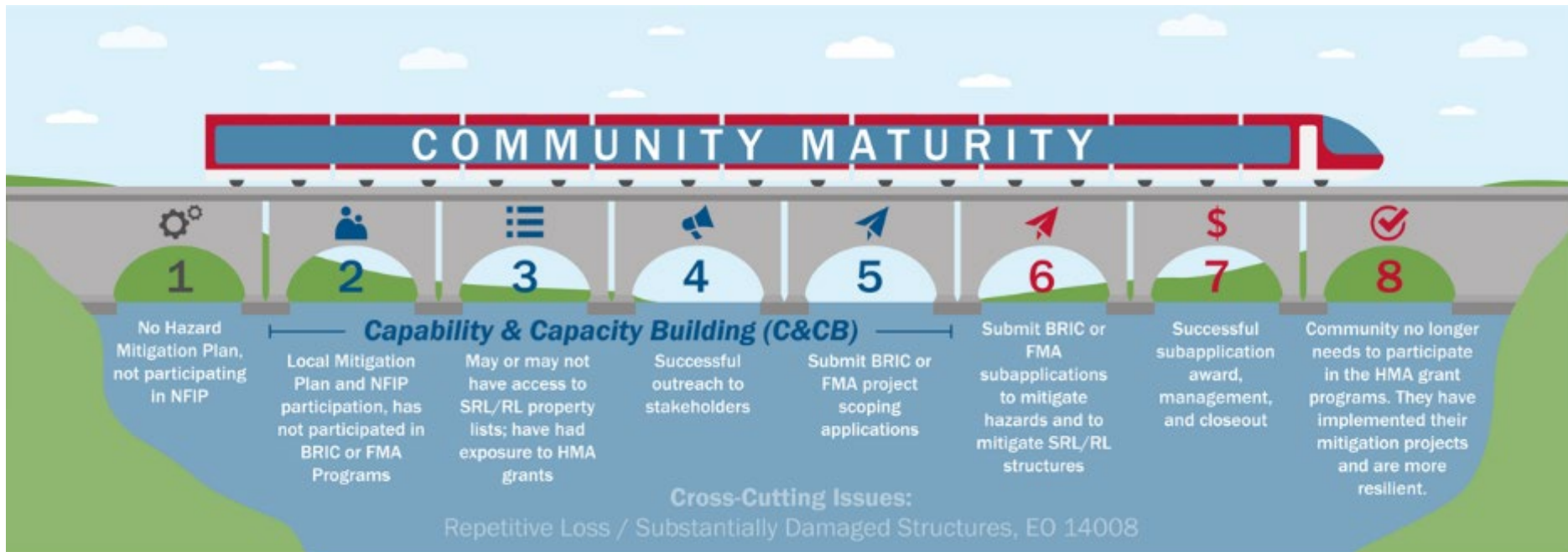




# Building Resilient Infrastructure & Communities (BRIC)

## Iowa Micro-Grid Projects

# Steps to Community Resilience



# Capability & Capacity Building (C&CB)

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- Building Codes
- Partnerships
- Planning
- Project Scoping
  - Scoping and developing hazard mitigation projects.
  - Conducting meetings, outreach.
  - Evaluating facilities or areas to determine appropriate mitigation actions.
  - Environmental compliance, and other program requirements.
  - Budget Development
  - Collecting data for Benefit-Cost Analyses



# Benefit-Cost Analysis (BCA) Development

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- **Common Loss of Function Values**
  - Loss of **Electrical Service** (\$182/person/day)
  - Loss of **Potable Water** (\$116/person/day)
  - Loss of **Wastewater** (\$60/person/day)
- **Additional benefits to consider**
  - **IT/Communications** – (\$130/person/day)
  - **Green Infrastructure Benefits** – Current FEMA Value \$17.05/tree/year.
  - **Ecosystem Service Benefits** – Current FEMA Value \$15,541 USD/acre/year.
  - **Critical Facilities** – City Hall /Emergency Operations Center (EOC), Police and Fire Station
  - **Shelters, Warming and Cooling Centers** – Operating budget, meals, square footage
  - **Loss of Hospital Services** – Annual operating budgets, distance to alternative hospital, etc.
  - **School Building Operating Budgets**
- **FEMA Benefit-Cost Analysis**
  - <https://www.fema.gov/grants/tools/benefit-cost-analysis>
  - <https://www.fema.gov/grants/guidance-tools/benefit-cost-analysis/resources>
  - [bchelp@fema.dhs.gov](mailto:bchelp@fema.dhs.gov)



