

The Role of Marine Transportation (ESF-1) Post Disaster



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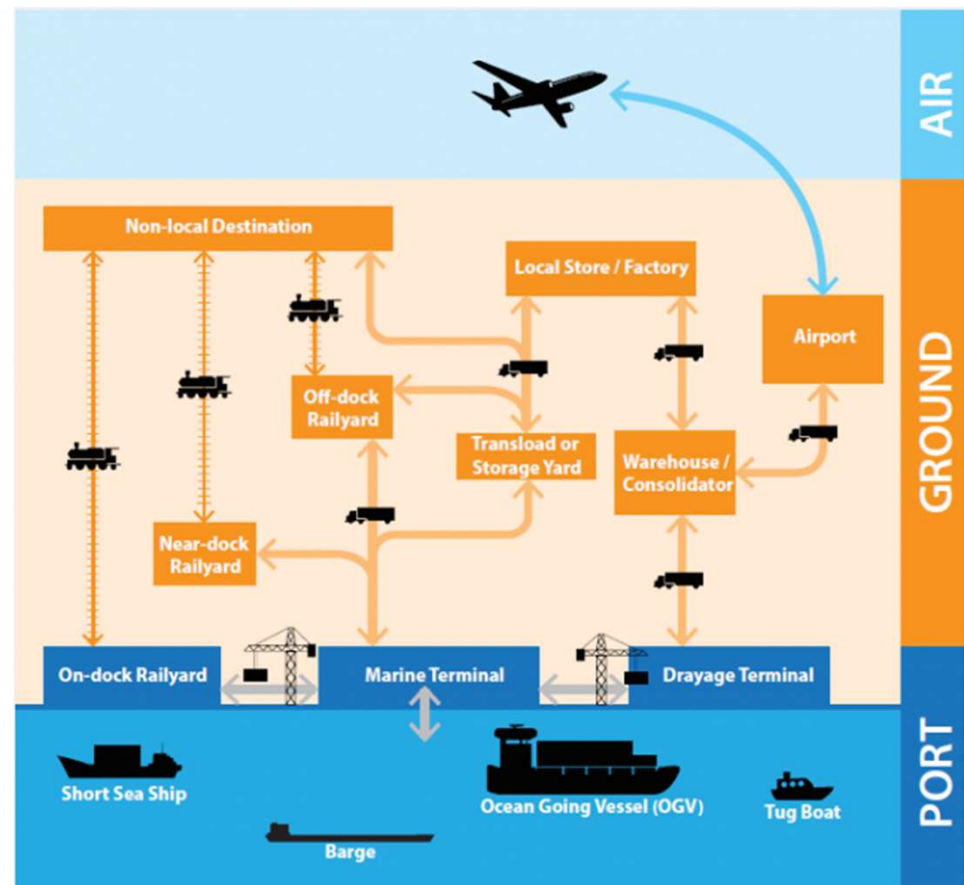
Agenda

- Why the MTS is Important
- How the MTS Connects intermodally
- Marine Transportation System Recovery Unit
- MTS Incidents and lessons learned
 - COVID 19
 - West Seattle Bridge
 - Hurricane Maria
 - Houston Ship Channel
 - Security Threats
- Takeaways

Why is the Marine Transportation System Important?

