

Engaging Ports to Create a More Resilient Coastal Economy

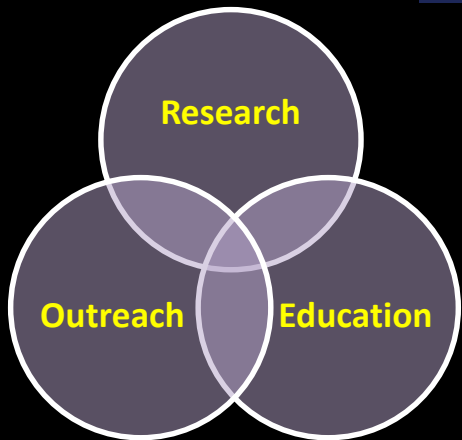
The Ports Resilience Index



Presentation to the AAPA Environment
Committee
September 16, 2015



National Sea Grant College Program



Louisiana Sea Grant Extension



Agents

- Carol Franze, Associate Marine Agent
- Twyla Herrington, Associate Marine Agent
- Albert 'Rusty' Gaudé, Marine Agent
- Alan Matherne, Marine Agent
- Thu Bui, Assistant Marine Agent
- Thomas Hymel, Marine Agent
- Mark Shirley, Marine Agent
- Kevin Savoie, Marine Agent
- Shared parish
- Agent office location

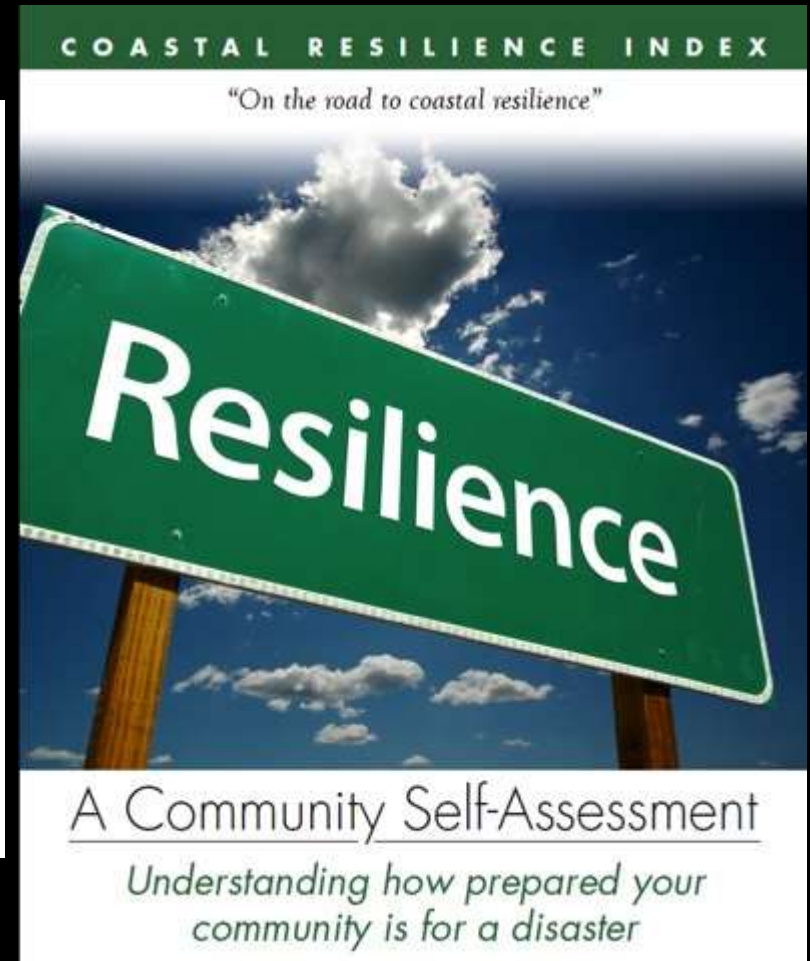
Specialists

- Julie Anderson Lively, Fisheries
- Victoria Bell, GIS Support
- Rex H. Caffey, Director of Marine Extension
- Julie Falgout, Extension Assistant
- Brian D. LeBlanc, Water Quality
- C. Gregory Lutz, Aquaculture
- John Supan, Molluscan Shellfish
- Maurice Wolcott, GIS Support

The Resilience Index Project



(GOMA)



CRITICAL INFRASTRUCTURE AND FACILITIES

The following are key indicators that will give a preliminary assessment of your community's disaster resilience. A more detailed assessment process is available in the FEMA 386-2 publication (fema.gov).

