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Center for Advanced
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Transportation

PROJECT OVERVIEW REPORT

1. UTC Identifying Number
   69A3551847102

2. Center Identifying Number
   CAIT-UTC-REG81

3. Project Title
   A Hydrologic Modeling Framework for Assessing Future Riverine Flood Risk of Critical Transportation Infrastructure

4. Principal Investigator & Contact Information
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7. Project Description
   The primary goal of this proposal is to develop a high-resolution distributed hydrologic model for the state of New Jersey. The model will provide space-time information of streamflow during flood events and will be calibrated/validated against USGS streamflow stations. The calibrated model will run for various Global Climate Model scenarios to simulate flood response in the future. Analysis of future flood simulations will be carried out to identify "hot spots" of future riverine flood risk.

8. Implementation of Research Outcomes (or why not implemented)
   The intended outcome of the project is a distributed hydrologic model setup for the state of New Jersey, which will be used for several other studies/applications related to flood warning and flood risk analysis.

9. Impacts/Benefits of Implementation (actual, not anticipated)
   To Be Determined

10. Dates and Budget
    Start date: 9/1/2023
    End date: 8/31/2024
    UTC (CAIT) Dollars: $84,898
    Cost Sharing: $0
    Total Dollars: $84,898

11. Keywords
    flood risk, climate change, distributed hydrologic modeling, future flood hazard

12. Web Links (Reports and Project Website)
    https://cait.rutgers.edu/research/a-hydrologic-modeling-framework-for-assessing-future-riverine-flood-risk-of-critical-transportation-infrastructure/