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under the Iowa Association of Electric Cooperatives**

44 CRF 201.2(b): An effective planning process is essential in developing and maintaining a good plan.

1. Documentation of the Planning Process

44 CFR 201.4.(c)(1): [The State plan must include] a description of the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how other agencies participated.

The State of Iowa has been proactive in hazard mitigation planning and activities for many years. The state’s planning process is driven by Section 322 of the Disaster Mitigation Act of 2000 (DMA 2000) and is synchronized through the coordination and integration of local hazard mitigation planning with interagency planning of the State Hazard Mitigation Team (SHMT). State and local planning form the core of the state’s planning process. Community and public involvement in this planning process is crucial and establishes the foundation of the state’s 322 Plan. This foundation links the planning of 711 local jurisdictions with approved DMA 2000 Local Hazard Mitigation Plans involving thousands of people and countless hours of participation to the interagency planning efforts of the SHMT.

Integration has been achieved at the state level by the creation of the State Hazard Mitigation Team established by an Executive Order of the Governor in 1990. Two succeeding Executive Orders have further shaped the development and structure of SHMT into its present composition. The current Executive Order (number 62), was issued in 1998, requires two main component groups, the Primary Iowa Hazard Mitigation Team and the Secondary Iowa Hazard Mitigation Team. Annex 1.2-A shows Executive Order Number 62 while Annex 1.2-B shows the SHMT members and other stakeholders. Agencies for both the Primary and Secondary teams participated in the development and execution of the planning process,

preparation of the planning document, and provided key technical assistance resources. The specific actions of the SHMT are detailed throughout this document as each specific part of the planning process was executed. Due to the makeup of the SHMT being codified the contact personnel may change, but the general makeup has been consistent.

The Primary SHMT members include representatives from the following state agencies (and their roles) who are required to participate in all SHMT activities:

| SHMT Primary Team State Agencies | Acronym |
|--|---------|
| Iowa Department of Natural Resources: To conserve and enhance our natural resources to improve the quality of life for Iowans | IDNR |
| Iowa Department of Transportation: To build, maintain and support a safe and efficient transportation system for users | DOT |
| Iowa Economic Development Authority: To engender and promote economic development policies and practices | IEDA |
| Iowa Department of Cultural Affairs: Primary responsibility for development of the state's interest in the areas of arts, history, and other cultural matters | DCA |
| Iowa Department of Public Safety—State Fire Marshall's Office : To provide Public Safety and Criminal Justice Services allowing citizens in Iowa to enjoy high quality of life in safe communities and promote economic growth in the state | DPS |
| Iowa Department of Homeland Security and Emergency Management: Committed to safe, secure, and sustainable Iowa-to lead, coordinate, and ensure economic opportunities for Iowa and its citizens | HSEMD |

The Secondary Team includes representatives from other state agencies who provide assistance and information to the Primary Team on an as-needed basis. Members of the Secondary Team are not required to attend quarterly SHMT meetings, but do participate in all SHMT functions related to their area of expertise.

Members of the Secondary Team include:

| SHMT Secondary Team State Agencies | Acronym |
|--|-----------|
| Iowa Department of Administrative Services—General Services Enterprise | DAS-GSE |
| Iowa Department of Public Health | IDPH |
| Iowa Department of Agriculture—Division of Soil Conservation | IDALS/DSC |
| Iowa Department of Commerce—Insurance Division and Utilities Board | DOC |
| Iowa Department of Management | DOM |
| Iowa Department of Revenue | IDR |
| Iowa Department of Education | DOE |
| Iowa Department of Justice | DOJ |
| Iowa Department of Workforce Development | IWD |
| Governor's Office | IGOV |

In addition to the agencies on the Primary and Secondary Teams, a number of additional state agencies and offices are involved in the planning process. These state agencies are:

| SHMT Additional State Agencies | Acronym |
|--|---------|
| Iowa Utilities Board | IUB |
| Iowa Department of Administrative Services—Information Technology Enterprise | DAS-ITE |

The SHMT currently consists of members from 28 different public organizations. In addition to the state agencies mentioned above, the team includes other federal, state, and local agencies as well as private and non-profit organizations that are not mandated by Executive Order Number 62 as part of either the Primary or Secondary Team, but are invited and encouraged to attend and participate in SHMT meetings. Many of these members regularly attend meetings

Federal agencies are:

| Federal Agencies | Acronym |
|--|---------|
| Natural Resources Conservation Service | NRCS |
| Department of Housing and Urban Development | HUD |
| Federal Emergency Management Agency—Region VII | FEMA |
| United States Department of Agriculture | USDA |
| United States Army Corps of Engineers | USACE |
| American Red Cross (a federally mandated agency) | ARC |
| National Weather Service | NWS |
| United States Environmental Protection Agency | USEPA |
| United States Geological Survey | USGS |

Private or non-profit organizations that participate in the planning process, but are not formally on the SHMT include:

| Private or Non-Profit Organizations |
|---|
| Iowa Association of Municipal Utilities |
| Iowa State Association of Counties |
| SICOG – Council of Government |
| Veenstra and Kimm |
| Iowa Association Electric Cooperative (Rural Electric Cooperatives - REC) |

Local organizations are:

| Local Organizations |
|---|
| Polk County Emergency Management Agency |
| Des Moines Law Enforcement |

Participation by federal, state, local, private and non-profit agencies was a key component in reviewing existing hazards to be addressed in this plan update. During the planning process all phases of the plan were reviewed and commented on by the members.

Following a disaster declaration, the SHMT operates as the Interagency Hazard Mitigation Team (IHMT). FEMA defines the IHMT as consisting of Federal, State, and local officials that determine what can be achieved following a disaster and prepares a strategy report within 15 days of the disaster. Membership of the SHMT and the IHMT are virtually identical.

Executive Order 62 and the agenda are sent to all SHMT representatives; to remind the Primary Team of their required attendance and to encourage members of the Secondary Team and other organizations to attend (although their attendance is not mandatory). SHMT meetings are open to the general public. To encourage input from the general public SHMT meeting times and locations are placed on the Iowa Department of Homeland Security & Emergency Management (HSEMD) website (www.homelandsecurity.iowa.gov).

Section 322 of DMA 2000 specifically addresses mitigation at the state and local levels and includes the following major provisions:

- Standard State Mitigation Plans (201.4 of the Rule): States with an approved Standard State Mitigation Plan will qualify for Hazard Mitigation Grant Program (HMGP) funding. HMGP funding is allocated using a “sliding scale” formula based on the percentage of the funds spent on Public and Individual Assistance programs for each Presidentially-declared disaster. Generally, states are required to coordinate mitigation planning with local and tribal jurisdictions and to document the funding and technical assistance they will provide to these jurisdictions. More specifically, 201.4 of the Rule require that plans meet the following basic criteria to receive approval:
 - Describe the planning process;
 - Develop a risk assessment to analyze natural hazards statewide;

- Develop a mitigation strategy for reducing the losses identified in the risk assessment;
- Establish a plan maintenance process;
- Describe how the state coordinates with local mitigation planning efforts;
- Establish a formal adoption process; and
- Address all applicable federal statutes and regulations including changes in state and federal laws.

- Enhanced State Mitigation Plan (201.5 of the Rule): A State with a FEMA approved Enhanced State Mitigation Plan at the time of a disaster declaration is eligible to receive increased HMGP funding not to exceed 20 percent of the total estimated federal disaster assistance. In order for the State to receive increased funding, the Plan must meet the requirements outlined in 44 CFR 201.5. The Enhanced State Plan must include all the elements of the Standard Plan (201.4 of the Rule) and, in addition, demonstrate a broad, programmatic mitigation approach as well as systematic and effective administration and implementation of existing mitigation programs.
- Local/Tribal Mitigation Plans (201.6 & 201.7 of the Rule): Local jurisdictions must also demonstrate that proposed mitigation actions are based on a sound planning process that accounts for the inherent risk and capabilities of the individual communities. Tribal governments will have the opportunity to fulfill Section 322 requirements either as a grantee (using state planning criteria) or a sub-grantee (using local planning criteria).
- Funding for Plan Development: 44 CFR 206.434 authorizes up to 7 percent of the State’s HMGP grant to be used to develop, state, tribal and/or local mitigation plans to meet the planning criteria outlined in 44 CFR Part 201. Pre-

Disaster Mitigation Program Competitive grant funding is available to applicants to develop mitigation plans.

