



APA Iowa Conference 2023

Building Communities for Always

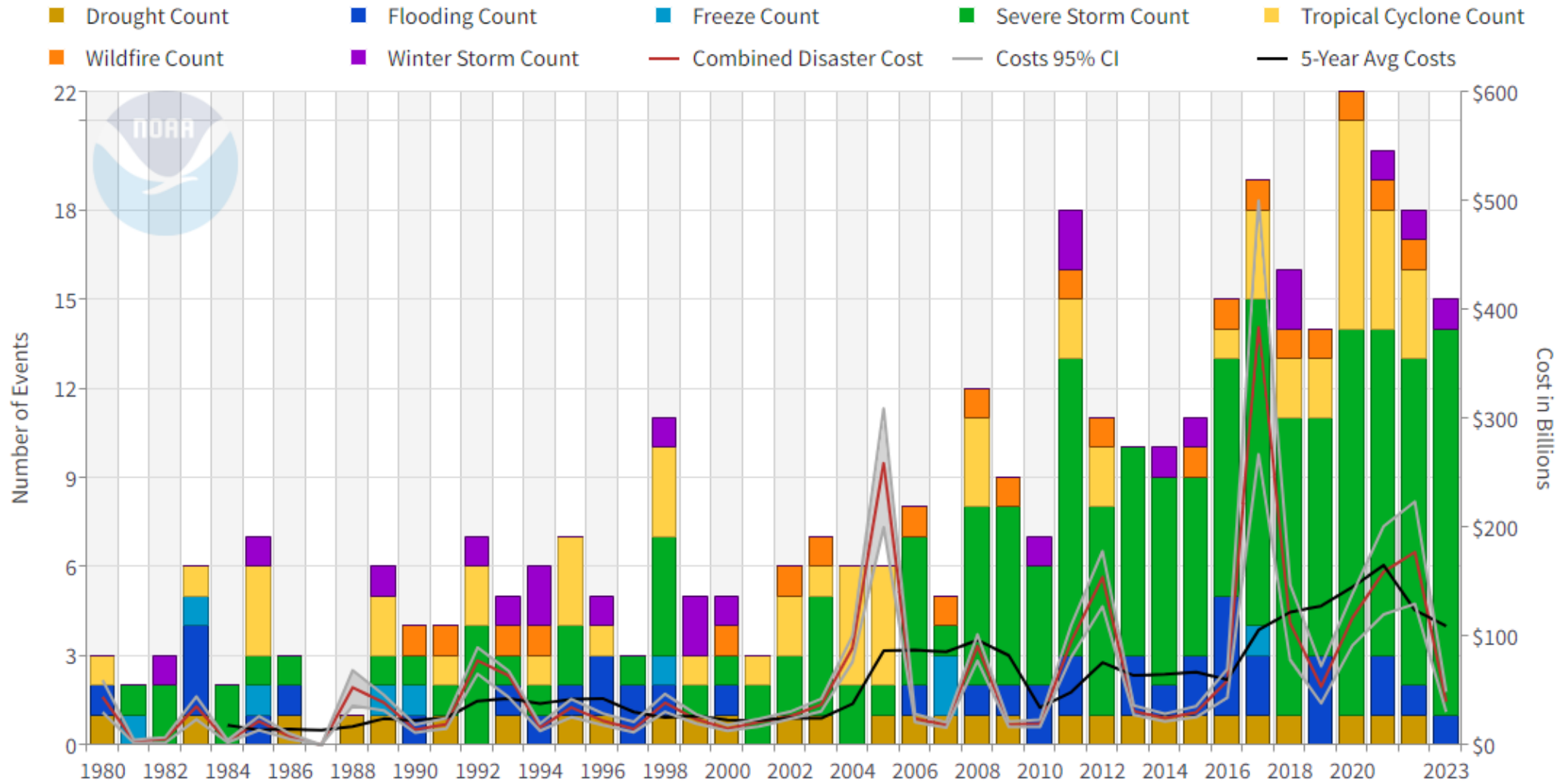
**Resilience against
Natural Disasters**



BUILDING COMMUNITIES FOR ALL

LIVABLE • ATTAINABLE • INCLUSIVE

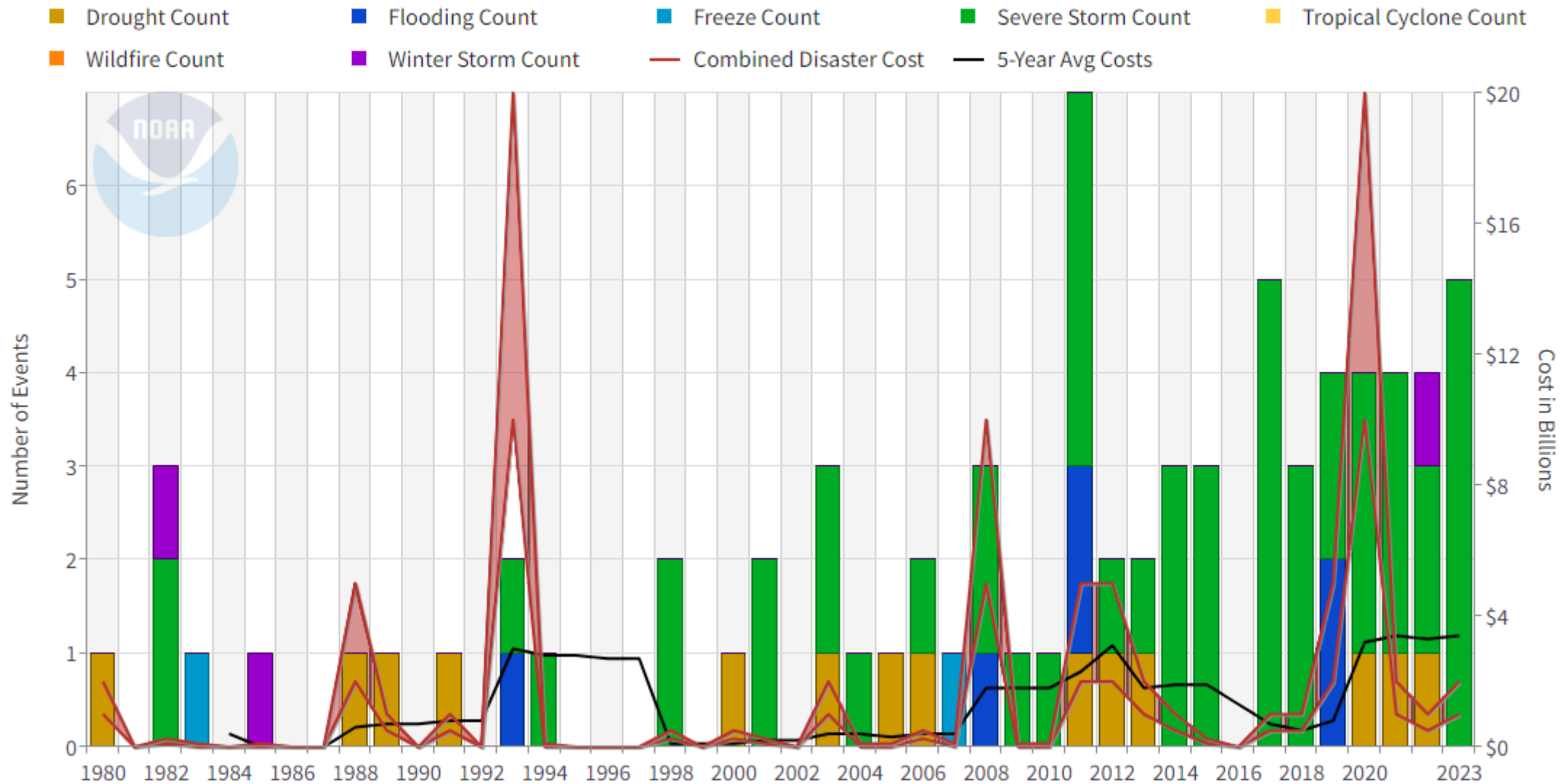
United States Billion-Dollar Disaster Events 1980-2023 (CPI-Adjusted)



Updated: August 8, 2023

Powered by ZingChart

Iowa Billion-Dollar Disaster Events 1980-2023 (CPI-Adjusted)



Updated: August 8, 2023

Powered by ZingChart



Hazard Mitigation Planning

What is Mitigation Planning?