- Place a check mark in the column where your community's critical infrastructure and facilities are located. You may need to use flood maps to determine where the boundaries would be. If the facility is located in multiple areas, put a check in all that are applicable. Then put a check mark in the last column if the infrastructure or facility is functional after a disaster (assuming Scenario 1). Use the total check marks in the last column for Section A and Section B to complete page 9, "Determining Your Resilience Index".

	Special Flood Hazard Area (SFHA)	Bad Storm Scenario 1	Future Storm Scenario 2	Infrastructure or facility functions after disaster
<i>Example: Power grid</i>		✓		✓
Section A: Critical Infrastructure				
Wastewater treatment system				
Power grid				
Water purification system				
Transportation/evacuation routes				
Total check marks for Section A:				
Section B: Critical Facilities*				
City Hall or other local government building(s)				
Police station or other law enforcement building(s)				
Fire station(s)				
Communications main office or substations				
Emergency operation center				
Evacuation shelter(s)				
Hospital(s)				
Critical record storage				
Total check marks for Section B:				

*Critical facilities may be defined a certain way in an ordinance. However, each community may identify other structures they consider critical. If you need assistance locating critical infrastructure and facilities, you can refer to the mapping tool that accompanies the Index.

MITIGATION MEASURES

- Has your community implemented the following ongoing mitigation measures or projects? Check Yes or No.

Mitigation measures in place	Yes	No
<i>Example: Relocation of buildings and infrastructure</i>		✓
Elevation of residential, nonresidential buildings, or infrastructure to National Flood Insurance Program standards for your community*		
Relocation of buildings and infrastructure from flood-prone areas		
Flood-proofing of nonresidential structures		
Education programs about mitigation options for your community		
Acquisition of repetitive loss structures, infrastructure, or property		
Incentives-based mitigation measures		
Adoption of the most recent International Building Codes		
Hiring certified building inspectors		
Staffing an adequate number of people to enforce building codes		
Have completed or planned shoreline restoration projects for critically eroding areas		
Require the protection and maintenance of sensitive coastal habitats, ecosystems, and natural features (dunes, barrier islands, salt marshes, mangroves)		
Have undeveloped public lands, such as parks, forests or preserves in the coastal high hazard areas (V-zone on FIRM map)		
Total number of Yes answers and No answers:		

ADDITIONAL NOTES

DID YOU KNOW?

Creating permanent no-build areas can earn a community up to 900 points through the Community Rating System. For buildings in hazardous areas that cannot be relocated or removed, retrofitting of existing structures is an option that can earn communities up to 2,800 points.