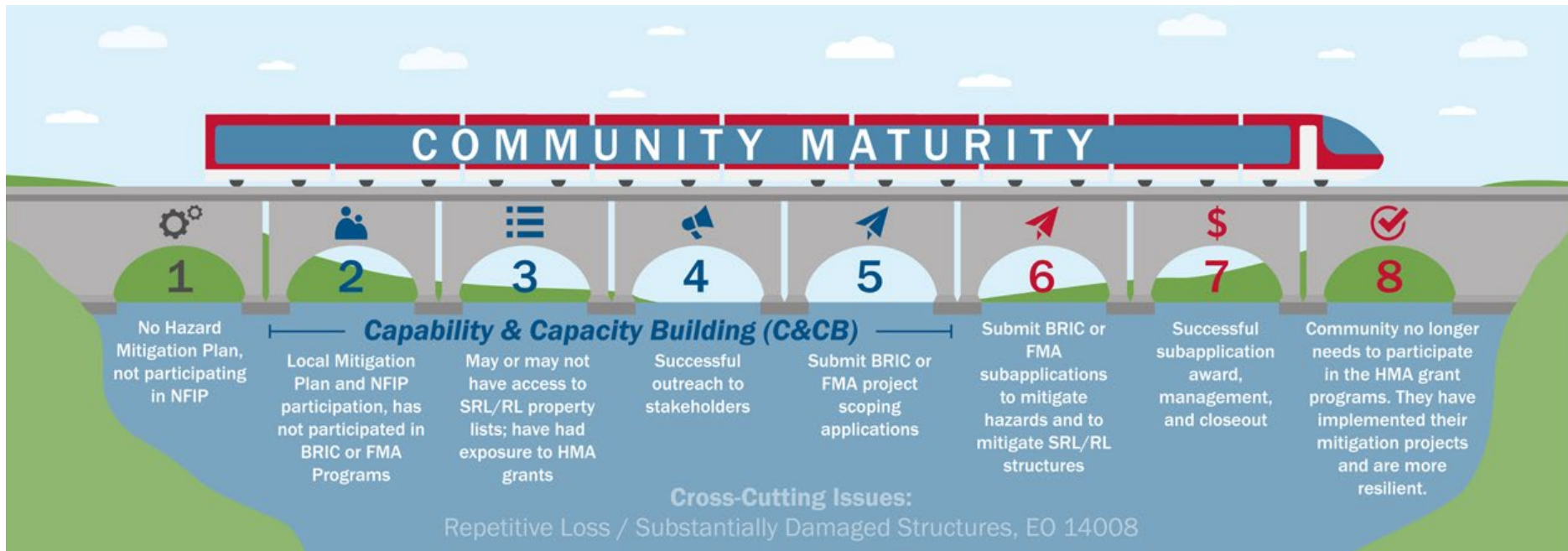
# Technical Criteria – App. Developed from Prior Award

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- HMGP AA
  - DR-4483 Coralville, IA generated BRIC22 Phased sub-application
  - Coralville Utility Resiliency project will protect against all major wind and icing events within the mitigated area
- BRIC Project Scoping
  - Iowa State University BRIC21 Project Scoping
  - ISU currently developing full BRIC application
  - Develop computational tool to size and site local energy resources and distribution lines to strengthen the energy lifeline for statewide communities



