USACE Jacksonville
SAD SAND Status

Ken Craig, PE.
Angela Schedel, Ph.D., P.E.
Clay McCoy, Ph.D.
February 5, 2020
SAD SAND Project

• Part 1 – SAD Sand Availability and Needs Determination
• Part 2 – Jacksonville District Sand Search Project
• Part 3 – SAD DMMA Off-loading and Sediment Exchange Study
The SAND Team

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Clay McCoy  Project Manager  clay.a.mccoy
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Jackie Keiser  SACS Program Manager  jacqueline.j.keiser
Pam Castens  SACS Project Manager  pamela.g.castens

USACE TEAM:

EXTERNAL PROJECT DELIVERY TEAM:

NC DEQ - Division of Coastal Management
Bureau of Ocean Energy Management
SC DHEC - Ocean and Coastal Resource Management
SC Dept. of Natural Resources
GA DNR - Coastal Resources Division
Florida Dept. of Environmental Protection

Alabama Dept. of Conservation & Natural Resources
Mississippi Dept. of Marine Resources
PR Dept. of Environmental and Natural Resources
Geological Survey of Alabama
Environmental Protection Agency
Univ. of Southern Mississippi, Stennis
**SAD-SAND Task Order Team Leads**

- **Taylor Engineering contact info**
  - Jacksonville (904) 731-7040, fax (904) 731-9847
  - [www.tayloengineering.com](http://www.tayloengineering.com)

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program Manager</strong></td>
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<tr>
<td><strong>Sand Availability and Needs Determination</strong></td>
<td></td>
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<tr>
<td><strong>Part 2 Project Manager</strong></td>
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</tr>
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<td><strong>Part 3 Project Manager</strong></td>
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</tr>
<tr>
<td><strong>DMMA Off-loading &amp; Sediment Exchange Study</strong></td>
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Part 1 – Sand Availability and Needs Determination

QUESTIONS ANSWERED:
• What/Where are ALL beach nourishment resource NEEDS within the South Atlantic Division (SAD) over the next 50 years?
• What are the SOURCES of sand for ALL projects within SAD and how long will it last?

PRODUCTS:
• Database of sand needs for all beaches in region
• Database of available sand resources in coastal zone (offshore/nearshore, beneficial use)
• Regional workshops
• Final Report
Project Milestones

August 15, 2019
SAD SAND stakeholder kick-off webinar

August 21, 2019
Stakeholders begin entering data on SAND Survey website

October 10, 2019
SAND Survey website closes

October 17, 2019
Status update webinar

October 25, 2019
Stakeholders to review sand needs & sources data

October 25, 2019
Review website closes

November 18, 2019
Review comments addressed

December 16, 2019
Workshops summarizing data

September, 2020
Final reports and geodatabase available

Data collection period:

Data review period:
Part 1 – Sand Availability and Needs Determination (SAND)

- Develop Tables & Report
- Build Geodatabase
- Prepopulate w/available data

Example tables from *Southeast Florida Sediment Assessment and Needs Determination Study* (Ousley et al 2014)
Sand Balance

• 50-year need x 55% contingency (SLR / dredge inefficiency)

• Sources
  ➢ Federal and non-federal RSM included
  ➢ Offshore
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May-June 2020
workshops summarizing data
**Sand Survey**

Please fill out both sections (if applicable) of this survey completely. The Sand Needs section specifies your projects in need of sand. Add each of your applicable projects using the "Add" button. The Sand Source section specifies each of your sand sources or borrow areas. Add each sand source using the "Add" button. Please use the appropriate units specified in each field when entering numeric values.

### Sand Needs

<table>
<thead>
<tr>
<th>Project Name</th>
<th>State</th>
<th>County</th>
<th>Sponsor</th>
<th>Extent</th>
<th>Length (ft)</th>
<th>Est 50 yr Req (cy)</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Project</td>
<td>Florida</td>
<td>Duval County</td>
<td>Federal</td>
<td>R1 - R20</td>
<td>8,000</td>
<td>20,300,000</td>
<td></td>
</tr>
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</table>

### Sand Sources

<table>
<thead>
<tr>
<th>Source Name</th>
<th>State</th>
<th>County</th>
<th>Project/Beach</th>
<th>Centroid Easting</th>
<th>Centroid Northing</th>
<th>Est. Volume (cy)</th>
<th>Last Used (if depleted)</th>
<th>Permit</th>
<th>NEPA</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DU4-R042</td>
<td>Florida</td>
<td>Duval County</td>
<td>Jax Beach</td>
<td>-9,055,433</td>
<td>3,547,040</td>
<td>20,000</td>
<td>No</td>
<td>Permit 123</td>
<td>Test NEPA</td>
<td></td>
</tr>
</tbody>
</table>
Project Milestones

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**May-June, 2020**
Workshops summarizing data
Summary of Sand Needs Data: North Carolina SAW

26 Total Individually Named Nourishment Projects

- Dare (8)
- Carteret (4)
- Onslow (3)
- New Hanover (6)
- Brunswick (5)
Summary of Sand Needs Data: South Carolina SAC

20 Total Individually Named Nourishment Projects

- Horry (4)
- Georgetown (4)
- Charleston (7)
- Colleton (1)
- Beaufort (4)
Summary of Sand Needs Data: Georgia SAS

