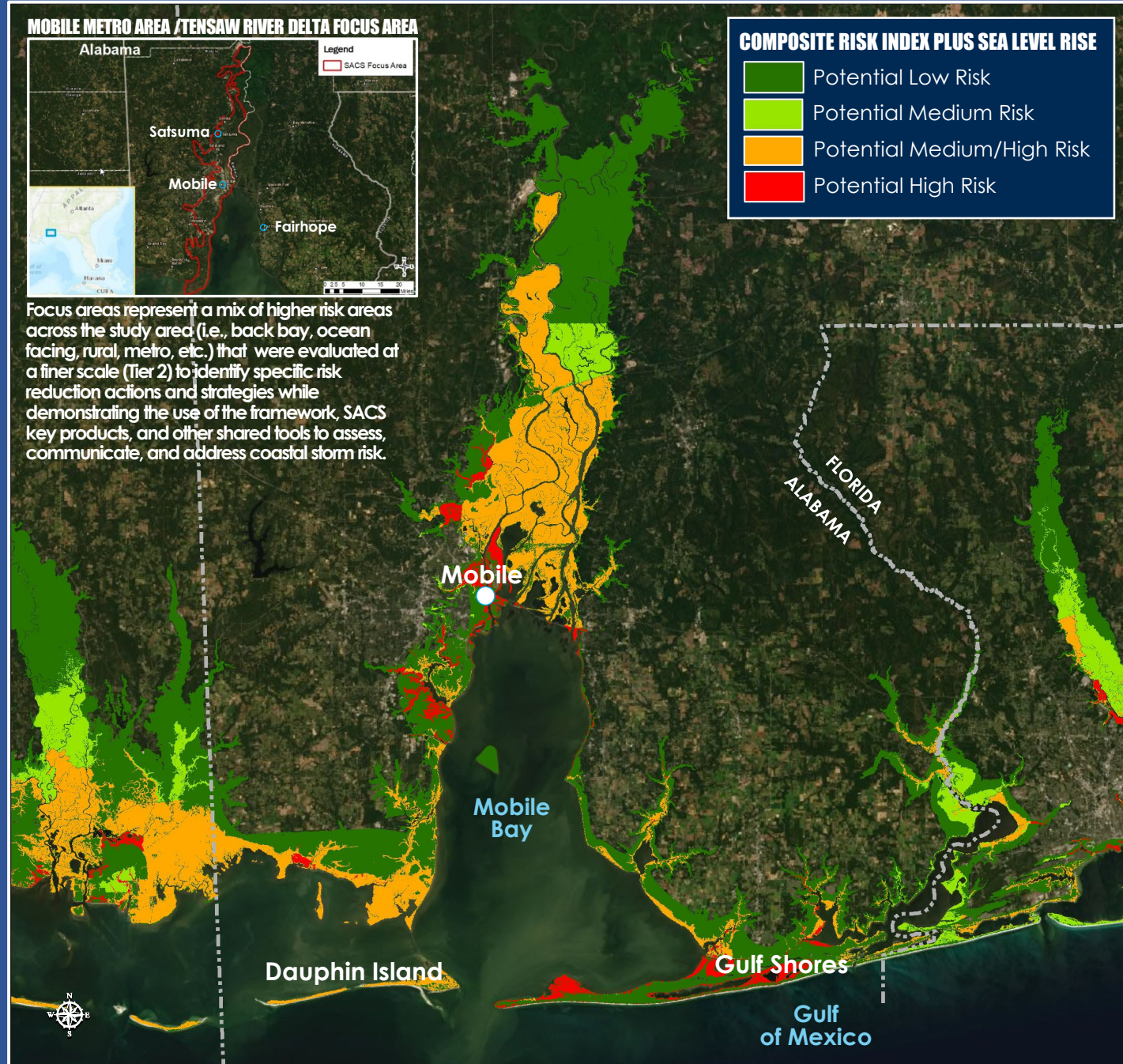


## ALABAMA SUMMARY

Alabama has the sixth largest potential economic risk in the study area. Mobile and Baldwin counties have the greatest economic risk to coastal storm surge. Approximately 80 percent of the risk is to areas that are relatively more populated. Orange Beach, Mobile, Gulf Shores, and Dauphin Island make up nearly 68 percent of the potential risk in Alabama.

