Structure & Infrastructure	
Action 1	**Purchase and install backup generators for critical facilities and shelters**
Action type	Mitigation
Action description	Purchase generators to ensure continued operation of critical facilities in the event of a power outage
Hazards addressed	Severe storms, Tornado, Winter weather
Affected Jurisdictions	Louisa County, Cities, Schools
Responsible party	Louisa County, City officials, School Administration
Goals	1,3
Score & Priority	10: High
Implementation timeline	1-60 months, ongoing until complete
Cost	Depends on capabilities
Potential funding sources	HMGP 5% Project
Action 2	**Facilitate the funding, installation and improvement of public and private storm shelters and safe rooms**
Action type	Mitigation
Action description	Improve community storm shelters, apply for FEMA & HSEM storm shelter assistance and School Safety Improvement Fund. County: Provide staff to assist with grant applications to assist homeowners who wish to construct a safe room. County & Cities: Facilitate development and funding of shelters and saferooms facilities for mobile home parks and campgrounds.
Hazards addressed	Severe storms (Hail, High wind, Lightning),Tornado, Winter weather, Terrorism
Jurisdiction affected	Louisa County, Cities of Columbus City, Columbus Junction, Grandview, Letts, Morning Sun, Wapello, Schools
Responsible party	Louisa County EM, County Conservation, City Administrators, Superintendents of Schools
Goals	1,3
Score & Priority	13: High
Implementation timeline	12-60 months
Cost	$5,000 to $100,000, Staff time; grant matching funds up to 25% of total project cost
Potential funding sources	HUD, CDBG, FHA, HMGP, Community Budget, Bonds, FEMA
Action 3	**Construct retention ponds. Iowa River basin in the vicinity of Letts & Short Creek Watershed Columbus Junction**
Action type	Mitigation
Action description	Louisa County and landowners cooperate to construct retention ponds to reduce flooding in the City of Letts and Columbus Junction
Hazards addressed	Flood
Jurisdiction affected	Unincorporated Louisa County, Letts,
Responsible party	Louisa County EM, City of Letts, Iowa DNR, local landowners
Goals	2,4

Score & Priority	7: Medium
Implementation timeline	12-60 months
Cost	$5,000 to $100,000, Staff time; grant matching funds up to 25% of total project cost
Potential funding sources	HUD, CDBG, FHA, HMGP, Community Budget, Bonds, FEMA
Action 4	**Construct retention basins and apply stormwater management strategies to reduce flooding in and near the Louisa County Fairgrounds**
Action type	Mitigation
Action description	Install stormwater drainage structures and apply other strategies to manage stormwater near the fairgrounds
Hazards addressed	Flood, Levee Failure
Jurisdiction affected	Unincorporated Louisa County, Columbus Junction
Responsible party	Louisa County EM, County Conservation
Goals	2,4
Score & Priority	7: Medium
Implementation timeline	12-60 months
Cost	$5,000 to $100,000, Staff time; grant matching funds up to 25% of total project cost
Potential funding sources	HMGP, CDBG, Community Budget, Bonds, FEMA
Action 5	**Flood-proof Infrastructure & critical facilities**
Action type	Mitigation
Action description	Inspect and apply floodproofing to vulnerable infrastructure such as roads, bridges, utility lines, water & sewer treatment facilities. Techniques may include dry floodproofing (floodwalls, elevation of mechanical systems, or sealing walls), or wet flood-proofing which allows water to flow through designated areas or spaces in the infrastructure. Increase the capacity of culverts or storm sewers.
Hazards addressed	Flood, Dam/Levee Failure, Landslide
Jurisdiction affected	Louisa County, Columbus Junction, Fredonia, Letts, Morning Sun, Oakville, Wapello
Responsible party	Louisa County, City Administrators, Superintendents
Goals	1,2,3
Score & Priority	9: Medium
Implementation timeline	12-60 months
Cost	$5,000 to $100,000, Staff time; grant matching funds up to 25% of total project cost
Potential funding sources	HUD, CDBG, FHA, HMGP, Community Budget, Bonds, FEMA
Action 6	**Improve safety where railroads intersect with citites, roads and trails**
Action type	Mitigation
Action description	Improve safety at crossings. Ensure the railroad operators are aware that trains can block emergency vehicle access to parts of Letts
Hazards addressed	Hazardous Materials, Transportation incident

