

# MANAGING DISASTERS AT THE COUNTY LEVEL:

A NATIONAL SURVEY

# **Emergency Management in County Government: A National Survey**

March 2019

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#### **Executive Summary**

In May 2018, NACo conducted a survey to assess key aspects of county emergency management, including organizational structure, budgets and funding, personnel and training, use of technology and ways counties collaborate with other government entities and nongovernmental organizations. NACo received completed responses from 397 counties in June 2018, representing all census divisions and 45 of the 50 states. The responding counties ranged in size from nearly 500 residents to more than 4.6 million, thus allowing NACo to identify general trends for small, medium and large counties. Of large counties – or counties with populations of over 500,000 – 26 out of 131 responded. Of medium counties – or counties with populations ranging from 50,000 to 500,000 – 126 out of 821 responded. Of small counties – or small counties with populations of under 50,000 – 245 out of 2,117 responded.

There are several major findings of this survey:

- Nearly three quarters of counties indicate that their chief emergency management official reports directly to the county elected official(s) – as opposed to reporting to county administrative staff.
- 95 percent of counties formally endorse the National Incident Management System (NIMS) and over 90 percent of county Emergency Management Agency (EMA) employees have completed the NIMS training program.
- 62 percent of counties have adopted administrative and financial procedures that allow the EMA to expediently request, apply for, receive, manage and expend funds during a local emergency or disaster.
- The majority of counties (over 90 percent) maintain insurance against disaster damage for buildings and infrastructure.
- At the federal level, counties most often engage FEMA on recovery and education and training and NOAA on education and training and planning on emergency management.
- Counties engage with other local governments and organizations on planning more than three times as often as they do on response the phase on which they next most engage.
- 99 percent of counties report having an Emergency Operations Plan (EOP) and Hazard Mitigation Plan (HMP). Additionally, 56 percent of counties report that they have integrated their HMP into their county comprehensive plan.
- About two-thirds of counties use social media to communicate risk before and after a disaster; although 12 percent of counties do not have social media accounts.
- 64 percent of counties have held a county-wide disaster preparedness drill within the past year. 19 percent have not done so in more than two years.
- While 77 percent of counties have pre-designated shelters for disaster evacuees, only 8 percent indicate that they have adequate housing stock to support temporary housing for residents, non-local volunteers, federal employees, etc.
- 22 percent of county respondents indicate that they do not regulate land use and 24 percent indicate that they do not regulate buildings codes. Correspondingly, 6 percent of counties report that they are not legally allowed to regulate local land use per state law and 8 percent report that they are not legally allowed to regulate local building codes per state law.

#### **Survey Findings**

Over the past 20 years, natural and manmade disasters have increased in both frequency, severity and cost. On average, 24 percent of counties have experienced at least one disaster in each of the last three years. The past three hurricane and wildfire seasons have included six hurricanes that combined to cost over \$330 billion in damages and more than eight wildfires causing over \$40 billion in damages. These disasters showcase the need for government officials, particularly county governments, to renew their focus on their planning and response readiness activities. Consequently, the U.S. has learned the importance of tactics and strategies that include scenario planning, land use planning, evacuation planning, building code adoption and enforcement, internal and external communication planning, citizen preparation, controlling information on social media, tracking volunteer hours and the impact of disaster on goods movement and industry.

In order to remain healthy, vibrant, safe and economically competitive, America's counties must be engaged in all aspects and phases of emergency management: planning, preparedness, mitigation, response and recovery. This report presents findings of current U.S. counties' activities in these areas from the Survey on Emergency Management in County Government.

#### Organizational Structure

The Survey on Emergency Management in County Government defined the emergency management agency (EMA) as the department, division, organization or agency specifically tasked with Emergency Management preparedness, response, recovery and mitigation plans and efforts. EMAs can be set up in a variety of ways. They can be standalone or part of another county office, such as the sheriff's office. They can be made up of one volunteer employee or ten full-time paid staff members. Their structure is typically reliant on county size and hazard vulnerability."

#### **Reporting Structure**

Approximately 72 percent of survey respondents indicate that their chief emergency management official reports directly to the county elected official(s), with just under half of chief emergency management officials reporting directly to the county board (46 percent) and the other half (44 percent) reporting directly to the county administrator, executive or manager. Less than 10 percent of chief emergency management officials respond directly to the county sheriff, county public works director or county health director, indicating a potential shift towards emergency management being a standalone unit in the structure of county government. In small counties, chief emergency management officials are twice as likely to report directly to elected official(s) than in large counties (82 to 46 percent, respectively); in fact, in large counties, 31 percent of chief emergency management officials are reported to be two steps removed from county elected official(s) – with their supervisor's supervisor being the individual to report directly to the county's elected official(s). (See Tables 3 and 4.)

#### **Staffing**

The majority of survey respondents (88 percent) indicate that their county has a written board ordinance or resolution that formally establishes an EMA, as shown in Table 1. On average, those county EMAs employ 2.89 full time employees and 1.65 part time employees. EMA sizes are markedly different across small, medium and large counties. On average, small county EMAs employ an average of 1.14 full time and 1.41 part time employees, medium county EMAs employ 3.48 full time and 2.36 part time employees, while large county EMAs employ 9.57 full time and 1.64 part time employees. See Table 2 for a full breakdown of county EMA employment.

#### **Professional Development**

A number of specialized training opportunities – from certifications to PhDs – conducted by the federal government, state governments and private institutions exist for emergency managers. The Emergency Management Institute (EMI) is the primary center for the development and delivery of emergency management training in the United States. It is run by the Federal Emergency Management Agency (FEMA) and emphasizes programs like the National Incident Management System (NIMS). NIMS is a comprehensive, national approach to incident management that is applicable at all jurisdictional levels and across functional disciplines. It is intended to be applicable across a full spectrum of potential incidents, hazards, and impacts, regardless of size, location or complexity. Survey data suggest that 95 percent of counties formally endorse the National Incident Management System and over 90 percent of county EMA employees have completed the NIMS training program (see Tables 5 and 6). Additionally, over 15 percent have attended courses at the Emergency Management Institute (EMI), and 10 percent have received a master's degree in emergency and/or disaster management. Large county EMA employees are as likely to have a master's degree in emergency and/or disaster management as they are to have attended courses at the FEMA EMI.

States, often through their state emergency management association, certify emergency managers at several levels of certification. The survey data in Table 7 suggest that 78 percent of chief emergency management officials have been certified as an emergency manager by their state. Notably, the percentage of state certified emergency managers is approximately twice as much for small counties (84 percent) as it is for large counties (41 percent). National certification also exists through the International Association of Emergency Managers (IAEM). IAEM has two levels of certification, the Certified Emergency Manager (CEM) and the Associate Emergency Manager (AEM). 8 percent of all chief emergency management officials report that they have been certified by IAEM – with just under a quarter (23 percent) of large county chief emergency management officials having achieved certification.

Just as training levels vary among emergency managers, emergency management programs vary in capability and distinction. In order to foster excellence and accountability in emergency management, the Emergency Management Accreditation Program (EMAP) created a voluntary, peer review accreditation process in which EMAs are evaluated across 64 standards. 12 percent of respondents indicate their county is accredited and compliant with all EMAP Emergency Management Standards, and an additional 37 percent indicate that while they are not accredited, they make use of the standards (see Table 8). Having a basic understanding of the EMAP standards can be helpful in building an effective, well-rounded emergency management program.

#### Budget and Funding<sup>iv</sup>

EMA departments primarily leverage local resources for annual operational support. While federal resources are available, the use of these funds correlate to the size of counties and their capacity to apply via complex application processes.

#### **Local Funding Sources**

The EMA budget goes to fund activities in all phases of the emergency management cycle. As shown in Tables 9 and 10, most counties dedicate 0 to 5 percent of the county's total annual budget to the EMA and manage the EMA budget within the county general fund (88 and 78 percent, respectively). Two-thirds (67 percent) of survey respondents expect the county budget for the EMA to stay the same in the

next fiscal year, about a quarter (26 percent) anticipate a budget increase, while the remaining 7 percent expect their budget to decrease (see Table 11).

Ahead of a disaster, many counties (62 percent) adopt administrative and financial procedures that allow the EMA to expediently request, apply for, receive, manage and expend funds during a local emergency or disaster (see Table 12). Counties also maintain a variety of insurance coverages. The data indicate that 43 percent of counties maintain private insurance, 41 percent participate in a statewide or regional insurance pool, 20 percent self-insure via reserved funds and 49 percent maintain a "rainy day" fund for emergencies and disasters (see Tables 13 and 14).

#### **Federal Resources**

Outside of county funding and insurance, counties also participate in a variety of federal grant programs. Respondents indicate the top five federal grant programs that counties of all sizes participate in:

- 1. FEMA Emergency Management Performance Grant (EMPG) Program [82 percent]
- 2. FEMA Homeland Security Grant Program (HSGP) [58 percent]
- 3. FEMA Hazard Mitigation Grant Program (HMGP) [52 percent]
- 4. HUD Community Development Block Grant (CDBG) Program [39 percent]
- 5. FEMA Hazard Mitigation Planning Program [35 percent]

When looking at small, medium and large counties individually, these top five are generally the same with some variation.

Large	Medium	Small
1. EMPG (96 percent)	1. EMPG (93 percent)	1. EMPG (75 percent)
2. HSGP (83 percent)	2. HSGP (67 percent)	2. HMGP (53 percent)
3. FEMA Urban Area Security	3. HMGP (50 percent)	3. HSGP (51 percent)
Initiative (UASI) Program (65		
percent)		
4. HMGP (61 percent)	4. FEMA Hazard Mitigation	4. FEMA Hazard Mitigation
	Planning Program (32 percent)	Planning Program (39 percent)
5. PDM (48 percent)	4. FEMA Pre-Disaster Mitigation	5. FEMA Pre-Disaster Mitigation
	(PDM) Grant Program (32	(PDM) Grant Program (23
	percent)	percent)

These figures suggest that small counties are less likely to go after and/or receive federal funding, which is in line with previous findings that rural communities often face barriers to competitive federal grants due to lack of expertise and/or personnel dedicated to grant writing and management. See Table 15 for the full breakdown of county engagement with federal funding opportunities.

#### **State & Other Sources**

Beyond federal funding, counties primarily finance mitigation projects with state funding (35 percent) and local taxes (34 percent). Very few counties finance mitigation projects through public-private partnerships (9 percent) or with foundation funding (2 percent). Of note, 20 percent of respondents indicated the use of "other" non-federal financing mechanisms. Some of the sources they indicate using are general funds, in-kind funds, law enforcement forfeiture funds, stormwater and wastewater fees,

Local Emergency Planning Committee fees and grants, water management district grants and funds from a nuclear plant decommissioning agreement. See Table 16 for complete data on non-federal funding.

#### <u>Partnerships</u>

The survey asked people to indicate the agencies and organizations with whom they have worked over the past five years, and in which phases they most often engaged and/or partnered with them. At each level of government, counties indicated the top two phases in which they were most often engaged:

Federal	State	Regional	Local	Within county
Education and	Planning	Planning	Planning	Planning
training				
Planning	Response	Education and	Response	Education and
		training		training

The federal agencies that responding counties indicate engaging with most often, across all phases of emergency management, are FEMA – primarily on recovery and education and training, and the National Oceanic and Atmospheric Administration (NOAA) – primarily on education and training and planning. The local governments and organizations counties engage with most often are schools, municipalities, hospitals, other counties, faith-based organizations and the local business community – and they engage with these local entities on planning more than three times as often as they do on response. See Table 37 for the full scope of county partnerships.

#### Planning

99 percent of counties report having an Emergency Operations Plan (EOP) and Hazard Mitigation Plan (HMP) in place. Of those counties, 69 percent report that the county EMA prepared the EOP, 13 percent report that the EOP was prepared by a county multi-agency task force and 10 percent of EOPs were prepared by a contractor (see Table 17). Additionally, 56 percent of counties report that they have integrated their HMP into their county comprehensive plan (see Table 18). As hazard mitigation often involves land use or other planning-related activities, this collaboration across departments helps to promote consistency within and concurrency between plans while also increasing the probability of the plan's implementation.<sup>vi</sup>

#### **Coordination Across Plans**

Looking beyond EOPs and HMPs, respondents indicate the top five plans and agreements counties have in place:

- 1. Mutual aid agreements with other jurisdictions (78 percent)
- 2. Mass casualty incident plans (60 percent)
- 3. Continuity of operations/government plans—COOP/COG (58 percent)
- 4. Evacuation plans (57 percent)
- 5. Memoranda of understanding with other governments (56 percent)

These findings further suggest that counties understand the importance of and highly value planning partnerships with surrounding counties and jurisdictions. When looking at small, medium and large counties individually, this holds true as the plans and agreements they most often have in place are:

Large	Medium	Small
1. COOP/COG (95 percent)	1. Mutual aid agreements with	1. Mutual aid agreements with
	other jurisdictions (86 percent)	other jurisdictions (73 percent)
2. Mutual aid agreements with	2. Mass casualty incident plan	2. Evacuation plan (55 percent)
other jurisdictions (86 percent)	(72 percent)	
3. Debris management plan (82	3. Debris management plan (63	3. Mass casualty incident plans
percent)	percent)	(53 percent)
4. Mass casualty incident plans	4. Evacuation plan (62 percent)	3. Memoranda of
(77 percent)		understanding with other
		governments (53 percent)
5. Memoranda of	5. Memoranda of	4. COOP/COG (53 percent)
understanding with other	understanding with other	
governments (64 percent)	governments (61 percent)	

Interestingly, the data in this table suggest small and medium counties are slightly more likely to have evacuation plans in place than large counties (50 percent). The Disaster Recovery Reform Act of 2018 (DRRA) — which modified several FEMA programs to better assist state and local disaster mitigation, preparedness and recovery — requires FEMA to develop and issue guidance regarding the identification and maintenance of evacuation routes. This new requirement — as well as the evacuation issues observed the past few disaster seasons — may impact county evacuation plans, both in content and frequency of development and adoption.

