

Project Title: Climate Impacts on Lock Use and Performance
Project Abstract (Brief Description): “It is the policy of USACE to integrate climate change preparedness and resilience planning and actions in all activities for the purpose of enhancing the resilience of our built and natural water-resource infrastructure (USACE Climate Preparedness and Resilience Policy Statement 2014).” Moreover, “climate impacts will affect DOT's strategic goals of safety, state of good repair and environmental sustainability (US DOT Climate Adaptation Plan 2014).” DOT Modal Administrations specified by Ensuring Transportation Infrastructure and System Resilience include MARAD and the Saint Lawrence Seaway Development Corporation which works to integrate Climate Change Adaptation with Planning, Engineering and Maintenance, Lock Operations and Marine Services. The US Global Change Research Program National Climate Assessment (2014) defines Transportation Sector components that are increasingly vulnerable to Climate Change, including fixed node infrastructure (ports), fixed route infrastructure (locks, canals/channels), and vehicles (ships, barges). Inland waterways may experience greater floods due to changing land-use patterns and precipitation, drought can lower vessel drafts, and less ice on navigable waterways could increase seasonal windows for passage. The goal of this project would be to provide guidance related to Climate Change for MarTREC.
Describe Implementation of Research Outcomes (or why not implemented) - Place any photos here <i>To be determined upon conclusion of the project:</i>
Impacts/Benefits of Implementation (actual, not anticipated) <i>To be determined upon conclusion of the project:</i>
Web Links: martrec.uark.edu
Budget (Funding) Amounts & Source(s) (US DOT +Match(s) =Total Costs): \$54,000+\$27,000=\$81,000
Project Start and End Dates: 07/01/16-06/30/18
Principal Investigator(s) and Contact Information: Justin Chimka
Principal Investigator Institution (University): University of Arkansas