjerstedt's team made slices across 35 inshore 3D seismic surveys using GeoFrame with a minimum amplitude seismic attribute at two-way travel time (TWTT) of 150 milliseconds (ms). Mr. Bjerstedt explained that the survey results were a reconnaissance, noting that if channel form features can be identified at roughly 350 feet below sea level, then reworked transgressive sands may overlie this palimpsest. From the data collected, the team identified likely sandy substrate or possibility muddy substrate areas. This data was added to MMIS and is publicly available.

Mr. Bjerstedt encouraged the audience to share feedback with BOEM about areas where projects are likely to occur so BOEM can more accurately target its studies.

- *Question: With such a diverse data set, have you been able to develop seismic confidence maps for these areas of interest? Have you been able to calibrate seismic facies that have been determined with borings or with cores?*
 - Response: BOEM hasn't created map depictions of this but does have the data via spreadsheet. From the surveys reviewed, BOEM can tell where additional surveys might be valuable. The second question is not applicable to the work at hand because the work is taking place too deep.
- *Question: Have well bores been collected by industry to record logs from that shallow?*
 - Response: BOEM suggested that the collected bores would not be a productive use of data collection. Therefore, this method of data collection is unlikely to have been taken.

D. Project Updates, Lessons Learned, and Next Steps

1. Borrow Area Analysis. Kevin Xu, Interim Director of Louisiana State University (LSU) Coastal Studies Institute, provided updates on his research studying the physical, biological, and geological aspects of Louisiana shelf dredge pits. Located within the Paleo River Channel and Sandy Shoal, Dr. Xu and his team analyzed five different dredge pits over a five-year period.

Dr. Xu and his team tracked changes in and around a dredging pit used between 2012 and 2015. The team found significant wall collapse following their initial data collection. Using an Acoustic Doppler Current Profiler (ADCP), they found that the water's current was very chaotic at the sea surface but slower towards the bottom of the pit. He noted that this is an important characteristic, as sluggish currents tend to decrease oxygen levels in water, increasing the likelihood of hypoxia.

From 2013 to 2015, the team found significant decreases in pit depth. When the team went back to collect additional data in 2018, they found that the pit had completely disappeared. Dr. Xu explained that this is atypical as it usually takes 10-20 years for a pit to fully fill up. Chirp data showed that the pit had filled up with mud and was excreting biogenic gas.

In a study on the Peveto Channel Dredge Pit, the team found infilling of the pit over 13 years, as well as a rough, pockmarked surface atop the pit. Dr. Xu characterized these pockmarks as mud volcanoes and indicated that the pit was not yet stable due to the excretion of many fluids and gases. In a study on the Caminada Dredge Pit, where 10 million cubic yards of sand were sourced for the restoration of

Caminada headland, bathymetric data showed that mud had been accumulation within the pit. The mud would complicate re-dredging efforts. Studies on Block 88 found infill of mud and sand.

- *Question: Did you look at how deep the dredge cuts were in Block 88? Did they encounter the silt and clay underneath? Were you seeing a redistribution of that silt and clay on top of the sand?*
 - *Response:* The team collected vibracores and found a lot of river sediment. When looking at the top meter of mud, Dr. Xu explained that they are confident that it was from recent mud deposits rather than from underneath.
- *Question: Do you have any idea how long it will take for the biogenic gas to run its course?*
 - *Response:* It's a very long process and depends on how much organic matter there is. Eventually, the organic matter will degrade and stop excreting.
- *Question: Did you see any gas in the water above the mud? Were there any mud volcanoes forming in the Peveto Channel Dredge Pit?*
 - *Response:* We saw some bubbles over mud. No mud volcanoes were forming there.

2. MsCIP Update. Justin McDonald, lead engineer for civil works, U.S. Army Corps of Engineers (USACE), Mobile District, began by offering a history of the Mississippi Coastal Improvements Program (MsCIP), initiated after Hurricane Katrina. The long-term plan identified projects and studies that addressed hurricane and storm damage reduction, saltwater intrusion, shoreline erosion, fish and wildlife preservation, and other water-related resource projects.

Mr. McDonald explained that restoration of the eastern shore of Cat Island alone required 20 million cubic yards of sand. Experts from the U.S. Geological Survey (USGS) and USACE analyzed potential sand sources, which were complicated by potential transportation distances. Employing staging platforms to avoid impacts on cultural resources and birds, the project has worked to close the gap and raise the berm on Ship Island.

