



**Polk County**

**Multi-Jurisdictional Local Hazard Mitigation Plan**

**Meeting 3:  
Mitigation Strategy  
January 9, 2014**

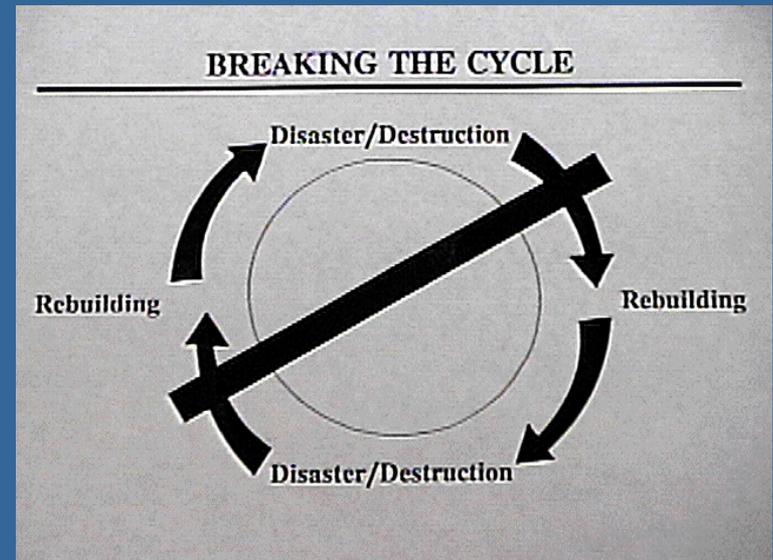
## Meeting Purpose

- Review Purpose/Requirements
- Public Survey Results
- Updating the Mitigation Strategy
  - Review Updated Plan Goals
  - Development of New Actions
  - Status of Previous Actions
  - Prioritization of Mitigation Actions
- Hazard Mitigation Assistance Grants
- Plan Maintenance
- Next Steps

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Disaster Mitigation Act of 2000

- Requires local governments to adopt a natural hazard mitigation plan to maintain eligibility for FEMA mitigation funds



## Participating Jurisdictions—Review Requirements

- **Meeting Participation** —Designate a representative to serve on the Hazard Mitigation Planning Committee, which will meet three times during the planning process,
- **Provide Data/Review Drafts** —Provide data and comment on plan drafts as requested,
- **Mitigation Actions**— Assist in the development of a risk assessment and mitigation actions (at least one) specific to the jurisdiction,
- **Disseminate Information** —Inform the public, local officials, and other interested parties about the planning process and provide opportunity for them to comment on the plan, and
- **Document Donated Time** (soft-match forms)
- **Formally adopt the mitigation plan**

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

Jurisdiction	Meeting Attendance	Data Collection Guide
City Of Alleman	X	X
City Of Altoona	X	X
City Of Ankeny	X	X
City Of Bondurant	X	X
City Of Carlisle*	NR	NR
City Of Clive	X	X
City Of Des Moines	X	X
City Of Elkhart	X	X
City Of Granger*	NR	NR
City Of Grimes	X	X
City Of Johnston	X	X
City Of Mitchellville	X	X
City Of Norwalk*	X/NR	NR
City Of Pleasant Hill	X	X
City Of Polk City	X	X
City Of Runnells	X	X
City Of Sheldahl*	NR	NR
City Of Urbandale	X	X
City Of West Des Moines	X	X
City Of Windsor Heights	X	X
Unincorporated Polk County	X	X
Ankeny, 261	X	X
Bondurant-Farrar, 720		X
Dallas Center-Grimes, 1576	X	X
Des Moines Independent, 1737	X	X
Johnston, 3231	X	X
North Polk, 4779	X	X
Saydel, 5805		
Southeast Polk, 6101	X	X
Urbandale, 6579	X	X
West Des Moines	X	X

\* = stakeholder community-participant of adjacent county plan



# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Mitigation Planning Steps

- Phase I
  - 1. Organize Resources
  - 2. Plan for Public Involvement
  - 3. Coordinate with Other Departments and Agencies
  - 4. Identify the Hazards
- Phase 2
  - 5. Profile the Hazards
  - 6. Identify Assets
  - 7. Estimate Losses
- Phase 3
  - 8. Identify Plan Goals
  - 9. Develop/Update Potential Mitigation Actions

