National Preparedness Report

March 30, 2012

Homeland Security

Executive Summary

Introduction

The Nation has made measurable strides toward improving preparedness for the full range of hazards at all levels of government and across all segments of society. National preparedness has improved not only for the countless threats posed by those who wish to bring harm to the American homeland but also for the many natural and technological hazards that face the Nation's communities.

Presidential Policy Directive 8: National Preparedness (PPD-8) describes the Nation's approach to preparing for the threats and hazards that pose the greatest risk to the security of the United States. The *Directive* requires a *National Preparedness Report* (NPR), an annual report summarizing the progress made toward building, sustaining, and delivering the 31 core capabilities described in the National Preparedness Goal (the Goal).

As the NPR coordinator, the U.S. Department of Homeland Security's (DHS's) Federal Emergency Management Agency (FEMA) worked with the full range of whole community partners—including all levels of government, private and nonprofit sectors, faith-based organizations, communities, and individuals—to develop the NPR. Specifically, FEMA collaborated with federal interagency partners to identify quantitative and qualitative performance and assessment data for each of the 31 core capabilities. In addition, FEMA integrated data from the 2011 State Preparedness Reports (SPRs), statewide self-assessments of core capability levels submitted by all 56 U.S. states and territories through a standardized survey. Finally, FEMA conducted research to identify recent, independent evaluations, surveys, and other supporting data related to core capabilities.

FEMA synthesized, reviewed, and analyzed all of these data sources in order to derive key findings that offer insight on critical issues in preparedness, including areas where the Nation has made progress and where areas of improvement remain. During the development of specific core capability key findings, eight broader trends in national preparedness emerged. As shown below, these overarching key findings synthesize information from across multiple core capabilities and mission areas and reflect national-level results on preparedness progress and gaps.

With the September 2011 release of the Goal, the Nation is transitioning to a new set of core capabilities. As a result, whole community partners are updating their efforts to collect, analyze, and report preparedness progress according to the Goal's core capabilities and preliminary targets. The 2012 NPR therefore relies on a range of existing assessment approaches and associated quantitative and qualitative data to present the Nation's preparedness progress and to report key findings. Assessment processes, methodologies, and data will evolve in future years to align more directly with the Goal and its capabilities. Efforts are already underway to refine the Goal's capabilities and preliminary targets; future efforts will focus on developing agreed-upon measures and assessment methodologies that will guide the annual development of the NPR.

Overarching Key Findings in National Preparedness

Key finding: *The Nation has developed areas of national strength in several core capabilities, particularly in cross-cutting, common capabilities and those that support responses to disasters.*

The Nation has a portfolio of preparedness capabilities that have improved significantly since 2001, as a result of dedicated funding and concerted attention through planning, organization, equipment, training, and exercises. Some areas of strength pre-date the September 11, 2001 (9/11) terrorist attacks, while others have developed and matured in the years since then. Areas of overall national strength as identified in the NPR include:

- **Planning:** The Nation has established the foundation for an integrated, all-hazards planning architecture that considers routine emergencies and catastrophic events and increasingly integrates whole community perspectives;

- **Operational Coordination:** The National Incident Management System (NIMS) provides a common doctrine for incident management, allowing the whole community to use shared language and principles;
- **Intelligence and Information Sharing:** A national network of fusion centers and Joint Terrorism Task Forces (JTTFs) brings together federal, state, and local law enforcement, Intelligence Community resources, and other public safety officials and private sector partners;
- **Environmental Response/Health and Safety:** A diverse set of federal, state, and local assets have the capabilities to address a wide range of routine and large-scale hazardous material (hazmat) and chemical, biological, radiological, nuclear, and explosive (CBRNE) incidents;
- **Mass Search and Rescue Operations:** Federal, state, local, tribal, and territorial resources comprise a mature search and rescue capability across the Nation;
- **Operational Communications:** Government partners around the country have established flexible and interoperable communications capabilities built on sound plans and tested through exercises and real-world events; and
- **Public Health and Medical Services:** A wide range of partners contribute to a highly responsive public health and medical capability.

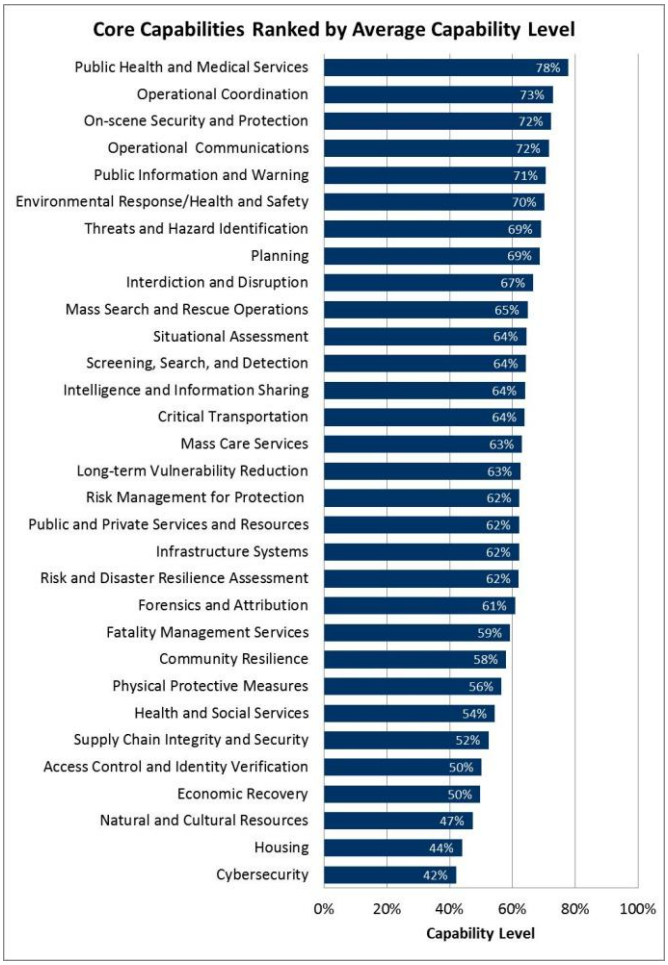

Figure 1: SPR results show average state/territory self-assessed capability levels for the 31 core capabilities (100% would mean that all states and territories attained their desired capability levels).

These areas of national strength align closely with the Goal's cross-cutting, common capabilities and those capabilities from the Goal's Response mission area. SPR data from the 56 states and territories substantiate these accomplishments. Figure 1 illustrates the range of average SPR results, showing the areas of greatest self-assessed capability levels among state and territorial partners. All of the areas of national strength identified above, except Intelligence and Information Sharing, appear in the top 10 SPR-assessed capabilities. More generally, eight of the top 10 SPR-assessed capabilities are among the Goal's common or response-focused core capabilities.

These strengths involve contributions from across the whole community. State, local, tribal, and territorial partners have built a network of multi-disciplinary capabilities that they use to manage the vast majority of emergencies. When disasters strike, federal partners, the private and nonprofit sectors, faith-based organizations, and the public stand ready to augment existing state, local, tribal, and territorial response capabilities and to help provide many of the essential services outlined in the core capabilities.

Key finding: *Cybersecurity and recovery-focused core capabilities are national areas for improvement.*

Despite significant efforts across all of the core capabilities, this NPR finds areas where national capability gaps remain.

- **Cybersecurity:** The number of cyber attacks—including attempts to gain unauthorized access to information or attempts to compromise the integrity, availability, or confidentiality of information systems—has increased significantly in recent years, triggering an expansion of cybersecurity initiatives in the government and the private sector. The Nation is highly reliant upon interdependent cyber systems, yet stakeholders have an incomplete understanding of cyber risk and inconsistent public and private participation in cybersecurity partnerships. Trends also point to cyber criminals' continued focus on stealing customer records, including personally identifiable information, payment card data, email addresses, and other customer data. States indicated through the SPR that Cybersecurity was the core capability with the lowest average self-assessed capability level. The Goal identified Cybersecurity as a discrete preparedness core capability for the first time, unifying the wide range of Cybersecurity efforts under a common definition.
- **Recovery Mission Area:** The Recovery mission area core capabilities center on helping disaster-affected communities rebuild infrastructure, provide adequate long-term housing, preserve community services, restore health and social services, promote economic development, and restore natural and cultural resources. Until recently, the Recovery mission area lacked the national structure and cohesive planning approaches employed across other mission areas, such as Protection and Response. As seen in the summary of SPR results (Figure 1), three of the four lowest-assessed capabilities fall within the Recovery mission area—Economic Recovery, Natural and Cultural Resources, and Housing. States indicated that they were less than halfway to achieving their desired capability levels in these three critical recovery functions. The recent release of the *National Disaster Recovery Framework* (NDRF) is an important milestone in enhancing the national approach to long-term recovery. The NDRF defines how federal agencies will more effectively organize and operate to promote effective recovery and support states, tribes, and other jurisdictions affected by a disaster.

Key finding: *Federal preparedness assistance programs have helped build and enhance state, local, tribal, and territorial capabilities through multi-year investments across mission areas.*

Federal preparedness assistance has clearly contributed to the capability gains achieved since 9/11. Before release of the Goal, grant investments typically aligned with target capabilities (from the *Target Capabilities List*) or National Priorities (identified in the *National Preparedness Guidelines*); with the release of the Goal, the core capabilities are the focus. Whole community partners have used federal preparedness grants to build core capabilities. Together, DHS and HHS administer the largest federal preparedness grant programs. A 2009 report by FEMA noted that DHS and HHS grants represented well over 90 percent of federal preparedness grant funds for Fiscal Year (FY) 2007 and FY 2008.

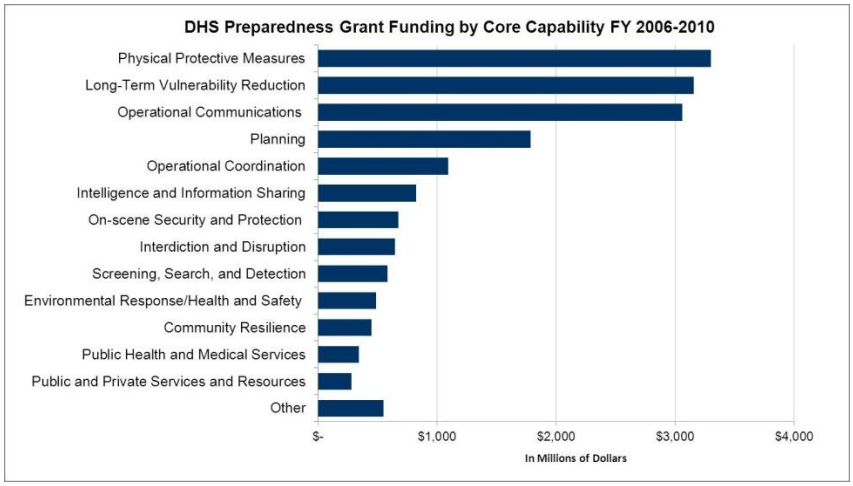

Figure 2: DHS grant-funded investments in the top five core capabilities total over $12.4 billion and account for nearly 72 percent of DHS's non-disaster federal preparedness assistance.

Figure 2 shows $17.2 billion in non-disaster preparedness grant investments through DHS programs from FY 2006 through FY 2010. DHS grants include general preparedness programs, such as the State Homeland Security Program (SHSP) and the Urban Areas Security Initiative (UASI); infrastructure protection programs, such as the Transit Security Grant Program, the Port Security Grant Program, and the Buffer Zone Protection Program; and hazard mitigation grants. In some cases, grant investments focused on one core capability. For example, port and transit security investments center on Physical Protective Measures. Similarly, hazard mitigation grants

are concentrated in the Long-Term Vulnerability Reduction capability. Programs such as SHSP and UASI support a wider range of capabilities across all mission areas, spreading these substantial investments more broadly.

HHS preparedness grant programs include the Assistant Secretary for Preparedness and Response (ASPR) Hospital Preparedness Program (HPP) and Public Health Emergency Preparedness (PHEP) through the Centers for Disease Control and Prevention (CDC). From FY 2006 through FY 2010, HPP and PHEP invested more than $2 billion and $4 billion, respectively, to help 62 state, local, and territorial jurisdictions improve public health and healthcare preparedness. Beginning in July 2012, HPP and PHEP will function under the same administrative structure. In March 2011, CDC released *Public Health Preparedness Capabilities: National Standards for State and Local Planning*, identifying 15 priority capabilities such as community preparedness and recovery, medical countermeasures dispensing, public health laboratory testing, and surveillance. In January 2012, HPP released *Healthcare Preparedness Capabilities: National Guidance for Healthcare System Preparedness*, outlining eight priority capabilities including healthcare system preparedness and recovery, medical surge, fatality management, and volunteer management. Together, these public health and healthcare system preparedness capabilities outline investment priorities moving forward and support the Public Health and Medical Services and other core capabilities outlined in the Goal.

Areas of national strength align with investments made by whole community partners through these assistance programs. Significant investments in Public Health and Medical Services, Operational Communications, and Planning capabilities are a substantial contributor to progress achieved nationally. For example, since FY 2006, whole community partners have applied more than $7.3 billion in preparedness assistance from DHS to support the core capabilities identified as national strengths.

Conversely, core capabilities identified as areas for national improvement have not historically received significant investments via preparedness grants. For example, while federal grant programs have increasingly sought to emphasize the importance of cyber preparedness, grant-funded investments aligned with the Cybersecurity core capability have been minimal. Similarly, less than one percent of DHS non-disaster preparedness assistance from FY 2006 to FY 2010 has supported recovery-focused core capabilities.

To improve overall coordination of preparedness assistance, DHS, HHS, and U.S. Department of Transportation (DOT) components signed a two-year memorandum of understanding in July 2011 and established an interagency process for ensuring consistent guidance for homeland security, public health, and healthcare system preparedness grants.

Key Finding: *States generally reported the most progress in capabilities that they identified as high priorities.*

In the 2011 SPR, states rated each core capability as a high, medium, or low priority. Table 1 lists the five capabilities cited most frequently as a high priority, as well as those identified most frequently as a low priority. These results provide further context for the areas of national strength and areas for improvement identified above. Notably, four of the top five high-priority capabilities align to national strengths and are areas in which states reported relatively more progress toward achieving preparedness goals.

Similarly, two of the lowest priority capabilities identified within the SPR (Health and Social Services and Natural and Cultural Resources) fall within the Recovery mission area, identified above as a national area for improvement and as an area in which states reported less progress toward achieving preparedness goals. For other low-priority core capabilities—such as Forensics and Attribution and Screening, Search, and Detection—the Federal Government tends to play a more prominent role than states and territories. Although approximately two-thirds of states identified Housing, Economic Recovery, and Cybersecurity as high-priority capabilities, these capabilities were among the lowest in SPR-reported preparedness levels. These results further highlight that Cybersecurity and the recovery-focused core capabilities may be areas for future emphasis to improve national preparedness.

Table 1: States' core capability priorities in the 2011 SPR align with areas of national strength.

Capability	% States Reporting
Capabilities Most Frequently Identified as "High Priority"	
Operational Communications	91%
Mass Care Services	89%
Operational Coordination	87%
Public Health and Medical Services	87%
Planning	84%
Capabilities Most Frequently Identified as "Low Priority"	
Natural and Cultural Resources	33%
Health and Social Services	17%
Forensics and Attribution	16%
Screening, Search, and Detection	14%
Fatality Management Services	11%

Key finding: *The Nation has made demonstrable progress addressing areas for improvement identified after events such as 9/11 and Hurricane Katrina.*

The 9/11 attacks and Hurricane Katrina highlighted gaps in preparedness activities nationwide and served as catalysts for change. Investigations such as the final report of the 9/11 Commission and the White House after-action review of the federal response to Hurricane Katrina identified dozens of recommendations. Table 2 highlights a handful of the key areas for improvement, as well as representative progress achieved through whole community efforts.

Table 2: Efforts to address identified preparedness gaps have yielded meaningful outcomes.

Areas for Improvement	Representative Progress Achieved
The 9/11 attacks identified challenges in conducting multi-disciplinary operational coordination on-site at incidents and among operations centers.	Nationwide adoption of NIMS as the common doctrine for incident management. More than four million whole community partners receive some form of NIMS training.
Hurricane Katrina revealed significant weaknesses in catastrophic emergency planning.	Development of national planning-related guidance and prioritized funding. Nationwide Plan Reviews demonstrate significant improvements in state and urban area confidence in their catastrophic plans.
The 9/11 attacks revealed limited information sharing of actionable intelligence across the government and with the private sector.	Development of a national network of fusion centers, Joint Terrorism Task Forces, and standardized policies and processes for sharing suspicious activity reports across the whole community.
The 9/11 attacks and Hurricane Katrina identified challenges in communications interoperability within and across jurisdictions.	Demonstrated capability to provide response-level operational communications within one hour of an incident in high-risk urban areas.

Key Finding: *Efforts to integrate people with disabilities and other access and functional needs, children, pregnant women, older adults, and people with chronic medical conditions into preparedness activities require attention across all mission areas.*

More than 55 million Americans have disabilities; moreover, infants and children make up nearly one-quarter of the Nation's population; nearly one in eight Americans are over the age of 65; and approximately one-quarter of Americans have multiple, chronic medical conditions. Better integrating these populations across all mission areas is an essential element of improving preparedness.

Whole community partners offer several successful examples of efforts to integrate the full range of community members into preparedness activities. For example, FEMA has located Regional Disability Integration Specialists in all 10 FEMA regions and has issued national guidance on how to integrate functional needs support services into mass care shelters. Many states and communities around the Nation have established innovative programs for integrating people with disabilities and access and functional needs into disaster preparedness. In addition, informed by findings from the National Commission on Children and Disasters, FEMA established a Children's Working Group to coordinate its efforts—in collaboration with federal partners—to better address children's needs in disasters. FEMA's *Comprehensive Preparedness Guide 101 (CPG 101)* provides guidance to state, local, tribal, and territorial emergency managers on developing a unified emergency operations plan that addresses all community members. Similarly, HHS has developed toolkits to guide emergency preparedness activities that integrate persons with disabilities, aging adults, children, pregnant women, and persons with chronic medical conditions. The U.S. Department of Education also offers training and technical assistance in readiness and emergency management planning to help schools provide for individuals with access and functional needs. Finally, the U.S. Department of Justice's *ADA Best Practices Tool Kit for State and Local Governments* provides guidance for emergency managers on requirements under the Americans with Disabilities Act of 1990.

However, these efforts have not yet taken hold across all whole community partners and mission areas. For example, despite CPG 101's guidance on unified emergency plans, many states and localities still include separate annexes or appendices focused on planning for populations characterized as "special needs," "vulnerable," or "at-risk." Some plans do not address the needs of children, the challenges of reuniting unaccompanied minors separated from their families as a result of disaster, the needs of older adults, or the needs of those with chronic medical conditions.

Key finding: *Decision-makers in the public and private sectors increasingly are using risk analysis to shape and prioritize preparedness activities across mission areas.*

PPD-8 and the Goal emphasize the important role that risk—defined simply as the potential for an unwanted outcome—plays in informing preparedness activities. Faced with a range of threats and hazards and constrained by available resources, whole community partners are increasingly using risk analyses to inform policy and programmatic decisions across all five preparedness mission areas. For example:

- Federal interagency partners conducted a Strategic National Risk Assessment to help identify potential incidents that pose the greatest threat to the Nation and to inform the development of core capabilities and targets in the Goal;
- DHS developed an annual National Risk Profile for the Nation's critical infrastructure, describing risks facing the Nation's infrastructure sectors and supporting public and private sector risk management decisions;
- Traditional mitigation planning has broadened to include both natural hazards and terrorist threats in order to identify a comprehensive suite of potential mitigation actions;
- States are required to conduct threat and hazard identification and risk assessments as a condition for receiving most preparedness grant funding and set hazard-based targets as the context for their SPR capability assessments;
- State and local public health departments are required to use jurisdictional risk assessments to prioritize capability enhancements through preparedness assistance from HHS ASPR and CDC;
- Risk analysis informs eligibility criteria for preparedness assistance, including the State Homeland Security Program, Urban Areas Security Initiative, Port Security Grant Program, Transit Security Grant Program, and the CDC PHEP, as well as the vision for the FY 2013 National Preparedness Grant Program; and
- Ongoing efforts to implement the National Preparedness System, as called for in PPD-8, further emphasize the importance of risk analyses in driving preparedness activities. The components of the

National Preparedness System emphasize the need to identify and assess risks in order to guide efforts to develop, maintain, and assess core capabilities.

Key finding: *Many programs exist to build and sustain capabilities across all mission areas, but challenges remain in measuring progress from year to year.*

Whole community partners offer programs and initiatives that contribute to the core capabilities outlined in the Goal. However, in many cases, measures and metrics do not yet exist to gauge performance, either quantitatively or qualitatively, over time. Thus, while programs may exist to address a specific challenge, the Nation has little way of knowing whether and to what extent those programs have been successful. PPD-8 envisions a National Preparedness System that includes a comprehensive approach to assessments using clear, objective, and quantifiable performance measures.

Conclusion

This NPR represents a step forward in efforts to assess overall national preparedness. Informed by inputs from across the whole community, the 2012 NPR serves as a baseline evaluation of the progress made toward building, sustaining, and delivering the core capabilities described in the Goal. Building on these efforts, the vision for future NPRs is to establish a routine, repeatable process that engages whole community partners throughout.

To achieve the Goal, the Nation will need to build on the significant progress to date and address identified areas for improvement. The complex set of threats and hazards facing the Nation and the underlying interdependencies within critical infrastructure and supply chains require integrated preparedness efforts to build, sustain, and deliver the core capabilities. The components of the National Preparedness System will provide a consistent and reliable approach to support decision-making, resource allocation, and ongoing performance assessment. Equally important, the National Preparedness System will engage the whole community to strengthen national preparedness.

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Introduction

National Preparedness: An Overview

The Nation has made measurable strides toward improving preparedness for the full range of hazards at all levels of government and across all segments of society. The Nation has increased its collective preparedness not only for the countless threats posed by those who wish to bring harm to the American homeland but also for the many natural and technological hazards that face the Nation's communities.

Efforts to improve national preparedness have incorporated the whole community, which includes individuals, communities, the private and nonprofit sectors, faith-based organizations, and federal, state, local, tribal, and territorial governments. This whole community approach to preparedness recognizes that disasters affect all segments of society. While the Federal Government plays a critical role in coordinating national-level efforts, it is communities and individuals who lead efforts to implement preparedness initiatives throughout the Nation. Accordingly, federal partners have worked with state, local, tribal, and territorial governments, as well as with a range of civic groups and intergovernmental coalitions to build national preparedness.

Preparedness efforts extend beyond governments. Experience has shown that community members often serve as first responders, such as by checking others' homes after a disaster or by reporting suspicious activity. Faith-based and voluntary organizations, furthermore, have demonstrated remarkable speed and capacity to establish operations to care for those in need after a disaster. Similarly, the private sector plays a critical role in preparedness, operating most of the Nation's critical infrastructure and possessing the presence, agility, and logistical reach to provide commodities and services on a national scale.

Of course, preparedness is not a new concept. This Nation has undertaken preparedness efforts for as long as it has existed. What is new is the unity of effort that whole community partners are bringing to the challenge, as well as the recognition that preparedness does not just involve spending resources—it involves changing mindsets and behaviors. To be sure, some national preparedness investments have provided more return than others. Nevertheless, the results of preparedness improvements are evident throughout all of the Nation's communities.

Presidential Policy Directive 8: National Preparedness (PPD-8) presents whole community partners an opportunity to reflect on the progress in building national preparedness. Using the lens of the new National Preparedness Goal, the 2012 *National Preparedness Report* (NPR) identifies those areas where the Nation has achieved preparedness progress, acknowledges where work remains to be done, and reinforces the important principles of national preparedness.

Presidential Policy Directive 8: National Preparedness

PPD-8 describes the Nation's approach to preparing for the threats and hazards that pose the greatest risk to the security of the United States. The approach to national preparedness outlined in PPD-8 includes four overarching elements:

- **National Preparedness Goal** (the Goal), which describes the Nation's 31 core capabilities across five mission areas: Prevention, Protection, Mitigation, Response, and Recovery (see page 4 for a full list of the core capabilities). The Goal emphasizes that national preparedness is the shared responsibility of the whole community. The U.S. Department of Homeland Security (DHS) released the first edition of the Goal in September 2011. The Goal is a living document that will be reviewed regularly to ensure alignment with policies and evolving conditions.
- **National Preparedness System**, which outlines the methodology the whole community will employ to build, sustain, and deliver core capabilities in order to achieve the goal of a secure and resilient Nation. DHS published the National Preparedness System Description in November 2011, and efforts to develop associated plans, guidance, programs, and processes are ongoing. Specifically, five

National Frameworks—due by June 30, 2012—will describe whole community roles and responsibilities for each mission area and define how whole community partners work together to deliver core capabilities.

- **Campaign for Building and Sustaining Preparedness**, which will provide an integrating structure for new and existing community-based, nonprofit, and private sector preparedness programs, research and development activities, and preparedness assistance.
- **National Preparedness Report**, an annual report summarizing the progress made toward building, sustaining, and delivering the core capabilities described in the Goal. Listed on page 4, the 31 core capabilities are distinct critical elements across all five mission areas necessary to achieve the Goal.