90% of Trade Travels via Maritime Conveyance

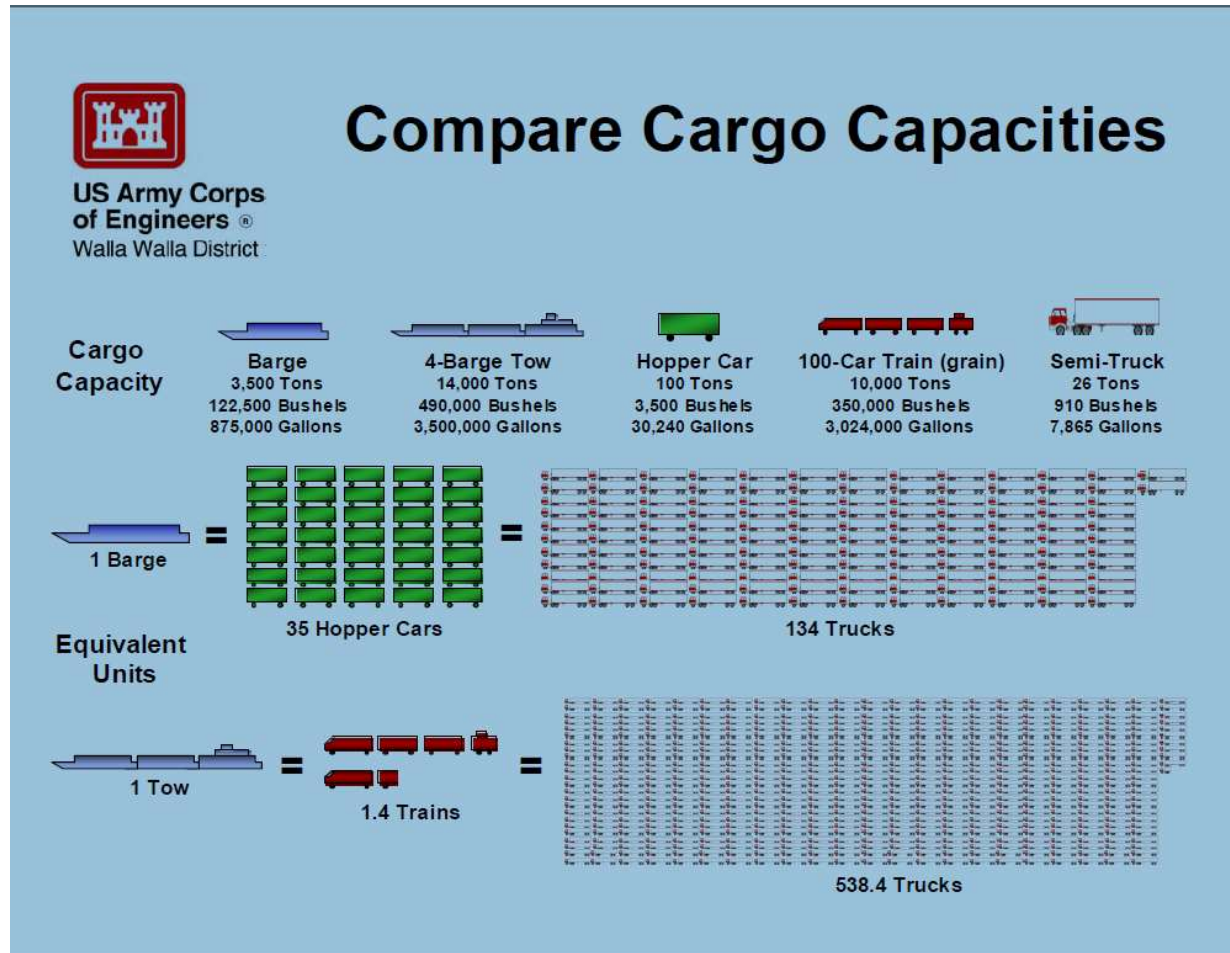
“Complex network of “waterways, ports, and intermodal landside connections that allow various modes of transportation to move people and goods to, from, and on the water”



