

BOEM Marine Minerals Program

BOEM is the Department of the Interior agency tasked with managing the extraction of offshore minerals from America's Outer Continental Shelf (OCS). While the largest component of this extraction is exploration and development of oil and gas resources, the bureau is also responsible for "non-energy minerals" (primarily sand and gravel) excavated from the ocean floor. As steward for these resources, BOEM must ensure that the removal of any mineral resources is done in a safe and environmentally sound manner, and that any potential adverse impacts to the marine, coastal and/or human environments are avoided or minimized. The BOEM Marine Minerals Program (MMP) manages these resources.

Marine Minerals Program Snapshot

- 31 projects completed since 1994
- Conveyed more than 58 million cubic yards of material
- Restored more than 180 miles of coastline

What are the primary uses of marine minerals? Coastal nourishment projects — or beach nourishment — is one of the primary uses of marine sand and gravel. Beach nourishment is the replenishment of beach sand by natural or artificial means. The Marine Minerals Program has come into higher demand in recent years due to increased erosion as a result of more frequent and intense storms and sea level rise.

Why is this program important? Access to OCS sand resources is critical for the long-term success and cost-effectiveness of many shore protection, beach nourishment, and wetlands restoration projects along the Gulf of Mexico and Atlantic coasts. Erosion of the Nation's beaches, dunes, barrier islands and coastal wetlands is a serious problem that not only affects nationally-important tourism, energy, defense, and public lands infrastructure, but is also important to coastal ecosystem function.

What is the demand for this natural resource and our ability to meet the demand? The demand for marine minerals is variable from region/state to region/state, but overall the bureau is noticing an increasing trend in the use of OCS sand resources. This trend is most likely due to the reducing volume of sand available in state waters from previous use in coastal nourishment projects, and increased erosion from storms due to increased frequency and intensity, such as hurricanes and Nor'easters.

Where is most of this work done? Most of the work is done in Federal waters; dredging is primarily occurring in Florida, Louisiana and Virginia. We have also done, and are planning to do future projects in Maryland, North Carolina and South Carolina. Some of the entities that have been involved in past MMP projects include the Florida Department of Environmental Protection, state geological surveys, various dredging companies and contractors, the U.S. Geological Survey, the National Marine Fisheries Service, the U.S. Fish and Wildlife Service and the National Park Service.

Before and After: Jacksonville Beach, Brevard County, FL



How is the material mined? The material is dredged from the OCS using a suction hopper dredge or a cutter-head dredge. The device used is based on several factors including environmental, material source location and funding.

How much of the material has BOEM extracted and used for projects to date? The MMP has conveyed more than 58 million cubic yards of material since 1994. This is the equivalent of enough material to fill 42 Empire State Buildings.

How many projects have been completed? To date, 31 projects have been completed under the MMP. There are currently 9 projects planned for the remainder of Fiscal Year 2012 and 7 projects planned for Fiscal Year 2013.

Is there a way to quantify the economic value of beach nourishment? BOEM is currently studying the regional economic benefits of beach nourishment projects using OCS sand resources. The study is examining the effects of beach replenishment on local residential owners, recreational beach users, and the commercial economy. The analysis focuses on recreation and property values and their relation to socioeconomic and geophysical data. The results of the study will evaluate the impacts of beach nourishment on the economy, account for the dynamic influence of rising sea levels, and quantify the values of restored beaches to the region, state, and nation.

What process does BOEM follow to ensure that adequate environmental protections are in place to conduct Marine Minerals projects? The bureau must conduct a review of all environmental impacts through the NEPA process, developing either an Environmental Impact Statement (EIS) or an Environmental Assessment (EA). Based on the NEPA analysis, mitigation and stipulations are inserted into the agreement that protect natural, cultural and living resources. These stipulations can and often include: dredging windows, location specifics, lighting requirements, type of equipment, and buffers around archeological and hard bottom setbacks that require operations occur at a certain distance away from these resources.

How long has this program been in effect? The Marine Minerals Program has been in place since 1994 and will celebrate 20 years of operation in 2014.

For More Information: BOEM Office of Public Affairs, 202-208-3984 and visit: www.BOEM.gov