The 2012 NPR will serve as a baseline against which to regularly assess progress in preparedness across the Nation. In addition to addressing PPD-8's requirements, the NPR addresses several reporting requirements from the Post-Katrina Emergency Management Reform Act of 2006, including components of the Federal Preparedness Report and State Preparedness Reports.

Methodology for Developing the NPR

As NPR coordinator, the Federal Emergency Management Agency (FEMA) within DHS took the lead in developing the Report, acting on the all-of-Nation principles called for in PPD-8. The information and data in the NPR reflect input from the full range of whole community partners. Specifically, DHS's approach to developing the NPR included the following activities:

- Collaborating with federal interagency partners to identify quantitative and qualitative performance and assessment data for each of the 31 core capabilities from the Goal, including sources such as DHS's *National Critical Infrastructure Protection and Resilience Annual Report*, National Incident Management System (NIMS) compliance reporting, FEMA's Nationwide Plan Reviews, and annual reports from the U.S. Department of Health and Human Services (HHS) on public health preparedness activities;
- Reviewing 2011 State Preparedness Report (SPR) data, including statewide self-assessments of core capability levels submitted to FEMA by all 56 U.S. states and territories through a standardized survey;
- Engaging with relevant preparedness-related professional organizations, associations, and private sector stakeholders to understand preparedness priorities and progress from a multi-disciplinary perspective;
- Soliciting ideas and views regarding national preparedness from the public and other whole community stakeholders through an online collaborative forum;[1]
- Conducting research to identify recent, independent evaluations, surveys, and other supporting data related to specific core capabilities; and
- Evaluating trends and progress within and across core capabilities and sharing those findings, as appropriate, with whole community partners for review, comment, and update.

FEMA reviewed and analyzed all of these sources in order to derive key findings for each core capability. FEMA evaluated trends and progress within and across core capabilities, sharing findings, as appropriate, for review and comment by whole community partners. In this way, the NPR's key findings are based on a comprehensive review of hundreds of sources, rather than any single overarching national assessment. Detailed analyses on specific topics related to the core capabilities and their supporting targets served as inputs to the broader, strategic view ultimately reflected in the NPR. Taken comprehensively, the result is an NPR that identifies overarching trends in preparedness progress.

The NPR includes SPR data summarized at the national level for each core capability, providing context on state and territory views of their current capabilities. All states and territories receiving federal preparedness assistance from DHS must submit to FEMA an annual report on their preparedness. In the 2011 SPR, state and territory emergency management and homeland security personnel led statewide efforts to self-assess current levels of preparedness for each core capability relative to desired levels of performance. FEMA encouraged states and territories to take a multi-disciplinary approach to completing the 2011 SPR, soliciting input from subject-matter experts across different disciplines to develop as complete and accurate a snapshot of state preparedness as possible. Although SPR results are not independently validated, these self-assessments provide a valuable view of state and territory preparedness.

With the September 2011 release of the Goal, the Nation is transitioning to a new set of core capabilities and supporting targets. Many of the assessments and data used in this NPR pre-date the Goal; nevertheless, these assessments provide meaningful quantitative and qualitative data to measure progress and report key findings. Assessment processes, methodologies, and data will continue to evolve to align more directly with the Goal, the core capabilities, and emerging performance measures.

Report Organization

In total, the NPR identifies 70 overall key findings. Eight of these key findings focus on overarching national trends and are highlighted in the Executive Summary. The remaining sections of the NPR present 62 key findings which relate to the 31 core capabilities from the Goal across all five mission areas. Each core capability has a set of common elements, illustrated in Figure 3, providing consistency throughout the document.

1. Each core capability section begins with the **core capability name** and the associated **description** provided in the Goal.
2. A box **summarizes national-level SPR data** for that core capability. In the SPR, states and territories conducted self-assessments of their **overall capability levels**. States and territories assessed each core capability across five areas—**Planning, Organization, Equipment, Training,** and **Exercises**. SPR results appear at the beginning of each core capability narrative simply to provide context and are one of many inputs that inform key findings for each capability.
3. The main text for each core capability includes **key findings**, supported by a discussion of related qualitative and quantitative information.
4. As available, core capability sections include **maps, charts, and graphs** showing progress.
5. As available, core capability sections include **preparedness case studies**, which highlight examples of how whole community partners have worked together to achieve outcomes.

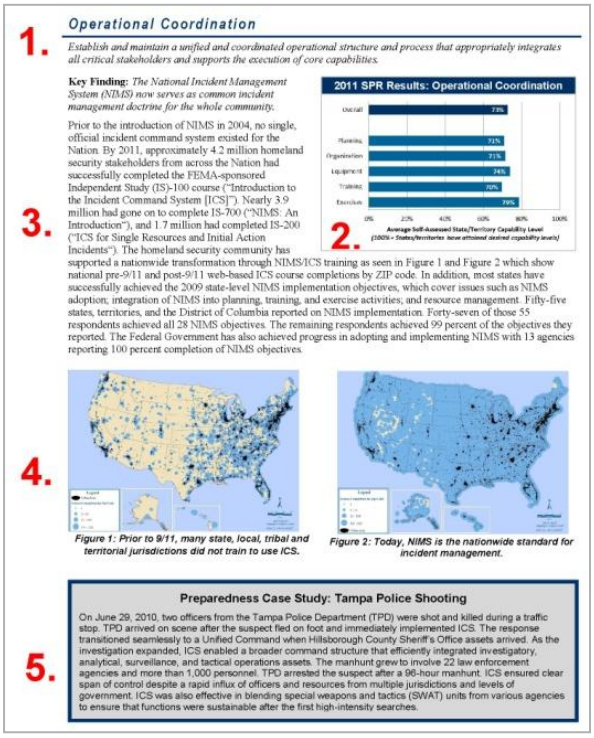


Figure 3: Core capability narratives in the NPR share a common layout, including SPR data, key findings, and other supporting inputs.

In the Goal, several core capabilities span mission areas. There are three common core capabilities (Planning; Public Information and Warning; and Operational Coordination) that span all five mission areas; three capabilities (Intelligence and Information Sharing; Interdiction and Disruption; and Screening, Search,

and Detection) that span the Prevent and Protect mission areas; and one capability (Infrastructure Systems) that spans the Response and Recovery mission areas. For these core capabilities, the NPR integrates the key findings and associated data and information into one unified section. Accordingly, Table 3 shows the order in which the NPR presents the core capabilities.

Table 3: The NPR addresses all 31 core capabilities outlined in the National Preparedness Goal.

Common Core Capabilities

- Planning
- Public Information and Warning
- Operational Coordination

Prevention Core Capability

- Forensics and Attribution

Prevention/Protection Core Capabilities

- Intelligence and Information Sharing
- Interdiction and Disruption
- Screening, Search, and Detection

Protection Core Capabilities

- Access Control and Identity Verification
- Cybersecurity
- Physical Protective Measures
- Risk Management for Protection Programs and Activities
- Supply Chain Integrity and Security

Mitigation Core Capabilities

- Community Resilience
- Long-term Vulnerability Reduction
- Risk and Disaster Resilience Assessment
- Threats and Hazard Identification

Response Core Capabilities

- Critical Transportation
- Environmental Response/Health and Safety
- Fatality Management Services
- Mass Care Services
- Mass Search and Rescue Operations
- On-scene Security and Protection
- Operational Communications
- Public and Private Services and Resources
- Public Health and Medical Services
- Situational Assessment

Response/Recovery Core Capability

- Infrastructure Systems

Recovery Core Capabilities

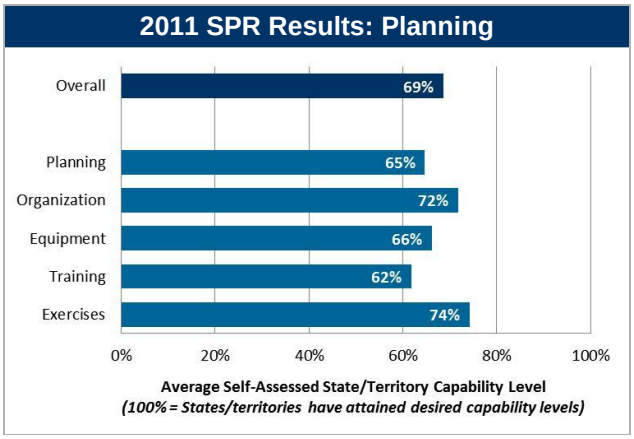
- Economic Recovery
- Health and Social Services
- Housing
- Natural and Cultural Resources

Common Core Capabilities

Planning

Conduct a systematic process engaging the whole community as appropriate in the development of executable strategic, operational, and/or community-based approaches to meet defined objectives.

Key Finding: *The Nation has significantly improved the adequacy, feasibility, and completeness of plans for catastrophic events. Catastrophic planning remains a top national priority.*



The 2010 Nationwide Plan Review showed significant increases from 2006 in the number of jurisdictions confident in their plans for catastrophic events (see Figure 4). In 2006, less than 40 percent of states and urban areas were confident that their overall basic emergency operations plans (EOPs) were well-suited to meet the challenges of a large-scale catastrophic event. By 2010, those numbers had increased to more than 75 percent of states and more than 80 percent of urban areas. Additionally, both states and urban areas show high degrees of confidence in functional planning appendices and hazard-specific planning annexes, with even higher degrees of confidence where they have more experience (e.g., flooding, tornadoes). More than 80 percent of states and more than 75 percent of urban areas had updated their plans since 2006 and nearly 95 percent of states and urban areas had tested them in exercises. The 2011 SPR survey data show that 84 percent of states consider planning to be a high priority, the fifth-highest of all 31 capabilities. Moreover, across all capabilities, states reported significant capability levels in planning activities.

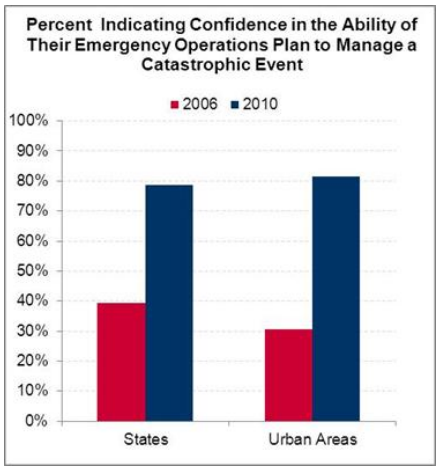


Figure 4: Confidence in basic emergency plans for catastrophic events improved significantly from 2006 to 2010.

Federal partners have also made important contributions to improving catastrophic planning, including Executive Branch contingency and continuity planning efforts for catastrophic incidents. For example, FEMA and its federal partners developed and published a Catastrophic Incident Annex to the *National Response Framework* (NRF) in 2008. This annex establishes the context and overarching strategy for implementing and coordinating an accelerated, proactive national response to a catastrophic incident. The U.S. Department of Defense (DOD) also routinely updates its all-hazards plans; chemical, biological, radiological, and nuclear (CBRN) incident plans; and pandemic influenza plans that support catastrophic incident response.

Catastrophic planning remains a top priority for the Nation. FEMA leads planning initiatives in different geographic areas that consider catastrophic earthquakes, hurricanes, dam failures, improvised nuclear device detonation, evacuation and sheltering, and other major events. FEMA also applies a catastrophic planning framework known as "Maximum of Maximums," which centers on collaborative, whole community planning for worst-case scenarios that exceed government capabilities. This approach sets ambitious outcomes for whole community partners to achieve after a catastrophic event. Examples include: treating, stabilizing, and caring for 265,000 casualties; meeting the supply and materiel needs of 1.5 million disaster survivors within 72 hours; restoring basic services for an affected area of seven

million people within 60 days; and recovering communities of 1.5 million disaster survivors within five years.

Key Finding: *Emergency planning efforts increasingly adhere to standardized development and maintenance processes, reflecting FEMA's* Comprehensive Preparedness Guide 101 *(CPG 101) and new requirements from PPD-8.*

First issued in March 2009, CPG 101 has become the standard for developing and maintaining state, local, tribal, and territorial EOPs throughout the Nation, outlining the fundamentals of sound planning for emergency and homeland security managers. In 2010, 100 percent of states and 96 percent of urban areas indicated that their basic EOPs fully or partially incorporated applicable components of CPG 101. Accordingly, whole community stakeholders are applying the CPG 101 core planning principles. For example, CPG 101 emphasizes the importance of integrating community stakeholders into the planning process. In 2011, 760 local Citizen Corps Councils (70 percent) reported that they had participated in the review of key local plans.

PPD-8 calls for further efforts to standardize and integrate plans nationally. Federal partners are working with whole community stakeholders to develop National Frameworks that describe roles and responsibilities across all five mission areas and define how whole community partners work together to deliver core capabilities. In addition, PPD-8 calls for Federal Interagency Operational Plans to address the critical tasks; responsibilities; and requirements for resourcing, personnel, and sourcing for the core capabilities.

Key Finding: *Mitigation planning is an area of national strength.*

All 56 states and territories have completed or are on target to complete approved mitigation plans. Ninety-five percent of these plans address inclusion of populations with disabilities and other access and functional needs in some way, and all state hazard mitigation plans provide opportunities for public review and comment prior to plan approval. Over 18,000 communities have FEMA-approved local mitigation plans (see Figure 5). The percentage of the Nation's population covered by these approved local mitigation plans has steadily increased and now stands at nearly 69 percent, up from approximately 57 percent in 2007. In addition, FEMA has issued and regularly updates multi-hazard mitigation planning guidance for both states and local jurisdictions, which requires natural hazard analysis and encourages consideration of other threats.

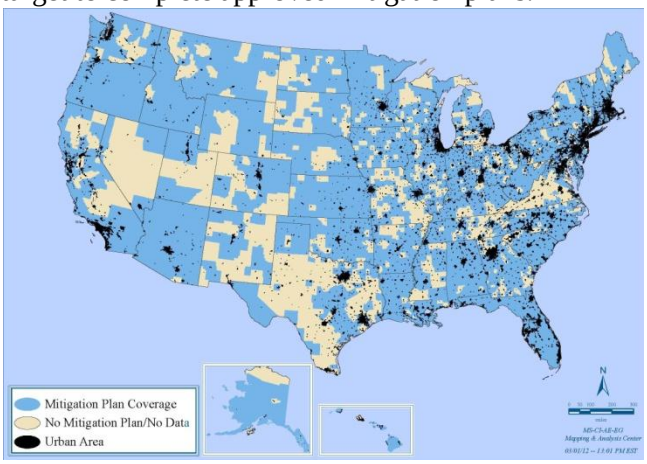


Figure 5: The growth in local hazard mitigation planning since 2007 translates into an additional 30 million individuals covered by these plans.

Key Finding: *Private sector critical infrastructure stakeholders have embraced preparedness planning.*

Under the *National Infrastructure Protection Plan* (NIPP) partnership model, planning-focused coordinating structures now exist throughout the 18 critical infrastructure sectors. Sector Coordinating Councils (SCCs) and Government Coordinating Councils (GCCs) for each sector provide ongoing coordination and planning for private sector and government partners. Dating back to 2004, these SCCs are self-organized planning and policy bodies that include broad representation from within the 18 sectors, including owners, operators, associations, and other relevant partners. For each sector, GCCs are the public sector counterpart to SCCs, with federal, state, and local government members. Through these

coordinating bodies, the sectors have established sector-specific plans, which describe how each sector is identifying and implementing risk management actions to enhance infrastructure protection.

Key Finding: *Government partners have worked to address weaknesses in contingency and continuity planning across all levels of government.*

The 2006 Nationwide Plan Review identified continuity planning as a significant weakness, with less than 50 percent of states and urban areas rating continuity-related plans as sufficient for a catastrophic event. Since then, FEMA has released comprehensive continuity planning guidance for non-federal governments. From 2006 to 2010, the number of states and urban areas requesting continuity of operations (COOP) technical assistance from FEMA increased more than eight-fold over the previous four years. In addition, as of January 2012, over 340,000 individuals had completed COOP training through the Emergency Management Institute, including over 244,000 in basic COOP awareness training. At the federal level, FEMA released *Federal Continuity Directives 1* and *2* in 2008, providing guidance to federal agencies on developing continuity plans and programs and identifying essential functions.

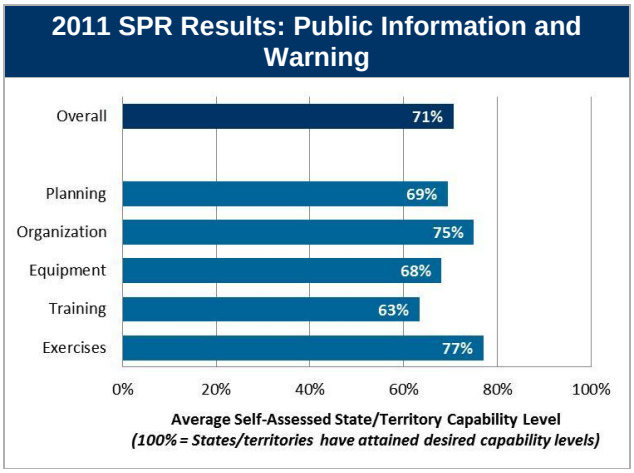
Key Finding: *Recent progress has occurred in recovery planning with the release of new doctrine and guidance, yet recovery planning is an area for improvement for all whole community partners.*

The release of the *National Disaster Recovery Framework* (NDRF) marks an important milestone in recovery planning. The NDRF articulates roles and responsibilities for long-term recovery and outlines how whole community partners can engage cooperatively in implementing the six Recovery Support Functions (RSFs). Emergency Support Function (ESF) #14 (Long-Term Community Recovery) representatives have worked with 180 communities across 23 states on recovery planning since 2004, deploying approximately 60 teams to support state, local, tribal, and territorial recovery after disasters and helping to develop 90 community recovery plans. This long-term recovery function continues under the Community Planning and Capacity Building RSF from the NDRF. Similarly, CDC recently developed 15 public health preparedness capabilities to serve as national standards to support state and local public health planning. Community Recovery is one capability addressed in that guidance, outlining considerations for rebuilding public health, medical, and mental/behavioral health systems following disasters. HHS ASPR also published eight capabilities focused on healthcare system preparedness, including healthcare system recovery. Recovery-focused planning is an area for sustained focus in future years.

Public Information and Warning

Deliver coordinated, prompt, reliable, and actionable information to the whole community through the use of clear, consistent, accessible, and culturally and linguistically appropriate methods to effectively relay information regarding any threat or hazard, as well as the actions being taken and the assistance being made available, as appropriate.

Key Finding: *State and urban area confidence in public information and warning plans has increased significantly since 2006.*



The 2010 Nationwide Plan Review indicated that more than 73 percent of states and urban areas were confident in their public information and warning plans for a catastrophic event, up from less than 45 percent in 2006 (see Figure 6). As part of these planning improvements, 31 states and territories have established state-level public information procedures that mirror the Federal Government's, and an additional 14 states and territories have published public information doctrine. In addition, there has been a proliferation of mass notification systems that allow officials to warn community members who are in harm's way and provide them with critical emergency information. These mass notification systems, combined with social media, have dramatically increased the breadth and speed of information dissemination during emergencies. Many of these mass notification systems integrate weather warnings from the National Oceanic and Atmospheric Administration (NOAA), which has worked to increase the timeliness and accuracy of its warning data. In FY 2011, NOAA issued severe weather warnings for tornadoes with an accuracy rate of 76 percent, providing an average lead time of 15 minutes. Both of these results exceeded NOAA's targets and demonstrated year-over-year improvements from FY 2010.

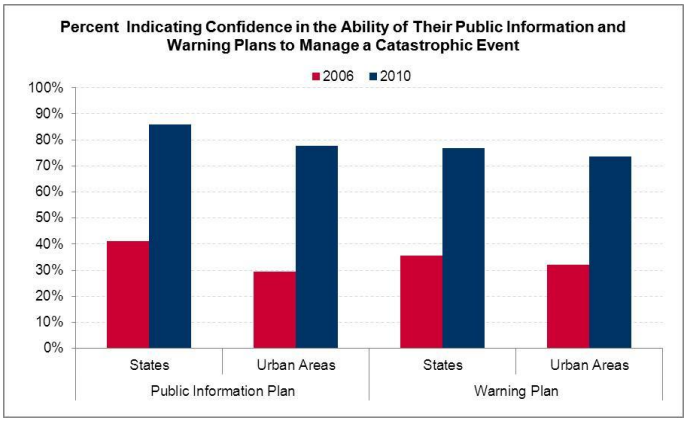


Figure 6: State and urban area confidence in public information and warning plans more than doubled from 2006 to 2010.

Key Finding: *A large and growing portion of the Nation is covered by the Integrated Public Alert and Warning System (IPAWS), but technical deficiencies still exist.*

IPAWS is an integrated set of services and capabilities that enable local, state, and federal authorities to alert and warn their communities of a hazard. As of 2011, commercial radio broadcast stations partnering with FEMA on public information and warning serve 84 percent of the U.S. population, up from approximately 67 percent in 2009. As part of the IPAWS programs, these broadcast stations are equipped with backup communications equipment and power generators to continue to support broadcasting prior to, during, and after an event.

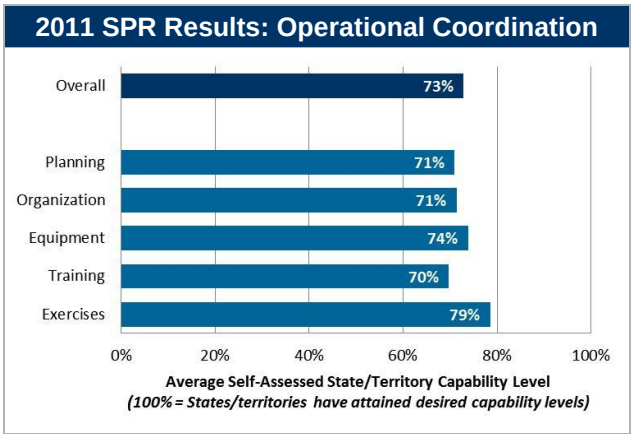
In November 2011, the United States conducted its first-ever nationwide test of the Emergency Alert System (EAS), a national public warning system. The purpose of the test was to assess the readiness and

effectiveness of the system for the President to address the public during times of extreme national emergency. Radio and television broadcasters and cable, satellite, and wireline providers across the country participated in the test. Although millions of Americans heard and saw the message, the test revealed technical areas for improvement, including audio quality and configuration of EAS devices. Initial test findings indicated that approximately 80 percent of EAS participants nationwide could receive and relay the test message.

Operational Coordination

Establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of core capabilities.

Key Finding: *The National Incident Management System (NIMS) now serves as common incident management doctrine for the whole community.*



Prior to the introduction of NIMS in 2004, no single, official incident command system existed for the Nation. By 2011, approximately 4.2 million homeland security stakeholders from across the Nation had successfully completed the FEMA-sponsored Independent Study (IS)-100 course ("Introduction to the Incident Command System [ICS]"). Nearly 3.9 million had gone on to complete IS-700 ("NIMS: An Introduction"), and 1.7 million had completed IS-200 ("ICS for Single Resources and Initial Action Incidents"). The homeland security community has supported a nationwide transformation through NIMS/ICS training as seen in Figure 7 and Figure 8, which show national pre-9/11 and post-9/11 web-based ICS course completions by ZIP code. In addition, most states have successfully achieved the 2009 state-level NIMS implementation objectives, which cover issues such as NIMS adoption; integration of NIMS into planning, training, and exercise activities; and resource management. Fifty-five states, territories, and the District of Columbia reported on NIMS implementation. Forty-seven of those 55 respondents achieved all 28 NIMS objectives. The remaining respondents achieved 99 percent of the objectives they reported. The Federal Government has also achieved progress in adopting and implementing NIMS, with 13 agencies reporting 100 percent completion of NIMS objectives.

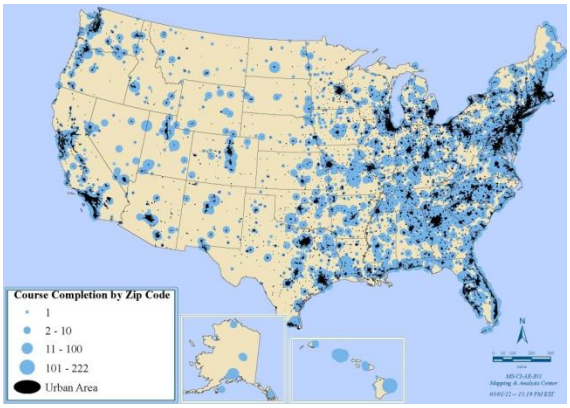


Figure 7: Prior to 9/11, many state, local, tribal and territorial jurisdictions did not train to use ICS.