Port of Tacoma

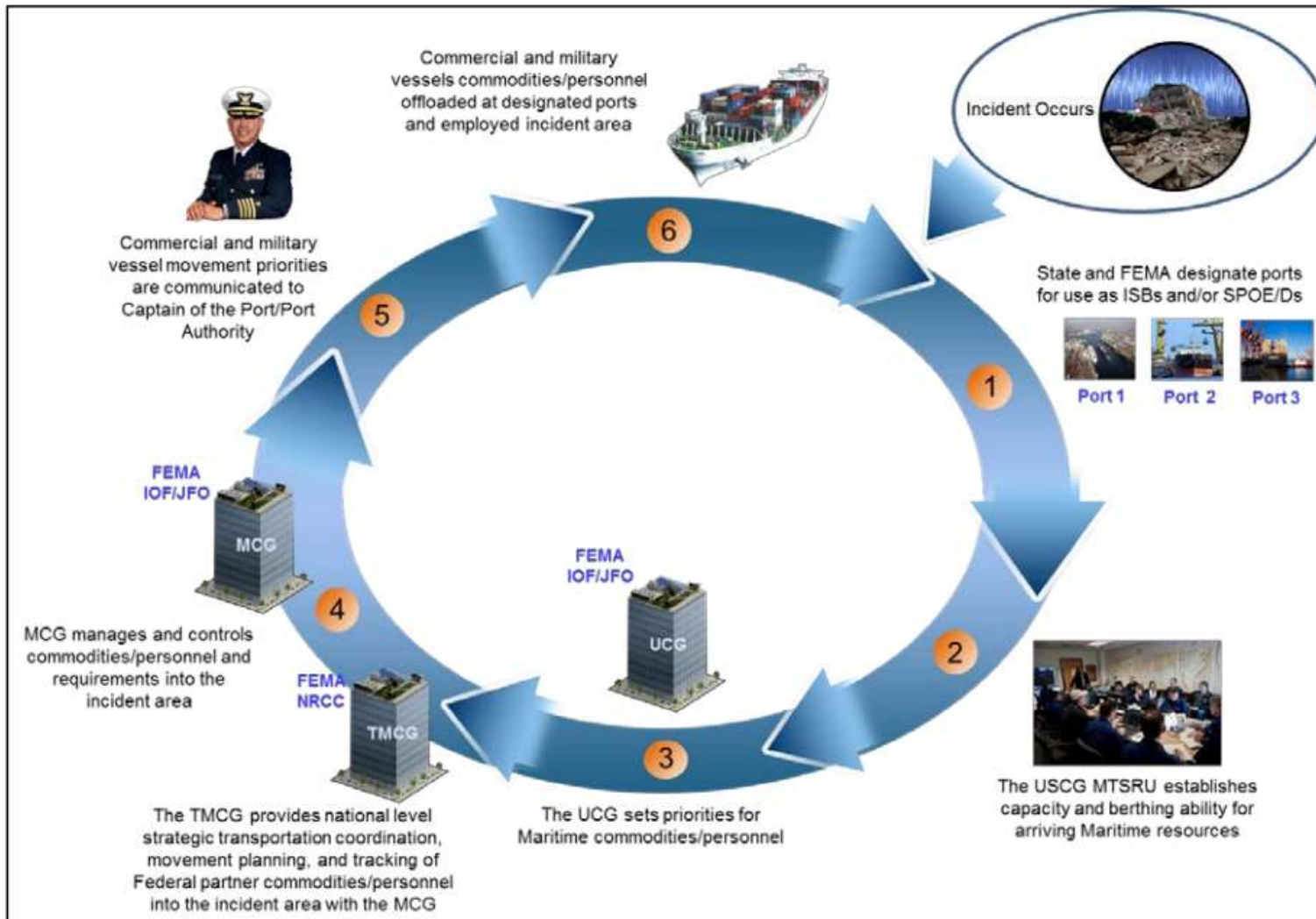


What is the scale of the Problem?



Maritime Emergency Response Guide





Composition of Marine Transportation Recovery Unit

National Oceanic and Atmospheric Administration

Department of Defense

- U.S. Army Corps of Engineers
- U.S. Navy - Supervisor of Salvage and Diving
- U.S. Northern Command U.S. Pacific Command
- U.S. Transportation Command

Department of Homeland Security

- Federal Emergency Management Agency
- U.S. Coast Guard

Department of Transportation

- Maritime Administration
- Office of the Secretary, National Response Program

State & Local Government

- Port Authority
- Emergency Mgt
- Fish & Wildlife
- Marine Police
- Fire

Local Industry

- Shallow draft Vessel Operators
- Deep draft Vessel Operators
- MTS Facility Owners/Operators
- Shippers & Freight Forwarders
- Trade Organization
- Recreational Boating Assoc.
- Railroad Companies
- Shipyards/Fleeting Operations
- Towboat Operators



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Advance Incident Coordination

- FEMA Regional Interagency Steering Committee
- Area Maritime Security Committee
- Port Readiness Committee/Port Readiness Team
- Harbor Safety Committee
- Pre-Hurricane Season Meetings



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COVID-19 MTS Disruptions

- Interruptions in flow of goods
 - Shipping companies cut schedules anticipating drop in demand
 - Lack of shipping containers increases shipping cost
 - Lack of docks = Crowded anchorages
 - Lack of truck drivers and dockworkers
 - Suez canal blocked
 - Maritime worker shortages
 - new requirements for physical spacing, contact-tracing and PPE
 - factories shut down or were forced to reduce production
 - Factories increase home goods production (where possible)
 - Consumer products demand
 - Shortages cause extra ordering
 - Home office/classroom goods
 - Home improvements: gym
- Takeaways
 - Keep more inventory
 - Not enough mariners
 - Plan multiple supply lines



