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44 CFR 201.4(c)(3): [To be effective the plan must include a] Mitigation Strategy that provides the State's blueprint for reducing the losses identified in the risk assessment.

## 1. Hazard Mitigation Goals, Objectives and Measures

44 CFR 201.4(c)(3)(i): [The State mitigation strategy shall include a] description of State goals to guide the selection of activities to mitigate and reduce potential losses.

44 CFR 201.4(c)(3)(iii): [The State plans shall include an] identification, evaluation, and prioritization of cost-effective, environmentally sound, and technically feasible mitigation actions and activities the State is considering and an explanation of how each activity contributes to the overall mitigation strategy. This section should be linked to local plans, where specific local actions and projects are identified.

44 CFR 201.4(d): Plan must be reviewed and revised to reflect changes in development, progress in statewide mitigation efforts, and changes in priorities...

Iowa's hazard mitigation goals, objectives, and measures are directly connected to the prioritized hazards from the hazard analysis and risk assessment. There are 20 identified in the Hazard Analysis Risk Assessment (HARA) for 2013.

### GOALS

The purpose of mitigation strategy goal statements is to establish general guidelines for the purpose of eliminating or reducing long-term risks to life and property, reducing the costs of disaster response and recovery, and minimizing disruption to the state following a disaster event. Goal statements are written in general terms and do not lay out specific strategies that are measurable. The development of the related objectives and mitigation measures is designed to perform this function.

The goal statements were developed taking into consideration a number of factors. First, the definitions and descriptions given in the hazard scoring section of the hazard analysis and risk

assessment (see Annex 1.3-A), was referred to in order to assure that the goal statements addressed the hazards. Other subsections of the HARA, i.e., probability, magnitude/severity, warning time, and duration (which form the methodology of the assessment) were also consulted as necessary.

The goal statements were developed and reviewed by the State Hazard Mitigation Team (SHMT) as well as by individual agencies and their representatives. The SHMT and subject matter experts within participating agencies re-evaluated the existing goals to determine if any substantive changes had occurred that would require changes or modifications. There were indeed significant changes to the existing goals to remove repetition and clearly identify goals encompassing all hazards. As a result of the process described above, the 2013 Plan identifies 3 goals – as a comprehensive overview for each of the identified hazards.

### OBJECTIVES

The objectives were developed as a means of fulfilling the goals. To support the objectives, current and past mitigation measures developed by counties and communities in Iowa were matched to the goals and objectives. As a result, while some of the objectives by themselves are not easily measurable, they become measurable through the associated mitigation measures.

The objectives were developed and reviewed in conjunction with the SHMT as well as by individual agencies and their representatives. The SHMT and subject matter experts within participating agencies re-evaluated the existing objectives to determine if any substantive changes had occurred that would require changes or modifications. There were again significant changes to the existing objectives to reduce repetition and help them work with the consolidated goals.

As a result of the process described above, the 2013 Plan identifies 6 objectives, a decrease of 104 objectives. The following table shows the overarching goals, with the hazards listed in rank order as determined in the HARA. The broad mitigation goals provide an umbrella that covers all the mitigation objectives, measures, and projects. The objectives/categories give the strategy more direction by grouping measures in similar areas (Preventative, Protection of Property, Public Education, Natural Resources, Emergency Services, and Structure). Within each objective/category the measures drill down to project types that reduce risk to Iowa in various ways. Finally specific approved mitigation projects are detailed in Annex 1.4-A with local level implementation of mitigation project grants.

**Goal 1:**

**Protect the health, safety and quality of life for Iowa citizens while reducing or eliminating property losses, economic costs, and damage to the natural environment caused by a disaster.**

**Goal 2:**

**Ensure government operations, response, and recovery are not significantly disrupted by disasters.**

**Goal 3:**

**Expand public awareness and encourage intergovernmental cooperation, coordination and communication to build a more resilient community against all hazards.**

- Rank 1: River Flooding
- Rank 2: Tornadoes/Windstorm
- Rank 3: Severe Winter Storms
- Rank 4: Levee/Dam Failure
- Rank 5: Terrorism
- Rank 6: Flash Flooding
- Rank 7: Animal/Plant/Crop Disease
- Rank 8: Hazardous Materials Incident
- Rank 9: Radiological Incident
- Rank 10: Thunderstorm/Lightning/Hail
- Rank 11: Drought
- Rank 12: Human Disease
- Rank 13: Transportation Incident
- Rank 14: Infrastructure Failure
- Rank 15: Extreme Heat
- Rank 16: Grass/Wildfire
- Rank 17: Sinkholes
- Rank 18: Landslide
- Rank 19: Earthquake
- Rank 20: Expansive Soils

**MITIGATION MEASURES (Actions)**

Mitigation measures (actions) were developed from mitigation actions that have been implemented in Iowa and from mitigation measures that local communities evaluated and selected during the local mitigation planning process. In order to collect and analyze local mitigation planning data, each local plan must complete the *Local Hazard Mitigation Plan – Data Collection Sheet*. Through this process, a MS Excel Workbook is used to provide local planners with a tool to organize data and information that is required for the local mitigation plan and it provides an electronic format for data collection at the local level. The Data Collection Sheet provides local jurisdictions with a tool to meet FEMA’s plan maintenance requirements (monitoring, evaluating, and updating the plan) after the plan is approved and before the next local mitigation plan is initiated. The Local Data Collection Worksheets are used as a method of validating the

State's existing hazard assessment, vulnerability assessment, goals, objectives, proposed and completed mitigation measures, and local plan integration. For this and future updates the local data collection worksheets were analyzed to determine statewide trends of hazard mitigation planning and activities. Information required for FEMA approval of a local hazard mitigation plan is incorporated within the Data Collection Sheet which includes:

- Proposed Mitigation Measures
- Completed or In Progress Mitigation Measures
- Local Capabilities Summary
- Vulnerability Assessment
- Critical Facilities Assessment
- Hazard Ranking

The HSEMD requirement for submittal of the Data Collection Sheet was established in the grant agreement for entities awarded planning grants starting with PDM 2007 and forward. This was not a requirement for previous planning grants. See Annex 1.4-C for an example of a completed Data Collection Sheet.

#### **Process for Integrating State and Local Mitigation Measures from the Data Collection Sheet:**

The Local Data Collection Sheets identify proposed mitigation measures from local plans within each local jurisdiction. The transition between identifying potential mitigation projects and submitting applications for funding of those projects is accomplished through the following process;

- The State notifies potential applicants of Hazard Mitigation Assistance (HMA) program funding availability and program requirements.

- Following notification, applicants will submit a Notice of Interest (NOI) declaring their intent to apply to the HSEMD by the established deadline. At a minimum, the NOI will include the name of the applicant, a brief description of the proposed project(s) including time frames for completion, title of Local Hazard Mitigation Plan and date of FEMA plan approval, mitigation measure from the approved plan that corresponds with the proposed project, approximate cost of the proposed project, and its precise location.
- HSEMD mitigation staff review NOI's to determine initial eligibility and whether the sub-applicant will be invited to complete a full HMA application. The review will consider the level of funding available under the grant; how the proposed project fits within an overall plan for development and/or hazard mitigation in the community and how the project addresses the State's priorities.
- All NOI's received by HSEMD are tracked in the General Project Tracking Spreadsheet and utilized for current and future funding opportunities. The NOI's are tracked by project type and include the sub-grantee, county, project type, total cost, and other pertinent information for the sub-grantee. A tracking sheet is maintained for acquisitions, planning, and all other projects.
- If all eligibility requirements are met and funding is available then a formal invitation to apply for FEMA funding will be sent to the sub-applicant.
- Each project lead is responsible for coordinating and tracking all project activities with the sub-applicant. The project lead will make reports on the weekly mitigation report outlining all relevant activities relating to the projects being submitted to the State. The SHMO sends these reports to HSEMD management, appropriate FEMA staff, and other stakeholders in an effort to keep all parties informed of significant mitigation project developments.

- State project leads and project officers provide technical assistance and guidance throughout project and application development.
- Upon application completion, the sub-applicant will submit the application to the State for review, approval, and submittal to FEMA.
- All activities specific to the submitted project application is tracked by the project lead using the Project Officer Report. This report tracks such items as total applications submitted, total project cost and application submittal dates.

The State has several Hazard Mitigation funding opportunities available. The following is a list of programs that have provided FEMA funding for hazard mitigation projects to complete proposed mitigation measures since the last update period.

- The Hazard Mitigation Grant Program (HMGP) has been available and open over the last three years due to multiple Presidential Disaster Declarations.
- The Pre Disaster Mitigation Program (PDM) has an annual funding stream which guarantees a minimum amount of funding to each state based on congressional appropriations.

### Validating and Consolidating Mitigation Measures

HSEMD staff reviewed the mitigation measures contained in the 2010 plan as well as measures listed on the data collection sheets. Revisions were made to the text describing some action items, but largely the measures remain the same. Revisions were made to strengthen, to provide more specificity to, or to expand an action item. The list of mitigation measures was distributed to the SHMT for review and comment before and during planning meeting conducted in November of 2012. Based on the Team's comments some additional wording was added to some actions. Additional detail was added to include a wider

variety of stormwater management projects including infiltration based practices.

The 2013 mitigation measures were reviewed and agreed upon by the HSEMD planning team and the SHMT. As a result of this process, the existing mitigation measures were consolidated and simplified into categories to reflect the State priorities and to guide the development of local mitigation strategies, objectives, and measures. This resulted in the 2013 Mitigation Measures Table found in the following pages.

After a general analysis of each measure for cost-effectiveness, environmental soundness, and technical feasibility, HSEMD planning staff was tasked with running a STAPLEE analysis on the mitigation measures as part of the update process. This was only to provide another level of analysis for setting state priorities rather than local priorities that are established in local mitigation plans. There were no substantive changes to the results of the STAPLEE analysis. The team used the STAPLEE evaluation tool explained in the FEMA How To Guide, 386-3 to re-evaluate and prioritize mitigation measures. This tool is often used by local communities to evaluate and prioritize mitigation measures selected for inclusion in local mitigation plans.

The STAPLEE evaluation assessment considers the following questions:

<b>S</b>	<b>Social</b>	Is the proposed measure acceptable to the community? Will the measure treat all individuals and groups equitably? Will the measure result in an inadvertent negative treatment of one or more segments of the population?
<b>T</b>	<b>Technical</b>	Will the measure reduce losses in the long-term? Is the measure a whole or partial solution to the problem? Does the measure solve the problem instead of the symptoms?
<b>A</b>	<b>Administrative</b>	Do the agencies responsible for implementing the measure have the skill, experience, knowledge, ability, staffing, funding, and maintenance capability to do so?
<b>P</b>	<b>Political</b>	Does the measure have the support of elected officials, public or private agencies, and the general public?
<b>L</b>	<b>Legal</b>	Does the jurisdiction responsible for implementing the measure have the legal authority to do so? Is there a legal basis (local code/ordinance, state law, or federal law] for the measure?
<b>E</b>	<b>Economic</b>	Do the measure's benefits exceed the costs? Does the measure contribute to the overall economic goals of the community? Are there current sources of funds to implement the measure? Will the measure impose an increased burden on the tax base or the local economy?
<b>E</b>	<b>Environmental</b>	How does the measure impact the natural environment? Does the measure comply with local, state, and federal environmental laws? Is the measure consistent with current environmental goals?

Iowa has consistently utilized the same rating guidelines used to evaluate the mitigations measures developed during the 2004 planning process. Each of the STAPLEE criteria were considered separately and given a positive “+”, negative “-”, or neutral “0” rating. For example, if a project would be acceptable to a community, it would receive a positive (+) rating or if a project would adversely impact one or more segments of a community, it would receive a (-) rating.

All the mitigation measures included in the revised list received a more positive than negative ratings. All mitigation measures received positive ratings in the Technical category. The economic category received the highest number of neutral ratings (unable to determine). For example, a funding source may be identifiable (such as Pre-disaster mitigation), but the availability of funds is often uncertain.

The identified mitigation measures can be grouped into six categories. The 2013 Mitigation Measures table below identifies which of the following group a specific measure falls within. All mitigation actions from the 2010 Plan were carried over to the 2013 Plan.

**Prevention**

Government administrative or regulatory measures or processes that influence the way land and buildings are developed and built. These measures also include public activities to reduce hazard losses. Examples include:

- Planning and zoning
- Hazard mapping
- Building codes
- Subdivision regulations
- Studies/data collection and analysis to support prevention measures
- Floodplain regulations
- Stormwater management regulations
- Multi-jurisdictional agreements that reduce hazard risks
- Other regulatory measures or processes that reduce hazard risks

### Property Protection

Measures that involve modifying existing buildings or structures to protect them from a hazard, or removing buildings or structures from the hazard area or providing insurance to cover potential losses. Examples include:

- Acquisition, elevation, or relocation of hazard-prone property
- Safe room/storm shelter retrofits
- Security retrofits
- Critical facility protection
- Risk reduction retrofits (modifications) to hazard prone properties
- Studies/data collection and analysis to develop property protection measures
- National Flood Insurance Program (NFIP) participation

### Public Education and Awareness

Measures to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them. Examples include:

- Programs to improve awareness of hazard risk
- Programs to improve awareness of hazard risk prevention and reduction
- Education programs directed toward specialized audience, i.e. buildings, developers, and hazard prone neighborhoods

### Natural Resource Protection

Measures that, in addition to minimizing hazard losses; preserve or restore the functions of natural systems. Examples include:

- Sediment and erosion control
- Stream corridor restoration, watershed management
- Forest and vegetation management
- Wetland restoration and preservation

### Emergency Services

Measures taken before, during and after a hazard event to protect people, and property; although these measures are not typically considered “mitigation, they significantly minimize the events impact and preserve the community’s health and safety. Examples include:

- Emergency/response facilities and personnel
- Hazard warning systems and equipment
- Health/safety/environmental risk prevention/reduction
- Emergency/response infrastructure
- Emergency/response planning
- Emergency/response training
- Emergency/response vehicles, equipment and protective gear
- Emergency/response services studies and data collection
- Emergency/response communication systems

## Structural Projects

Measures that involve the construction and maintenance of structures and infrastructure that reduce the impact of a hazard or redirect the impact away from people and property. Examples include:

- Channel modification/maintenance
- Dam and reservoir construction/maintenance
- Levee and floodwall construction and maintenance
- Safe room construction
- Infrastructure construction and maintenance – roads and bridges
- Infrastructure construction and maintenance – utility systems
- Infrastructure construction and maintenance – urban and rural drainage systems
- Studies and data collection to develop structural projects

The following 2013 Mitigation Measures Table identifies the objective, hazard(s) addressed, mitigation category of each measure, measure score, and update on progress since the last planning cycle.