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- Phase 4
  - 10. Draft the Mitigation Plan
  - 11. Adopt the Plan
  - 12. Implement and Maintain the Plan

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

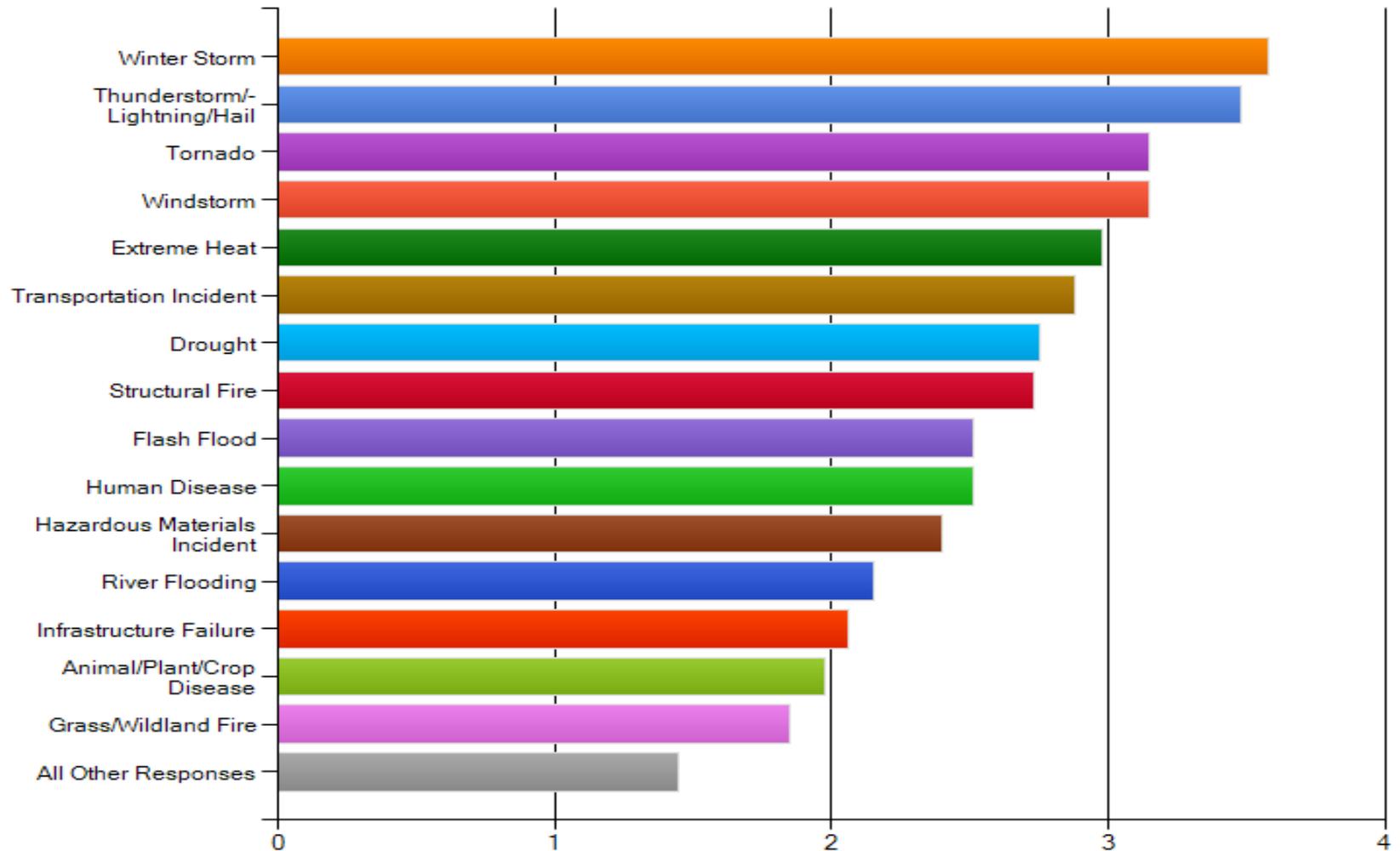
Public Survey  
Results

456 Surveys Completed!

Jurisdiction	Response Percent	Response Count
<b>Unincorporated Polk County</b>	<b>3.5%</b>	<b>16</b>
<b>City of Alleman</b>	<b>0.2%</b>	<b>1</b>
<b>City of Altoona</b>	<b>1.3%</b>	<b>6</b>
<b>City of Ankeny</b>	<b>43.0%</b>	<b>196</b>
<b>City of Bondurant</b>	<b>0.4%</b>	<b>2</b>
<b>City of Carlisle</b>	<b>0.0%</b>	<b>0</b>
<b>City of Clive</b>	<b>1.8%</b>	<b>8</b>
<b>City of Des Moines</b>	<b>9.9%</b>	<b>45</b>
<b>City of Elkhart</b>	<b>0.4%</b>	<b>2</b>
<b>City of Granger</b>	<b>0.0%</b>	<b>0</b>
<b>City of Grimes</b>	<b>0.2%</b>	<b>1</b>
<b>City of Johnston</b>	<b>10.5%</b>	<b>48</b>
<b>City of Mitchellville</b>	<b>3.9%</b>	<b>18</b>
<b>City of Norwalk</b>	<b>0.0%</b>	<b>0</b>