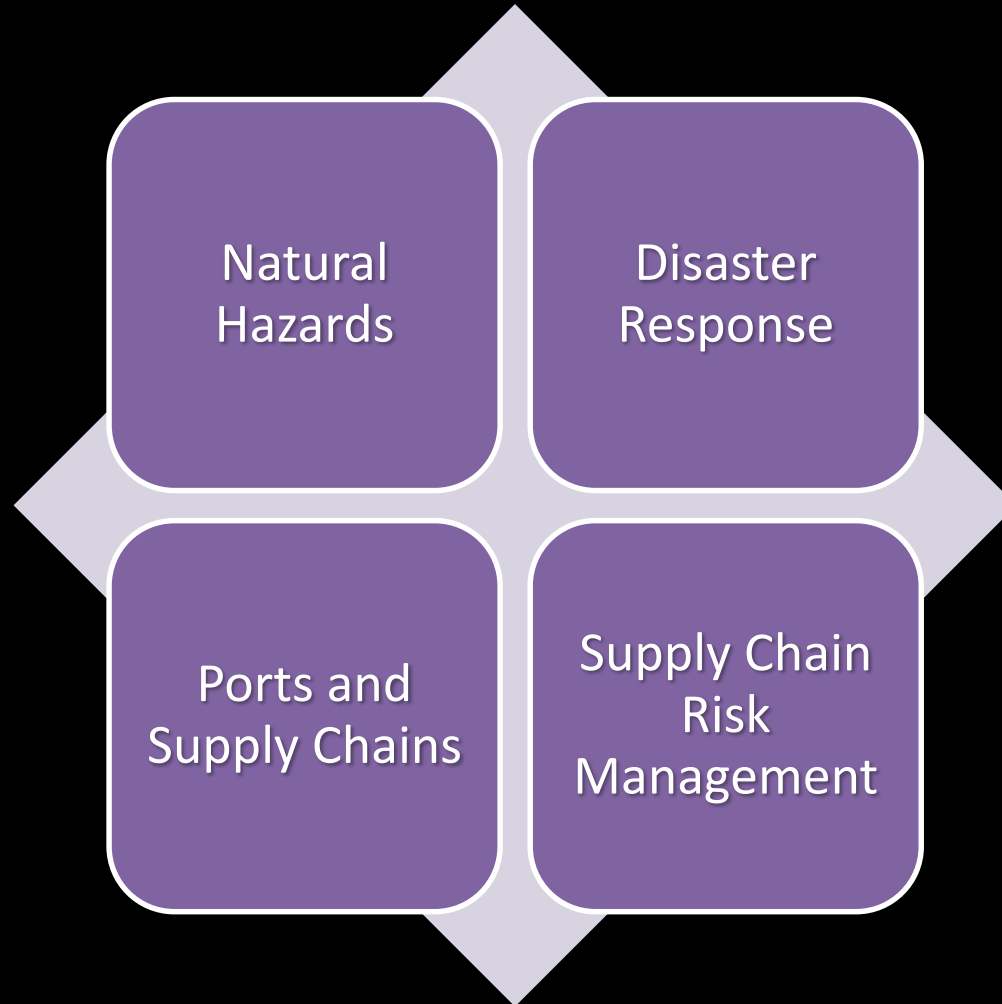
*Note that the Association of State Floodplain Managers recommends communities consider higher elevations than the minimum National Flood Insurance Program standard.

Our Working Definition of Resilience

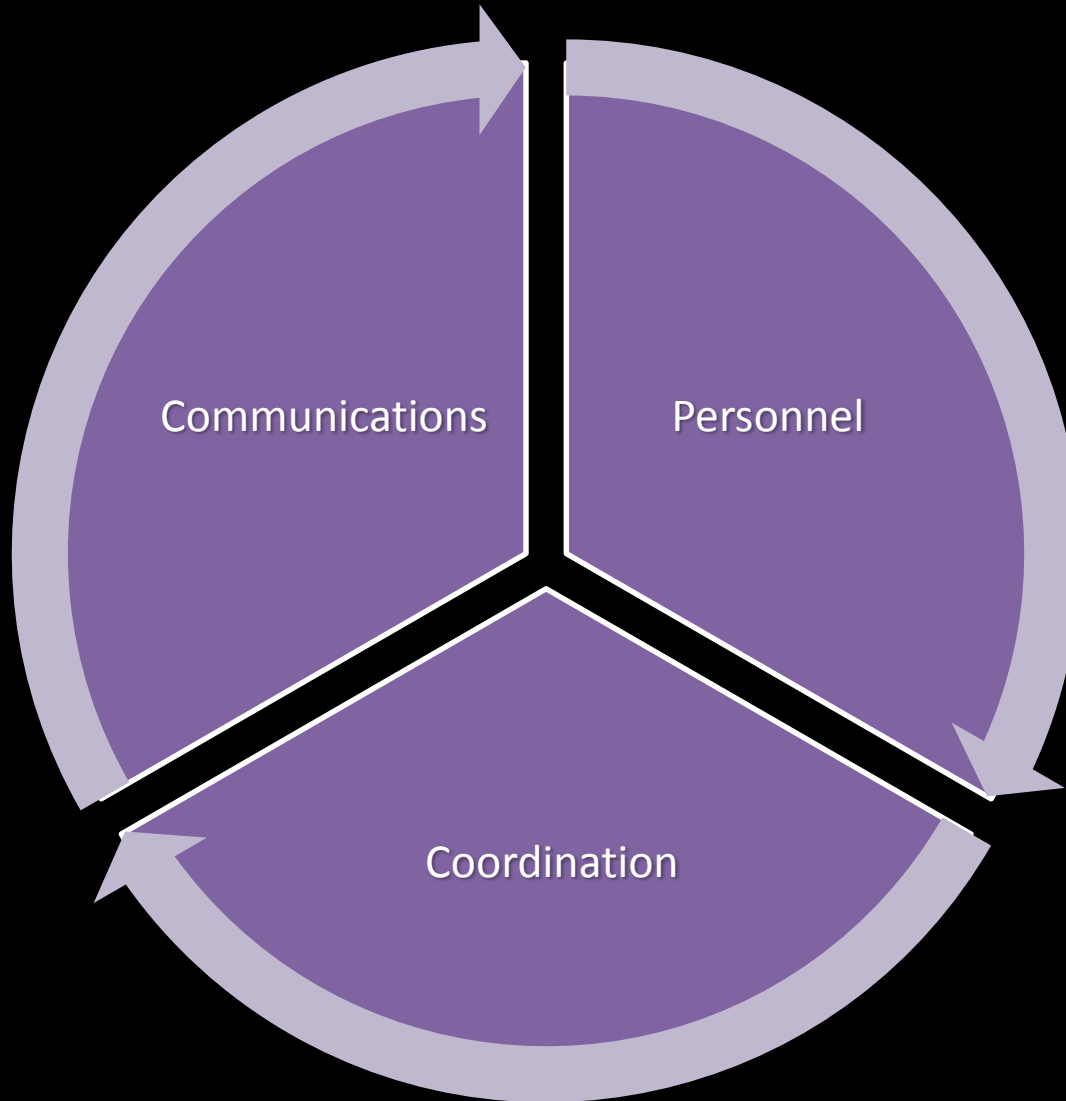
The ability of ports to return to an acceptable level of functioning after a disaster and “bounce forward”