How One of the World's Biggest Ships Jammed the Suez Canal



Courtesy New York Times

West Seattle Bridge March 2020

- 84,000 cars and trucks, along with 25,000 bus riders, every weekday
- Port of Seattle, rail yards, industrial businesses, County's largest manufacturing and industrial center, and the national highway system
- Alaska marine lines, the supplier to Alaska must pass beneath the bridge
- Many parts of Alaska maintain only 72 hours of reserve supplies/groceries
- Alaska marine line would have to move operations to Terminal 46
- Takeaways
 - Awareness of infrastructure that supports your operations
 - Alternative suppliers



“We’re the lifeline — from food, to building materials, to you name it, we haul everything that keeps a community going,” company president Kevin Anderson said. Alaskan towns from Sitka to Nome, and sometimes as far north as Barrow, rely on barges that leave Seattle three to six times a week. (Seattle Times, 2020)

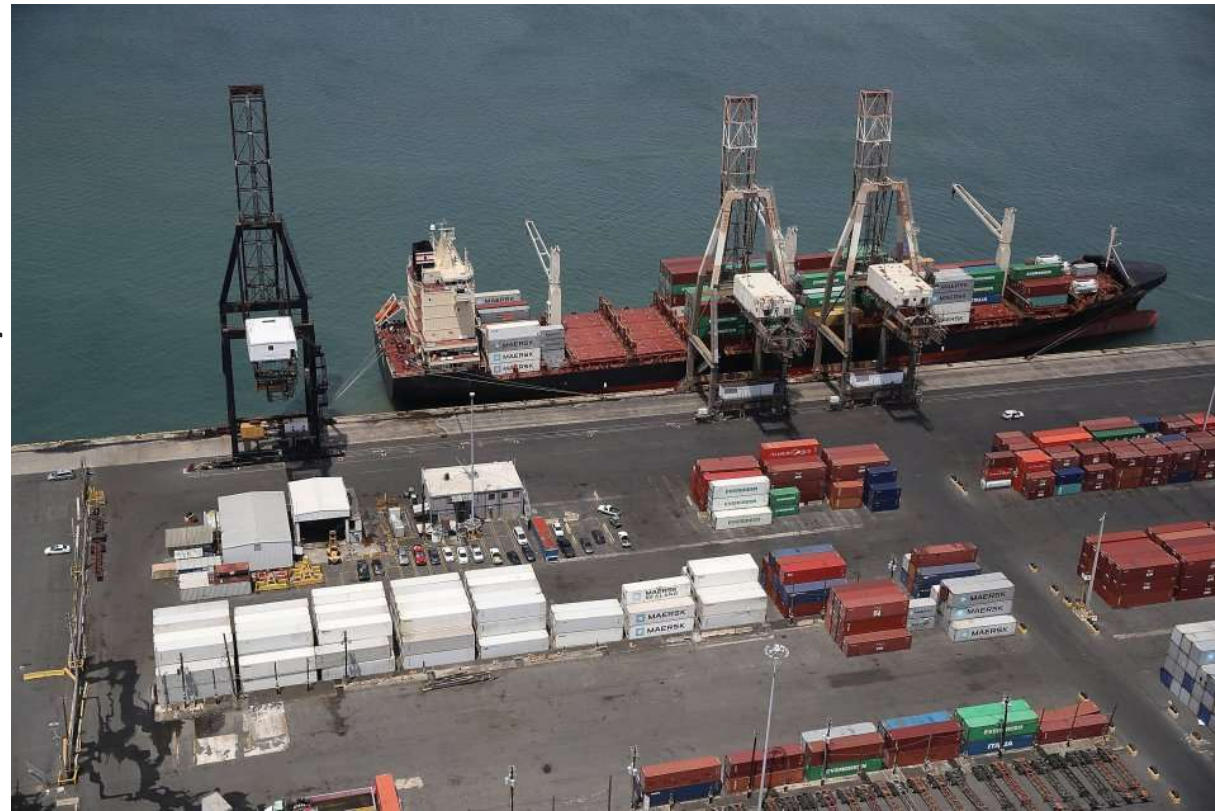
Houston Ship Channel Collision March 2014

- Freight Vessel Summerwind & Kirby Barge collide
- Houston Ship Channel shut for 5 days
- Primary petrochemical port \$906B per year Nationally
- Cruise ships are delayed
- Gulf intracoastal waterway is closed
- Takeaways
 - Use extra caution in fog
 - Enhance Vessel Traffic Control measures when foggy
 - Feedstock for refineries