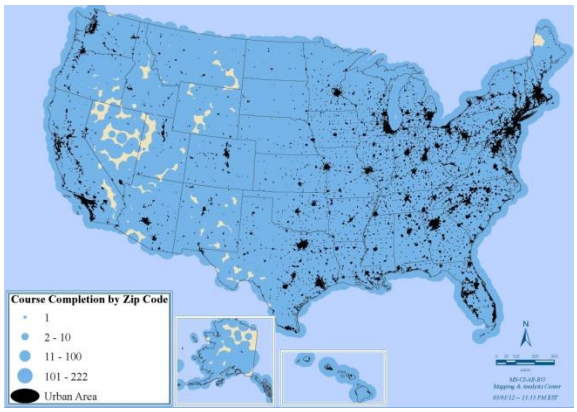


Figure 8: Today, NIMS is the nationwide standard for incident management.

Preparedness Case Study: Tampa Police Shooting

On June 29, 2010, two officers from the Tampa Police Department (TPD) were shot and killed during a traffic stop. TPD arrived on scene after the suspect fled on foot and immediately implemented ICS. The response transitioned seamlessly to a Unified Command when Hillsborough County Sheriff's Office assets arrived. As the investigation expanded, ICS enabled a broader command structure that efficiently integrated investigatory, analytical, surveillance, and tactical operations assets. The manhunt grew to involve 22 law enforcement agencies and more than 1,000 personnel. TPD arrested the suspect after a 96-hour manhunt. ICS ensured clear span of control despite a rapid influx of officers and resources from multiple jurisdictions and levels of government. ICS was also effective in blending special weapons and tactics (SWAT) units from various agencies to ensure that functions were sustainable after the first high-intensity searches.[2]

Key Finding: *Operational coordination structures exist for all five mission areas. However, the Response mission area has the most metrics that can demonstrate improvements over time.*

Each mission area has an established set of operational coordination structures that integrate key stakeholders into critical functions. As an example, in the Prevention mission area, a network of national coordinating structures exists to counter imminent terrorism threats, including, but not limited to, national operations and coordination centers, the Terrorist Screening Center, and Joint Terrorism Task Forces (JTTFs).

Similarly, critical infrastructure stakeholders have established SCCs and GCCs, which facilitate the development of sector-specific plans. An area of increasing focus is coordination to address interdependencies across infrastructure sectors through entities such as the Critical Infrastructure Cross-Sector Council, the Regional Consortium Coordinating Council, and the Critical Infrastructure Partnership Advisory Council. In the maritime domain, the U.S. Coast Guard (USCG) has established Interagency Operations Centers (IOCs) at key ports around the country to coordinate port security activities with federal, state, local, and private sector maritime partners. Supporting these IOCs is the DHS Maritime Operations Coordination Plan, which formalized coordination, planning, information sharing, and intelligence integration for maritime operations among the USCG, U.S. Customs and Border Protection (CBP), and U.S. Immigration and Customs Enforcement (ICE). From a long-term recovery perspective, the NDRF establishes Federal Disaster Recovery Coordinator positions and recommends that state, local, tribal, and territorial leaders appoint Disaster Recovery Coordinators to provide a central focus for organizing, coordinating, and advancing disaster recovery operations.

Key operational coordination metrics showing progress are largely concentrated in the Response mission area. There are currently 16 federal Incident Management Assistance Teams and 128 state and local teams that can work with state, local, tribal, and territorial emergency operations centers (EOCs) during disasters to reinforce and expand ICS (see Figure 9). Similarly, FEMA tracks how quickly essential incident command functions are established following disasters. In 2011, FEMA had a 100-percent success rate in supporting state, local, tribal, and territorial stakeholders to establish essential incident command functions within 12 hours. FEMA has also developed additional doctrine and guidance to support NIMS implementation, such as the 2011 *FEMA National Incident Support Manual*, which describes how FEMA national staff support incident

Figure 9: Federal, state, and local incident management teams support operational coordination activities nationwide.

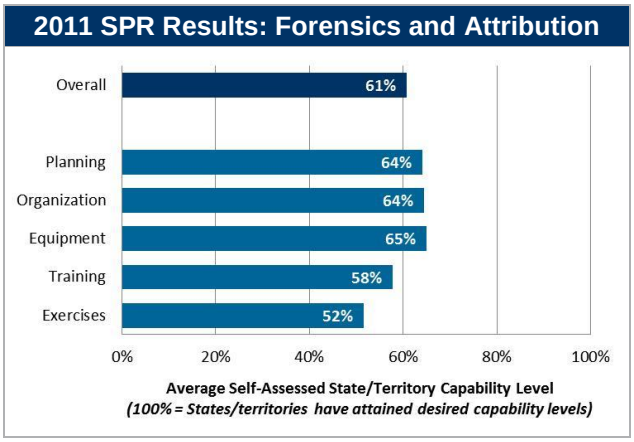
operations. PPD-8 requires the development of National Frameworks for planning built on "scalable, flexible, and adaptable coordinating structures." These planning structures will support future initiatives to develop and report on coordination-related metrics across all five mission areas.

Prevention Core Capabilities

Forensics and Attribution

Conduct forensic analysis and attribute terrorist acts (including the means and methods of terrorism) to their source, to include forensic analysis as well as attribution for an attack and for the preparation for an attack in an effort to prevent initial or follow-on acts and/or swiftly develop counter-options.

Key Finding: *Prevention-focused forensics and attribution capabilities reside almost entirely with federal agencies, with specialized forensics capabilities that serve the Nation.*



The Federal Bureau of Investigation's (FBI's) network of 56 field offices, 399 domestic satellite offices, and 63 international legal attaché offices has expanded upon traditional criminal forensic capabilities to support counterterrorism efforts. Example programs include the following FBI units and teams:

- The Counterterrorism and Forensic Science Research Unit, which develops and validates new forensic technologies and techniques that support FBI and state, local, tribal, and territorial law enforcement needs;
- The Chemical, Biological, Radiological, and Nuclear Sciences Unit, which has conducted and directed forensic examinations of hazardous chemical, biological, radiological, and nuclear materials since 2002;
- Evidence Response Teams, which have a total of 1,200 personnel across all 56 FBI field offices trained to identify, document, collect, and preserve evidence for court cases;
- Cyber Action Teams, which are small cadres of technical experts that can deploy within 72 hours to investigate cybercrimes and conduct forensic analysis; and
- The Criminal Justice Information Services Division's Global Initiatives Unit, which collects and shares fingerprint and biometric information for suspected terrorists and international criminals with international law enforcement and Intelligence Community partners.

Other resources include the Technical Explosives Device Analytic Center, which is managed by the FBI in partnership with DOD and provides forensic and technical analysis of improvised explosive devices. Using advanced forensic techniques, the center studies terrorist methods and tactics, provides actionable intelligence to military and law enforcement partners, and forecasts explosives-related threats globally.

Additionally, the National Technical Nuclear Forensics Center within the DHS Domestic Nuclear Detection Office (DNDO) provides centralized planning, integration, assessment, and stewardship of the Nation's nuclear forensics capabilities, and leads efforts to advance capabilities to conduct nuclear forensics on illicitly trafficked radiological or nuclear materials or those extracted from an interdicted weapon. Nuclear forensics is the collection, analysis, and evaluation of pre- and post-detonation radiological or nuclear materials, devices, and debris, as well as the analysis of the immediate effects created by a nuclear detonation. Combined with law enforcement and intelligence information, nuclear

forensics findings can help identify the nature, source, pathway, and perpetrators of an attempted or actual attack.

In the computer forensics domain, the U.S. Secret Service, DHS, and the State of Alabama have partnered to establish the National Computer Forensics Institute (NCFI). NCFI's goal is to provide a national standard of training for a variety of electronic crimes investigations. NCFI offers state and local law enforcement officers the training necessary to conduct computer forensics examinations, respond to network intrusion incidents, and conduct basic electronic crimes investigations. Since opening in 2008, the NCFI has allowed the Secret Service to train 1,324 state and local law enforcement officials, prosecutors, and judges representing over 300 agencies from all 50 states and 3 U.S. territories.

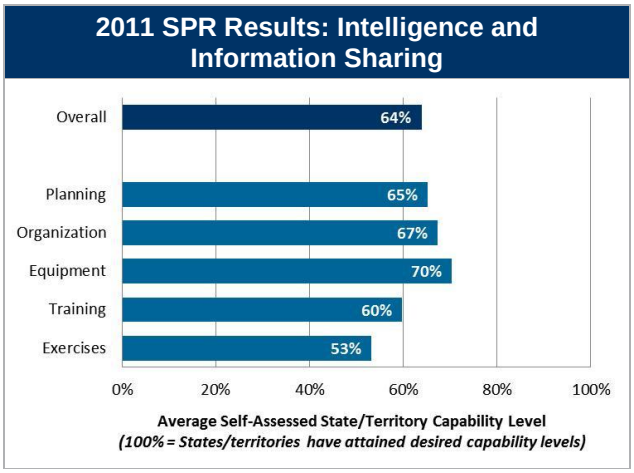
Data on state, local, tribal, and territorial counterterrorism forensics and attribution capabilities are limited and anecdotal. Furthermore, only 42 percent of states indicated in their 2011 SPR survey that Forensics and Attribution was a high-priority capability; it tied for the lowest total for any of the 31 capabilities. This prioritization likely reflects the fact that the Federal Government plays a more prominent role in this capability than states, allowing states to focus preparedness resources on other priority areas.

Prevention/Protection Core Capabilities

Intelligence and Information Sharing

Provide timely, accurate, and actionable information resulting from the planning, direction, collection, exploitation, processing, analysis, production, dissemination, evaluation, and feedback of available information concerning threats to the United States, its people, property, or interests; the development, proliferation, or use of WMDs; or any other matter bearing on U.S. national or homeland security by Federal, state, local, and other stakeholders. Information sharing is the ability to exchange intelligence, information, data, or knowledge among Federal, state, local, or private sector entities, as appropriate.

Key Finding: *A network of state and major urban area fusion centers and JTTFs has significantly improved analytical and information sharing capabilities among law enforcement, homeland security, and Intelligence Community entities at all levels of government.*



Consistent with the *National Strategy for Information Sharing*, fusion centers function as focal points within the state and local environment for the receipt, analysis, gathering, and sharing of threat-related information between federal, state, and local governments and private sector partners. Fusion centers position law enforcement, public safety, emergency management, fire service, public health, critical infrastructure protection, and private sector security personnel to understand local implications of national intelligence. As of February 2012, 77 designated state and major urban area fusion centers exist nationally, as shown in Figure 10. A 2009 survey by the National Governors Association revealed that fusion centers were a top priority for states, a trend confirmed by the 2011 SPR.

In October 2011, the DHS Office of Intelligence and Analysis (I&A)—in collaboration with interagency partners—concluded an assessment of the National Network of Fusion Centers to evaluate the maturity of their capabilities. The assessment showed that:

- 79.2 percent have approved plans, policies, or standard operating procedures (SOPs) for receiving federally generated threat information;
- 76.4 percent have approved plans, policies, or SOPs for assessing the local implications of time-sensitive and emerging threat information;
- 79.2 percent have approved plans, policies, or SOPs governing the timely dissemination of products to customers within their area of responsibility;
- 80.6 percent have documented plans, policies, or SOPs for gathering locally generated information or have a Nationwide Suspicious Activity Reporting (SAR) Initiative (NSI) site plan; and
- 100 percent have developed plans, policies, or SOPs for privacy, civil rights, and civil liberties.

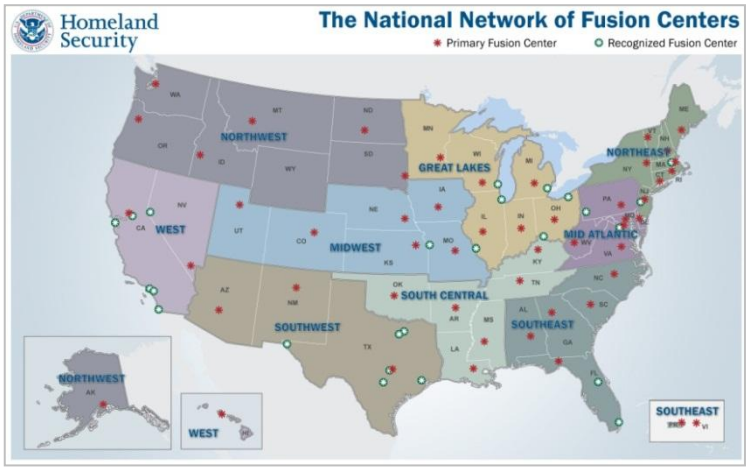


Figure 10: The National Network of Fusion Centers as of February 2012

Working with other federal partners, DHS coordinates a variety of resources to support fusion centers, including deployed personnel, training, technical assistance, exercise support, security clearances, connectivity to federal systems, technology, and grant funding. For example, there are now 93 DHS I&A personnel deployed in support of fusion centers throughout the country. These intelligence personnel coordinate with DHS Component intelligence and law enforcement personnel who support fusion centers in various capacities. Additionally, in FY 2011, DHS provided training to nearly 1,500 state, local, tribal, and territorial analysts on analytic techniques and methodologies and supported the NSI in providing training to over 200,000 law enforcement officers on indicators of suspicious activity. Additionally, in 2010, DHS and DOJ jointly issued guidance to strengthen ties between fusion centers and EOCs, including steps to help them routinely share information. The DOJ Bureau of Justice Assistance (BJA) also provides programs, training, funding, operational coordination, and system deployment that support the DHS efforts to mature the National Network of Fusion Centers.

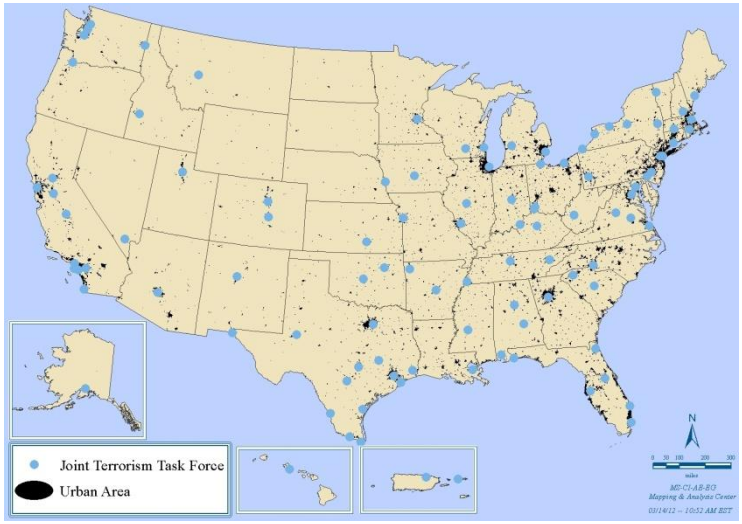


Figure 11: Over 100 FBI JTTFs exist nationally as of 2011, focusing primarily on terrorism-related issues.

JTTFs are FBI-led multi-jurisdictional task forces established to conduct terrorism-related investigations. JTTFs focus primarily on terrorism-related issues, with specific regard to terrorism investigations with local, regional, national, and international implications. Investigations conducted by JTTFs focus on known threat actors or identified individuals who meet the thresholds established in accordance with the Attorney General Guidelines for Domestic FBI Operations to initiate assessments or investigations. Using information derived from FBI Field Office Field Intelligence Groups, JTTF operations, and other federal partners, the FBI develops intelligence products on significant developments or trends related to terrorism. State, local, and private sector partners can use these intelligence products to support law enforcement and homeland security activities, such as intelligence-led policing efforts, implementing protective measures, or other target hardening initiatives.

The number of JTTFs has grown from 35 in 2001 to 103 in 2012 (see Figure 11), ultimately including over 4,400 members globally from 57 federal and 540 state and local law enforcement agencies. The FBI has 104 personnel assigned to 55 fusion centers, 16 of which are co-located within the FBI's JTTFs or Field Intelligence Groups. FBI and other federal partners—including ODNI, DOD, and DHS—also share threat information through the JTTFs. DOD has approximately 90 detailees that support 56 FBI JTTFs throughout the United States. In August 2011, DOD and DOJ adopted an overarching memorandum of understanding to promote standardized and controlled information sharing. This collaboration plays an important role in protecting U.S. military communities.

More broadly, intelligence analysts from over 30 departments and agencies work inside the ODNI-led National Counterterrorism Center (NCTC), which facilitates information sharing between the Intelligence Community and state, local, tribal, and private partners in coordination with DHS, FBI, and other interagency partners. NCTC serves as the Federal Government's central and shared knowledge repository on known and suspected terrorists and international terror groups.

Key Finding: *Prevention and protection public information campaigns have resulted in high-profile criminal or terrorist indictments and convictions.*

The Nationwide Suspicious Activity Reporting (SAR) Initiative (NSI) is a collaborative effort led by the DOJ Bureau of Justice Assistance in partnership with DHS, FBI, and state, local, tribal, and territorial law enforcement partners. NSI provides law enforcement with another tool to help prevent terrorism and other related criminal activity by creating a national capacity for gathering, documenting, processing, analyzing, and sharing SAR information. The NSI establishes a standardized process to identify and report suspicious activity in jurisdictions across the country and serves as the unified focal point for sharing SAR information. There are multiple options for entry of the SAR data, to include the Shared Space and eGuardian, which allow FBI JTTFs and fusion centers to seamlessly access and share SAR information. As of January 2012, 53 fusion centers have implemented NSI policies, processes, and standards; another 18 fusion centers can submit SAR information via eGuardian or the Shared Space. The NSI also includes comprehensive training on identifying and reporting pre-incident terrorism indicators while ensuring protection of privacy, civil rights, and civil liberties. The behaviors outlined in this training were identified through the State and Local Anti-Terrorism Training (SLATT), a BJA program that was started in 1996 focused on recognizing and preventing terrorist attacks and is provided to thousands of law enforcement officers each year.

NSI is a critical aspect of DHS's "If You See Something, Say Something™" campaign, which is a simple and effective program to raise public awareness of indicators of terrorism and terrorism-related crime, and to emphasize the importance of reporting suspicious activity to the proper local law enforcement authorities. Both the "If You See Something, Say Something™" campaign and the NSI underscore the concept that homeland security begins with hometown security, where an alert public plays a critical role in keeping our nation safe. In addition, since 2005 the USCG has operated the America's Waterway Watch program, which enables reporting of suspicious activity in and around maritime environments to appropriate authorities. Together, these efforts have helped raise awareness about suspicious behavior and have resulted in high-profile criminal or terrorist indictments and convictions.

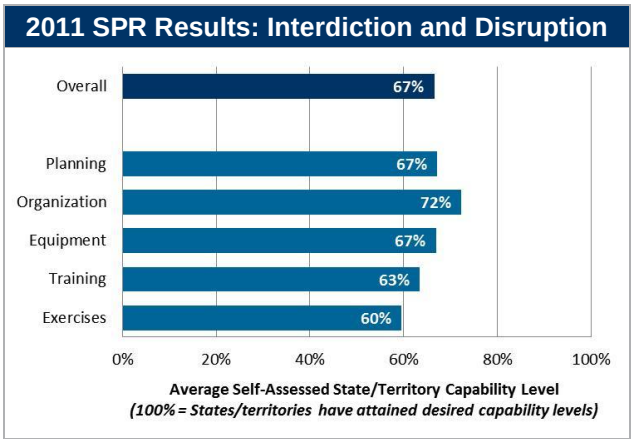
Preparedness Case Study: Reporting Suspicious Activities

On January 27, 2011, three alert workers identified a suspicious backpack placed along the planned route of the Martin Luther King, Jr. Day Unity March in Spokane, Washington. The workers established a perimeter around the backpack and promptly alerted police who diverted the march. Upon investigation, law enforcement authorities determined that the backpack contained an improvised explosive device. After a multi-week investigation conducted by the Inland Northwest JTTF—comprised of federal, state, and local law enforcement agencies—the FBI arrested Kevin William Harpham and charged him with two crimes related to the planned bombing. Harpham pleaded guilty in September 2011 and was sentenced to 32 years in prison.

Interdiction and Disruption

Delay, divert, intercept, halt, apprehend, or secure threats and/or hazards.

Key finding: *Layered defenses in the air, land, and maritime domains have enhanced protection against terrorist plots.*



Federal agencies have built new programs and increased staffing to strengthen capabilities to detect and disrupt potential terrorist attacks in the air, along land borders, and at sea. Across all these domains, approximately 700 FBI agents serve as air, maritime, and rail liaisons. In November 2010, the Transportation Security Administration (TSA) completed implementation of a 9/11 Commission recommendation to improve air passenger screening. Through the Secure Flight program, TSA checks all passengers boarding flights within or bound for the United States against consolidated terrorist watch lists. TSA electronically screens millions of bags for explosives each day at over 450 airports nationwide. TSA also screens all air cargo transported via commercial passenger flights originating domestically. TSA works daily with international partners to screen 100 percent of high-risk inbound cargo on passenger planes and is making significant progress toward screening all international inbound cargo on passenger planes. In addition, interagency partners established an Air Domain Awareness Board in 2011 to synchronize and deconflict air domain awareness efforts across the Federal Government.

Federal agencies have also significantly increased the number of personnel supporting border security and developed multi-agency teams to disrupt criminal enterprises along the border. Annual performance measures indicate that these and other investments are paying off. Nationwide, Border Patrol apprehensions of illegal aliens decreased from nearly 724,000 in FY 2008 to approximately 340,000 in FY 2011, a 53-percent reduction, indicating that fewer people are attempting to illegally cross the border.

In the maritime domain, the FBI maintains an active maritime response capability that works closely with local partners. Twenty-five of the FBI's 56 SWAT teams are designated, trained, and equipped for maritime operations. In addition, the FBI's Hostage Rescue Team maintains an advanced interdiction capability with helicopter and high-speed intercept vessels to support this mission. The FBI's maritime tactical response incorporates these resources and local agency partners to disrupt or interdict criminal or terrorist threats. USCG interdiction forces include major cutters in U.S. waters and on the high seas, patrol boats, and shore-based small boats. USCG deployable specialized forces—including the Maritime Security Response Team and 11 Maritime Safety and Security Teams—conduct advanced interdiction

operations, high-speed intercepts, and maritime radiation detection, as well as respond to criminal or terrorist actions. DOD and DHS have established procedures that provide for rapid transfer of DOD forces to support USCG maritime homeland security operations, and for the USCG to transfer forces to Combatant Commanders to support maritime homeland defense operations. More broadly, DOD employs an active, layered defense to seamlessly integrate U.S. capabilities in forward regions around the world, as well as space, cyberspace, and domestically. The USCG interdicted almost 2,500 undocumented migrants attempting to enter the United States via maritime routes in FY 2011.

Key finding: *States and local jurisdictions have used their own resources in combination with federal assistance to enhance interdiction and disruption capabilities since 9/11 by building specialized fire and law enforcement teams. Highly specialized FBI resources are capable of immediately initiating operations to interdict or disrupt threats and are supported by additional federal agencies.*

Federal, state, and local organizations have built a national inventory of specialized teams that can conduct operations to render safe explosive devices and dispose of hazardous materials. Approximately 1,100 hazardous materials (hazmat) teams, 5,400 SWAT teams (see Figure 12), and 469 FBI-trained and -accredited bomb squads exist at the state, local, tribal, and territorial levels. Federal grant funding has contributed to these capability enhancements largely through training and equipment support. For example, jurisdictions implemented more than 250 projects to acquire new and improved robots to support bomb squad render safe operations, using over $49 million from FEMA preparedness grants from FY 2004 to FY 2010.

The FBI maintains unique assets to support interdiction and disruption activities. For example, the FBI operates the Critical Incident Response Group, which can deploy subject-matter experts in crisis management, tactical operations, crisis negotiation, hostage rescue, hazardous device mitigation, and behavioral assessment. In addition, the FBI maintains and, when required, deploys investigative and technical resources to assess and respond to WMD threats and incidents. FBI resources also include the Hazardous Materials Response Unit, which responds to criminal acts and incidents that involve hazardous materials, and 28 Hazardous Materials Response Teams, which support evidence collection in hazardous environments. DOE's National Nuclear Security Administration supports render safe operations to recover and secure a radiological device or a lost or stolen U.S. nuclear weapon in support of federal, state, and local authorities.

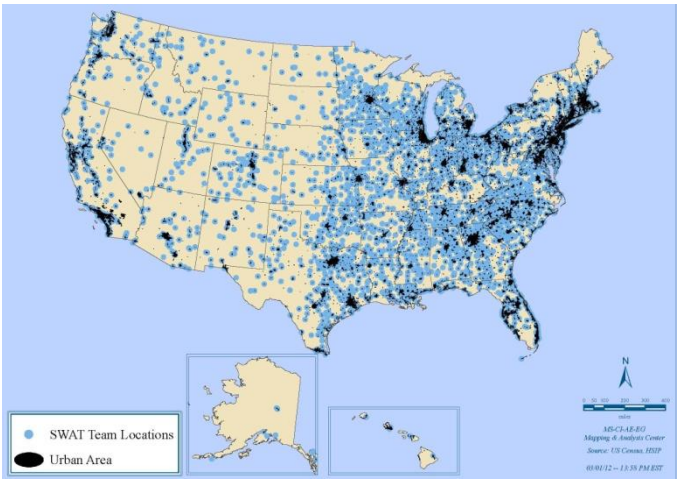


Figure 12: Law enforcement agencies around the country have developed SWAT teams capable of supporting interdiction and disruptions efforts.