Measures status updates are abbreviated as:

- **C** – Completed mitigation measure
- **I** – Incomplete mitigation measure
- **O/C** – Ongoing as measure is part of a continuous cycle
- **O/P** – Ongoing in progress with grant(s) open during performance period or in development

2013 Mitigation Measures Table

Targeted Objectives	Mitigation Measure	Hazard	Score
<p><b>Objective 1:</b></p> <p><b>Establish regulatory measures or processes that reduce the number and severity of all hazard risks in order to alleviate death, injuries, environmental impact, and property losses.</b></p> <p><b>Category:</b></p> <p><b>Preventive</b></p>	Develop and promote comprehensive cost-effective recommendations for adoption and enforcement of land use, ordinances and regulations, promote legislation, zoning, and building codes that regulate construction, and decrease risk in areas susceptible to hazards	(1)River Flooding, (2)Tornado/Windstorm, (3)Severe Winter Storms, (4)Dam/Levee Failure, (6)Flash Flood, (8)Hazardous Materials, (10)Thunderstorms/Lightning/Hail, (14)Infrastructure Failure, (17)Sinkholes, (18)Landslide, (20)Expansive Soils	24  O/C
	Encourage communities to include severe repetitive loss and repetitive loss strategy in all-hazard mitigation plans and comprehensive plans and educate communities on these properties in their jurisdiction and measures which may be used to reduce future damages	(1) River Flooding, (6)Flash Flooding, (14)Infrastructure Failure	8  O/C
	Complete FIRM (Flood Insurance Rate Maps) and encourage NFIP community and individual participation, and survey of flood prone areas, and river channel studies, and update of existing flood maps and evaluation of the existing Community Rating System	(1)River Flooding, (6)Flash Flood, (4)Dam/Levee Failure	9  O/C
	Support legislation increasing shelter standards and provide safe room education for builders and developers	(2)Tornado/Windstorm, (10)Thunderstorms/Lightning/Hail	5  O/C
	Encourage communities to continue Hazardous Materials agreements, support enforcement of Occupational Safety and Health Administration's (OSHA) regulations, and support regional Hazardous Materials teams.	(8)Hazardous Materials, (9)Radiological, (14)Infrastructure Failure	6  O/C
	Encourage communities in areas vulnerable to earthquake to adopt current building codes for seismic retrofitting—to make structures earthquake resistant	(19)Earthquake	1  O/C

Targeted Objectives	Mitigation Measure	Hazard	Score
<p><b>Objective 2:</b> Prevent and reduce property damage from all hazards by maintaining and improving property protection measures in order to assure that the health and safety of residents and the environment are protected against any incident.</p> <p><b>Category:</b> Property Protection</p>	Non-structural retrofit of public structures	(1)River Flooding, (2)Tornado/Windstorm, (10)Thunderstorms/Lightning/Hail, (14)Infrastructural Failure, (19)Earthquake	11 O/P
	Relocate critical facilities for flood protection	(1)River Flooding, (6)Flash Flood, (13)Transportation Incident	8 O/P
	Construct/elevate wastewater lift station	(1)River Flooding, (6)Flash Flood, (12)Human Disease	8 O/P
	Acquire flood prone properties and convert to open space/green space; or elevate to or above base flood elevation	(1)River Flooding, (6)Flash Flooding, (14)Infrastructure Failure	13 O/P
	Encourage communities to participate in the National Flood Insurance Program and to complete and adopt the FIRM (Flood Insurance Rate Map)	(1)River Flooding, (4)Dam/Levee Failure (6)Flash Flood	9 O/C
	Construct floodwalls	(1)River Flooding, (6)Flash Flooding, (14)Infrastructure Failure	8 O/P
	Install and maintain protective measures for the safety and security of critical facilities	(5)Terrorism, (8)Hazardous Materials, (12)Human Disease, (14)Infrastructure Failure	9 O/C
	Employ construction measures that direct water away from structures	(1)River Flooding, (6)Flash Flooding, (17)Sinkholes	7 O/P
	Remove asbestos from public facilities	(8)Hazardous Materials, (12)Human Disease, (14)Infrastructure Failure	6 O/P
	Flood protection for critical facilities	(1)River Flooding, (6)Flash Flood	6 O/P
	Remove underground fuel storage tanks	(8)Hazardous Materials, (14)Infrastructure Failure	4 O/G
	Build airport consolidated fuel storage facilities	(8)Hazardous Materials, (13)Transportation Incident,	4 O/G

Targeted Objectives	Mitigation Measure	Hazard	Score
<b>Objective 3:</b>  <b>Enhance public education through programs that expand public awareness and encourage intergovernmental cooperation, coordination, and communication to mitigate against all hazards.</b>  <b>Category:</b>  <b>Public Education</b>	Develop educational materials for the general public and decision makers, educational projects and information regarding public and private volunteer initiatives as well as information regarding health safety and alternatives to improve the public’s awareness of hazard risks and ways to prevent or reduce their impact with a sustainment mechanism to distribute educational materials.	(1)River Flooding, (2)Tornado/Windstorm, (3)Severe Winter Storms, (4)Dam/Levee Failure, (5)Terrorism, (6)Flash Flood, (7)Animal/Crop/Plant Disease, (8)Hazardous Materials, (9)Radiological, (10)Thunderstorms/Lightning/Hail, (11)Drought, (12)Human Disease, (13)Transportation Incidents, (14)Infrastructure Failure, (15)Extreme Heat, (16)Grass/Wild Land Fire, (17)Sinkhole, (18)Landslide, (19)Earthquake, (20)Expansive Soils	40  O/G
	Promote NOAA (National Oceanic and Atmospheric Administration) weather radio, including citizen purchase of receivers and maintenance of existing NOAA towers	(1)River Flooding, (2)Tornado/Windstorm, (3)Severe Winter Storms, (4)Dam/Levee Failure, (5)Terrorism, (6)Flash Flood, (8)Hazardous Materials, (9)Radiological, (10)Thunderstorms/Lightning/Hail, (15)Extreme Heat, (16)Grass/Wild Land Fire, (18)Landslide, (19)Earthquake	28  O/G

Targeted Objectives	Mitigation Measure	Hazard	Score
<b>Objective 4:</b>  <b>Build support capacity and commitment to prevent or reduce risks from all hazards for protection of Iowa’s residents and their property as well as the State’s natural resources.</b>  <b>Category:</b>  <b>Natural Resources</b>	Develop and implement watershed studies and implement watershed plans and conduct hydrology studies and studies of groundwater problems, support of stormwater management including infiltration, retention basins, bioswale, rain garden, and siltation removal projects.	(1)River Flooding, (4)Dam/Levee Failure, (6)Flash Flood, (11)Drought, (17)Sinkholes, (18)Landslide, (20)Expansive Soils	14  O/G
	Establish natural vegetation buffers and removal of dead vegetation next to sensitive lands and forestry improvements/tree planting (sinkholes, floodplains, etc.)	(1)River Flooding, (4)Dam/Levee Failure, (6)Flash Flood, (17)Sinkholes	8  O/G

Targeted Objectives	Mitigation Measure	Hazard	Score
<p><b>Objective 5:</b></p> <p><b>The health, safety, and quality of life of Iowa’s residents shall be protected by preventing, controlling, and ensuring an immediate and effective response to all hazards that cause injury, disability, or death and to keep economic loss and social disruption to a minimum.</b></p> <p><b>Category:</b></p> <p><b>Emergency Services</b></p>	<p>Develop/update/publicize emergency management plans, including preparedness, response, recover, operations, long term recovery, and mitigation plans and maintain data inventory</p>	<p>(1)River Flooding, (2)Tornado/Windstorm, (3)Severe Winter Storms, (4)Dam/Levee Failure, (5)Terrorism, (6)Flash Flood, (7)Animal/Crop/Plant Disease, (8)Hazardous Materials, (9)Radiological, (10)Thunderstorms/Lightning/Hail, (11)Drought, (12)Human Disease, (13)Transportation Incidents, (14)Infrastructure Failure, (15)Extreme Heat, (16)Grass/Wild Land Fire, (17)Sinkhole, (18)Landslide, (19)Earthquake, (20)Expansive Soils</p>	<p>45</p> <p>O/C</p>
	<p>Maintain Emergency Operations Center (EOC) with 24 hour capability</p>	<p>(1)River Flooding, (2)Tornado/Windstorm, (3)Severe Winter Storms, (4)Dam/Levee Failure, (5)Terrorism, (6)Flash Flood, (7)Animal/Crop/Plant Disease, (8)Hazardous Materials, (9)Radiological, (10)Thunderstorms/Lightning/Hail, (11)Drought, (12)Human Disease, (13)Transportation Incidents, (14)Infrastructure Failure, (15)Extreme Heat, (16)Grass/Wild Land Fire, (17)Sinkhole, (18)Landslide, (19)Earthquake, (20)Expansive Soils</p>	<p>40</p> <p>O/C</p>
	<p>Ensure that the state and individual local communities have adequate equipment, training, and staff to respond to hazard events specific to their needs</p>	<p>(1)River Flooding, (2)Tornado/Windstorm, (3)Severe Winter Storms, (4)Dam/Levee Failure, (5)Terrorism, (6)Flash Flood, (7)Animal/Crop/Plant Disease, (8)Hazardous Materials, (9)Radiological, (10)Thunderstorms/Lightning/Hail, (11)Drought, (12)Human Disease, (13)Transportation Incidents, (14)Infrastructure Failure, (15)Extreme Heat, (16)Grass/Wild Land Fire, (17)Sinkhole, (18)Landslide, (19)Earthquake, (20)Expansive Soils</p>	<p>40</p> <p>O/C</p>
	<p>Train, exercise, and equip key state and local leaders for emergency/disaster/and response efforts</p>	<p>(1)River Flooding, (2)Tornado/Windstorm, (3)Severe Winter Storms, (4)Dam/Levee Failure, (5)Terrorism, (6)Flash Flood, (7)Animal/Crop/Plant Disease, (8)Hazardous Materials, (9)Radiological, (10)Thunderstorms/Lightning/Hail, (11)Drought, (12)Human Disease, (13)Transportation Incidents, (14)Infrastructure Failure, (15)Extreme Heat, (16)Grass/Wild Land Fire, (17)Sinkhole, (18)Landslide, (19)Earthquake, (20)Expansive Soils</p>	<p>40</p> <p>O/C</p>
	<p>Ensure that proper security measures are in place for critical facilities</p>	<p>(5)Terrorism, (8)Hazardous Materials, (12)Human Disease, (13)Transportation Incident, (14)Infrastructural Failure</p>	<p>11</p> <p>O/C</p>
	<p>Establish procedures, installation, networks, response teams and equipment necessary to issue warnings, alert officials, emergency personnel, and inform the public and ensure that they are in place and operational</p>	<p>(1)River Flooding, (2)Tornado/Windstorm, (3)Severe Winter Storms, (4)Dam/Levee Failure, (5)Terrorism, (6)Flash Flood, (7)Animal/Crop/Plant Disease, (8)Hazardous Materials, (9)Radiological, (10)Thunderstorms/Lightning/Hail, (11)Drought, (12)Human Disease, (13)Transportation Incidents, (14)Infrastructure Failure, (15)Extreme Heat, (16)Grass/Wild Land Fire, (17)Sinkhole, (18)Landslide, (19)Earthquake, (20)Expansive Soils</p>	<p>40</p> <p>O/C</p>

Objective 5 : Continued..	Mitigation Measure	Hazard	Score
	Identify/develop/maintain inventory of special needs population to promote hazard mitigation and emergency management training specific to the requirements of the special needs population	(1)River Flooding, (2)Tornado/Windstorm, (3)Severe Winter Storms, (6)Flash Flood, (8)Hazardous Materials, (10)Thunderstorms/Lightning/Hail, (12)Human Disease, (13)Transportation Incidents, (14)Infrastructure Failure	22 O/C
	To the extent possible, collaborate and coordinate processes to strengthen interagency cooperation as a means to enhance collaborative planning and response	(8)Hazardous Materials (12)Human Disease, (14)Infrastructure Failure, (16)Grass/Wild Land Fires	7 O/C
	Plan and monitor Hazardous Materials decontamination sites	(8)Hazardous Materials, (9)Radiological, (14)Infrastructure Failure	6 O/C
	Develop/maintain list of facilities that produce, process, store or transport hazardous materials	(8)Hazardous Materials, (9)Radiological, (14)Infrastructure Failure	6 O/C
	Develop Metro Area Hazardous Materials transportation routes	(8)Hazardous Materials, (9)Radiological, (14)Infrastructure Failure	6 O/C
	Install safety and warning signage in appropriate vulnerable locations	(8)Hazardous Materials, (9)Radiological, (14)Infrastructure Failure	6 O/C
	Provide efficient, rapid allocation, distribution, testing, and administration of anti-virals and/or vaccine to officially designated high priority groups to facilitate control and management of outbreak	(12)Human Disease	2 O/C
	Monitor hospital surge capacity associated with a pandemic	(12)Human Disease	2 O/C
	Limit or prohibit mass gatherings, close schools, and implement quarantines, as necessary	(12)Human Disease	2 O/C
	Conduct inspections at mass feeding/sheltering/care operations or other mass gathering sites to assure food safety	(12)Human Disease	2 O/C
	Identify and map existing sinkholes and evaluate the potential for new sinkholes in hazard plans	(17)Sinkholes	1 I – funding
	Coordinate with FEMA (Federal Emergency Management Agency) on earthquake program	(19)Earthquake	1 O/C

Targeted Objectives	Mitigation Measure	Hazard	Score
<b>Objective 6:</b>  <b>Improve disaster resistance from long-term property losses, disruption of communities, and damage to structures.</b>  <b>Category:</b>  <b>Structure</b>	Electrical utility retrofit/hardening	(1)River Flood, (2)Tornado/Windstorm, (3)Severe Winter Storms, (6)Flash Flood, (10)Thunderstorm/Lightning/Hail, (14)Infrastructure Failure, (15)Extreme Heat	22 O/P
	Purchase/install backup power generators	(1)River Flooding, (2)Tornado/Windstorm, (3)Severe Winter Storms, (5)Terrorism, (10)Thunderstorm/Lightning/Hail, (14)Infrastructure Failure, (15) Extreme Heat	17 O/P
	Construct, retrofit or maintain drainage systems (pipes, culverts, and channels) to provide adequate and proper functioning systems to include sewage systems and retention and detention systems	(1)River Flood, (4)Dam/Levee Failure, (6)Flash Flood, (11) Drought, (12) Human Disease, (14) Infrastructure Failure, (17)Sinkholes	21 O/P
	Replace or retrofit bridges and culverts to meet capacity requirements	(1)River Flooding, (4)Dam/Levee Failure, (6)Flash Flood, (8)Hazardous Materials, (13)Transportation Incident, (14)Infrastructure Failure	15 O/P
	Install soil stabilization, drainage and erosion protection measures	(1)River Flooding, (4)Dam/Levee Failure, (6)Flash Flood, (7) Animal/Crop/Plant Disease, (13)Transportation Incident	13 O/P
	Construct, retrofit or maintain levees, dams, floodwalls, culverts, and floodgates to ensure adequate capacity and protection levels for property and critical facilities	(1) River Flooding, (4)Dam/Levee Failure, (6)Flash Flooding, (14)Infrastructure Failure	11 O/P
	Construct public safe rooms for government facilities functions, critical facilities functions, recreational areas, manufactured home parks, schools, and day care centers	(2)Tornado/Windstorm, (5)Terrorism, (10)Thunderstorms/Lightning/Hail	13 O/P
	Raise roads to reduce hazard risk	(1)River Flooding, (6)Flash Flood, (8)Hazardous Materials, (13) Transportation Incident, (14) Infrastructure Failure	12 O/P
	Develop stream modifications/channel improvement projects	(1)River Flooding, (4)Dam/Levee Failure, (6)Flash Flood	9 O/P
	Connect to regional water	(8)Hazardous Materials, (11)Drought, (14)Infrastructure Failure, (16)Grass/Wild Land Fire	7 O/C
Install dry hydrants in areas without water mains and domestic fire hydrants	(8)Hazardous Materials, (14)Infrastructure Failure, (16)Grass/Wild Land Fire	5 O/C	

For prioritization of mitigation measures, HSEMD conducted an analysis to determine which of the listed mitigation measures were consistent with FEMA HMA project types. Included in this analysis was consideration of whether the measures are technically feasible and cost effective. Multiple benefits or risk reduction related to multiple hazards as well as those hazards that have been evaluated in the vulnerability assessment. Additionally, measures that are prioritized are associated with hazards of a higher risk as demonstrated by the hazard analysis and risk assessment process.