- Deadlines and Requirements for Regular Plan Reviews and Updates: States, local, and tribal governments must obtain approval for their mitigation plans to be eligible for HMGP project funding. In extraordinary circumstances, FEMA was authorized to grant justifiable extensions for State and Indian tribal governments of up to six months. In order to continue hazard mitigation assistance grant eligibility, regulations require State Hazard Mitigation Plans be reviewed, updated, and submitted to FEMA for approval every three years. Local mitigation plans must be reviewed, updated, and re-approved by FEMA every five years.

Following the unprecedented flooding disaster that Iowa endured in 2008 FEMA provided planning technical assistance located in the Iowa Closeout Center. These FEMA planners provided an additional layer of technical assistance and review of local mitigation plans. In 2012 as part of the transition of FEMA mitigation plan reviewers located in the Iowa Closeout Center leaving FEMA Region VII planners conducted training in Iowa. This training was focused on state level review of local mitigation plans for the District Liaisons and other State employees. Iowa HSEMD conducted the Mitigation Planning Workshop for Local Governments course in Iowa City during November of 2011. In 2010 Iowa hosted and participated in a FEMA sponsored workshop for local governments and council of governments on Section 322. Topics included general requirements of Section 322, local planning requirements, and the four major phases of the mitigation planning process (organizing resources, assessing risks, developing the mitigation plan, and implementing and monitoring progress.) The workshop included numerous group activities to facilitate the understanding of these topics.

To establish a clear understanding of the planning requirements outlined in the scope of work for Iowa's plan update, the SHMT met in December of 2011 to discuss the scope of work, the planning process, and to review requirements outlined in 44 CFR Part 201. The SHMT again met in November of 2012 for rollout of agency coordination and data collection. Also reviewed and approved were consolidated goals and objectives. Mitigation capabilities and measures were captured both during SHMT meetings and through direct contact with specific agencies.

The Iowa HSEMD mitigation planner provided the team with material to facilitate the team's review of existing hazards and identification of any additional hazards. Hazard identification, scoring, and combination of like hazards were discussed during the SHMT meeting that occurred in May of 2012. The team reviewed each hazard profile using the best available data for that hazard. Changes and additional historical information were incorporated into the existing information.

The assessment and ranking for each hazard was based on:

- (1) Probability
- (2) Magnitude/Severity
- (3) Warning Time and
- (4) Duration

Before the November 2012 SHMT Meeting, HSEMD mitigation planners worked to consolidate the goals and objectives developed from the previous mitigation planning cycle. When the consolidation was completed and presented before the SHMT it was approved. The primary purpose of the consolidation was to reduce redundancy and improve organization. The team reviewed and analyzed hazard mitigation measures that addressed each goal and objective. The SHMT used the STAPLEE method to evaluate mitigation options by comparing them to these criteria: Social acceptance,

Technical merit, Administrative support, Political support, Legal support, Economic viability and the Environment. This method is explained in the FEMA How to Guide, 386-3 to evaluate and prioritize mitigation measures. Local communities also use the STAPLEE method to evaluate and prioritize mitigation measures during the local planning process. SHMT members are subject matter experts in the programs, type of projects and initiatives they managed and administer. As a result, their knowledge was critical to updating the statements of hazard mitigation goals, objectives and measures.

In addition, the team was given the task of identifying and reporting accomplished measures. HSEMD acted as the primary contact for collection of mitigation measures. Knowing that this is not inclusive it captured the completed measures known.

The Rural Electric Cooperatives (REC) under the Iowa Association of Electric Cooperatives has participated in the planning process as a mitigation planning partner since the 2007 update of the Iowa Hazard Mitigation Plan. REC are treated as private non-profit organizations (PNP) for the purpose of disaster assistance provided by FEMA under the Stafford Act. The SHMT, in an agreement with the REC, incorporated electric cooperatives as a revised Annex 1.2-C for this update to the state plan. This will meet the planning requirement in the event of subsequent disasters. The REC community generally has representation at SHMT meetings, but also put together a planning committee specifically for the development and update of the REC Annex C for the State Mitigation Plan.

With the goals, objectives, and measures established, HSEMD served as the lead agency to write the update for the plan. An update of the major changes to the existing draft was presented to the SHMT in July of 2013. The SHMT function is to review the draft plan to ensure a correct alignment between

the current and updated plan. The draft plan was available for review and comment by the public at

www.homelandsecurity.iowa.gov

The State Mitigation Plan is always posted on the HSEMD website, and comments are welcome at any time. After the draft plan is approved the final version will be uploaded. Public comments can be submitted and incorporated during the drafting and review phase, or considered during plan maintenance.

The SHMT used a similar approach on each section of the plan throughout the planning process. Planning meetings were held to discuss progress of the plan update. This aided in the preparation of material to be presented to the SHMT for review. Each section of the plan was reviewed with discussion by the SHMT and decisions were made by the group to amend or not to amend the section.

2013 State Hazard Mitigation Plan Update Schedule

| Regulation | Iowa Planning Step | Timeframe |
|------------------------|---|------------------|
| | Planning Process | |
| CFR 201.4 (c)(1) | "Documentation of the Planning Process" | 12/2011 - 4/2013 |
| CFR 201.4 (b) | "Coordination Among Agencies" | 12/2011 - 4/2013 |
| CFR 201.4 (b) | "Program Integration" | 12/2011 - 4/2013 |
| | Risk Assessment | |
| 201.4 (c)(2)(i) | "Identifying Hazards" | 5/2012 - 4/2013 |
| 201.4 (c)(2)(i) | "Profiling Hazards" | 5/2012 - 4/2013 |
| 201.4 (c)(2)(ii) | "Assessing Vulnerability by Jurisdiction" | 11/2012 - 4/2013 |
| 201.4 (c)(2)(ii) | "Assessing Vulnerability of State Facilities" | 11/2012 - 4/2013 |
| 201.4 (c)(2)(iii) | "Estimating Potential Losses by Jurisdiction" | 11/2012 - 4/2013 |
| 201.4 (c)(2)(iii) | "Estimating Potential Losses of State Facilities" | 11/2012 - 4/2013 |
| | Mitigation Strategy | |
| 201.4 (c)(3)(i) | "Hazard Mitigation Goals" | 11/2012 - 5/2013 |
| 201.4 (c)(3)(ii) | "State Capability Assessment" | 11/2012 - 5/2013 |
| 201.4 (c)(3)(ii) | "Local Capability Assessment" | 11/2012 - 5/2013 |
| 201.4 (c)(3)(iii) | "Mitigation Actions" | 11/2012 - 5/2013 |
| 201.4 (c)(3)(iv) | "Funding Sources" | 11/2012 - 5/2013 |
| | Coordination of Local Mitigation Planning | |
| 201.4 (c)(4)(i) | "Local Funding and Technical Assistance" | 2/2013 - 4/2013 |
| 201.4 (c)(4)(ii) | "Local Plan Integration" | 2/2013 - 4/2013 |
| 201.4 (c)(4)(iii) | "Prioritizing Local Assistance" | 4/2013 - 6/2013 |
| | Plan Maintenance Process | |
| 201.4 (c)(5)(i) | "Monitoring, Evaluating, and Updating the Plan" | 3/2013 - 6/2013 |
| 201.4 (c)(5)(ii)-(iii) | "Monitoring Progress of Mitigation Actions" | 3/2013 - 6/2013 |
| | Severe Repetitive Loss Mitigation Strategy | |
| 201.4 (c)(3)(v) | "Repetitive Loss Mitigation Strategy" | 4/2013 - 6/2013 |
| 201.4 (c)(3)(v) | "Coordination with Repetitive Loss Jurisdictions" | 4/2013 - 6/2013 |

2. Coordination Among Agencies

44CFR 201.4(b): The [state] mitigation planning process should include coordination with other State agencies, appropriate Federal agencies, [and] interested groups.