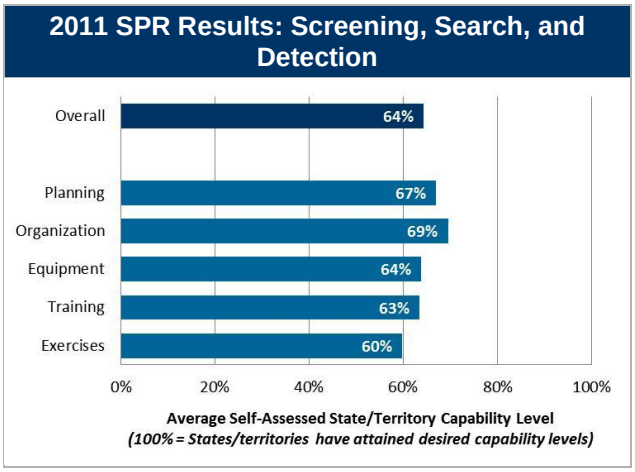
Preparedness Case Study: Joint Counterterrorism Awareness Workshop Series

The Joint Counterterrorism Awareness Workshop Series (JCTAWS) brings together stakeholders from law enforcement, incident management, and the private sector in cities across the country to engage in scenario-based reviews of their terrorism prevention and response capabilities. Jointly sponsored by the National Counterterrorism Center, DHS, and the FBI, the workshops revolve around a 24-hour scenario in which multiple, coordinated assaults occur, resembling the November 2008 terrorist attacks in Mumbai, India. During the workshops, participants jointly evaluate whether the city's existing plans, procedures, and capabilities are adequate to manage a coordinated, multi-site terrorist attack and to identify existing programs or resources that they can use to close any gaps. Since 2009, 6 JCTAWS workshops have occurred throughout the country.

Screening, Search, and Detection

Identify, discover, or locate threats and/or hazards through active and passive surveillance and search procedures. This may include the use of systematic examinations and assessments, sensor technologies, or physical investigation and intelligence.

Key Finding: *Chemical and biological agent detection, confirmation, and characterization capabilities have improved in key laboratories across the Nation, contributing to improved biosurveillance capabilities.*



The CDC Laboratory Response Network (LRN) includes federal, state, and local facilities that can confirm detection of, characterize, and communicate information on confirmed chemical and biological threats. Of these LRN laboratories, 142 can test for biological agents, while 47 can test for chemical agents. The total number of LRN labs has decreased since 2007, although lab performance has trended upward. For example, in 2010, 95 percent of LRN biological labs passed proficiency tests, up slightly from 2008. In exercises, 96 percent of LRN biological labs showed they could contact the CDC EOC within two hours. Laboratories have cut the average time needed to process and report on large volumes of chemical agent samples by over 40 percent, dropping from 98 hours in 2009 to 56 hours in 2010. Moreover, sophisticated LRN chemical labs demonstrated proficiency in using more testing methods to detect and measure chemical agents, growing from an average of 6.7 methods per lab in 2009 to 8.9 in 2010. Laboratories are distributed across the country, ensuring that approximately 90 percent of the U.S. population lives within 100 miles of an LRN facility (see Figure 13).

The CDC LRN is only one component of an integrated set of laboratory networks around the country. Additional laboratory networks, including the U.S. Department of Agriculture (USDA) National Animal Health Laboratory Network (NAHLN), the U.S. Environmental Protection Agency (EPA) Environmental Response Laboratory Network (ERLN), and the USDA and Food and Drug Administration (FDA) Food Emergency Response Network (FERN), provide laboratory screening capabilities for a range of natural and other hazards.

These labs are part of a broader effort to develop biosurveillance capabilities nationwide. Federal, state, local, tribal, territorial, and hospital partners have developed a broad array of surveillance systems to detect outbreaks and other public health events of consequence. In 2010, CDC developed a *National Biosurveillance Strategy for Human Health*, which identifies priorities, goals, and objectives for a national enterprise of complementary biosurveillance systems that provides relevant, accurate, and timely information for government, healthcare, business, and personal decision-making for planning and responding to population health emergencies.

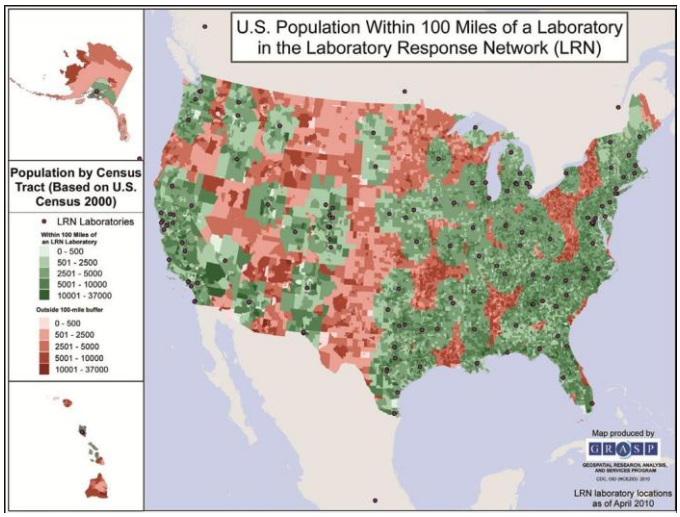


Figure 13: As of 2010, most of the Nation's population centers are within 100 miles of an LRN public health laboratory.

The DHS-managed BioWatch program provides biological agent monitoring and detection capabilities for targeted high-risk urban areas across the country. BioWatch is the Nation's federally managed and locally operated biomonitoring and detection system designed to detect intentional release of aerosolized biological agents. Since 2003, BioWatch has expanded coverage to more than 30 metropolitan areas. Fourteen BioWatch coordinators in the field work closely with local, state, and regional planning teams to advise public health, emergency management, and other local officials on BioWatch operations. Similarly, EPA maintains RadNet, a national network of monitoring stations in each state that regularly collect air, precipitation, drinking water, and milk samples for analysis of radioactivity.

In addition, CDC has several biosurveillance initiatives, programs, and systems in place. For example, the National Electronic Telecommunications System for Surveillance is a computerized public health surveillance system that provides CDC with weekly data regarding cases of certain diseases. At the state level, assessments conducted by the Council of State and Territorial Epidemiologists have revealed progress in state biosurveillance efforts. In 2010, 47 states (94 percent) had established fully operational state electronic disease surveillance systems, up from 40 (80 percent) in 2007. More broadly, the National Biosurveillance Integration Center, managed by DHS, plays a key role in integrating biosurveillance activities to quickly and effectively monitor, detect, and respond to biological events of national concern.

Key finding: *Federal agencies scan most of the cargo entering the United States through land borders and seaports for radiological and nuclear threats. State and local partners have also enhanced capabilities by building preventive radiological and nuclear detection networks and training thousands of first responders.*

The Global Nuclear Detection Architecture is a worldwide network of sensors, telecommunications, and personnel with a mission to protect against terrorist attacks using nuclear and radiological materials. A key focus of this worldwide architecture is the detection of radiological and nuclear material at U.S. ports of entry. DHS's DNDO and CBP have partnered to submit most containerized cargo coming into the United States through land borders and seaports to screening using radiation portal monitors. In FY 2011, DHS met annual performance targets for using radiation detection systems to scan cargo entering the United States via land borders, as well as international rail and sea ports of entry. In addition, all USCG boarding and inspection teams are equipped with radiation detection and identification capabilities to stop radiological threats far away from U.S. ports. Finally, the FBI coordinates and oversees search and response operations for identified radiological and nuclear threats, providing a command and control structure, offering guidance on prioritizing critical resources, incorporating intelligence and investigative information, and consolidating activities of participating incident response organizations.

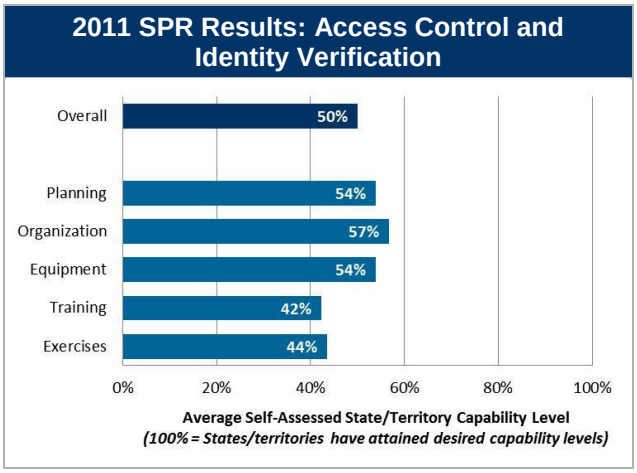
At the same time, state, local, tribal, and territorial agencies are also enhancing their radiological/nuclear detection capabilities. Through the Securing the Cities program and other state and local programs, more than 100,000 responders have received training in radiological/nuclear incident awareness and prevention via the Nevada Test Site's Counter Terrorism Operations Support (CTOS) program, and more than $2.1 billion in investments have enabled states and major urban areas to develop preventive radiological/nuclear detection (PRND) programs. The National Nuclear Security Administration's Radiological Assistance Program also delivers training and technical assistance support to federal, state, and local partners in order to help to evaluate, identify, search for, and mitigate nuclear or radiological hazards.

Protection Core Capabilities

Access Control and Identity Verification

Apply a broad range of physical, technological, and cyber measures to control admittance to critical locations and systems, limiting access to authorized individuals to carry out legitimate activities.

Key finding: *Owners and operators of high-priority infrastructure assets are strengthening access controls as part of risk-based priority security enhancements.*



Critical infrastructure owners and operators participating in the Enhanced Critical Infrastructure Protection (ECIP) security survey reported that their use of background checks increased from 88 percent in 2009 to 95 percent in 2010. Critical infrastructure sectors have implemented credentialing programs to control access to privately owned facilities. For example, the Transportation Worker Identification Credential (TWIC) program provides credentials for transportation workers at regulated maritime port facilities. In FY 2011, DHS reported a 100-percent TWIC compliance rate at regulated facilities. Similarly, the Hazardous Materials Endorsement Threat Assessment Program conducts terrorist, immigration, and criminal background checks on commercial drivers applying to obtain, renew, or transfer a hazmat endorsement on a commercial driver's license. In FY 2009 alone, the program evaluated over 297,000 applicants.

Key finding: *Federal agencies have made some progress in recent years in strengthening access control and identity verification procedures.*

Issued in 2004, Homeland Security Presidential Directive 12 (HSPD-12) ordered the establishment of a government-wide standard for secure and reliable forms of identification for employees and contractors accessing federally controlled facilities and networks. The General Services Administration (GSA) manages the government-wide acquisition of information technology for implementing access card services compliant with HSPD-12. In October 2011, a Government Accountability Office (GAO) report evaluated federal progress in implementing HSPD-12 requirements between 2008 and 2011. The GAO concluded that agencies had made:

- *Substantial progress* in conducting background investigations and in issuing Personal Identity Verification (PIV) cards (see Figure 14);
- *Fair progress* in using electronic capabilities of the PIV cards for access to federal facilities;

- *Limited progress* in using the electronic capabilities of the cards for access to federal information systems; and
- *Minimal progress* in accepting and electronically authenticating cards from other agencies.

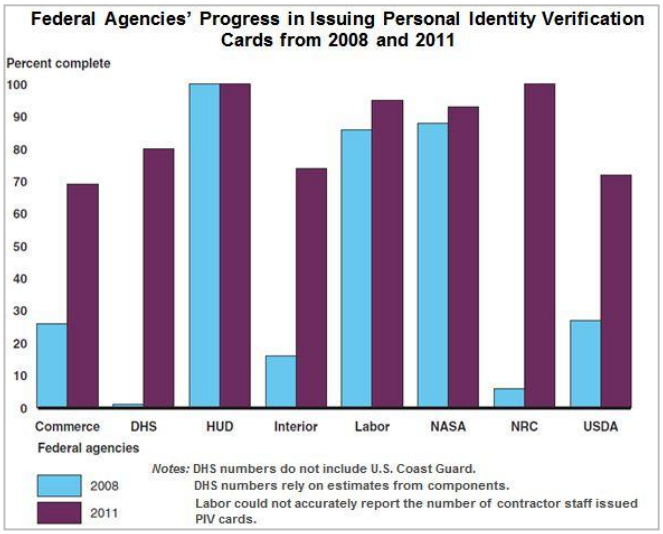


Figure 14: In just three years, federal agencies rapidly increased the percentage of the federal workforce with PIV cards.

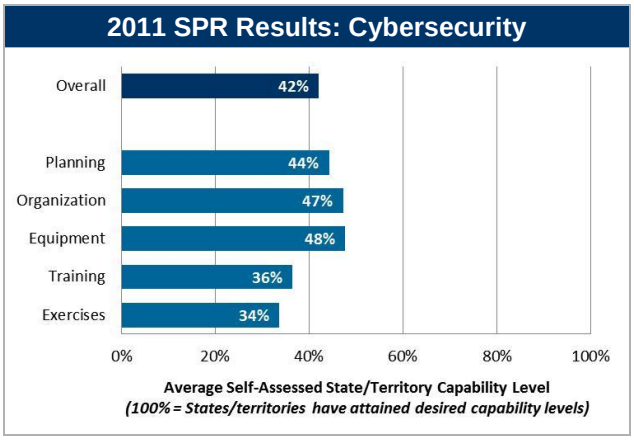
As of September 1, 2011, agencies reported that they had issued more than five million credentials to the federal workforce (89 percent of the total number of people requiring credentials, including both government employees and contractors), up from 4.5 million the previous year. Agencies had also completed almost five million background investigations (86 percent of the total number required) in accordance with HSPD-12.

Federal agencies have also taken additional steps to control access to chemical, biological, radiological, nuclear, and explosive (CBRNE) materials. For example, the FBI conducts a security risk assessment on all persons requiring access to dangerous biological agents and toxins—referred to as select agents—that have the potential to pose a severe threat to human, animal, or plant health.

Cybersecurity

Protect against damage to, the unauthorized use of, and/or the exploitation of (and, if needed, the restoration of) electronic communications systems and services (and the information contained therein).

Key Finding: *Cyber attacks have increased significantly in number and sophistication in recent years, resulting in the Federal Government and private sector partners expanding their cybersecurity efforts.*



The U.S. Computer Emergency Readiness Team (US-CERT) reported an over 650-percent increase in the number of cyber incidents reported by federal agencies over a five-year period, from 5,503 in FY 2006, to 41,776 in FY 2010. Almost two-thirds of U.S. firms report that they have been the victim of cybersecurity incidents or information breaches. Moreover, this serious problem may be subject to underreporting: only 50 percent of owners and operators at high-priority facilities participating in the ECIP security survey said that they report cyber incidents to external parties. DHS's Strategic National Risk Assessment notes that cyber attacks can have catastrophic consequences and trigger cascading effects across critical infrastructure sectors.

To counter these and related threats, federal and private sector partners have accelerated initiatives to enhance data collection, detect events, raise awareness, and respond to cyber incidents. In fact, most infrastructure protection stakeholders now identify cybersecurity as a priority issue for their programs. At least 10 different critical infrastructure sectors have established joint public-private working groups through the SCCs and GCCs focused on cyber issues. In FY 2011, facility owners and operators from all

18 critical infrastructure sectors conducted assessments using the DHS Cyber Security Evaluation Tool. This free software helps users assess their systems and networks through a series of guided questions. In addition, DHS and DOD are jointly undertaking a proof-of-concept called the Joint Cybersecurity Services Pilot. The purpose of this pilot program is to enhance the cybersecurity of participating Defense Industrial Base (DIB) critical infrastructure entities and to protect sensitive DOD information and DIB intellectual property that directly supports DOD missions or the development of DOD capabilities from unauthorized access, exfiltration, and exploitation. By the end of FY 2011, the National Cybersecurity Protection System was monitoring cyber intrusions with advanced technology for 37 of 116 federal agencies (32 percent), exceeding the proposed target of 28 percent. DHS's National Cyber Security Division (NCSD) and Science and Technology Directorate also contribute to the development of international cybersecurity standards by participating in standards bodies such as the International Telecommunication Union, the International Organization for Standardization, and the Internet Engineering Task Force.

DHS operates the National Cybersecurity and Communications Integration Center, a 24-hour center responsible for coordinating cyber and communications warning information across federal, state, and local governments, intelligence and law enforcement communities, and the private sector. DHS has also established the Cybersecurity Information Sharing and Collaboration Program (CISCP), a systematic approach to cyber information sharing and cooperation with critical infrastructure owners and operators. The program incorporates government participants, Information Sharing and Analysis Centers (ISACs), and other critical infrastructure owners and operators, and facilitates the fusion of data through collaboration among CISCP entities to develop and share cross-sector information products through a secure portal. In addition, the National Cyber Investigative Joint Task Force (NCIJTF) facilitates federal interagency collaboration and serves as a central point of entry for coordinating, integrating, and sharing pertinent information related to cyber-threat investigations. The FBI oversees the NCIJTF, which includes representation from 18 partner agencies from the intelligence and law enforcement communities. The FBI also runs 65 cyber task forces across the country that integrate federal, state, and local assets. At the state, local, tribal, and territorial levels, the Multi-State Information Sharing and Analysis Center is a cybersecurity focal point, including a cybersecurity operations center that provides real-time network monitoring, early cyber threat warnings and advisories, vulnerability identification and mitigation, and incident response.

The Secret Service has successfully dismantled some of the largest known cybercriminal organizations by working through the agency's established network of 31 Electronic Crimes Task Forces (ECTFs). With the recent addition of two international ECTFs in Rome, Italy, and London, England, local law enforcement can leverage ECTF participation in Europe, a hub of cybercriminal activity.

Despite progress achieved through these efforts, the SPR survey shows that cyber capabilities are lagging at the state level. Results indicated that Cybersecurity was the single core capability where states had made the least amount of overall progress, with an average capability level of 42 percent. In addition, DHS's 2011 Nationwide Cybersecurity Review highlighted gaps in cyber-related preparedness among 162 state and local entities. For example, though 81 percent of respondents had adopted cybersecurity control frameworks and/or methodologies, 45 percent stated they had not implemented a formal risk management program. Moreover, approximately two-thirds of respondents had not updated information security or disaster recovery plans in at least two years. The challenges identified in these reviews likely apply across sectors.

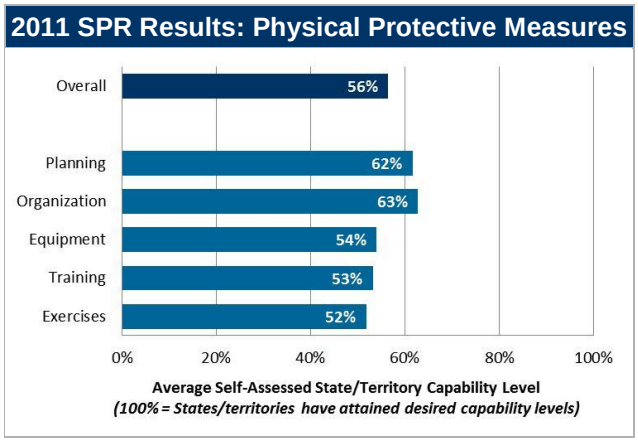
Preparedness Case Study: Cybersecurity and the Postal and Shipping Sector

The Postal and Shipping Sector owns the third-largest information technology structure in the world, facing thousands of malicious network attacks every day. Over the past year, the sector has partnered with the National Cyber Forensics and Training Alliance (NCFTA), a not-for-profit group, to research effective ways to manage cyber attacks. The sector and NCFTA used a malicious software analysis program to help limit the U.S. Postal Service's (USPS) risk to information technology infrastructure by identifying emerging cyber threats and providing timely analysis to postal executives and the USPS Computer Incident Response Team. Inspectors also reverse-engineered malicious code, leading to the identification of a Romanian organized crime network targeting U.S. businesses and the public via malicious software.

Physical Protective Measures

Reduce or mitigate risks, including actions targeted at threats, vulnerabilities, and/or consequences, by controlling movement and protecting borders, critical infrastructure, and the homeland.

Key Finding: *The Nation's critical infrastructure facilities are actively taking steps to improve physical protection capabilities.*



The ECIP initiative enables DHS to collect data on vulnerability and protective measures in a standardized format from the most critical facilities across the country. Through this program, DHS Protective Security Advisors meet with critical infrastructure facility owners and operators to build relationships, raise awareness about available resources, and conduct ECIP security surveys at a subset of key facilities nationally. The ECIP surveys help establish a baseline for measuring future progress in physical protection and risk reduction. This voluntary assessment is one resource available to help critical infrastructure facilities better understand their security needs.

Figure 15 summarizes results from 427 ECIP surveys in 2009 and 763 in 2010, showing growth in protective actions that critical infrastructure facilities have implemented. DHS also conducted follow-up interviews with officials at 473 sites six months after the initial surveys. In these selected interviews, 49 percent of facilities reported that they had implemented protective improvements since the survey's completion, including enhancements to physical security and security forces. In a sector-specific example, over 65 percent of the Nation's most critical transit infrastructure has enhanced physical protection capabilities through the Transit Security Grant Program. These results highlight the value of assessment programs such as ECIP in shaping security-related investment decisions to reduce risk to critical infrastructure assets.

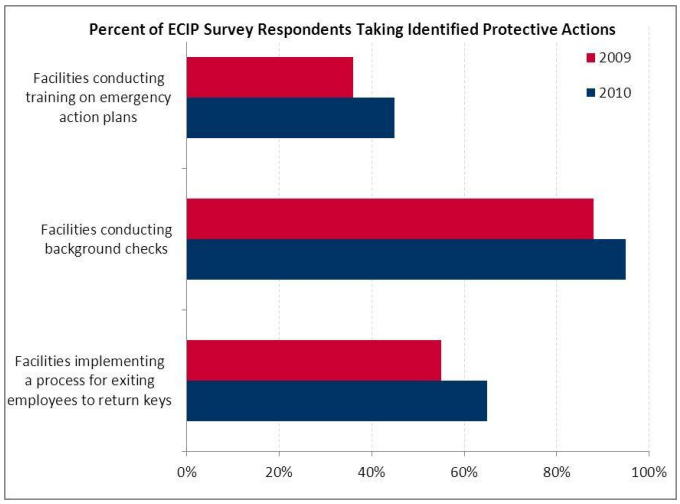


Figure 15: Results from ECIP surveys show growth in protective actions at critical infrastructure facilities.

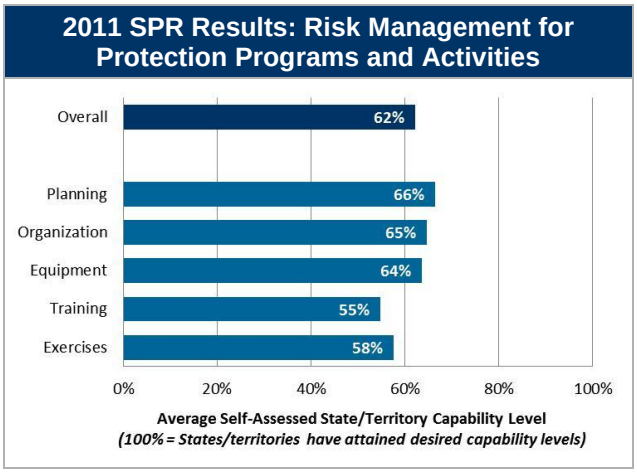
Preparedness Case Study: Partnering Through InfraGard

Established in 1996, InfraGard is a partnership program between the FBI and the private sector that focuses on sharing information in the service of protection efforts. After the 9/11 attacks, InfraGard expanded its efforts to focus on critical infrastructure protection from both physical and cyber threats. Since 2001, InfraGard's membership has grown from 1,910 members to more than 45,000 nationwide. InfraGard chapters are starting to place liaisons within fusion centers. These liaisons help InfraGard's private sector members better understand evolving threats and adopt appropriate physical protection measures.

Risk Management for Protection Programs and Activities

Identify, assess, and prioritize risks to inform Protection activities and investments.

Key finding: *Public and private sector stakeholders are increasingly using risk to shape the protection policies and programs they implement*.



Nationally, critical infrastructure facilities are identifying potential security enhancements based on an understanding of the risks they face. Results from the ECIP security survey, conducted by DHS in cooperation with 111 critical infrastructure facilities between May 2010 and April 2011, showed that facility owners and operators used risk to inform the creation of emergency action plans and standard operating procedures. Similarly, most of the Sector-Specific Agencies representing the 18 critical infrastructure sectors indicated that risk analysis results shape how they prioritize and resource protection programs, as shown in Figure 16. Many agencies report that they base these decisions on their own risk analyses rather than on the findings from the National Risk Profile developed by DHS.

Key Finding: *Whole community partners have established a set of common objectives for risk management activities focused on enhancing measurement, reporting, and resource allocation and helping address identified areas for improvement.*

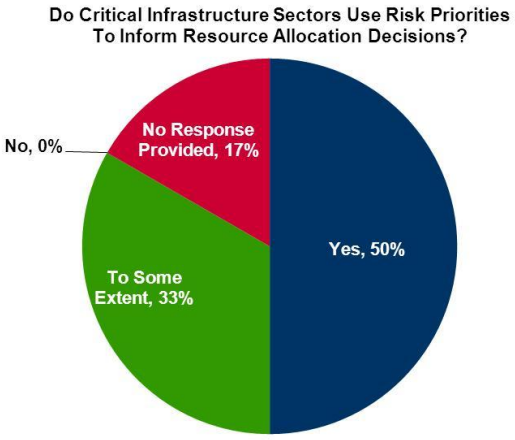


Figure 16: Risk analysis shapes infrastructure protection decisions.