For this analysis, measures were scored according to the hazard priority group classification (see Section 1.3 Risk Assessment) of the hazard(s) in which the measure is designed to address. A measure that addresses a hazard listed in priority group I was given a score of 3, priority group II a score of 2, and priority group III a score of 1. The measures with higher total scores are higher priority measures.

The highest score recorded was “45”, while the lowest score was “1.” In addition to scoring measures relevant to the hazard assessment, five State priority measures were given an additional 5 points. These 5 measures are planning, electrical utility system retrofit/hardening, infrastructure, property acquisitions, and tornado safe-rooms remain priority projects. These measures address high impact hazards in accordance with our vulnerability and loss estimate and were also identified in the FEMA HMA project implementation guidance. The State of Iowa has been successful identifying and funding these types of projects in the past.

The result of this analysis supports the expectation that all hazards planning measures are a high priority. Generally, public education and various types of hazard or risk reduction training and education measures were also evaluated as being

consistently a high priority. Response and preparedness related measures address a variety of hazards as well and score high.

While this method of comprehensively prioritizing hazard mitigation measures is effective, it is recognized that mitigation funding availability, disaster specific events and associated disaster response and recovery measures can result in the prioritization of specific mitigation measures that contribute to the disaster recovery process. In Iowa this holds true in particular for flood retrofitting projects for critical facilities and infrastructure as well as the acquisition and/or relocation of repetitive loss residential and commercial structures.

### **High Priority Actions Considered by the State of Iowa**

The State of Iowa has experienced many long-term successes with mitigation. More specifically, during the last three years, multiple mitigation measure projects in development coincide with the objectives and goals in the State Hazard Mitigation Plan to prevent and reduce the risks to lives, property, and economic activity from the effects of all hazards. Iowa communities have benefited, and continue benefitting from mitigation activities such as local hazard mitigation planning, critical facilities protection, infrastructure drainage, electrical retrofit, property acquisition/relocation/elevation, safe rooms, NOAA weather radio transmitter installations and through various training, workshops and mitigation related legislation. These mitigation measures are making communities across the state more resilient and secure against the negative impacts of natural and man-made hazards.

In Annex 1.4-A Mitigation Projects there is a listing of mitigation projects including those designated as ongoing in the 2010 version of the State Plan. Projects completed in the last planning cycle were not repeated.

Examples of mitigation actions completed and grants closed during the last update 2010-2013 include:

- The acquisition and demolition of substantially damaged or destroyed properties in multiple communities. These properties were located in a Special Flood Hazard Area. Although the respective project subgrants have not all closed, the State has acquired 933 properties and demolished 922 properties through HMGP 1763 funding in 33 communities. Of those 933 acquired properties, 85 repetitive loss properties were acquired in 19 communities. In subsequent disasters 1880, 1930, and 1998 acquisition of 107 properties with 94 converted to open space has been completed with 10 of those properties being repetitive loss in 5 communities.
- 2 tornado safe rooms
- 125 local hazard mitigation plans
- 22 emergency back-up generator projects and 1 siren under the 5% initiative
- Many electrical retrofit projects
- 5 Infrastructure projects including elevation of wellhouse and controls, protective floodwalls for critical facilities, and other drainage projects.

From 2010-2013, the State of Iowa has received 7 Presidential Declared Disasters, which emphasized the vulnerabilities and obstacles the state faces in relation to natural hazards such as flooding, tornadoes, and severe storms. The multitude of disasters has offered opportunities for the state to strengthen their mitigation capabilities through the availability of HMA funding. Federally approved and funded mitigation projects are being administered by the state to include the HMGP and PDM programs. These programs have enabled mitigation projects to address the State's hazard mitigation goals and objectives meeting the priorities and criteria outlined in the Mitigation Strategy.

In addition to federal programs, several programs at the state level support the goals and objectives outlined and are utilized in advancing mitigation statewide. The State Capability Assessment follows in this section, and provides some of the programs and initiatives currently supporting mitigation in Iowa. Further capability detail is located in Annex 1.4.-B.

In evaluation of all measures identified and prioritized, it was determined that the 2013 State Hazard Mitigation Plan measures including planning, electrical utility system retrofit/hardening, infrastructure, property acquisitions, and tornado safe rooms remain high priorities for the State of Iowa. The action descriptions listed below are the primary actions the state supports for addressing the hazards analyzed in this plan (not an inclusive list of all actions supported).

#### State Priority Mitigation Action Descriptions

**Mitigation Action:** Develop/update/publicize emergency management plans, including preparedness, response, recovery, operations, long term recovery, and mitigation plans and maintain data inventory

**Goals:** All

**Objective 5:** The health, safety and quality of life of Iowa's residents shall be protected by preventing, controlling, and ensuring an immediate and effective response to all hazards that cause injury, disability, or death and to keep economic loss and social disruption to a minimum.

Planning mitigation measures impact the state goals for the prevention and reduction of risks to lives, property, and economic activity from the effects of all hazards. Planning is ranked as the number one mitigation measure for implementation in the State of Iowa. These plans offer communities the opportunity to identify and evaluate hazards, assess risk, probability, vulnerability, impact, and develop

mitigation goals and actions for the prevention and preparation of future hazard events. There are more than 700 jurisdictions with FEMA approved local hazard mitigation plans, and many more jurisdictions are currently in the process of developing local hazard mitigation plans. These plans include updates and initial planning efforts.

Further, the State of Iowa is promoting multi-jurisdictional planning to achieve all-inclusive plans across the State. Overall, multi-jurisdictional planning is a benefit to local jurisdictions, counties, State, and FEMA by creating a more streamlined process in developing plans. Multi-jurisdictional planning will cover more area within the state and address the health, safety and general welfare of all communities from potential hazards.

**Mitigation Action:** Electrical utility retrofit/hardening  
**Goals:** All  
**Objective 6:** Improve disaster resistance from long-term property losses, disruption of communities, and damage to structures.

Following extreme ice storms and severe winter weather, HSEMD and the Iowa REC Association have worked in partnership to develop and fund electrical utility retrofit/hardening projects. Multiple electrical retrofit projects in development are to upgrade and strengthen conductor, increase pole size, reduce pole spans, convert overhead electrical distribution lines to underground power lines, and ensure a more reliable supply of power to critical facilities. These projects involve hundreds of miles of electrical infrastructure. These projects reduce the future risk of life safety and health, property loss and economic disruption effected by hazards from severe winter storms, wind storms, power failure, tornadoes, and lightning. Electrical utility retrofit/hardening mitigation measures are scored 3rd highest of the overall prioritized measures.

Since 2010 through the Public Assistance Program, more than \$162 million dollars in funding approximately 277 electrical utility retrofit/hardening projects has been obligated. These projects encompass 6 different disaster declarations. Mitigation measures are evident in these projects by strengthening and improving the reliability of the existing electrical lines or structures which contribute to the overall reduced negative effects of natural hazards.

**Mitigation Action:** Construct, retrofit or maintain drainage systems (pipes, culverts, and channels) to provide adequate and proper functioning systems to include sewage systems and retention and detention systems  
**Goals:** All  
**Objective 6:** Improve disaster resistance from long-term property losses, disruption of communities, and damage to structures.

HSEMD and eligible communities throughout the State have worked in partnership to develop infrastructure mitigation projects. These mitigation projects are broadly defined as drainage and flood control type mitigation. Mitigation projects in development are intended to retrofit existing drainage systems to more effectively handle riverine and overland flooding, protect commercial, residential, and governmental facilities critical to the health, safety and welfare of the populations they serve, and reduce and/or eliminate the long term risk to people and property from natural hazards. These projects involve storm sewer systems, sanitary sewer systems, potable water treatment facilities, wastewater treatment, buildings, equipment and life safety.

This mitigation measure is ranked 4<sup>th</sup> priority for this plan and addresses river flooding, dam/levee failure, flash flood, drought, human disease, infrastructure failure, and sinkhole hazards.

The average percent of total projects per disaster for Public Assistance funding include 406 Mitigation for the declared disasters in this planning cycle (2010-Apr 2013) was 11.7 percent. There are a total of 223 (406) mitigation project worksheets submitted under DR-1930 with an estimated \$1,844,033 dollars contributable to mitigation projects. An estimated \$1.316 million is contributing to the development of approximately 96 additional 406 mitigation projects under DR-1928, DR-1977, DR-1998, DR-4016 and DR-4018. Due to the large amount of Public Assistance funding available, several mitigation projects are being completed to further prevent future damage and reduce loss of life and property.

**Mitigation Action:** Acquire flood prone properties and convert to open space/green space; or elevate to or above base flood elevation

**Goals:** All

**Objective 2:** Prevent and reduce property damage from all hazards by maintaining and improving property protection measures in order to assure that the health and safety of residents and the environment are protected against any incident.

The HMGP is currently providing funding for the acquisition/demolition of more than 1,000 properties with approximately 845 additional properties which are being acquired through Community Development Block Grant (CDBG) funding by the Iowa Economic Development Authority (IEDA). Mitigation measures providing property acquisitions directly address objectives for river and flash flooding and infrastructure failure hazards. River flooding is the #1 ranked hazard in this plan. Acquisition for demolition/relocation/elevation is ranked 8<sup>th</sup> priority for mitigation measures in this plan. Acquisition projects will directly reduce deaths, injuries, property loss, and economic disruption from all future flooding events. Multiple loss avoidance studies such as the 2008 Iowa Mitigation Success Story (Section 1.6 - Annex A) demonstrate the impact of acquiring property and

converting to open/green space on total losses avoided contributable to previous mitigation actions.

**Mitigation Action:** Construct public safe rooms for government facilities functions, critical facilities functions, recreational areas, manufactured home parks, schools and day care centers

**Goals:** All

**Objective 6:** Improve disaster resistance from long-term property losses, disruption of communities, and damage to structures.

Construction of safe rooms and maintenance of other structural projects can be used to prevent or reduce risks to life and property from the hazards of tornado/windstorm, thunderstorm/lightning/hail, and terrorism. Safe rooms are long-term hazard mitigation measures implemented to reduce the loss of life and property, lessen the impact to local communities due to natural disasters, and enable recovery after a disaster. Overall safe rooms are tied for ranking 8<sup>th</sup> of the prioritized mitigation measures for Iowa.

Currently, there are 15 completed tornado safe rooms funded through the HMGP. Additionally, 40 tornado safe room projects are approved in 36 school districts. When completed these safe rooms will protect more than 30,000 students, staff, and visitors. Multiple applications are currently under HMGP development and State review. Safe rooms for schools have been encouraged throughout the state, and national tragedies have only increased attention to the need for safe rooms. Most of the safe rooms under development are multi-purpose safe rooms for schools. Also, the Public Assistance staff has worked closely with the HMGP Mitigation staff to complete joint projects incorporating PA building replacement and Mitigation safe rooms in the communities of Palo, Greene, Waverly, and Cedar Rapids.

Iowa's first FEMA Publication 361 tornado safe room was built at the Iowa State Fairground campground area in 2004. This was a multi-use precast building with restrooms, showers, and a laundry facility with the ability to provide near absolute protection for 450 campers.

The Nevada Community School District was the first school in Iowa to receive HMGP funding, as a result of the 2008 tornado and catastrophic flood events. This multi-purpose tornado safe room will be used as a gym which will be built to the FEMA Publication 361 Guidance. An awareness outreach was done in partnership with the Iowa Department of Education and HSEMD Mitigation Section to notify school districts of the opportunity to apply for HMGP grant funding for the construction of tornado safe rooms.

Currently, several schools across Iowa have proposed plans to construct new school buildings or additions to existing buildings. Many schools are working with or have worked with HSEMD Mitigation Project Officers in developing grant applications for constructing tornado safe rooms.

### **Severe Repetitive Loss**

The Severe Repetitive Loss grant program was authorized by Section 1361A of the National Flood Insurance Act of 1968, U.S.C. 41002a, as amended by the Flood Insurance Reform Act (FIRA) 2004, Public Law 108-254, which amended the National Flood Insurance Act of 1968 to provide funding to reduce or eliminate the long-term risk of flood damage to severe repetitive loss (SRL) structures insured under the National Flood Insurance Program.

SRL Properties are residential properties.

- a. That have at least four NFIP claim payments over \$5,000 each, when at least two such claims have occurred within any ten-year period (must be greater than 10 days apart), and the cumulative amount of such claims payments exceeds \$20,000; or
- b. For which at least two separate claims payments have been made with the cumulative amount of the building portion of such claims exceeding the value of the property, when two such claims have occurred within any ten-year period.