Findings also suggest that large counties are likely to return to normal operations faster than small and medium counties as they are one and a half to two times as likely to have a debris removal and continuity of operations plan in place. Having a COOP plan indicates the county has pre-identified vital departmental functions that must continue regardless of a disaster and has thought through the execution of those functions to ensure minimal disruption to normal operations. See Table 19 for the full breakdown of county emergency management planning efforts.

#### **Special Populations**

In planning, counties often account for the needs of special populations. Respondents suggest that the special populations most often identified and addressed in county plans are:

- 1. Nursing home residents (85 percent)
- 2. Hospital patients (77 percent)
- 3. Pet owners (68 percent)
- 4. Non-English-speaking residents (41 percent)
- 5. Prisoners (38 percent)

These stay true across all government sizes, except 57 percent of large counties also plan for public transit dependent populations. As FEMA continues its implementation of DRRA – which requires the development of guidance regarding health care and long-term care facility prioritization and assistance in the development of evacuation plans that account for the care and rescue of animals – it will be

interesting to see how often and in what capacity special populations are accounted for in county plans. See Table 20 for further information on the inclusion of special populations in county planning efforts.

#### **Use of Technology**

Geographic Information Systems (GIS) is an integral tool in today's planning toolkit. Organizations use GIS not only to map what is where but also consolidate data on those geographic points that can provide situational awareness and information to support decision making, real-time and for planning purpose. GIS enhance information sharing, communication and collaboration. VII Looking at county use of GIS, 6 percent of counties indicate that they do not use GIS (see Table 21). Of those that do use GIS, respondents indicate how their communities most often use GIS:

- 1. Accurate addressing (68 percent)
- 2. Dispatching response units (67 percent)
- 3. Mapping response resources (58 percent)
- 4. Identifying persons or facilities for notification of potential hazards (56 percent)
- 5. Identifying areas affected by an incident using meteorological information (52 percent)
- 6. Assessing risk (52 percent)

When looking at small, medium and large counties individually, the GIS is most often used for:

Large	Medium	Small
1. Mapping response resources	1. Accurate addressing (76	1. Accurate addressing (64
(86 percent)	percent)	percent)
Identifying persons or facilities	2. Dispatching response units	2. Dispatching response units
for notification of potential	(75 percent)	(63 percent)
hazards (86 percent)		
3. Identifying areas affected by	3. Mapping response resources	3. Identifying persons or
an incident using	(70 percent)	facilities for notification of
meteorological information (77		potential hazards (52 percent)
percent)		
Assessing risk (77 percent)	4. Identifying areas affected by	4. Mapping response resources
	an incident using	(49 percent)
	methodological information (61	
	percent)	
Plan for critical infrastructure	5. Identifying persons or	5. Assessing risk (47 percent)
(77 percent)	facilities for notification of	
	potential hazards (58 percent)	
Facilitate recovery (77	Plan for critical infrastructure	6. Identifying areas affected by
percent)	(58 percent)	an incident using
		methodological information (45
		percent)

Over half of county respondents indicate that their EMA works with an employee in the county planning department or another central government unit to fulfill their GIS needs (see Table 22). Another quarter have an in-house EMA employee perform their GIS work. Only 9 percent outsource to a private contractor, and 5 percent work with their regional planning office.

#### **Preparedness**

Before a disaster strikes, local governments must ensure that all stakeholders – from local elected officials to the public – understand their risks to all hazards and are prepared for when they strike. Counties employ various strategies to communicate risk and raise awareness of risk reduction strategies to residents. Table 23 details the top four ways that responding counties – regardless of size – communicate risk before a disaster:

- 1. Trainings or exercises (85 percent)
- 2. Public meetings (73 percent)
- 3. Social media (71 percent)
- 4. School visits (60 percent)

Beyond these top four strategies, large, medium and small counties communicate risk through:

Large Counties (500,000 or more)	Medium Counties (50,000-500,000)	Small Counties (50,000 or less)
Civic engagement events (65 percent)	Civic engagement events (62 percent)	Newspaper or magazine ads (47 percent)
Radio or television spots (57 percent)	Radio or television spots (47 percent)	Civic engagement events (30 percent)
Newspaper or magazine ads (39 percent)	Newspaper or magazine ads (36 percent)	Radio or television spots (29 percent)

Additionally, 30 percent of large counties use direct mailers, compared to only 6 percent of medium and small counties.

Exercises play a vital role in national preparedness by enabling whole community stakeholders to test and validate plans and capabilities, and identify capability gaps and areas for improvement. While 85 percent of respondents identified trainings and exercises as the top means by which their county builds disaster risk reduction awareness, only 64 percent have held a county-wide disaster preparedness drill within the past year (see Tables 24 and 25). Looking within the last two years, that number rises to 81 percent. However, 19 percent of responding counties have not held a county-wide disaster preparedness drill in over two years. When drills are held, the formats typically used are table top exercises (63 percent), functional drills (48 percent) and full-scale simulations (46 percent). Drills, regardless of format, are important means by which counties can test emergency plans and procedures. They provide feedback on the process, promote interorganizational contact before a disaster strikes and yield publicity that informs the public on the county's planning and preparedness efforts.

#### **Preparedness Levels by County Agency and Community Groups**

When asked to what extent agencies and community groups within their county are prepared for all hazards, respondents indicated that most groups are prepared at a level two or three on a scale of zero to four, with zero being not prepared at all and four being extremely prepared (see Table 26). The most prepared groups are the local police departments, local fire departments and local hospitals and health care providers. 68 percent of counties said their local police departments are prepared at a level three,

60 percent said their local fire departments are prepared at a level three and 55 percent said their local hospitals and health care providers are prepared at a level three.

The least prepared groups are residents, the business community and early childhood development centers – with over 25 percent of respondents indicating that these groups were only prepared at a level one. Counties must ensure they have the necessary resources – food, water, vehicle, volunteers, etc. – and facilities – shelters, recovery center, etc. – in place in the event of a disaster. The survey data suggests that counties feel their various agencies and departments are generally prepared at a level three (45 percent) or two (40 percent).

Digging deeper into the specifics of county preparedness efforts, 77 percent of respondents report their counties have pre-designated shelters for disaster evacuees (see Table 27). Only 8 percent, however, indicate that they have adequate housing stock to support temporary housing for residents, non-local volunteers, federal employees, etc. (see Table 28). Temporary housing is necessary after a disaster to help get residents on the way back to their homes and to restore emergency shelter facilities to their original intended functions to help the community get back to its normal ready state.

#### Mitigation

With the FEMA 2022 Moonshots and DRRA, the topic of mitigation has once again risen to the top in the resilience conversation. The FEMA 2022 Moonshots look to quadruple national investment in mitigation and double the number of properties covered by insurance by 2022. The DRRA promises further investments in mitigation and prevention efforts through several programs. Through both these initiatives, the federal government is asking local governments to collaborate with them to achieve these goals.

Some counties are already pursuing hazard mitigation strategies to build local disaster resilience. Looking at local mitigation policies, the data in Table 29 suggests the top five mitigation policies adopted by counties in the United States:

- 1. Building codes (56 percent)
- 2. Building setbacks (41 percent)
- 3. Overlay districts (41 percent)
- 4. Emergency vehicle access requirements (38 percent)
- 5. Buffer zones (26 percent)

While this ranking stays true for large, medium and small county governments, large and medium counties are more likely to adopt mitigation policies than small counties. For example, 73 percent of large and 70 percent of medium counties have adopted building code requirements while only 46 percent of small counties have done so. Of note, 22 percent of respondents indicate that they do not regulate land use and 24 percent indicate that they do not regulate buildings codes. Correspondingly, 6 percent of counties report that they are not legally allowed to regulate local land use per state law and 8 percent report that they are not legally allowed to regulate local building codes per state law.\* As part of its changes to federal hazard mitigation policy, the DRRA emphasized the importance of the adoption and enforcement of the latest published consensus-based codes, specifications and standards. These changes include allowing the local government to engage FEMA during recovery to help the address local building code and floodplain ordinance administration and enforcement post-disaster.

Beyond mitigation policy, 24 percent of large counties and 3 percent of all counties have established non-FEMA funded repetitive flood loss property buyout programs, as shown in Table 30. Flood buyout, or property acquisition, programs enable local governments to purchase eligible homes prone to frequent flooding from willing, voluntary owners and return the land to open space, wetlands, rain gardens or greenways. These programs reduce the number of flood-prone buildings and can decrease the overall flood risk in the floodplain.

Additionally, as shown in Table 31, 53 percent of respondents indicate that their county participates in the National Flood Insurance Program (NFIP) Community Rating System (CRS). CRS is a voluntary incentive program that recognizes communities for implementing floodplain management practices that exceed the federal minimum requirements of the NFIP to provide protection from flooding. In exchange for a community's proactive efforts to reduce flood risk, policyholders can receive reduced flood insurance premiums for buildings in the community.<sup>xii</sup> There are 10 CRS Classes. Class 1 requires the most credit points and provides the largest flood insurance premium reduction (45 percent), while Class 10 means the community does not participate in the CRS, or has not earned the minimum required credit points, and residents receive no premium reduction.

#### Response

A community's initial response to a disaster can set the tone for its recovery. Open and proper communications play a huge role in disaster response, both within county government, between county government and its partners and from county government to the public. During response, EMAs are in charge of implementing the Incident Command System (ICS) structure for field response and managing the Emergency Operations Center (EOC). The ICS enables coordinated, collaborative, effective and efficient incident management by integrating a combination of facilities, equipment, personnel, procedures and communications operating within a common organizational structure.

Concurrently, EOCs help counties to coordinate response activities by gathering decision makers together in one location to supply them with the most current information. An EOC can be physical or virtual and can be dedicated solely to the EMA or used by multiple departments. The data in Table 32 suggests that 53 percent of counties have an EOC dedicated solely to the EMA; 43 percent of county EMAs share the EOC with other departments; and 4 percent of counties have no EOC.

Beyond using an EOC to coordinate county communications internally, the top external means of communications county respondents indicate using during emergencies are:

- 1. Emergency Alert Systems (90 percent)
- 2. Facebook (82 percent)
- 3. Landlines (71 percent)
- 4. Text messaging (70 percent)
- 5. Internet/email (62 percent)

When looking at small, medium and large counties individually, these hold true with slight variation, although the levels of usage can vary quite substantially from large to small counties. See those variations in Table 33.

#### Social Media

With the rise of social media over the past decade, EMA communications have transformed. EMAs now use social media during a disaster to as an emergency management tool to conduct emergency communications and issue warnings; receive victim requests for assistance; monitor user activities and postings for situational awareness; identify and get in front of incorrect information and rumors; and crowdsource information for flood water monitoring, damage assessments, etc. While 17 percent of small counties indicate that they do not have any social media accounts, the majority of counties do have social media accounts and employ staff to manage those accounts in a variety of ways during a disaster (see Table 34). Many counties have a county employee who handles social media on a regular basis (32 percent) and/or assign one employee to manage social media during a disaster as "other duties as assigned" (25 percent). Very few counties engage social media volunteer teams during disaster (6 percent) and then only medium and small counties use this method. As for having an employee fully committed to social media, large counties lead the way at 18 percent, medium counties closely follow at 13 percent and only 5 percent of small counties indicate having an employee fully committed to social media. With regards to controlling misinformation during a disaster, 77 percent of counties closely monitor social media to identify and get in front of rumors (see Table 35).