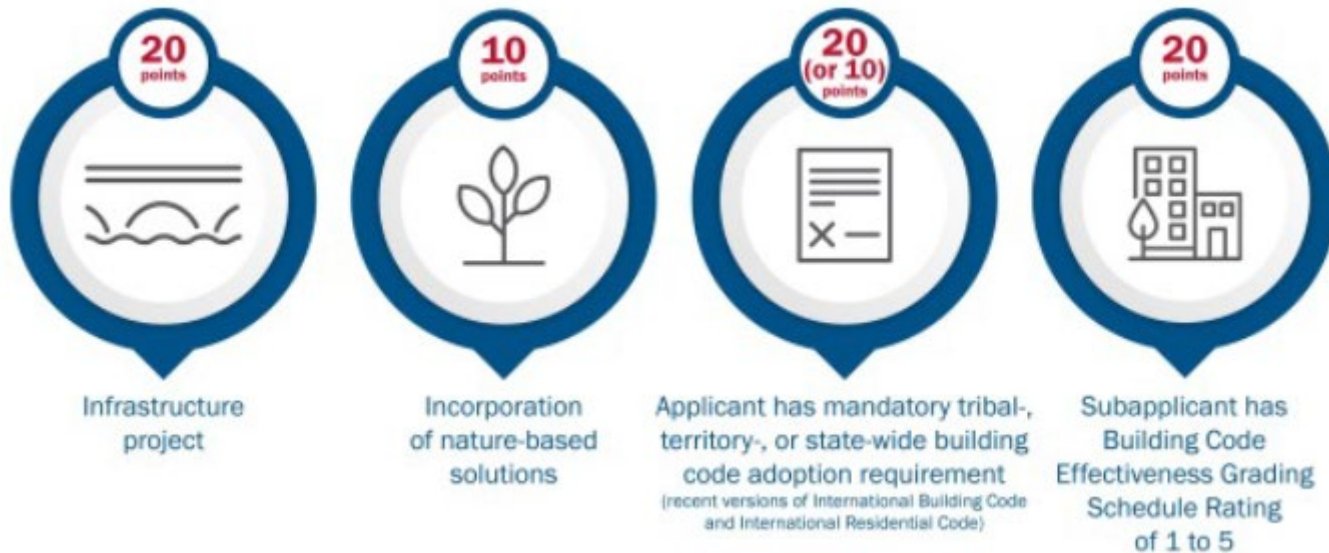
# Steps to Community Resilience



# Technical Criteria – 115pts (FY22 BRIC NOFO)

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Projects either receive the specified points allotted or zero points for each criterion (with the exception of the tiered building codes and CDC SVI/EDRC designation criteria)





# Technical Criteria – 115pts (FY22 BRIC NOFO)

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Projects either receive the specified points allotted or zero points for each criterion (with the exception of the tiered building codes and CDC SVI/EDRC designation criteria)





# Technical Criteria – Outreach Opportunity

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- Sub-Application generated from prior award
  - HMGP Advanced Assistance
  - BRIC Project Scoping
- Mandatory Building Codes (FY22 BRIC NOFO)
  - 10pts 2015 IBC/IRC
  - 20pts 2018 or 2021 IBC/IRC



# Technical Criteria – Outreach Opportunity

- Building Code Effectiveness Grading Schedule (BCEGS) (FY22 BRIC NOFO)
  - 20pts BCEGS Rating of 1 to 5
  - The BCEGS is an independent assessment of a community's building code adoption and enforcement activities, resulting in a score of 1 (best) to 10.
  - Administered by the Verisk/Insurance Services Office (ISO)
  - Questions about the BCEGS survey can be directed to [BCEGS\\_Info@verisk.com](mailto:BCEGS_Info@verisk.com)
  - [Additional BCEGS Informational Link](#)



# Qualitative Criteria – (FY22 BRIC NOFO)

Projects receive points based on the degree to which the subapplication meets the criterion.



Scoring Option	Degree of Meeting Criterion
Not at all	Not addressed
Minimally	Weak
Partially	Mediocre
Mostly	Acceptable
Entirely	Excellent
Exceeds	Beyond Excellent



# Iowa State University – BRIC Project Scoping

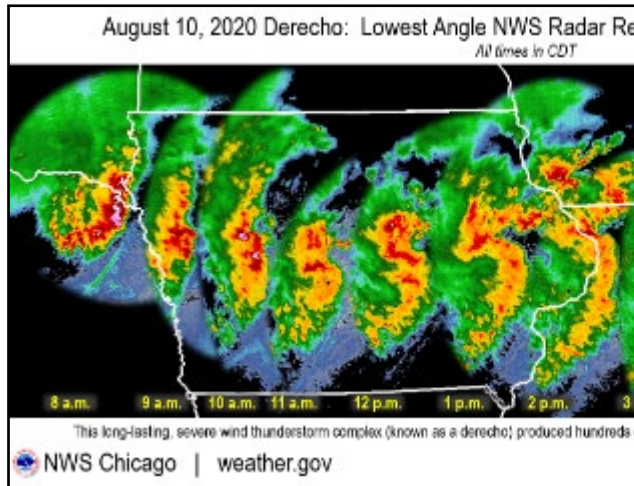
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- ISU FEMA BRIC-2021-IA-0009, Scoping Grant
- Title: Flexible renewable power sources for greater Iowa community resiliency
- **Anne Kimber, Hugo Villegas, Nick David**, ISU Power Engineering
- **Robin McNeely**, ISU GIS lab: mapping loads, resources and infrastructure
- **Eric Kamm**, Stanley Consultants: FEMA B/C analysis
- **Steve Oberbroeckling**, IHSEMD- FEMA partner, project oversight