DHS launched the Critical Infrastructure Risk Management Enhancement Initiative (CIRMEI) in 2010 to track implementation of NIPP requirements and ensure that risk management efforts directly inform program and budget planning. A key component of CIRMEI is the *National Critical Infrastructure Protection and Resilience Annual Report* (NAR), which pre-dates CIRMEI but changed significantly in 2011 to better measure progress of whole community protection efforts. In spring 2011, federal, state, local, and private sector representatives adopted a common set of 12

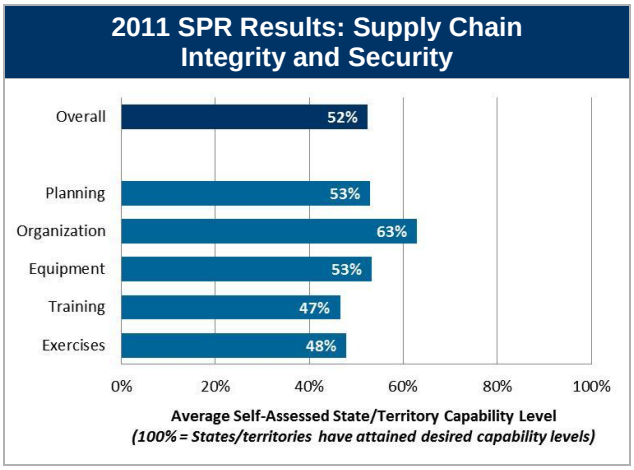
outcome statements to describe the desired end-state for national critical infrastructure protection and resilience. Annual performance measurement in the NAR now focuses on these outcomes. Example observations from the 2011 report include the following:

- Stakeholders made progress in identifying critical assets, systems, and clusters and the risks posed to those infrastructure assets.
- Defensible methodology and documentation of risk processes either do not exist or are difficult for the stakeholders to articulate.
- Stakeholders have a wide range of risk analysis capabilities; thus a national-level determination of these capabilities is difficult.

Supply Chain Integrity and Security

Strengthen the security and resilience of the supply chain.

Key Finding: *Government programs to build global networks among public and private partners have bolstered supply chain security.*



CBP leads both the Customs-Trade Partnership Against Terrorism (C-TPAT) and the Container Security Initiative (CSI), two programs that are critical to maintaining the integrity of the global supply chain. C-TPAT is a voluntary public-private sector program that works with international supply chain stakeholders—such as importers, carriers, consolidators, licensed customs brokers, and manufacturers—to ensure the highest possible levels of cargo security. C-TPAT has over 10,000 members worldwide and has conducted over 19,300 site validations of manufacturing and logistics facilities in 97 countries. Similarly, CSI extends to over 58 ports around the world (as shown in Figure 17), enabling prescreening of over 80 percent of all maritime cargo prior to its import into the United States.

C-TPAT and CSI implementation partners have seen benefits from both of these programs. For example, almost 88 percent of the nearly 4,000 companies that participated in a 2010 C-TPAT Partner Survey agreed or somewhat agreed that C-TPAT had strengthened their businesses' ability to assess and manage supply chain risk.[3] FY 2011 results show that agencies and their partners are making notable progress in achieving their targets. In FY 2011, CBP reported a 95-percent compliance rate with established C-TPAT security guidelines among C-TPAT members. Under CSI, in FY 2011, CBP partners conducted 96 percent of requested cargo examinations at foreign ports of origin in cooperation with host nations.

Additionally, the USCG leads the International Port Security (IPS) Program, which assesses the effectiveness of anti-terrorism measures in foreign ports. From 2009 to 2011, the program conducted assessments at over 500 ports and facilities in approximately 150 countries involved in maritime trade with the United States. Vessels arriving from ports that are not compliant with IPS Program requirements must take additional security precautions and submit to boarding by USCG personnel before receiving permission to enter U.S. seaports. The USCG also leads a nationwide maritime security program that coordinates with public and private sector partners and stakeholders to protect the marine transportation system and domestic supply chain. In 2011, 43 Area Maritime Security Plans were in force covering all coastal ports and navigable river systems. These plans include community-oriented procedures for deterrence, security response, and system restoration functions to support commerce.

In the area of food supply chain integrity and security, HHS, DHS, and USDA collaborate with whole community stakeholders to ensure an integrated national food safety system. For example, HHS's FDA, CDC, USDA, and DHS held a workshop in 2010 that brought together more than 267 food safety officials from all 50 states, five territories, and multiple federal agencies. Workshop participants with expertise in food, feed, epidemiology, laboratory processes, animal health, and environmental and public health identified and developed a series of recommendations to further the development and implementation of an integrated food safety system. In addition, the National Center for Food Protection and Defense—a DHS center of excellence—is analyzing major food product types to assess vulnerabilities to intentional contamination from various threat agents. USDA contributions include the Food Safety and Inspection Service, which ensures the safety of the Nation's supply of meat, poultry, and processed egg products, and the Food and Nutrition Service, which administers USDA nutrition assistance programs and provides children and needy families with improved access to healthy and safe food.

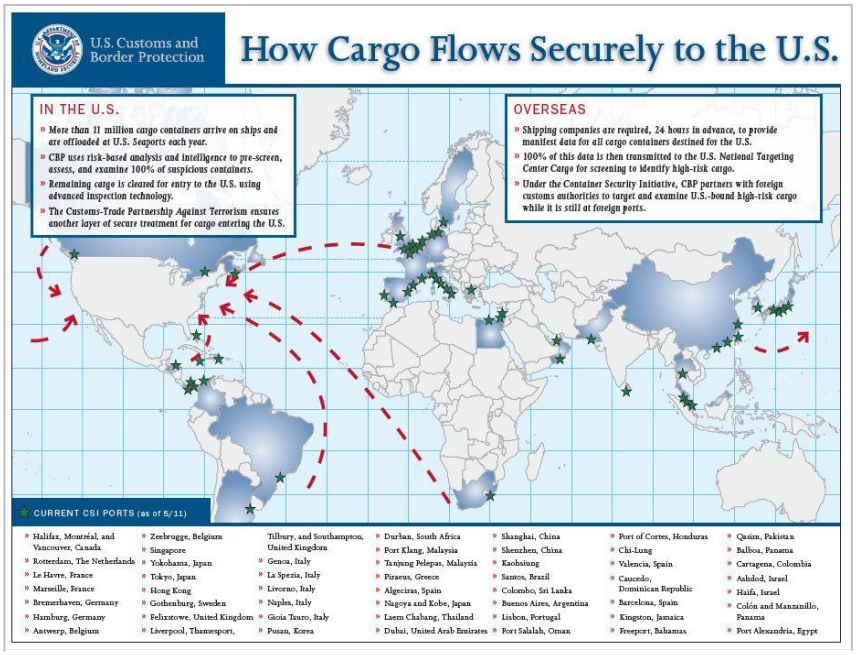


Figure 17: Supply chain security is an effort that stretches well beyond U.S. borders and requires collaboration between public and private entities.

In the area of information and communications technology, DHS NCSD is collaborating with federal partners, private sector critical infrastructure stakeholders, and national and international standards bodies to address risks to information and communications technology supply chains. Outcomes from these collaborations include methods and guidelines for preventing counterfeit and malware-containing information technology products from entering the supply chain and for finding and isolating counterfeit and malicious products that do enter the supply chain. Looking beyond information and communications technology, the Federal Government continues to focus on demonstrating quantifiable increases in supply chain risk management for government purchases. To this end, GSA has co-developed and implemented multiple instances of Federal Acquisition Regulation-compliant contract clauses, supply chain risk management standards, product tests, supplier reviews, and interagency knowledge shares to increase global assurance in the integrity of government purchases. Efforts actively seek to eliminate potentially malevolent actors present both knowingly and unknowingly through tiered design, manufacture, transportation, and operation and maintenance supply chains. Quantifiable increases in supply chain risk management—particularly for cyber-related product and service acquisitions—remain a preeminent focus of GSA.

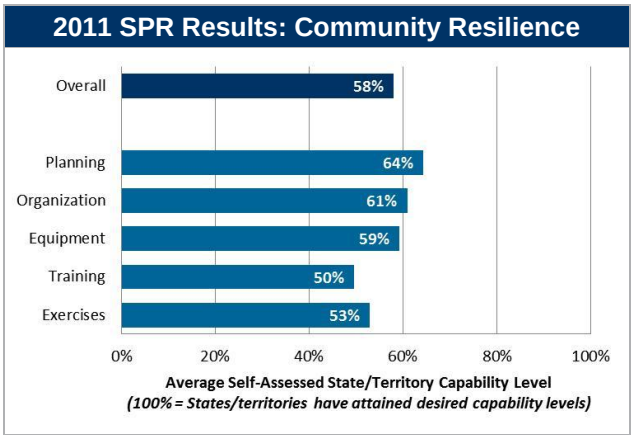
In January 2012, the White House released the *National Strategy for Global Supply Chain Security*, which sets forth an integrated U.S. Government policy to promote security and efficiency in the supply chain system; foster a resilient system that can absorb shocks and recover rapidly from disruptions; and endorse a risk-based approach that involves integrating efforts to manage risk, leverage a layered defense, and identify and resolve threats as early as possible.

Mitigation Core Capabilities

Community Resilience

Lead the integrated effort to recognize, understand, communicate, plan, and address risks so that the community can develop a set of actions to accomplish Mitigation and improve resilience.

Key finding: *State, local, tribal, and territorial governments are increasingly engaging with whole community partners to develop localized, risk-informed mitigation plans and to strengthen community preparedness.*



Public review and comment opportunities ensure that community members are engaged in state, local, tribal, and territorial mitigation planning and resultant efforts. Additional mitigation initiatives that emphasize community engagement are *StormReady* and *TsunamiReady* programs sponsored by NOAA. Over 1,950 communities voluntarily committed to additional mitigation efforts under these programs, which emphasize community engagement, redundant alert and notification functions, and hazardous weather planning. Similarly, in 2009 and 2010, DOE provided grants to state and local governments to develop and expand energy assurance plans. These energy assurance plans focus on helping communities to prepare for and lessen the potential impacts of energy supply disruption risks.

Citizen Corps Councils, Community Emergency Response Team (CERT) Programs, and the Ready Campaign contribute to resilience by engaging communities in preparedness activities. More than 1,100 local, county, and tribal Citizen Corps Councils exist nationwide (see Figure 18). These Councils represent over 178 million people, or approximately 58 percent of the U.S. population. Citizen Corps Councils and CERT Programs also deliver training to community members in emergency response; 93 percent of Councils support programs that train volunteers for disaster response and recovery roles, and 76 percent have used their trained volunteers for local response. Since their inception, nearly 2,000 registered CERT Programs have trained over 428,500 individuals in activities that directly support community resilience: 66 percent of CERT Programs participate in emergency preparedness, 51 percent in emergency planning, 31 percent in fire safety, and 20 percent in mitigation. CERT Programs have had tangible impact in communities across the country, including cleaning up Florida beaches after the BP Deepwater Horizon oil spill, rescuing individuals from burning residences, and supporting local response operations to wildfires, landslides, and floods. Meanwhile, approximately four million individuals use the Ready Campaign annually as a reference for emergency preparedness

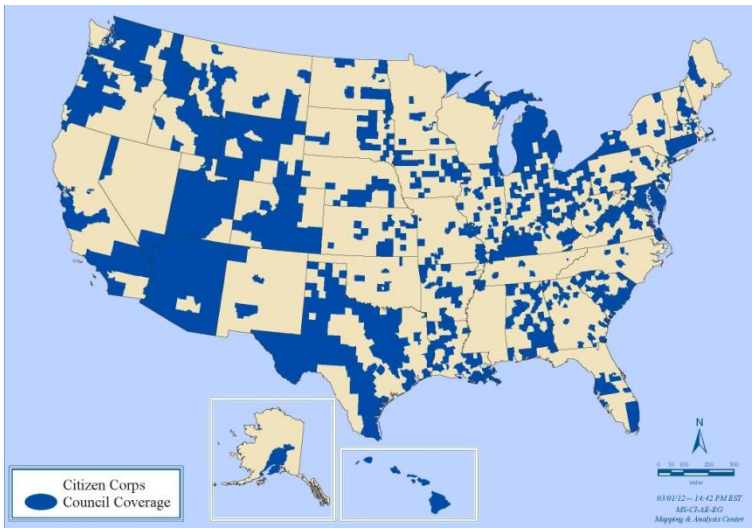


Figure 18: As of September 2011, over 1,100 Citizen Corps Councils exist nationwide, supporting whole community planning, preparing the public, and building volunteer preparedness and response capabilities.

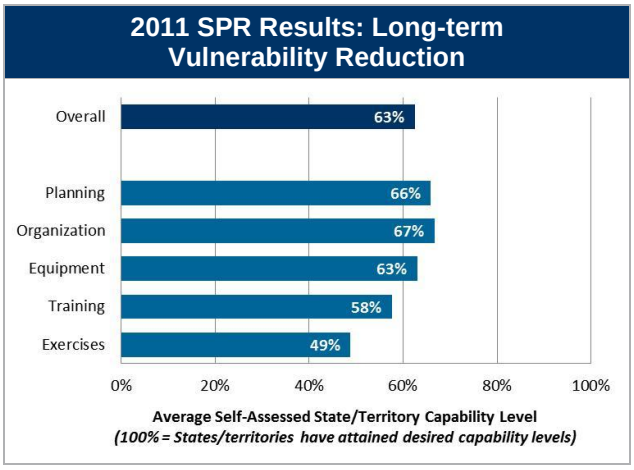
information and resources. The Ready Campaign has emphasized the importance of preparedness plans and kits that enable individuals to be self-sufficient for at least 72 hours following a disaster.

FEMA's 2011 Household Preparedness Survey indicated that households with children who brought home preparedness materials were significantly more likely to be prepared than other households. For example, 70 percent of households with children bringing home preparedness materials said they have an emergency plan that family members have discussed, compared to about 40 percent of other households. Free disaster preparedness education programs available to schools nationwide can help build preparedness habits early. For example, the Student Tools for Emergency Planning (STEP) program has reached over 30,000 fourth- and fifth-graders through a one-hour curriculum that helps children understand what to do in an emergency. Citizen Corps Councils and CERT Programs have increasingly emphasized youth preparedness. As of 2011, Citizens Corps Councils indicate that 87 percent of Councils focus on youth preparedness by including representatives from youth-focused organizations, targeting youths with preparedness materials, or providing training. About 44 percent of CERT Programs now provide training delivered specifically for youths. In addition, the U.S. Department of Education provides training and technical assistance resources to build school emergency management capacity for PreK-12 schools and institutions of higher education. These resources include training materials on emergency management basics as well as threat-specific topics and emerging issues.

Long-term Vulnerability Reduction

Build and sustain resilient systems, communities, and critical infrastructure and key resources lifelines so as to reduce their vulnerability to natural, technological, and human-caused incidents by lessening the likelihood, severity, and duration of the adverse consequences related to these incidents.

Key finding: *Enhanced building codes and floodplain management have reduced vulnerability and saved billions of dollars in disaster damage nationwide.*



Significant national progress has occurred in efforts to enhance building codes that reduce vulnerabilities. As of 2011, 48 percent of communities in areas prone to earthquakes, floods, and high wind had adopted building codes with disaster-resistant provisions, exceeding FEMA's target of 45 percent. Moreover, 27 percent of households that FEMA surveyed indicated that they had taken steps to mitigate property damage and protect themselves in the event of a disaster. This result fell short of FEMA's target of 35 percent, but it provides a baseline for measuring future progress.

The International Building Code (IBC) is an international standard that has undergone progressive updates to improve fire, wind, and seismic safety. As seen in Figure 19, a majority of states have adopted one of the two most recent IBC versions—2012 IBC or 2009 IBC. In one example of enhanced building codes, Oklahoma provided financial incentives to install residential safe rooms, specially hardened rooms that protect occupants from wind and windborne debris. Residents built more than 6,000 safe rooms statewide. Eleven other states also had safe room initiatives in place as of August 2010. Similarly, a 2011 FEMA national survey of 2,759 representative households found that 28 percent of surveyed households had built a space in their home specifically to provide shelter in an emergency. As of March 2012, FEMA had received 245 applications from 14 states to build 2,228 residential safe rooms and 138 community safe rooms using mitigation grant funding.

Real-world events also demonstrate the value of building code enhancements. For example, updated building codes in San Diego, California, have helped decrease community losses from wildfires. The 2003 Cedar Fire in San Diego damaged or destroyed 17 percent of the structures within the fire perimeter (280,278 acres burned). In 2004, San Diego County enacted more stringent fire-related building codes. The next major wildfire, which hit in 2007, destroyed only 13 percent of structures within the fire perimeter (197,990 acres burned). More impressively, the fire damaged or destroyed just two percent of those structures built to the enhanced 2004 codes.[4] Across the United States, communities are implementing building code enhancements to protect against wildland-urban interface fires. Data collection and analysis by whole community partners will document the effectiveness of these enhancements in actual fires and inform efforts to further improve building codes moving forward.

Similar progress has occurred nationally in floodplain management. The National Flood Insurance Program (NFIP) is a federal program enabling property owners in participating communities to purchase flood insurance, while requiring governments to adopt and enforce floodplain management regulations (such as ensuring that new buildings in flood-prone areas are protected from flood damage). From 2000 to 2010, the number of NFIP policies increased by 29 percent, and total policy coverage increased by 119 percent to $1.2 billion. In FY 2010 alone, NFIP added more than 47,000 policyholders to its rolls and prevented some $1.6 billion in potential flooding losses to communities nationally.

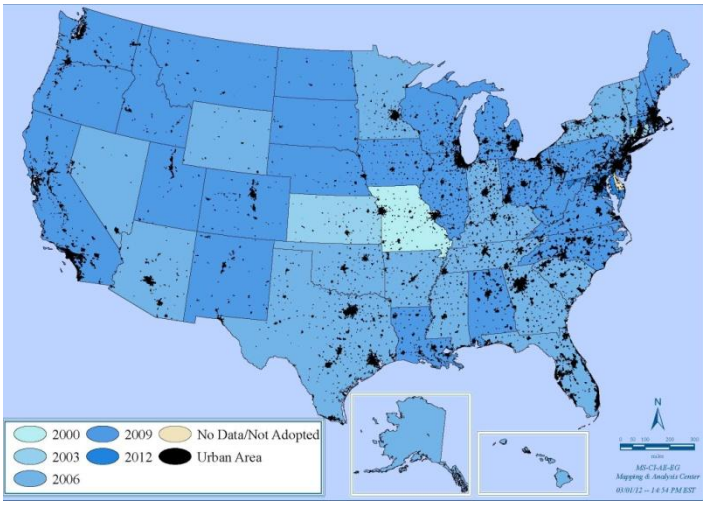


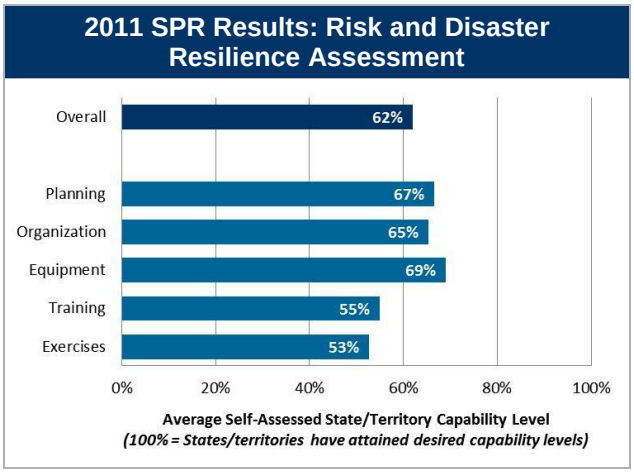
Figure 19: Adopting up-to-date building code standards state-wide helps to reduce vulnerabilities from fire, earthquakes, and severe winds.

The Community Rating System (CRS) is a voluntary program that encourages mitigation actions by offering flood insurance discounts for communities that exceed standard NFIP requirements, for example by offering property owners technical advice on how to protect their buildings from flooding. The CRS Program began in 1991 and has grown more than fourfold over the past 20 years, expanding from 254 participating communities to more than 1,100. Nevertheless, significant portions of the Nation's population are vulnerable to flooding. FEMA estimates that approximately 10 percent of the U.S. population lives in high-risk flooding areas. From 1964 to 2011, about 64 percent of the population experienced a flood-related disaster declaration.

Risk and Disaster Resilience Assessment

Assess risk and disaster resilience so that decision makers, responders, and community members can take informed action to reduce their entity's risk and increase their resilience.

Key Finding: *Hazard identification and risk assessment (HIRA) processes are well-established among states and territories. Efforts are underway to consistently integrate both natural hazards and other threats into HIRAs and to broaden HIRA development processes to urban areas.*



All 56 states and territories have HIRAs in place as required components of mitigation plans. Original mitigation planning guidance centered on natural hazards, but more recent approaches have expanded in order to encourage states to consider other threats in their HIRA processes. Similarly, the Emergency Management Accreditation Program (EMAP) Standard explicitly requires emergency management programs to account for both natural hazards and other threats that may affect them.[5] Figure 20 highlights EMAP-accredited states and local jurisdictions.

In FY 2011, the State Homeland Security Program and the Urban Areas Security Initiative included new provisions requiring states to develop and maintain threat and hazard identification and risk assessments (THIRAs) that are coordinated with their major metropolitan areas. All states achieved that goal. The FY 2012 program guidance continued the requirement, noting that THIRA findings should inform state and urban area strategies, plans, and investments. FEMA is developing guidance for state, local, tribal, and territorial partners on implementing a THIRA process.

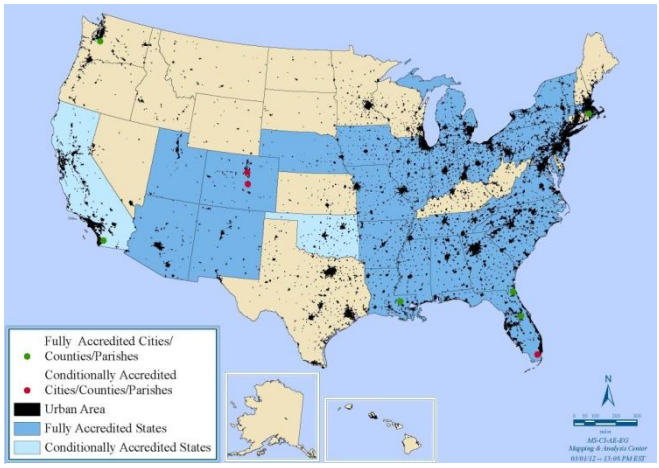


Figure 20: Voluntary accreditation by EMAP demonstrates a commitment to national standards in hazard identification and risk assessment.

DHS has published guidance and developed training courses to educate stakeholders on widely accepted principles in risk analysis and risk management. For example, in April 2011, DHS published *Risk Management Fundamentals: Homeland Security Risk Management Doctrine*, which outlines key risk management principles, including risk assessment and analysis. In addition, DHS sponsors training related to risk assessment, including courses on HAZUS, a free software tool that allows communities to develop empirical risk assessments using nationally accepted methodologies. More than 30 self-organized HAZUS user groups have emerged throughout the Nation, serving as outlets for whole community HAZUS users to share risk and disaster resilience assessment best practices. Other federal agencies have also developed tools to support risk and resilience analysis, such as the NOAA-sponsored Coastal Community Resilience online planning community geared toward enhancing community resilience to climate and natural hazard risks.

Preparedness Case Study: California, Arizona, and Nevada State Hazard Viewer

Using funding from the FEMA Hazard Mitigation Grant Program, the California Emergency Management Agency and the California Natural Resources Agency produced MyPlan, a web-based risk assessment application (see Figure 21). MyPlan integrates geographic information systems (GIS) information on natural hazards in California and is designed to assist local jurisdictions in preparing, upgrading, and reviewing mitigation plans. Building on this innovative program, the Nevada Department of Public Safety and the Arizona Division of Emergency Management are cooperating with California to bring customized versions of MyPlan to their states, using common data standards.