To ensure mitigation of repetitive loss properties remains a high priority for receipt of mitigation program grant funds, the HSEMD will implement a Severe Repetitive Loss Strategy (SRL) designed to eliminate or reduce the damage to property and the disruption of life caused by repeated flooding of the same properties. This program will be implemented as funds become available. The key elements of the Iowa SRL will include a combination of technical assistance, education, and implementation of mitigation measures. Specific mitigation actions to be taken by HSEMD include:

- Establishing SRL as a funding priority for mitigation grants in order to implement mitigation measures such as acquisition, demolition, relocation, and elevation to reduce the number of severe repetitive loss properties
- Providing educational materials and assistance to the public, community leaders, planners, and other interested parties regarding severe repetitive loss properties in the community
- and mitigation measures/strategies which may be used to reduce damages to these properties
- Encouraging planners and communities to include severe repetitive loss strategies in all-hazard mitigation plans and in other community planning documents such as comprehensive plans.

Community Name	Total Pay: Building	Total Pay: Contents	Losses	Total Paid	Average Paid
AMES	\$403,716	\$0	5	\$403,716	\$80,743
AMES	\$461,326	\$0	5	\$461,326	\$92,265
AMES	\$446,683	\$0	5	\$446,683	\$89,337
AMES	\$122,330	\$50,345	5	\$172,676	\$34,535
BETTENDORF	\$121,764	\$14,949	6	\$136,713	\$22,786
BETTENDORF	\$442,074	\$991,291	7	\$1,433,365	\$204,766
BETTENDORF	\$112,204	\$0	4	\$112,204	\$28,051
CAMANCHE	\$60,841	\$0	4	\$60,841	\$15,210
CAMANCHE	\$46,631	\$5,019	3	\$51,650	\$17,217
CEDAR FALLS	\$58,688	\$12,343	5	\$71,031	\$14,206
CEDAR FALLS	\$53,151	\$45,284	5	\$98,435	\$19,687
CEDAR FALLS	\$134,354	\$32,117	8	\$166,471	\$20,809
CEDAR FALLS	\$141,907	\$40,387	6	\$182,293	\$30,382
CEDAR RAPIDS	\$364,262	\$0	4	\$364,262	\$91,065
COUNCIL BLUFFS	\$31,637	\$6,193	4	\$37,830	\$9,457
DAVENPORT	\$44,657	\$0	7	\$44,657	\$6,380
DAVENPORT	\$92,273	\$44,529	4	\$136,802	\$34,201
DAVENPORT	\$44,206	\$1,649	4	\$45,855	\$11,464
DAVENPORT	\$56,506	\$17,025	4	\$73,531	\$18,383
DAVENPORT	\$522,581	\$113,442	4	\$636,023	\$159,006
DAVENPORT	\$75,804	\$0	4	\$75,804	\$18,951
DAVENPORT	\$155,592	\$17,495	6	\$173,087	\$28,848
DAVENPORT	\$313,320	\$72,963	5	\$386,283	\$77,257
DAVENPORT	\$80,378	\$0	7	\$80,378	\$11,483
DES MOINES COUNTY	\$143,767	\$3,395	3	\$147,162	\$49,054
DES MOINES COUNTY	\$83,802	\$6,044	3	\$89,846	\$29,949
DES MOINES	\$316,148	\$23,424	10	\$339,572	\$33,957
DES MOINES	\$83,483	\$8,271	4	\$91,754	\$22,939
INDEPENDENCE	\$37,974	\$0	6	\$37,974	\$6,329
INDEPENDENCE	\$48,484	\$260	4	\$48,744	\$12,186
JASPER COUNTY	\$78,488	\$22,479	4	\$100,967	\$25,242
LINN COUNTY	\$48,268	\$2,255	4	\$50,523	\$12,631
MANCHESTER	\$157,487	\$85,605	4	\$243,093	\$60,773
SCOTT COUNTY	\$35,287	\$613	4	\$35,900	\$8,975
SCOTT COUNTY	\$51,903	\$5,108	5	\$57,012	\$11,402
SCOTT COUNTY	\$75,917	\$0	5	\$75,917	\$15,183
SCOTT COUNTY	\$73,750	\$17,185	6	\$90,935	\$15,156
SCOTT COUNTY	\$29,421	\$6,416	5	\$35,838	\$7,168
SCOTT COUNTY	\$88,888	\$0	5	\$88,888	\$17,778
SCOTT COUNTY	\$34,350	\$0	4	\$34,350	\$8,588
SCOTT COUNTY	\$66,667	\$861	6	\$67,528	\$11,255
SCOTT COUNTY	\$43,125	\$0	4	\$43,125	\$10,781
SCOTT COUNTY	\$71,465	\$0	5	\$71,465	\$14,293
SCOTT COUNTY	\$168,302	\$15,657	7	\$183,959	\$26,280
SCOTT COUNTY	\$136,456	\$10,914	6	\$147,370	\$24,562
WATERLOO	\$69,339	\$42,500	5	\$111,838	\$22,368
WATERLOO	\$0	\$52,614	7	\$52,614	\$7,516
WEBSTER COUNTY	\$124,540	\$89,271	4	\$213,811	\$53,453
WEBSTER COUNTY	\$233,158	\$29,104	2	\$262,262	\$131,131

The most recent listing of Severe Repetitive Loss Properties is shown at left.

The Final Rule implementing regulations for both Severe Repetitive Loss and Flood Mitigation Assistance programs based on the 2004 Flood Insurance Reform Act became effective October 16, 2009. Section 79.6 clarifies that demolition and relocation of structures are eligible for funding only when the acquired flood-prone property is converted to open space.

The Capability Assessment found in Annex 1.4 B identifies potential technical and funding resources for mitigation measures falling within that objective. Members of the SHMT were asked to provide what mitigation measures they initiated or accomplished since 2010. The results of reporting agencies are shown in Annex 1.4-A.

## 2. State Capability Assessment

44 CFR 201.5(b)(2)(i) and (ii): [The Enhanced Plan must document] the State's project implementation capability, identifying and demonstrating the ability to implement the plan, including:

- Established eligibility criteria for multi-hazard mitigation measures.
- A system to determine the cost effectiveness of mitigation measures, consistent with OMB Circular A-94, Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs, and to rank the measures according to the States eligibility criteria.

44 CFR 201.5(b)(1): [An Enhanced Plan must demonstrate] that the plan is integrated to the extent practicable with other state and/or regional planning initiatives (comprehensive, growth management, economic development, capitol improvement, land development, and/or emergency management plans) and FEMA mitigation programs and initiatives that provide guidance to State and regional agencies.

The capability assessment was developed and updated as a result of the SHMT analysis of financial, legal, and programmatic capabilities to carry out pre-and post-disaster mitigation measures (actions) to achieve mitigation goals and objectives. The 2010 capability assessment was provided to the SHMT representative from each state agency for review and update. The updated information by agency representatives was incorporated into the 2013 Plan update. Iowa has maintained or increased hazard management capabilities including mitigation planning technical assistance (Section 1.5 Local Coordination and pg 5 of Section 1.2 Planning Process), determining cost effectiveness (pg. 28 of this Section), management capability (pg.30), and financial and progress reporting (pg. 38). The capability assessment is a tool to help local and state agencies better understand the range of resources and services available in Iowa, where to find resources, criteria for eligibility, and ultimately connecting directly with resource and service providers (federal, state,

and nonprofit agencies) who can answer questions and respond to needs.

The capability assessment identifies Iowa's hazard mitigation funding sources or resources, provides a program overview, and identifies the respective federal, state, or nonprofit agency responsible for administering the program. It also assists the SHMT and local jurisdictions to carry out the mission of improving state and local hazard mitigation planning, to reduce damage and destruction of the environment, property, and loss of life; and to improve response and recovery as well.

The evaluation of the information contained in the capability assessment was the basis for identifying the relationship between SHMT agencies, programs, and associated mitigation objectives. The associations between agencies and objectives are found in the Capability Assessment Annex 1.4-B. This report demonstrates the degree of detail and effort expended to fully identify and evaluate Iowa capabilities to mitigate through the programs, policies, laws and regulations that apply. Unless specifically identified as a disaster related program (i.e. Hazard Mitigation Grant Program), the technical assistance and/or funding resources are considered to be on-going or pre-disaster programs. It is the policy of the State of Iowa to integrate pre- and post-disaster programs in order to make the best use of available resources.

### 2.1 Policies

#### 2.1.1 Process Used to Evaluate and Prioritize Mitigation Actions

Prioritizing local assistance in Iowa operates at two basic levels. The first involves the voluntary cooperative

arrangements between state agencies on the SHMT and procedures that each agency uses in administering its own programs. The second involves funding and programs delivered through FEMA for specific hazard mitigation purposes. In both cases above, the SHMT is involved as a coordination component. The following narrative will describe how prioritization is accomplished generally by state agencies through the SHMT followed by the specific mitigation programs from the HSEMD.

Although the Governor's Executive Order (see Annex 1.2-A) sets requirements for participation in hazard mitigation activities by the state's various agencies in the SHMT, the Executive Order does not require that the agencies work together to prioritize local assistance in all of the programs and separate Federal and State authorities that drive those other programs. Numerous hazard mitigation related programs operated by state agencies are identified in the state capability assessment database, but most of these programs do not fall under the direct authority of the SHMT. In an ideal world, all prioritization would fall under the single authority of one interagency group like the SHMT. However, the various state agencies must retain their autonomy in determining the prioritization of local assistance in the administration of their programs.

Nevertheless, a number of state agencies voluntarily utilize the SHMT for prioritizing local assistance on a case-by-case or project-by-project basis. A major reason for doing so is because of the shared responsibilities linked to the SHMT hazard analysis and risk assessment and the monitoring of programs identified in the state capability assessment. The newly developed THIRA also seeks to tie decision making to actual risk from threats and hazards. More information including additional examples of

coordination between state agencies is located in Section 1.5 Local Coordination.

In the HARA, the SHMT identified the hazards that affect the State of Iowa and determined the ranking of those hazards using the profile methodology discussed in the Identifying Hazards and Profiling Hazard Events sections. In the state capability assessment, the agencies list and describe their programs that either directly or indirectly indicate likely eligible subgrantees. Those agencies that do utilize the SHMT for advice and assistance in prioritizing, report to the SHMT, the actions and initiatives of their programs along with appropriate information on what program resources are utilized, how they are utilized, in which jurisdictions they are utilized, and the timeframes in which they are utilized.

State agencies generally base prioritization on risk and capability, although precise administrative steps vary from one agency to the next. Projects that are approved by the SHMT obtain those approvals because of the SHMT discussions, analysis, and decision-making on risk and capability. In other words, communities with the highest risk, vulnerable populations, repetitive loss properties, and/or the most intense development pressures tend to be treated with the highest priority in terms of getting project applications approved.

### 2.1.2 Eligibility Criteria

For the specific hazard mitigation programs from FEMA, the HSEMD establishes the specific state criteria for prioritizing community and local jurisdictions that will receive planning and project grants. This too is based on considerations of communities with the highest risk,

vulnerable populations, repetitive loss, and most intense development pressures in looking at likely future risk.

Beginning FFY 2009, FEMA unified the Hazard Mitigation Grant Program (HMGP), the Pre-Disaster Mitigation (PDM) program, the Flood Mitigation Assistance (FMA) program, the Repetitive Flood Claim (RFC) program, and the Severe Repetitive Loss Program programs into a unified Hazard Mitigation Assistance (HMA) program application cycle. Together these five programs provide significant opportunities to reduce or eliminate potential losses to state and local governments through hazard mitigation and project grant funding for pre- and post-disaster mitigation. FEMA has combined information on the five programs into the *Hazard Mitigation Assistance Unified Guidance* in order to create one comprehensive document. This document consolidates program eligibility information and outlines common goals and unique requirements among the programs. The five hazard mitigation programs are administered by HSEMD under the direction of the State Hazard Mitigation Officer (SHMO). Eligible applicants for funding generally include state and local governments and certain private non-profit organizations.

### 2.1.3 General State Project Eligibility Criteria

#### Hazard Mitigation Grant Program (HMGP)

To be eligible for HMGP, a project must meet the federal minimum project criteria listed below. In addition to the federal criteria, the State of Iowa may consider additional criteria when evaluating potential HMGP projects. Federal Criteria states the project must:

- Be in conformance with Iowa’s Hazard Mitigation Plan developed as a requirement of Section 322 of the Stafford Act.
- Have a beneficial impact upon the designated disaster area, whether or not located in the disaster area. Eligible applicants will be solicited from all 99 counties in Iowa in accordance with the FEMA-State Agreement.
- Be in conformance with 44 CFR, Part 9, Floodplain Management and Protection of Wetlands, and 44 CFR, Part 10, Environmental Considerations.
- Solve a problem independently or constitute a functional portion of a solution where there is assurance that the project as a whole will be completed. Projects that merely identify or analyze hazards or problems are not eligible.
- Be cost-effective and substantially reduce the risk of future damage, hardship, loss, or suffering resulting from a major disaster. The State, in applying for the grant, must demonstrate this by documenting that the project does the following:
  - Addresses a problem that has been repetitive or that poses a significant risk to public health and safety if left unsolved.
  - Will not cost more than the anticipated value of the reduction in both direct damages and subsequent negative impacts to the area if future disasters were to occur. Both costs and benefits will be computed on a net present value basis.
  - Has been determined to be the most practical, effective, and environmentally sound alternative after consideration of a range of options.

- Contributes, to the extent practicable, to a long-term solution to the problem it is intended to address.
- Considers long-term changes to the areas and entities it protects, and has manageable future maintenance and modification requirements.

### **Flood Mitigation Assistance (FMA)**

To be eligible for FMA, all the above cited Criteria must be addressed. In addition, the FMA funds shall not be awarded for activities in non-participating communities. All applicants and sub-applicants must be participating in the National Flood Insurance Program (NFIP), and must not be on probation, suspended or withdrawn from the NFIP. Priority consideration will first be given to flood mitigation activities that reduce the number of repetitive loss structures currently insured by the NFIP and secondly will be given to flood mitigation activities that will reduce the risk of flood losses to any property currently insured under the NFIP, whether repetitive loss or not.

### **Repetitive Flood Claim (RFC)**

The RFC program is nearly identical to the FMA program, except that the RFC is administered as a nationally competitive program and individual structures are selected to be mitigated and awarded funds. The RFC priority is to fund the acquisition of severe repetitive loss properties (including non-residential properties that meet the same claims thresholds) currently insured under the NFIP. Applications are accepted for any insured property that has one or more claim payments for flood damages and are located within a State or community that cannot

meet the requirements of the FMA program for either cost share or capacity to manage the activities. RFC awards are prioritized to those acquisitions that mitigate severe repetitive loss properties and those that create the greatest savings to the NFIP based on a Benefit-Cost Analysis (BCA). Unlike the FMA, the applicant does not need to have a FEMA approved mitigation plan to be eligible.