## TIER 1 COMPOSITE RISK ASSESSMENT MAP (PLUS SEA LEVEL RISE)



## ALABAMA SACS SNAPSHOT

<p><b>DOWNTOWN MOBILE</b> (COURTESY OF FLY THE COAST)</p>	<p><b>32</b> Hurricane Strikes (1851-2021)</p>	<p><b>2</b> Deep Draft Harbors</p> <p>Annual Dredge Volume: 7,190,000 Cubic Yards</p>	<p><b>More Than 2,000</b> Miles Of Tidally Influenced Coastline</p>										
<p><b>MOBILE HARBOR</b> (COURTESY OF FLY THE COAST)</p>	<p><b>119,000</b> Estimated Population Within High Socially Vulnerable Communities</p>	<p><b>190,000</b> Estimated Vulnerable Structures</p> <p>Footprint: 500 year Floodplain + 3 Feet Sea Level Rise</p>	<p><b>9</b> Priority Environmental Areas (PEAs)</p>										
<p><b>HURRICANE IVAN</b></p>	<p><b>8</b> Beach Nourishment Projects Federal and Non-Federal</p>	<p><b>7</b> High-Risk Locations Future Condition with 3 Feet Sea Level Rise</p>	<p><b>92%</b> Increase in Economic Damages from the Existing to the Future Condition (with 3 feet Sea Level Rise)</p>										
<p><b>OTHER:</b></p> <ul style="list-style-type: none"> <li>54,419 Federal Flood Insurance Policies</li> <li>Jobs and Federal, State, and Local Revenues at Risk</li> </ul>													
<p>Sources (rows, left to right):</p> <table border="0"> <tr> <td>1) NOAA HURDAT Database</td> <td>6) SACS Appendices</td> </tr> <tr> <td>2) 2020 RSM Optimization Report</td> <td>7) SACS SAND Report</td> </tr> <tr> <td>3) NOAA Environmental Sensitivity Index (ESI) Guidelines</td> <td>8) SACS Tier 1 &amp; Tier 2 Risk Assessments</td> </tr> <tr> <td>4) 2016 CDC Social Vulnerability Index</td> <td>9) SACS Tier 2 Economic Risk Assessment</td> </tr> <tr> <td>5) National Structure Inventory</td> <td></td> </tr> </table>				1) NOAA HURDAT Database	6) SACS Appendices	2) 2020 RSM Optimization Report	7) SACS SAND Report	3) NOAA Environmental Sensitivity Index (ESI) Guidelines	8) SACS Tier 1 & Tier 2 Risk Assessments	4) 2016 CDC Social Vulnerability Index	9) SACS Tier 2 Economic Risk Assessment	5) National Structure Inventory	
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5) National Structure Inventory													

## RECOMMENDATIONS

The Coastal Storm Risk Management Framework, SACS key products, and other shared tools were used to assess and communicate risk across the SACS Study Area, and ultimately to address the assessed risk with a series of recommendations. The entire process was implemented with input from stakeholders across federal, state, and local public and private sectors. Recommendations to manage coastal storm risk are grouped into six categories, as illustrated in the icon graphics below, and are further grouped by timeframe : near term (< 5 years), mid term ( 5 10 years), and long term (> 10 years), as well as by responsible party (multi agency, USACE, and Congress).

<p>Activities and Areas Warranting Further Analysis</p>	<p>Address Barrier Preventing Comprehensive Risk Management</p>	<p>Design and Construction Efforts</p>	<p>Recommendations on Previously Authorized USACE Construction Projects</p>	<p>Regional Sediment Management Practices</p>	<p>Study Efforts</p>
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## RECOMMENDATION CATEGORIES DEFINED

	<b>Activities and Areas Warranting Further Analysis:</b> This category includes development of tools, data collection, and multi-agency efforts such as those undertaken by Silver Jackets teams, which bring together multiple state, federal, and sometimes tribal and local agencies to manage risk from flooding and other natural disasters.
	<b>Address Barriers Preventing Comprehensive Risk Management:</b> This category advances opportunities to address the multiple barriers preventing comprehensive risk management identified in the SACS report.
	<b>Design and Construction Efforts:</b> Examples include recommendations that support design and construction of tentatively selected or recommended plans from USACE CSRMs studies conducted separately from SACS.
	<b>Recommendations on Previously Authorized USACE Construction Projects:</b> This category includes recommendations that maintain and/or adapt existing USACE CSRMs projects to continue providing storm risk management as sea level rises.
	<b>Regional Sediment Management Practices:</b> This category supports a systems approach for more efficient and effective use of sediments in coastal environments, ranging from agency collaboration on sand source identification to leveraging the beneficial use of dredged material with emerging natural, nature-based features (NNBF).
	<b>Study Efforts</b> Examples include USACE feasibility study recommendations, studies that may be led by other stakeholders, and studies that fall under existing USACE authorities, such as the Continuing Authorities Program (CAP) and Planning Assistance to States (PAS).

## ALABAMA RECOMMENDATIONS

The recommendations to the right include:

### 1 REGIONAL RECOMMENDATIONS APPLICABLE TO ALABAMA

Regional Priority Recommendations may be applicable to the entire region, such as improving understanding and application of compound flooding effects, or they may be location-specific recommendations to address areas with the most significant risk relative to the entire study area.

### 2 ALABAMA-SPECIFIC RECOMMENDATIONS

Key state and regional recommendations center around collaborative planning among local, state, tribal, and federal entities, non-governmental organizations to address coastal storm risk along the coast. In addition, several recommendations focus on regional sediment management (RSM) and beneficial use of dredged material strategies to support economically sustainable and environmentally acceptable solutions to reduce coastal risk.