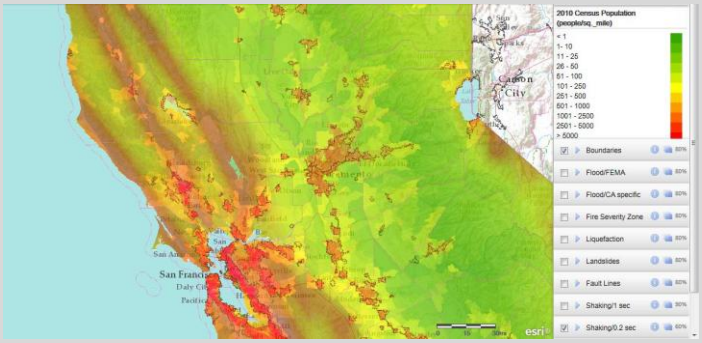
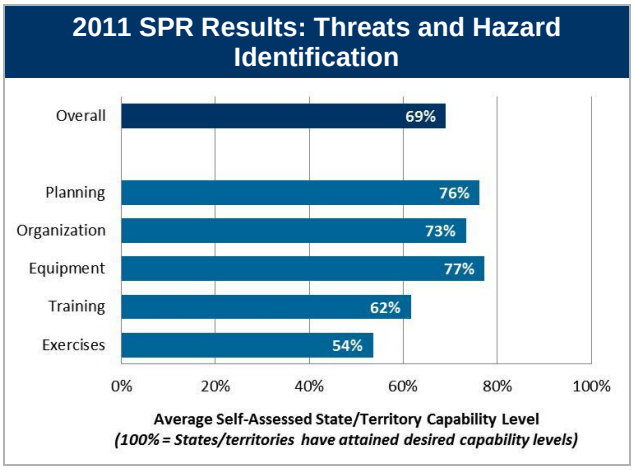


Figure 21: MyPlan uses GIS data on floods, fires, landslides, and earthquakes to inform mitigation planning.

Threats and Hazard Identification

Identify the threats and hazards that occur in the geographic area; determine the frequency and magnitude; and incorporate this into analysis and planning processes so as to clearly understand the needs of a community or entity.

Key finding: *Whole community partners are increasingly using threat and hazard identification as a building block for risk-based planning.*



Threat and hazard identification is a critical first step for public and private sector entities in developing plans that are informed by an understanding of the risks they face. The planning process outlined in CPG 101 exemplifies that approach, urging threat and hazard identification as an early component of collaborative, risk-based planning. Notably, in the 2010 Nationwide Plan Review, 100 percent of states and 96 percent of urban areas indicated that their basic plans were either completely or partially consistent with CPG 101. FEMA is developing additional guidance as part of the CPG to support THIRA implementation. At state, local, tribal, and territorial levels, hazard mitigation planning begins with identifying hazards, and then determining historical frequency and severity in order to drive selection of specific mitigation actions. Hazard data on flooding, coastal issues, earthquakes, and fires are available from FEMA, NOAA, the U.S. Geological Survey, and the U.S. Forest Service, respectively.

Local Emergency Planning Committees (LEPCs) are one example of whole community partners working to use threat and hazard information to inform planning. Required by law, LEPCs work within local communities to identify chemical hazards and develop emergency plans in case of accidental release. A 2008 survey of LEPCs by the EPA indicated that nearly 85 percent of LEPCs incorporated natural hazards into their emergency planning efforts. Moreover, the 2008 survey highlighted that LEPCs incorporate a diverse range of whole community perspectives into risk-based planning efforts (see Figure 22).

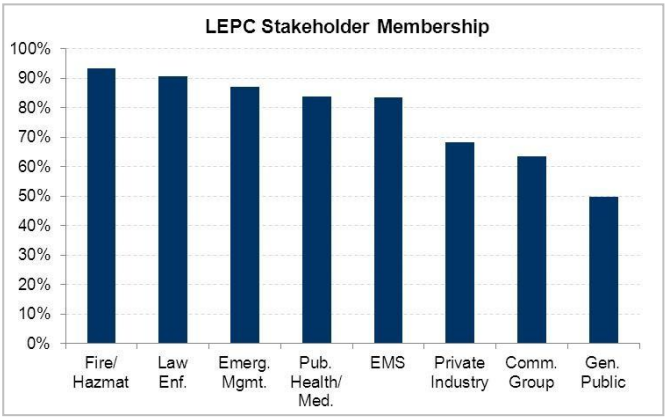


Figure 22: Whole community partners, including private industry, community groups, and the general public, participate in LEPCs.

Threat and hazard identification also informs planning efforts at the national level. The Strategic National Risk Assessment conducted as part of PPD-8 implementation identified potential incidents that pose the greatest threat to homeland security and informed the development of core capabilities and targets in the Goal. Similarly, DHS and interagency partners developed a National Risk Profile to support infrastructure protection planning, identifying intentional and unintentional threats and natural hazards, and analyzing the risk they present to critical infrastructure sectors. Through the SCCs, critical infrastructure owners and operators in the private sector also conduct threat and hazard identification to support implementation of the NIPP's risk management framework. Annual reports for each sector outline the relationships between identified threats and hazards, risk, and mitigation actions.

Key Finding: *States most frequently reported that earthquakes, hurricanes, and cyber attacks would significantly stress their capabilities.*

Through the 2011 SPR, states and territories identified a specific threat or hazard for each of the 31 core capabilities that would most stress their existing capabilities and demand maximum capacity to manage. The results of this threat and hazard identification process do not mean that these threats and hazards are more likely to actually occur. However, the national totals shed light on the types of events that states and territories believe would put the most stress on the capabilities they have in place. For natural hazards, earthquakes and hurricanes were the most frequently cited events, while cyber attacks and radiological dispersion device/nuclear attacks topped the list of threats, as illustrated in Figure 23. The "Other" category in Figure 23 combines 19 hazards ranging from avalanches to space weather. These findings align with DHS's Strategic National Risk Assessment which highlighted the national-level risks from natural hazards (including earthquakes, hurricanes, and floods), pandemic influenzas, terrorist use of WMD, and cascading effects from cyber attacks.

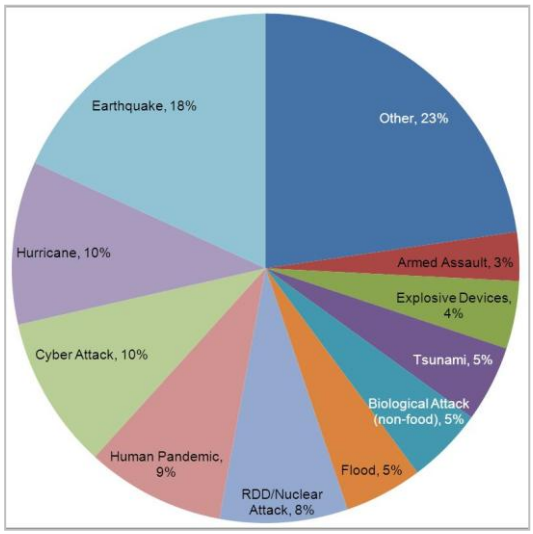


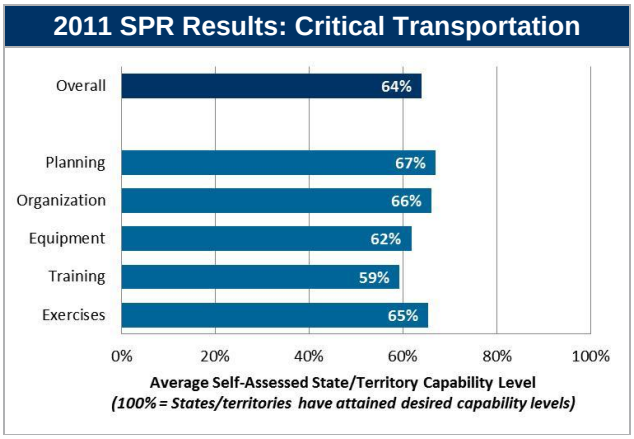
Figure 23: Through the SPR, states prioritized which threats and hazards would most stress existing capabilities.

Response Core Capabilities

Critical Transportation

Provide transportation (including infrastructure access and accessible transportation services) for response priority objectives, including the evacuation of people and animals, and the delivery of vital response personnel, equipment, and services into the affected areas.

Key finding: *Confidence in evacuation plans among states and urban areas has increased significantly since 2006.*



The 2006 Nationwide Plan Review identified evacuation planning as an area in need of significant improvement nationwide. At that time, less than 11 percent of states and urban areas indicated confidence in the adequacy of their public protection and evacuation plans for a catastrophic event. By 2010, confidence in these plans had increased more than six-fold (see Figure 24). In addition, initiatives such as the Regional Catastrophic Preparedness Grant Program have encouraged large-scale evacuation planning in large metropolitan areas that may not have traditionally focused on that issue.

A range of whole community collaborative efforts have informed evacuation and transportation planning improvements. For example, between 2007 and 2008, the Department of Transportation (DOT) Federal Highway Administration (FHWA) conducted four, multi-state workshops on transportation evacuation preparedness and response. One outcome of the workshops was a summary of good practices in transportation evacuation. In FY 2010, the FHWA assessed mass evacuation plans for 26 of the Nation's highest risk urban areas. This assessment identified and prioritized challenges that could impede effective evacuations, such as day-to-day congestion, infrastructure constraints, and communications. DOT also developed primers on evacuation planning, use of highways for evacuation, evacuation of persons with disabilities and other access and functional needs, and evacuation of pedestrians. In addition, between 2008 and 2010, FEMA worked with more than 35 states and territories to improve evacuation planning. From FY 2006 to FY 2010, states and local jurisdictions dedicated $50.6 million in FEMA preparedness grant funds to build evacuation and shelter-in-place capabilities. More recently, in June 2011, FEMA conducted three no-notice discussion-based exercises in FEMA Regions to test hurricane response plans, which enhanced the agency's real-world response to Hurricane Irene.

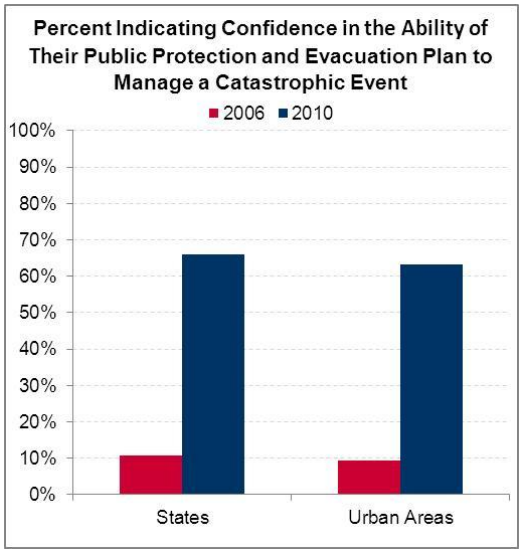


Figure 24: Whole community planning efforts supported by DOT and FEMA have supported improvements to public protection and evacuation plans.

Key finding: *Federal partners have met targets for delivering life-sustaining commodities and key operational resources on time during disasters.*

In FY 2010 and FY 2011, FEMA's Logistics Management Directorate exceeded its targets for delivering life-sustaining commodities and operational resources within agreed-upon timeframes during disasters. In FY 2011, FEMA delivered 615

of 659 (93.3 percent) of these priority orders on time, significantly exceeding its target of 85 percent.

To support these efforts, FEMA established a number of pre-scripted mission assignments with federal partners, including DOD and its components such as the U.S. Army Corps of Engineers (USACE). These pre-scripted mission assignments use standardized language, allowing FEMA to request key resources rapidly. Also, as part of its Advance Contracting Initiative, the USACE has pre-awarded contracts for major emergency response missions. For example, the USACE pre-awarded 28 debris removal contracts in six different regions, allowing for immediate activation of contract support that can support road clearing during the response phase or debris removal during long-term recovery.

Environmental Response/Health and Safety

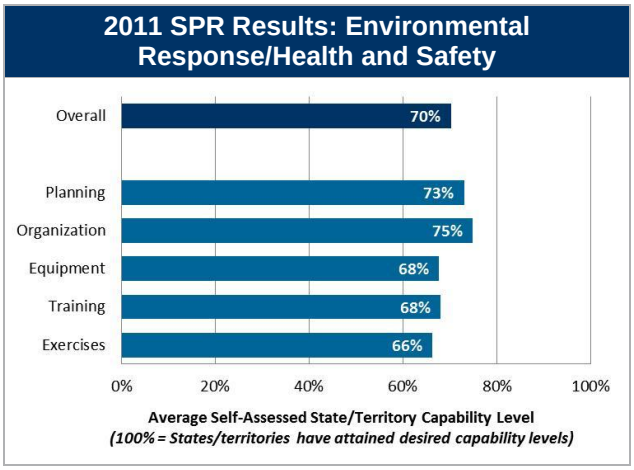
Ensure the availability of guidance and resources to address all hazards including hazardous materials, acts of terrorism, and natural disasters in support of the responder operations and the affected communities.

Key Finding: *The Nation has developed a mature set of assets for addressing hazardous materials incidents.*

There are over 1,100 state and local hazmat response teams positioned throughout the country, as shown in Figure 25. Together, these teams provide hazmat response coverage to over 76 percent of the Nation's population.

The National Response System (NRS) routinely and effectively responds to a wide range of oil and hazardous substance releases. The NRS includes individuals and teams representing all levels of government that share expertise and resources to control oil spills and conduct cleanup activities. Within the NRS, the National Response Team (NRT) consists of 15 federal agencies responsible for coordinating emergency preparedness and response to oil and hazardous substance pollution incidents.

As chair of the NRT, EPA brings a wide range of resources to oil and hazmat response. For example, EPA currently has 260 On-Scene Coordinators with the training, expertise, and regulatory authority to direct all actions at a hazmat spill. EPA also has over 2,000 Response Support Corps members, 14 equipment warehouses, technical and heavy equipment support contracts in each EPA Region, response teams with diverse technical specialties, and the capability to establish over 30 Incident Management Teams. Each of the 10 EPA Regions maintains a cadre of on-call, On-Scene Coordinators for immediate deployment to an actual or potential release of oil or hazardous substances. As Vice-Chair of the NRT, the USCG provides 41 pre-designated On-Scene Coordinators located at Coast Guard Sectors and select sub-units across the country to direct and coordinate responses



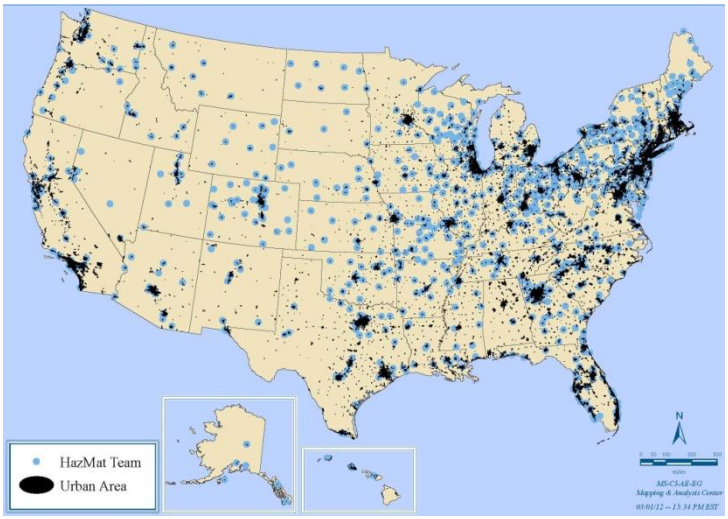


Figure 25: Local hazmat teams are the first line of defense in a multi-layered environmental response/health safety capability.

to oil discharges and hazardous substance releases along 95,000 miles of coastline and offshore navigable waterways. These personnel respond to nearly 4,000 oil and hazardous substance spills annually.

EPA and USCG co-chair thirteen Regional Response Teams that include regional representation from 15 federal agencies and state personnel. These teams provide policy coordination support and technical advice to the designated On-Scene Coordinator during an event. On-Scene Coordinators from both EPA and USCG have access to specialized, deployable response assets for hazmat events and oil spills. For example, EPA maintains three Environmental Response Teams, two Radiological Emergency Response Teams, and one National Decontamination Team. Similarly, the USCG oversees the National Strike Force, which includes three National Strike Force Teams and a Public Information Assist Team. As shown in Figure 26, approximately 98 percent of the U.S. population is within a 12-hour drive of one of these joint assets; these teams can also deploy via air and water routes, enhancing national coverage.

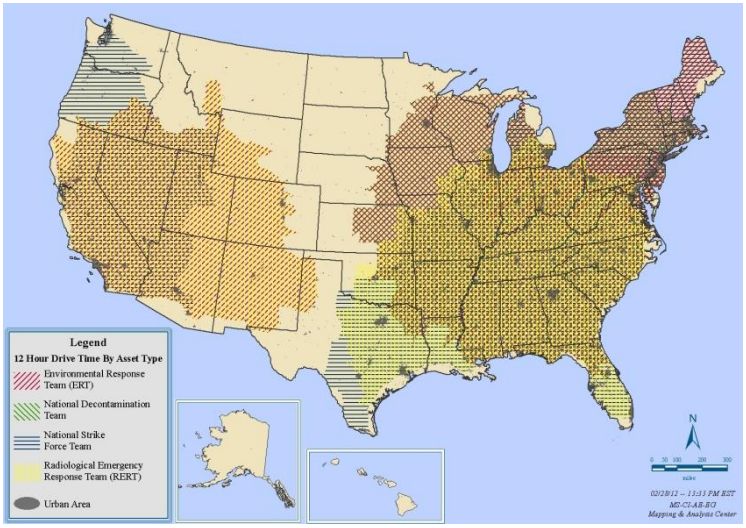


Figure 26: Nine specialized EPA and USCG hazmat and oil spill response assets are located across the country, ensuring that 98 percent of the Nation's population is within a 12-hour drive of one of these teams.

Key Finding: *The Federal Government has hazardous materials response resources that can supplement state, local, tribal, and territorial assets in addressing large-scale disasters, including CBRNE incidents.*

Federal departments and agencies—including the FBI, EPA, and National Nuclear Security Administration—maintain numerous assets to support responses to large, complex disasters. For example, the FBI has primary jurisdiction for all criminal or terrorist CBRNE events launched domestically or against U.S. interests overseas. To support domestic CBRNE incident investigations and evidence collection operations, the FBI maintains 28 Hazardous Materials Response Teams across the country, as well as a specialized fly-away response capability at the FBI laboratory in Quantico, Virginia.

In addition, under the DOD CBRN Response Enterprise, DOD maintains a range of assets, including: one Defense CBRN Response Force (DCRF); two Command and Control CBRN Response Elements (C2CRE); a National Guard Weapons of Mass Destruction Civil Support Team (WMD-CST) positioned in every state; 17 National Guard CBRNE Enhanced Response Force Packages (CERFPs); and five National Guard Homeland Response Forces (HRFs) across the United States. The DOD CBRN Response Enterprise assets improve the ability to operate in hazardous environments and provide a nationwide capability to support civil authorities following a CBRNE incident. Figure 27 shows the location of these teams across the country. EPA and USCG can also provide surge capacity for environmental remediation activities.

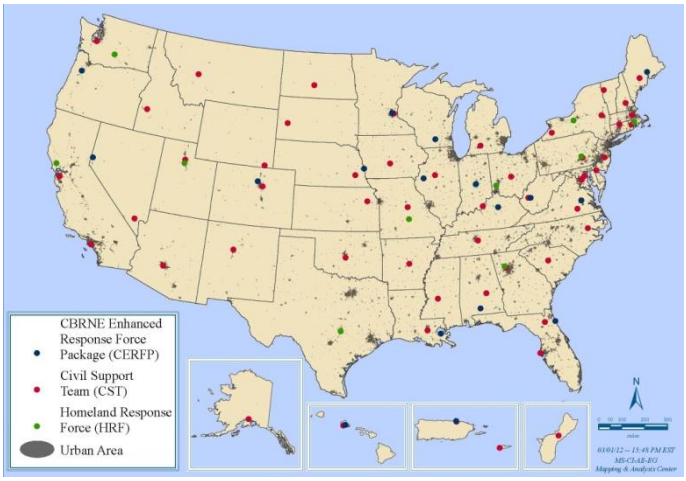


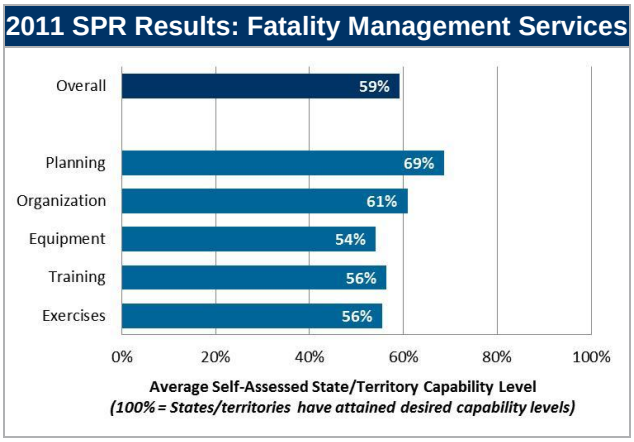
Figure 27: National Guard CBRN response assets deliver specialized capability nationally.

Fatality Management Services

Provide fatality management services, including body recovery and victim identification, working with state and local authorities to provide temporary mortuary solutions, sharing information with mass care services for the purpose of reunifying family members and caregivers with missing persons/remains, and providing counseling to the bereaved.

Key finding: *All states have developed fatality management plans, but more work remains.*

In 2007, only 64 percent of states had established fatality management plans. By 2009, that number had increased to 96 percent. However, assessments of these fatality management plans indicated that some are not yet adequate or actionable. For example, a 2009 joint DHS-HHS assessment of state operating plans for pandemic influenza rated 41 out of 56 plans as having major gaps with respect to fatality management, requiring engagement with a broader set of partners.



Key finding: *States and local jurisdictions will rely heavily on federal fatality management assets during disasters.*

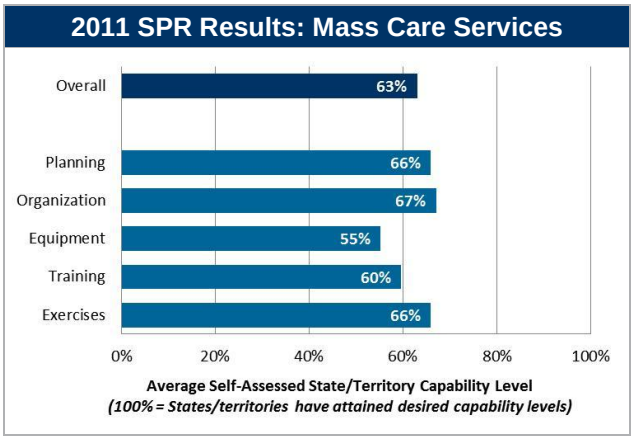
In state, local, tribal, and territorial jurisdictions, medical examiners and coroners typically oversee fatality management services. In many disasters—including the 2011 Joplin, Missouri tornado—the number of deaths overwhelms limited state, local, tribal, and territorial capabilities, necessitating federal assistance. The National Disaster Medical System (NDMS) includes 12 mortuary teams that can deploy within 24 hours of an event. HHS also maintains three Disaster Portable Morgue Units, which include prepackaged supplies for rapid deployment in support of morgue operations. Moreover, DOD maintains Fatality Search and Recovery Teams, which provide fatality recovery and transport capabilities from hazardous environments.

Federal fatality management planning assumptions focus on events that result in fewer than 5,000 fatalities. The Goal notes that a virulent strain of pandemic influenza could result in hundreds of thousands of deaths nationwide over an extended period and that a WMD attack or industrial accident might cause extensive fatalities. Moreover, many of these fatalities could be contaminated. Standard regional mortuary response teams are not equipped or trained to process chemically or radiologically contaminated human remains.

Mass Care Services

Provide life-sustaining services to the affected population with a focus on hydration, feeding, and sheltering to those who have the most need, as well as support for reunifying families.

Key Finding: *Public and private partners providing mass care have the resources to support feeding and hydration needs of survivors following a catastrophic event, but distribution of these resources presents challenges.*



Nationwide, whole community stakeholders have the capacity to acquire and initially provide over 45 million shelf-stable meals, produce over 3.5 million hot meals per day, and distribute more than 5.2 million liters of water per day. In addition, USDA's Food and Nutrition Service, within its statutory authorities, works with whole community partners to determine nutrition assistance needs, obtain appropriate food, and arrange for delivery of food supplies to support mass care services. Community partners tested components of this national mass care capacity during the 2011 National Level Exercise, evaluating whether partners could feed and hydrate two million survivors in 72 hours. The sheer magnitude of this requirement made it difficult to validate whole community mass care capacity in its entirety through an exercise simulation. However, participation in that national exercise helped federal, state, regional, local, and private sector personnel respond effectively to the May 2011 Joplin tornado that occurred just days after the exercise ended.

Enormous mass care capacity exists, but challenges remain in the efficient movement and coordination of these resources. A catastrophic event would likely disrupt existing transportation infrastructure and distribution networks, complicating acquisition and movement of life-sustaining supplies. Delays in mass care resources might be particularly acute for survivors with medical conditions, disabilities, or other access and functional needs, and for infants, children, and pets.

