BOEM | FACT SHEET

BUREAU OF OCEAN ENERGY MANAGEMENT

Marine Minerals Program

Preserving and Restoring the Nation's Beaches and Supporting Coastal Resilience

BOEM is the agency within the U.S. Department of the Interior that manages the responsible exploration and development of offshore energy and marine mineral resources on the U.S. Outer Continental Shelf (OCS). The bureau's Marine Minerals Program (MMP) manages non-energy minerals (primarily sand and gravel) on the OCS for coastal restoration, and commercial leasing of gold, manganese, and other hard minerals. In addition, pursuant to Executive Order 13817 issued in December 2017, the MMP and the U.S. Geological Survey (USGS) are collaborating to determine which 35 critical minerals are located on the OCS. Domestically-sourced critical minerals could reduce the Nation's vulnerability to economic disruption and negative national security impacts caused by a break in imports used in manufacturing and other sectors.

Marine Minerals Program Snapshot:

- 54 negotiated agreements executed
- 45 coastal restoration projects completed
- More than 147 million cubic yards of material authorized
- More than 321 miles of shoreline restored in 8 states

(As of Sept. 28, 2018)

As resource stewards, BOEM ensures that the removal of any mineral resource is conducted in a safe and environmentally sound manner, and that any potentially adverse impacts on the marine, coastal, or human environments are avoided or minimized.

For more than 20 years, BOEM has provided OCS sand resources to complete 45 coastal restoration projects and convey through negotiated agreements more than 147 million cubic yards of material to coastal communities and Federal agencies such as the Navy, Air Force, NASA, and the National Park Service. That amount of sand would cover the entire borough of Manhattan, New York, to a depth of more than six feet.

What are the primary uses of marine minerals? Marine minerals are used primarily in coastal restoration projects, including beach nourishment and coastal habitat restoration, with increased attention to building resilience to deal with future storms and rising sea levels. Beach nourishment is the replenishment of beach sand by natural or artificial means.

Why is this program beneficial? Access to and identification of potential OCS sand resources is critical for the long-term success and cost-effectiveness of many shore protection, beach nourishment, and coastal habitat restoration projects. Erosion of the Nation's beaches, dunes, barrier islands, and coastal wetlands affects natural resources, energy, defense, public infrastructure, and tourism, which are important to state and local economies. MMP projects provide the Nation's coastlines crucial resources to maintain healthy coastal ecosystems.

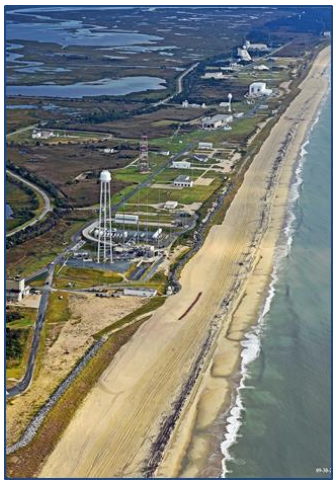
What is the demand for this natural resource? The demand for marine minerals varies; yet in recent years the Bureau has experienced a significant increase in the number of requests for negotiated agreements from governmental agencies to use OCS sand resources. This trend is most likely due to a diminishing supply of available material in state waters, increased coastal erosion as a result of more frequent and intense storms, and sea level rise. To identify resources for potential use, BOEM is building a National Offshore Sand Inventory, with data housed within a GIS-based Marine Minerals Information System (MMIS) including sediment quality, quantity, location, and accessibility.

Where are projects located? OCS material has been used for nearly four dozen coastal restoration projects in Florida, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, South Carolina, and Virginia. Taking a regional approach to resource management, the MMP hopes to sponsor new offshore sediment surveys from Maine to Texas, and has published a related draft environmental assessment, to learn more about the resources and ultimately to increase preparedness. The plans build on the approach following Hurricane Sandy in 2012, when BOEM supported coastal restoration projects in several Atlantic states, and sponsored research partnerships with 13 states to update offshore sand maps and data bases. The MMP is conducting sediment studies offshore California. Projects generally consist of four components: environmental reviews pre-project approval, dredging on the OCS to obtain sand and/or gravel, placing the resources onto the shoreline, and pre-and post-completion engagement with partners to monitor dredging site and placement conditions.

Who are the stakeholders with whom the MMP collaborates? The MMP works with city and county officials, state geological surveys and environmental agencies, the U.S. Army Corps of Engineers and other Department of Defense agencies, USGS, National Marine Fisheries Service, U.S. Fish and Wildlife Service, National Park Service, and NASA. The program actively engages fisheries groups, nonprofit groups, and tribes in workshops, Sand Management Working Groups, and other settings.

Left to right, before and after shoreline replenishment at NASA Wallops Flight Facility, Virginia. NASA photographs

July 14, 2014



September 30, 2014

How are the resources obtained? The resources are dredged from the OCS using a trailing head suction hopper dredge or a cutterhead dredge. The type of dredge used is based on several factors including environmental conditions, material source location, and funding.

How does BOEM evaluate environmental impacts for MMP projects? The Bureau must review all environmental impacts through the National Environmental Policy Act process by developing either an environmental assessment or environmental impact statement. Based on the analysis, BOEM includes mitigation measures and other stipulations in a memorandum of agreement or lease to protect physical, biological, and cultural resources. Stipulations often include dredging window constraints, dredge location constraints, lighting requirements, equipment requirements, monitoring requirements for threatened and endangered species, and buffers surrounding cultural resources and hard-bottom habitat.

Since the 1990s, BOEM has invested about $43 million to identify non-energy resources on the OCS, conduct world-class scientific research, lease OCS resources to coastal communities and other Federal agencies in need, and more recently, to develop a GIS-based data management system to inform planners and help bolster preparedness. These measures have informed environmental assessment and leasing decisions on the use of OCS sand resources in beach nourishment and coastal restoration.