#### **Other Communication Channels**

Beyond social media, county EMAs use a variety of technology and software to help with information management and communications. According to the survey data in Table 36, the top five technologies and software most used by all sizes of county government – with slight variations in order – are:

- 1. WebEOC® (76 percent)
- 2. Interoperable communications equipment (71 percent)
- 3. Ham/shortwave radio (64 percent)
- 4. CAMEO (Computer-Aided Management of Emergency Operations)/ALOHA (49 percent)
- 5. Homeland Security Information Network (HSIN) (43 percent)

WebEOC® is a crisis management software that enhances an organization's preparedness, disaster recovery and emergency management efforts.\*V Interoperable communications equipment allows county emergency responders to communicate and share voice and data information.\*VI Ham and shortwave radios are operated by members of the public and regulated by the Federal Communications Commission (FCC).\*VII During a disaster, licensed and trained ham radio operators — often members of the Amateur Radio Emergency Service (ARES) or Radio Amateur Civil Emergency Service (RACES) — help provide both voice and data communications modes to bridge interoperability gaps between agencies. CAMEO is a system of software applications used to plan for and respond to chemical emergencies; ALOHA is a one of the software applications that estimates threat zones for chemical spills.\*VIII HSIN is a network through which agencies can share sensitive but unclassified information, manage operations, analyze data and send alerts and notices relevant to public safety.\*XIX

#### Conclusion

County governments generally feel well prepared in the event of a disaster. They are less confident, however, in the preparedness of their residents and the non-governmental organizations within their communities. To better prepare local communities, counties might increase their usage of no- or low-cost pre-hazard mitigation strategies, their focus on social vulnerability – or the inability of a population to withstand adverse impacts from disaster or other stressors – during the planning process and their risk communications prior to a disaster. With the rise of social media – in general and as an emergency communications strategy – counties have an ideal, no- to low- cost vehicle to share preparedness messages.

Counties have done well to get their central emergency management plans in place: EOPs, HMPs, mutual aid agreements, mass casualty incident plans and COOPs. They are accounting more often for special populations with medical needs, but they could continue to increase their focus on other socially vulnerable populations and housing concerns. Housing continues to be an issue – not only the lack of affordable housing pre-disaster, but also the lack of temporary housing post-disaster.

Regarding the implementation of plans, funding for local projects is a major issue. Based on the survey results, many counties may need a better understanding of what federal grant programs and non-federal financing mechanisms are out there – especially for mitigation – and/or they may need assistance in putting together more competitive applications.<sup>xx</sup>

Overall, counties appear to be doing well in their planning for, preparedness for and response to disasters. However, they could improve their mitigation planning, policies and implementation.

#### Methodology

NACo prepared the survey instrument with input from the Carl Vinson Institute of Government at the University of Georgia and emergency management practitioners from local and federal emergency management agencies. Requests with instructions for completing the survey went out in May to each of the 3,069 U.S. counties. The requests were sent to county clerks, board presidents and emergency management directors. Instructions requested that the clerk and/or board president send the request, which was signed by NACo Resilient Counties Advisory Board Chair and Sonoma County Supervisor James Gore, to the appropriate emergency management professional. NACo received completed responses from 397 counties in May and June 2018, representing all Census divisions and 45 of the 50 states.

#### **Acknowledgements**

The National Association of Counties (NACo) would like to thank the Carl Vinson Institute of Government at the University of Georgia for its historical insight into the original "Emergency Management in County Government: A National Survey" that the school conducted in 2006 on behalf of NACo. Dr. Wes Clarke, Senior Public Service Associate, provided valuable historical context for the 2006 survey and insight into the original survey instrument's development and analysis. Dr. Theresa Wright, Director of Survey Research and Evaluation; Dr. John Barner, Survey Research and Evaluation Specialist; and Ms. Michelle Bailey, Research Professional, assisted in brainstorming how to update the survey instrument for the 2018 survey respondent audience, taking into account changes in technology and survey respondent behavior.

The survey instrument questions (see Appendix D) were improved greatly through the efforts of Mr. Nick Crossley, Emergency Management Director for Hamilton County, Ohio; Mr. Judson Freed, CEM, Emergency Management Director for Ramsey County, Minnesota; Ms. Margaret Larson, Emergency Management Consultant for Ernst and Young; and representatives from the Federal Emergency Management Agency. As experts in emergency and disaster management, they provided valuable insights into aspects of the field and graciously reviewed multiple drafts of the survey instrument.

And, of course, a huge thank you to all the counties who took the time to complete the survey and share their stories and practices. This report would have been impossible without the wealth of data they shared. See Appendix C for the full list of participating counties.

This report was researched and written by Jenna Moran, associate program director for resilience, with guidance from Jay Kairam, director of program strategy; Stacy Nakintu, research associate; Lindsey Holman, associate legislative director for justice and public safety; and Shanna Williamson, NOAA Digital Coast Fellow. The data for this report was analyzed by Stacy Nakintu, research associate, and Ricardo Aguilar, data analyst.

#### About the National Association of Counties

The National Association of Counties (NACo) unites America's 3,069 county governments. Founded in 1935, NACo brings county officials together to advocate with a collective voice on national policy, exchange ideas and build new leadership skills, pursue transformational county solutions, enrich the public's understanding of county government and exercise exemplary leadership in public service. More information at: <a href="https://www.naco.org">www.naco.org</a>.

#### About NACo's Resilient Counties Initiative

Through the Resilient Counties initiative, NACo works with counties and their stakeholders to bolster their ability to thrive amid changing physical, environmental, social and economic conditions. Hurricanes, wildfires, economic collapse and other disasters can be natural or man-made, acute or long-term, foreseeable or unpredictable. Preparation for and recovery from such events requires both long-term planning and immediate action. Learn more about the initiative and its sponsors at: <a href="https://www.naco.org/resources/signature-projects/resilient-counties-initiative">https://www.naco.org/resources/signature-projects/resilient-counties-initiative</a>.

#### **Appendix A: Glossary**

**Associate Emergency Manager (AEM).** The AEM designation is one of two types of certification offered to emergency management professionals by IAEM.

Source: <a href="https://www.iaem.com/cem">https://www.iaem.com/cem</a>.

**Building codes**. Building codes govern the design, construction, alteration and maintenance of structures by specifying minimum requirements to adequately safeguard the health, safety and welfare of building occupants. Rather than create and maintain their own codes, many communities adopt the model building codes maintained by the International Code Council (ICC).

Source: <a href="https://www.fema.gov/building-codes">https://www.fema.gov/building-codes</a>.

**Building setbacks**. Building setbacks can help keep development out of harm's way. Setback standards establish minimum distances that structures must be positioned (or set back) from river channels and coastal shorelines.

Source: <a href="https://www.fema.gov/setback">https://www.fema.gov/setback</a>.

**Computer-Aided Management of Emergency Operations (CAMEO).** CAMEO is a system of software applications used to plan for and respond to chemical emergencies; ALOHA is a one of the software applications that estimates threat zones for chemical spills.

Source: <a href="https://www.epa.gov/cameo">https://www.epa.gov/cameo</a>

**Certified Emergency Manager (CEM).** The CEM designation is one of two types of certification offered to emergency management professionals by IAEM.

Source: <a href="https://www.iaem.com/cem">https://www.iaem.com/cem</a>.

**Comprehensive plans.** A comprehensive plan sets the overall policy direction for a community's future development. It guides coordinated development and sets high standards of public services and facilities in a county. They are important decision-making and priority-setting tools.

Source: <a href="https://projects.arlingtonva.us/plans-studies/comprehensive-plan/">https://projects.arlingtonva.us/plans-studies/comprehensive-plan/</a>

Continuity of operations/government plans (COOP/COG). COOPs help to ensure the execution of essential organizational functions and the fundamental duty of a department during all-hazards emergencies or other situations that may disrupt normal operations. A COOP should: describe the readiness and preparedness of the organization and its staff; outline to whom it should be distributed; detail the process for activating and relocating (or not-relocating) personnel from the organization's primary facility to its continuity site(s); identify the continuation of essential functions – and delineate responsibilities for key staff positions; identify critical communications and information technology (IT) systems to support connectivity during crisis and disaster conditions; and specify how the organization and its staff will return to normal operations. Ideally, a COOP also explains how it fits into other county plans. They are helpful in managing scarce resources during disaster response and identifying vital departmental functions that must continue regardless of a disaster.

Source: https://www.naco.org/resources/managing-disasters-county-level-focus-flooding-0

**Debris management plans**. A debris management plan is a written document that establishes procedures and guidelines for managing disaster debris in a coordinated, environmentally-responsible and cost-effective manner. The more local governments take a proactive approach to coordinating and managing debris removal operations the better prepared they will be to restore public services and ensure public health and safety in the aftermath of a disaster.

Source: https://emilms.fema.gov/IS0633/groups/8.html

**Disaster preparedness exercises**. Training and emergency exercises ensure that county personnel and residents understand proper protocols and procedure. They prepare individuals to be ready to assist in times of disaster and can be targeted to specific groups or for the public at-large.

Source: <a href="https://www.ready.gov/business/testing/exercises">https://www.ready.gov/business/testing/exercises</a>

**Disaster Recovery Reform Act of 2018 (DRRA)**. On October 5, President Trump signed H.R. 302, which contains the Disaster Recovery Reform Act of 2018 (DRRA), on a 93-6 vote. DRRA modified several FEMA programs to better assist state and local hazard mitigation, preparedness and recovery.

Source: <u>www.naco.org/drra</u>.

**Emergency Alert Systems (EAS)**. The Emergency Alert System is a national public warning system that requires TV and radio broadcasters, cable television systems, wireless cable systems, satellite digital audio radio service providers, direct broadcast satellite service providers and wireline video service providers to offer all levels of government the communications capability to address the American public during a national emergency.

Source: https://www.fcc.gov/consumers/guides/emergency-alert-system-eas

**Emergency Management Accreditation Program (EMAP)**. Emergency Management Accreditation Program (EMAP) is a voluntary, peer review accreditation process in which EMAs are evaluated across 64 standards.

Source: <a href="https://www.emap.org/">https://www.emap.org/</a>

**Emergency Operations Centers (EOC)**. EOCs help counties to coordinate response activities by gathering decision makers together in one location to supply them with the most current information. An EOC can be physical or virtual and can be dedicated solely to the EMA or used by multiple departments.

Source: <a href="https://www.ready.gov/business/implementation/incident">https://www.ready.gov/business/implementation/incident</a>

**Emergency Operations Plan (EOP)**. In compliance with state laws, counties must develop emergency operations plans (EOP) to address how they will deal with emergencies and disasters. An EOP specifies the roles and responsibilities of county agencies and officials as well as state and federal agencies and volunteer organizations. They can be contained within a comprehensive emergency management plan – which also establishes a framework for mitigation, preparation, response and recovery.

Source: https://www.naco.org/resources/managing-disasters-county-level-focus-flooding-0

**Geographic Information Systems (GIS)**. GIS is an integral tool in today's planning toolkit. Organizations use GIS not only to map what is where but also consolidate data on those geographic points that can provide situational awareness and information to support decision making, real-time and for planning purpose.

Source: <a href="https://www.esri.com/about/newsroom/blog/mapping-future-gis/">https://www.esri.com/about/newsroom/blog/mapping-future-gis/</a>

Ham/shortwave radio. Ham and shortwave radios are operated by members of the public and regulated by the Federal Communications Commission (FCC). During a disaster, licensed and trained ham radio operators – often members of the Amateur Radio Emergency Service (ARES) or Radio Amateur Civil Emergency Service (RACES) – help provide both voice and data communications modes to bridge interoperability gaps between agencies.

Source: https://www.domesticpreparedness.com/preparedness/ham-radio-in-emergency-operations/

Hazard Mitigation Plan (HMP). Hazard mitigation plans are documents that aim to identify, assess and reduce the long-term risk to life and property from a range of natural hazards. They must be updated every five years and can be stand-alone documents or integrated in a community's local comprehensive plan. Counties can prepare hazard mitigation plans on their own, with other jurisdictions within the county or with other counties as part of a multi-county region. Counties must have FEMA approved hazard mitigation plans in place to be eligible to receive federal funding for mitigation and other non-emergency disaster projects.

Source: https://www.naco.org/resources/managing-disasters-county-level-focus-flooding-0

**Homeland Security Information Network (HSIN).** HSIN is a network through which agencies can share sensitive but unclassified information, manage operations, analyze data and send alerts and notices relevant to public safety.

Source: <a href="https://www.dhs.gov/homeland-security-information-network-hsin">https://www.dhs.gov/homeland-security-information-network-hsin</a>

**HUD Community Development Block Grant (CDBG) Program.** The CDBG program assists urban, suburban and rural communities to improve housing and living conditions and expand economic opportunities for low- and moderate-income persons. Counties use the flexibility of CDBG funds to partner with the private and non-profit sectors to develop and upgrade local housing, water, infrastructure and human services programs. There is also a separate Community Development Block Grant Disaster Relief (CDBG-DR) program through which Congress allocates billions in funding to HUD for necessary expenses related to natural disasters relief, long-term recovery, restoration of infrastructure and housing and economic revitalization.