<b>City of Pleasant Hill</b>	<b>0.9%</b>	<b>4</b>
<b>City of Polk City</b>	<b>0.7%</b>	<b>3</b>
<b>City of Runnells</b>	<b>0.0%</b>	<b>0</b>
<b>City of Sheldahl</b>	<b>0.0%</b>	<b>0</b>
<b>City of Urbandale</b>	<b>4.2%</b>	<b>19</b>
<b>City of West Des Moines</b>	<b>4.2%</b>	<b>19</b>
<b>City of Windsor Heights</b>	<b>1.5%</b>	<b>7</b>
<b>Ankeny School District, 261</b>	<b>6.1%</b>	<b>28</b>
<b>Bondurant-Farrar School District, 720</b>	<b>0.0%</b>	<b>0</b>
<b>Dallas Center-Grimes School District, 1576</b>	<b>0.2%</b>	<b>1</b>
<b>Des Moines Independent School District, 1737</b>	<b>2.9%</b>	<b>13</b>
<b>Johnston School District, 3231</b>	<b>0.2%</b>	<b>1</b>
<b>North Polk School District, 4779</b>	<b>0.2%</b>	<b>1</b>
<b>Saydel School District, 5805</b>	<b>0.0%</b>	<b>0</b>
<b>Southeast Polk School District, 6101</b>	<b>1.1%</b>	<b>5</b>
<b>Urbandale School District, 6579</b>	<b>2.0%</b>	<b>9</b>
<b>West Des Moines School District, 6957</b>	<b>0.7%</b>	<b>3</b>
		<b>456</b>