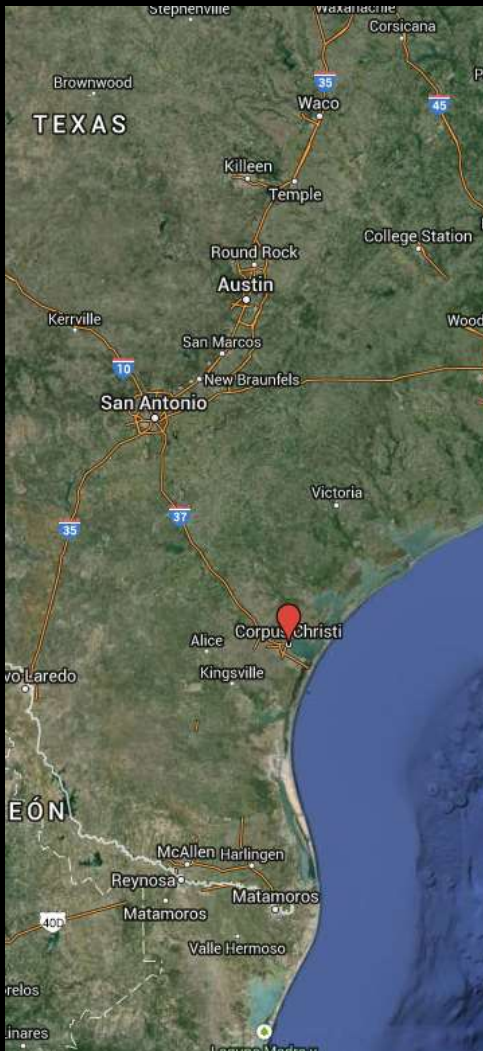
Ports & Resilience in the Academic Literature



Port Risk Management: Additional Federal Guidance would aid Ports in Disaster Planning and Recovery



Ports and Harbors Workgroup



Progress To Date

Online Survey

Kickoff Meeting:
October 31, 2014

Work Session:
January 20-21, 2015



Challenges for a “Resilience Index”

- Each port is unique – the only commonality is the fact that they have water
- Operational Categories vs. Time Phases
- Unique governance structures
- Decision-making occurs on the fly

Opportunities for a “Resilience Index”

- Checklists or resource for newer senior-level managers
- Focus on role-specific (rather than person-specific) responsibilities
- Use the AAPA Emergency Best Practices Manual as a starting point

Emergency Preparedness and Continuity of Operations Planning

Manual for Best Practices

Prepared for the American
Association of Port Authorities
(AAPA)

*Prepared by: Phyllis Sudhoff
Managing Director
Port Freeport*



1. **Hazard A**
Does your Port have plans to assess all hazards
Yes or No.