3 Total
Individually
Named
Nourishment
Projects

Chatham (1)
Glynn (2)
Summary of Sand Needs Data: Florida SAJ

72 Total Individually Named Nourishment Projects

- Hillsborough (1)
- Sarasota (4)
- Lee (6)
- Pinellas (4)
- Manatee (4)
- Charlotte (3)
- Collier (5)
- Nassau (3)
- Duval (1)
- St. Johns (6)
- Flagler (2)
- Volusia (3)
- Brevard (5)
- Indian River (3)
- St. Lucie (2)
- Martin (3)
- Palm Beach (10)
- Broward (4)
- Miami-Dade (3)
11 Total
Individually Named Nourishment Projects

- Escambia (2)
- Walton (1)
- Gulf (1)
- Santa Rosa (1)
- Okaloosa (4)
- Bay (2)
Summary of Sand Needs Data: Alabama SAM

5 Total Individually Named Nourishment Projects

- Mobile (2)
- Baldwin (3)
Summary of Sand Needs Data: Mississippi SAM

7 Total
Individually Named Nourishment Projects

Harrison (4)  Jackson (1)  Hancock (2)
Summary of Sand Needs Data: Puerto Rico SAJ

2 Total
Individually Named Projects

San Juan (1) — Rincon (1)
Summary of Sand Needs Data: U.S. Virgin Islands SAJ

6 Total Individually Named Projects

St. John (1)
St. Thomas (5)
Workshops & Study Products

- **August 15, 2019**: SAD SAND stakeholder kick-off webinar
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- **May-June 2020**: Workshops summarizing data

**Data Collection Period:**
- **August 15, 2019**

**Data Review Period:**
- **October 10, 2019**
- **October 25, 2019**

**Workshops & Study Products Period:**
- **September 2020**
Sand Sources

- ROSSI database
- BOEM database
- USACE RSM database
- Local stakeholder inputs – non-federal RSM projects
- Classifications

<table>
<thead>
<tr>
<th>Category</th>
<th>Confidence</th>
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<tbody>
<tr>
<td>Proven</td>
<td>90%</td>
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<tr>
<td>Potential</td>
<td>70%</td>
</tr>
<tr>
<td>Unverified Plus</td>
<td>30%</td>
</tr>
<tr>
<td>Unverified</td>
<td>0%</td>
</tr>
<tr>
<td>Unusable</td>
<td>0%</td>
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</table>
Part 2 – Jacksonville District Sand Search

• Focus on Southeast and Southwest Florida
• Geophysical data collected along 120 miles
• Vibracores → +/-120
• Initial field plans submitted for review
• AmDrill → data collection (m/v Thunderforce)
  ➢ March/April – geophysics
  ➢ May/June – vibracores
• Geotechnical lab → Taylor Engineering’s Coastal Geoscience Lab
  ➢ See Bill Aley
Part 3 – SAD DMMA Off-Loading and Sediment Exchange Study

• PM – Angela Schedel, Ph.D., P.E.

• South Atlantic Division (except Puerto Rico and U.S.V.I.)

• Geodatabase:
  ➢ ALL confined upland placement facilities

• Sediment Exchange Report
  ➢ Current management & offloading practices
  ➢ Beneficial re-use opportunities
  ➢ District specific maps and tables

DMMA Characteristics
• Facility Footprint
• Volume Capacity
• Current Volume
• Dredged Material Placement and Frequency
• Dike Elevation
• Crest Height
• Weir Type
• Year Constructed
• Facility Access
• Owner
• Points of Contact
• Offloading Frequency
• Sediment Characteristics
Data Sources

• ASBPA’s RSM Database
• FIND’s Dredged Material Management Plans (DMMP)
• AIWW Initial Plan Development DMMP
• Dredging Volume Projections for WCIND / GIWW
• USACE’s Placement Areas Database - SAM
• USACE’s SAD Regional Sediment Management Optimization Report - SAJ
Work in Progress – Identification of SAD DMMAs

<table>
<thead>
<tr>
<th>USACE DISTRICT</th>
<th>ESTIMATED NUMBER OF USACE PLACEMENT AREAS*</th>
<th>ESTIMATED NUMBER OF PORTS</th>
<th>ESTIMATED NUMBER OF U.S. NAVY FACILITIES</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>WILMINGTON</td>
<td>314</td>
<td>3</td>
<td>1 (Camp Lejeune)</td>
<td>318</td>
</tr>
<tr>
<td>CHARLESTON</td>
<td>97</td>
<td>3</td>
<td>2 (Beaufort, Charleston)</td>
<td>102</td>
</tr>
<tr>
<td>SAVANNAH</td>
<td>68</td>
<td>5</td>
<td>0</td>
<td>73</td>
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<tr>
<td>JACKSONVILLE</td>
<td>66 (FIND) + 31 (WCIND)</td>
<td>9</td>
<td>2 (Mayport, Kings Bay)</td>
<td>108</td>
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<tr>
<td>MOBILE</td>
<td>29</td>
<td>19</td>
<td>3 (Panama City, Pensacola, Pascagoula)</td>
<td>51</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>605</strong></td>
<td><strong>39</strong></td>
<td><strong>8</strong></td>
<td><strong>652</strong></td>
</tr>
</tbody>
</table>

*Note: FIND = Fort Island Navigational Dredge, WCIND = Wetlands CIN, WCIND = Water Craft INDuction.
Five Chapters: one per District
Spatial database summary
Current management and offloading practices
Beneficial re-use opportunities
Data limitations
Additional offloading opportunities
Estimated cost comparisons
Part 3 – SAD DMMA Off-Loading and Sediment Exchange Study / Tasks & Deliverables

• Web-Based ArcGIS Spatial Database (SDSFIE Compliant)
• Recently submitted draft database – Corps comments pending
• Final deliverables June 2020
THANK YOU

Questions?