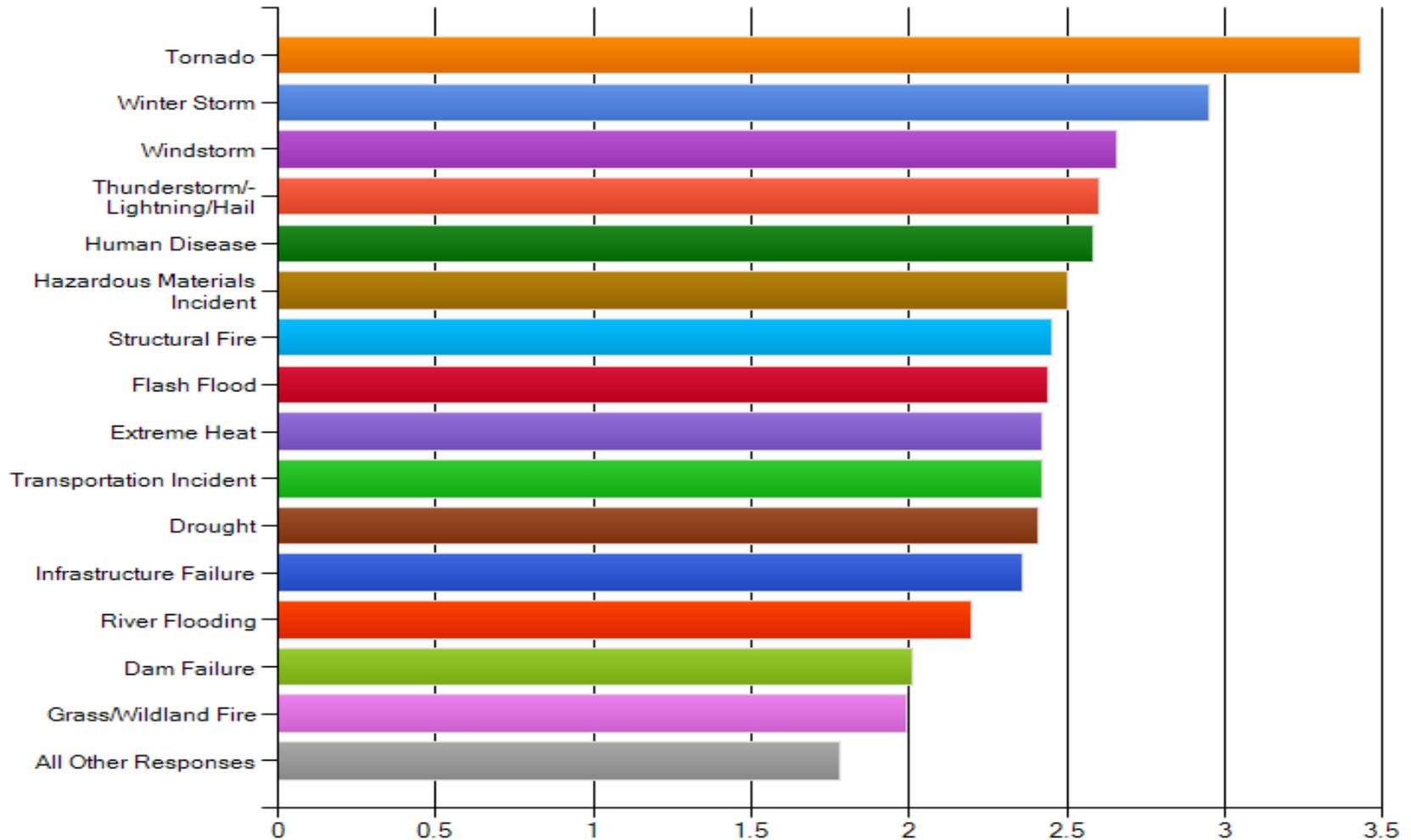
# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Public Opinion on Likelihood of Occurrence



# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Public Opinion on Potential Magnitude of an Event



# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

Public Survey Results	
Hazard	Weighted Score
Winter Storm	3.25
Tornado	3.00
Thunderstorm/Lightning/Hail	2.90
Windstorm	2.87
Transportation Incident	2.72
Structural Fire	2.66
Infrastructure Failure	2.64
Human Disease	2.60
HAZMAT Incident	2.53
Extreme Heat	2.52
Drought	2.51
Flash Flood	2.26
Dam Failure	2.26
Levee Failure	2.23
River Flooding	2.18
Animal/Plant/Crop Disease	2.03
Sinkholes/Landslide	1.87
Earthquake	1.74
Grass/Wildland Fire	1.68
Expansive Soils	1.48

Planning Committee Results	
Hazard	Weighted Score
River Flooding	3.25
Winter Storm	3.15
Flash Flood	3.10
HAZMAT Incident	3.10
Structural Fire	3.10
Transportation Incident	3.10
Tornado	2.95
Levee Failure	2.80
Windstorm	2.75
Thunderstorm/Lightning/Hail	2.65
Drought	2.50
Infrastructure Failure	2.50
Human Disease	2.50
Grass/Wildland Fire	2.35
Dam Failure	2.35
Extreme Heat	1.95
Animal/Plant/Crop Disease	1.60
Earthquake	1.45
Sinkholes/Landslide	1.45
Expansive Soils	1.45

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Updating the Polk County Mitigation Strategy

## Mitigation Strategy

- **Goals** are general guidelines that explain what you want to achieve. They are usually long-term, broad, policy-type statements.
- **Mitigation Actions** are specific actions that help achieve goals and objectives.

## Plan Goals—Updated at Meeting #2

1. Protect the public health, safety, and welfare by increasing public awareness of hazards and by encouraging collective and individual responsibility for mitigating hazard risks.
2. Improve capabilities, coordination, and opportunities at municipal and county levels to plan and implement hazard mitigation projects, programs, and activities, including incorporation of lessons learned from previous events and exercises.
3. Improve data collection, use, and sharing to reduce the impact of hazards.
4. Protect the most vulnerable populations, buildings, and critical facilities through the implementation of cost-effective and technically feasible mitigation actions.