### **Severe Repetitive Loss (SRL)**

The Severe Repetitive Loss (SRL) grant program was authorized by Section 1361A of the National Flood Insurance Act of 1968, U.S.C. 41002a, as amended by the Flood Insurance Reform Act (FIRA) 2004, Public Law 108-254, which amended the National Flood Insurance Act of 1968 to provide funding to reduce or eliminate the long-term risk of flood damage to severe repetitive loss (SRL) structures insured under the National Flood Insurance Program.

- c. That have at least four NFIP claim payments over \$5,000 each, when at least two such claims have occurred within any ten-year period, and the cumulative amount of such claims payments exceeds \$20,000; or
- d. For which at least two separate claims payments have been made with the cumulative amount of the building portion of such claims exceeding the value of the property, when two such claims have occurred within any ten-year period and are greater than 10 days apart.

To ensure repetitive loss properties remains a high priority for receipt of mitigation program grant funds, the State of Iowa HSEMD will implement a Severe Repetitive Loss

Strategy designed to eliminate or reduce the damage to property and the disruption of life caused by repeated flooding of the same properties. Substantially damaged or destroyed properties are the State's priority for HMGP funding, and eligible communities have the opportunity to acquire SRL and Repetitive Loss Properties.

The Final Rule implementing regulations for both Severe Repetitive Loss and Flood Mitigation Assistance programs based on the 2004 Flood Insurance Reform Act became effective October 16, 2009. Section 79.6 clarifies that demolition and relocation of structures are eligible for funding only when the acquired flood-prone property is converted to open space.

### **Pre-Disaster Mitigation (PDM)**

To be eligible for the PDM, the criteria cited for the HMGP and FMA programs is used for prioritization but also considers other factors. HSEMD prioritizes the use of PDM funds by establishing that the first priority is to offer PDM grants to communities that have demonstrated previous interest and commitment to developing Local Hazard Mitigation plans. Particular consideration is given to communities that developed local hazard mitigation plans in accordance with the previous State criteria and have identified hazard mitigation projects that may likely be eligible for future hazard mitigation grants under the Stafford Act or the National Flood Insurance Reform Act (NFIRA).

#### **2.1.4 Eligible Activities**

Iowa has required Local Hazard Mitigation planning as a condition of receiving project grant funding from any hazard mitigation program for many years. Subsequently,

the utilization of grant funding to support Local Hazard Mitigation Planning is a priority. Projects may be of any nature that will result in protection to public or private property. Eligible projects include, but are not limited to:

- Property Acquisition and Structure Demolition/Relocation; (HMGP,PDM, FMA,RFC, SRL)
- Structure Elevation; (HMGP,PDM, FMA,RFC, SRL)
- Dry Floodproofing of Historical Residential Structures; (HMGP,PDM, FMA,RFC, SRL)
- Dry Floodproofing of Non-residential Structures; (HMGP,PDM, FMA,RFC)
- Minor Localized Flood Reduction Projects; (HMGP,PDM, FMA,RFC, SRL)
- Structural Retrofitting of Existing Buildings; (HMGP,PDM)
- Non-structural Retrofitting of Existing Buildings and Facilities; (HMGP,PDM)
- Safe Room Construction; (HMGP, PDM)
- Infrastructure Retrofit; (HMGP, PDM)
- Soil Stabilization; (HMGP, PDM)
- Wildfire Mitigation; (HMGP, PDM)
- Post-Disaster Code Enforcement; (HMGP)
- 5% Initiative Projects; (HMGP)
- Hazard Mitigation Planning; (HMGP, PDM, FMA)
- Structural hazard control or protection projects; (HMGP, PDM)

#### **2.1.5 Specific State Project Eligibility Criteria**

The State's hazard mitigation staff reviews all application forms to ensure that adequate information has been provided and that the project meets the

minimum eligibility requirements. The State's hazard mitigation staff is responsible for contacting the applicant to obtain any necessary additional information.

The SHMO then convenes a Review Panel consisting of HSEMD's hazard mitigation staff whose responsibility it is to prioritize or rank the projects in accordance with the criteria listed below based on the level of detail and documentation contained in the sub-grantee's application.

- Measures that best fit within an overall plan for development and/or hazard mitigation in the community, disaster area, or state.
- Measures that, if not taken, will have a severe detrimental impact on the applicant, such as potential loss of essential services, damage to critical facilities, or economic hardship on the community.
- Measures that have the greatest potential impact on reducing future disaster losses.
- Measures that are designed to accomplish multiple objectives, including damage reduction, environmental enhancement, and economic recovery.
- Measures that provide the greatest benefit of avoided damages as documented by a FEMA approved Benefit Cost Analysis (BCA) methodology.

The Review Panel must prioritize the eligible projects beyond the criteria that have been established above when funding is limited and requests for funding are high, particularly because of a disaster event.

Flood mitigation projects related to a flood disaster will be the first priority with the following additional criteria:

- Acquisitions/structural relocations of primary owner/occupied residences will be given the highest priority.
- Elevation of qualifying residential structures and/or acquisition/structural relocation of secondary and rental residential structures will be the next priority.
- Acquisition of commercial structures and vacant lots will be the next priority.

Disaster 1763 was a presidential declaration due to catastrophic flooding in the summer of 2008. Due to the thousands of residential and commercial properties substantially damaged and destroyed from this disaster, projects being considered for funding under DR-1763 will be funded in the following order:

- 1.Acquisition/demolition of primary owner/occupied property that are certified as substantially damaged or condemned due to flooding.
- 2.Acquisition/demolition of rental property occupied at the time of the flood event as the renters primary residential property certified as substantially damaged or condemned due to flooding.

3. Acquisition/demolition of secondary or recreational property certified as substantially damaged or condemned due to flooding.
4. Acquisition/demolition of commercial property certified as substantially damaged or condemned due to flooding.
5. Open for other projects that will result in protection to public or private property, should sufficient funding be available to fully fund the above identified properties. Eligible projects include, but are not limited to:
  - Structural hazard control or protection projects;
  - Construction activities that will result in protection from hazards;
  - Retrofitting of facilities to include the construction of tornado shelters;
  - Development of state or local mitigation standards;
  - Development of comprehensive hazard mitigation programs with implementation as an essential component; and
  - Development of improvement of warning systems
6. Lastly, properties that are not funded will be stacked for funding consideration should funds become available. The State will give consideration to modifying the above criteria in situations where the applicant demonstrates an overall property acquisition plan that includes specific acquisition target areas in the community that are particularly vulnerable to future flooding.

After consideration has been made for acquisition projects as mentioned above, the State will consider all eligible HMGP project types that will reduce or eliminate losses from future natural disasters. Eligible projects include but are not limited to the construction of safe rooms, structural and non-structural retrofitting of existing public buildings, facilities, or utilities, minor structural hazard control or protection projects such as storm water management, and localized flood control projects designed specifically to protect critical facilities. When funding constraints are an issue, each structure is ranked by the benefit-to-cost ratio. Each structure and each project is evaluated utilizing the current FEMA Benefit Cost Analysis (BCA) version. The BCA ratio is strongly considered in the ranking of projects as well as structures within projects when applied to acquisition, relocation or elevation projects. In addition to the above selection criteria, the Review Panel takes into account the applicant's level of interest and demonstrated degree of commitment to hazard mitigation actions and programs. Following a review by the SHMT, the SHMO (or the SHMO on behalf of the SHMT), makes a formal recommendation to the Governor's Authorized Representative (GAR) or the Director of HSEMD, as to which projects should be selected for funding and the order in which they should be funded.

Finally, the SHMO and grant management staff work to ensure that all applicants are notified of the decision made relative to their proposed project. For those projects that have been selected, the SHMO determines if the applicant still intends to carry out the project and if it would carry out the project with the level of funding tentatively approved. Those projects that were approved but not selected can still be eligible under other FEMA HMA programs when funds are available.

**2.1.6 Determining Cost Effectiveness**

Establishing priorities for local assistance and ensuring that the eligibility criteria for multi-hazard mitigation measures required by federal regulation, is integrated with the State’s evaluation of the cost effectiveness of mitigation measures. This capability is met by ensuring staff are trained and training is provided to applicants consistent with OMB Circular A-94, Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs, a requirement of CFR 44 201.5(b)(2)(ii). The June 2009 BCA Reference Guide is another resource used by mitigation staff.

Iowa has maintained a strong record of conduct and performance related to performing BCA. All hazard mitigation staff maintain some level of training related to FEMA modules for BCA, and HSEMD sponsors training on BCA for local officials.

For all projects submitted under the HMGP, FMA, RFC, and PDM programs since 1993, the State mitigation staff have completed or provided technical assistance in completing detailed BCA. Projects involving flood mitigation buyouts, relocations and elevations have been further evaluated to determine a structure-by-structure analysis in order to rank applications and individual structures. All proposed mitigation projects that are submitted under the FEMA HMA grant program must show that they are credible, well-documented, prepared in accordance with FEMA BCA practices and demonstrate the project is cost-effective with at least a ratio of 1 to 1. This ensures that the project will result in reduced damages in the future and justifies costs for the project.

Currently there are 24 mitigation staff members with the expertise to complete HMA project cost effectiveness evaluation. The State Mitigation Project Officers attended Benefit-Cost Analysis training for version 4.8 provided by FEMA in November of 2012.

The following chart demonstrates an estimated total # of BCA’s performed by HSEMD Mitigation Staff from 2010-2013. Actual numbers are higher, but documentation of the number of BCAs run during application development or as part of a budget adjustment is not easily attainable.

<b>HSEMD Mitigation - BCA Capabilities 2007-2010</b>		
<b>Project Type</b>	<b># BCA’s</b>	<b>Total \$ Amount</b>
<i>Acquisition/Demolition</i>	51	\$3,833,592
<i>Acquisition/Elevation</i>	0	\$0
<i>Drainage</i>	11	\$61,869,002
<i>Electrical</i>	38	\$141,317,073
<i>Safe Rooms</i>	50	\$39,903,327
<b>Total:</b>	<b>150</b>	<b>\$246,922,994</b>

The State mitigation staff have developed a high level of expertise in completing and validating BCA’s for all project types over the past several years. They lead in the preparation, review, discussion and response to both engineering and BCA review of submitted projects. All projects have extensive review and approval chain requirements prior to submittal to FEMA that are in place to insure that each submittal conforms to all eligibility requirements under all applicable codes and regulations, and is consistent with the requirements and information required by FEMA as determined by past submittals.

Following the receipt of the notice of interest (NOI) from the sub-applicant, the project proposal is reviewed for basic eligibility and determination that the minimum requirements have been met. Once this determination has been made, necessary documentation is gathered from the sub-applicant in order to evaluate best estimates and conduct a BCA analysis for project eligibility. Mitigation project questions addressed during this preliminary stage include:

- What problem is the applicant trying to solve? What is the hazard source?
- What damage(s) have the hazard(s) caused? What buildings, infrastructure, or people have been affected?
- How did the hazard cause those specific damages?
- What future damage or losses would be avoided by implementing a project? What is the ideal solution to the problem?

After all necessary documentation is received a preliminary BCA run determines whether or not the BCR of 1.0+ is met. If it does not meet the minimum BCR, mitigation staff works with the sub-applicant to gather further damage history and data to complete an accurate and complete benefit cost analysis for eligibility. Initial BCA work is completed by HSEMD staff prior to the applicant completing the application process to ensure resources aren't invested in a project that is not cost effective.

Mitigation staff continues to build upon their BCA capabilities to keep up with the continuously shifting BCA requirements. With the modification of the BCA system and evolving software, components of the BCA are not always reviewed on a consistent platform. With these occurrences, State mitigation staff have provided information to FEMA regarding inconsistencies and continue to discuss and provide feedback to FEMA when BCA software issues arise. The State Mitigation Section approaches these issues in order to make sure everyone is using the same software to achieve the same output and that there is consistency with all BCA ratios.

The results of the benefit cost analysis are a major factor in determining project eligibility however, other factors are dependent on funding availability and whether the project meets federal and state priorities and requirements as identified in this plan.

44 CFR 201.5(b)(2)(iii A-D): [The Enhanced Plan must demonstrate] that the State's has the capability, to effectively management the HMGP as well as other mitigation grant programs, [and provide] a record of the following:

- Meeting HMGP and other mitigation grant application timeframes and submitting complete, technically feasible, and eligible project applications with appropriate supporting documentation;
- Preparing and submitting accurate environmental reviews and benefit-cost analyses;
- Submitting complete and accurate quarterly progress and financial reports on time; and
- Completing HMGP and other mitigation grant projects within established performance periods, including financial reconciliation.

## 2.2 Project Management Capability

### 2.2.1 State Grant Management Capability

For Iowa, the approach to creating and maintaining the capability to effectively manage the HMGP as well as other mitigation grant programs, has involved the creation of a permanent framework for interagency cooperation known as the SHMT. The SHMT priority and the focus of hazard mitigation grant programs in Iowa have led to joint efforts to concentrate on immediate hazard mitigation opportunities related to numerous flood disaster events since 1993. The SHMT framework supports this process by providing a mechanism for long-term approaches to specific hazard mitigation initiatives.

HSEMD participates as the primary manager of FEMA hazard mitigation programs. A great deal of emphasis is placed on planning under Iowa's management to create an environment where mitigation initiatives are identified in the pre-disaster environment. Planning for hazard mitigation prior to the disaster enhances the management of the grant programs by allowing the state to work through the unique characteristics of each program so

that communities are not negatively impacted by program differences.

As detailed in the previous section, Project Implementation Capability, Iowa institutes a system and grant management process that effectively manages mitigation grant programs of all types. The developed and implemented grant administrative plan(s) and associated fiscal/financial guidance provide the framework leading to the submission of complete, technically feasible and eligible project applications with the appropriate supporting documentation. In submitting project applications, Iowa completes an eligibility review checklist, completes all Benefit Cost Analysis, participates in the environmental compliance process and submits accurate and timely quarterly progress and financial reports. Iowa has developed a local/state grant agreement process that establishes strict performance periods and lead to a financial reconciliation and closeout process for mitigation grants. Please see section 3.6. Grant Management – Accurate and Timely Progress and Financial Reporting for further details.