Jurisdiction affected	Louisa County, City of Letts
Responsible party	Des Moines County Emergency Management Coordinator, Fire Chiefs
Goals	1,2,4
Score & Priority	11: High
Implementation timeline	60 months
Cost	Lights/Gates: $150,000-$300,000
Potential funding sources	HUD, CDBG, FHA, HMGP, Community Budget, Bonds, FEMA
Plans & Regulations	
Action 7	**Ensure water supply networks have sufficient reserve capacity or develop alternative supply options**
Action type	Mitigation
Action description	Develop agreements for secondary water sources that may be used during drought conditions or contract with a regional water provider
Hazards addressed	Drought
Jurisdiction affected	Louisa County, Cities of Columbus City, Columbus Junction, Grandview, Letts, Morning Sun, Oakville, Wapello
Responsible party	Public works officials, City Councils
Goals	1,2
Score & Priority	6: Medium
Implementation timeline	60 months
Cost	Staff time
Potential funding sources	Current budget
Action 8	**Encourage utility companies to increase the percentage of cables that are underground**
Action type	Mitigation
Action description	Adopt a policy that requires underground lines when possible
Hazards addressed	Severe storms (Hail, High wind, Lightning), Tornado, Winter weather
Affected Jurisdictions	Louisa County, Cities of Columbus City, Columbus Junction, Grandview, Letts, Morning Sun, Wapello, Schools
Responsible party	Building permit officials
Goals	1,2,3
Score & Priority	6: Medium
Implementation timeline	12 months, ongoing
Cost	Staff time
Potential funding sources	Part of construction costs for new or substantially improved structures
Action 9	**Develop and implement a Continuity of Government plan**
Action type	Mitigation
Action description	Develop and adopt a plan to facilitate continuity of government during hazard events
Hazards addressed	Severe storms (Hail, High wind, Lightning), Tornado, Winter weather, Human pandemic
Jurisdiction affected	Louisa County, Cities

Responsible party	Louisa County Supervisors, City Administration
Goals	1,3
Score & Priority	9: Medium
Implementation timeline	12-60 months
Cost	Staff time, Contractor up to $20,000
Potential funding sources	Annual budget
Action 10	**Join the National Flood Insurance Program (NFIP) and ensure compliance**
Action type	Mitigation
Action description	Prevent development in flood hazard areas
Hazards addressed	SFHA Flood
Affected Jurisdictions	Morning Sun
Responsible party	Louisa County EM, City Administrators
Goals	2,4
Score & Priority	5: Low
Implementation timeline	12 - 24 months
Cost	$500, Staff time
Potential funding sources	Current budget
Action 11	**Enact and enforce ordinances to minimize the risks associated with vacant and/or derelict structures**
Action type	Mitigation
Action description	Ensure that dilapidated properties are not creating increased risk in the community from loose materials, debris that can be carried aloft, and structures that harbor vermin
Hazards addressed	Hail, High wind, Lightning, Tornado, ACP Disease
Jurisdiction affected	Louisa County, Cities of Columbus City, Columbus Junction, Grandview, Letts, Morning Sun, Wapello
Responsible party	Supervisors, Administrators, Code enforcement
Goals	2
Score & Priority	11: High
Implementation timeline	12 Months, Ongoing
Cost	$2000 / year
Potential funding sources	Local Budget, staff time
Action 12	**Establish an annual round of applications to State agencies to improve access to grant funding and implement those eligible projects**
Action type	Mitigation
Action description	All jurisdictions work together to develop and implement a strategy to track funding opportunities and apply for hazard mitigation grants on an annual basis. Implement all projects derived from such funding, to replace aging or inadequate infrastructure. Include levee improvements, any eligible mitigation projects, Safe Routes to Schools and Transportation Alternative Program to reduce hazard impacts.

Hazards addressed	Drought, Flood (River, Flash, Stormwater), Severe storms, Tornado, Wildfire Winter Weather, Dam or Levee Failure, Landslide, Animal/Plant/Crop Disease, Hazardous Materials Incident, Human Disease, Terrorism
Jurisdiction affected	Louisa County, Cities, Schools
Responsible party	Louisa County EM, County Conservation, Supervisors, City Administration, SEIRPC, School Administrators
Goal	1,2,3,4
Score & Priority	12: High
Implementation timeline	12-24 months
Cost	SEIRPC support, Staff time, improved communication with HSEM
Potential funding sources	General fund
Action 13	**Updated Floodplain Mapping and Studies**
Action type	Mitigation
Description	All of the participating jurisdictions expressed concern that flooding occurs outside of the delineated floodplain on a regular basis. While some communities believed that areas that should be in the SFHA were not included, others noted that areas had been added to the SFHA that did not flood during the 500-year event in 2008. The jurisdictions would like to see another map update and flood study using more accurate terrain data.
Hazards addressed	Flood, Dam/Levee Failure
Affected Jurisdictions	Louisa County, Columbus Junction, Fredonia, Letts, Morning Sun, Oakville, Wapello
Responsible party	Local Governments with FEMA, Iowa DNR, USACE
Goals	2
Score & Priority	8: Medium
Implementation timeline	60 months
Cost	Unkown
Potential funding sources	Local government or FEMA
Action 14	**Maintain Adequate Emergency Response Personnel**
Action type	Mitigation and Preparedness
Description	Timely and accurate response to hazard situations can prevent situations from worsening. Additional personnel or additional training opportunities for response personnel would accomplish this action step. Training opportunities could include on-site workshops, off-site training at various federal institutes, tabletops or drills.
Hazards addressed	HazMat Incident, Wildfire
Affected Jurisdictions	Louisa County, Cities, Schools
Responsible party	Louisa County, all emergency response entities
Goals	1,4
Score & Priority	9: Medium
Implementation timeline	12-60 months