## Mitigation Actions

- Losses from hazards can be reduced if communities take action before the next disaster
- Actions have long term and cumulative benefits
- Some may be low-cost initiatives readily adopted
- Others may be dependent on available funding or best implemented following a disaster
- **Not all actions identified through this planning process will be eligible for FEMA grants**

## Developing/Updating Mitigation Actions

- Review Key Issues from Risk Assessment
- State Priorities for Hazard Mitigation Assistance Grants
- Public Opinion from Surveys
- FEMA's 6 Categories of Mitigation Actions
- Previous Actions

## Key Issues From Risk Assessment (Top 10 Hazards)

- River Flooding
  - 10 of 12 Presidential Disaster Declarations have been for events involving flooding.
  - 29 Un-mitigated Repetitive Loss Properties.
    - Clive-1; Des Moines-20; Pleasant Hill-1; County-5; Urbandale-1; West Des Moines-1
  - Implications of Revisions to Flood Maps
- Winter Storm
  - 2 Presidential Disaster Declarations
  - Power Outages
  - Alternate Power for Critical Facilities?

## Key Issues From Risk Assessment (Top 10 Hazards)

- Flash Flood
  - NWS Flash Flood Watches/Warnings-Avg. 8 per year ea. for Polk Co.
  - Intersections w/ repetitive closures
  - Includes Ice Jams (Avg. 1 per year)
- Haz-Mat Incident
  - 311 Tier II Facilities/158 with EHS
  - Transportation Routes
  - Pipelines

## Key Issues From Risk Assessment (Top 10 Hazards)

- Structural Fire
  - 742 structure fires in 2012 (NFIRS)
  - 25 Injuries/3 deaths
  - Average Property Damage Per Structure Fire-\$10,000
- Transportation Incident
  - Average 10,000 incidents per/year from 2003-2012
  - Average 29 per/year with fatalities
  - Average annual cost including property damages  
\$3,079,695

## Key Issues From Risk Assessment (Top 10 Hazards)

- Tornado
  - 27 recorded tornadoes in 34 years
  - Most were F0 and F1—stronger magnitude is possible
  - Not all schools, mobile home parks, public buildings have saferooms
- Levee Failure
  - 6 levee systems in Des Moines / 1 in West Des Moines
  - Implications of Flood Map Revisions?
  - FEMA's Levee Analysis and Mapping Procedures (LAMP) for Non-accredited Levees
  - Public Information Needed?

## Key Issues From Risk Assessment (Top 10 Hazards)

- Windstorm
  - Light-frame structures more vulnerable
  - Power outages
  - Wind-resistant construction techniques? Building Codes?
- Thunderstorm/Lightning/Hail
  - Average of 23 Severe Thunderstorm Warnings per year
  - Do critical systems/facilities have adequate surge protection?

