

MarTREC UTC Project Information Form

USDOT Tier 1 University Transportation Center Agency ID or Contract Number 69A3551747130

Project Title: Interdependency of port clusters during regional disasters

Project Abstract (Brief Description): External disruptions to a port may result for storms, such as Hurricane Mathew and Super Storm Sandy as well as terrorism and oil/hazardous material spill. The overall impact of a disruption on a port is a function of vulnerability of the port and the severity of the disruption. The resiliency of ports and inland waterways is critical for maintaining the flow of essential goods throughout the United States and is critical to national security and defense readiness (Sturgis et al., 2014). The research seeks to build upon the prior knowledge and expand the scientific understanding of regional disruptions to port clusters, areas of the country with multiple ports servicing the same region. The contribution of this research is to empirically show how port clusters rely upon each other during disruptive events to increase the overall resiliency of water bourn commerce during disruptive events.

Describe Implementation of Research Outcomes: Identify port clusters in the U.S. that have experienced a major disruptive event. Collect data from ports within the cluster. Develop a detained time line of events at each port during the event. Systematically quantify port operations before, during, and after the event. Identify trends, patterns, and relationships between the ports throughout the recover process. Develop time-depending resiliency plots to quantify the resiliency of the ports thought the event.

Impacts/Benefits of Implementation (actual, not anticipated)

To be determined upon conclusion of the project:

Web Links: http://www.evaccenter.lsu.edu/ http://martrec.uark.edu/

Budget (Funding) Amounts & Source(s) (US DOT +Match(s) =Total Costs): \$118,484 + \$39,638 = \$158,122

Project Start and End Dates: January 2018 – September 2018 Complete

Principal Investigator(s) and Contact Information: **P.I.**: Brian Wolshon, Ph.D., P.E., PTOE, Associate Professor, Department of Civil & Environmental Engineering, Louisiana State University, 3240 Q Patrick F. Taylor Hall, Baton Rouge, LA 70803. **Co-PI**: Scott Parr, Ph.D., Visiting Assistant Professor, Department of Civil Engineering, Embry-Riddle Aeronautical University, 600 S. Clyde Morris Blvd., Daytona Beach, FL 32114.

Principal Investigator Institution (University): Louisiana State University