Image: Lightening Point Prior to Vegetation (courtesy of Fly the Coast)

## ALABAMA RECOMMENDATIONS

CATEGORY	TIMING*	TYPE**	RECOMMENDATION	ASSIGNED TO	NEXT STEP
Activities/Areas Warranting Further Analysis	Near-Term		Develop Hazard Mitigation Plan/Updates for Mobile County, AL.	Multi-agency	Stakeholder Collaboration
	Near-Term		Develop Watershed Management Plans for Mobile Bay and Delta, AL.	Multi-agency	Funding
	Mid-Term		Support local agencies with communication and communication tools within Mobile and Baldwin Counties, AL.	Multi-agency	Stakeholder Collaboration
Regional Sediment Management Practices	Near-Term		Develop updates to regional sediment management plans within coastal Alabama within the Western Mobile Bay and Delta Focus Area.	USACE	Stakeholder Collaboration
	Near-Term		Continue to promote partnerships and collaboration on existing beneficial use and RSM opportunities within Mobile and Baldwin Counties, AL.	Multi-agency	Stakeholder Collaboration
	Near-Term		Barrier island maintenance plan and interagency coordination within the vicinity of the Western Mobile Bay and Tensaw River Delta Focus Area	USACE	Funding
Study Efforts	Near-Term	SP	A study on reducing erosion along Mobile Bay, AL.	Congress	New Study Authority
	Near-Term	SP	Study to address combined flooding effects in Mobile, AL.	Congress	New Study Authority
	Mid-Term	RP	Develop conservation management plans and implementation for Tensaw Delta Habitat Preservation.	USACE	Funding
	Long-Term		Coastal Storm Risk Feasibility study for Orange Beach/Gulf Shores, Alabama	Congress	New Study Authority
	Long-Term		Develop and implement coal ash removal plan, Barry's Steam Plant, Bucks, Alabama.	Multi-agency action	Stakeholder Collaboration

## ADDITIONAL REGIONAL PRIORITY RECOMMENDATIONS APPLICABLE TO ALL STATES

CATEGORY	TIMING*	TYPE**	RECOMMENDATION	ASSIGNED TO	NEXT STEP
Activities/Areas Warranting Further Analysis	Mid-Term	RP	Advance ongoing interagency work to improve understanding and application of compound flooding effects on existing and future coastal storm risk.	Multi-Agency	Stakeholder collaboration
	Near-Term	RP	SACS key products should be maintained and updated by USACE and utilized, as applicable, by USACE and stakeholders to support consistent, efficient, and effective analyses. Additionally, other agency-led data and tools should be supported to facilitate use of consistent, up-to-date information for decision making. Examples of such agency-led efforts include the Bureau of Ocean Energy Management (BOEM) Minerals Management Information System (MMIS) and the National Oceanic and Atmospheric Administration (NOAA) Coastal Change Analysis Program.	Multi-Agency	Funding
	Near-Term	RP	A multi-agency and collaborative approach should be used to develop methods that account for environmental benefits in traditional habitat units and economic quantities (monetized) in order to acknowledge and consider environmental benefits as a factor in deciding on a recommended plan in all future CSRMs studies.	Multi-Agency	Guidance/Policy
	Near-Term	RP	Develop streamlined and vetted methods to quantify and incorporate risk management benefits to Regional Economic Development, Environmental Quality, and Other Social Effects to ensure Federal interest determinations consider benefits other than National Economic Development.	USACE	Guidance/Policy
Address Barriers	Near-Term	RP	Develop streamlined and vetted methods to quantify and incorporate risk management benefits to Regional Economic Development, Environmental Quality, and Other Social Effects to ensure Federal interest determinations consider benefits other than National Economic Development.	USACE	Guidance/Policy
Previously Authorized USACE Construction Projects	Near-Term	RP	Prioritize funding for renourishment of existing federal CSRMs beach nourishment projects (except PR and USVI)	Congress	Funding
	Near-Term	RP	Prioritize extension of federal periods of participation in existing CSRMs beach nourishment projects, as appropriate, to continue providing coastal storm risk management and important incidental benefits to coastal systems, communities, and environmental and cultural resources. Options could include prioritizing funding and review of studies on existing CSRMs projects, streamlining the study process for existing projects, or providing extensions to the existing periods of federal participation through legislation such as was done by WRDA 2018 (P.L. 115-270) (except PR and USVI)	Congress	Funding
	Near-Term	RP	Ongoing and future federal and nonfederal studies recommending beach nourishment should explicitly incorporate adaptive capacity to improve project resilience.	Multi-Agency	Guidance/Policy
Regional Sediment Management	Near-Term	RP	Promote partnerships and collaboration on beneficial use of dredged material opportunities.	Multi-Agency	Stakeholder collaboration
	Near-Term		Develop regional prioritization of strategies to address sand needs.	USACE	Funding

\* Near-Term: < 5 Years / Mid-term: 5 – 10 Years / Long-term: >10 Years / \*\* RP: Regional Priority / SP: State Priority