At the time of Iowa's State Mitigation Plan last submittal (approved September 18, 2010) more than 300 jurisdictions had approved local hazard mitigation plans. For this update, 711 jurisdictions with local hazard mitigation plans approved to the DMA 2000 planning requirements were referenced and reviewed. Iowa has been able to utilize HMGP funding to aid in local mitigation planning, and encouraged local multi-jurisdictional plans to include school districts. For more information on multi-jurisdictional planning see pg. 17 in Section 1.4 Mitigation Strategy.

Hazard mitigation activities in Iowa are collected primarily through the State Hazard Mitigation Team (SHMT), the organization of which was described previously. SHMT participation was crucial to the coordination process of analyzing the threats and hazards that can impact the State of Iowa and also in determining the ranking of those hazards which form the basis of the hazard analysis and risk assessment. Federal, state, private, and non-profit agencies represented on the team was contacted to present and describe programs, services, and activities that result in risk prevention and reduction.

The Iowa Department of Homeland Security and Emergency Management (HSEMD) was the chief author of the plan, but the SHMT provided assessment and capability information as well as guidance, review, and adoption of the plan. A description of their programs, services, and activities is located in Annex 1.4-B Capability Assessment Report. The SHMT's review of drafts of the 322 Hazard Mitigation Plan along with their comments, corrections, suggestions, and final adoption of the plan makes this truly an interagency plan.

The federal, state, and private, non-profit agencies that are coordinated in the SHMT are identified here with the name of the agency, federal/state/private source, and a brief summary of the agency's designated mitigation responsibilities.



United States Army Corps of Engineers [Federal]

Civil works measures are in the broad areas of water infrastructure, environmental management and restoration, response to natural and human-caused disasters, and engineering/technical services to the Army, DOD, and other Federal agencies.



United States Geological Service—U.S. Dept of the Interior [Federal]

USGS provides maps, reports, and information to help others find, manage, develop, and protect natural resources. Data online includes hydrologic data for publications, projects, education, newsletters, press releases, and events.



National Oceanic and Atmospheric Administration (NOAA)—National Weather Service—U.S. Dept of Commerce [Federal]

NOAA supplies weather and climate data as well as weather forecasting and warning information. Outreach activities include training for storm spotters, school tours, and public presentations.



Farm Service Agency—U.S. Dept of Agriculture [Federal]

The Farm Service Agency administers the Conservation Reserve Program which is designed to reduce soil erosion and improve water quality. This voluntary program financially encourages long-term soil conservation on sensitive cropland and marginal pastureland.



Natural Resources Conservation Service—U.S. Dept of Agriculture [Federal]

The NRCS assists private landowners with conserving soil, water, and other natural resources through a variety of voluntary programs and technical assistance. They also provide expertise to help local, state, and federal agencies and policymakers.



Federal Emergency Management Agency [Federal]

FEMA provides funding to the states for a number of hazard mitigation programs, most notably the Flood Mitigation Assistance Program, the Hazard Mitigation Grant Program, the Pre-Disaster Mitigation Program, and the Public Assistance Program.



Iowa Department of Homeland Security and Emergency Management [State]
The Emergency Management Department administers funds from FEMA for the various programs in hazard mitigation. The Department functions as one of Iowa's lead agencies for hazard mitigation activities.



Office of Economic Development—U.S. Dept of Housing & Urban Development [Federal]
OED programs address economic and community development needs, such as developing housing in rural areas, new public facilities and infrastructure, redeveloping industrial and commercial facilities, and creating and retaining jobs.



Office of Community Development—U.S. Dept of Housing & Urban Development [Federal]
The OCD offers programs that help cities and counties develop their communities or recover from presidential declared disaster. Notable among their programs are the Community Development Grant Program, the Loan Guarantee Program, and the Disaster Recovery Assistance Program.



State Historic Preservation Office—Iowa Dept of Cultural Affairs [State]
The State Historic Preservation Office reviews and comments on any federal projects and planned federal infrastructure projects that impact on historic and cultural resources. It partners with the Office of the State Archeologist and works with the Advisory Council on Historic Preservation.



Iowa Department of Natural Resources [State]
The DNR has primary responsibility for conserving and enhancing Iowa's natural resources by maintaining state parks and forests, protection the environment, and managing energy, fish, wildlife, land and water resources. Its major hazard mitigation programs deal with air, land, water quality and watershed issues and concerns.



Iowa Department of Agriculture and Land Stewardship [State]
IDALS offers many services and programs in soil conservation, water quality and resources, regulation of mines and minerals, livestock inspection, and management of feed, fertilizers, and pesticides.



Iowa Economic Development Authority [State]
The IEDA assists communities by providing prevention and risk reduction structural projects, programs to help vulnerable populations, and funding for immediate response to critical situations that also result in benefits to the community long-term.



Iowa Department of Transportation [State]
DOT sponsors many programs and services that support hazard mitigation. They include rail and highway safety programs, hazardous materials awareness.....

3. Program Integration

44 CFR 201.4 (b): [The State mitigation planning process should] be integrated to the extent possible with other ongoing State planning effort, as well as other FEMA mitigation programs and initiatives.

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.

Hazard mitigation planning efforts in Iowa are integrated through a combination of federal, state, local, and non-government plans, programs, and initiatives. Legal requirements in the Disaster Mitigation Act of 2000, the National Flood Insurance Reform Act (NFIRA), the Flood Mitigation Assistance (FMA) program, the Iowa Code, Iowa Administrative Code, and Executive Order 62, the Iowa Comprehensive Emergency Management Plan, local Disaster Mitigation Plans (DMA), and business partnerships all add to the framework for integration.

The State of Iowa has been a leader in enacting hazard mitigation and damage-reduction initiatives as well as mitigation planning. For example, Iowa has had a statewide floodplain management program that pre-dates FEMA and the National Flood Insurance program. Iowa has also been proactive in the area of mitigation planning, requiring a State approved mitigation plan in order to receive Hazard Mitigation Grant funds since 1998, four years prior to the DMA 2000 requirements. In addition, Iowa Code requires the development of Comprehensive Plans as a part of local zoning. Among other requirements the Comprehensive Plan must be “designed ...to

secure safety from fire, flood, panic, and other dangers: to promote health and the general welfare...” These codified basic mitigation requirements are implemented at the local level in full integration with Iowa’s hazard mitigation planning objectives.

3.1 Federal Integration

The Pre-Disaster Mitigation Grant Program (PDM), Hazard Mitigation Grant Program (HMGP), Public Assistance (PA), and the Flood Mitigation Assistance (FMA) are administered through the HSEMD. The National Flood Insurance Program (NFIP) is coordinated through the Iowa Department of Natural Resources (DNR). These programs are used to implement the integrated planning process and implement mitigation measures through funding sources and policy. The HMGP, FMA, and PDM are currently used to fund state and local planning efforts and the implementation of the mitigation strategies identified in this plan.

3.2 State Integration

State and local hazard mitigation planning is completed to the requirements as outlined in 44 CFR. HSEMD is the only entity in the State of Iowa with the defined responsibility for integrating mitigation planning with other planning initiatives and FEMA programs. This type of integration is tied into local planning through programs, but only through HSEMD and not at another agency level.

Integration is also achieved through funding mechanisms as established in Section 29C of the IC. Section 29C.17 establishes a local emergency management fund in the office of the county treasurer. Any revenues provided and collected are deposited in the fund. Unencumbered balances are not allowed to revert to the county general revenues. Any reimbursement,

matching funds, moneys received from the sale of property, or moneys obtained from any source in connection with the county emergency management program is deposited in the local emergency management fund.

To ensure compliance with these rules, the County Emergency Management Commission serves as the fiscal authority, and the chairperson or vice-chairperson of the commission serves as the certifying official. The county emergency management agency’s approved budget may be funded by one or any combination of the following options:

- A countywide special levy approved by the board of supervisors.
- Per capita allocation funded from city and county general funds or by a combination of city and county special levies which may be apportioned among the member jurisdictions.
- An allocation computed as each jurisdiction’s relative share of the total assessed valuation within the county.
- A voluntary share allocation.