- Mitigation:
 - "Hazard mitigation" is any sustainable action that reduces or eliminates long-term risk to people and property from future disasters.
- Hazard mitigation planning
 - Reduces loss of life and property by minimizing the impact of disasters. It begins with state, tribal and local governments identifying natural disaster risks and vulnerabilities that are common in their area. After identifying these risks, they develop long-term strategies for protecting people and property from similar events. Mitigation plans are key to breaking the cycle of disaster damage and reconstruction.



Emergency Management & the Disaster Cycle

- Response, Recovery, and Preparedness all happen in relation to a disaster event
- Mitigation can happen any time.

Example Projects

- Flood-prone property acquisitions (“Buyouts”)
- Flood walls, berms, levees
- Elevating roads, utilities, facilities
- Storm sewer / culvert expansion
- Stormwater detention/retention
- Upgrading utility poles
- Underground utilities
- Backup generators
- Hurricane straps
- Etc.

Hazards

- Drought
- Tornado / Windstorm
- Flooding (flash & riverine)
- Severe winter storms
- Thunderstorms (Hail & Lightning)
- Excessive heat
- Dam / levee failure
- Landslide
- Earthquake
- Wildfire
- Sinkhole
- Expansive soils

How Mitigation Planning Helps You

- Avoid damages
- Community knows what to rebuild better
- Community disaster awareness (individual preparedness)
- HMA/HHPD Funding
- Integrate with other plans and efforts
 - Stormwater management
 - Building Codes

Why Planners should be involved

- Your community already has a mitigation plan –
 - Most useful when integrated into other plans
 - While maintaining infrastructure, why not upgrade resilience of roads, sewers, power and comm lines?
 - While planning future land use, consider location-specific hazards (flooding, landslides, etc.)
 - Mitigation funding can help fund city projects
 - The project must be in the plan
 - Plans can be easily amended later
- An opportunity to connect with communities

What's in a Plan?

- Planning process
- Community Profile
- Hazard Analysis & Risk Assessment
- Mitigation Strategy

Hazard Mitigation & Comprehensive Plans

- Community vision of resilience
- Recognize impact of projected demographics and land use on resilience
 - If the population is growing, are new developments going to be in hazard-prone areas (landslides, floods, etc.). Are they built to code?
 - If the population is shrinking, are there decaying abandoned buildings that could become projectiles or cause environmental concerns if flooded?
 - Is an aging population going to be less mobile during disasters?
 - Is an increase in children going to make the community more vulnerable overall?
 - Do people need signs/messages translated?
- Stormwater management

Hazard Mitigation & Capital Improvement Plans

- Consider cost-saving mitigation projects against other community priorities
- Ensure cost of hazard mitigation is considered in budgets
- Integrate timelines to provide realistic mitigation plans
- Which assets are vulnerable to which hazards? Roads, bridges, structures, comm towers, overhead distribution lines, combined sewers, WWTPs, etc.

Hazard Mitigation & Community Economic Development Plans (CEDs)

- See FEMA Guide
- SWOT analysis alignment
 - Are natural hazards considered among threats?
 - What strengths or opportunities can the community draw on to become more resilient, economically and against natural hazards?
 - How would a disaster affect economic development/resilience?
 - Is the community's economy dependent on a single industry that would be vulnerable to a natural hazard?
- Historic Preservation
 - Does a historic area need special consideration (protecting unique cultural value, exceptions to building codes, retrofitting, etc.)?

Hazard Mitigation & Transportation Plans

- Evacuation routes
- Vulnerability of high-traffic roads and single-access areas
- Effect of roads on movement of floodwaters
- Effect of pavement on runoff
 - How can you manage stormwater onsite?
- Debris Management
- Locating management sites near debris sources
- Ensuring debris hauling routes can handle heavy trucks

Hazard Mitigation & Solid Waste Plans

- Debris Management
- How would the community deal with a sudden influx of debris?
 - Large appliances
 - Hazardous materials
 - Vegetation (branches, destroyed crops, etc.)
 - Vehicles
 - Building materials (esp. older buildings with asbestos)
 - Etc.
- Vulnerability of waste management sites to flooding, high winds, erosion, etc.

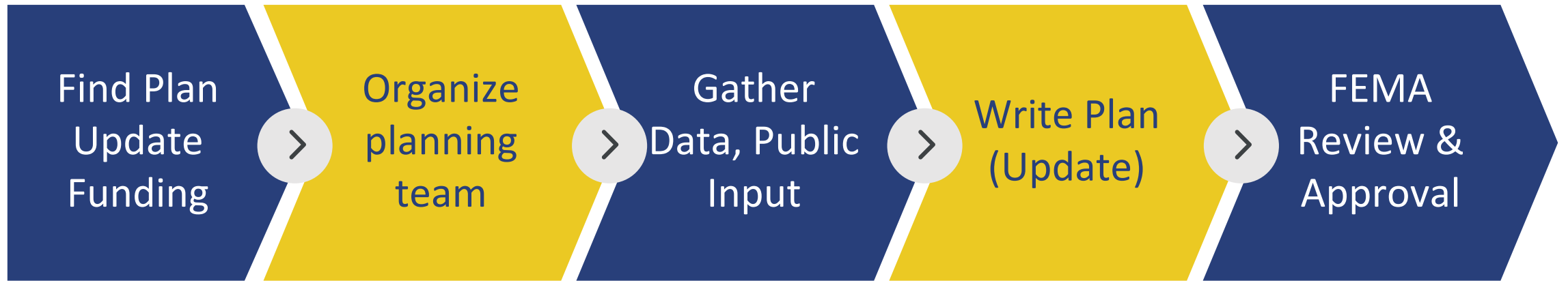
Plan Integration Summary

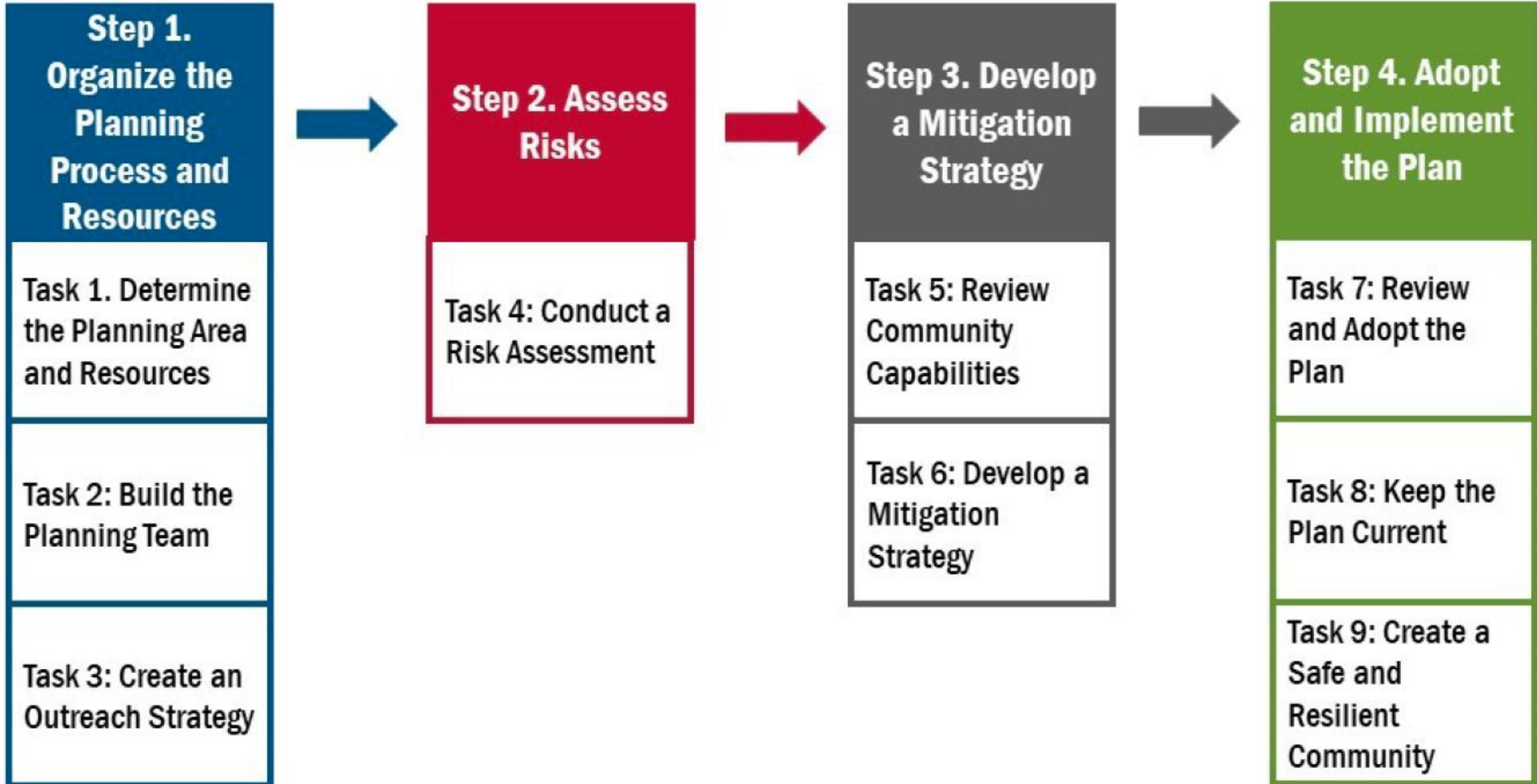
In short, local planners should be involved in hazard mitigation planning because you know what is planned in the community. Inversely, community plans should be informed by hazard analyses and risk reduction strategies found in the local HMP.