# Iowa State University – BRIC Project Scoping

- Mobile microgrids as “Grid Resilience Assets”





# Iowa State University – BRIC Project Scoping

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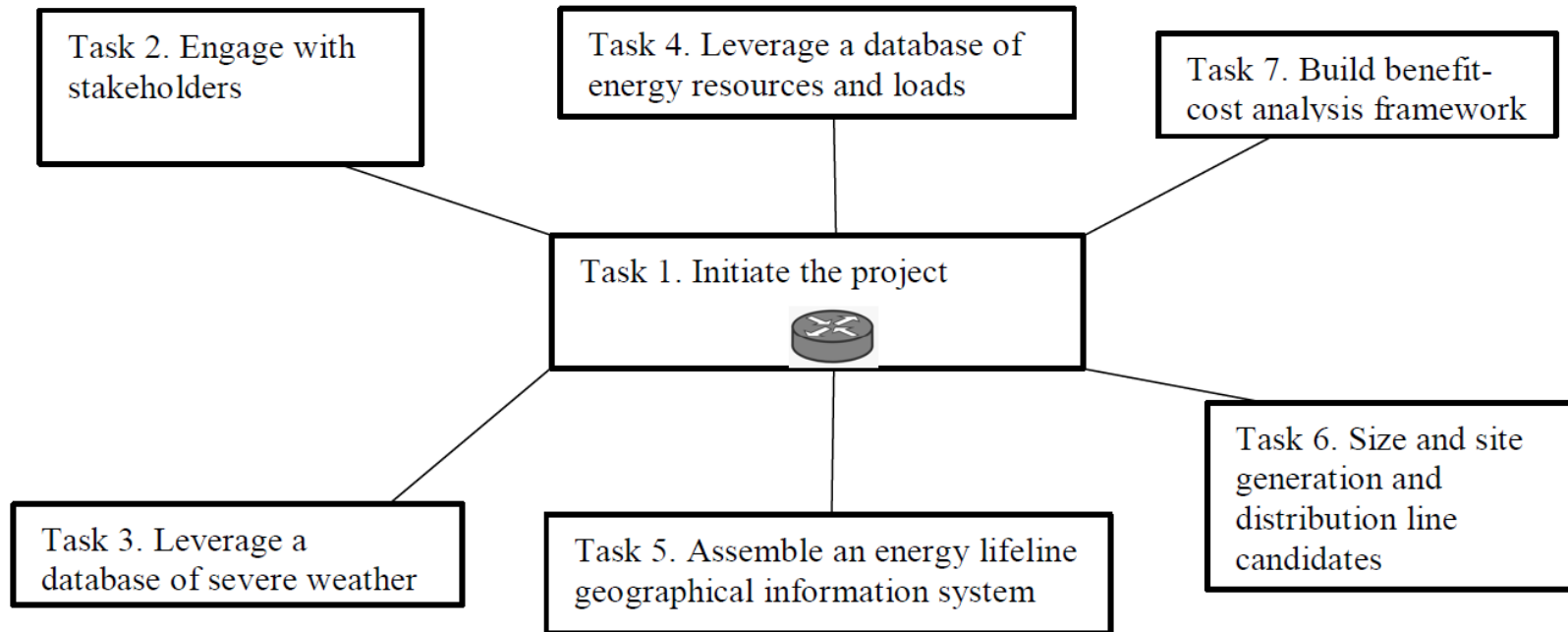


Fig. 1. Technical tasks to develop a computational tool for greater Iowa community resilience.