An incentive for local participation in hazard mitigation is supplied by the provisions of Section 29C.6 of the IC. Subsection 17 states that if financial assistance is granted by the federal government for hazard mitigation following a major disaster declaration by the president, the state may participate in the funding of the financial assistance authorized to a local government in an amount not to exceed 10 percent of the eligible expenses, with the applicant providing the balance of any participation amount. However, this is contingent on the local government having on file a state-approved, comprehensive, countywide emergency operations plan. Since Federal assistance cannot exceed 75 percent of eligible expenses, the local government must provide at least 15 percent of eligible expenses. If that plan is not on file, the state

will choose at its discretion whether to contribute its 10 percent portion. If the State elects not to contribute the 10 percent cost share the local government then must provide at least 25 percent of eligible expenses.

Although funding may occur from one or more of the options listed above, the incentive given by the state of Iowa to the local governments help to empower the commissions to develop a comprehensive countywide emergency operations plan which include a mitigation plan. This in turn promotes the integration of mitigation planning between the State of Iowa and local governments.

3.2.1 Integration with Emergency Management Accreditation Program (EMAP)

Planning initiatives in Iowa are enhanced through the state's participation in the Emergency Management Accreditation Program (EMAP). EMAP is a voluntary assessment and accreditation process for state/territorial, tribal, and local government emergency management programs. It includes (1) a structure for identifying areas in need of improvement; (2) a methodology for strategic planning and justification for resources; (3) a catalyst for improved interoperability and professionalism; and (4) strengthened state, territorial, and local preparedness, including sharing of best practices.

EMAP uses collaboratively developed national emergency management standards along with peer assessment teams to evaluate a program's activities—not just an agency, but a jurisdiction's entire program. The EMAP Standard is based on the NFPA (National Fire Protective Association) 1600 and covers 14 functional areas:

- Program management
- Laws and authorities

- Hazard identification and risk assessment
- Hazard mitigation
- Resource management
- Planning
- Direction, control, and coordination
- Communications and warning
- Operations and procedures
- Logistics and facilities
- Training
- Exercises, evaluations, and corrective action
- Crisis communications, public education, and information
- Finance and administration

Baseline assessments using EMAP provide a methodology to evaluate state emergency management programs against a consistent set of criteria. Assessments identify areas of program activities that need to be addressed, help programs develop prioritized improvement strategies and demonstrate accountability, and help support for requests for additional emergency management resources. An assessment report includes whether the program is compliant or non-compliant with 54 standards and reasons for assessors' findings.

The State of Iowa volunteered for a baseline assessment in the spring of 2003. This was done in order to obtain a better sense of the status of the state's emergency management programs and because plan integration is a significant function and priority of HSEMD. It was also done to demonstrate the State of Iowa's intent to work toward compliance with all 63 of the EMAP prescribed standards. This in turn will be helpful in integrating planning initiatives across agency and jurisdictional lines. HSEMD Strategic Plan endorses this explicitly, listing as one of its strategies to "Ensure that the state and each county have completed the Emergency Management Accreditation Program (EMAP) self-assessment

tool measuring the jurisdictions baseline against nationally recognized standards in all functional areas.”

The purpose of the assessment was to provide the State of Iowa emergency management program with an unbiased outside evaluation of compliance with each of 63 EMAP standards. Each standard helps provide emergency management programs national criteria with which to assess their programs. It provides criteria to measure success in developing, implementing, and maintaining a program to mitigate, prepare for, respond to, and recover from disasters and emergencies. This evaluation of the self-assessment process allowed for feedback and allowed the State of Iowa emergency management program an opportunity to make improvements, modifications, or locate additional documentation in order to attain accreditation. During this initial assessment, 47 of the 63 standards were sufficiently addressed, including being compliant in all evaluated areas addressing mitigation. At that time, Iowa was granted interim accreditation until the remaining 16 standards were reviewed for final compliancy in June of 2010 and final EMAP accreditation was granted. Iowa last validated in 2012 to maintain EMAP accreditation.

3.2.2 State Planning Framework

The Iowa Strategy for Homeland Security and Emergency Management serves as a roadmap to a safer and more secure Iowa. Through the projects and programs outlined in this plan, Iowa will strengthen its ability to prevent, protect, respond to and recover from foreign and domestic terrorism or man-made and naturally occurring disasters. This plan directly supports the Governor’s Strategic Plan for the State of Iowa. The Strategy offers initiatives and programs that provide for the safety and security of Iowa’s communities and citizens. The State Hazard Mitigation Plan integrates with this philosophy. All state agencies develop strategy plans to integrate with the Governor’s strategy protecting the citizens and communities.

All state departments are participating in Results Iowa-Accountability for Iowa; each agency sets department goals and strategies for a 3-5 year period, aligns them with customers needs, and helps target scarce resources more effectively by clarifying desired results. Performance plans are a snapshot of what the department does and how well it does it.

The plan helps pinpoint improvement opportunities and implement strategies to achieve better results. With these plans departments can better make informed decisions, and tell Iowans and other stakeholders what they have accomplished. All state departments work toward the Governor’s Strategic Plan. State departments consider their area of authority in their mission statements. For example: (good water quality) Iowa Department of Natural Resources is to improve the quality of life for Iowans and ensure a legacy for future generations.

HSEMD planners are responsible for integrating, to the greatest extent practicable, hazard mitigation planning, and programs into other state, regional, and local planning initiatives and programs. Specific accomplishments are the Critical Asset Protection Program (CAPP) and the Continuity Planning (COOP/COG) continuity of operations and continuity of government pieces of the State of Iowa Comprehensive Emergency Plan.

3.2.3 Iowa Comprehensive Emergency Plan

As part of Iowa’s emergency management program, a periodic review of the state’s suite of emergency plans is undertaken. This collection of plans, to include enterprise wide mitigation, operations, continuity, response, and recovery plans comprises what is known as the Iowa Comprehensive Emergency Plan (ICEP). The ICEP planning process involves the development of a capability gap analysis and meetings with emergency partners (e.g., state and federal agencies along with private and

non-profit organizations) to coordinate and integrate statewide efforts.

Iowa Code Section 29C.8 requires the Director of the HSEMD to prepare a comprehensive plan for Homeland Security, disaster response, recovery, mitigation and emergency resource management for the state. The comprehensive plan is composed of the following parts:

- Iowa Emergency Response Plan
- Iowa Hazard Mitigation Plan
- Iowa Disaster Recovery Plan
- Iowa Critical Asset Protection Plan

The HSEMD Preparedness Bureau planners are responsible for integrating state, regional and local mitigation planning, the extent practicable, into HSEMD's ongoing planning, training, exercise and recovery efforts.

Iowa HSEMD coordinates statewide disaster recovery and mitigation with recovery planning requirements in the Iowa Code. Preparedness Bureau District Liaisons serve as points of contact for Iowa's homeland security districts. In addition, the Bureau implements the Iowa Comprehensive Exercise Program, develops and conducts exercises and provides technical exercise and evaluation assistance to state agencies and local jurisdictions. The Bureau is also responsible for implementing a range of training initiatives, including assessing state-wide training needs, coordinating and conducting training activities, conducting needs assessment, producing Threat and Hazard Identification and Risk Assessment (THIRA) and State Preparedness Report (SPR), and developing training strategies.

HSEMD planning staff reviews codes and recommended changes to facilitate updates and integration. For example,

changes have been made to the Iowa Code to improve the timeliness of the planning requirements for the counties. Each District Liaison is assigned on of 6 District/Regions in Iowa. The District Liaison attends monthly/quarterly meetings and is a conduit for communication and technical assistance to locals from the State. District Liaison activities also include review of the county plans under the authority of the Iowa Code. The District Liaison reviews the county's response, mitigation, and recovery plans and recommends changes to the plan's author where necessary.

The Exercise Section organizes and facilitates exercise training and design, state-wide. The Training Section offers training courses and coordinates the EMI attendance. Mitigation specific training is provided to mitigation employees, planners, Council of Governments, and county coordinators. Since the last plan update multiple courses have been offered including BCA workshops, local hazard mitigation planning workshops, and a presentation about safe rooms in state parks. Along with specific training, technical assistance is an on-going process.