4. **Communications**
Does your Port have the following robust and sustainable communications practices
in place for times during and after a crisis? *Check Yes or No.*

2. **Insurance, Risk**
Does your Port have the right pro
exposure and

5. **Emergency Operations Center**
Does your Port have the time, manpower, and financial resources to staff
and run its own Emergency Operations Center? *Check Yes or No.*

3. Does your Port
enabl

6. **Operations Planning for Preparedness**
Does your Port have the following procedures in place to minimize damage
and ensure survival during an event? *Check Yes or No.*

Planning for Disaster
<i>Example: Pre-event Contracts</i>
Does your Port have pre-event co place to allow for fast-track proc
Do other government entities in emergency response and restora
Does your Port have a pre-identi contractors)?
Does the Port use a Port Coordin terminal operators) to remain up navigation channel, aids to navig
Does your Port have knowledge disaster assistance programs (i.e. Grant Program) and a plan to ap
Is your Port aware of the roles it community in the event of a disa Reserve Force, etc.)?

For resources to improve your Port

Operations Planning for Preparedness	YES	NO
<i>Example: Mission Statement</i>	✓	

7. **Accounting, Finance, and Administration**
Does your Port have the following procedures in place to address vital records, payroll,
emergency spending, and banking and bonds during an emergency situation? *Check Yes or No.*

Accounting, Finance, and Administration	YES	NO
<i>Example: Ability to process payroll from an alternate location</i>	✓	
Does your Port's evacuation plan consider supplies needed (e.g., additional cash or cashiers checks) for employee payroll and other expenses?		
Does your Port store backup files offsite at a location not subject to the same risks?		
Does your Port have the ability to process payroll from an alternate location?		
Does your Port's Executive Management have emergency spending authority?		
Does your Port have recordkeeping procedures for emergency purchases and distribution of petty cash or purchase orders?		
Does your Port bank with an institution with multiple locations?		
Total number of Yes and No answers:		

For resources to improve your Port in these areas, see the "Resilience Resources" section.

SCORING TABLE

Use the box labeled "Total Number of Yes or No Answers" from Sections 1-7 to complete the following chart.

Sections 1-7	Number of Yes answers	Translate number of Yes answers to Resilience Index	Resilience Index	Comments
<i>(Example) Section 3: Planning for Disaster</i>	6	7 or fewer (LOW) 8 to 11 (MEDIUM) 12 or more (HIGH)	LOW	<i>We are planning a tabletop exercise where we can practice our Continuity of Operations Plan. We are also developing a program for cross-training our employees.</i>
Section 1: Hazard Assessment		1 (LOW) 2 to 3 (MEDIUM) 4 or more (HIGH)		
Section 2: Insurance, Risk Management, & Legal Protection		3 or fewer (LOW) 4 to 6 (MEDIUM) 7 or more (HIGH)		
Section 3: Planning for Disaster		2 or fewer (LOW) 3 to 4 (MEDIUM) 5 or more (HIGH)		
Section 4: Communications		1 (LOW) 2 to 3 (MEDIUM) 4 or more (HIGH)		
Section 5: Emergency Operations Center		2 or fewer (LOW) 3 to 4 (MEDIUM) 5 or more (HIGH)		
Section 6: Operations Planning for Preparedness		3 or fewer (LOW) 4 to 6 (MEDIUM) 7 or more (HIGH)		
Section 7: Accounting, Finance, & Administration		2 or fewer (LOW) 3 to 4 (MEDIUM) 5 or more (HIGH)		