# Iowa State University – BRIC Project Scoping

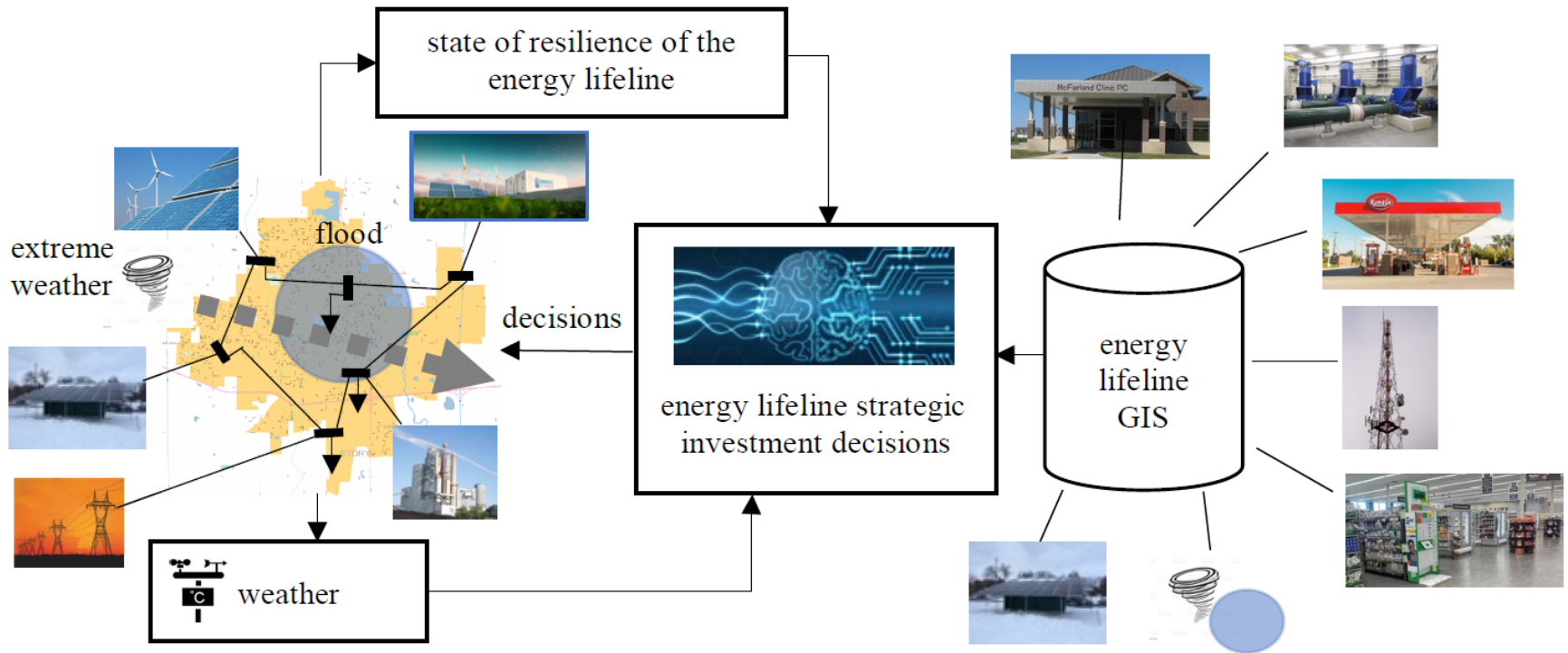


Fig. 2. Concept of the functionality of the project. The brain maps inputs into strategic investment decisions.





# Next Steps

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- How to apply (for State of Iowa eligible sub-applicants)
  - Submit Notice of Interest -  
<https://my.iowahomelandsecurity.org/>
- Eligible sub-applicants must apply for funding using the new FEMA Grants Outcomes (FEMA GO) at the FEMA GO Portal:
  - [FEMA GO Portal](#)
  - [FEMA GO Resources](#)
- FEMA GO Technical Support
  - Help Desk: 1-877-611-4700
  - Email: [femago@fema.dhs.gov](mailto:femago@fema.dhs.gov)



# Questions

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- IHSEMD State Hazard Mitigation Officer
  - Dusty Pogones
  - [Jonathan.Pogones@iowa.gov](mailto:Jonathan.Pogones@iowa.gov)
- IHSEMD Hazard Mitigation Officer
  - Steve Oberbroeckling
  - [Steve.Oberbroeckling@iowa.gov](mailto:Steve.Oberbroeckling@iowa.gov)
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  - [HSEMDmitigation@iowa.gov](mailto:HSEMDmitigation@iowa.gov)