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

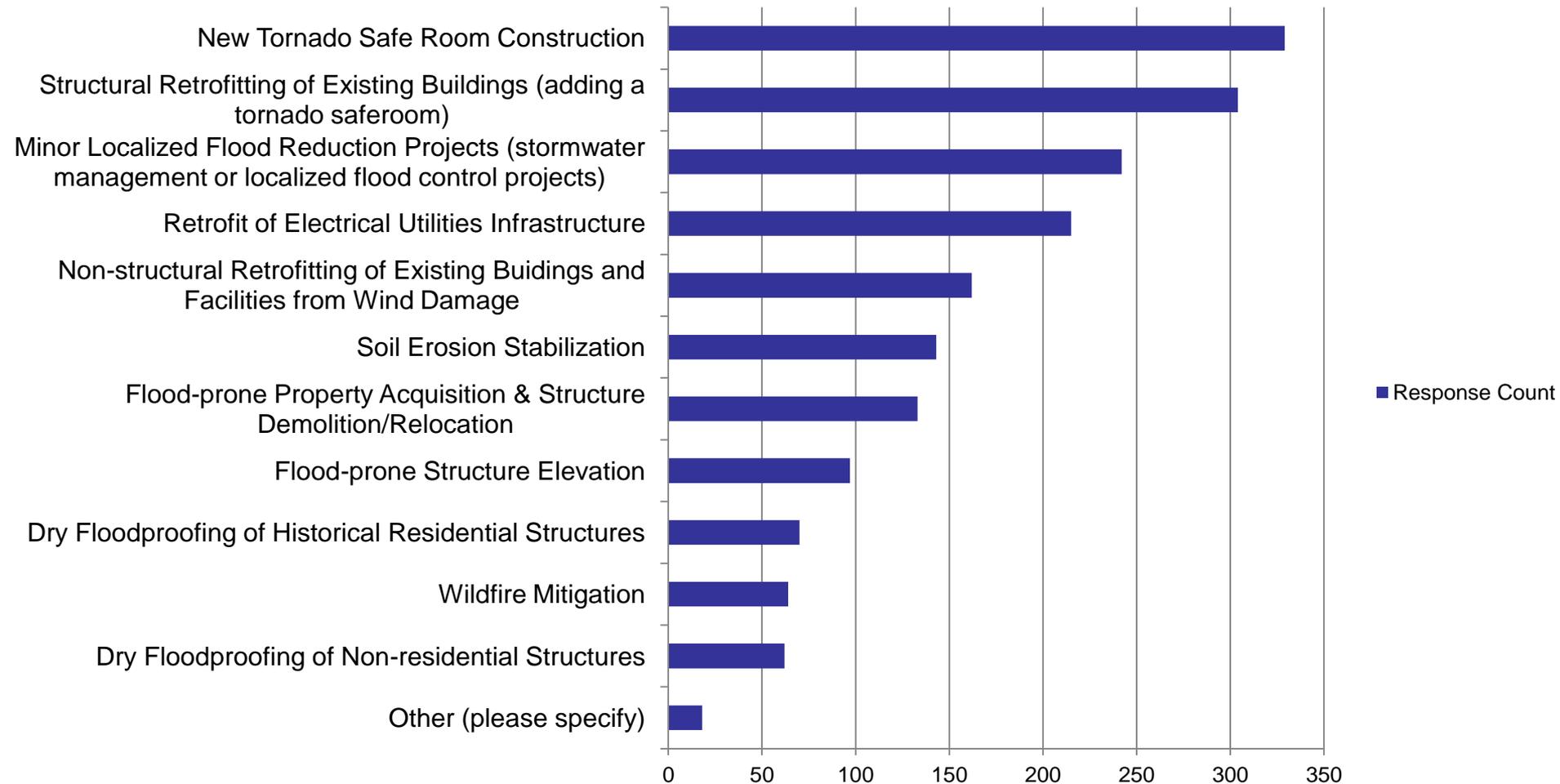
## State Project Priorities

- Flood-prone Property Acquisition & Structure Demolition /Relocation
- Flood-Prone Structure Elevation
- Dry Floodproofing of Historical Residential Structures
- Dry Floodproofing of Non-residential Structures
- Minor Localized Flood Reduction Projects (storm water management or localized flood control projects)
- Structural Retrofitting of Existing Buildings (adding a tornado safe room)
- Non-structural Retrofitting of Existing Buildings, and Facilities from wind damage.
- New Tornado Safe Room Construction
- Electrical Utilities Infrastructure Retrofit
- Soil Erosion Stabilization
- Wildfire Mitigation

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Public Opinion

### Response Count



# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Sample Public Survey Comments (see handout)

- “The Storm Sewer System on E 27th St between Guthrie Ave & Easton Blvd is many decades old and needs to be replaced to be able to handle periods of heavy rain.”
- “...adding a road between Merle Hay Road west across Beaver Creek to 54th Street would help if we have flooding like 1993. We really do need a third option to connect Johnston.”
- “Adding a tornado safe room to existing schools and new schools for the safety of our kids.”
- “Flooding, levees, dams, etc. are a huge concern nearby, but I did not check those because my particular jurisdiction is uphill from all that.”
- “Please spend this money wisely on broad factors rather than giving money to people who built in a flood zone, knew they bought in a flood zone, or are simply expecting the gov't to bail them out if there is a problem.”
- “I would like to recommend Tornado Saferooms for our local mobile home parks.”
- “Need more public education.”

## FEMA's 6 General Mitigation Measure Categories (see handout)

1. Prevention
2. Property protection
3. Public education and awareness
4. Natural resource protection
5. Structural projects
6. Emergency services protection

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Prevention

- Building codes
- Open space preservation
- Planning and zoning
- Stormwater management
- Capital improvement programs



## Property Protection

- Acquisition
- Relocation
- Elevation
- Floodproofing
- Structural retrofits
- Firewise construction



# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Public Information

- Outreach projects
- Real estate disclosure
- Hazard maps
- Education programs (children and adults)



# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Natural Resource Protection

- Erosion and sediment control
- Stream corridor restoration
- Wetlands restoration/preservation
- Public open space expansion
- Forest and vegetation management



Kearny, Arizona – FEMA's Environmental Program strives to protect valuable resources, such as endangered species habitats, during disaster recovery.