Due to budget constraints caused by increased dredging costs, the project design had to be shifted to accommodate operating costs while still meeting objectives. As a result, Phase 5 was initiated earlier than expected, beginning in November 2019. This phase involves placement of vegetation on the newly restored island. Phases 3 and 4 involves placement of 3.5 million cubic yards of sand on East Ship Island and the north shore of Camille Cut fill. Phases 3 and 4 are anticipated to begin in March 2020. In terms of lessons learned, Mr. McDonald suggested that the project demonstrates a need to cast a wide net on sand source investigations and building relationships and interagency collaboration.

- *Question: Is the project going to need to be renourished? Is that apart of the project plan and budget?*
 - *Response:* The project should be renourished, but it won't be because National Park Service (NPS) owns the land. We designed the project to inject enough sand into the island so that it can heal itself.
- *Question: Was the planting component a separate contract?*
 - *Response:* Yes, a local Mississippi firm was contracted to do the planting component for Ship and Cat Islands.

3. Louisiana Restoration Updates. Greg Gandy, Deputy Director of the Coastal Protection and Restoration Authority (CPRA), provided an overview of Louisiana's Coastal Master Plan and Fiscal Year 2020 Annual Plan, as well as lessons learned. Mr. Gandy explained that CPRA works within the context of a Coastal

Master Plan that operates within a six-year timeframe. The plan guides how protection and restoration plans are developed and submitted. He explained that the objectives of the Coastal Master Plan include flood protection, natural resources, coastal habitats, cultural heritage, and a working coast. The plan details 124 projects that have the potential to reduce flood damages by \$150 billion and create 802 square miles of land. Mr. Gandy previewed CPRA's Fiscal Year 2020 Annual Plan, which allocates \$748 million towards coastal restoration efforts. He anticipates that the fiscal plans for 2021 and 2022 will require funding of \$900 million and \$1 billion, respectively.

Mr. Gandy emphasized that Louisiana has a significant sediment deficit problem. To address this problem, CPRA is sourcing sediment from renewable sand deposits, offshore sediment sources, maintenance dredging sources, as well as bay and nearshore sediment sources. To manage their sediment resources, Mr. Gandy outlined several tools, including examining policy and regulation, collecting data to populate the Louisiana Sand Resource Database (LASARD), compiling surficial sediment distribution maps, and coordinating with industry stakeholders. Looking towards 2020, CPRA anticipates as many as 13 dredging projects happening concurrently.

Mr. Gandy detailed key lessons learned from these efforts. These include the importance of conducting robust geotechnical investigations of borrow area and restoration sites, providing construction contractors flexibility, communicating early and often with BOEM and regulatory agency personnel, and planning level investigations to expedite implementation and foster collaboration.

- *Question: How does flexibility result in financial savings?*
 - *[CPRA Response]:* The value of flexibility is hard to quantify, but there is a penalty associated with inflexibility and time constraints. CPRA understands there are times where dredgers are going to leave us to work on other projects and that dredging time is a scarce commodity.
 - *[Comment]:* On the oil and gas industry side, there may be savings from planning ahead and allowing for flexibility in scheduling to accommodate other time stressors and commitments.
 - *[CPRA Comment]:* Project type is likely to impact flexibility. Some project delays could result in a year's worth of loss not captured in initial budgets. It's important in the Master Plan to look out 50 years and think about sea level rise and help inform communities regarding future development. We can't save everything, so it's important to inform stakeholders and communities where CPRA plans on working and where they don't.
- *Question: Can you speak to what Louisiana is doing for infrastructure in state waters and how that process is progressing for both existing and decommissioned structures?*
 - *Response:* CPRA works closely with our partners within the Coastal Management Division. When we start an investigation for a project, the borrow area shows up on permit maps. As far as pipeline decommissioning in state waters, I don't know if that's happening.
- *Question: Can we develop a dredging database all together, so all the agencies have access to that information? A collaborative database that can be public and accessed by everyone.*
 - *Response:* I think that would be a great thing. We'd like to have a working group that includes all the districts and the Gulf states. We encourage that collaboration, so

everyone understands what's coming out in the future. Industry indicated that they would appreciate the collaboration as well.