Hazard Mitigation Planning Process

Process





Right-Sized Updates

- You probably have a plan already
- Most plans are already sufficient, minus outdated info and a few updates (plus the public engagement necessary to validate the plan)
- You also have the opportunity to make the plan more robust if that's what your jurisdictions want

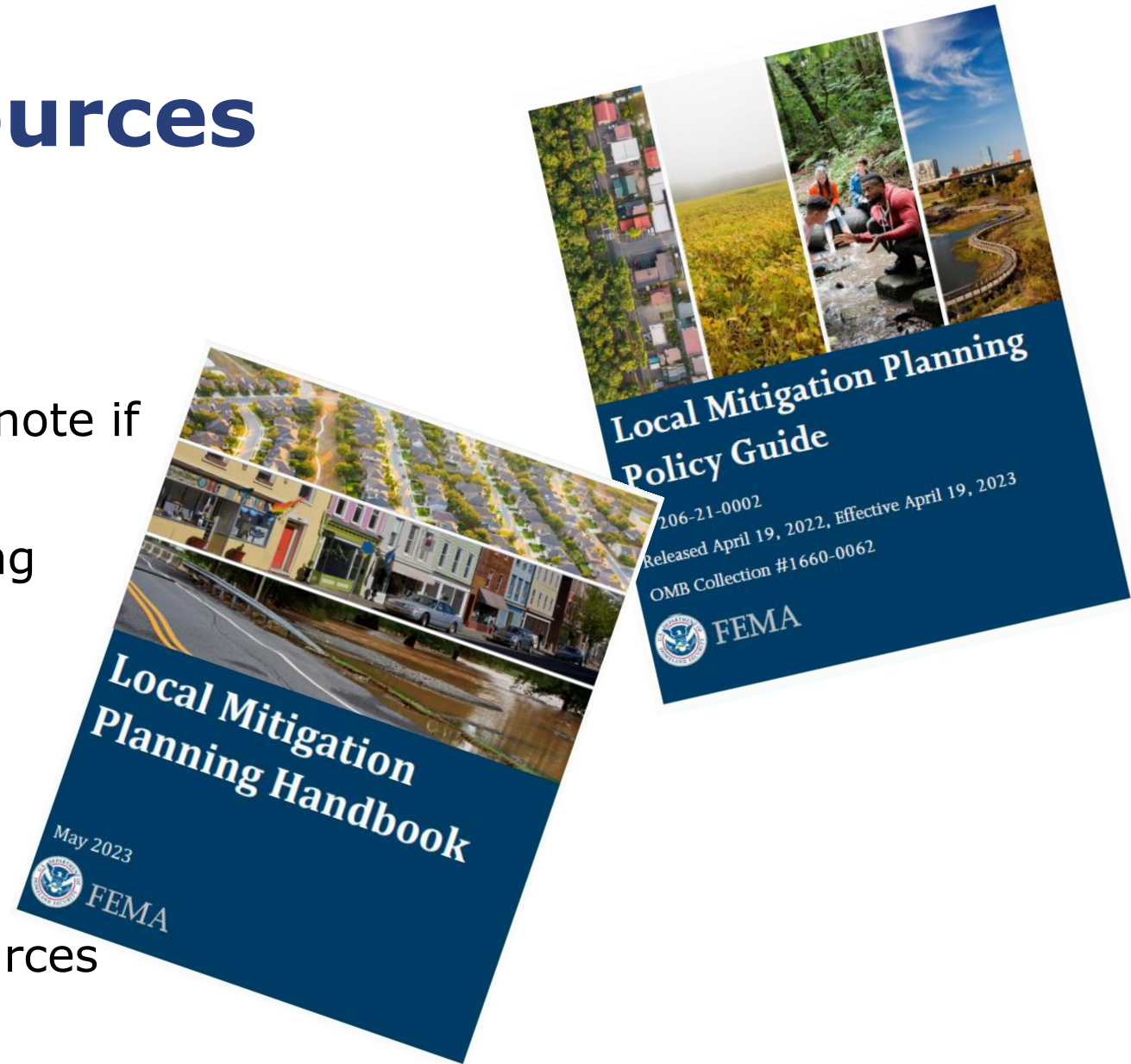
Guidance and Resources

FEMA LMPPG:

- Updated in 2022
- New requirements need to be met (note if plan was updated prior to 2023)
- See also the Local Mitigation Planning Handbook

State Guidance:

- State Hazard Mitigation Planners
- Forthcoming:
 - plan template, FAQs, data resources





Hazard Mitigation Funding

Hazard Mitigation Assistance (HMA) Grant Opportunities

- Hazard Mitigation Grant Program (HMGP) -- Based on federal disaster assistance funding
- Building Resilient Infrastructure and Communities (BRIC)
 - \$2.295 billion available in FY2022
 - \$2M State/Territory Allocation per applicant
 - \$50M Tribal Set-Aside
 - \$2.133B National Competition
- Flood Mitigation Assistance (FMA)
 - \$800M available Nationwide FY 2022

Hazard

Mitigation Grant

Program (HMGP)

Hazard Mitigation Grant Program (HMGP)

- After a Presidentially-Declared Disaster
 - Applications should be received within 12 months of the declaration (and ongoing)
- Available Statewide (not limited to declared counties)
- Administered by State Emergency Management Agency (HSEMD)
- Subapplicants include:
 - State, Tribal, and Local Governments
 - Certain Private Non-profit Organizations providing an “essential government service”
- Requires FEMA-Approved Hazard Mitigation Plan
- Cost Share is 75% Federal / 10% State / 15% Local