Hurricane Maria September 2017

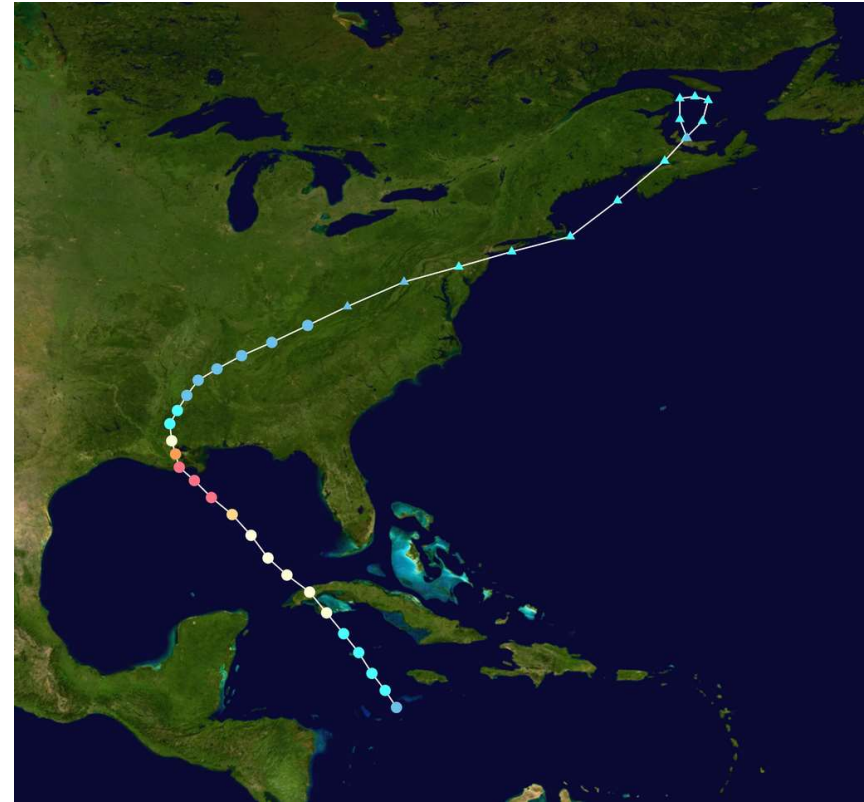
- Category 5 hurricane
- 2,975 Fatalities
- \$90 billion in damage
- flattened neighborhoods
- crippled the island's power grid
- heavy damage to roads, computer systems
- The Port was prioritized to speed recovery, freight forward logistics were not prioritized
- Takeaway
 - Ports are very important to island recovery (air is only other option)
 - Ensure freight routes are prioritized





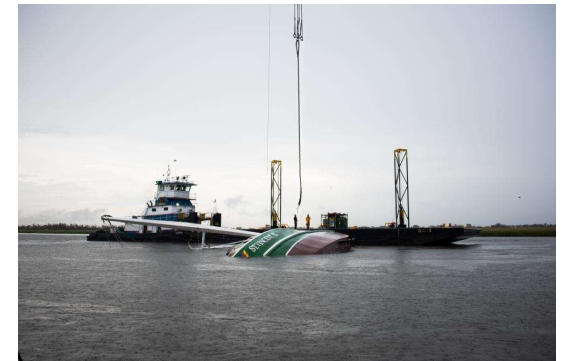
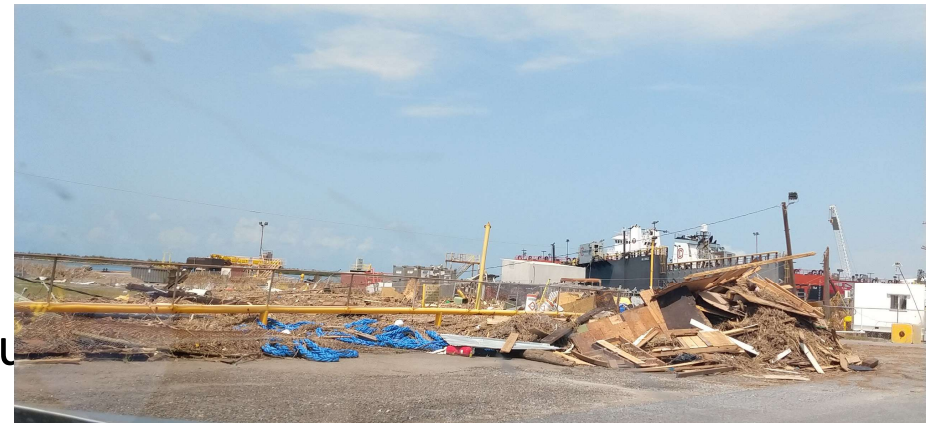
Hurricane Ida Sep 21