Cost	Low for additional training, high for additional personnel
Potential funding sources	Local funds, HSEMD training courses, SAFER (Staffing for Adequate Fire and Emergency Response) Grants (offered through FEMA). Assistance to Firefighters Grants
Action 15	**Track occurrence and extent of Wildfires**
Action type	Correct data deficiency
Description	Develop a separate tracking mechanism to document Wildfires. Include location, number of acres burned, cause if known, other pretinent data
Hazards addressed	Wildfires
Affected Jurisdictions	Louisa County, Columbus City, Columbus Junction, Fredonia, Letts, Morning Sun, Oakville, Wapello
Responsible party	Louisa County EM, Fire Depts
Goals	2
Score & Priority	4: Low
Implementation timeline	Ongoing
Cost	0
Potential funding sources	Current budget
Natural Systems	
Action 16	**Acquire, elevate or relocate any structures that remain in the SFHA**
Action type	Mitigation
Action description	Identify any structures that remain in SFHA flood areas, acquire and demolish when the opportunity arises. As an alternative, buildings that are structurally viable may be elevated or relocated out of the floodplain to prevent future flood damages.
Hazards addressed	Flood, Dam/Levee Failure
Jurisdiction affected	Louisa County, Columbus Junction, Fredonia, Letts, Morning Sun, Oakville, Wapello
Responsible party	Louisa County Supervisors, City Councils
Goals	2
Score & Priority	9: Medium
Implementation timeline	Ongoing
Cost	Variable, depending on each structure $8000 to $100,000
Potential funding sources	FEMA, local funding
Action 17	**Implement best practices for stormwater management**
Action type	Mitigation
Action description	Monitor and correct stormwater surface flow problems in affected areas. Implement Best Practices and FEMA's Nature-based solutions.
Hazards addressed	Stormwater Flood, Landslide
Jurisdiction affected	Louisa County, Cities, Schools
Responsible party	Louisa County Supervisors, City Public Works
Goals	2

Score & Priority	6: Medium
Implementation timeline	12-36 months
Cost	Variable depending on project
Potential funding sources	HMA, Building maintenance budget
Action 18	**Tree maintenance and post storm clean up**
Action type	Mitigation
Description	Maintenance of trees and post storm clean up mitigates the potential for future damage to power lines and prevents debris available for wildfires and can decrease the spread of tree disease carried by insects or blight.
Hazards addressed	High wind, Tornado, Wildfire, Winter storm, ACP Disease
Affected Jurisdictions	Louisa County, Cities
Responsible party	Public Works Officials
Goals	2
Score & Priority	7: Medium
Implementation timeline	12-24 months
Cost	$5-10,000 / year
Potential funding sources	Louisa County & City maintenance budgets
5% Projects	**(a FEMA funding category)**
Action 19	**Provide, maintain & upgrade communications systems**
Action type	Mitigation
Action description	Continue to upgrade and modernize communication equipment. Ensure students & staff have broadband access at home
Hazards addressed	Flood, Hail, Severe storms (High wind, Lightning), Tornado, Wildfire, Winter weather, Human epidemic, HazMat, Terrorism
Jurisdiction affected	Louisa County, Cities, Schools
Responsible party	Emergency Managers, City Administration, School Superintendents
Goals	1,2,3,4
Score & Priority	10: High
Implementation timeline	Ongoing
Cost	Varies by needs
Potential funding sources	5% Grants, Local budget, FEMA HSGP grants, State SHSP grants
Action 20	**Maintain Public Health Preparedness and Disease Surveillance**
Action type	Mitigation and Preparedness
Description	Improve public health response capabilities through increased supplies, training, drills, equipment and facilities
Hazards addressed	ACP Disease, Human Disease Epidemic/Pandemic
Affected Jurisdictions	Louisa County, Cities, Schools
Responsible party	Louisa County Public Health
Goals	1,3
Score & Priority	8: Medium