**FEMA News Photo**

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Structural

- Detention/retention structures
- Sediment basins/low-head weirs
- Culvert resizing/replacement
- Flood walls
- Safe rooms



# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Emergency Services

- Warning systems
- Protection of critical facilities (back-up generators, etc.)
- Protection of lifeline utilities
- Emergency response services (mitigation projects that ensure response services are functional after a disaster **NOT** actions to improve response)



Ex. An action to relocate a fire station out of the floodplain to ensure firefighting services are available during flooding.

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Mitigation Actions for the Plan

- Each jurisdiction must include **at least one** action
  - Can be currently on-going
  - Can be for the future
  - Can be for any funding source
- Communities Participating in the National Flood Insurance Program (NFIP) **must have** an additional action addressing continued compliance.

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

Previous  
Actions-from  
2009 Plan  
(see  
handout)

Jurisdiction	# of Actions
Alleman	5
Altoona	5
Ankeny	18
Bondurant	8
Clive Count	6
Des Moines	18
Elkhart	5
Grimes	7
Johnston	10
Mitchellville	5
Pleasant Hill	15
Polk City	8
Polk County	10
Runnells	5
Urbandale	12
West Des Moines	10
Windsor Heights	7
<b>Total</b>	<b>154</b>

## Status Choices for Previous Actions

- Completed
  - Not Started/Continue in Plan Update
  - In Progress/Continue in Plan Update
  - Delete
- 
- How many actions in your jurisdiction have been completed?

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Prioritizing Mitigation Actions

- STAPLEE Worksheet (handout):

**S**ocial

**T**echnical

**A**ministrative

**P**olitical

**L**egal

**E**conomical

**E**nvironmental

**STORY COUNTY  
MULTI-JURISDICTIONAL  
LOCAL HAZARD MITIGATION PLAN**

<b>Action Title:</b>	<b>Jurisdiction:</b>
<b>Action ID:</b>	

Note: Make sure the Action ID Matches the Action ID on the corresponding Mitigation Action Implementation Worksheet. For actions being continued from previous plans, use the existing Action ID, if available. Action ID format for new actions is Jurisdiction-# (Ex. Ames-1, Ames-2, Ames-3, etc.)

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?		
T: Is it Technically feasible and potentially successful?		
A: Does the jurisdiction have the administrative capacity to execute this action?		
P: Is it Politically acceptable?		
L: Is there Legal authority to implement?		
E: Is it Economically beneficial?		
E: Will the project have either a neutral or positive impact on the natural environment? (score a 3 if positive impact, 2 if neutral impact)		
Will historic structures be saved or protected?		
Could it be implemented quickly?		
<b>STAPLEE Score</b>		

Mitigation Effectiveness Criteria	Evaluation Rating	Score
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives would be saved.	
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	
<b>Mitigation Effectiveness Score</b>		

Total Score (STAPLEE Score + Mitigation Effectiveness Score): \_\_\_\_\_

Local Priority Level:  High (33+ points)  Medium (20-32 points)  Low (less than 20 points)

Completed by (name/title/phone #): \_\_\_\_\_

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Action Spreadsheet Instructions

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Delete

For actions that you would like to remove from the mitigation plan's mitigation strategy, please complete column L with the blue heading titled "2013 Action Status Comment", to indicate why the action is no longer applicable.

## Completed

For actions that your jurisdiction has completed, please enter information as available in the columns with purple headings (columns M-S). If the information is not available, please enter N/A. You can also enter comments in column L if necessary.

## Not Started/Continue in Plan Update AND In Progress/Continue in Plan Update

For these actions, please complete ALL columns with the green headings (Columns T-AD). FEMA will not approve plans that are missing information in any of these categories for actions that will be continued in the plan. You can also enter comments in column L if necessary.

The details that already appear in the spreadsheet came from the previous Hazard Mitigation Plan. So, this information may need to be updated.

You will also need to complete a STAPLEE form that will provide the STAPLEE score to insert in Column U

## Adding New Actions

Add new actions to the spreadsheet. The Action ID will be the name of your jurisdiction and the next sequential number. Choose "NEW" in the "2013 Action Status Column". Details in columns A-J and T-AD will need to be completed for all new actions.