- Cat 4 Hurricane in Port Fourchon LA 107 deaths, \$75.2B damage
- Second-most damaging and intense hurricane
- Widespread infrastructure damage in SE LA, heavy flooding in coastal areas
- Overtopped local levee systems
- Storm remnants caused NE flooding and closed NY subways
- Follow on tornado
- Takeaways
 - Move vessels out of trajectory when possible
 - Improve levies
 - Invest in recovery equipment and teams



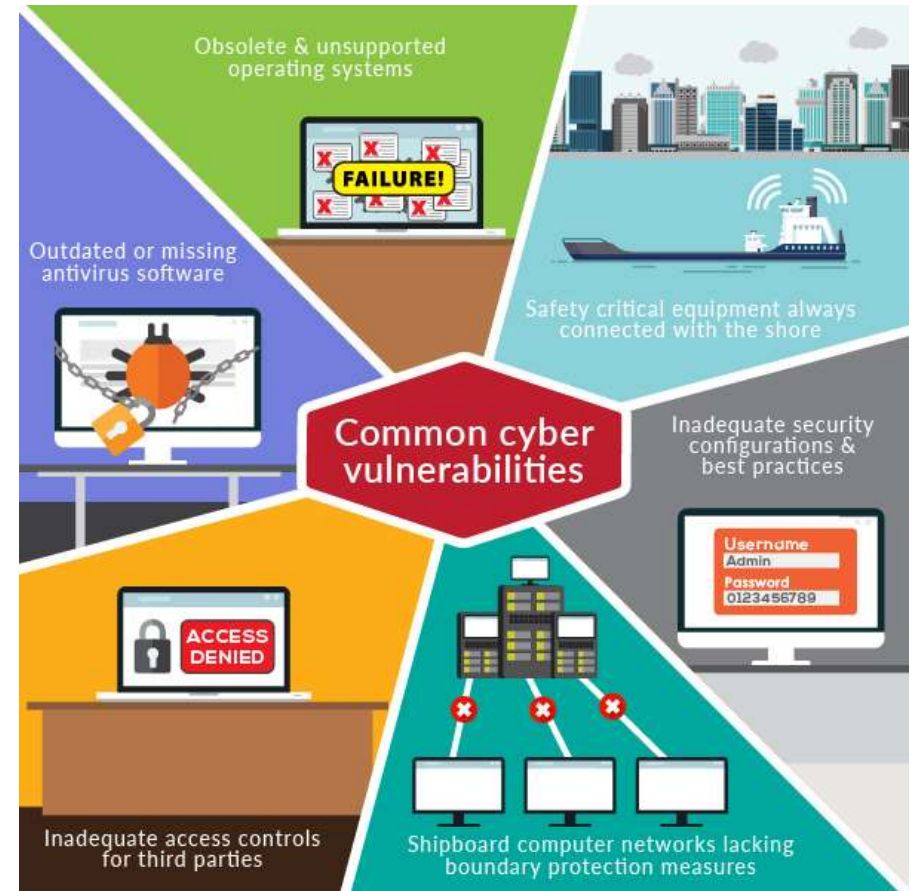
USCG led Marine Transportation System Recovery Unit

- Identified and began removal of 100+ submerged vessels and obstructions
- US ACE/Navy Supsalv
- Houma Navigation Canal
- Closed the Gulf Intracoastal Waterway
- Restored 408 aids to navigation
- Private waterways were not w/in federal purview
- Takeaways
 - Need more USCG members
 - Improve levies
 - Move vessels when possible



Security Threats

- Marine Transportation Security Act /International Ship Port Security
 - Secure Vessels and Facilities
 - Piracy
 - Insider threat
 - Smuggling
- Cyber
 - Ransomware
 - GPS spoofing
 - Control of operational control/navigation systems
 - Propulsion and rudder control



Takeaways

- Reference: Maritime Emergency Response Guide
- Get familiar with your local Area Maritime Security Committee
- Get to know the emergency managers in the USCG and US ACE
- Participate in exercises with a maritime focus
- Plan for supply chain resilience (more suppliers in geographically diverse areas)
- Maritime worker shortage
- Be aware of pinch points in your supply chain
- Maritime accidents in key locations can have cascading ramifications
- Some shortages can cause severe secondary problems
- Think intermodally
- Invest in protective severe weather infrastructure and response equipment
- Stay on top of security threats

Questions?

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