Sources: <a href="https://www.naco.org/resources/support-local-development-and-infrastructure-projects-community-development-block-grant-1">https://www.hudexchange.info/resources/documents/CDBG-DR-Fact-Sheet.pdf</a>

**Federal Emergency Management Agency (FEMA).** FEMA is an agency of the United States Department of Homeland Security focused on helping America – local governments, first responders, residents, etc. – prepare for, prevent, respond to and recover from disasters.

Source: www.fema.gov/

**FEMA 2022 Moonshots.** The FEMA 2022 Moonshots look to quadruple national investment in mitigation and double the number of properties covered by insurance by 2022.

Source: https://www.treasury.gov/initiatives/fio/Documents/FACIFebruary2018 FEMA.pdf

**FEMA Emergency Management Institute (EMI)**. EMI is the primary center for the development and delivery of emergency management training in the United States.

Source: <a href="https://training.fema.gov/">https://training.fema.gov/</a>

**FEMA Emergency Management Performance Grant (EMPG) Program**. EMPG provides resources to assist state, local, tribal and territorial governments in preparing for all hazards. The EMPG program's allowable costs support efforts to build and sustain core capabilities across the Prevention, Protection, Mitigation, Response and Recovery mission areas.

Source: https://www.fema.gov/emergency-management-performance-grant-program

**FEMA Hazard Mitigation Grant Program (HMGP)**. HMPG funds help communities implement hazard mitigation measures following a Presidential Major Disaster Declaration.

Source: https://www.fema.gov/hazard-mitigation-grant-program

**FEMA Homeland Security Grant Program (HSGP)**. HSGP provides funding to states, territories, urban areas and other local and tribal governments to prevent, protect against, mitigate, respond to and recover from potential terrorist attacks and other hazards.

Source: https://www.fema.gov/homeland-security-grant-program

**FEMA National Flood Insurance Program (NFIP).** NFIP aims to reduce the impact of flooding on private and public structures by providing affordable insurance to property owners, renters and businesses. Source: https://www.fema.gov/national-flood-insurance-program

FEMA National Flood Insurance Program Community Rating System (CRS). CRS is a voluntary incentive program that recognizes communities for implementing floodplain management practices that exceed the Federal minimum requirements of the NFIP to provide protection from flooding. In exchange for a community's proactive efforts to reduce flood risk, policyholders can receive reduced flood insurance premiums for buildings in the community. There are 10 CRS Classes. Class 1 requires the most credit points and provides the largest flood insurance premium reduction (45 percent), while Class 10 means the community does not participate in the CRS, or has not earned the minimum required credit points, and residents receive no premium reduction. Learn more on the CRS page on www.FloodSmart.gov. Source: https://www.fema.gov/national-flood-insurance-program-community-rating-system

**FEMA Pre-Disaster Mitigation (PDM) Grant Program**. The PDM Grant Program is designed to assist local communities in implementing a sustained pre-disaster natural hazard mitigation program. The goal is to reduce overall risk to future hazard events and reliance on federal funding in future disasters.

Source: <a href="https://www.fema.gov/pre-disaster-mitigation-grant-program">https://www.fema.gov/pre-disaster-mitigation-grant-program</a>

**FEMA Urban Area Security Initiative (UASI) Program**. Part of HSGP, the UASI Program intended to provide financial assistance to address high-threat, high-density Urban Areas in efforts to build and sustain the capabilities necessary to prevent, protect against, mitigate, respond to and recover from acts of terrorism using the Whole Community approach.

Source: <a href="https://www.homelandsecuritygrants.info/GrantDetails.aspx?gid=17162">https://www.homelandsecuritygrants.info/GrantDetails.aspx?gid=17162</a>

**Flood buyouts**. Flood buyout, or property acquisition, programs enable local governments to purchase eligible homes prone to frequent flooding from willing, voluntary owners and return the land to open space, wetlands, rain gardens or greenways.

Source: <a href="https://www.naco.org/resources/managing-disasters-county-level-focus-flooding-0">https://www.naco.org/resources/managing-disasters-county-level-focus-flooding-0</a>

**International Association of Emergency Managers (IAEM)**. IAEM is the premier organization for emergency management. It promotes the principles of emergency management to advance the emergency management profession.

Source: www.iaem.com/

**Incident Command System (ICS).** The ICS is a flexible, standardized management system designed to enable coordinated, collaborative, effective and efficient incident management by integrating a combination of facilities, equipment, personnel, procedures and communications operating within a common organizational structure.

Source: https://www.fema.gov/pdf/emergency/nims/nimsfags.pdf

**Interoperable communications equipment**. Interoperable communications equipment allows county emergency responders to communicate and share voice and data information

Source: <a href="http://www.disaster-resource.com/index.php?option=com\_content&view=article&id=859&">http://www.disaster-resource.com/index.php?option=com\_content&view=article&id=859&</a> Itemid=50

Mass-Casualty Incident (MCI) Plans. MCI plans are designed to provide guidance to assist emergency response personnel in ensuring adequate and coordinated efforts to minimize loss of life, disabling injuries, and human suffering by providing effective emergency medical assistance. They are usually an annex within a larger county EOP.

Source: https://www.countyofnapa.org/DocumentCenter/View/1824/Multi-Casualty-Incident-Management-Plan---Updated-June-2013-PDF

Memoranda of understanding (MOU) with other governments. MOUs are formal inter-local agreements that define the roles and responsibilities of two governments during an emergency – or any other event.

Source: https://emilms.fema.gov/is554/lesson4/01 04 030f1.htm

Mutual aid agreements with other jurisdictions. Mutual Aid Agreements are important mechanisms to secure county operations in times of emergency because they can authorize assistance between two or more neighboring counties, jurisdictions, and/or states – and also between private sector entities, NGOs and other community partners. They put in place formalized systems that allow for expedited assistance and acquisition of equipment and personnel in times of emergency. The primary difference between a MOU and mutual aid agreement is an MOU can be used to pledge assistance without mutual benefits while mutual aid agreements are reciprocal.

Source: https://www.naco.org/resources/managing-disasters-county-level-focus-flooding-0

**National Incident Management System (NIMS)**. NIMS is a comprehensive, national approach to incident management that is applicable at all jurisdictional levels and across functional disciplines. It is intended to be applicable across a full spectrum of potential incidents, hazards, and impacts, regardless of size, location or complexity.

Source: https://www.fema.gov/pdf/emergency/nims/nimsfaqs.pdf

**National Oceanic and Atmospheric Administration (NOAA)**. NOAA is an agency within the United States Department of Commerce that focuses on the conditions of the oceans, major waterways and the atmosphere.

Source: <u>www.noaa.gov/</u>

**Overlay districts**. Overlay zoning is a regulatory tool that creates a special zoning district, over an existing base zone(s), which identifies special provisions in addition to those in the underlying base zone. Regulations or incentives are attached to the overlay district to guide development within a special area. Within an overlay zone, common requirements may include building setbacks, density standards, lot sizes, impervious surface reduction and vegetation requirements.

Source: https://www.uwsp.edu/cnr-ap/clue/Documents/PlanImplementation/Overlay Zoning.pdf

**Statewide or regional insurance pools**. Similar to NFIP, statewide or regional insurance pools act as insurers of last resort for property owners.

**WebEOC**<sup>®</sup>. WebEOC<sup>®</sup> is an incident management software that enhances an organization's preparedness, disaster recovery and emergency management efforts.

Source: <a href="https://www.juvare.com/solutions/webeoc">https://www.juvare.com/solutions/webeoc</a>

### **Appendix B: Data Tables**

**Table 1.** Does your county have a written board ordinance or resolution formally establishing an emergency management agency (EMA) and its responsibilities?

	Total	Large	Medium	Small
Yes	87.91%	86.94%	88.89%	92.31%
No	8.06%	7.76%	9.52%	3.85%
Do Not Know	4.03%	5.31%	1.59%	3.85%
Count	397	26	126	245

**Table 2.** How many individuals does the EMA employ?

	Total	Large	Medium	Small
Full Time Average	2.89	9.57	3.48	1.14
Full Time Standard Deviation	4.46	6.62	5.21	1.23
Part Time Average	1.65	1.64	2.36	1.41
Part Time Standard Deviation	2.36	0.84	4.11	1.39
Count	397	26	126	245

**Table 3.** How many reporting levels are there between the chief emergency management official and the county elected official(s)?

	Total	Large	Medium	Small
1 - reports directly to elected official(s) (e.g.	71.79%	46.15%	56.35%	82.45%
supervisor, commissioner, council member, borough				
member, etc.)				
2 - supervisor of the chief of emergency	16.37%	19.23%	25.40%	11.43%
management reports directly to elected official(s)				
3 - supervisor's supervisor reports directly to elected	7.05%	30.77%	11.90%	7.05%
official(s)				
Other	4.79%	3.85%	6.35%	4.79%
Count	397	26	126	245

**Table 4.** To whom does the chief emergency management official directly report? Please select all that apply.

	Total	Large	Medium	Small
County Board	45.59%	19.23%	30.16%	56.33%
County Administrator, Executive or Manager	43.83%	61.54%	53.97%	36.73%
County Sheriff	8.06%	7.69%	7.94%	10.61%
County Public Works Director or Engineer	0.76%	0.00%	3.17%	1.63%
County Health Director	2.02%	0.00%	0.79%	0.82%
Other	18.89%	34.62%	18.25%	17.55%
Count	397	26	126	245

**Table 5.** Please describe the education and training experience of the EMA. Please select all that apply.

	Total	Large	Medium	Small
Completed the National Incident Management System (NIMS) Training Program	93.04%	96.00	96.80%	90.76%
Attended some courses at the FEMA Emergency Management Institute (EMI)	16.75%	24.00	15.20%	16.81%
Completed the Basic Academy at EMI	14.33%	36.36 %	12.38%	12.94%
Completed the Advanced Academy at EMI	9.02%	20.00 %	11.20%	6.72%
Completed the Executive Academy at EMI	4.12%	8.00%	4.80%	3.36%
Completed the Master's Program at Naval Postgraduate School Center for Homeland Defense and Security (NPS CHDS)	0.00%	0.00%	0.00%	0.00%
Completed the Executive Leaders Program at NPS CHDS	1.80%	4.00%	2.40%	1.26%
Master's degree in emergency and/or disaster management	9.79%	24.00 %	16.80%	4.62%
Count	388	25	125	238

**Table 6.** Does your county formally endorse the National Incident Management System?

	Total	Large	Medium	Small
Yes	94.84%	100.00%	98.15%	92.69%
No, but we do use the system.	3.15%	0.00%	0.93%	4.57%
No, and we do not use the system.	0.29%	0.00%	0.00%	0.46%
Do Not Know	1.72%	0.00%	0.93%	2.28%
Count	349	22	108	219

**Table 7.** Is your Chief Emergency Management Officer certified as an Emergency Manager by any of the following?

	Total	Large	Medium	Small
Your State	78.05%	40.91%	75.24%	83.58%
International Association of Emergency Managers	7.62%	22.73%	12.38%	3.48%
Other	14.33%	36.36%	12.38%	12.94%
Count	328	22	105	201

**Table 8.** Is your county accredited by the Emergency Management Accreditation Program (www.emap.org)?

	Total	Large	Medium	Small
Yes, we are accredited and compliant with all EMAP	11.79%	36.00%	8.00%	11.23%
Emergency Management Standards.				
No, but we make use of EMAP Emergency	37.44%	48.00%	47.20%	31.25%
Management Standards				
No, and we do not make use of EMAP Emergency	34.10%	16.00%	38.40%	33.75%
Management Standards.				
Do Not Know	16.67%	0.00%	6.40%	23.75%
Count	390	25	125	240

**Table 9.** What percentage of the county's total annual budget is dedicated to the EMA?

	Total	Large	Medium	Small
0-5%	87.53%	86.96%	93.81%	84.55%
5-10%	6.23%	0.00%	3.54%	8.15%
10-15%	0.54%	0.00%	0.00%	0.86%
15-20%	0.27%	0.00%	0.00%	0.43%
20-25%	0.27%	4.35%	0.00%	0.00%
Other	5.15%	8.70%	2.65%	6.01%
Count	369	23	113	233

**Table 10.** The budget for the EMA is located in the:

	Total	Large	Medium	Small
General Fund	78.14%	95.65%	78.76%	76.09%
Separate governmental fund	13.93%	0.00%	12.39%	16.09%
Other	7.92%	4.35%	8.85%	7.83%
Count	366	23	113	230

**Table 11.** Do you anticipate the budget for the EMA in the next fiscal year for your county to decrease, stay the same or increase?

	Total	Large	Medium	Small
Decrease	7.07%	13.04%	3.54%	8.19%
Stay the Same	66.85%	69.57%	61.95%	68.97%
Increase	26.09%	17.39%	34.51%	22.84%
Count	368	23	113	232

**Table 12.** Pre-disaster, has your county adopted -- or during a disaster declaration, does your state automatically implement -- administrative and fiscal procedures that allow the EMA to expediently request, apply for, receive, manage and expend funds during a local emergency or disaster event?