Key Finding: *The Nation has the capacity to provide mass care sheltering for more than 900,000 individuals near an area affected by a catastrophic event.*

Whole community partners—including the American Red Cross, voluntary organizations, government agencies, and the private sector—can shelter approximately 500,000 survivors in existing facilities located near an area affected by a catastrophic event. In addition, FEMA can provide 405,000 temporary shelter spaces. To support mass care sheltering operations, FEMA, federal partners, and voluntary organizations have over 560,000 cots and 750,000 blankets available. Moreover, voluntary organizations, the private sector, and federal agencies can provide sheltering, transportation, feeding, hydration, and veterinary care for 135,000 household pets. FEMA also released *Guidance on Planning for Integration of Access and Functional Needs Support Services in General Population Shelters*, which provides guidance and resources to ensure that children and adults with access and functional needs can benefit from and participate in sheltering programs. The National Mass Care Council—led jointly by FEMA, American Red Cross, and National Voluntary Organizations Active in Disaster—is developing a National Mass Care Strategy to provide a unified approach to delivering mass care services. Due in July 2012, the strategy will establish common mass care goals and support whole community partner efforts to estimate current capabilities and determine capacity needed to respond to catastrophic events.

FEMA has developed a variety of programs to shift survivors from congregate to non-congregate care and works with interagency partners, state, local, and tribal governments, voluntary agencies, faith-based organizations, and the private sector to support implementation efforts. For example, in order to allow

survivors to stay at their residences, FEMA can provide tarps and plastic sheeting, and coordinate with other partners to assist survivors in establishing safe and secure spaces in their damaged dwellings. Alternatively, FEMA can provide tents, campers, or similar emergency sheltering structures to allow disaster survivors to stay with their damaged property. FEMA maintains an inventory of approximately 2,500 U.S. Department of Housing and Urban Development (HUD)-certified manufactured homes. Furthermore, FEMA has improved its contracting capabilities to ensure timely production of additional manufactured homes. Finally, FEMA also provides rental assistance through programs such as the Transitional Sheltering Assistance Program.

Preparedness Case Study: Mass Care Support Following Hurricane Irene

In late August 2011, Hurricane Irene made landfall along the East Coast of the United States. Ultimately, the storm resulted in major disaster declarations in Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire New Jersey, New York, North Carolina, Pennsylvania, Puerto Rico, Rhode Island, Vermont, and Virginia.

As a result of the storm, more than 27,000 people found shelter in approximately 500 locations opened by states, localities, and the American Red Cross. Working with its mass care partners, the American Red Cross supplied 1.8 million meals and snacks, provided 22,000 health and mental health consultations, and distributed nearly 127,000 relief items by September 7, 2011, just 11 days after the storm's landfall. In Pennsylvania alone, numerous organizations supported the relief effort:

- The Southern Baptist Convention helped set up two mobile kitchens;
- County mental health agencies deployed volunteers to emergency aid stations;
- The American Humane Association established pet shelters;
- Mennonite Disaster Services helped clean out homes;
- The Teamsters assisted in transporting supplies;
- The Boy Scouts of America helped assemble hundreds of coolers packed with food, supplies, and information; and
- Local organizations donated over $400,000 worth of in-kind supplies and materials.

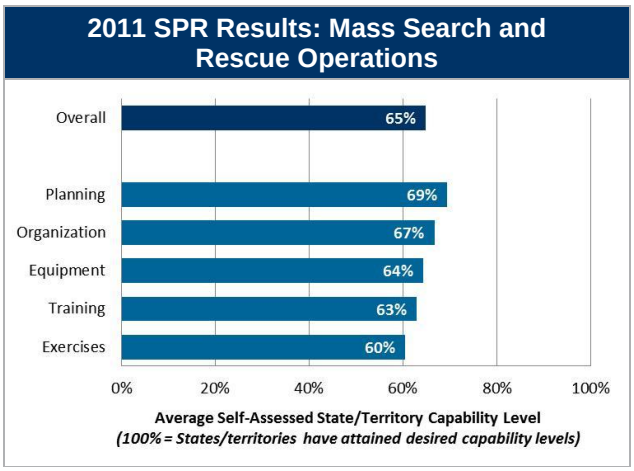
Key finding: *Planning and technological gaps present challenges to post-disaster family reunification.*

Large disasters can separate family members from one another, complicating parents' ability to pick up their children from school or day care, especially when evacuations are required. In a 2010 report, the National Commission on Children and Disasters observed that 67 million children are in school or day care on any weekday, but that only a few states require school evacuation and family reunification plans. Another assessment of child protection efforts in disasters found that fewer than half of states require licensed child care facilities to have family reunification plans. Although various online reunification tools and call centers allow the public to search and upload information about displaced adults and children, no single, comprehensive source for this information exists. Example resources include the American Red Cross' "Safe and Well" website, FEMA's National Emergency Family Registry and Locator System and National Emergency Child Locator Center, the National Library of Medicine's People Locator, and social media outlets such as Facebook and Twitter.

Mass Search and Rescue Operations

Deliver traditional and atypical search and rescue capabilities, including personnel, services, animals, and assets to survivors in need, with the goal of saving the greatest number of endangered lives in the shortest time possible.

Key Finding: *The Nation has a highly mature structural collapse search and rescue capability, due in large part to the build-up of state and local search and rescue assets.*



Mass search and rescue focuses on delivering immediate response to large numbers of distressed people. Under the NRF, federal search and rescue activities occur across three operational environments: structural collapse or urban search and rescue (US&R), led by FEMA; maritime/coastal/waterborne search and rescue, led by USCG; and land search and rescue, led by the National Park Service (NPS) within the U.S. Department of the Interior and DOD.

Today, the Nation possesses significantly more capability in the US&R environment than it did 10 years ago. Ninety-seven percent of the U.S. population lives within a four-hour drive of a structural collapse team (see Figure 28). A recent FEMA tally identified nearly 300 structural collapse/US&R teams; only 55 percent of these teams existed prior to 2001. The national expansion of state and local US&R teams is a direct product of FEMA contributions in funding and training. From FY 2006 to FY 2010, state, local, tribal, and territorial grantees allocated approximately $158 million in preparedness assistance to build and maintain US&R capabilities, which can be deployed to support operations nationally. Meanwhile, in this same period, students completed nearly 33,000 search and rescue-related courses. Across the country, local governments are further increasing capability by integrating the public into search and rescue activities. A 2011 survey of 1,774 CERT Programs indicated that 320 CERT Programs (18 percent) had supported basic search and rescue activities during an emergency.

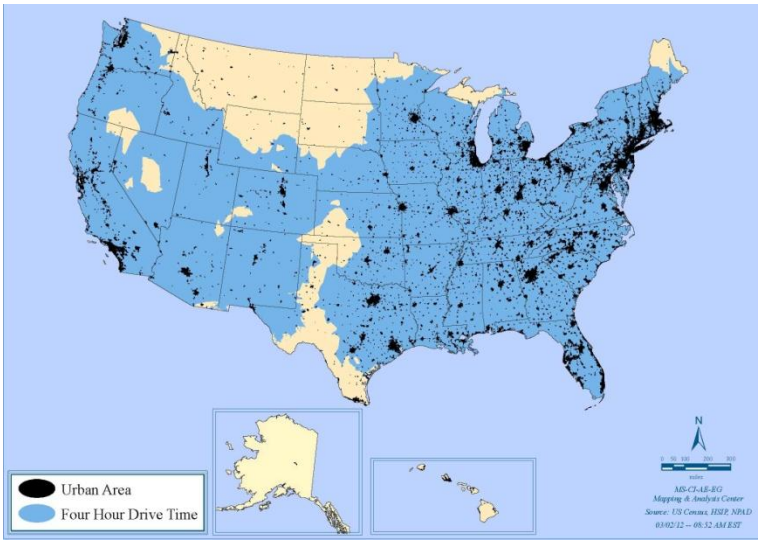


Figure 28: ***Prior to 9/11, significant population centers throughout the Nation lacked search and rescue coverage, but today, 97 percent of the Nation's population is within a four-hour drive of a US&R team.***

Supplementing state, local, tribal, and territorial assets is a mature, mission-ready federal capability in the form of 28 FEMA US&R Task Forces. Since FEMA established its National US&R Response System in 1989, no disaster has overwhelmed its operational capacity. For FY 2011, FEMA's US&R Task Forces met their requirement to arrive on scene within 12 hours of deployment notification. These capabilities have contributed directly to saved lives during previous disasters, most recently following the 2010 Haiti earthquake, in which three US&R Task Forces were responsible for 47 live rescues, the greatest number of lives saved in a collapse rescue environment in the history of the FEMA US&R program.

Preparedness Case Study: Mobilizing State and Local Search and Rescue Mutual Aid Support

After the April 2011 outbreak of deadly tornadoes in the Southeast, Alabama elected to mobilize state and local teams to support search and rescue operations in Marion, Jefferson, Franklin, and Tuscaloosa Counties rather than request assistance from federal US&R Task Forces. In addition to Alabama's own state US&R team (Alabama Task Force 1), Louisiana mobilized all three of its regional Task Forces under the Southeast region mutual aid agreement. Alabama Task Force 1 also received additional K-9 support from Tennessee Task Force 1 through the Emergency Management Assistance Compact.[6] In addition, Alabama Task Force 1 coordinated with the Alabama National Guard to obtain air support for reconnaissance and team transport. These specialized teams provided critical relief to local fire and law enforcement personnel who were overwhelmed by the magnitude of the damage. Teams searched more than 205 square miles and helped account for over 100,000 individuals.[7] The availability of these assets is attributable to efforts in the past decade to develop local search and rescue assets and use mutual aid to supplement local capability (Alabama Task Force 1 and Louisiana Task Force 1 were founded after 9/11).

Key Finding: *Existing search and rescue capabilities in inland and maritime domains are available to support mass search and rescue operations following large-scale disasters.*

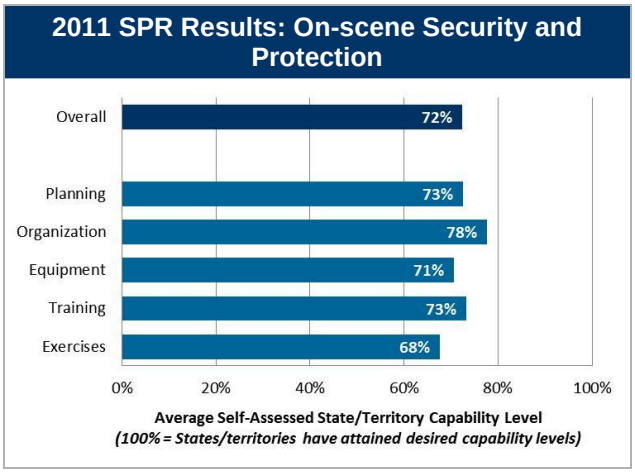
Each year, federal, state, local, and volunteer resources conduct thousands of search and rescue missions to address situations such as missing persons and aircraft and watercraft in distress. In 2010, as the U.S. inland search and rescue coordinator, the Air Force Rescue Coordination Center (AFRCC) under U.S. Northern Command initiated 1,004 missions, resulting in 561 lives saved. Civil Air Patrol routinely carries out 90 percent of AFRCC missions;[8] other DOD capabilities, USCG, state police, and local rescue services address the remainder. The NPS conducts over 5,000 land-based search and rescue missions annually on and off public lands. NPS operations occur in diverse settings ranging from sea-level environments to mountainous terrain. In the maritime domain, USCG assets provide both airborne and waterborne search and rescue capabilities. In FY 2011, the USCG addressed 20,517 cases, saving 3,793 lives. These capabilities can support mass search and rescue operations; the most notable example occurred following Hurricane Katrina, when USCG personnel saved more than 33,500 people. DOD is working with interagency partners to establish airspace management protocols to ensure safe and efficient aerial delivery of support within 72 hours following a large-scale disaster.

On-scene Security and Protection

Ensure a safe and secure environment through law enforcement and related security and protection operations for people and communities located within affected areas and also for all traditional and atypical response personnel engaged in lifesaving and life-sustaining operations.

Key finding: *Approximately one-quarter of state and local law enforcement officers work through departments that are accredited to national, voluntary standards, providing capability to address security and protection needs in routine events.*

The Commission on Accreditation for Law Enforcement Agencies (CALEA) developed a set of voluntary standards for law enforcement agencies and began accrediting them in 1984. CALEA accreditation requires an established preparedness program—including all-hazards planning for critical incident response that follows ICS principles—to ensure that law enforcement agencies are ready to address natural disasters or other threats. Several CALEA standards address specific elements of on-scene security and protection, including direction and control procedures. Despite being an entirely voluntary accreditation body, CALEA currently lists over 700 accredited law enforcement agencies nationwide, representing more than 250,000 law enforcement professionals (approximately 25 percent of the Nation's full-time law enforcement personnel). As shown in Figure 29, more than 100 of these accredited law enforcement agencies have a staff size greater than 500, including some of the largest law enforcement agencies in the country such as the California Highway Patrol (which has over 7,500 sworn officers).[9]



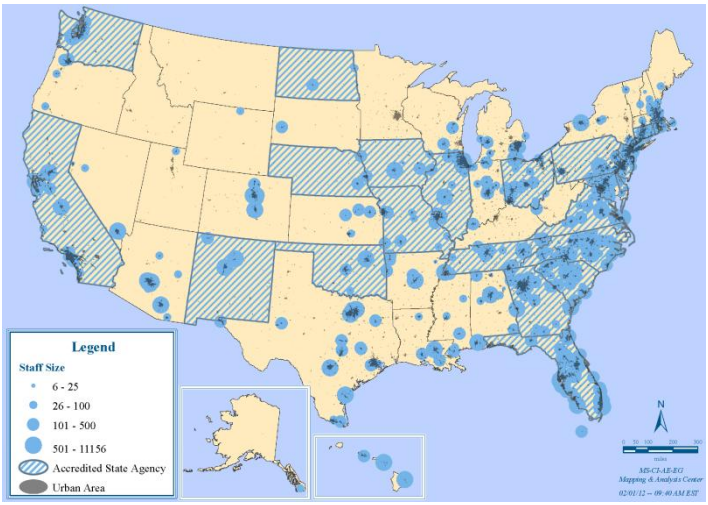


Figure 29: CALEA accreditation requires an established preparedness program to address all hazards.

Key finding: *State, local, tribal, and territorial law enforcement agencies can draw on mutual aid resources and federal assets to address large-scale, complex disasters.*

State, local, tribal, and territorial law enforcement professionals provide on-scene security and protection for routine events. For emergencies of greater size and complexity, law enforcement can draw on extensive mutual aid resources. For example, in the immediate aftermath of Hurricane Katrina, the Emergency Management Assistance Compact—a nationwide mutual aid compact involving numerous disaster response disciplines—supported the deployment of more than 6,800 law enforcement responders from 35 states to augment law enforcement capabilities in Louisiana and Mississippi. In addition, the Illinois Law Enforcement Alarm System (ILEAS) serves as a model state-based law enforcement mutual aid system. Formed in 2002, ILEAS is a consortium of more than 900 local governments in Illinois, representing over 95 percent of Illinois officers and deputies. In addition to supporting intrastate mutual aid within Illinois, ILEAS has supported out-of-state deployments of law enforcement officers in support

of Hurricanes Katrina and Rita in Louisiana; the 2008 Republican National Convention in St. Paul, Minnesota; and the 2009 G20 summit in Pittsburgh, Pennsylvania.[10] Nationwide, FY 2012 preparedness grant programs continue to encourage mutual aid relationships and require that new capabilities built through grant investments be deployable to support regional and national efforts.

Moreover, the National Guard has established a tiered set of assets to support on-scene security and protection missions. For example, National Guard Reaction Forces (NGRFs) provide states with a rapidly deployable unit of 75-125 personnel within eight hours of a request from a Governor or the President. NGRFs are self-sufficient for up to 72 hours.

State, local, tribal, and territorial law enforcement agencies can also request federal assets to support law enforcement in large-scale, complex disasters. ESF #13 (Public Safety and Security) is responsible for coordinating responses from the federal law enforcement community to such requests to support state, local, tribal, and territorial needs, and to provide security.

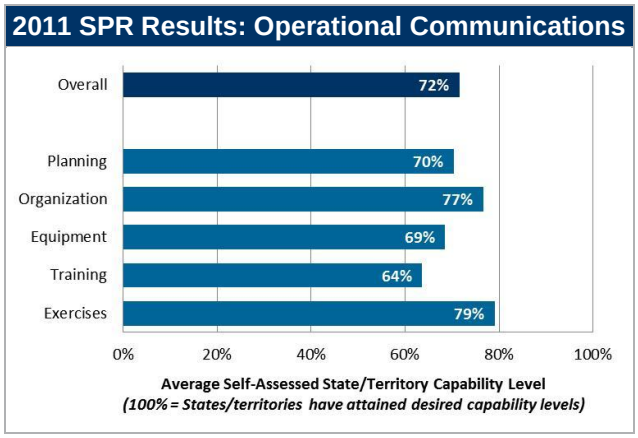
Preparedness Case Study: ESF #13 (Public Safety and Security) Support in Aftermath of Dakota Flooding

When major floods occurred in North and South Dakota in spring and summer 2011, ESF #13 representatives partnered with local police and sheriffs' departments to support flood-relief efforts. Federal personnel and equipment support from DOJ, DHS, and the U.S. Department of the Interior supplemented traditional police functions, including patrol, traffic control, and entry and exit point maintenance in neighborhoods to protect vacant properties. The deployment through ESF #13 included approximately 135 federal law enforcement personnel working in concert with local officials.

Operational Communications

Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.

Key Finding: *Federal, state, local, tribal, and territorial governments have increased cooperation to improve strategic-level and tactical-level communications planning significantly.*



In 2006, DHS supported high-risk urban areas in assessing their tactical interoperable communications capabilities. The results were varied—while all urban areas had established some form of interoperability, 58 percent had no strategic plan in place to guide interoperability efforts. Informed by these results, DHS released the National Emergency Communications Plan (NECP) in 2008, which outlines the Nation's strategic approach to improving interoperability, operability, and continuity of communications. Building on the NECP, all states have developed DHS-approved Statewide Communication Interoperability Plans and participate in ongoing planning workshops to continue to address emergency communications priorities. Moreover, 42 of 56 states and territories have developed State Emergency Communications Plans, with eight more expected by the end of FY 2012. FEMA's Nationwide Plan Review showed that, by 2010, more than 70 percent of states and urban areas

expressed confidence in their communications plans for a catastrophic event, more than doubling the results from 2006 (see Figure 30).

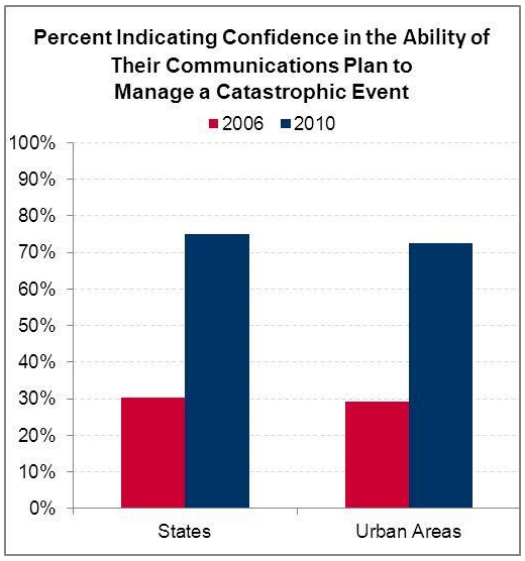


Figure 30: Significant federal preparedness assistance has supported improvements to operational communications planning.

Key Finding: *High-risk urban areas have established capabilities to provide response-level operational communications within one hour of an incident.*

In accordance with the goals laid out in the NECP, 100 percent of 60 high-risk urban areas successfully demonstrated through real-world events their ability to provide response-level communications within one hour of routine events involving multiple jurisdictions and agencies. Urban area communications successes have led to a focus on capabilities in counties and county-level equivalents across the Nation. Evaluating existing capabilities informs DHS technical assistance and improvement planning support. Significant federal financial support has helped state, local, tribal, and territorial governments to prioritize communications-related improvements. In 2007, DHS—in partnership with the U.S. Department of Commerce—awarded nearly $1 billion in Public Safety Interoperable Communications (PSIC) grants, focused largely on the acquisition and deployment of advanced communications. As of September 2011, states had expended more than $690 million of PSIC grant funds. More recently, the Interoperable Emergency Communications Grant Program provided additional communications-related grant funding from FY 2008 to FY 2010. Overall, state, local, tribal, and territorial partners made over $3 billion in operational communications investments supported through federal grant funds from FY 2006 to FY 2010.

Preparedness Case Study: Operational Communications during Hurricane Irene

All six of FEMA's Mobile Emergency Response Support detachments mobilized for the response to Hurricane Irene/Tropical Storm Lee, providing emergency communications services to more than 2,600 emergency responders in 12 states and territories. Private sector firms pre-positioned communications equipment to support response and recovery efforts. They also provided temporary mobile cellular sites and generators to support responders in Vermont, Pennsylvania, New York, and North Carolina.

Key Finding: *Federal and private sector assets have the capability to rapidly restore communications infrastructure following a disaster, but technologies enabling priority use of telecommunications during emergencies have had mixed results.*

FEMA maintains six Mobile Emergency Response Support (MERS) detachments, which can provide communications support following a disaster. In FY 2011, MERS units conducted 110 separate deployments, establishing critical communications in each deployment within 12 hours. Private sector communications firms field their own emergency response teams and can provide deployable communications assets to provide temporary network capacity in affected areas.

Whole community partners—including public and private sector personnel responsible for national security, public safety, and public welfare during emergencies—also have access to the Government Emergency Telecommunications Service (GETS) and Wireless Priority Service (WPS) programs, which enable priority use of telecommunications during emergencies and other periods of high use. The number

of state, tribal, local, and industry partners using these programs increased dramatically between 2005 and 2011 (see Figure 31). Stakeholders tested these programs' capabilities during the 2009 Presidential Inauguration, when hundreds of thousands of people flooded the National Mall with their cell phones. GETS data for that day reported a 99 percent call completion rate while WPS reported only a 65 percent call completion rate, pointing to the need for continued technological improvements in WPS. In August 2011, timely connectivity to WPS also proved challenging in the Washington, D.C., area following a 5.8-magnitude earthquake that caused a tremendous traffic surge on wireless networks. However, WPS technological improvements are well underway. In December 2011, a major wireless provider implemented a WPS enhanced overload performance feature. Enhancement work will continue through 2013. Additionally, a second carrier plans system enhancements into 2013. Other WPS providers appear unaffected by the issue.

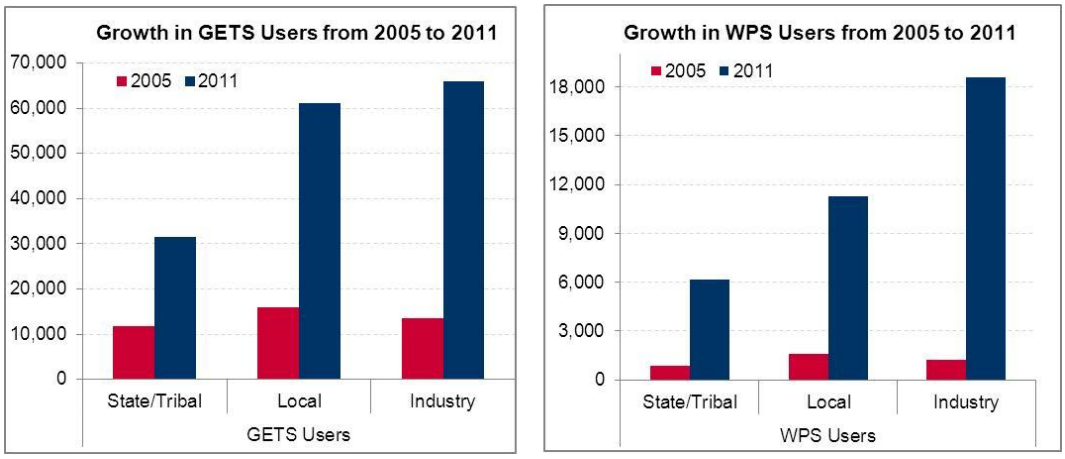


Figure 31: Private sector participation in GETS and WPS now outpaces state/tribal and local participation.

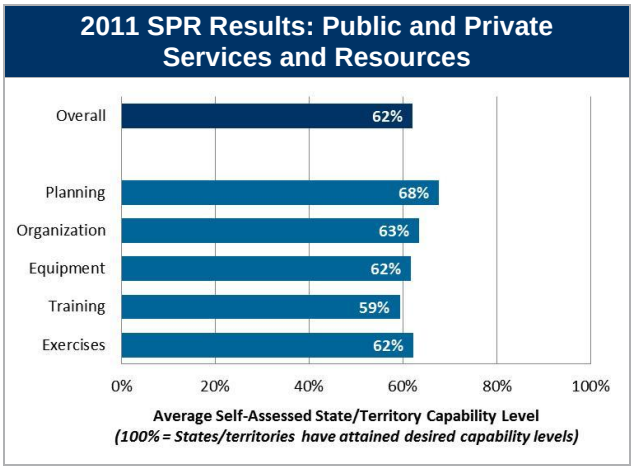
Public and Private Services and Resources

Provide essential public and private services and resources to the affected population and surrounding communities, to include emergency power to critical facilities, fuel support for emergency responders, and access to community staples (e.g., grocery stores, pharmacies, and banks) and fire and other first response services.