3.2.4 Critical Infrastructure and Key Resource Protection Program

The State of Iowa's critical asset list is a tool that can be used to organize activities, such as pre-identifying assets and sectors that may need to take additional protective actions given specific intelligence threat information. By preplanning and identifying potential systems and assets, HSEMD and public and private sector partners can act to prepare, prevent, and respond to potential or actual attacks. The program provides a basis for informed decision making and potential targets for mitigation activities. The list highlights the interdependencies of the assets and how the loss of one could have a major impact on other assets within and outside that system. Because over two-thirds of the assets on the list are

privately owned, the work done by HSEMD and other state partners has opened a valuable dialogue with private sector partners and reinforced the need to work together.

This capability and integrated planning was tested in the flooding of 2008 when critical facilities across all planning sectors were continuously evaluated for potential risks from flooding and impacts were assessed for movement of response and equipment requests.

As HSEMD continues to refine Iowa's critical asset list, our efforts are guided by the National Infrastructure Protection Plan (NIPP) which provides the unifying structure for the protection of critical infrastructure and key resources into a single national program.

3.2.5 Continuity Planning

All Iowa executive branch agencies completed continuity of operations (COOP) and continuity of government (COG) plans in 2005, and many have exercised and updated them since then. Staff from the Information Security Office and HSEMD assists all state agencies with COOP/COG plan development, exercises, and other program endeavors. A new plan template and a "Pocket Plan" were developed to make it easier for agencies to understand how to activate and use continuity plans in the event they are needed. Approximately 12 COOP/COG exercises occur each year with various agencies participation. Equipment and procedures have also been put in place to help ensure the ability to continue state and local government operations. For example 13 portable generators were purchased in the past year and are being staged throughout the state in the event they are needed to continue essential functions if there is a power outage. Local governments have been engaging in planning as well. Continuity planning courses and workshops have been taught

throughout the state over the past two years, with participants from over two dozen counties and cities. These efforts address the question of resiliency and ultimately the enrollment processes in the event of a catastrophic event. This effort involved looking at interdependencies between federal, multi-state region, state, and local stakeholders; continually working toward improving and maintaining, in the face of disasters, the relationships necessary to endure essential functions and services. This process has been further refined to include processes and agreements across agencies to include alternative Emergency Operations Center facilities and COOP/COG of vital services and functions of the State Emergency Operations Center.

3.2.6 Threat and Hazard Identification and Risk Assessment (THIRA)

As part of the Community Preparedness Guide 201 states are required to complete a THIRA. The THIRA identifies threats and hazards, gives them contexts, and leads to capability targets. The THIRA serves as the basis for the State Preparedness Report (SPR) which helps set priorities for the State. The list of hazards from the Risk Assessment section of the State Mitigation Plan gave Iowa planners a starting point for the THIRA. The THIRA serves as connective tissue between mitigation and preparedness activities in the State of Iowa.

3.2.7 Additional State Agency Planning Initiatives

The Hazard Mitigation Capability Assessment (Annex 1.4-B) identifies planning initiatives and mitigation programs and projects that comprise Iowa's overall mitigation capability and contribute to achieving Iowa's mitigation goals and objectives.

3.3 Regional Integration

There are 17 Regional Council of Governments (COG) in Iowa. These organizations are formed by counties and cities to serve local governments and citizens in their regions. They address issues facing local government and provide coordination of service delivery, grant writing and administration, planning, advocacy, technical assistance and project development. In addition, the COG serve as forums for regional economic development and the federal Economic Development Administration has designated several as Economic Development Districts (EDD).

COG provide a large number of services that facilitate the integration of mitigation with regional planning initiatives, for example: Land Use Services, Comprehensive Plans, Strategic Planning, Annexation Studies, Zoning and Subdivision Regulation, Ordinances Codification, Urban Renewal Plans, Economic Analysis, and Hazard Mitigation Plans. Recognizing the opportunity the COG provide to integrate mitigation into regional planning, Iowa has partnered with the COG. This has resulted in these regional planning organizations adding mitigation planning to the services they provide.

The partnership between HSEMD and the COG pre-dates the FEMA mitigation planning requirements. A large percentage of the 711 jurisdictions with approved DMA 2000 Local Mitigation Plans have been completed by planners from the COG. HSEMD and FEMA Region VII have provided mitigation training workshops covering a wide-range of mitigation related activities, including benefit-cost analysis and hazard and risk analysis. The most recent workshops were provided in November of 2011. In addition to workshops, HSEMD provides one-on-one technical assistance to planners.

3.4 County-wide Integration

Iowa Administrative Code, Chapter 7, Section 605 establishes standards for emergency management and provides local emergency management commissions with the criteria to assess and measure their capability to mitigate against, prepare for, respond to, and recover from emergencies or disasters. In carrying out their legal responsibilities, the local emergency management commissions ensure mitigation is integrated into all phases of planning on a county-wide basis.

The county emergency management commission must be comprised of: a member of the county board of supervisors or its appointed representative, the county sheriff or the sheriff's appointed representative, and the mayor or mayor's appointed representative from each city within the county. The commission is a municipality as defined in Iowa Code section 670.1, thus all commission business must be carried out in compliance with Iowa Open Meeting Laws. One of the primary responsibilities of the commission is to develop comprehensive countywide emergency plans that are both multi-hazard and multifunctional in nature.

This plan is required to include the following elements:

- Part "A"-Operations plan requires organizations and individuals to carry out specific actions at projected times and places in an emergency or disaster.
- Part "B"-Mitigation plan establishes interim and long-term strategies to eliminate hazards or to reduce the impact of those hazards that cannot be eliminated. In order to qualify for federal funding for mitigation assistance, an eligible applicant must comply with the mitigation planning requirements

established in 44 CFR 201.6 and the Iowa Hazard Mitigation Grant Program Administrative Plan.

- Part “C”-Recovery plan identifies short-term and long-term strategic priorities, processes, vital resources, and acceptable time frames and procedures for restoration.

Following a Presidential Declaration for a major disaster, both part “B” Mitigation Plans and part “C” Recovery Plans must be reviewed and amended, as appropriate, certified by the commission and emergency management coordinator and submitted to Iowa HSEMD for approval within 180 days of the formal closing of a disaster incident period. Failure to meet these requirements results in the loss of state financial assistance (state match) to federal disaster funding. Comprehensive Plans must also be regularly reviewed and amended, as appropriate, at least every five (5) years.

In order to facilitate these planning activities, HSEMD has developed a planning guide and sample plans to be used as models by the county emergency management commissions in developing the three parts of the countywide plans.

A key support factor for county commission mitigation planning is planning at the community level. Iowa’s commitment to local hazard mitigation planning pre-dates FEMA DMA 2000 planning requirements. The Local Hazard Mitigation Planning Initiative began in 1997 to promote the local planning process in Iowa. Recognizing that in order to identify and implement mitigation projects that conformed to federal and state requirements and met the needs and priorities of the community, it was essential that communities develop locally based mitigation plans. Thus, in 1998 the state established a requirement that communities have a state approved, all-hazards mitigation plan in order to qualify for Hazard Mitigation Grant Program Funds.

Building on the Community Rating Service (CRS) and Flood Mitigation Assistance Program (FMA) planning programs, the State developed a State Mitigation Guidance document. The guidance emphasized the importance of a collaborative planning process, a community based hazard analysis/risk assessment, and a mitigation strategy that integrated mitigation planning and activities into the communities economic, social, environmental, and safety needs and priorities.

Implementation of Iowa’s Local Hazard Mitigation Planning Initiative was an outreach program that focused on public education and planning workshops to reach community leaders and professional planning organizations. Between 1997 and 2000, 593 communities in 74 counties developed and adopted Local Hazard Mitigation Plans. These plans were completed to State standards. Since that time FEMA developed standards pursuant to the 44 CFR Part 201 under the Disaster Mitigation Act of 2000, dated January 2008.

HSEMD provides technical guidance for the Local Hazard Mitigation Planning to communities, emergency managers, professional planners, and government elected officials. HSEMD encourages communities to use the STAPLEE (i.e., Social acceptability, Technical feasibility, Administrative capability, Political desirability, Legal authority, Economic benefits, and Environmental benefits) criteria in order to assess their mitigation measures. In addition, FEMA has developed guidance to help states, tribes and local governments comply with the mitigation planning requirements of the Disaster Mitigation Act of 2000.