	Total	Large	Medium	Small
Yes	61.81%	81.82%	73.21%	54.35%
No	22.25%	9.09%	19.64%	24.78%
Do Not Know	13.19%	4.55%	4.46%	18.26%
Other	2.75%	4.55%	2.68%	2.61%
Count	364	22	112	230

**Table 13.** Does your county maintain insurance against disaster damage for its buildings and infrastructure? Please select all that apply.

	Total	Large	Medium	Small
Yes, it maintains private insurance coverage	43.14%	14.29%	41.67%	46.61%
Yes, it is part of a statewide/regional insurance pool.	41.43%	14.29%	35.19%	47.06%
Yes, it self-insures using reserved funds.	19.71%	80.95%	34.26%	6.79%
No, it has no disaster insurance	3.43%	4.76%	0.93%	4.52%
Count	350	21	108	221

**Table 14.** Does your county maintain a "rainy day" reserve fund to pay for emergencies and disasters?

	Total	Large	Medium	Small
Yes	48.78%	56.72%	52.21%	46.35%
No	30.89%	30.43%	27.43%	32.62%
Do Not Know	20.33%	13.04%	20.35%	21.03%
Count	369	23	113	233

**Table 15.** Does your county participate in any of the following federal grant programs? Please select all that apply.

	Total	Large	Medium	Small
FEMA Pre-Hazard Mitigation Grant Program	27.62%	47.83%	32.43%	22.86%
FEMA Hazard Mitigation Grant Program	52.33%	60.87%	49.55%	52.86%
FEMA Flood Mitigation Assistance Grant Program	15.12%	30.43%	18.02%	11.90%
FEMA Fire Prevention and Safety Grants	20.64%	17.39%	26.13%	18.10%
FEMA Hazard Mitigation Planning Program	35.47%	21.74%	32.43%	38.57%
FEMA Emergency Management Performance	81.98%	95.65%	92.79%	74.76%
Grant Program				
FEMA Homeland Security Grant Program	58.43%	82.61%	66.67%	51.43%
FEMA Radiological Emergency Preparedness	11.92%	21.74%	15.32%	9.05%
Program				
FEMA Urban Area Security Initiative Program	8.72%	65.22%	9.91%	1.90%
HUD Community Development Block Grant	39.13%	16.22%	10.95%	14.53%
Program				
HUD Community Development Block	6.10%	13.04%	10.81%	2.86%
Grant-Disaster Recovery Program				
USDA Emergency Watershed Protection Program	4.65%	8.70%	4.50%	4.29%
NOAA Coastal Resilience Grant Program	2.62%	4.35%	2.70%	2.38%
CDC Hospital Preparedness Program - Public	10.76%	26.09%	14.41%	7.14%
Health Emergency Preparedness Cooperative				
Agreement				
Other	8.14%	8.70%	8.11%	8.10%
Count	331	23	110	198

**Table 16.** What non-federal financing mechanisms have you used to fund mitigation projects?

	Total	Large	Medium	Small
State funding	34.83%	11.11%	31.67%	37.88%
Local tax funding	34.33%	33.33%	35.00%	34.09%
Foundation funding	1.99%	11.11%	3.33%	0.76%
Public private partnerships	8.46%	11.11%	13.33%	6.06%
Other	20.40%	33.33%	16.67%	21.21%
Count	201	9	60	132

**Table 17.** Who prepared the emergency operations plan?

	Total	Large	Medium	Small
County EMA	68.97%	63.64%	71.56%	68.20%
County multi-agency task force	13.22%	22.73%	16.51%	10.60%
Regional planning organization	4.02%	0.00%	0.00%	6.45%
Contractor	9.48%	9.09%	9.17%	9.68%
Other	4.31%	0.00%	0.00%	6.45%
Count	348	22	109	217

**Table 18.** Is your county's hazard mitigation plan integrated into its comprehensive plan?

	Total	Large	Medium	Small
Yes	55.68%	47.83%	57.27%	55.71%
No	27.84%	39.13%	30.91%	25.11%
Do Not Know	16.48%	13.04%	11.82%	19.18%
Count	352	23	110	219

**Table 19.** Does your county have any of the following emergency management plans or agreements? Please select all that apply.

	Total	Large	Medium	Small
Emergency Operations Plan	99.43%	100.00%	100.00%	99.08%
Hazard Mitigation Plan	98.84%	100.00%	94.50%	94.50%
Evacuation Plan	57.02%	50.00%	62.39%	55.05%
Disaster Recovery Plan	44.13%	59.09%	48.62%	40.37%
Continuity of Operations/Government Plan	57.59%	95.45%	59.63%	52.75%
Donations Management Plan	28.94%	59.09%	38.53%	21.10%
Debris Management Plan	52.72%	81.82%	63.30%	44.50%
Pre-Event, FEMA Approved Debris Removal	14.61%	31.82%	26.61%	6.88%
Contract				
Mass Casualty Incident Plan	60.46%	77.27%	71.56%	53.21%
Mutual aid agreements with other jurisdictions	77.94%	86.36%	86.24%	72.94%
Memoranda of understanding with other	56.45%	63.64%	61.47%	53.21%
governments				
Other	5.16%	0.00%	9.17%	3.67%
Count	349	22	109	218

**Table 20.** Do your plans specifically identify and address the needs of any of the below special populations? Please select all that apply.

	Total	Large	Medium	Small
Nursing homes	85.48%	85.71%	82.83%	86.89%
Hospitals	76.90%	90.48%	83.84%	71.58%
Homeless	21.78%	38.10%	26.26%	17.49%
Non-English speaking	40.90%	90.48%	48.48%	30.60%
Public transit dependent	24.09%	57.14%	34.34%	14.75%
Pet owners	68.32%	90.48%	77.78%	60.66%
Prisoners	37.95%	47.62%	41.41%	34.97%
Sex offenders	12.21%	19.05%	17.17%	8.74%
Other	5.28%	4.76%	6.06%	4.92%
Count	303	21	99	183

**Table 21.** How does your county use Geographic Information Systems (GIS) technology? Please select all that apply.

	Total	Large	Medium	Small
Dispatch response units	67.35%	72.73%	75%	62.91%
Manage resources	40.82%	68.18%	45.37%	35.68%
Identify areas affected by an incident using meteorological information	52.19%	77.27%	61.11%	45.07%
Identify persons or facilities (schools, nursing	55.98%	86.36%	58.33%	51.64%
homes, etc.) for notification about potential				
hazards				
Risk assessment	51.90%	77.27%	56.48%	46.95%
Plan for critical infrastructure	48.69%	77.27%	58.33%	40.85%
Identify special populations	30.61%	59.09%	37.96%	23.94%
Map response resources (e.g. water sources)	58.31%	86.36%	70.37%	49.30%
Facilitate recovery	36.73%	77.27%	47.22%	27.23%
Accurate addressing	67.64%	63.64%	75.93%	63.85%
Other	5.25%	0.00%	5.56%	5.63%
We do not use GIS.	5.83%	4.55%	0.93%	8.45%
Count	343	22	108	213

**Table 22.** Who performs the GIS work specifically for the EMA? Please select all that apply.

	Total	Large	Medium	Small
EMA employee	26.91%	36.36%	20.56%	29.29%
Employee of planning department or other	57.80%	77.27%	73.83%	46.97%
central government unit				
Regional planning office	4.89%	4.55%	2.80%	6.06%
Private contractor	8.56%	0.00%	4.67%	11.62%
Other	18.35%	4.55%	13.08%	22.73%
Count	327	22	107	198

**Table 23.** What strategies does your county employ to build disaster risk reduction awareness among local elected officials and the public? Please select all that apply.

	Total	Large	Medium	Small
Public meetings	72.93%	82.61%	77.06%	69.86%
Civic engagement events (ex. "build your	42.17%	65.22%	62.39%	29.68%
bucket" for an emergency)				
Training or exercises	84.62%	95.65%	89.91%	80.82%
School visits	59.26%	60.87%	67.89%	54.79%
Radio or television spots	36.47%	56.52%	46.79%	29.22%
Newspaper or magazine ads	43.30%	39.13%	35.78%	47.49%
Direct mailers	7.69%	30.43%	5.50%	6.39%
Billboards	5.98%	13.04%	9.17%	3.65%
Location-based visualization applications	4.56%	13.04%	8.26%	1.83%
Social media	70.94%	82.61%	80.73%	64.84%
Other	8.26%	17.39%	6.42%	8.22%
Count	351	23	109	219

**Table 24.** When was the last time your county conducted a county-wide disaster preparation drill or exercise?

	Total	Large	Medium	Small
Within the last 6 months	32.19%	30.43%	40.37%	28.31%
6-12 months ago	31.62%	43.48%	32.11%	30.14%
1-2 years ago	16.81%	8.70%	15.60%	18.26%
More than 2 years ago	19.37%	17.39%	11.93%	23.29%
Count	351	23	109	219

**Table 25.** Would you describe the drill or exercise as any of the following? Please select all that apply

	Total	Large	Medium	Small
Table top exercise	62.94%	59.09%	62.96%	63.33%
Functional drill	48.53%	63.64%	56.48%	42.86%
Full-scale simulation	45.88%	45.45%	57.41%	40.00%
Other	7.94%	9.09%	10.19%	6.67%
Count	340	22	108	210

**Table 26.** To what extent is each of the following groups within your county prepared for the types of disasters that have hit the county in the past or might hit in the future? Please rate each on a scale of 0 (not prepared at all) to 4 (extremely prepared).

County agencies/departments	Total	large	Medium	Small
0-not prepared at all	0.58%	0.00%	0.00%	0.92%
1	4.05%	4.55%	2.80%	4.61%
2	39.88%	40.91%	35.51%	41.94%
3	45.09%	45.45%	45.79%	44.70%
4-extremely prepared	9.09%	15.89%	7.83%	10.40%
Count	346	22	107	217

Local Police departments	Total	large	Medium	Small
0-not prepared at all	0.00%	0.00%	0.00%	0.00%
1	3.77%	4.55%	3.74%	3.70%
2	24.06%	9.09%	27.10%	24.07%
3	68.18%	51.40%	58.80%	57.10%
4-extremely prepared	15.07%	18.18%	17.76%	13.43%
Count	345	22	107	216

Local Fire departments	Total	Large	Medium	Small
0-not prepared at all	0.00%	0.00%	0.00%	0.00%
1	0.58%	0.00%	0.00%	0.92%
2	16.18%	9.09%	12.15%	18.89%
3	59.83%	54.55%	63.55%	58.53%
4-extremely prepared	23.41%	36.36%	24.30%	21.66%
Count	346	22	107	217

Local Hospitals & Health Care Providers	Total	Large	Medium	Small
0-not prepared at all	2.11%	0.00%	0.00%	3.45%
1	2.11%	0.00%	0.93%	2.96%
2	24.40%	22.73%	21.50%	26.11%
3	55.42%	72.73%	58.88%	51.72%
4-extremely prepared	15.96%	4.55%	18.69%	15.76%
Count	332	22	107	203

Local municipalities (cities, towns, boroughs, etc.)	Total	Large	Medium	Small
0-not prepared at all	0.59%	0.00%	0.94%	0.47%
1	13.82%	0.00%	14.15%	15.09%
2	44.41%	45.45%	39.62%	46.70%
3	36.47%	54.55%	35.85%	34.91%
4-extremely prepared	0.00%	9.43%	2.83%	4.71%
Count	340	22	106	212

Residents	Total	Large	Medium	Small
0-not prepared at all	1.16%	4.55%	1.87%	0.46%
1	28.32%	22.73%	25.23%	30.41%
2	54.62%	50.00%	55.14%	54.84%
3	14.45%	22.73%	15.89%	12.90%
4-extremely prepared	1.45%	0.00%	1.87%	1.38%
Count	346	22	107	217

Business Community	Total	Large	Medium	Small
0-not prepared at all	2.61%	0.00%	2.83%	2.76%
1	29.57%	22.73%	30.19%	29.95%
2	54.49%	59.09%	50.00%	56.22%
3	11.88%	13.64%	15.09%	10.14%
4-extremely prepared	1.45%	4.55%	1.89%	0.92%
Count	345	22	106	217

Volunteer Community	Total	Large	Medium	Small
0-not prepared at all	2.05%	0.00%	0.94%	2.80%
1	13.74%	4.55%	9.43%	16.82%
2	46.78%	36.36%	43.40%	49.53%
3	34.50%	54.55%	40.57%	29.44%
4-extremely prepared	2.92%	4.55%	5.66%	1.40%
Count	342	22	106	214

Faith-based Community	Total	Large	Medium	Small
0-not prepared at all	2.05%	4.55%	0.95%	2.34%
1	17.89%	9.09%	19.05%	18.22%
2	50.15%	54.55%	43.81%	52.80%
3	27.27%	31.82%	31.43%	24.77%
4-extremely prepared	2.64%	0.00%	4.76%	1.87%
Count	341	22	105	214

Colleges & Universities	Total	Large	Medium	Small
0-not prepared at all	8.24%	0.00%	0.00%	15.79%
1	11.76%	4.55%	8.00%	15.79%
2	39.61%	54.55%	45.00%	33.08%
3	37.25%	36.36%	42.00%	33.83%
4-extremely prepared	3.14%	4.55%	5.00%	1.50%
Count	255	22	100	133

K-12 Schools	Total	Large	Medium	Small
0-not prepared at all	0.87%	4.55%	0.00%	0.93%
1	6.40%	4.55%	7.55%	6.02%
2	37.79%	54.55%	36.79%	36.57%
3	47.67%	31.82%	48.11%	49.07%
4-extremely prepared	7.27%	4.55%	7.55%	7.41%
Count	344	22	106	216

Early childhood development centers and daycares	Total	Large	Medium	Small
0-not prepared at all	4.53%	9.09%	4.72%	3.94%
1	23.87%	36.36%	27.36%	20.69%
2	47.73%	31.82%	50.94%	47.78%
3	21.15%	18.18%	15.09%	24.63%
4-extremely prepared	2.72%	4.55%	1.89%	2.96%
Count	331	22	106	203

**Table 27.** Are there pre-designated public shelters within your county for evacuees from disasters?

	Total	Large	Medium	Small
Yes	77.33%	71.43%	81.31%	75.93%
No	18.31%	23.81%	16.82%	18.52%
Do Not Know	4.36%	4.76%	1.87%	5.56%
Count	344	21	107	216

**Table 28.** Does your county have adequate housing stock to support temporary housing needs for local residents, non-local volunteers, federal employees, etc. in the event of a major disaster?