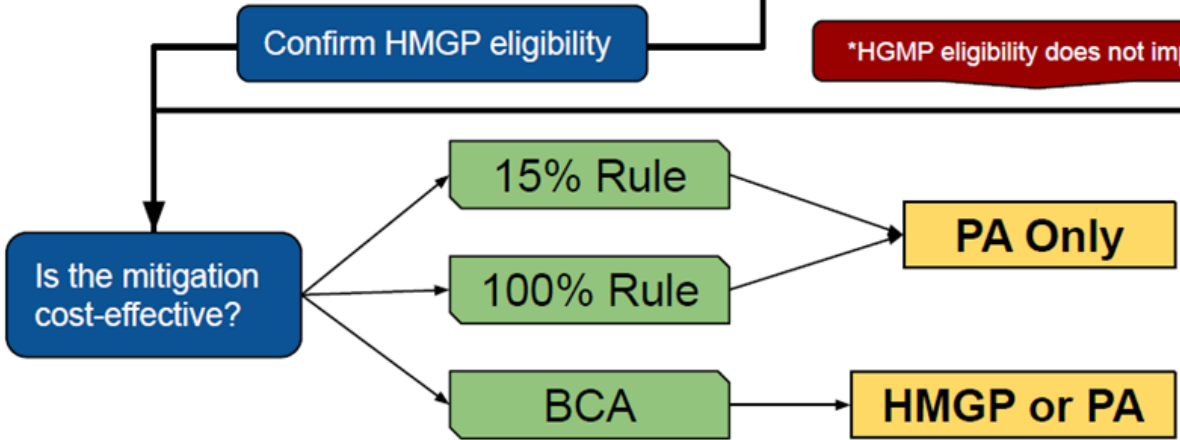
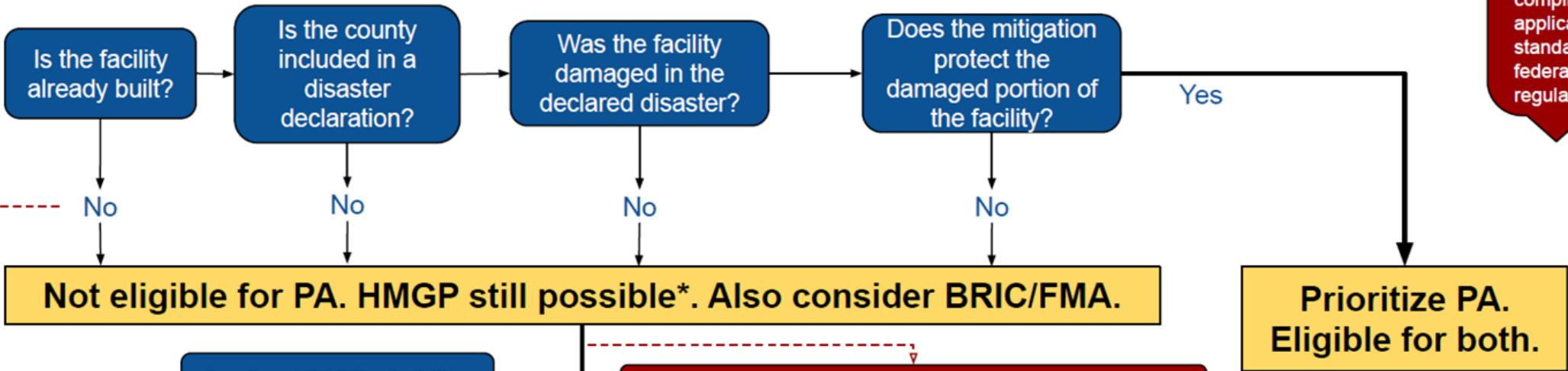
Public Assistance (PA)

Public Assistance – Mitigation (PAM)

- If a facility was damaged in a presidentially-declared disaster, PA Mitigation may be best
 - Not competitive: if eligible under PA, funding is available
 - Easier cost-effectiveness requirements (BCA not always required)
 - May protect damaged facilities with new facilities or elements
- Requirements:
 - Facility is in a county included in declaration
 - The facility being protected was damaged by event
 - Cannot have been in disrepair prior
 - Does not have to be a flooding event to create flooding mitigation project
 - Mitigation measure would protect the damaged portion of the facility
 - Cost-effective, technically feasible

PA or HMGP: Which mitigation funding opportunity is right for your project?

This chart assumes applicant / facility / work eligibility and compliance with all applicable codes, standards, and other federal laws & regulations.



Confirm HMGP eligibility

*HMGP eligibility does not imply priority or availability of funds.

HMGP	PA
<ul style="list-style-type: none"> Subject to limited funding State prioritizes project types May take years from application to closeout Not restricted to counties & facilities impacted by a disaster Must pass BCA Applicants can take their time to plan projects 	<ul style="list-style-type: none"> Funding available for all eligible work Easier to fund small-cost measures Can fund work already completed Not eligible in all counties/facilities Hard to plan ahead for BCA not always required Becomes part of recovery timeline

Most projects protect existing facilities. Construction of new facilities is less common, but may include warning sirens, generators, floodproofing, stormwater drainage and retention, etc. (i.e. new facilities to protect existing facilities). Storm saferooms may be eligible for HMGP, but are not funded often.

Note: PA & HMGP can work in tandem on the same facility, but cannot fund the same work.

**Building
Resilient**

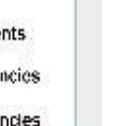
**Infrastructure
and**

**Communities
(BRIC)**

Who is eligible for BRIC funding?

Applicants:

- ✓ All 50 States
- ✓ U.S. territories
- ✓ Federally recognized Tribal Governments
- ✓ District of Columbia



Subapplicants:

- ✓ Local Governments
- ✓ Tribal Governments
- ✓ State Agencies
- ✓ Tribal Agencies

Building Resilient Infrastructure and Communities (BRIC)

Guiding Principles:

- Support SLTT through Capacity-and-Capability-Building to identify mitigation actions & reduce risks
- Encourage & enable innovation
- Promote partnerships & enable high-impact investments to reduce risk from natural hazards
- Reduce future losses & minimize impacts
- Promote equity & implementing the Justice40 Initiative
- Support the adoption and enforcement of building codes, standards, and policies

BRIC

Applying for BRIC

- FY22 NOFO released Aug. 5, 2022
- Application period:
- Opened Sept. 30, 2022
- Closed Jan. 27, 2023

Cost Share

- 75% federal, 10% state, 15% local
- Extra points for increasing local share to 20%

FY22 BRIC Priorities

- Mitigate the risk to public infrastructure (including natural systems)
- Incentivize resilient investments in disadvantaged communities, as referenced in Executive Order 14008 (Tackling the Climate Crisis at Home and Abroad)
- Incorporate nature-based solutions including those designed to reduce carbon emissions
- Enhance climate resilience and adaptation
- Incentivize the adoption and enforcement of the latest published editions of building codes

BRIC encourages mitigation projects that meet multiple program priorities!



Flood Mitigation Assistance (FMA)

Flood Mitigation Assistance (FMA)

Eligibility

- Community participating in NFIP
- Project must protect NFIP-insured structure(s)
 - Individual structures
 - Localized flood reduction

Applying for FMA

- FY22 NOFO released Aug. 5, 2022
- Application period:
 - Opened Sept. 30, 2022
 - Closed Jan. 27, 2023

Cost Share

- 75% federal, 10% state, 15% local
- Repetitive loss:
90% federal, 10% state
- Severe Repetitive Loss (SRL):
100% federal

FY22 FMA Priorities

- Green stormwater infrastructure
- Enabling equitable outcomes
- Reducing complexity and barriers to entry
- Focusing on climate resilience

Planning and Local Damage Assessments

October 2023

90% percent of counties across the U.S. experienced a federally declared climate disaster between 2011 and 2021 (e.g. flood, hurricane)

NUMBER OF ENVIRONMENTAL DISASTERS

■ 20+ ■ 16–20 ■ 11–15 ■ 6–10 ■ <5

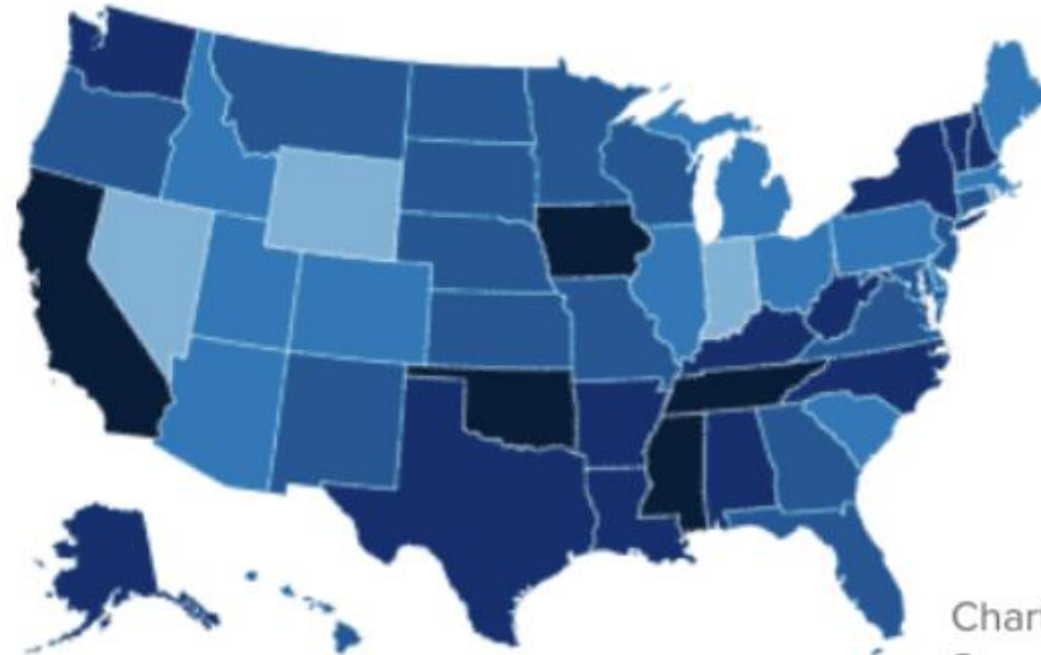


Chart: Gabriel Cortes / CNBC
Source: Rebuild by Design's [Atlas of Disaster](#), published November 2022