### 2.2.2 Program Management Staffing Support and Responsibilities

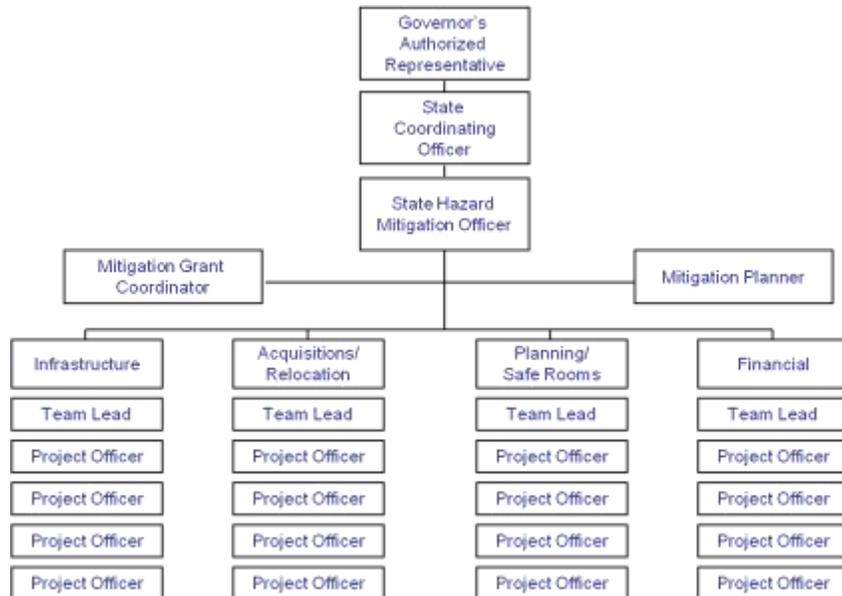
The Director of the HSEMD or designee serves as the Governor's Authorized Representative (GAR). The Director of the HSEMD will recommend to the Governor the appointment of a State Coordinating Officer (SCO) and a State Hazard Mitigation Officer (SHMO). The SHMO is the official who has overall responsibility for the coordination, implementation and administration of the HMGP. The SHMO monitors compliance with federal requirements and involves appropriate federal, state, and local governments

in the pre- and post-disaster hazard mitigation program activities.

**Staffing**

The organizational staffing structure in support of HMGP will be flexible and capable of expansion, depending upon the estimated number of applicants for the HMGP and other mitigation programs and the type of disaster. At a minimum, the staff consists of the State Hazard Mitigation Officer (SHMO), a Mitigation Finance Officer (MFO), a State Hazard Mitigation Grant Coordinating Officer (SHMGCO), HSEMD’s Recovery Bureau Chief, and appropriate members of the State Hazard Mitigation Team (SHMT).

**Hazard Mitigation Grant Program Organizational Chart**



If necessary, the GAR will hire or assign staff to assist the SHMO in providing program support. This staff may be provided in the form of contractual services. The need for such hires is determined by the SHMO throughout program implementation and may vary from start to completion of a grant program.

**Grant Program Management Responsibilities**

**State Hazard Mitigation Officer (SHMO)**

The SHMO serves as team leader of the HMGP and has the overall management responsibility for the program. He/she is the state official who is ultimately responsible for ensuring that the State properly carries out its Section 404 and Section 322 responsibilities subsequent to a Presidential Disaster Declaration and applicable grant management regulations. In this regard, the GAR/SCO/SHMO monitors the activities of the SHMT. These responsibilities are consistent regardless of the grant program that is being managed.

Specifically the SHMO will:

- Ensure Iowa’s 404 grant administrative plan(s) are updated, outlining how the State will administer the program.
- Ensure all potential applicants are notified of the programs and receive the assistance to which they are eligible.
- Ensure an initial application and any necessary supplemental applications, including Standard Form 424 (SF 424) are prepared for GAR/SCO review and signature in a timely manner.
- Ensure technical assistance is provided to potential

- applicants and/or eligible Subgrantees.
- Ensure the distribution of financial assistance to eligible Subgrantees is done in a timely manner and in accordance with existing procedures.
  - Ensure approved projects are monitored to completion in federally required time frames.
  - Ensure Subgrantee accounts are monitored and in compliance with 44 CFR, Part 13.
  - Ensure appropriate state agencies are represented on the SHMT, are involved as necessary with the Interagency Hazard Mitigation Team (IHMT) and the Hazard Mitigation Survey Team (HMST), and assist in the development of the Section 322 Plans.
  - Ensure participation of the appropriate state agencies that are needed to review selected mitigation measures.

The State is responsible for ensuring that potential applicants are notified of the availability of hazard mitigation funding and of program requirements. The method to be used in notifying applicants will be determined by the SHMO for each grant program disaster but will normally include the following:

- Public Officials briefing.
- Engineer briefing(s) for the Public Assistance Program.
- The SHMO or designated representative will present information on the programs at the applicant briefing(s) in conjunction with the Public Assistance briefing(s). The local Emergency Management Coordinators, acting as agents for all Public Assistance applicants in their respective counties, can be instrumental in the identification and notification of potential hazard mitigation applicants.

- A press release describing the program may be developed and issued at the discretion of the SHMO and FEMA HMO. The press release would include a point of contact for obtaining additional program information.
- Announcement of HMGP Funds availability through:
  - E-mail to potential applicants, County Emergency Management Coordinators, Councils of Government.
  - HSEMD monthly newsletter.
  - HSEMD Web page.
  - Iowa Bulletin

### **Mitigation Finance Officer (MFO)**

Generally, the MFO is responsible to maintain Iowa's 404 Administrative Plan(s), which outline how the State will administer the grant program(s) and, on order, implement the plan when grant programs are authorized and funding becomes available.

In addition the MFO does the following:

- Compile and analyze financial information contained in grant proposals.
- Develop and implement procedures to establish a record keeping system to document financial information. Review payment requests to determine/validate eligible costs against the Subgrantee's approved scope of work and budget and applicable cost principles.
- Analyze expenditures in the form of either advances or reimbursements and evaluate requests for grant disbursements to establish and define eligible costs.

- Prepare balance sheets and detailed expenditure tracking for each grant recipient as well as other reports to summarize the current and projected financial status of HMA grants.
- Review pay requests and source documentation to ensure compliance with approved scopes of work and budgets. Coordinate with the State Fiscal Office (SFO) to initiate disbursements, financial revisions, request to decrease and close out the Letter of Credit, closing out the accounts (de-obligations) and processing bills for collection.
- Develop and implement a tracking system to ensure grant recipient compliance with applicable state and federal requirements.
- Develop and modify all necessary forms to be completed by each grant recipient.
- Coordinate the implementation of the HMA accounting and fiscal control procedures to be used by each grant recipient.
- Monitor the status of approved grants for processing time extension requests, appeals, and grant closeouts.
- Develop and implement a system for departmental accounting to document the use of administrative and managerial funds applicable to the HMA.
- Draft Grant Agreements between HSEMD and Subgrantees and conduct grant award meetings with grant recipients, and also provide technical assistance to the Subgrantees.
- Monitor hazard mitigation grants to ensure compliance with the 44 CFR, Part 13, Part 201, and Part 206 (Subparts M and N) and the Single Audit Act and other applicable regulations.
- Review, recommend, and submit amendments to a Subgrantee's approved hazard mitigation grant to FEMA Region VII when appropriate.
- Conduct HMA grant closeout meetings with grant recipients and appropriate federal and state agencies.
- Track and monitor budget information on each grant recipient and hazard mitigation personnel.
- Compile financial information on open hazard mitigation grants and submit progress and financial reports to FEMA Region VII in a timely manner. Assist and provide financial information to other hazard mitigation staff, public assistance staff, state auditors, federal auditors, and local auditors as needed.

### **State Hazard Mitigation Grant Coordinating Officer (SHMGCO)**

A SHMGCO may be hired or designated to assist the SHMO to carry out the program coordination, implementation and administration. The SHMGCO will accomplish the necessary program work required of the State to deliver the HMGP to eligible Subgrantees as tasked by the SHMO.

Specifically the SHMGCO shall:

- Develop and implement a process for identifying potential hazard mitigation grants and prioritizing those grants.
- Coordinate with the SHMO in determining the composition of the IHMT, SHMT or HMST and scheduling activities.

- Notify potential applicants of the program and brief them with appropriate handout materials on elements of the program.
- Coordinate with State Public Assistance officials to ensure that they understand the involvement of the hazard mitigation effort in the Public Assistance Program to avoid duplicating activities.
- Prepare and submit the initial HMGP applications and any supplemental applications per federal requirements.
- Provide technical assistance to potential applicants and/or eligible Subgrantees in developing and submitting applications and completing project requirements throughout the grant performance period.
- Determine the cost-effectiveness of potential hazard mitigation grants.
- Coordinate with other hazard mitigation staff members.
- Assist with mitigation planning and activities at the state and local levels.
- Coordinate activities with appropriate state agencies and involve them in meeting Section 322 requirements.
- Involve the appropriate local agencies, especially the local Emergency Management Coordinators, in the implementation of mitigation initiatives.

### **State Hazard Mitigation Project Officer (SHMPO)**

- Provide technical assistance to potential applicants and/or eligible subgrantees in developing and submitting applications and completing project requirements throughout the grant performance period.
- Assist in developing and modifying hazard mitigation application materials.
- Assist in identifying potential HMGP projects.
- Serve as a liaison between potential applicants and/or eligible Subgrantees and FEMA Region VII.
- Review hazard mitigation applications to determine project eligibility.
- Determine the cost effectiveness of potential hazard mitigation projects.
- Review, recommend, and submit Subgrantee hazard mitigation applications to FEMA Region VII.
- Notify Subgrantees of FEMA's and the State's determination of project eligibility.
- Prepare written correspondence to local, state, and federal entities as needed.
- Assist communities with local mitigation planning.

### **State Hazard Mitigation Team (SHMT)**

- The SHMT functions on both a day-to-day and disaster basis. Its ongoing responsibilities and work activities are delineated in the State Hazard Mitigation Plan. The SHMT is authorized to request participation from local governments, federal government, and private industry as needed.

It is the State's responsibility to ensure that potential applicants for the hazard mitigation grant programs are identified. This is primarily accomplished by the SHMO through the following means:

- Information acquired during the Preliminary Damage Assessment (PDA).
- Consultation between the SHMO and the SHMT.
- Review of the State and Local Hazard Mitigation Plans.
- Consultation between the SHMO and the FEMA program representative.
- Information provided by the Damage Survey Teams.
- Outreach efforts conducted by state and federal hazard mitigation staff.

### 2.2.3 Preparation and Involvement in the Environmental Review Process

Part of project implementation capability involves compliance with environmental laws, regulations, and executive orders. The state's role is to coordinate with applicants, state agencies, and the FEMA to ensure all appropriate environmental and historic preservation considerations and requirements are taken into account and properly documented, and to provide this documentation to the Regional Environmental Officer (REO) with FEMA for review and approval.

To fulfill this role, HSEMD performs the following tasks:

- Provides technical assistance to applicants in the planning, application, and implementation stages of the Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA) program, Repetitive Flood Claim (RFC), and Pre-Disaster Mitigation (PDM) projects to ensure the completeness and accuracy of environmental information
- Consults with appropriate agencies during planning
- Considers viable alternatives to the proposed project, particularly when environmental issues or impacts are identified
- Provides thorough and accurate information regarding project details and environmental issues
- Serves as the Liaison between the REO, applicant, and State Historical Preservation Office (SHPO) during the historical and environmental review process

The State of Iowa began incorporating activities to support the environmental review process following the 1993 Flood Event (FEMA-DR-966). At that time, the State, with FEMA assistance, developed a guidance document designed to ensure HMGP acquisition-demolition projects complied with environmental and historic preservation laws and applicable Executive Orders. Although the document was developed to facilitate the environmental review process for acquisition-demolition projects, the information provided also applies to construction projects.

The document addresses both state and federal environmental law requirements. This document is reviewed and revised as necessary. Circumstances that trigger a review/revision include:

- changes in state agency responsibilities,
- changes in state or federal environmental laws and Executive Orders,
- events that could result in a preliminary damage assessment,
- a disaster declaration, and
- additional FEMA environmental guidance.

This document contains a summary of applicable environmental laws and Executive Orders, state and federal agency points of contact, and applicant responsibilities. The applicant is also provided with instructions on how to complete required documentation as well as examples of completed compliance documentation.

As the FEMA environmental review process became more defined and FEMA technical assistance and training provided opportunities for the state staff to increase its capacity to perform environmental tasks identified above, the state incorporated more environmental activities into the state's mitigation program.

These activities include:

- Participating in consultation meetings with the FEMA Regional Environmental Officer (REO) and other federal and state agencies, particularly the State Historic Preservation Office (SHPO) staff.

- Incorporating the National Environmental Policy Act review process into the state local mitigation planning process guidance.
- Providing information to applicants regarding the environmental laws and Executive Orders that are applicable for specific objects.
- Incorporating 44 CFR Part 9, floodplain and wetland review (Executive Orders 11988 and 11990), into the state review process for HMGP and FMA projects.
- Incorporating 44 CFR Part 10, NEPA implementation, into the state review process for HMGP and FMA projects. (Note: FEMA incorporates the information and compliance process for other environmental laws into the NEPA review process set forth in 44 CFR Part 10.
- Collecting and analyzing environmental information and making recommendations to FEMA regarding compliance. Examples of relevant environmental information include:
  - Project scope of work
  - Project area of potential impact
  - Proximity of waterways, water bodies, floodplain, floodways, potential wetland areas
  - Public notices, public meetings, and public interest (if public interest identify issues, specific organizations such as neighborhood groups, information that has been provided by applicant/state, public input, public meetings held or scheduled, etc.)
  - Maps of project area
  - Prime farmland areas, if applicable
  - Archeological, historical, or cultural resources within the area of potential effect
  - Threatened and endangered species and habitats in area of potential effect

- Low income and minority populations and socio-economic concerns
- Coordinate the historic preservation 106 review process, including assisting applicants to complete required inventory forms, reviewing documentation, and making recommendations to FEMA regarding compliance. If FEMA determines the action will have an adverse impact, participating in consultations with the SHPO staff to develop appropriate mitigation measures and, if the project proceeds, monitoring implementation of mitigation measures.

The review process has helped in the development within HSEMD of some ideas for the future for improving environmental reviews:

- EMI environmental classes-check schedule and send staff member(s) to NEPA and/or Historic Preservation Training
- Expand Demolition Guidance to address environmental review (laws, POC, etc.) in general
- Establish review schedule—annual review to verify POC (in addition to revision triggers listed above)
- In-house training—REO FEMA responsibilities and preparing Categorical Exclusion (CATEX) review documentation means—In-house (state staff) state role
- In-house training—preparing NEPA documentation (levels of CATEX and appropriate level of documentation for each)

A special process was established specific to DR-1763, Iowa's catastrophic tornado and flood event, to prepare and complete Historic Preservation 106 Review. This was implemented through programmatic agreement between

HSEMD, SHPO, and FEMA Region VII Environmental Staff. This involved an in-depth examination of resources through reconnaissance surveys to evaluate 2008 flood projects in Iowa. HSEMD completed these reconnaissance surveys including approximately 5,000 properties in demolition areas which incorporated the following; architectural descriptions and potential for architectural element salvage, general historical information and references, geographic coordinates, photographs, historic maps and aerials, presence within a previously identified National Register Historic District, evaluations of the structure's potential eligibility for listing on the National Register of Historic Places and mitigation recommendations.