4. Archeology in Sediment Resources. Doug Jones, a Marine Archaeologist and Regional Historic Preservation Office at BOEM, provided an overview of the archaeological activities occurring in the OCS and its impact on sourcing sediment resources. Mr. Jones explained that BOEM maintains two different databases for archaeological sites, one for shipwrecks and another for pre-contact submerged Native American sites. For shipwrecks, BOEM compiles known and potential shipwreck areas, spanning from the 16th century to more recently with fishing and commercial boats. There are approximately 3,000 total wrecks within the database.

Mr. Jones explained that bottom disturbing activities, such as geological sampling, coring, and vessel anchoring, can have impacts on archaeological sites. Therefore, any bottom-disturbing activities must be preceded by an archaeological clearance geophysical survey. Additionally, a project archaeologist must be present for field operations or otherwise have real time access to survey data in order to identify potential archeological resources prior to bottom-disturbing activities. Mr. Jones added that if a suspected archaeological resource is discovered during operations, BOEM must be notified within 24 hours and precautions should be taken to protect the site. Mr. Jones outlined the internal process for reviews and emphasized that it is never too early to consult with archaeologists to inform which areas should be avoided.

5. Ecological Function and Recovery within Shoals Study. Jimmy Nelson, from the University of Louisiana Lafayette, presented his study on the ecological responses of biological communities subject to dredging. Mr. Nelson explained that the study was commissioned by BOEM to determine the ecosystem effects of dredging, discern whether there are functional differences in the control site versus the borrow sites post-dredging, and investigate if these differences correlate with biophysical differences.

To conduct this study, Mr. Nelson and his team took samples from before and after dredging to analyze how communities respond to the reference areas. These areas were sampled throughout the spring, summer, and fall. Mr. Nelson hypothesized that ecological effects within the dredge areas may be short lived, around ten years, because the ecological systems are used to being disturbed on a regular basis. Mr. Nelson and his team are still processing and analyzing the data and are not able to share additional findings at this point in time.

- *Question: If we find that a portion of a shoal is productive and then show that it's not going to come back, are we foreseeing more mitigation in other areas to compensate?*
 - *Response:* There are studies that evaluate dredge impacts from biological perspectives. My study would validate those assumptions. More information is always helpful to inform when to dredge or what is being impacted. These types of biological studies have not been conducted within the GOM.
- *Question: Are you studying hypoxia?*
 - *Response:* Not in this study. However, Dr. Kevin Xu is studying hypoxia and plans to present his results next year.

6. Discussion – Topics for Future Sand Management Working Group Meetings. Eric Poncelet, facilitator from Kearns & West, invited participants to share any remaining questions, comments, or suggestions

for future GOM Sand Management Working Group meetings. Suggested topics for future meetings included:

- Further exploration of cost implications around providing flexibility to dredgers and contractors.
- The benefits of creating a dredge database, so that every time someone starts a project they're not starting from scratch.
 - Determine if there are additional dredging vessels coming to the GOM. Some projects have been abandoned or delayed due to lack of dredging vessels.
 - Explore inland dredging companies as potential support on small-scale projects.
- Discuss or consider autonomous dredges and new technologies.
- Include time to further discuss ecological and archeological impacts of sourcing marine minerals in the GOM.

7. Wrap Up & Next Steps. Eric Poncelet, facilitator from Kearns & West, summarized the main topics from the meeting. Those included:

- *Increased industry coordination and how it informs decommissioning.* Included within this topic were discussions on identifying Significant Sand Resources Areas (SSRAs), managing multiple-use conflicts, as well as the process for decommissioning a pipeline.
- *Gulf-wide sand inventories and the MMIS.* The meeting highlighted the amount of information that has become available both through the Mississippi and Texas studies, as well as how the MMIS is aiding stakeholders' understanding of where sediment resources are located. We also discussed how RESTORE is identifying information gaps, the Gulf of Mexico Alliance is examining regional stressors, and BOEM is conducting scientific analyses on inshore near-surface geology.
- *Project updates and key themes.* Significant sand and sediment needs were discussed throughout the meeting. Questions raised included how to demystify dredging and how to advance data collection inventories. Multiple presenters touched on lessons learned throughout project, which include the importance of upfront planning, collaboration amongst stakeholders, and borrowing sediment resources today with an eye towards future projects.