Cedar Rapids
June 2008



Drought (statewide) – 2012

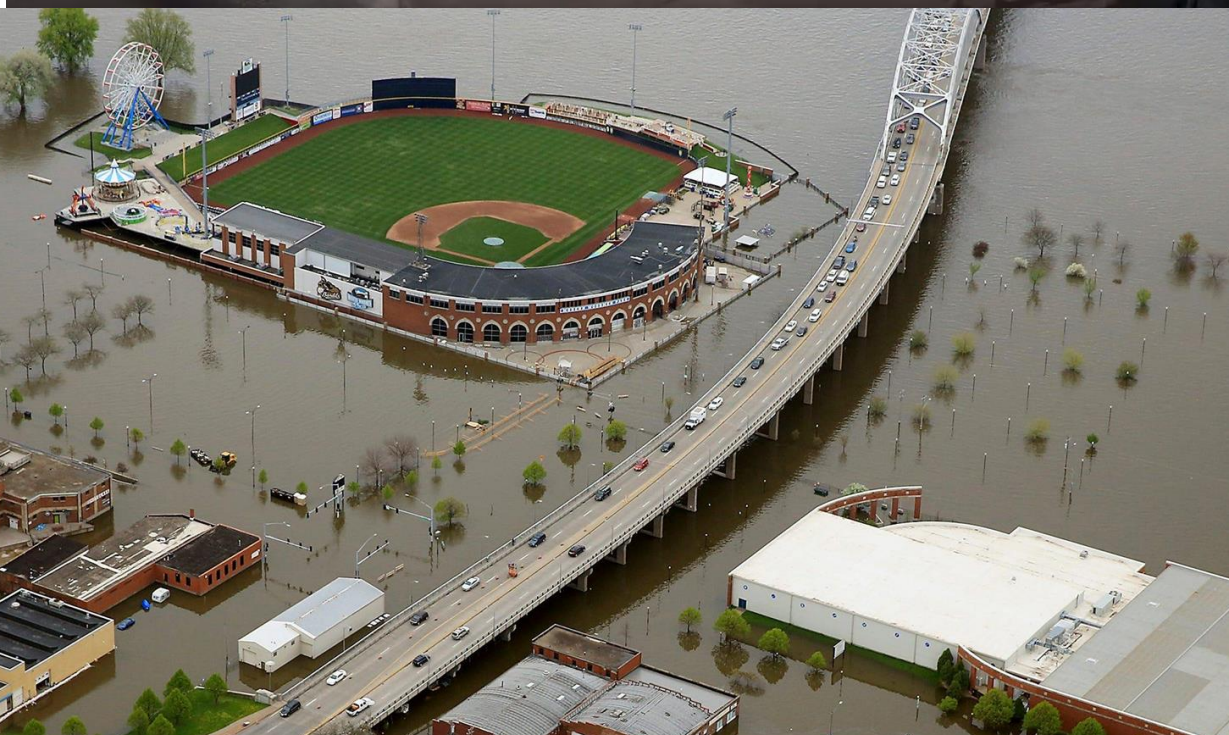




Scott County 2019



Fremont County 2019



IOWA DERECHO AUG. 10

TOP WIND GUSTS

WEATHER
FIRST

SW CEDAR RAPIDS* 140

CLINTON & MARION* 130

ATKINS 126

VAN HORNE* 120

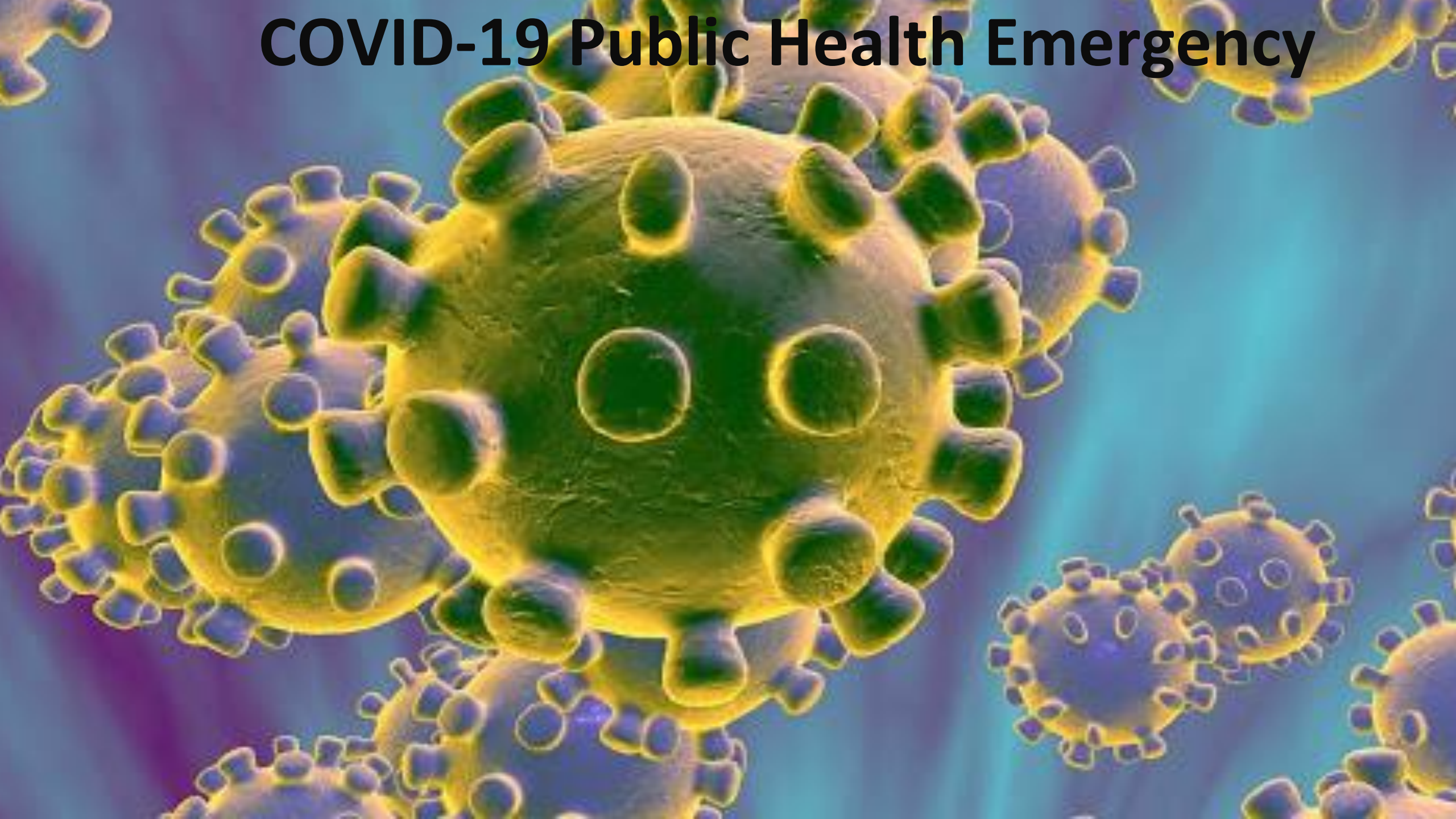
MIDWAY 112

LE GRAND 106

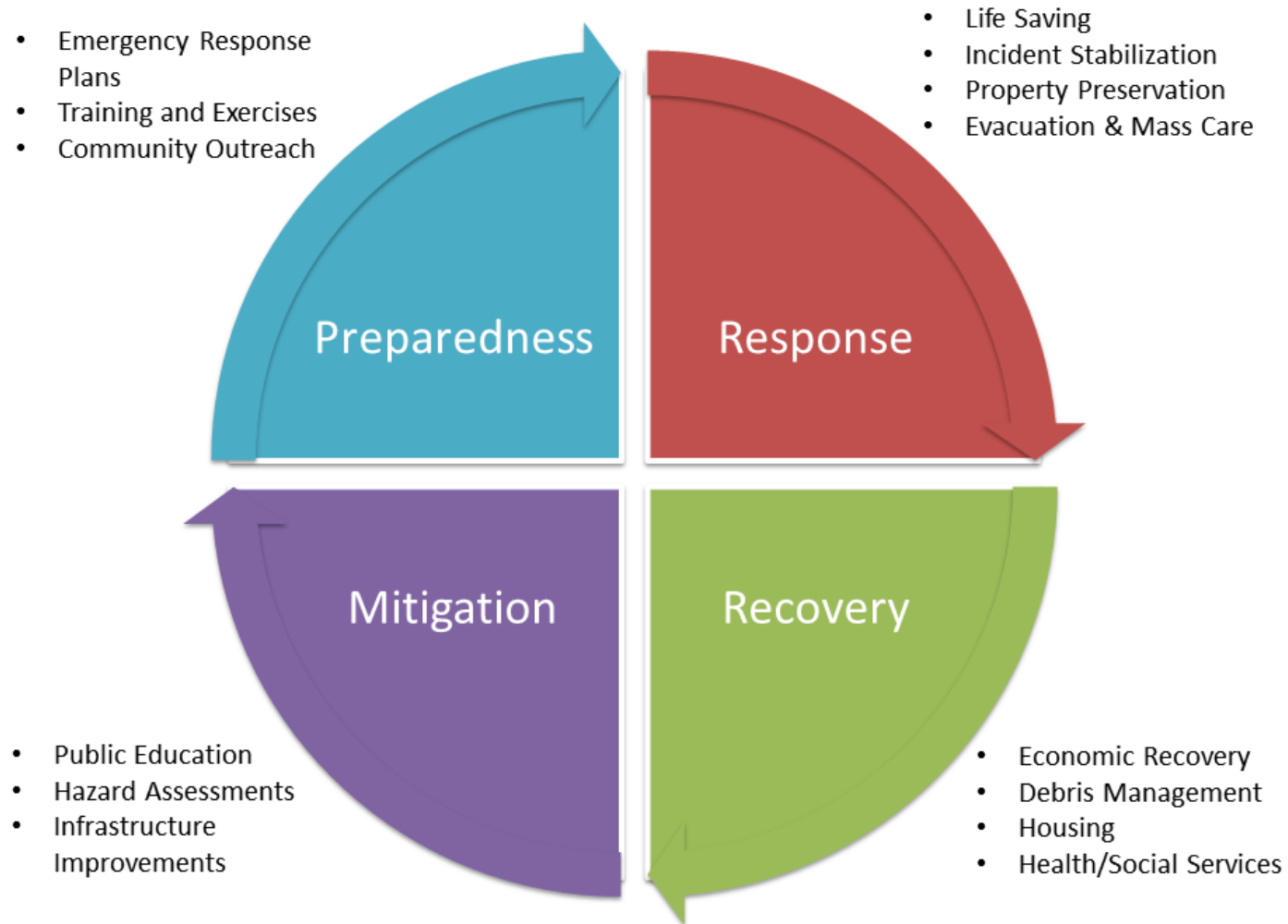
* ESTIMATED



COVID-19 Public Health Emergency