	Total	Large	Medium	Small
Yes	8.38%	9.52%	10.28%	7.34%
No	79.19%	71.43%	76.64%	81.19%
Do Not Know	12.43%	19.05%	13.08%	11.47%
Count	346	21	107	218

**Table 29.** What types of mitigation policies does your county have in place? Please select all that apply.

	Total	Large	Medium	Small
Freeboard	16.73%	26.67%	25.27%	11.43%
Buffer zones	25.62%	40%	35.16%	19.43%
Building setbacks	41.28%	40%	53.85%	34.86%
Overlay districts (ex. floodplain, avalanche, etc.)	41.28%	46.67%	52.75%	34.86%
Green infrastructure	9.25%	40.00%	9.89%	6.29%
Building code, including materials requirements	55.52%	73.33%	70.33%	46.29%
Continuous load paths	5.34%	6.67%	6.59%	4.57%
Emergency vehicle access requirements	37.72%	60.00%	47.25%	30.86%
Other	2.85%	0.00%	2.20%	3.43%
Per state law, counties are not legally allowed to regulate local land use.	5.54%	11.76%	8.51%	3.37%
Per state law, counties are not legally allowed to regulate local building codes.	7.61%	35.29%	7.45%	5.06%
We do not regulate land use.	22.15%	17.65%	13.83%	26.97%
We do not regulate building codes.	24.22%	17.65%	12.77%	30.90%
Count	289	17	94	178

**Table 30.** Does your county have a non-FEMA funded repetitive flood loss property buyout program?

	Total	large	Medium	Small
Yes	3.23%	23.81%	2.88%	1.39%
No	79.18%	61.90%	81.73%	79.63%
Do Not Know	17.60%	14.29%	15.38%	18.98%
Count	341	21	104	216

**Table 31.** Does your county participate in the National Flood Insurance Program Community Rating System?

	Total	large	Medium	Small
Yes	52.79%	76.19%	64.42%	44.91%
No	20.23%	14.29%	13.46%	20.23%
Do Not Know	26.98%	9.52%	22.12%	31.02%
Count	341	21	104	216

**Table 32.** Does your county have a primary Emergency Operations Center dedicated solely to the EMA?

	Total	Large	Medium	Small
Yes	52.67%	76.00%	64.29%	44.21%
No, but we do have an EOC	43.26%	24.00%	34.92%	49.59%
No, we do not have an EOC.	3.56%	0.00%	0.79%	5.37%
Do Not Know	0.51%	0.00%	0.00%	0.83%
Count	393	25	126	242

**Table 33.** What means of communications does your county employ during disasters? Please select all that apply.

	Total	Large	Medium	Small
Emergency Alert System (radio, cable television,	90.26%	95.45%	91.67%	89.04%
wireless cable and satellite providers)				
Door-to-door	55.30%	68.18%	59.26%	52.05%
Landline (ex. 211 or reverse 911)	70.77%	95.45%	75.00%	66.21%
Cell phone applications (e.g. Next Door)	58.45%	81.82%	57.41%	56.62%
Internet/email	61.89%	95.45%	73.15%	52.97%
Text messaging	69.05%	86.36%	63.89%	69.86%
Twitter	45.27%	86.36%	69.44%	29.22%
Facebook	81.66%	95.45%	88.89%	76.71%
Other	10.89%	18.18%	8.33%	11.42%
Count	349	22	108	219

**Table 34.** How does your county manage social media during a disaster?

	Total	Large	Medium	Small
The county has an employee fully committed to social media.	8.31%	18.18%	12.96%	5.02%
The county has an employee who handles social media on a regular basis.	32.09%	31.82%	39.81%	28.31%
The county assigns one employee to social media during a disaster as "other duties as assigned."	24.64%	22.73%	18.52%	27.85%
The county engages a team of social media volunteers.	6.02%	0.00%	6.48%	6.39%
We do not have any social media accounts.	11.75%	0.00%	2.78%	17.35%
Other	17.19%	27.27%	19.44%	15.07%
Count	349	22	108	219

**Table 35.** Does your county monitor social media during a disaster to identify and get in front of incorrect information or rumors?

	Total	Large	Medium	Small
Yes	77.03%	90.48%	86.92%	70.83%
No	17.15%	4.76%	9.35%	22.22%
Do Not Know	5.81%	4.76%	3.74%	6.94%
Count	344	21	107	216

**Table 36.** Does your county currently use any of the following technology/software?

	Total	Large	Medium	Small
WebEOC®	77.51%	86.36%	81.65%	74.24%
Cameo/Aloha	49.24%	54.55%	57.80%	43.94%
Ham/Shortwave Radio	63.83%	77.27%	75.23%	56.06%
DisasterLAN (D-LAN)	4.56%	4.55%	7.34%	3.03%
Homeland Security Information Network (HSIN)	42.55%	68.18%	54.13%	33.33%
Knowledge Center	16.11%	22.73%	22.02%	12.12%
Interoperable communications equipment (800 MHz	71.12%	95.45%	83.49%	61.62%
Radio)				
Other	13.68%	9.09%	11.01%	15.66%
Count	329	22	109	198

**Table 37.** Which agencies and organizations has the EMA worked with over the past five years, and in what phases have you engaged/partnered with them?

Note: Due to a survey formatting error, respondents were only able to select the phase during which they most often engaged each agency or organization. Not selecting any options

#### **Federal Partnerships.**

Phases	FEMA	EPA	USDA	NOAA	Other Homeland Security agency	Other federal agency/ department
Education/Training	22.17%	10.58%	7.81%	28.97%	10.83%	5.29%
Mitigation	12.85%	1.76%	2.77%	1.01%	2.27%	0.76%
Planning	15.87%	10.83%	12.85%	24.94%	9.32%	4.53%
Recovery	24.94%	3.53%	4.28%	1.01%	0.25%	1.51%
Response	5.79%	12.59%	4.28%	14.36%	2.52%	2.02%
Count	324	156	127	279	100	56

#### State and Regional Partnerships.

Phases	State EMA	State EPA	Other state agency	COGs/Regional
				planning organizations
<b>Education/Training</b>	19.40%	5.79%	4.03%	5.04%
Mitigation	4.28%	1.76%	1.01%	3.27%
Planning	35.77%	10.58%	6.05%	29.72%
Recovery	5.29%	3.53%	0.76%	1.26%
Response	15.62%	17.13%	6.55%	2.02%
Count	319	154	73	164

## **Local Government Partnerships.**

Phases	Other county		Local	
	agencies	Other counties	municipalities	Schools
<b>Education/Training</b>	10.83%	13.85%	10.08%	15.11%
Mitigation	3.53%	0.76%	4.53%	3.02%
Planning	30.23%	36.27%	43.32%	52.39%
Recovery	1.76%	1.26%	2.52%	0.50%
Response	9.07%	17.63%	16.12%	7.05%
Count	220	277	304	310

## **Local Community Partnerships.**

Phases	RACES/	National volunteer	Local	Faith-based	Other local non-	Local	Local business
	ARES	organizations	VOAD	organizations	profits	hospitals	community
Education/							
Training	8.56%	8.06%	5.54%	9.32%	5.54%	12.59%	12.09%
Mitigation	0.50%	0.25%	0.00%	0.50%	0.00%	0.76%	1.01%
Planning	21.41%	19.65%	23.43%	31.23%	12.09%	50.13%	38.04%
Recovery	1.01%	5.79%	7.05%	7.81%	2.02%	0.00%	1.51%
Response	18.39%	11.34%	7.30%	11.08%	5.29%	8.31%	5.29%
Count	198	179	172	238	99	285	230

#### **Appendix C: County Survey Respondents**

Calhoun County, AL Chambers County, AL Clarke County, AL Lamar County, AL Mobile County, AL Morgan County, AL Washington County, AL Denali Borough, AK Cochise County, AZ Coconino County, AZ Navajo County, AZ Santa Cruz County, AZ Yuma County, AZ Baxter County, AR Bradley County, AR Clay County, AR Lafayette County, AR Pike County, AR Pope County, AR Prairie County, AR Pulaski County, AR Searcy County, AR Sevier County, AR White County, AR Yell County, AR Calaveras County, CA Contra Costa County, CA Del Norte County, CA Fresno County, CA Mono County, CA Orange County, CA Sacramento County, CA San Diego County, CA Baca County, CO Chaffee County, CO Eagle County, CO Gilpin County, CO Grand County, CO Montezuma County, CO Montrose County, CO Phillips County, CO Routt County, CO Yuma County, CO Sussex County, DE Alachua County, FL

Brevard County, FL

Manatee County, FL Martin County, FL Sumter County, FL Volusia County, FL Baldwin County, GA Bartow County, GA Ben Hill County, GA Camden County, GA Catoosa County, GA Charlton County, GA Crawford County, GA DeKalb County, GA Gilmer County, GA Greene County, GA Hart County, GA Heard County, GA Henry County, GA Jeff Davis County, GA Lamar County, GA Macon County, GA Mitchell County, GA Pierce County, GA Rockdale County, GA Spalding County, GA Sumter County, GA Taliaferro County, GA Telfair County, GA Whitfield County, GA Maui County, HI Adams County, ID Bear Lake County, ID Blaine County, ID Caribou County, ID Clearwater County, ID Latah County, ID Teton County, ID Valley County, ID Washington County, ID Alexander County, IL Champaign County, IL Cumberland County, IL Jefferson County, IL Kane County, IL Lee County, IL McHenry County, IL Madison County, IL

Marshall County, IL Stephenson County, IL Wabash County, IL Winnebago County, IL Franklin County, IN Marshall County, IN Ohio County, IN Posey County, IN Putnam County, IN Warrick County, IN Black Hawk County, IA Butler County, IA Poweshiek County, IA Washington County, IA Barton County, KS Butler County, KS Cowley County, KS Ellis County, KS Ford County, KS Franklin County, KS Grant County, KS Hamilton County, KS Kingman County, KS Lane County, KS McPherson County, KS Nemaha County, KS Pottawatomie County, KS Saline County, KS Scott County, KS Sedgwick County, KS Shawnee County, KS Stanton County, KS Unified Govt. of Wyandotte County and Kansas City, KS Barren County, KY

Bath County, KY

Fleming County, KY

Garrard County, KY

Henderson County, KY

Marshall County, KY

Mason County, KY

Russell County, KY

Shelby County, KY

Spencer County, KY

Beauregard Parish, LA

Morgan County, KY

Morehouse Parish, LA St. Helena Parish, LA West Baton Rouge Parish, LA Waldo County, ME Calvert County, MD Carroll County, MD Cecil County, MD Dorchester County, MD Wicomico County, MD Arenac County, MI Grand Traverse County, MI Gratiot County, MI Ingham County, MI Macomb County, MI Mason County, MI Montcalm County, MI Montmorency County, MI Ottawa County, MI Wexford County, MI Anoka County, MN Benton County, MN Hennepin County, MN Nobles County, MN Olmsted County, MN Otter Tail County, MN Ramsey County, MN Renville County, MN Roseau County, MN Washington County, MN Benton County, MS DeSoto County, MS Grenada County, MS Harrison County, MS Neshoba County, MS Atchison County, MO Barton County, MO Boone County, MO Callaway County, MO Cape Girardeau County, MO Carroll County, MO Cass County, MO Christian County, MO Greene County, MO Lawrence County, MO McDonald County, MO Madison County, MO

