Restoration Found: Selecting the Right Location for Your Restoration Project

Philip Blackmar
Outline

- Phase 1: Desktop – Level Assessment
  - Understanding project goals
  - Regional Location
  - Historical Review
  - Boat Traffic
  - Bottom Conditions
  - Meteorological and Oceanographic Conditions

- Phase 2: Field Collection
  - Side-scan sonar
  - Bathymetry
  - Natural Resources
  - Geotechnical
  - Hazards
Phase 1
Understanding Your Project

Work with your project team from the initial stages!
Phase 1
Regional Location

- Galveston Bay
- Matagorda Bay
- San Antonio Bay
- Copano Bay
- Corpus Christi Bay
- Baffin Bay
Phase 1
Historical Conditions and Trends

- What did the area look like historically
- What has been happening to the area
Phase 1
Boat Traffic

- Vessel traffic
Phase 1
Bottom Conditions

- Historical Aerials
- Do you sink??
Phase 1
Meteorological and Oceanographic Conditions

- Wind and fetch
### Phase 1
Meteorological and Oceanographic Conditions

- **Water Depth**

<table>
<thead>
<tr>
<th>Water Depth</th>
<th>Mound Volume</th>
<th>Mound Cost</th>
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</thead>
<tbody>
<tr>
<td>2 ft</td>
<td>5,773</td>
<td>$40,411</td>
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<tr>
<td>3 ft</td>
<td>9,551</td>
<td>$66,857</td>
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<tr>
<td>4 ft</td>
<td>14,691</td>
<td>$102,837</td>
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</table>
Phase 2 – Data Collection
Phase 2
Side-Scan Sonar

- Large coverage
- Qualitative not Quantitative
- Good for directing future investigations

Source: Baythymetricresearch.com
Phase 2
Bathymetry

Elevation (ft, NAVD)
- -5.9 - -5.0
- -4.9 - -4.0
- -3.9 - -3.0
- -2.9 - -2.0
- -1.9 - -1.0
- -0.9 - 0.0
- 0.1 - 1.0
Phase 2
Natural Resources

<table>
<thead>
<tr>
<th>DATE</th>
<th>LOCATION</th>
<th>DREDGE</th>
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<tbody>
<tr>
<td>7/16/15</td>
<td>SAN ANTONIO BAY</td>
<td>17</td>
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Phase 2
Geotechnical

- Borings and sediment analyses
Phase 2
Hazards

- Magnetometer survey
Summary

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Discussion