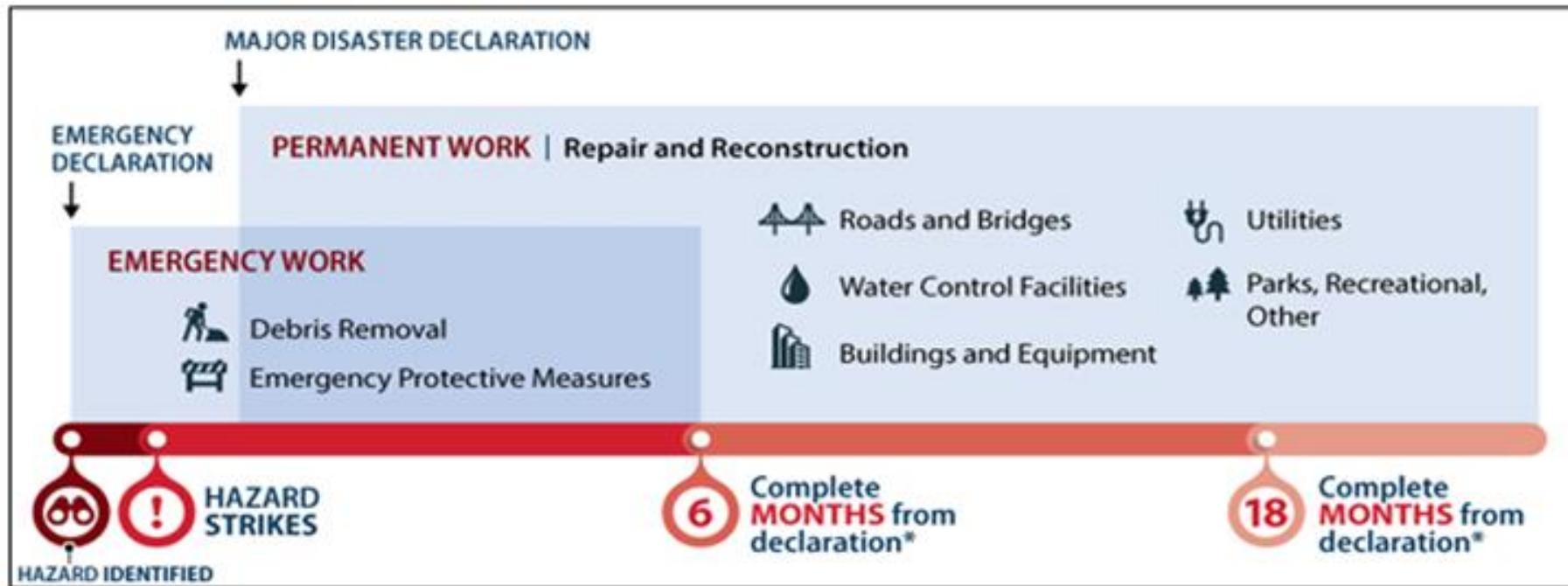


Emergency Management Cycle



FEMA Public Assistance 101

- FEMA awards grants to assist State and local governments and certain Private Nonprofit (PNP) entities with the response to and recovery from disasters.
 - When it is illustrated it is beyond their capacity to respond.
- Specifically, the program provides assistance for debris removal, emergency protective measures, and permanent restoration of infrastructure.

