Marine Minerals Program

Northeast Sediment Sources and Needs

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**Outer Continental Shelf (OCS)** or Federal jurisdiction begins seaward of the Submerged Lands Act (SLA) boundary.

Generally 3 nautical miles (nm) from shore (but 3 leagues or 9 nm offshore Texas and west coast of Florida) and extends 200 nm.

**BOEM’s Authority =** OCS Lands Act (43 U.S.C. § 1331, et. seq.)

**Regulations =** 30 CFR Parts 580, 581, 582, and 583
• BOEM is responsible for managing development of Outer Continental Shelf (OCS) non-energy marine mineral resources.

• As the nation’s steward for these resources, BOEM must ensure that the removal of any mineral resource is done in a safe and environmentally sound manner.

• As a responsible steward and resource manager, BOEM needs to know where and how much resource may be available in order to make informed decisions on its use.

• DOI and BOEM play a critical role in shoreline protection projects - without sand/material projects cannot be constructed.
Increasing Demand for OCS Sand

Agreements Executed

Projected

Million Cubic Yards Conveyed

Projected
What is Driving OCS Demand?

- Diminishing Resources in State Waters
- Environmental Concerns w/ Dredging in State Waters
- Larger & Higher Quality Resources in Federal Waters
- Increased Recent Storm Activity?
- More States Interested in OCS Sand (8 total)
  - Recent: NJ (2014) and MS (2016)
  - Future: DE, MD, NY and others (?)
  - Northeast Region?

“Bad news...we’ve run out of unlimited resources”
Several factors determine the availability and feasibility of dredging OCS sand:

- Compatibility
- Water depth
- Sediment thickness
- Resource area shape
- Transport distances
- Environmental impacts
- Conflicting uses
• History of BOEM/state cooperative agreements
  – Since early 1990s
  – Have worked w/ 18 states (Atlantic, GOM, Pacific)
  – Currently have 15 active agreements
  – Invested tens of $$ millions
Thematic Elements of State Cooperative Agreements

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
1. Proactively plan for the increasing demands for OCS resources
2. Help communities meet longer-term needs, while maximizing the lifecycle of these resources.
3. Initiate and direct early and ongoing engagement.
4. Identify environmental studies for maximum benefit and understanding
5. Coordinate with state and federal agencies
Atlantic Sand Assessment Project

- Geophysical and Geological Surveys
- Data Acquisition Plan in coordination w/ states
- 3–8 nm offshore
- Miami, Florida to Massachusetts
- Reconnaissance and Site-Specific Level
Potential Conflicting Uses

Types:
- Fiber optic and electric transmission cables, pipelines, platforms
- Other material demands
- Fishing
- Heavy mineral mining
• BOEM supplies the sand for projects
• BOEM does not identify needs or plan projects BUT!
  – Where, how much, and when material is needed are critical for management decisions
  – Planning is challenging when oftentimes need driven by last storm event and projects are funded individually
  – Regional perspective – FL example (Irma)
Aggregate Exploration and Habitat Classification: Tools for Building Resiliency in Maine
Assessment of Offshore Sources of Sand and Gravel for Beach Nourishment in New Hampshire
Cooperative Agreements – Massachusetts

Sand Resource Assessment at Critical Beaches on the Massachusetts Coast

<table>
<thead>
<tr>
<th>Beach Name</th>
<th>Town</th>
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<tbody>
<tr>
<td>1. Marsh Hole</td>
<td>Westport</td>
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<tr>
<td>2. Rust</td>
<td>Westport</td>
</tr>
<tr>
<td>3. Barnes</td>
<td>Cuttyhunk</td>
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<tr>
<td>4. Surf Drive</td>
<td>Edgartown</td>
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<tr>
<td>5. Oak Bluffs</td>
<td>Oak Bluffs</td>
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<tr>
<td>6. Sydney</td>
<td>Oak Bluffs</td>
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<tr>
<td>7. Mill Bay</td>
<td>Oak Bluffs</td>
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<tr>
<td>8. Low</td>
<td>Nantucket</td>
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<tr>
<td>9. Towns</td>
<td>Nantucket</td>
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<tr>
<td>10. Long</td>
<td>Nantucket</td>
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<tr>
<td>11. Great Rock</td>
<td>Marshfield</td>
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<tr>
<td>12. Field</td>
<td>Marshfield</td>
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<tr>
<td>13. Humarock</td>
<td>Scituate</td>
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<td>14. Peggotty</td>
<td>Scituate</td>
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<td>15. Nantasket</td>
<td>Hull</td>
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<tr>
<td>16. Wanton</td>
<td>Westport</td>
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<tr>
<td>17. Revere</td>
<td>Revere</td>
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<tr>
<td>18. Rehoboth</td>
<td>Nantucket</td>
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<td>19. Long</td>
<td>Rockport</td>
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<td>20. Plum</td>
<td>Newburyport</td>
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<tr>
<td>21. Plum</td>
<td>Newburyport</td>
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<tr>
<td>22. Tuckers</td>
<td>Salisbury</td>
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</tbody>
</table>
Identification of Sand/Gravel Resources in Rhode Island Waters While working Toward a Better Understanding of Storm Impacts on Sediment Budgets
1. Increase availability of existing data
2. Develop a Needs Assessment and Sand Inventory for states, region, and Atlantic Coast
3. Improve long-term sustainability and geomorphic function of resources
4. Utilize and develop collaborative web tools for states and Federal government
5. Identify data gaps for future surveys and implement large scale data acquisition and collaboration
6. Identify shared use stakeholders, determine environmental impacts and implement studies.
7. Increase communication between Federal, state agencies and stakeholders
For More Information

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