Tershara Matthews closed the Gulf of Mexico Sand Management Working Group meeting by thanking participants for their role in supporting the meeting and emphasized the advances being made within coastal resiliency in the Gulf of Mexico.

Appendix A: Meeting Agenda

AGENDA

Bureau of Ocean Energy Management (BOEM), Marine Minerals Program Gulf of Mexico Offshore Sand Management Working Group

**Thursday, December 5, 2019
9:00 AM - 4:00 PM**

Location: InterContinental New Orleans
444 St. Charles Ave.
New Orleans, LA 70130
Melpomene Room

Information for Remote Participants:

Call-in Number: 1-866-705-2554

Participant Passcode: 954959

Webinar Link: <http://kearnswest.adobeconnect.com/boemsm/>

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Meeting Purpose/Objectives

- Receive updates on BOEM Marine Minerals Program (MMP) and Sand Management Working Group (SMWG) efforts
- Discuss outcomes from recent industry coordination efforts
- Share information on gulf-wide sand inventory initiatives and lay the foundation for future interstate coordination
- Discuss lessons learned from recent sand management efforts
- Identify opportunities for continued Gulf of Mexico (GOM) SMWG activities

Instructions for Webinar Participants (will send this out in advance as well)

- Please select *6 or the mute button to mute your audio to the phone
 - **Please do not put the line on hold!**
- Click the “raise hand” icon in the top of the webinar window to enter the discussion queue
- You can also share questions using the chat pod in the bottom left of the webinar window
- Click the “full screen” button – top right of the presentation pod – to make the presentation bigger

Agenda

TIME	ITEM
8:30-9:00 a.m.	Arrivals
9:00-9:10	Welcome and Introductions <ul style="list-style-type: none">• Welcome and introductions of MMP staff (<i>Tershara Matthews, BOEM</i>)• Review agenda, meeting objectives, and process approach (<i>Facilitator</i>)
9:10-9:20	MMP Program Update (<i>Barry Obiol, BOEM</i>)
Industry Coordination	

9:20-9:40	Offshore Operators Committee (OOC) Update (<i>Greg Southworth, OOC</i>)
9:40-10:00	Crimson Pipeline Coordination Case Study (<i>Eric Lyons, Crimson Midstream</i>)
10:00-10:20	Management of Use Conflicts (<i>Jessica Mallindine, BOEM</i>)
10:20-10:35	<i>Break</i>
Gulf-wide Sand Inventory Initiatives and Cooperative Agreements	
10:35-10:50	RESTORE Planning Grand Funding Overview (<i>Tershara Mathews, BOEM</i>)
10:50-11:00	Gulf of Mexico Alliance Update (<i>Ray Newby, Texas General Land Office</i>)
11:00-11:10	Mississippi COOP Update (<i>Davin Wallace, USM</i>)
11:10-11:30	Texas COOP Update (<i>Chris Lowery, UTIG</i>)
11:30-11:50	Sediment Analysis in Resource (<i>Tom Bjerstedt, BOEM</i>)
11:50-1:30	<i>Lunch (on your own)</i>
Project Updates, Lessons Learned, and Next Steps	
1:30-1:35	Introduction to Afternoon Session (<i>Facilitator</i>)
1:35-2:00	Borrow Area Analysis (<i>Kevin Xu, Louisiana State University</i>)
2:00-2:25	Mississippi Coastal Improvement Program (MsCIP) Update (<i>Justin McDonald, USACE, Mobile District</i>)
2:25-2:50	Louisiana Restoration Updates (<i>Greg Grandy, LA CPRA</i>)
2:50-3:00	<i>Break</i>
3:00-3:20	Archaeology in Sediment Resources (<i>Doug Jones, BOEM</i>)
3:20-3:40	Ecological Function and Recovery within Shoals Study (<i>James Nelson, University of Louisiana at Lafayette</i>)
3:40-3:50	Discussion – Topics for future SMWG meetings (<i>Facilitator</i>) <ul style="list-style-type: none"> • Anticipated challenges facing sand management projects in the Gulf • Opportunities for collaboration • Topics for future SMWG meetings
3:50-4:00	Wrap Up & Next Steps (<i>Facilitator</i>)
4:00 p.m.	<i>Adjourn</i>