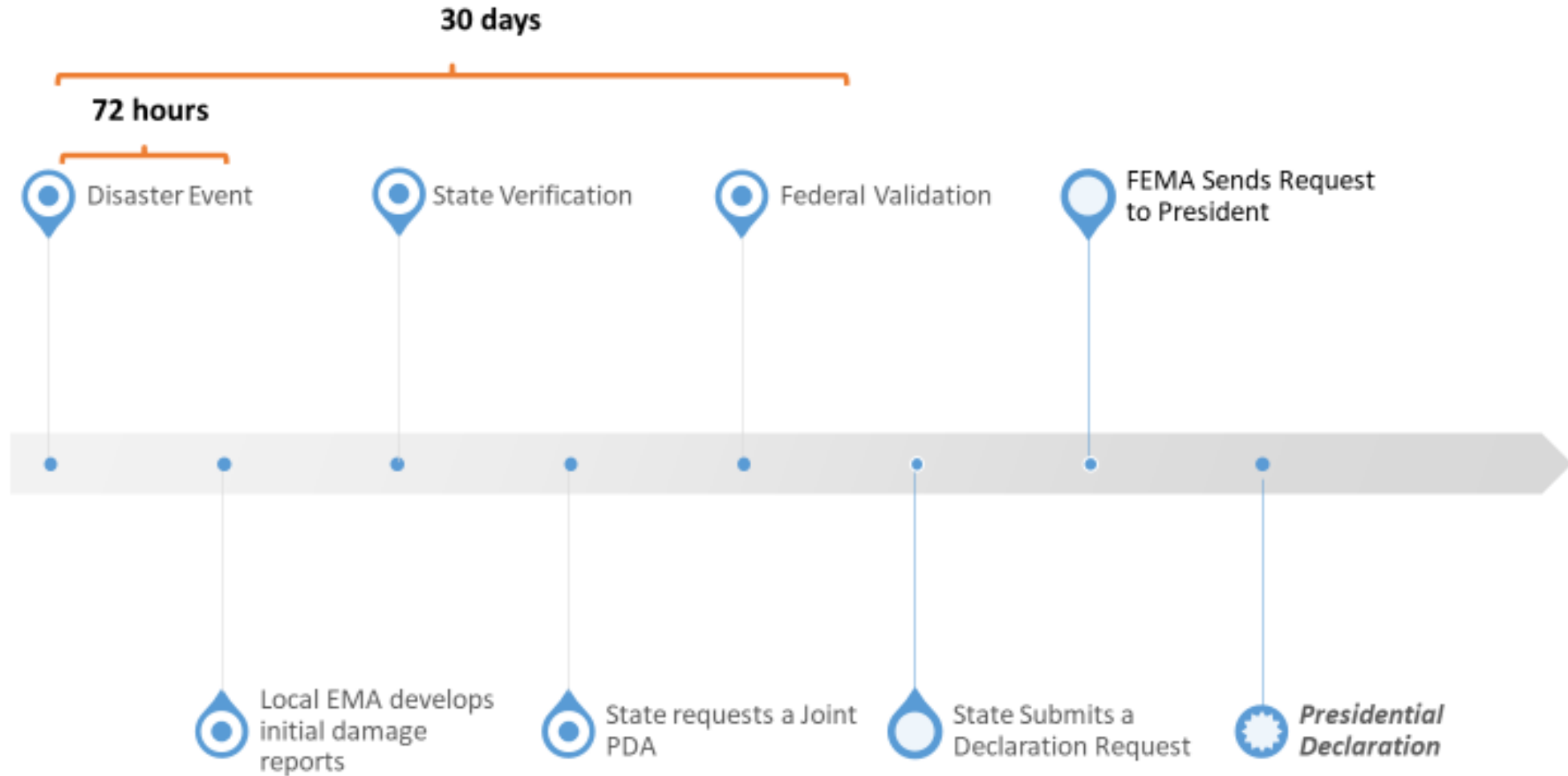


What is & Why Conduct a PDA

- What is a Preliminary damage assessment (PDA)?
 - A mechanism used to determine the impact and magnitude of damage and the resulting unmet needs of individuals, businesses, the public sector, and communities as a whole.
- Why conduct a PDA?
 - To help the local and state entity determine the level of damage resulting from a hazard
 - To help illustrate the impacts of a hazard are beyond the capability of the local and state governments to respond/recover
 - To help illustrate damages warrant a Presidential disaster declaration.



PDA Timeline



Local Damage Assessment

County Emergency Managers (EMA) works with locals to obtain specific damage and cost data

When should EMA report?

- HSEMD will provide a deadline for reporting.
- The deadline is typically no more than 10-14 days at the maximum

How can I provide my reports to my EMA?

- Each EMA may have a specific format that they require information to be provide.
- Please contact your county's EMA for how they would like damage information reported



State of Iowa Preliminary Damage Assessment Standard Operating Procedure 1/21/20



Local Damage Assessment

What do need to provide my county EMA?

- Start with the most severe damages
- Identify damaged facilities and any emergency work to include location/GPS
- Estimated costs for repair of damage and for carrying out emergency measures
- Documentation to support how estimated costs were arrived at
- Photos and maps
- Insurance coverage information
- Impact statements



State of Iowa Preliminary Damage Assessment Standard Operating Procedure 1/21/20



Preliminary Damage Assessment (PDA)

What happens next?

- EMAs provide all damage information to HSEMD
- HSEMD works with FEMA to validate verify damages and costs per county
- The State must have sustained the minimum amount of damage statewide (according to FEMA regulations) of \$1.77 per capita, or \$5,646,953, to qualify for Public Assistance funding.
- Once this statewide minimum has been met, then the qualifying amount of damage per capita in each county must reach at least \$4.44.
- A Presidential Declaration is requested for all counties, impacted by the disaster event, that meet their county threshold.
- If a Presidential Disaster is declared, applicants can apply for assistance through HSEMD.



Allocation Resources for LDA

Local government employees:

- Know and understand the nuances that make up a jurisdiction;
 - Especially, planners.
- This understanding allows them to capture infrastructure and resident damage better than anybody else.

Local government LDA team members need the following to accurately capture damages after an event:

- Proper training;
- Sufficient resources.

Local staff conducting LDAs benefits communities in the following ways:

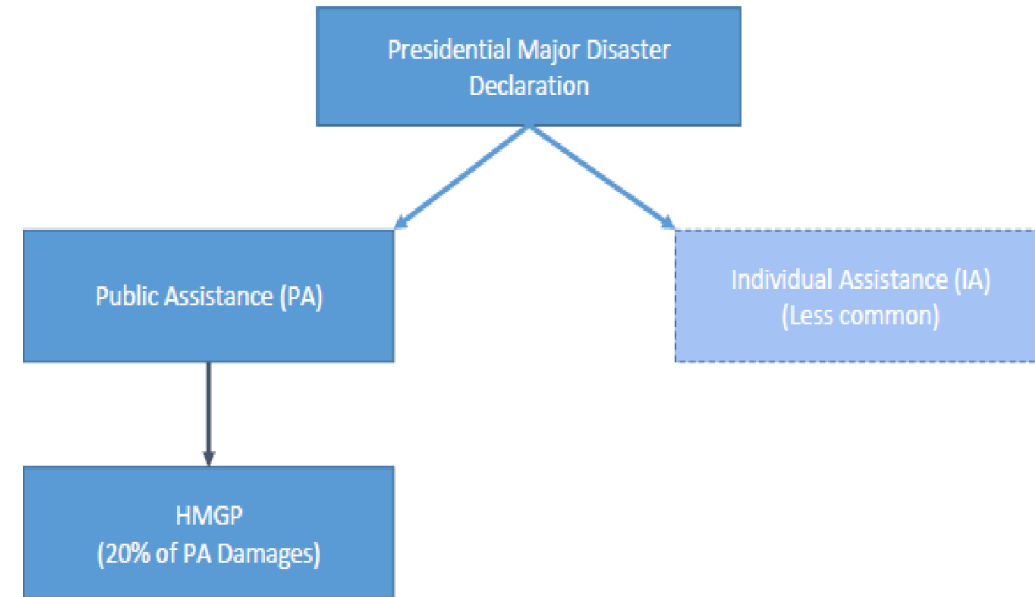
- Local staff including planners;
- Ensuring data can be gathered and reported in a tight timeframe;
- Enabling LDA teams to create an accurate, comprehensive list of damages;
- Enable the maximization of state & federal resources that may be awarded;
- Helping to identify future opportunities for mitigation and planning.



Non PA/IA Benefits of Conducting an LDA

Hazard Mitigation Grant Program

- It's very important to report damages even if your county may not meet the threshold for Public Assistance eligibility. Your area may still benefit from a presidential disaster declaration and be funded for these types of unmet needs in your community! Every presidential disaster request requires a summary of recent disasters (with & without Presidential declarations).
- The way a county may benefit from a presidential disaster declaration other than PA or IA is through the Hazard Mitigation Grant Program (HMGP). Once a presidential disaster declaration is made that includes permanent work, the HMGP is activated by FEMA for all 99 counties in Iowa. The HMGP program is funded by FEMA at 20% of the PA permanent work damage for the disaster.



Non PA/IA Benefits of Conducting an LDA

The damage details provided in an LDA can also be used for facilities that have available funding from another federal funding source, such as the Emergency Relief (ER) program provided by Federal Highway Administration (FHWA), administered by the Iowa Department of Transportation (IDOT).

- Many times planners are responsible for a jurisdiction's Thoroughfare Plan and funding for those identified elements on said plan.

LDAs can also contain useful information that assists local entities in capturing repetitive damage data for future Hazard Mitigation Assistance applications such as BRIC, HMGP, and FMA, Public Assistance (406) Mitigation, and grants applications.