Maries County, MO

Mississippi County, MO

Pemiscot County, MO Platte County, MO Ray County, MO Scotland County, MO Vernon County, MO Webster County, MO Blaine County, MT Fallon County, MT Garfield County, MT Liberty County, MT McCone County, MT Butte-Silver Bow County, MT Boone County, NE Cherry County, NE Clay County, NE Dakota County, NE Dawes County, NE Dodge County, NE Douglas County, NE Frontier County, NE Hayes County, NE Jefferson County, NE Kearney County, NE Logan County, NE McPherson County, NE Nemaha County, NE Nuckolls County, NE Otoe County, NE Platte County, NE Rock County, NE Saline County, NE Scotts Bluff County, NE York County, NE Clark County, NV Elko County, NV Nye County, NV Cape May County, NJ Passaic County, NJ Grant County, NM Guadalupe County, NM Santa Fe County, NM Socorro County, NM Union County, NM Allegany County, NY Chenango County, NY Clinton County, NY

Erie County, NY

Lewis County, NY

Madison County, NY Nassau County, NY Sullivan County, NY Wayne County, NY Yates County, NY Bladen County, NC Burke County, NC Camden County, NC Columbus County, NC Craven County, NC Franklin County, NC Granville County, NC Guilford County, NC Iredell County, NC Nash County, NC Pitt County, NC Tyrrell County, NC Union County, NC Warren County, NC Washington County, NC Burleigh County, ND Dunn County, ND Foster County, ND Mountrail County, ND Ward County, ND Athens County, OH Guernsey County, OH Hardin County, OH Medina County, OH Mercer County, OH Muskingum County, OH Tuscarawas County, OH Union County, OH Blaine County, OK Cleveland County, OK Greer County, OK Murray County, OK Rogers County, OK Seminole County, OK Texas County, OK Tillman County, OK Washington County, OK Washita County, OK Woods County, OK Baker County, OR Harney County, OR Malheur County, OR Union County, OR

Bedford County, PA Blair County, PA Cameron County, PA Carbon County, PA Chester County, PA Erie County, PA Fayette County, PA Franklin County, PA Greene County, PA Jefferson County, PA Lancaster County, PA Lehigh County, PA Luzerne County, PA McKean County, PA Mercer County, PA Montour County, PA Northumberland County, PA Schuylkill County, PA Somerset County, PA Warren County, PA Barnwell County, SC Florence County, SC Horry County, SC Lancaster County, SC Marion County, SC Lake County, SD Lincoln County, SD Minnehaha County, SD Clay County, TN Fayette County, TN Grundy County, TN Lincoln County, TN McMinn County, TN Marshall County, TN Meigs County, TN Montgomery County, TN Shelby County, TN Williamson County, TN

Andrews County, TX

Aransas County, TX Archer County, TX Bastrop County, TX Bell County, TX Brewster County, TX Calhoun County, TX Cameron County, TX Cooke County, TX Fort Bend County, TX Gaines County, TX Hardin County, TX Harris County, TX Jefferson County, TX Johnson County, TX Kaufman County, TX Kendall County, TX Kent County, TX Lavaca County, TX Liberty County, TX Lubbock County, TX Roberts County, TX Robertson County, TX San Saba County, TX Smith County, TX Terrell County, TX Wichita County, TX Wise County, TX Daggett County, UT Davis County, UT Wasatch County, UT Washington County, UT Weber County, UT Bath County, VA Greene County, VA Henrico County, VA James City County, VA Loudoun County, VA Powhatan County, VA Surry County, VA

Warren County, VA Washington County, VA York County, VA Asotin County, WA Columbia County, WA Jefferson County, WA King County, WA San Juan County, WA Snohomish County, WA Stevens County, WA Doddridge County, WV Hardy County, WV Jackson County, WV Morgan County, WV Pleasants County, WV Barron County, WI Bayfield County, WI Burnett County, WI Chippewa County, WI Dodge County, WI Eau Claire County, WI Iron County, WI Jackson County, WI Kewaunee County, WI Lafayette County, WI Manitowoc County, WI Pepin County, WI Polk County, WI Richland County, WI Sheboygan County, WI Vilas County, WI Waushara County, WI Winnebago County, WI Goshen County, WY Hot Springs County, WY Laramie County, WY Niobrara County, WY Teton County, WY

8/29/2018

Qualtrics Survey Software

## Introduction

## Survey on Emergency Management in County Government

The National Association of Counties (NACo) is asking for your help as we seek to assess key aspects of county emergency management, including organizational structure, personnel and training, budgets and funding, partnerships and planning, preparedness, mitigation and response efforts. Your responses will help NACo shape its future resilience programming and aid our members as they make recommendations on federal policy issues and legislation pertaining to emergency management.

Please complete the questions on the following pages to the best of your ability. The length of time needed to complete the survey will vary depending on how much detail you choose to provide us. 

The core portion of the questionnaire should take approximately 20-25 minutes to complete. 
We recommend that you complete the entire survey in one sitting. However, if you would like to complete it in stages, you can return by closing out of the browser and using the original survey link to re-enter the survey; your previously entered answers will automatically repopulate. The survey

Thank you in advance for taking the time to complete this survey. NACo intends to conduct a similar survey every five years; the responses to this survey will be our baseline going forward. Your individual responses will be kept confidential. If you have any questions or need any assistance with the survey, please contact Jenna Moran at jmoran@naco.org.

**County and Organizational Structure** 

deadline is Friday, June 1, 2018.

## **COUNTY AND ORGANIZATIONAL STRUCTURE**

Please indicate your: \*

29/2018 County.	Qualtrics Survey Software
State.	
What is the population of your count	y? <b>*</b>
O Above 500,000	
O 50,000 to 500,000	
O Under 50,000	
How many jurisdictions are in your o	county? (i.e. cities, towns, etc.)
In the past 2 years, has your county declaration? Please check all that a	been part of a disaster or emergency oply. *
☐ Presidentially declared disaster (federal)	
☐ State declared disaster	
☐ Locally declared disaster	
an emergency management agency For the purposes of this survey, the emergency mana agency specifically tasked with Emergency Managem	gement agency ("EMA") is the department, division, organization or ent preparedness, response, recovery and mitigation plans and fanagement Agency or officials within the state emergency
To whom does the chief emergency check all that apply. *	management official directly report? Please
	management official directly report? Please
check all that apply.*	

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	olic works director or engineer
County hea	alth director
Other	
_	reporting levels are there between the chief emergency management the county elected official(s)?*
O 1 - reports member, etc.)	directly to elected official(s) (e.g. supervisor, commissioner, council member, borough
O 2 - supervi	sor of the chief of emergency management reports directly to elected official(s)
O 3 - supervi	sor's supervisor reports directly to elected official(s)
O Other	
-	ef Emergency Management Officer certified as an Emergency Manager ne following? Please check all that apply.
O Your State	
O The Interna	ational Association of Emergency Managers
O Other	
	entage of the chief emergency management official's time is spent on management?
-	individuals does the EMA employ? Please check all that apply and w many employees are employed in that category in the text box.*
☐ Full time	
☐ Part time	
- Part time	
How many	FTEs (full time equivalents) does this represent?

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	Is your cou	unty accredited by the Emergency Management Accreditation Program ap.org)?
	Yes, we a	re accredited and compliant with all EMAP Emergency Management Standards.
	O No, but w	e make use of EMAP Emergency Management Standards.
	O No, and w	ve do not make use of EMAP Emergency Management Standards.
	O Do Not Kr	now
	Does your solely to the	county have a primary Emergency Operations Center (EOC) dedicated ne EMA?
	O Yes	
	O No, but w	e do have an EOC.
	O No, we do	not have an EOC.
	O Do Not Kr	now
	FUNDING	
		e dollar amount of the budget for the EMA (excluding grants and other n the current fiscal year for your county?*
	The budge	et for the EMA is located in the:
	O General fo	und
	Separate	governmental fund
	O Other	
	What perc	entage of the county's total annual budget is dedicated to the EMA?*
	0-5%	
	O 5-10%	
	O 10-15%	
	O 15-20%	

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O 20-25%
O Other:
Do you anticipate the budget for the EMA in the next fiscal year for your county to:
O Decrease
O Increase
O Stay the same
What portion of your county's capital expenditures were devoted to natural hazard mitigation in the current fiscal year for your county?
O 0-5%
O 5-10%
O 10-15%
O 15-20%
O 20-25%
O Other:
Does your county participate in any of the following federal grant programs? Please
check all that apply. If applicable, please also indicate how much funding your
county received from that program in the past fiscal year, and if the funding was
used for natural hazard mitigation.
FEMA Pre-Hazard Mitigation Grant Program
FEMA Hazard Mitigation Grant Program
FEMA Flood Mitigation Assistance Grant Program
FEMA Fire Prevention and Safety Grants
FEMA Hazard Mitigation Planning Program
FEMA Emergency Management Performance Grant Program
FEMA Homeland Security Grant Program

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☐ <u>FEMA</u>	Radiological Emergency Preparedness Program
□ <u>FEMA</u>	Urban Area Security Initiative Program
□ <sub>HUD</sub> c	Community Development Block Grant Program
HUD C	Community Development Block Grant-Disaster Recovery Program
□ <u>USDA</u>	Emergency Watershed Protection Program
□ NOAA	Coastal Resilience Grant Program
CDC H	lospital Preparedness Program - Public Health Emergency Preparedness Cooperative
Other (	(i.e. DOT, EPA, etc.)
Please the fund	on-federal financing mechanisms have you used to fund mitigation projects? describe the nature of the funding; if applicable, you can provide a link to ling source page.  unding (e.g. recurrent funding, one-time contribution, steady funding, annual on, etc.)
O Local to	ax funding (e.g. special taxing district, tourism/bed tax, etc.)
O Founda	ation funding
O Public	private partnerships
O Other	
state au EMA to local en	aster, has your county adopted or during a disaster declaration, does your atomatically implement administrative and fiscal procedures that allow the expediently request, apply for, receive, manage and expend funds during a nergency or disaster event (e.g. Human Resources policies to pay exempt ees overtime or waivers from certain permitting processes)?

( ) Do Not Know					
O Do Not Know					
O Other					
Doos your county mainte	oin incuron	oo ogoinet	disaster de	amaga for	ite buildinge on
Does your county mainta infrastructure? Please ch		_	uisastei ua	arriage ioi	its buildings an
Yes, it maintains private ins					
Yes, it is part of a statewide					
Yes, it self insures using re	_		•		
No, it has no disaster insur					
Does your county mainta	ain a "rainy	day" rese	rve fund to	pay for em	nergencies and
disasters?*					
O Yes					
O No					
_					
O Do Not Know					
O Do Not Know					
O Do Not Know  Partnerships					
Partnerships					
Partnerships	anizations	has the El	MA worked	with over t	he past five
Partnerships PARTNERSHIPS					-
Partnerships PARTNERSHIPS Which agencies and organical control	es have yo	u engaged	d/partnered	with them	? Please indica
Partnerships PARTNERSHIPS Which agencies and orgayears, and in what phase which other agencies, or	es have yo ganization	ou engaged is, etc. you	d/partnered r county en	with them' gaged in t	? Please indica
Partnerships PARTNERSHIPS Which agencies and orgayears, and in what phase	es have yo ganization	ou engaged is, etc. you	d/partnered r county en	with them' gaged in t	? Please indica ne text box.
PARTNERSHIPS  Which agencies and orgayears, and in what phase which other agencies, or Other county agencies (e.g. planning department)	es have yo ganization Planning	ou engaged is, etc. you	d/partnered r county en	with them' gaged in t	? Please indica ne text box.
PARTNERSHIPS  Which agencies and orgovers, and in what phase which other agencies, or Other county agencies (e.g. planning department)  FEMA	es have your ganization Planning O	ou engaged as, etc. you Mitigation	d/partnered r county en Response	with them'ngaged in the Recovery E	? Please indica ne text box.
PARTNERSHIPS  Which agencies and orgovers, and in what phase which other agencies, or Other county agencies (e.g. planning department)  FEMA  EPA	es have your ganization Planning O O	ou engaged is, etc. you	d/partnered r county en Response O O	with them' gaged in the Recovery E	? Please indica ne text box.
PARTNERSHIPS  Which agencies and orgovers, and in what phase which other agencies, or Other county agencies (e.g. planning department)  FEMA  EPA  USDA	es have your ganization Planning O O O O	ou engaged as, etc. you Mitigation	d/partnered r county en Response	with them'ngaged in the Recovery E	? Please indica ne text box.
PARTNERSHIPS  Which agencies and orgovers, and in what phase which other agencies, or Other county agencies (e.g. planning department)  FEMA  EPA  USDA  NOAA	es have your ganization Planning O O	ou engaged as, etc. you Mitigation	d/partnered r county en Response O O	with them' gaged in the Recovery E	? Please indica ne text box.
PARTNERSHIPS  Which agencies and orgovers, and in what phase which other agencies, or Other county agencies (e.g. planning department)  FEMA  EPA  USDA	es have your ganization Planning O O O O	ou engaged as, etc. you Mitigation	d/partnered r county en Response	with them'ngaged in the Recovery E	? Please indica ne text box.