Upon completion of these surveys, HSEMD submits a copy of the draft survey report to the Certified Local Government for comment during a two week period. Following this comment period, the comments are incorporated into a survey report and a digital copy is submitted to the SHSI within the following week. Once SHSI reviews the findings, they either accept the survey or ask for additional information within 20 business days. The SHSI provides FEMA Special Considerations with a recommendation in the form of a letter of concurrence or non-concurrence and a digital copy of the survey immediately following review. Upon initiation of a federal undertaking FEMA identifies historic properties by reference to the SHSI letter of concurrence/non-concurrence.

The demolition of every structure within both Section 403 and Section 404 programs is carried out following low impact protocols – limiting disturbance to the footprint of the existing structure and emphasizing that the

contractors make reasonable efforts to avoid or minimize harm to any potential archaeological deposits.

The process outlined above created efficient methods for identifying thousands of historic structures, evaluating impact of demolition on existing historic districts and evaluating alternatives for revising or designating additional historic districts to complete the 106 Review following the major floods of 2008.

### 2.2.4 Grant Management-Accurate and Timely Progress and Financial Reporting

The HSEMD has the responsibilities of grant management and accountability of funds in accordance with the 44 CFR, Part 13, Uniform Administrative Requirements for Grants, Cooperative Agreements to State and Local Governments, Hazard Mitigation Assistance Unified Guidance, and 44 CFR Part 206. Approved Sub-grantees for HMA funding are accountable to HSEMD and FEMA for funds awarded to them.

- HSEMD lead Fiscal Officer coordinates with the State Fiscal Office to establish grant fund accounts. All Federal grant funds that have been obligated by FEMA are placed in an account with unique accounting classification.
- Allowable costs will be governed by 44 CFR, Section 13.22.
- HSEMD implements a record keeping and financial tracking system for each grant awarded based upon the approved scope of work. HSEMD also monitors and evaluates each grant awarded for adherence to the scope of work.

- Subgrantees submit progress reports to HSEMD. Quarterly reporting periods end on March 30, June 30, September 30, and December 30 for these reports. The MFO specifies the due dates for these reports. HSEMD ensures review and summarization of these reports. The reports are forwarded to FEMA Region VII mitigation staff and the FEMA Regional Administrator is notified accordingly. The reports indicate the status and completion date for each measure funded. Any problems or circumstances affecting completion dates, scope of work, or project costs which are expected to result in noncompliance with the approved grant conditions will also be described in the report. HSEMD ensures a final report is prepared with a complete assessment of project accomplishment(s). This report is also submitted per FEMA requirements.

The State Mitigation Finance Staff have developed a process for submitting timely, complete, and accurate comprehensive quarterly progress and financial reports for the HMA grant programs. This process is looked upon by FEMA Region VII and is encouraged to be used by other states as a template. The following summarizes the process followed by mitigation staff in meeting quarterly reporting requirements.

**Report Preparation:** Hazard Mitigation Finance updates each sub-grantee's Quarterly Progress report based on: the most recently submitted Quarterly Progress Report and any payment requests and/or match documentation processed since the last Quarterly Progress Report was submitted. Hazard Mitigation Finance electronically sends (e-mail) the updated Quarterly Progress Report to the subgrantee or their Authorized Representative.

**Sub-grantee Completes Report:** Subgrantee, or their Authorized Representative, completes the Quarterly Progress report making note of significant progress made in the quarter. Subgrantee, or their Authorized Representative, updates the completed or in progress milestones. Subgrantee, or their Authorized Representative, electronically submits the completed Quarterly Progress Report to Hazard Mitigation Finance within the specified time frame as outlined by HSEMD. Note: Final Quarterly Progress Reports need signatures, all others during the sub-grantee's Period of Performance require electronic confirmation.

**HSEMD Review:** Hazard Mitigation Finance reviews the submitted Quarterly Progress Reports and requests that the subgrantee makes revisions as needed. Hazard Mitigation Finance compiles all Quarterly Progress Reports from respective subgrantees and prepares reports for submission to FEMA.

**Submission:** Hazard Mitigation Finance in cooperation with State Comptroller's Office prepares state-wide summary Quarterly Progress Reports and submit to FEMA. Summary Quarterly Progress Reports are submitted to FEMA Region VII.

**FEMA Review:** FEMA reviews submitted summary Quarterly Progress Reports for compliance with applicable agreements and laws.

Upon FEMA HMA project approval, a Grant Agreement Meeting is coordinated with the sub-applicant to establish strict performance guidelines and explain the requirements for grant completion. The grant agreement is reviewed in its entirety including budget and allowable

costs, scope of work, legal requirements, and authorized representative prior to receiving signatures. Period of performance dates are re-enforced including plan approval dates and milestones as outlined in the application. The process for financial reporting and progress reporting is explained in detail. Budget, procurement procedures and the payment process are reviewed thoroughly to include methods of payment and match verification. Directive is provided on how to request budget amendments, change in SOW, and time extensions. The Financial Chart of Accounts is discussed with the subapplicant and a walk through of the Accounting Management System is presented. Finally, Fiscal Closing Procedures are discussed and reviewed following the Mitigation Project Closeout Checklist and records retention and audit requirements are reviewed. Resources provided to the sub applicant include:

- Finance Methodology Guide; Procurement Requirements and Regulations
- Hazard Mitigation Resources for Sub-grantees CD; Please see Annex 2-B for all acquisition, infrastructure, planning, and safe room project information provided on CD
- Budget Checklist for payment requests and closeouts
- Sample forms pertinent to the sub-grant

Technical assistance is provided to the subapplicant throughout the duration of the grant period of performance. On site and desk top monitoring ensure that up to the point of payment request all state and federal project requirements are met. Close monitoring of grant

activity leads to a final reconciliation and closeout process for all HMA grants.

- Subgrantees maintain financial records and receipts necessary to document all their expenditures relative to their projects.
- Audits
  - The HSEMD and each subgrantee ensure that audits are conducted in accordance with the Single Audit Act, Single Audit Act Amendments of 1996 (effective July 1, 1996), and OMB Circular A-133 (as amended).
  - HSEMD Grants Bureau Chief reviews audits for the grantee and subgrantee and report any problems to the SHMO and FEMA.
  - The GAR directs the SHMO/MFO or HSEMD Administration Bureau Chief to take the appropriate or required action.
  - If FEMA elects to conduct a federal audit of the grant program, the grantee and subgrantee cooperate as necessary.
- The SHMO, in coordination with the MFO, will schedule and conduct grants monitoring visits with subgrantees.
- The SHMO, in coordination with the MFO, will ensure the review of funding requests, time extension requests, cost overruns, and appeals are completed. The SHMO will also coordinate project close-outs.

#### Project Completion and Close-out:

HSEMD is notified in writing by the Sub-grantee when all work has been completed on approved projects. The written notification will include documentation for unpaid expenditures. The SHMO/MFO will have the documentation reviewed to ensure that all claims and

costs are eligible and that work performed is in compliance with the approved project application. Once the final federal payment has been made, the MFO will close the Sub-grantee's file. When all projects have been completed and all files closed, HSEMD's Grant Bureau Chief will close out the Letter of Credit. The MFO will then prepare a final report indicating project closeout and notify FEMA Region VII.

### 2.2.5 Overview of Hazard Mitigation Grant Funds Disbursed to Subgrantees

#### Compilation and Analysis of Financial Information

The Hazard Mitigation Grant Program has recently been the most critical program for Iowa, based primarily on the amount of grant funding made available. The HMGP is the driving grant source behind local government interest in hazard mitigation programs and projects. However, it is also true that annually funded programs like the Flood Mitigation Assistance (FMA) and Pre-Disaster Mitigation (PDM) grant program provide the means to sustain the program long-term. FEMA grant programs in Iowa resulted in funds totaling more than \$80 million from 1990-2006.

There was an estimated total of \$430 million in funding availability for projects under grants DR-1688, DR-1705, DR-1727, DR-1737, DR-1763, DR-1854, DR-1877, and DR-1880 during the 2007-2010 data cutoff time period. From April 2010 to April 2013 there is an estimated \$50 million in funding availability for projects under grants DR-1928, DR-1930, DR-1977, DR-1998, DR-4016, DR-4018. The majority of this funding is provided through the HMGP and funds were ongoing due to the frequency,

severity, and magnitude of disaster events during this time period.

The areas of hazard mitigation specifically supported by FEMA grant programs in Iowa include:

- Acquire, relocate, or elevate structures located in flood hazard areas;
- Protect critical public facilities and important commercial and business areas;
- Enhance statewide National Oceanic and Atmospheric Administration (NOAA) Weather Radio transmitter coverage and better provide “all hazard” early warning capability;
- Construct tornado safe rooms in public facilities and schools;
- Support the development and adoption of Local Hazard Mitigation Plans and enhance the capability of communities for effective hazard analysis and risk assessment; and
- Educate and market hazard mitigation to Iowa citizens and to promote safer homes and safer more disaster resistant communities.
- Utility System Retrofits

Iowa’s grant priorities have consistently targeted locally identified projects to remove residential and commercial structures from flood hazard areas. Diligent attention is used in evaluating all funded projects to determine the likely economic benefit through use of BCA. Iowa’s criteria for grant funding not only ensure that the greatest number of flooded homeowners are provided with assistance, but also prioritizes funding to ensure the greatest benefit in avoided future damage.

Among Iowa’s leading efforts in mitigation is the acquisition and removal of residential and commercial structures from flood hazard areas. Prior to the 2008 flood event, Iowa funded projects in 71 separate jurisdictions removing 1,447 flood prone structures from identified flood hazard areas. The total investment of over \$70 million is expected to result in benefits in the form of eliminated future damages exceeding \$141.1 million over 50 years, the average lifetime of the project.

Following the floods of 2008, the 2008 Iowa Mitigation Success Story – Avoided Losses through Property Acquisition and Relocation for Open Space completed by the HSEMD mitigation staff demonstrates a total of \$98,707,438 of losses avoided due to past mitigation measures. This study captures 12 Iowa communities that experienced losses avoided during the catastrophic flooding event that occurred in 2008 due to prior removal of structures in special flood hazard areas and conversion of the property to open space. The communities evaluated in this study had a significant number of acquisitions from past events and experienced at least a 100+ flood event in 2008. A total of 703 properties included in this study would have flooded again due to the magnitude and severity of the 2008 floods. Although this study only took into consideration the larger past Iowa buyout projects, substantial additional losses were avoided throughout the state due to smaller projects from other events. This study illustrates the importance of continuing to implement mitigation measures in the State of Iowa. This loss avoidance study as well as others can be located in Section 1.6 Annex – A.

One aspect of managing mitigation grants has been the leadership role that the mitigation staff plays in addressing long term housing recovery needs in the aftermath of severe flooding. Subsequently, an additional benefit of acquiring and removing residential structures is that the proven cost effectiveness is enhanced by contributing to the effectiveness of the recovery process through quick and efficient delivery of community home acquisition and relocation projects. HMGP funding has been utilized to address flood impacted areas to nearly eliminate needs associated with short term replacement housing, Individual Assistance, under insured or uninsured housing or home rehabilitation needs.

Protection of critical public facilities is one of Iowa's leading types of mitigation measures. A natural hazard event which disrupts or shuts down wastewater treatment systems, electrical generation facilities, and water treatment plants serves to magnify the effects of a disaster event and encompass citizens and areas otherwise not directly impacted. Great benefit has been achieved by ensuring that critical public facilities are sufficiently protected from hazards and risks, often times ensuring that the impacts of natural hazards do not become a "disaster event."

### 2.2.6 Audit Documentation of Program Management Capability

The State of Iowa has effectively demonstrated its capability to manage the HMGP and other grant programs such as the Flood Mitigation Assistance Program (FMA) and the Pre-Disaster Mitigation Program (PDM). This demonstration of effectiveness can be shown by the results of an audit performed in November of 2001, on the

HMGP as administered by HSEMD. Since the administrative procedures for the FMA, RFC, and the PDM programs are identical to those for the HMGP, the audit results of the HMGP apply equally to the other two programs. The audit originated from the requirements of the Single Audit Act Amendments of 1996 that require the grantees (states) and subgrantees to undergo an audit in accordance with terms of the Act.

Among the requirements are administrative plans that are required by the Robert T. Stafford Disaster Relief and Emergency Act (the Stafford Act), Chapter 44 of the Code of Federal Regulations (44 CFR) for hazard mitigation programs, and the auditing requirements of the Office of Management and Budget (OMB) Circular No. A-133. For a fuller explanation of this plan, refer to section 1.5 of the standard plan under Local Funding and Technical Assistance. FEMA requires this administrative plan to ensure that grantees are prepared for future disasters, and that state policies and procedures will effectively accomplish grant goals.

Grantees must submit administrative plans or updates, amendments, and/or plan revisions for hazard mitigation programs at the start of each disaster. Administrative plans must be approved by the FEMA regional director. Exact requirements for the state administrative plan are located in 44 CFR 206.437.

The audit commenced with a contract between FEMA and Cotton & Company LLP signed on July 16, 2001, to audit the grant management process of HSEMD for three disaster awards by FEMA under the Stafford Act. The objectives of the audit were to determine if HSEMD administered FEMA grant programs according to federal regulations, properly accounted for and used FEMA

program funds, and submitted accurate financial expenditure reports. The audit report focused on HSEMD systems and procedures for assuring that grant funds were managed, controlled, and expended in accordance with applicable laws and regulations, including the Stafford Act and 44 CFR.

The audit covered three major disasters declared by the President of the United States between July, 1998, and July, 1999 (Disaster Nos. 1230, 1277, and 1282.) In determining if HSEMD was administering FEMA grant programs according to federal regulations, the auditors examined all material aspects of the grant cycle including:

- Administrative Plan
- Subgrantee Award Process
- Project Completion
- Project Closeout
- Subgrantee Monitoring
- Administrative Costs
- Cost-Share Requirements

In order to assess compliance and performance with grant management provisions, the auditors selected and tested hazard mitigation projects to determine if the projects were administered within program guidelines. Both open and closed projects were reviewed, but the auditors focused on evaluating HSEMD internal controls and procedures to identify internal control system weaknesses or noncompliance issues. The auditors also evaluated how HSEMD accounted for and used FEMA program funds to assure that HSEMD had internal controls and procedures in place to account for program funds and safeguard federal assets. They also reviewed HSEMD financial reporting process to assure that it submitted accurate

financial expenditure reports. This was accomplished by reviewing several financial reports submitted by HSEMD and reconciling the reports to accounting systems established by FEMA and the State of Iowa, FEMA's databases, and HSEMD Federal Cash Transaction Reports.