## Completed Action Spreadsheets Due Feb. 6, 2014

- Work with others in your jurisdiction to determine final actions to submit for the plan
  - Other Departments
  - Private Non-Profit Organizations
- Provide Completed Spreadsheets as email attachment to:
  - [laurie.bestgen@amec.com](mailto:laurie.bestgen@amec.com)
  - Phone: 816-637-6378

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Hazard Mitigation Assistance Grants:

Iowa Homeland Security and Emergency Management Division

- Hazard Mitigation Grant Program-HMGP
- Pre-Disaster Mitigation Grants-PDM
- Flood Mitigation Assistance Grants-FMA

### Contact

Dan Schmitz

Deputy State Hazard Mitigation Officer

515-725-9369

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Other Funding Sources

- USDA
  - Rural Development Grants
  - Emergency Watershed Protection Program
- U.S. Dept of Commerce
  - Public Works and Economic Dev. Facilities Assistance
- U.S. Dept of Housing and Urban Development
  - Community Development Block Grants
- U.S. Army Corps of Engineers
  - Studies
  - Projects
- Iowa DNR Forestry
- Iowa DNR Floodplain Management
- Iowa Department of Agriculture and Land Stewardship (IDALS)
- Iowa Department of Transportation
  - Traffic Safety Improvement Program
  - Rail/Highway Crossing Safety Program
  - Operation Lifesaver (public education)
- Iowa Department of Elder Affairs
- Iowa Department of Public Health

More Comprehensive List in  
State Hazard Mitigation  
Plan:

[http://www.homelandsecurity  
.iowa.gov/disasters/hazard  
mitigation.html](http://www.homelandsecurity.iowa.gov/disasters/hazard_mitigation.html)

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

## Plan Maintenance

## Plan Maintenance

- FEMA Regulations require complete plan update every 5 years.
- FEMA requires a formal plan maintenance process to ensure that the mitigation plan remains an active and relevant document
- Who, how, and when will plan be monitored, evaluated, and updated?
- How will public be involved in plan maintenance process?
- How will mitigation strategy be incorporated into other planning mechanisms?

## Plan Implementation and Maintenance- HMPC Consensus Needed

- Who, how, and when will plan be monitored, evaluated, and updated?
  - Annual Review?, After hazard events?
  - Who will organize?, Who will participate?
  - Update Status of Mitigation Actions
- How will public be involved in plan maintenance process?
  - Press Release on annual reviews?
  - Other ideas?

## Plan Implementation and Maintenance- HMPC Consensus Needed

- How will mitigation strategy be incorporated into other planning mechanisms?
  - Review Mitigation Plan during planning process to update other plans?
    - Comprehensive Plans
    - Capital Improvement Plans
    - School Emergency Plans
  - After review of Mitigation Plan, forward strategy with updates for consideration in other planning mechanisms?

## Final Public Comment-Details

- Final Public Comment Period—Target Date Late March
- AMEC will send email to planning committee with details
- Planning committee members responsible to notify governing boards of plan availability
  - AMEC will email Stakeholders regarding plan availability (state/federal agencies, chambers of commerce, adjacent counties)
    - Provide e-mail addresses to Laurie Bestgen of additional stakeholders that you want to receive notice of draft plan.
- Plan will be on county website and in hard copy at select locations.
- Polk County will coordinate a Press Release
- Please place links and/or county web address in newsletters/flyers, etc. to help get the word out.

## Homework & Next Steps

- **Feb. 6, 2014**
  - Mitigation Action Worksheets/STAPLEES Due
  - Status Spreadsheets of Previous Actions Due
- **Early March—Final Draft of Plan Update Document Available to HMPC**
- **Late March—Final Public Comment Period**
- **Early April—Submit Plan to IA HS&EM**
- **Late April—Submit Plan to FEMA**
- **June—Anticipate FEMA’s Approval Pending Adoption (preliminary approval)**
- **June-July—Jurisdictions Adopt Plan**

## Please Continue to Complete Soft Match Forms

- Completing Data Collection Guides
- Validating Critical Facilities
- Risk Assessment Review
- Status Updates Prior to this Meeting
- Developing Actions/Completing Spreadsheets
- Review Draft of Complete Plan

# Polk County Multi-Jurisdictional Local Hazard Mitigation Plan

Thank You!

Any Questions?