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	Planning	Mitigation	Response	Recovery	Education/Training
Other federal agency/department	0	0	0	0	0
State EMA	0	0	0	0	0
State EPA	0	0	0	0	0
Other state agency	0	0	0	0	0
COGs/Regional planning organizations	0	0	0	0	0
RACES/ARES	0	0	0	0	0
Other counties	0	0	0	0	0
Local municipalities (cities, towns, boroughs, etc.)	0	0	0	0	0
Schools	0	0	0	0	0
National volunteer organizations	0	0	0	0	0
Local VOAD	0	0	0	0	0
Faith-based organizations	0	0	0	0	0
Other local non-profits	0	0	0	0	0
Local hospital(s)	0	0	0	0	0
Local business community	0	0	0	0	0
Other	0	0	0	0	0
Planning PLANNING In what year did your coassessment?*	unty last c	onduct a h	azard iden	tification a	and risk

Does your county have any of the following emergency management plans or agreements? Please check all that apply and if known indicate in what year they were last updated.	/
Emergency Operations Plan	
☐ Hazard Mitigation Plan	
□ Evacuation Plan	
☐ Disaster Recovery Plan	
Continuity of Operations/Government Plan (COOP/COG)	
□ Donations Management Plan	
☐ Debris Management Plan	
☐ Pre-Event, FEMA Approved Debris Removal Contract	
☐ Mass Casualty Incident Plan	
☐ Mutual aid agreements with other jurisdictions	
☐ Memoranda of understanding with other governments	
Other	
Is your county's hazard mitigation plan integrated into its comprehensive plan?*	ı
O Yes	
O No	
O Do Not Know	
Do your plans specifically identify and address the needs of any of the below special populations? Please check all that apply. If your evacuation plan has special sheltering arrangements for any of these populations, please indicate the via the text box with a "yes."  Nursing homes	at

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☐ Hospitals		
Homeless		
Non-English speaking		
☐ Public transit dependent		
☐ Pet owners		
Prisoners		
☐ Sex offenders		
Other		
Who prepared the emergency	operations plan?	
County EMA		
O County multi-agency task force		
Regional planning organization		
O Contractor		
O Other		
How does your county use Ger	ographic Information Systems (GIS) technology?	
Please check all that apply.	graphic information dystems (did) technology!	
☐ Dispatch response units		
☐ Manage resources		
☐ Identify areas affected by an incide	ent using meteorological information	
☐ Identify persons or facilities (school hazards	ls, nursing homes, etc.) for notification about potential	
☐ Risk assessment		
☐ Plan for critical infrastructure		
☐ Identify special populations		
☐ Map response resources (e.g. water	er sources)	
☐ Facilitate recovery		
Accurate addressing		
https://naco.co1.qualtrics.com/ControlPanel/Ajax.php?action=	GetSurveyPrintPreview	11/17

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Other	
☐ We do not use GIS.	
Who performs the GIS wo	ork specifically for the EMA? Please check all that apply.
☐ EMA employee	
☐ Employee of planning depart	tment or other central government unit
Regional planning office	
Private contractor	
Other	
Does your county currently	ly use any of the following technology/software? Please
check all that apply.	, and an including technology, continues i loude
☐ Web EOC	
☐ Cameo/Aloha	
☐ Ham/Shortwave Radio	
☐ DisasterLAN (D-LAN)	
☐ Homeland Security Informati	ion Network (HSIN)
☐ Interoperable communication	ns equipment (800 MHz Radio)
Other	
Preparedness	
PREPAREDNESS	
Does your county formally	y endorse the National Incident Management System?
O Yes	
O No, but we do use the system	m.
O No, and we do not use the sy	ystem.
O Do Not Know	
os://naco.co1.qualtrics.com/ControlPanel/Ajax.php	p?action=GetSurveyPrintPreview 1

To what extent is each of the following groups within your county prepared for the types of disasters that have hit the county in the past or might hit in the future? Please rate each on a scale of 0 (not prepared at all) to 4 (extremely prepared).

	0-not prepared at all	1	2	3	4-extremely prepared
County agencies/ departments	0	0	0	0	0
Local police departments	0	0	0	0	0
Local fire departments	0	0	0	0	0
Local hospitals and health care providers	0	0	0	0	0
Local municipalities (cities, towns, boroughs, etc.)	0	0	0	0	0
Residents	0	0	0	0	0
Business community	0	0	0	0	0
Volunteer community	0	0	0	0	0
Faith-based community	0	0	0	0	0
Colleges and universities	0	0	0	0	0
K-12 schools	0	0	0	0	0
Early childhood development centers and daycares	0	0	0	0	0
What strategies doe among local elected	-			r risk reduc	tion awareness
Public meetings					
☐ Civic engagement eve	ents (ex. "build yo	our bucket" fo	or an emergenc	y)	
☐ Training or exercises					

School visits

Direct mailers

Radio or television spotsNewspaper or magazine ads

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Billboards	
☐ Location-base	d visualization applications (ex. <u>San Diego County's Know Your Hazards map</u> )
☐ Social media	
Other	
When was the	e last time your county conducted a county-wide disaster preparation
drill or exercis	
O Within the last	6 months
O 6-12 months a	igo .
O 1-2 years ago	
O More than 2 ye	ears ago
	I
	nty held any neighborhood-level disaster trainings, drills or exercises months to gauge the public's understanding and expectations of
O Yes	
O No	
O Do Not Know	
Response	
RESPONSE	
What means of	of communications does your county employ during disasters? Please

check all that apply. \*

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	☐ Em	ergency Alert System (radio, cable television, wireless cable and satellite providers)
	☐ Doo	or-to-door
	Lan	idline (ex. 211 or reverse 911)
	☐ Cel	I phone applications (e.g. Next Door)
	☐ Inte	ernet/email
	☐ Tex	t messaging
	☐ Twi	tter
	☐ Fac	rebook
	Oth	er
	How	does your county manage social media during a disaster?*
	O The	e county has an employee fully committed to social media.
	O The	e county has an employee who handles social media on a regular basis.
	O The assigne	e county assigns one employee to social media during a disaster as "other duties as ed."
	O The	e county engages a team of social media volunteers.
	O We	do not have any social media accounts.
	O Oth	er
	Does	your county monitor social media during a disaster to identify and get in front
	of inc	correct information or rumors?
	O Yes	
	O No	
	O Do	Not Know
	Are t	here pre-designated public shelters within your county for evacuees from
		sters? If yes, please indicate what the public sheltering capacity is as a
	perce	entage of your county's total population.
	O yes	
	O No	
	O Do	Not Know

Does your county have adequate housing stock to support temporary housing needs for local residents, non-local volunteers, federal employees, etc. in the event of a major disaster? If yes, please indicate what the temporary housing capacity is as a percentage of your county's total population.			
O Yes			
O No			
O Do Not Know			
Mitigation			
MITIGATION			
What types of mitigation policies does your county have in place? In the text box, please indicate the specifics of that policy (e.g. Freeboard, 3 feet).			
Freeboard			
□ Buffer zones			
☐ Building setbacks			
Overlay districts (ex. floodplain, avalanche, etc.)			
☐ Green infrastructure			
☐ Building code, including materials requirements			
Continuous load paths			
☐ Emergency vehicle access requirements			
Other			
Per state law, counties are not legally allowed to regulate local land use.			
Per state law, counties are not legally allowed to regulate local building codes.			
☐ We do not regulate land use.			
☐ We do not regulate building codes.			

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Does your county have a non-FEMA funded repetitive flood loss property buyout program? If yes, please list your funding sources in the text box (e.g. local stormwater fee).*
O Yes
O No
O Do Not Know
Does your county participate in the National Flood Insurance Program Community Rating System? If yes, please indicate at which class the county is currently rated.*  O Yes  O No
O Do Not Know
This is the end of the survey. Once you click "Submit," you will not be able to return to change your answers.

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Emergency Management Institute, FEMA, https://training.fema.gov/.

<sup>v</sup> Vying for Funding, Rural Counties Often Lose to Big Cities, Governing,

 $\underline{http://www.governing.com/topics/finance/gov-how-rural-communities-can-compete-for-development-cash.html}.$ 

vii "Mapping the Future of GIS," Esri, https://www.esri.com/about/newsroom/blog/mapping-future-gis/.

viii Per the 2003 Supplement Enterprise Information Technology Strategic Plan for Nevada County, Calif., "address data is integral to the operations of many County departments and applications...Having consistent, accurate addressing allows for the mapping of this information using a GIS capability referred to as geocoding...An example of the importance of consistent and accurate data would be an application that would route emergency response vehicles to an incident based on an address." See more at

https://www.mynevadacounty.com/DocumentCenter/View/11171/2003-Strategic-Plan-Supplement-GIS-Enterprise-PDF-test-rename.

"" "Chapter 9 – Preparedness for Emergency Response," FEMA, <a href="https://training.fema.gov/hiedu/docs/fem/chapter%209%20-%20preparedness%20for%20emergency%20response.doc">https://training.fema.gov/hiedu/docs/fem/chapter%209%20-%20preparedness%20for%20emergency%20response.doc</a>.

- \* The American Planning Association recently completed a Survey of State Land-Use and Natural Hazards Planning Laws in coordination with FEMA's Cooperating Technical Partners (CTP) program. Check out your state's survey results at <a href="https://www.planning.org/nationalcenters/hazards/statesurvey/">https://www.planning.org/nationalcenters/hazards/statesurvey/</a>.
- xi "Managing Disasters at the County Level: A Focus on Flooding," NACo, <a href="https://www.naco.org/resources/managing-disasters-county-level-focus-flooding-0">https://www.naco.org/resources/managing-disasters-county-level-focus-flooding-0</a>. <a href="https://www.naco.org/resources/managing-disasters-county-level-focus-flooding-0">https://www.naco.org/resources/managing-disasters-county-level-focus-flooding-0</a>. <a href="https://www.naco.org/resources/managing-disasters-county-level-focus-flooding-0">https://www.naco.org/resources/managing-disasters-county-level-focus-flooding-0</a>. <a href="https://www.naco.org/resources/managing-disasters-county-level-focus-flooding-0">https://www.naco.org/resources/managing-disasters-county-level-focus-flooding-0</a>.
- "NIMS: FAQs," FEMA, https://www.fema.gov/pdf/emergency/nims/nimsfaqs.pdf.
- xiv "Incident Management," Ready.gov, https://www.ready.gov/business/implementation/incident.
- xv "The New WebEOC," Juvare, https://www.juvare.com/solutions/webeoc.
- \*vi "Interoperable Communications," Disaster Resource Guide, http://www.disaster-

resource.com/index.php?option=com content&view=article&id=859&Itemid=50.

xvii "Ham Radio in Emergency Operations," Domestic Preparedness,

https://www.domesticpreparedness.com/preparedness/ham-radio-in-emergency-operations/.

- xviii "CAMEO: Computer-Aided Management of Emergency Operations," NOAA, https://cameo.noaa.gov/.
- xix "Homeland Security Information Network (HSIN)," U.S. Department of Homeland Security, https://www.dhs.gov/homeland-security-information-network-hsin.

<sup>xx</sup> The survey asked which federal grant programs responding counties participated it. It did not ask them to distinguish if they applied and received funding, if they applied and did not receive funding or if they did not apply at all.

<sup>&</sup>quot;Billion-Dollar Weather and Climate Disasters: Table of Events," NOAA, https://www.ncdc.noaa.gov/billions/events.

<sup>&</sup>quot;Chapter 3: Building an Effective Emergency Management Organization," FEMA, <a href="https://training.fema.gov/hiedu/docs/fem/chapter%203%20-%20building%20an%20effective%20em%20org.doc.">https://training.fema.gov/hiedu/docs/fem/chapter%203%20-%20building%20an%20effective%20em%20org.doc.</a>

<sup>&</sup>lt;sup>iv</sup> The average dollar amount of the budget (excluding grants and other sources) for county EMAs could not be calculated due to inconsistencies in the data reported back.

vi "Integrating Hazard Mitigation Into Local Planning," FEMA, <a href="https://www.fema.gov/media-library-data/20130726-1908-25045-0016/integrating">https://www.fema.gov/media-library-data/20130726-1908-25045-0016/integrating</a> hazmit.pdf.



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