Phase I Pilot Tests of the Ports Resilience Index



Port of Corpus Christi



Port of Lake Charles



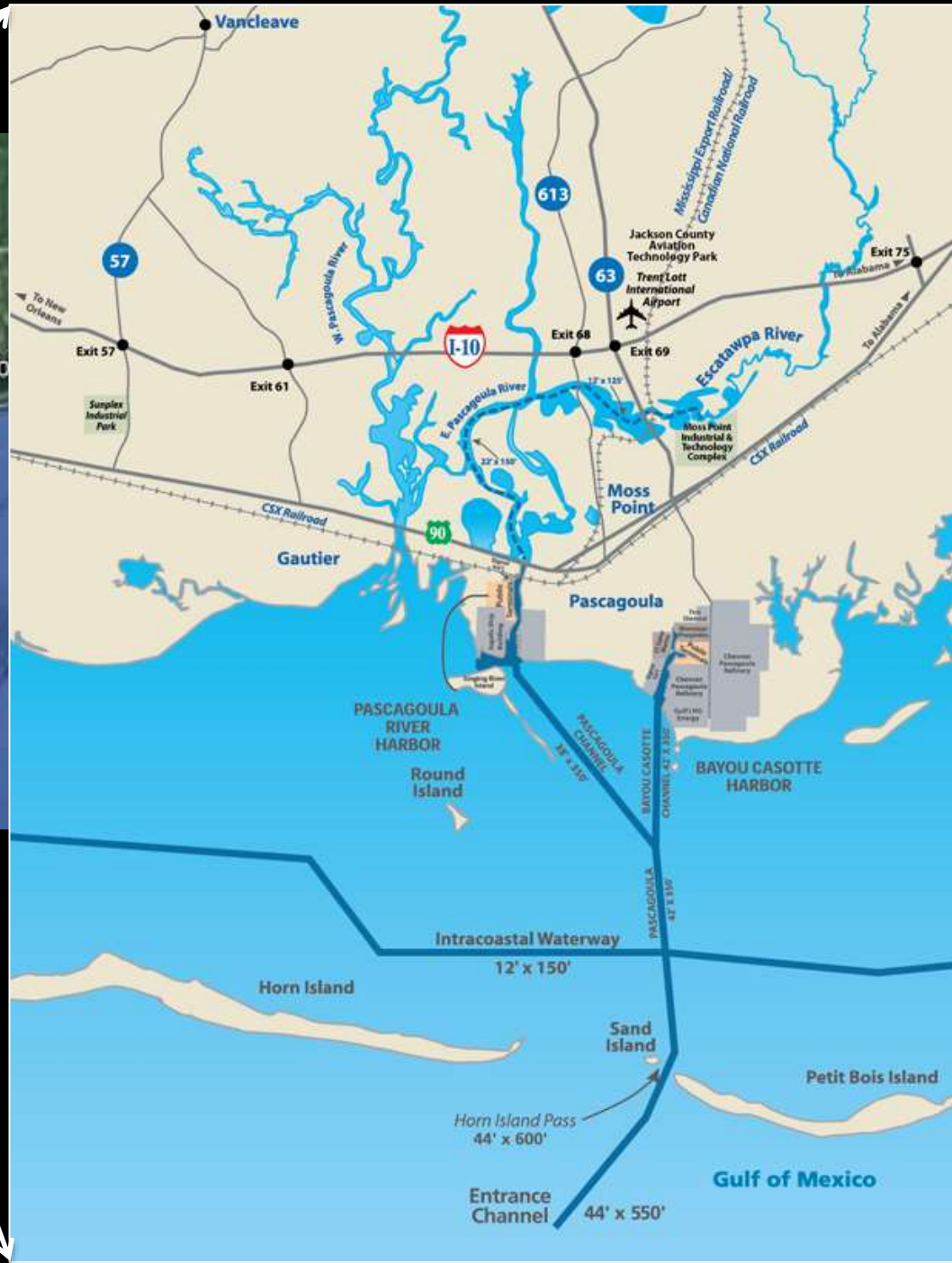
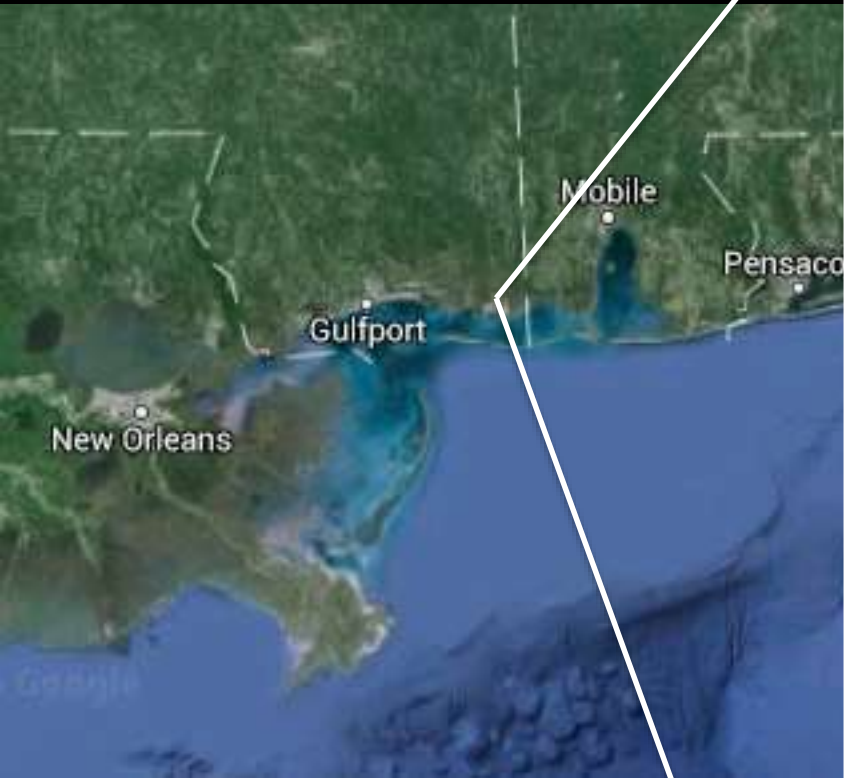
Port of Pascagoula