The audit was conducted in accordance with FEMA's Consolidated Audit Guide for Grantee Audits of FEMA Disaster Programs from the Office of the Inspector General and also in accordance with the U.S. General Accounting Office's Government Auditing Standards as prescribed by the Comptroller General of the United States. The Consolidated Audit Guide is designed to assist auditors to perform audits at the grantee level. It is divided into two sections. The first discusses the background, objectives, audit planning, other considerations, and establishes certain requirements to perform the audit. The second section contains fieldwork and reporting requirements.

The outcome of the audit was that there were no findings against the administration of hazard mitigation programs by HSEMD. This means a number of things. First, it means that all seven parts of the grant cycle mentioned above were being administered correctly according to federal regulations. This in turn means that the administrative plan complied with the requirements of CFR 44, that the subgrantee award process was administered correctly, that project completions and closeouts were accomplished in a timely manner, that subgrantee monitoring was effective, and that administrative costs and cost-share requirements were kept within authorized bounds. Second, all program funds from FEMA were accurately accounted for and all financial expenditures were accurate. Third, all financial expenditure reports were correct. Fourth, the financial

reports that were reviewed were reconciled satisfactorily with the accounting systems, databases, and reports mentioned above. Fifth, all of HSEMD internal controls and procedures were in compliance with the Stafford Act and 44 CFR and were functioning satisfactorily.

HSEMD most recent State audit was completed by the Office of Auditor of State on March 18, 2013 for the entire Department of Public Defense with no instances of non-compliance that were unable to be addressed with a response and plan for corrective action.

As a result of these audits, it is evident that the State of Iowa through the HSEMD has soundly demonstrated its capability to manage hazard mitigation programs. The requirements of these programs have been met in a timely, complete, and accurate manner.

### 2.3 Evaluation of State laws, regulations, policies, and programs

44 CFR 201.4(c)(3)(ii): [The State mitigation strategy shall include a] discussion of the State's pre-and post-disaster hazard management policies, programs, and capabilities to mitigate the hazards in the area, including: an evaluation of State laws, regulations, policies, and programs related to hazard mitigation as well as to development in hazard-prone area [and] a discussion of State funding capabilities for hazard mitigation projects...

The SHMT conducted an evaluation of state laws, regulations, policies, and programs related to pre-and-post hazard mitigation. Applicable laws and policies are addressed at the state, city and county level and are identified in their respective ordinances, statutes, regulations and adopted policies. Following the floods of 2008, the State of Iowa passed several legislative initiatives to address comprehensive programs covering the disaster recovery process, development in hazard-

prone areas, economic impact, and mitigation related programs. Many of the previously highlighted legislative programs were specifically tied to recovery from the devastating floods of 2008. Listed below are select pieces of current legislation with a brief description of the mitigation-related benefits each provides.

#### New Legislation

##### **SF2217 – Iowa Flood Mitigation Board**

The Flood Mitigation Board was created by the Iowa Assembly and signed into law by Governor Branstad in 2012. The board is charged with creating a flood mitigation program for Iowa. This program will allow certain governmental entities to submit flood mitigation projects to the Board for review and possible approval for funding. The funding will come from either sales tax increments or funds appropriated by the General Assembly.

#### Continued Legislation

##### **HF822 – Iowa Flood Center and Flood Prevention.**

The State Board of Regents shall establish and maintain in Iowa City as a part of the State University of Iowa an Iowa Flood Center. Appropriation of \$1.3 million for an Iowa Flood Center to develop hydrologic models, frequency and flood forecasting and improve flood monitoring and predictions, share resources and expertise, and develop a workforce knowledgeable regarding flood research, prediction, and mitigation strategies. Research and education conducted by the Iowa Flood Center is funded by the State of Iowa with additional support for Center projects from Iowa Department of Natural Resources, The

National Science Foundation, National Aeronautics and Space Administration, The University of Iowa and the City of Coralville. Center research and education program collaborators include Iowa Department of Natural Resources, Iowa State University, National Weather Service, National Oceanic and Atmospheric Administration, National Resources Conservation Services, U.S. Army Corps of Engineers, Rock Island District, and the Communities of Elkader, Des Moines, Charles City, Iowa City, Coralville, Cedar Rapids, Cedar Falls, and Waterloo.

This bill also provides \$2 million for a new floodplain management program through IDNR that focuses on improving floodplain mapping using LiDAR, assisting local entities with permits and planning, increasing the number of inspections for safety and structural integrity of dams and levees, developing a statewide flood control plan, and assisting emergency management teams with flood events.

The IFC is currently engaged in flood projects in several Iowa communities and employs several graduate and undergraduate students participating in flood-related research. IFC researchers have designed a cost-efficient sensor network to better monitor stream flow in the state; have developed a library of flood-inundation maps for several Iowa communities; and are working on a large project to develop new floodplain map for 85 of Iowa's 99 counties.

The IFC is also providing technical engineering expertise in collaboration with IDNR and FEMA on the Risk MAP program to update floodplain maps in the Iowa.

#### **HF2459 – Floodplain Management.**

Establishes a Watershed Planning Advisory Council to review research and make recommendations to various state entities regarding methods to protect water resources in the state, assure an adequate supply of water, mitigation and prevent floods, and coordinate the management of those resources in a sustainable, fiscally responsible, and environmentally responsible manner.

These Authorities can work alongside the WRCC to reduce risk and improve water quality, create economic incentives, implement urban storm water control programs, wetland restoration and creation, assigning responsibility for monitoring flood risk, flood mitigation, coordinate with federal agencies and involve cities, counties and other local and regional public and private entities in watershed improvement.

#### **SF2389 – Smart Planning.**

Established 10 Iowa smart planning principles for state agencies, local governments and other public entities to use in preparing economic growth and to mitigate future disasters. It also provides local comprehensive planning and development guidelines for creating and updating comprehensive plans. Another important component of the bill establishes the Iowa Smart Planning Task Force to consult with land use experts, representatives of local governments, individuals with agricultural and environmental interests, urban and regional planning experts, and the public to develop statewide goals, evaluate and develop incentives for comprehensive planning, and develop recommendations for state comprehensive planning programs. This initiative provides resources for evaluating and identifying hazards and

mitigation within communities throughout the state. The comprehensive plans shall take into consideration the following;

- Current and future development effecting structures located in the flood plain of a river or stream
- Evaluate land development regulations and flood plain or storm water ordinances, rules or regulations
- Identify current and future flood control boundaries, drainage, and removal, current and potential impacts on local watersheds, and current and future provision of utilities
- Review objectives, policies, and programs guiding future development of sanitary sewer service, storm water management, wastewater treatment technologies, telecommunications facilities; estimates regarding future demand for such utility services
- Review objectives, policies, and programs that identify the natural and other hazards that have the greatest likelihood of impacting the community or that pose a risk of catastrophic damage as such hazards relate to land use and development decisions, as well as the steps necessary to mitigate risk after considering the local hazard mitigation plan approved by the Federal Emergency Management Agency
- Identify opportunities to collaborate and partner with neighboring jurisdictions and other entities in the region for projects of mutual interest
- Address prevention and mitigation of, response to, and recovery from a catastrophic flood
- Coordinate development of the area and the general welfare, convenience, safety, and prosperity of its people; may include recommendations with respect to secure safety from fire, flood, panic and other dangers, drainage protection against floods and other disasters,

location of private and public utilities, and zoning regulations and restrictions for the purpose of preventing airport hazards

**HF759 – Flood Insurance.**

All counties and cities in the State of Iowa that have an effective flood insurance rate map or flood hazard boundary map published by the federal emergency management agency that identifies a special flood hazard area within the political boundaries of the county or city shall meet the requirements for participation in the national flood insurance program administered by the federal emergency management agency on or before June 30, 2011. Communities that do not join by that date will no longer be eligible for state cost share (average 10%) for Public Assistance in federal declared disasters. If the community does not have a flood hazard boundary map or flood insurance rate map, they must meet the requirements within twenty four months from the effective date of any future flood maps.

**SF457 - Disaster Recovery Housing Project Tax Credit.**

This bill provides income tax credits on individual, corporate and franchise taxes for the development of disaster recovery housing projects within a declared major disaster area and within disaster revitalization areas. The project must be designed to avoid, prevent, or mitigate the effects of a future natural disaster. The maximum amount of credits issued cannot exceed \$3 million in each of the five tax years, or \$15 million total from 2011 through 2017. This legislation provides assistance in the economic recovery of communities effected by presidentially declared disaster events.

## 2.4 Development in Hazard prone areas

The State of Iowa has building codes for state owned facilities and encourages, but does not require, local jurisdictions to adopt the most current State Building Code. State policies related to development in hazard prone areas have not significantly changes in the past three years. In 2006, the State adopted a new State Building Code and a State Historic Building Code. Both became effective January 1, 2007; however compliance for state owned facilities will not become mandatory until April 1, 2007.

The State Building Code's core provision is the adoption by reference of the International Building Code 2006 edition. This code provides a comprehensive set of standards and requirements for structural and life safety in building construction. The State Historic Building Code is based upon the provisions of the International Existing Building Code, 2006 edition.

Iowa Code section 103A.8C, which was enacted as part of 2009 Iowa Acts, Chapter 142, authorizes the Building Code Commissioner to adopt standards for the design and construction of safe rooms and storm shelters. The rules in this chapter do not require the construction of a weather safe room or rooms for any construction project but establish standards for design and construction of weather safe rooms when their construction is required by another provision of law or is incorporated voluntarily in a construction project.

The Iowa Department of Natural Resources (DNR) has authority (Iowa Administrative Code, Title V, Chapters 70-75) to regulate construction on floodplains and floodways

in the state. Floodplains in rural areas where the drainage area is 10 square miles or greater and unincorporated (urban) areas where the drainage area is 2 square miles or greater fall within the jurisdiction of the DNR. Examples of floodplain or floodway development where DNR approval is required include:

- Agricultural Levees and Dikes
- Bridges and Roads
- Channel Changes
- Commercial, Industrial and Multi-Unit Residential Development and Associated Fill
- Culverts and Roads
- Earth Embankment Dam
- Low Head Dam
- Miscellaneous Obstructions
- Pedestrian Bridges and Roads
- Single Family House
- Streambank Protective Devices: Basic Method
- Streambank Protective Devices
- Waste or Water Treatment Facility

### 3 Local Capability Assessment

44 CFR 201.4(c)(3)(ii): [The State mitigation strategy shall include] a general description and analysis of the effectiveness of local mitigation policies, programs, and capabilities.

Local capability assessment for hazard mitigation in Iowa is included in this plan by integrating the hazard analysis and risk assessment data from Local Hazard Mitigation Plans as well as the goals, objectives and measures of this plan as an integral part of the overall planning process. Mitigation measures included in this plan are a direct integration of the local mitigation policies, programs and capabilities demonstrated and documented through Local Hazard Mitigation Plans. Local capabilities identified in Data Collection Sheets include planning elements such as capital improvement, comprehensive, recovery, economic development, transportation, and land use plans. Policies and ordinances mentioned include zoning, building codes, floodplain, tree trimming, storm water, site plan, and historical preservation ordinances. Various local capabilities related to specific staffing identified in local plans include County Emergency Manager, Building Inspector, Engineer, Floodplain Administrator, Economic Development Coordinator, Council of Government, County Emergency Management Commission, and Local Mitigation Planning Committee. Additional information on local integration and coordination with local planning mechanisms can be found in Section 1.2 Planning Process and Section 1.5 Local Coordination.

The combination of funding availability and efforts of the SHMT has maintained or increased the interest in local hazard mitigation planning since the last Iowa Hazard Mitigation Plan was written.

The State of Iowa now has over 700 local jurisdictions with FEMA approved local mitigation plans. There are several hundred communities with local hazard mitigation plans that are not DMA 2000 compliant. HSEMD continues to encourage these communities and those without any type of mitigation plan to start or join the planning process.

Presidential disaster declarations recently have made available large amounts of HMGP funding to develop local hazard mitigation plans and projects.

Iowa has gone from three communities participating in the Community Rating System (CRS) up to five with Cedar Rapids and Iowa City joining the CRS in 2011 and Linn County joining in 2013. Des Moines and Davenport have participated in CRS for a number of years.

Participation in the National Flood Insurance Program (NFIP) continues to increase in Iowa. This is reflected in local policies and ordinances aimed at reducing development in flood plains and other hazard areas as well as providing homeowners the opportunity to purchase flood insurance through the NFIP. Several communities are in the process of applying for NFIP membership in part, to become eligible for federal and state mitigation funds.

In 2010 there were 517 Iowa communities participating in the NFIP. There are currently 630 communities participating. Iowa law also allows IDNR to delegate the State's floodplain regulatory functions to a local government that has a flood study identifying the regulatory floodway and floodway fringe along with 100-year flood profile(s) and a floodplain management ordinance meeting NFIP and State minimum

requirements. The State allows communities with delegated floodplain management authority to issue floodplain development permits for most types of development in lieu of the IDNR. The State has delegated floodplain authority to approximately 136 NFIP participating communities. As part of the delegation process, the State retains the right to concur or deny with granting of any variance from the community's floodplain management regulations.

Although the State of Iowa's criteria for new floodplain development is similar to the minimum NFIP criteria in most respects, there are some important differences, for example:

- The lowest floor of new structures must be elevated an additional 1.0 foot above the 100-year (base) flood.
- Iowa does not allow new residential structures in the floodway.
- Residential structures must have wheeled vehicular access during the 100-year flood.
- The substantial improvement threshold includes additions that increase a building's footprint by 25% or more.
- All post-FIRM (Flood Insurance Rate Map) additions are considered cumulative improvements in the determination of increase in floor area.

## 4 Funding Sources

44 CFR 201.4(c)(3)(iii): [The State mitigation strategy shall include an] identification of current and potential sources of Federal, State, local or private funding to implement mitigation activities.

Funding for the mitigation measures primarily comes from federal and state sources. However, the state continues to pursue additional funding sources. Please refer to the Capability Assessment (Annex 1.4-B) that where appropriate, provides information on the funding source, description of the type of funding and monetary capabilities. This information was updated by providing the SHMT with the previous version of the mitigation plan. They updated, removed or added additional funding sources that would reflect the types of projects identified in the plan. Mitigation measures identified in local hazard mitigation plans reflect the reliance on federal and state resources to assist with these measures. In Iowa a majority of the communities do not have the local financial resources to fulfill their local mitigation measures alone.