Implementation timeline	Ongoing
Cost	Varuable depending on the situation
Potential funding sources	Public health funds, FEMA, HHS, CDC
Action 21	**Update current law enforcement and first responder equipment**
Action type	Preparedness
Action description	Acquire additional containment materials and other equipment for local Hazardous Materials Response. Continue to equip and train local authorities to improve response capability according to best practices.
Hazards addressed	HazMat incident, Terrorism
Jurisdiction affected	Louisa County, Cities, Schools
Responsible party	Louisa County EM, Fire Chiefs, Law enforcement, School Administration
Goals	1
Score & Priority	10: High
Implementation timeline	1-60 months, ongoing
Cost	10% to 25% of total project costs
Potential funding sources	HMPG 5% projects, Local budgets, HSEM, FEMA HSGP, EPA
Action 22	**School Terrorism prevention and response**
Action type	Mitigation and Preparedness
Description	Improve school emergency response capabilities through modification of facilities, increased supplies, training, drills and equipment
Hazards addressed	Terrorism
Affected Jurisdictions	Schools
Responsible party	School administration, Law enforcement officers
Goals	1,4
Score & Priority	11: High
Implementation timeline	Ongoing
Cost	Variable depending on project
Potential funding sources	STOP & COPS School violence prevention, FEMA TVPT, US Dept of Education
Education & Awareness	
Action 23	**Continue practice drills and train firefighters, responders, and community leaders on effective disaster response**
Action Type	Preparedness
Action description	Perform Tabletop exercises, attend training on disaster response
Hazards addressed	Severe storm (Hail, High wind, Lightning), Tornado, Wildfire, Winter weather, Dam/Levee Failure, Human disease, HazMat, Terrorism
Jurisdiction affected	Louisa County, Cities
Responsible party	Louisa County EM, Fire Depts
Goals	1,4
Score & Priority	9: Medium
Implementation timeline	Annually
Cost	$1,000 per year
Potential funding sources	Staff time, Local training budget

Action 24	**Ensure critical services and information is protected from cyber-attacks; educate local officials about cyber security**
Action type	Mitigation
Action description	Stay current with best practices in Cyber security by closely working with State agencies and updating equipment
Hazards addressed	Terrorism
Jurisdiction affected	Louisa County, Cities, Schools
Responsible party	IT Managers, Administrators
Goals	1,3,4
Score & Priority	6: Medium
Implementation timeline	Ongoing
Cost	Possible training and travel costs $5,000, updated equipment Variable costs
Potential funding sources	Annual budget, FEMA HSGP, Iowa Cyber Resilience Initiative
Action 25	**Conduct hazard education and awareness programs**
Action type	A mix of Mitigation & Preparedness
Action description	Community outreach & emergency training for the general public and special needs populations Educate the public on a variety of Hazard topics. See list below
Hazards addressed	Flood, Severe storm, Tornado, Wildfire, Winter weather, Dam Levee failure, HazMat incident, Human disease epidemic, Terrorism
Jurisdiction affected	Louisa County, Cities, Schools
Responsible party	Louisa County EM, City Administrators, School Administrators, Fire Departments
Goals	1
Score & Priority	8: Medium
Implementation timeline	12-60 months
Cost	$1000 to $3000
Potential funding sources	Printing, Staff. Current operating budgets
Hazard	**Educational recommendations:**
Severe storms (Hail, High wind, Lightning), Tornado, Winter weather, HazMat Incident	Distribute public information on how to develop a family emergency plan and a disaster preparedness kit
Tornado, Wildfire, Winter weather, HazMat incident	Distribute public information regarding evacuation strategies and reunification after a disaster
Flood SFHA, Flash	Educate the public regarding a) Location of special flood hazard areas; b) Precautions due to flood waters; c) Best practices for water retention and infiltration
Flood Stormwater	Inform the public about best practices for stormwater management
Hail, High wind, Lightning, Tornado, Winter weather	a) Proper response to the sirens; b) Tornado safe room locations; c) Accessing watch and warning information; d) Weather advisories and warnings by the National Weather Service
Wildfire	Reduce the occurrence of wildfires by providing fire safety education for adults and children throughout the Louisa County

Winter weather	Educate the Public regarding a) information on precautions to take in the event of severe Winter weathers; b) dangerous routes and road closings
Winter weather	Educate the public on shelter locations and the potential dangers of alternative heat sources
HazMat Incident	Provide education about the safe storage and handling of hazardous materials and how to respond in the event of a hazardous materials spill.
Human Epidemic	Educate public regarding existing diseases and best practices for prevention and care; a) management of communicable diseases and outbreaks; b) immunization clinics and locations
Terrorism	Continue to conduct drills and provide safety education to students and school personnel, according to state guidelines