Port of Corpus Christi

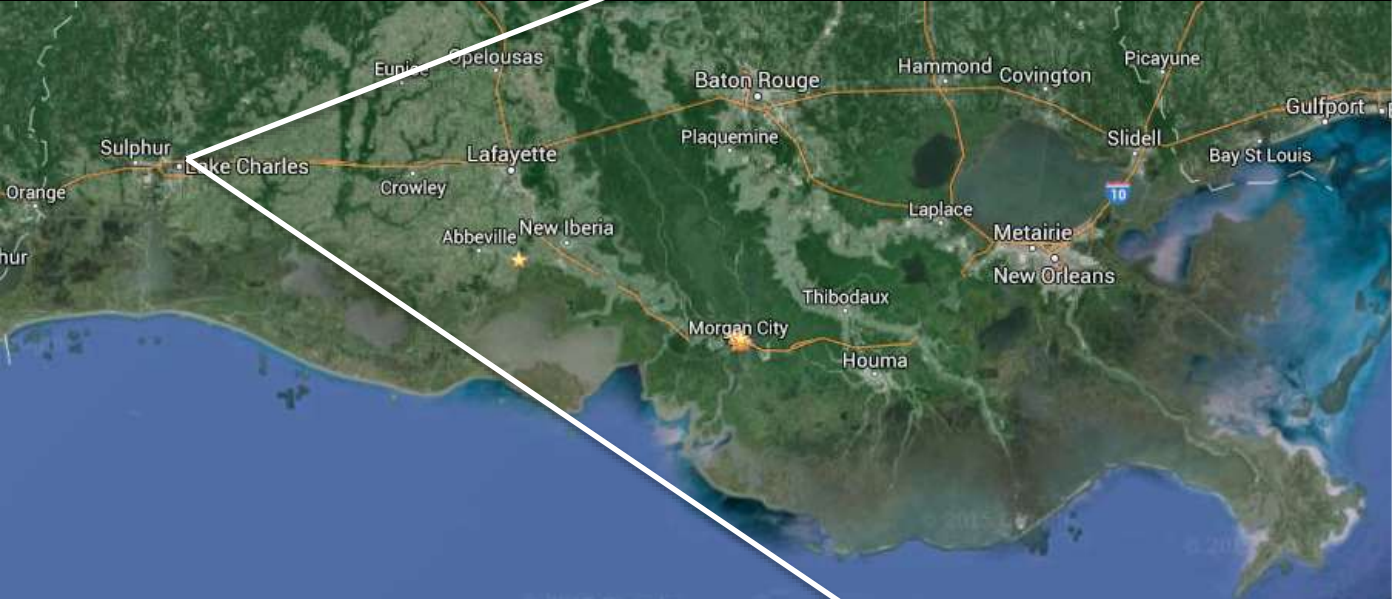
TEXAS



Port of Pascagoula



Port of Lake Charles



Next Steps for the PRI

Revise the questions with the feedback from 3 pilot tests

Send the checklist out to the Expert Committee for another round of reviews

Test the revised version with Port of Tampa

Develop 3 case studies to showcase best practices and potential recommendations for ports

Phase II pilot tests of the PRI



Port of Tampa

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