The planning process is a key element to a completed Local Hazard Mitigation Plan and has proven to be a valuable tool for identifying unmet needs related to hazard mitigation. Local planning committees often work with a professional planner which is generally a private contractor or from a COG. This

combines the expertise and experience of the planner with local participation. The result is that Iowa has been capable of easily identifying unmet local hazard mitigation needs on a statewide scale, improving the state's capability to access available resources and grant programs to impact locally identified needs. FEMA approved DMA local hazard mitigation plans were incorporated into the state's 322 Plan. This process occurred by surveying local hazards and associated mitigation measures. These local hazards and measures were consolidated into generalized categories by HSEMD staff and presented to the SHMT for review and approval.

Iowa's strategy is that Local Hazard Mitigation Planning and the resulting adopted local plans are a function of, and primary contributor to, Part B of the countywide multi-hazard plan adopted by the county emergency management commission. In this way, strategies developed, supported, and adopted by separate jurisdictions represented on the county emergency management commission assist the commission strategy and State Hazard Mitigation Plan. A responsibility of the SHMT is to review potential mitigation projects. Through integrated planning the SHMT oversee the state's hazard mitigation program resulting in grant funds for projects.

3.5 Local Integration

Local integration is mandated by both the federal and state governments. Local hazard mitigation planning is identified in 44 CFR 206 Subpart M and was expanded and detailed by the Disaster Mitigation Act of 2000 (P.L. 106-390), enacted October 30, 2000 and 44 CFR Part 201 – Mitigation Planning, Interim Final Rule (the Rule), published February 26, 2002.

From Subpart M, the key responsibilities of local governments are to:

- Participate in the process of evaluating hazards and adoption of appropriate hazard mitigation measures, including land use and construction standards;
- Appoint a Local Hazard Mitigation Officer;
- Participate on Hazard Mitigation Survey Teams and Interagency Hazard Mitigation Teams;
- Participate in the development and implementation of hazard mitigation plans and plan updates; and
- Coordinate and monitor the implementation of local hazard mitigation measures.

Successes in local planning integration have occurred in a variety of ways:

- Local Hazard Mitigation Planning integrated with Capital Improvement Planning (CIP) in Iowa's largest cities
- Regional Council of Governments (COG) are primarily responsible for the development of the Comprehensive plans as well as the local hazard mitigation plans. HSEMD provided mitigation training and technical assistance to the COG personnel imparting the mitigation philosophy for integration in all their planning efforts.
- Iowa Code mandated county hazard mitigation planning in Iowa integrates Local Hazard Mitigation Planning within the county.

At the local level many mitigation activities are realized by inclusion in a city's Capital Improvement Plan. The following two examples show of how cities have incorporated mitigation goals into their public works activities. These are examples of the larger projects in Iowa. Many cities have mitigation oriented projects integrated into the Capital Improvement Plan sections of their projects. With nearly 1,000 municipalities and over 50 rivers (not including branches and tributaries), a

comprehensive listing of all the mitigation-related projects in the state has not been compiled.

City of Des Moines

The flooding that occurred in 1993 across most of the Midwest hit the City of Des Moines particularly hard. The city, located at the confluence of the Des Moines and Raccoon Rivers, saw a significant part of its Central Business District flooded. In addition, the Des Moines Water Works main facility was inundated by flood waters, disabling service to over 250,000 residents. Damage to the Water Works facility was approximately \$12 Million, with an additional \$2 Million in damages tied to debris removal and levee repair. The City of Des Moines has approximately 15 miles of US Army Corps of Engineers-certified levees and floodwalls within its corporate limits.

In the City of Des Moines' Fiscal Year 2007 Capital Improvement Plan, approximately \$3.7 Million is dedicated to Flood Protection System Improvements, which is mainly tied to repairing levees along and leading to the Des Moines River.

The Des Moines Central Campus Floodgates Project was to construct a floodwall and two floodgates at the rail yard opening. The project involved the construction of 55 feet of floodwall and two 20-foot floodgates across the rail yard opening. This project was completed March 25, 1996.

Following the floods of 2008, the Des Moines Central Campus Floodgates Project was evaluated to determine return on investment that included only the losses associated with physical damage. It was determined

that the return on investment was 9,758%, nearly 100 times the project investment cost.

City of Sioux City

The Perry Creek Flood Control Project, a \$97 Million project authorized under the 1986 Water Resources Development Act, is one of the largest and longest-term flood control projects in Iowa's History. The Perry Creek basin is located in Woodbury and Plymouth Counties in northwestern Iowa. The downstream five miles of the basin lie within the corporate limits of Sioux City, and drain the central portion of the city into the Missouri River. Perry Creek experienced 10 significant floods prior to the beginning of the flood control project in 1996. The most recent was in 1990 with significant damage to personal and public property.

There are approximately 2,000 homes and businesses located within the floodplain targeted by the project. This project will protect the homes and businesses from the damages caused by a 100 year flood event. In 2011 it was reported that 90% of homeowners in the affected project area were taken out of the 100 year floodplain in the latest FEMA floodplain maps.

This project was sponsored by the United States Army Corps of Engineers, with the City of Sioux City acting as the local partner. Sioux City is funding approximately \$34 Million, and the US Army Corps of Engineers funding the rest of the project. In Sioux City's Fiscal Year 2007 Capital Improvement Plan, approximately \$350,000 was budgeted for work on the project which is winding down in its final phase. The overall project consists of 14,800 linear feet of grass and rock lined channel, 1,500 linear feet of new conduit,

modification of 710 linear feet of existing conduit, and a concrete stilling basin, to provide capacity for the 100-year event. Also included are 4.25 miles of hiking/biking trail and a basin-wide flood warning system. Three phases of the four phase project are complete, with the final phase completed in 2008. Project work has required the replacement of numerous bridges, as well as the design of a large culvert/inlet into the Missouri River, passing underneath a six lane segment of Interstate Highway 29.

Further local integration is accomplished through mitigation measures (actions) developed from mitigation actions that have been implemented in Iowa. Local community mitigation measures are 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 Worksheet*.

Through this process, a spreadsheet 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 Worksheet 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 prior to the next local mitigation plan update.

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 update the current 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 Worksheet 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 Worksheet 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 2-D for an example of a submitted and approved Data Collection Worksheet.

3.5.1 Local Comprehensive Planning

The Comprehensive Plan is required as the basis for a zoning ordinance (Iowa Code Section 414.3 (municipal) and Section 335.5 (county)).

The Comprehensive Plan is a long-range (10-20 year) guide for overall development in the community. The plan's purpose is to encourage compatible land use development, provide services efficiently, and coordinate development activities between both regional and local governmental entities, specific interest groups, and the general public.

Areas covered by the Plan include, transportation, employment, housing, and access to clean air, water and open spaces. Specifically the Iowa Code states that the Comprehensive plan must be "designed ...to secure safety from fire, flood, panic, and other dangers: to promote health and the

general welfare...” These codified basic mitigation requirements are fully integrated with the hazard mitigation planning goals and objectives at the state and federal level. Upon adoption, the Comprehensive Plan serves as a local jurisdiction statement of policy and a decision making tool.

Regional Council of Governments (COG) are primarily responsible for the development of the Comprehensive plans as well as many of the local and county multi-jurisdictional hazard mitigation plans. HSEMD provides mitigation training and technical assistance to the COG personnel as well as local officials. This imparts the mitigation goals, objectives and philosophy for integration in all their planning efforts.