Non PA/IA Benefits of Conducting an LDA

- According to 'Disaster Recovery Guidance,' an APA/Texas A&M report:
 - *When asked about specific role of planners in a variety of recovery activities, respondents felt that planning professionals should be extremely involved in four activities:*
 - *integrating disaster recovery planning with other city plans;*
 - *integrating resilience into various city plans;*
 - *developing resilience goals, and;*
 - *promoting a culture of prevention and preparedness.*



Non PA/IA Benefits of Conducting an LDA

- According to 'Disaster Recovery Guidance,' an APA/Texas A&M report:
 - *When asked about federal funding mechanisms for post-disaster recovery, respondents felt “barely knowledgeable” or less about the funding that is specific for post-disaster recovery;*
 - *FEMA Hazard Mitigation Assistance (HMA);*
 - *FEMA Individual Assistance (IA) ;*
 - *Public Assistance (PA), and;*
 - *HUD Community Development Block Grants for Disaster Recovery (CDBG-DR).*
 - *The same is also true for non-federal aid from nonprofits and states, among others.*



Non PA/IA Benefits of Conducting an LDA

- According to 'Disaster Recovery Guidance,' an APA/Texas A&M report, noted from 33 interviews:
 - *Planners or others, did not perceive planners as central to the disaster recovery process, even though their skillsets are important to recovery efforts;*
 - *TA need for wider coordination/collaboration between planners and other and others working in disaster recovery;*
 - *Learning about disaster recovery should be centered on best practices through mentorship.*
 - *Planners learn best from fellow professionals who had been through recovery elsewhere;*
 - *Planners felt that they had limited access to information that would accelerate recovery processes.*



Non PA/IA Benefits of Conducting an LDA

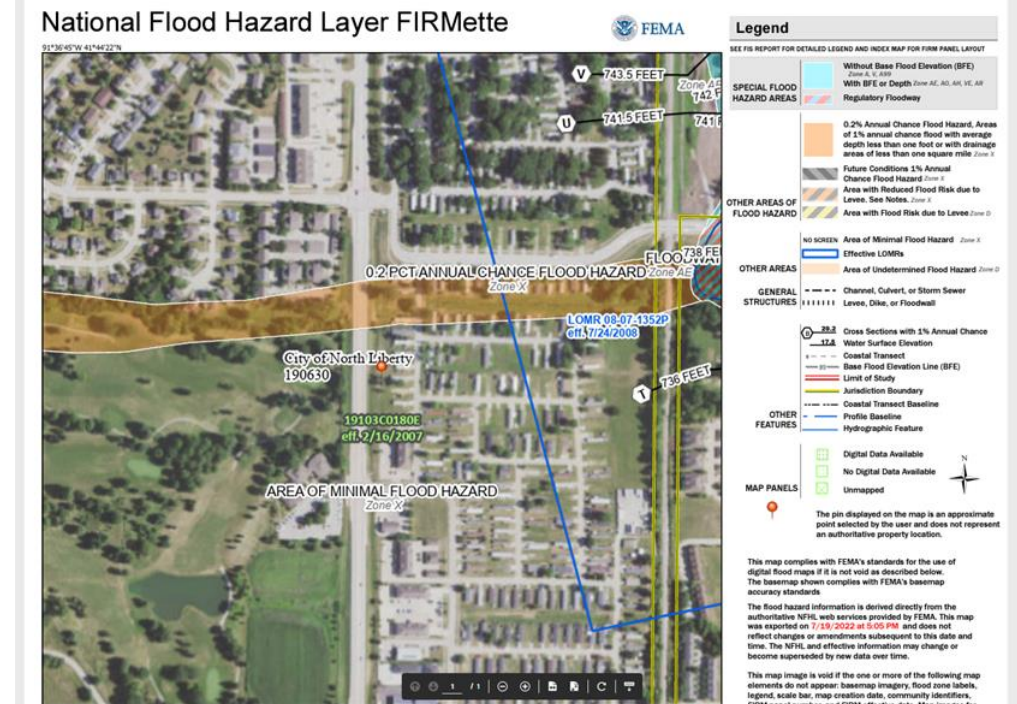
LDAs can contain useful information that assists local entities in capturing repetitive damage data for comprehensive plans and capital planning.

- The Planning for Post-Disaster Recover Briefing Papers – 07, defines the following Roles and Responsibilities:
 - *“Emergency Management:*
 - *Coordinate the preparation of local hazard mitigation plans post-disaster hazard mitigation grant applications.”*



Non PA/IA Benefits of Conducting an LDA

- The Planning for Post-Disaster Recover Briefing Papers – 07, defines the following Roles and Responsibilities:
 - *“Planning:*
 - *Identify specific rebuilding and hazard mitigation opportunities;*
 - *Expedite review of temporary housing, rehabilitation, and land-use applications;*
 - *Enforce or recommend exceptions to planning-related regulations;*
 - *Recommend sites for interim housing or businesses, changes in land uses, and any new standards for rebuilding;*
 - *Participate in the preparation of local hazard mitigation plans and post-disaster hazard mitigation grant applications.”*
- The common theme is a planner needs first hand knowledge of damages they are hoping to avoid through city plans.



Available at MSC.fema.gov



How Can a Planner Help

LDAs can contain useful information that assists local entities in capturing repetitive damage data for comprehensive plans and capital planning.

- The Planning for Post-Disaster Recover Briefing Papers – 07, key findings:
 - *“Plans most often used to inform the post-disaster recovery plan include the hazard mitigation plan, the comprehensive plan, the capital improvement plan, and the debris management plan.”*
- **These are plans that planners create, revise and maintain;**
 - **The first steps in the revising of these plans after a disaster, identifying and having first hand knowledge of the damages.**



Non PA/IA Benefits of Conducting an LDA

Again, these Planning Responsibilities cannot be done in a vacuum. By their very nature they require Planners to identify a community's damages as part of a Local Damage Assessment Team



Non PA/IA Benefits of Conducting an LDA

- The Planning for Post-Disaster Recover Briefing Papers – 07, published by the American Planning Association (APA) states,
 - *Recovery decisions are likely to vary by community and be influenced by preexisting political and governance dynamics;*
 - *Some decisions, such as the expediting of permit review and the locations of temporary road closures, may be able to happen quickly;*
 - *Planning the potential change or relocation of uses or prohibiting rebuilding will require more deliberation and stakeholder engagement.*
- **The first step in this process is identifying a community's damages**



Questions That Only a Damage Assessment can Answer

- Are damages concentrated in an area that impacts:
 - Vulnerable populations;
 - Transportation;
 - Critical Facilities?
- Are damages reoccurring?
- Are damages a partial result of climate change not addressed in city plans?
- Are damages a partial result of inadequate infrastructure?
- Are damages a partial result of the unintended consequences of planning requirements?



Real World Example – City of Ames Plan 2040 (12/21)

The City has also experienced environmental impacts from the effects of extreme weather events throughout its history, with significant large-scale floods in the 1990s, 2008, and 2010 and recently the 2020 Derecho windstorm. The City has responded to these constraints with development policies limiting impacts in flood plains, removing highly impacted housing from the flood plain, and adding mandatory storm water management standards to new development. The City has also responded by incorporating planning and resiliency into our services and infrastructure, including our emergency response planning and new bridges and flood mitigation projects.



Real World Example – City of Ames Plan 2040 (12/21)

1

Assess a wide range of environmental conditions pertinent to Ames.

The City should maintain an inventory of known environmental resources and attributes of the community that affect environmental quality. This applies to the existing community as well as to areas planned for growth. While an inventory will be an ongoing effort, Ames should update their entire inventory every 5-10 years, which may include:

- I. Natural features, including floodplains, wetlands, streams, soil quality, topography, vegetation, species richness, tree canopy, sandy soils, critical natural resource areas, principal flow paths, and drainage ways.
- II. Watershed protection
- III. Greenhouse gas inventory
- IV. Climate data
- V. Travel demand and patterns
- VI. Solid Waste, RDF, recycling
- VII. Funding contributed to environmental initiatives.



DECEMBER >> 2021



Real World Example – City of Ames Plan 2040 (12/21)

2

Use planning documents and models to assist in managing environmental quality.

Ames will apply appropriate data related to current conditions to the policies of a wide range of plans and activities administered by the City, which will include:

- I. Greenhouse Gas Inventory and Climate Action Plan
- II. Stormwater Management Plan
- III. Watershed plans focused on water quality monitoring and measuring.
- IV. Transportation Plan that considers multi-modal transportation
- V. Parks Master Plan
- VI. Development standards and ordinances, such as flood plain, subdivision, zoning, environmentally sensitive overlays





THANK YOU

Key Contacts

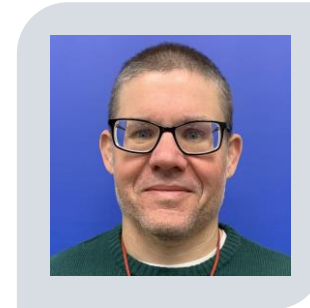


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