Further mitigation goals, objectives and philosophy for integration in all planning efforts is demonstrated through the SF-2389 Smart Planning legislation (2010) which provides local comprehensive planning and development guidelines for creating and updating comprehensive plans, establishes the Iowa Smart Planning Task Force, and provides resources for evaluating and identifying hazards and mitigation within communities throughout the state. This initiative is based on extensive mitigation planning in Iowa. It establishes 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. The following are the established Iowa Smart Planning Principles:

1. Collaboration; encouraged participation of governmental, community and individual stakeholders
2. Efficiency, transparency, and consistency; individuals, communities, regions, and governmental entities should share in the responsibility to promote the equitable distribution of development benefits and costs

3. Clean, renewable and efficient energy; promote clean and renewable energy use as well as increased energy efficiency
4. Occupational diversity; promote increased diversity of employment and business opportunities and promote the establishment of businesses in locations near existing housing, infrastructure, and transportation
5. Revitalization; promote and establish development that conserves land, protects historic resources, promotes pedestrian accessibility, and integrates different uses of property as well as remediation and reuse of existing sites, structures, and infrastructure
6. Housing diversity; encourage housing diversity, support rehabilitation of existing housing, and promotes the location of housing near public transportation and employment centers
7. Community character; consistent development with architectural style of the community and local values
8. Natural resources and agricultural protection; emphasize protection, preservation, and restoration of natural resources, agricultural land, and cultural and historic landscapes, and should increase the availability of open spaces and recreational facilities
9. Sustainable design; develop utilizing sustainable design and construction standards, conserve natural resources, reduce waste and pollution through efficient use of land, energy, water, air, and materials
10. Transportation diversity; expanded transportation options to maximize mobility, reduce congestion, conserve fuel, and improve air quality

This comprehensive planning process involving the above smart principles provides resources for evaluating and identifying hazards and mitigation within communities throughout the State of Iowa. Recommendations during this planning process include evaluating land development

regulations and floodplain or storm water ordinances, rules or regulations with consideration of the effects of development on structures located in the flood plain of a river or stream. Through this process maps and other documentation are reviewed to identify current and future flood control boundaries, drainage, and removal, current and potential impacts on local watershed, and current and future provision of utilities.

Objectives, policies, and programs guiding future development of sanitary sewer service, storm water management, wastewater treatment technologies, and telecommunications facilities may be reviewed with estimates evaluated for future demand for such utility services. These objectives, policies, and programs shall also 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.

Communities may address prevention and mitigation of, response to, and recovery from a catastrophic flood and identify opportunities to collaborate and partner with neighboring jurisdictions and other entities in the region for projects of mutual interest. Plans may also 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 multiple hazards.

This planning process coordinates the development of the area in regards to the general welfare, convenience, safety, and prosperity of its people through comprehensive development and coordination integrated with the mitigation of local hazards.

3.6 Non-Government Integration

Recognizing the additional need for businesses to work with government to ensure Iowa's resilience to natural and human-caused disasters, the Iowa Business Council has teamed with the State of Iowa and the non-profit Business Executives for National Security (BENS) to launch the Safeguard Iowa Partnership. The Safeguard Iowa Partnership provides channels of communication between the State and private entities concerning up to date information on mitigation trends and funding opportunities. The Partnership and continued planning, support and participation consists of representatives from key utilities, businesses, government agencies, and academic institutions.

The operating council for the Safeguard Iowa Partnership has identified five strategies for successful interaction and cooperation among the partnership. These initiatives are:

- Expand business resource registry to meet community needs
- Develop communication network
- Develop educational workshops focused on facilitating business continuity and leveraging community resources
- Engage in state and local exercises
- Expand funding to facilitate growth and value to Iowa businesses and communities

3.7 Integration with Federal and State Programs

3.7.1 Floodplain Management

The State of Iowa's floodplain management program pre-dates the National Flood Insurance Program (NFIP) by almost twenty years. As part of an effort to stem the increase in flood damages sustained after a number of devastating flood events in the 1940's, the Iowa General Assembly created the Natural Resources Council in 1949. Originally, the Council's power over floodplain activities was advisory in nature. Its regulatory functions were established by 1957 and 1965 amendments. After a number of state reorganizations, Iowa's floodplain regulatory authority now resides with the Iowa Floodplain Management Program, Water Resource Section of the Iowa Department of Natural Resources (IDNR).

The flood plain management program administers the state flood plain permit program, works with communities and counties to develop and administer local flood plain management programs, coordinates the National Flood Insurance Program, administers the state's dam safety program, and assists FEMA and HSEMD in responding to flood disasters.

Iowa's floodplain program is different from most states in that its authority extends to virtually all floodplain construction within the state and is not limited to FEMA regulatory floodplains. An IDNR permit is required for rural development in the floodplains of streams with watersheds draining ten square miles or more and urban development in the floodplains of streams with watersheds draining two square miles or more. Potential flood damages for development in floodplains with watersheds below those thresholds is considered to be minor.

There are currently 630 Iowa communities participating in the NFIP. 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.

Iowa Homeland Security and Emergency Management staff coordinates closely with IDNR Floodplain Management Staff in all facets of floodplain management, including NFIP issues.

NFIP participation is a pre-requisite for community eligibility in pre-and post-disaster programs, including the HMGP, FMA, RFC, SRL and PDM mitigation grant programs. In addition, flood insurance through the NFIP is only available in communities that participate in the program. Flood insurance policies issued within communities participating in the regular NFIP program include Increased Cost of Compliance (ICC) coverage for properties located in the Special Flood Hazard Area that have been substantially damaged as a result of flooding. The ICC serves as an important source of non-federal match for the mitigation grant programs.

3.7.2 LiDAR Interactive Mapping, Iowa Flood Center

The Iowa Department of Natural Resources and the United States Geological Survey have partnered to create interactive topographic maps to cover the entire State of Iowa. By using a system of light detection and ranging (LiDAR) to scan the earth with lasers from aircrafts, data can be obtained on elevations across the state. The elevation data is complemented by high-resolution aerial photography to provide the following:

- Reduction of many infrastructure planning costs including roadway, utility line, construction, and soil conservation site planning and estimating
- Risk assessment to include floodplain and flood insurance mapping, erosion potential measurements and modeling, and emergency management and response planning; dam breach inundation areas, levee analysis, and spill routing
- Evaluating alternative infrastructure options such as utility lines, roadways, stormwater facilities, and pipelines
- Permit process improvement involving animal feeding operation siting with regards to floodplains and slop,

air emission permitting, and floodplain permitting for industrial/residential construction

- Education/research; environmental science such as watershed modeling, runoff modeling, conservation practice performance, and watershed delineation; engineering involving construction site planning and development/use of automated planning tools; development of new technologies

These efforts have been funded by partnerships among IDOT, IDNR, NRIS, and IDALS. Upon completion of the LiDAR initiative, the topographic maps, elevation maps, and available data will be made available at no cost from a state website, in various formats, for all Iowans. The DNR and other involved agencies have completed an implementation plan that outlines a strategy to complete flood plain mapping for Iowa in the next 5-7 years. The management and updating of flood plain maps will be an on-going continuous process. Maps will be updated electronically as conditions and available information change.

Beginning with the historic flooding in 2008 University of Iowa researchers began collecting time-sensitive data on many aspects of the flooding. At this time there was a lack of centralized location for flood related study in Iowa and the Nation. In 2009 the Iowa Flood Center (IFC) was established. The IFC is actively engaged in flood projects and research.

Further, the Iowa Department of Natural Resources and FEMA Region VII have entered into a Cooperating Technical Partnership to manage flood hazard mapping following the floods of 2008. Through this partnership, the Iowa DNR and FEMA will work together to create hazard data making necessary data available to FEMA for updating effective Flood Insurance Rate Maps across the state. The data provided through LiDAR will identify flood hazards in many areas of the state in association with FEMA's Risk MAP program.

3.7.3 Storm Ready

The State of Iowa currently has 34 Storm Ready Sites, 14 communities, 15 counties, 4 universities, and 1 commercial site participating in the Storm Ready program through the National Weather Service. The Storm Ready program helps community leaders and emergency managers strengthen their local safety programs by preparing for severe weather through advanced planning, education, and awareness. The State of Iowa is prone to severe weather impacts year round due to geographical location and climate making preparedness and awareness a high priority. Supporters of the Storm Ready program in Iowa include F.W. Kent Park, Howard H. Cherry Scout Reservation, and Little Sioux Scout Ranch. The Little Sioux Scout Ranch has built multiple tornado safe rooms through private partnerships due to the devastation they experienced June 11, 2008 when an EF3 tornado ravaged the camp killing four boy scouts and injuring 48 others. The Howard H. Cherry Scout Reservation in Central City is currently in the process of constructing five tornado safe rooms at the Howard H. Cherry Scout Reservation.

On April 13, 2006, Iowa City, Iowa experienced an F2 tornado which swept through the heart of the city. The Johnson County Sheriff's office and St. Patrick's Catholic Church were critically damaged by its path of destruction. Due to timely forecasts and warnings from the National Weather Service and the quick actions of the emergency management community in following adopted procedures, activating indoor warning systems, and activating outdoor tornado sirens, nearly 50 people's lives were saved. Johnson County officials and other community leaders had joined Storm Ready to develop plans to handle all types of severe weather prior to the tornado event which enabled them to prevent what could have been a terrible tragedy. In response, the NOAA's National Weather Service honored five

community heroes involved in the Iowa City tornado for their life-saving actions.

On July 17, 2010 Dickinson County experienced damaging winds. No injuries or deaths were reported during the storm. Many residents and Emergency Manager credited the NWS for the advance warning. Local media credited NWS along with the County being StormReady specifically as reasons why there were no casualties.

3.7.4 Dam Safety

The dam safety program in the State of Iowa is coordinated by the Iowa Department of Natural Resources. Their department reviews and approves all construction of new dams, maintaining an inventory of existing dams meeting minimum size criteria and they conduct periodic dam inspections. There are currently 3,787 dams in the State's dam inventory. A total of 321 dams require a regular inspection by the IDNR due to the increased potential to create extensive damage to downstream houses or buildings, or to cause loss of life should they fail and release their impounded water. These 321 dams are required to have inspection at least once every five years, with some requiring a two-year inspection. There is a required permit application process by the IDNR in which they review and evaluate permits to construct dams, modify existing dams, drawdown the water level, or removal of a dam.

A partnership between the Association of State Dam Safety Officials and the Iowa Department of Natural Resources offered a dam safety workshop May 20, 2010. The goal of this workshop was to educate dam owners and operators on the following:

- State dam safety laws and regulations
- Extreme storm events and potential dam failure conditions

- Public safety, security and owner responsibilities/liabilities
- Dam operations, maintenance, and inspections
- Developing and implementing emergency action plans
- Potential sources of funding for remedial dam repair, design, and construction
- Procedures for retaining a professional engineer to inspect, investigate and evaluate dams, and provide remedial dam repair plans, construction inspection or supervision

3.7.5 Safe Rooms

Iowa HSEMD provides technical assistance for Safe Rooms in Iowa through FEMA's Hazard Mitigation Assistance Programs. 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. FEMA Publication 361, Design and Construction Guidance for Community Safe Rooms, Second Edition (August 2008) is the guidance that architects use to design tornado safe rooms to be eligible for grant funding through the HMA programs. Iowa currently has eight tornado safe rooms built to the FEMA Publication 361. Most of the safe rooms built in Iowa are multi-use allowing optimal use of space, little to no increase in facility maintenance, and a good return on investment. HSEMD has partnered with the American Institute of Architects to encourage design and construction of tornado safe room projects in schools and multi-functional community centers.

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.

In February 2009, Iowa HSEMD and FEMA Region VII sponsored workshops to educate the participants on the engineering and programmatic requirements found in the FEMA Publication 361 Guidance for designing and constructing of tornado safe rooms. Tornado safe rooms are built to provide for near absolute life protection to all occupants during tornado/high wind events. Participants invited included schools, architects, engineers, community leaders, Regional Council of Governments, and other eligible applicants.

Schools across Iowa have proposed plans to construct new school buildings or additions to existing buildings. Currently, 40 tornado safe room projects are approved in 36 school districts. When completed these projects will protect more than 30,000 students, staff, and visitors.

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.

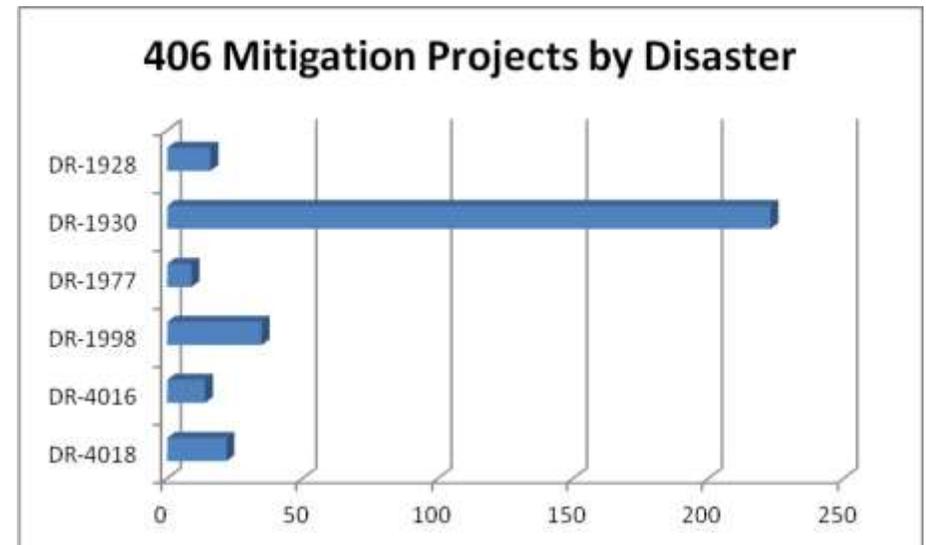
“Weather safe room” by definition means a building, structure, or portion of a building or structure built in accordance with requirements established in chapter 315 and designated for use during a severe windstorm event. The Iowa Legislature established the above terminology in reference to tornado safe rooms. Chapter 315 Weather Safe Rooms is outlined in the Iowa Administrative Code.

3.7.6 Public Assistance Section Mitigation

Section 406 (Public Assistance) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act establishes the program for the repair, restoration, and replacement of facilities damaged as a result of a Presidentially Declared Disaster. Through federal, state and local government partnerships, these funds are used for hazard mitigation measures that a state or local government determines to be necessary to meet a need for governmental services and functions in the area affected by the major disaster.

Section 406 mitigation funds can only be used in the declared disaster areas (usually counties) and only in conjunction with identified, eligible disaster projects that will reduce future loss to life and property, protect the public infrastructure and help build disaster resistant communities. In addition, the State Hazard Mitigation Officer (SHMO) coordinates directly with the State Public Assistance (PA) Officer on implementation of 406 Mitigation conducting joint project reviews and joint Benefit Cost Analysis (BCA). If there is a mitigation project that does not meet the requirements of section 406 Mitigation, the SHMO is notified and the project is reviewed for eligibility under section 404 and HMA Mitigation funding guidance. The last version of the State Mitigation Plan identified 4 joint Public Assistance and Hazard Mitigation projects under development within the cities of Greene, Palo, Cedar Rapids and Waverly. Construction on these projects has been completed in the past three years. These projects involved

substantially damaged structures which were replaced through the Public Assistance Grant Program and new tornado safe rooms being built using funding from the HMGP. These facilities were built and designed to the FEMA Publication 361 guidance and hardened to resist 250 mph wind loads. Since the Public Assistance Program is able to provide the funding for the rebuilding of these facilities, the HMGP funds allowed funding for the hardening for the safe room construction within the buildings.



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. The preceding chart provides a visual representation of the number

of public assistance projects to include 406 mitigation for disasters in the last three years. Due to the amount of Public Assistance funding available, several mitigation projects are being completed to further prevent future damage and reduce loss of life and property.

Through the Public Assistance Program, since January of 2010 there have been 277 Category F (Public Utilities) project worksheets written and obligated for nearly \$163 million. These projects encompass six different disaster declarations. Although these projects are not included under the Hazard Mitigation Grant Program, they contribute to the reduced negative effects of natural hazards. Mitigation measures are evident in these projects by strengthening and improving the reliability of the existing electrical lines or structures.

Code and Standard upgrades are another type of project funded under the Public Assistance program. These projects have proven to reduce the negative effects of natural hazards on property and people by upgrading damaged public infrastructure using current design codes and standards. Currently there are two projects being funded through the Public Assistance program under Codes and Standards. All building replacement projects must demonstrate that they are cost effective. A primary goal is to relocate buildings that have been or will be subject to repetitive heavy damage outside of the floodplain.