Key finding: *Whole community stakeholders have demonstrated the capacity to provide primary commodity support for 1.5 million survivors following a disaster.*

Within the NRF, ESF #7 (Logistics Management and Resource Support) provides primary commodity support following disasters. Primary commodity support includes items such as meals, water, generators, blankets, cots, durable medical equipment, and medications and supplies. ESF #7's planning efforts have included:

- Federal interagency stakeholders;
- State, local, tribal, and territorial governments;
- Voluntary organizations active in disasters;



- Faith-based organizations;
- Non-governmental organizations, such as the American Red Cross; and
- Private sector partners and retail associations.

Together, these partners are capable of providing primary commodity support for 1.5 million survivors following a disaster. ESF #7 tested this capability during National Level Exercise 2011, which simulated a catastrophic earthquake in the New Madrid Seismic Zone. During the exercise, ESF #7 stakeholders procured 21 million liters of water—nearly one-third of the amount needed—from private sector partners to help close significant post-disaster water shortages. However, the exercise also identified a need for federal and state governments to further integrate private sector resource providers into response planning and operations. Donated commodities from private sector partners after disasters also help meet resource needs. In addition, financial contributions to volunteer organizations from private individuals and companies offer an efficient mechanism to target resources to communities in need—cash donations spent by volunteer organizations in affected communities inject funds into the local economy and avoid time-consuming processes for collecting, sorting, transporting, and distributing donated items.

A private sector representative is now embedded in FEMA's National Response Coordination Center, the monitoring and operations center used to coordinate emergency response efforts during a disaster. This rotating liaison enhances coordination with the private sector before, during, and after emergencies.

Preparedness Case Study: Missouri Business Emergency Operations Center

Through a public-private partnership, Missouri has established a Business Emergency Operations Center (BEOC) co-located with Missouri's State Emergency Management Agency. The Missouri BEOC embeds private sector personnel in the state emergency operations center to help coordinate response and recovery logistics and resource management.

The BEOC played a critical role after the 2011 Joplin tornado. The BEOC coordinated with state and local responders and over 25 companies to acquire and deliver first responder equipment and services, including food, water, generators, fuel, and medical supplies.

Key finding: *Fire service capabilities are mature, bringing together whole community partners to implement fire safety, fire prevention, and firefighting activities.*

The Nation possesses mature firefighting capabilities that integrate whole community partners. Local fire departments—professional and volunteer—provide initial fire services, with additional assistance progressively provided via neighboring fire departments, intra-state mutual aid, and inter-state mutual aid. The national wildland fire mobilization system can move firefighting resources anywhere in the Nation within 24 to 48 hours. Community members and organizations also support fire services. A 2011 survey of CERT Programs reported that 153 programs (8.6 percent) supported wildland/urban interface fire-related responses. Similarly, a 2010 independent evaluation of the Fire Corps program found that over 12,000 volunteers had participated in Fire Corps activities during the previous year, including youth programs and fire safety education.[11] Data from the U.S. Fire Administration (USFA) show an overall downward trend in fire deaths per million people. In 2010, USFA reported 10.1 deaths per million people, compared to 13.6 deaths per million people in 2004.

Preparedness Case Study: Community Ideas for Enhancing Preparedness

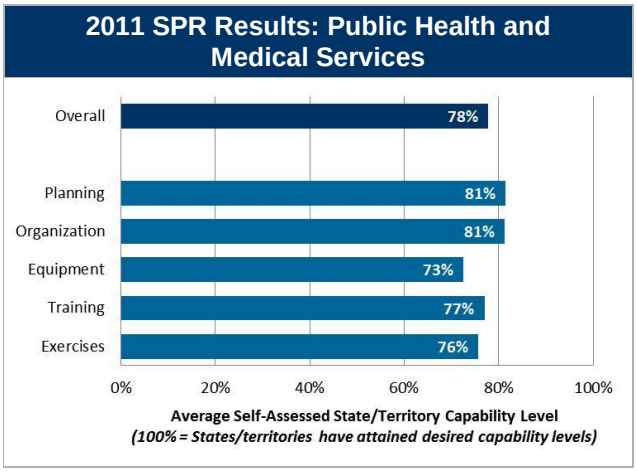
In December 2011, FEMA launched an online collaboration community to solicit ideas from the public on national preparedness assessment and reporting. Among the several dozen comments submitted were the following proposals for enhancing national preparedness in the future:

- Create an Emergency Management Reserve Corps, comprising current and former emergency management professionals who would volunteer their time and expertise during emergencies.
- Include Citizen Corps Councils in developing pre-disaster maps that highlight not only physical and geographic features of the community (e.g., evacuation routes, hazard zones) but also social and economic features. These maps could inform disaster mitigation, response, and recovery efforts.
- Educate the general public on effective donation practices in order to raise awareness about the kinds of donations that are most beneficial to survivors and avoid overwhelming communities after disasters with impractical individual donations.

Public Health and Medical Services

Provide lifesaving medical treatment via emergency medical services and related operations and avoid additional disease and injury by providing targeted public health and medical support and products to all people in need within the affected area.

Key finding: *Federal coordination of medical countermeasure efforts across agencies—from research and development through utilization—has greatly improved since 2001.*



In 2001, limited investment existed in developing, procuring, and stockpiling medical countermeasures to treat the effects of CBRN agents and emerging infectious diseases, including pandemic influenza. In July 2006, HHS established the Public Health Emergency Medical Countermeasures Enterprise (PHEMCE) to coordinate medical countermeasure-related efforts, carried out across HHS organizations in cooperation with other federal departments, including DOD. The PHEMCE provides coordinated, strategic direction and policy oversight for HHS medical countermeasure preparedness activities—from requirements generation, research, early- and late-stage product development, and procurement to utilization planning activities—for threats that have the capacity to affect national health security. Figure 32 depicts the increase of aggregate awards and proposals for medical countermeasures.

In 2007, a *PHEMCE Strategy and Implementation Plan for Chemical, Biological, Radiological and Nuclear Threats* was released which laid out HHS's medical countermeasure priorities, in particular in the areas of advanced development and acquisition.

Also established in 2006, the HHS ASPR Biomedical Advanced Research and Development Authority, has awarded more than 70 contracts and grants for the advanced development of medical countermeasures. Further, Congress established the Project BioShield Special Reserve Fund for countermeasures acquisition; nearly $4.1 billion in expenditures from this fund have occurred from FY 2004 through FY 2011. Today, vaccines, therapeutic drugs, and diagnostic devices are in place for

bioterror threats (e.g., anthrax or smallpox) as well as naturally occurring infectious diseases (e.g., pandemic influenza), and a strong product pipeline exists for these and other threats. In addition, while only one vaccine manufacturing site existed in the United States during the influenza vaccine shortage of 2004, three sites now exist with more in development. In 2010, HHS conducted a comprehensive review of the medical countermeasures landscape and articulated a long-term vision for future efforts—the Nation must have the nimble, flexible capacity to produce medical countermeasures rapidly in the face of any attack or threat.

The CDC has been working with states and urban areas to improve plans for receiving and distributing medical assets from the CDC's Strategic National Stockpile (SNS). Since 2007, the CDC has conducted annual technical assistance reviews to assess state and local plans to receive, stage, store, distribute, and dispense SNS assets during a public health emergency. These reviews assess plans on a scale of 0 to 100; as shown in Figure 33, scores have increased steadily for both states and urban areas since 2007, signifying year-over-year improvements in preparedness for public health emergencies due in part to over $8 billion in funding support from the CDC since 2001.

In addition, FDA has established the FDA Medical Countermeasures Initiative to facilitate development and availability of medical countermeasures for use in public health emergencies. FDA has issued an Emergency Use Authorization allowing local responders to begin immediate mass dispensing of the antibiotic doxycycline after an anthrax attack. Another authorization covers antibiotics prepositioned in the homes of postal worker volunteers, who would help deliver medical countermeasures to residences through the National Postal Model.

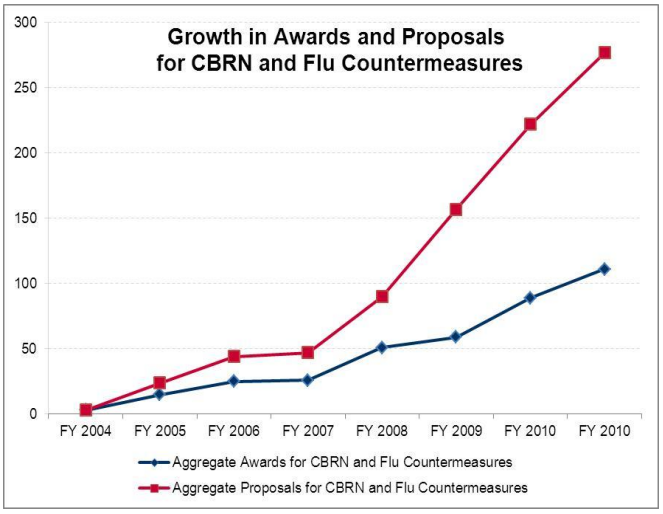


Figure 32: Total awards and proposals for medical countermeasures increased significantly since the 2006 creation of the PHEMCE.

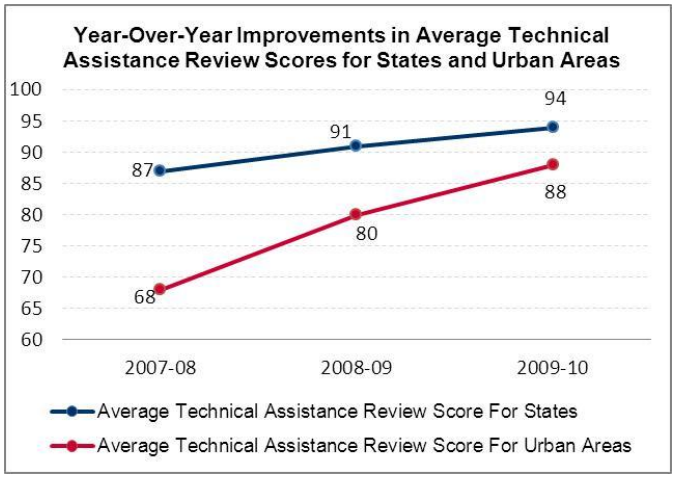


Figure 33: CDC grants have supported continuous improvements to state and urban area plans for receiving and distributing CDC medical assets.

Key finding: *A focus on hospital medical surge planning and capabilities has improved hospital preparedness nationwide. Greater emphasis is being placed on community approaches that involve healthcare coalitions, which include a variety of healthcare organizations, public health, mental and behavioral health, and emergency management to enhance medical surge.*

The HHS Hospital Preparedness Program (HPP) has awarded approximately $4 billion to states, territories, and large metropolitan areas since 2002 to improve preparedness of healthcare systems nationwide. This program improved the resilience of U.S. healthcare organizations and increased their capacity to respond to disasters of any type. In 2009, more than 76 percent of participating hospitals met at least 90 percent of HPP's all-hazards preparedness program measures. Figure 34 illustrates progress from 2009 to 2011 through HPP in healthcare system preparedness, including communications, medical evacuation, and fatality management.

Currently, a focus area for HPP is the development of community- and regionally based healthcare coalitions. These coalitions bring together healthcare organizations, public health, and emergency management to conduct joint planning, build structures to efficiently share resources, and better collaborate to strengthen the overall community health system resilience. Strong and resilient healthcare coalitions are the key to an effective state and local public health and medical response.

Despite these gains, Institute of Medicine reports highlight that hospitals and emergency departments in the United States are struggling to manage the current volume of patients who present for care in day-to-day, non-emergency situations. These challenges are the result of structural problems within the healthcare delivery system that have resulted in fewer hospitals with emergency departments, increases in non-emergency patient visits to emergency departments, diversion of emergency medical services, regionalization of surgical care, and healthcare worker shortages that have led to unprecedented crowding in emergency departments.

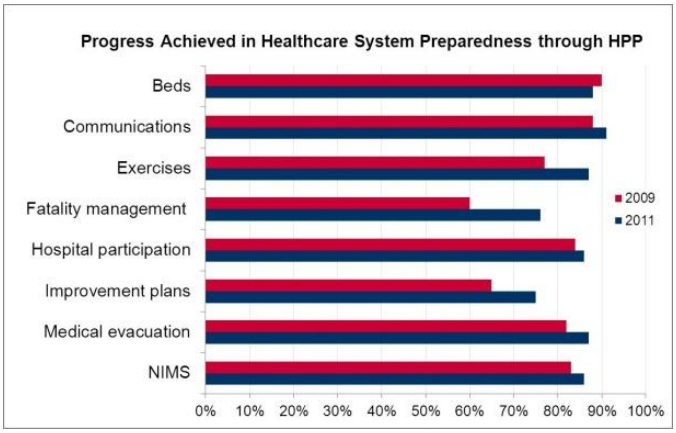


Figure 34: HPP funding has strengthened healthcare system disaster response capacity and overall resilience.

Key finding: *The Nation has built a highly responsive public health capability for managing incidents, but recent reductions in public health funding and personnel have impacted these capabilities.*

CDC data from 2009 indicate that designated state public health personnel with lead incident management roles needed only 66 minutes to report for immediate duty in response to a no-notice public health emergency. Moreover, 47 states reported having sufficient staffing capacity to work five, 12-hour days for six to eight weeks in response to an infectious disease outbreak.[12] While these metrics highlight the Nation's responsive public health capabilities, the Nation has experienced a reduction in local public health jobs. From 2008 to 2010, states reduced their public health workforces by 14 percent and localities cut 20 percent.

Key finding: *Emergency Medical Services (EMS) capabilities are critical to managing medical emergencies. Continuing to integrate EMS into planning and preparedness initiatives is an area of national focus.*

EMS is the practice of medicine involving the triage, treatment, and transport of patients with acute traumatic and medical conditions in a pre-hospital environment. In 2011, the Federal Interagency Committee for Emergency Medical Services released the first comprehensive description of EMS, EMS emergency preparedness, and 9-1-1 systems. The national EMS survey noted that nearly 20,000 credentialed EMS agencies exist in the United States, with more than 826,000 credentialed personnel at the Emergency Medical Technician (EMT)-Basic, EMT-Intermediate, and EMT-Paramedic levels. These entities conducted nearly 37 million responses in 2009, with over 28 million transports. According to the survey, 87 percent of responding state EMS offices indicated that they actively participated in the HPP, enhancing coverage of pre-hospital treatment and transport issues in hospital preparedness. In 2010, 47 percent of state EMS offices participated in at least one CBRNE mass casualty exercise. The survey also indicated that the economic downturn has negatively affected available budgets for state EMS offices. This comprehensive national EMS survey provides a baseline against which to measure future progress in strengthening EMS capacity.

In a catastrophic event, patient treatment and medical evacuation needs will exceed state, local, tribal, and territorial capabilities, particularly when coupled with damaged vehicles, roadways, airfields, and bridges.

To support EMS transport capabilities, FEMA's national ambulance contract delivers large patient-movement capacity, providing 1,200 ambulances, 100 fixed- and rotary-wing aircraft, and 14,000 para-transit seats, evenly split over four zones across the country.

Key finding: *The Nation has developed an array of federal and volunteer medical assets to supplement state, local, tribal, and territorial capabilities.*

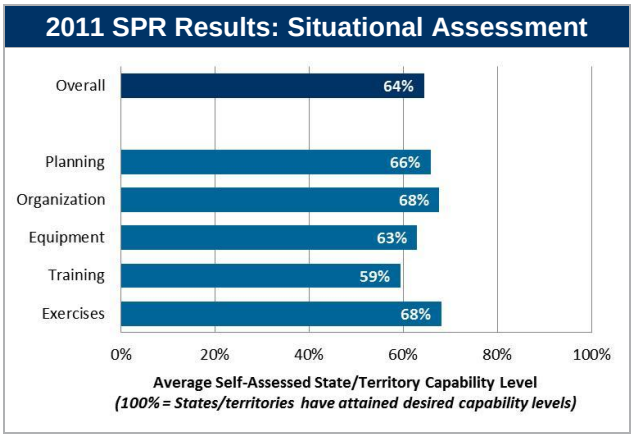
Federal agencies have established a variety of teams and volunteer resources to supplement state, local, tribal, and territorial public health and medical capabilities. For example, the NDMS is a partnership among HHS, DOD, the U.S. Department of Veterans Affairs, and DHS that provides medical response surge during emergencies through on-scene medical care, patient transport, and definitive care in participating NDMS hospitals. NDMS response assets consist of 70 medical teams, 12 mortuary teams, and 5 veterinary teams that can deploy and provide care within 24 hours of an event. Teams use medical equipment and supplies that are stored at regional warehouses and transported to meet them. NDMS also coordinates patient movement from the disaster area to available beds in 1,600 participating hospitals. In addition to NDMS resources, the U.S. Public Health Service (USPHS) Readiness and Response Program maintains 41 response teams including Rapid Deployment Forces, Applied Public Health Teams, Mental Health Teams, Services Access Teams, and Incident Support Teams. Established in 2006, each team includes trained responders from the USPHS Commissioned Corps who can deploy within 12 hours of activation to provide medical, public health, mental health, veterinary, and incident support services.

An important tool for coordinating volunteer response is the Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP), which helps pre-register volunteer health professionals and verify their credentials and qualifications in advance of an emergency. All 50 states have operational ESAR-VHP systems with registered volunteers across 20 health professions and can generate a verified list of volunteer health professionals available for deployment within 24 hours. Another volunteer resource is the Medical Reserve Corps, established by the Office of the Surgeon General to bring together public health and medical volunteers around the Nation to strengthen public health, emergency response capacity, and community resiliency. As of December 2011, over 200,000 Medical Reserve Corps volunteers exist in nearly 1,000 units across all 50 states. In FY 2011, Medical Reserve Corps units reported participation in approximately 10,000 local activities. Together, these units provide volunteer public health and medical capability coverage to 91 percent of the U.S. population.

Situational Assessment

Provide all decision makers with decision-relevant information regarding the nature and extent of the hazard, any cascading effects, and the status of the response.

Key finding: *Social media are emerging as a key situational awareness tool in disasters. Whole community partners are increasingly using social media to share situational awareness information, but governments have been slower to embrace ways to receive situational awareness information from the public.*



A 2011 survey found that 65 percent of adult Internet users report using a social networking site like MySpace, Facebook or LinkedIn, more than double the 29 percent reported in 2008.[13] In particular, social media have played an increasing role during emergencies and disasters over the past several years. A 2011 American Red Cross survey indicated that one in seven respondents had

experienced or witnessed an emergency and posted information about that event to a social media site.[14] Seventy percent of survey respondents also expected that local emergency response organizations would monitor social media for emergency requests.[15] Eighty percent of survey respondents expect national emergency response organizations to monitor social media.[16] Researchers studying the use of Twitter during the March 2011 Japanese earthquake and tsunami found that survivors with Twitter accounts tweeted for assistance when they could not place a telephone call.

Emergency response organizations are increasingly using social media to transmit information to the public through resources such as Facebook pages and Twitter accounts. The International Association of Chiefs of Police counts over 2,000 law enforcement agencies around the Nation that use some form of social media.[17] FEMA alone uses 16 Twitter accounts to reach over 100,000 people and actively posts information to Facebook and YouTube. In 2010, FEMA launched a mobile website, followed by a mobile app in 2010, both of which allow the public to access resources directly on their smartphones. Many other agencies maintain similar social media presences. For example, FEMA worked with the Tennessee Emergency Management Agency (TEMA) in the aftermath of the 2009 flooding to set up a joint Facebook page that provided the public with the latest information about ongoing disaster response and recovery efforts. Now that the main recovery phase has concluded, TEMA uses the Facebook page to share general preparedness and disaster-related information (see Figure 35).

Emergency response organizations have been slower to adopt ways to receive situational awareness information from community members. From a policy perspective, some emergency response organizations have strict security policies that prohibit use of social media for operational purposes. In other cases, agencies are overwhelmed by the sheer volume of situational awareness data shared before, during, and after emergencies. The Alabama State EOC recently countered this challenge by relying on online volunteers to help manage the large amount of social media information generated following an outbreak of tornadoes in April 2011.[18] Similarly, the American Red Cross used trained digital volunteers to monitor updates on Hurricane Irene in August 2011 via a variety of social media channels.[19]

Figure 35: More than two years after the 2009 floods, TEMA continues to use its Facebook page to provide preparedness information to the general public.

Key finding: *Whole community partners are increasingly using geographic information systems (GIS) tools to provide situational assessment capabilities.*

GIS tools enhance situational understanding for decision-makers and the general public by enabling whole community stakeholders to display disaster response and recovery information through maps. Using GIS tools to inform situational assessment has become so prevalent that the overwhelming majority of states and high-risk urban areas have incorporated GIS capabilities. Non-governmental organizations are also increasingly using GIS tools to support disaster response. For example, the Red Cross uses a GIS-based tool that displays the addresses and populations of open shelters via the Red Cross website and through a smartphone application.

Federal agencies use powerful GIS platforms for integrating and visualizing data from multiple streams. FEMA's Situational Awareness Viewer for Emergency Response & Recovery (SAVER^2) and HHS's MedMap programs are two of many federal GIS tools that provide federal and non-federal stakeholders with situational assessment data before, during, and after disasters. DHS recently issued the *Federal Interagency Geospatial Concept of Operations*, which identifies and aligns federal geospatial resources for use pre- and post-disaster, and ensures timely and accurate sharing of geospatial data. FEMA GIS capabilities help provide situational awareness to responders and policy makers using software tools such

as HURREVAC and HAZUS for predictive modeling and impact analysis. FEMA also maps important disaster response data in real-time, including road conditions, debris locations, points of distribution for emergency relief items, and disaster recovery centers. The Interagency Modeling and Atmospheric Assessment Center distributes map products and GIS data files to enable Federal partners to incorporate consensus atmospheric dispersion modeling into their situational assessment tools. Similarly, the Federal Radiological Monitoring and Assessment Center aggregates all federal radiological environmental monitoring data and makes them available to stakeholders. In addition, DOE has developed an in-house monitoring and mapping GIS tool called EAGLE-*i*, which provides near real-time information regarding energy grids and networks and can map components of the Nation's energy infrastructure along with real-time weather hazards. Federal GIS stakeholders also collaborated to develop GIS smartphone-capable applications for search and rescue teams, allowing them to push on-scene data and images to decision-makers. Search and rescue teams successfully deployed these new mobile applications during the response to Hurricane Irene in 2011.

Preparedness Case Study: Virtual Alabama

In 2005, the Alabama Department of Homeland Security initiated development of Virtual Alabama, a GIS tool that overlays operational data from emergencies on three-dimensional maps (see Figure 36). Virtual Alabama transforms massive amounts of geo-referenced data into useful information for technical and non-technical users. Virtual Alabama supports situational assessment activities such as critical infrastructure mapping, plume modeling, and damage assessments. By 2010, Virtual Alabama had provided over 28,000 people from more than 1,500 agencies throughout the state, region, and Nation with access to a robust set of data made available by each of the state's 67 counties.

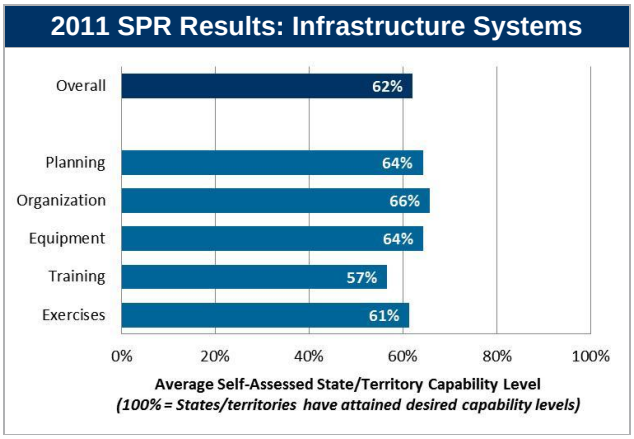
Figure 36: Virtual Alabama includes plume modeling capabilities to inform decision-making related to situational assessment.

Response/Recovery Core Capabilities

Infrastructure Systems

Stabilize critical infrastructure functions, minimize health and safety threats, and efficiently restore and revitalize systems and services to support a viable, resilient community.

Key finding: *Utilities and other critical infrastructure partners have long-standing and proven mutual aid networks to promptly stabilize and restore infrastructure systems following disasters. Public works responders are also increasingly participating in mutual aid networks. However, sustained loss of electrical power following a catastrophic disaster could have significant effects on response and recovery activities.*



To varying degrees of maturity, utilities and other critical infrastructure partners have established mutual aid networks to increase disaster response capabilities. These mutual aid networks enable the sharing of personnel, equipment, and other resources to support disaster response and recovery efforts. Examples include the following:

- The American Gas Association has developed a mutual assistance program that governs the provision of mutual assistance during disasters among nearly 100 utilities and product/service providers nationwide.[20]
- In a 2009 survey of 610 water/wastewater utilities, nearly all respondents reported that they had established or were in the process of establishing written agreements for mutual aid.[21] Forty-eight Water/Wastewater Agency Response Networks exist nationwide, serving as intrastate mutual and assistance agreements.
- More than half of respondents to a 2011 American Public Works Association survey indicated that they belong to some sort of formal or informal mutual aid program.[22]
- The Edison Electric Institute, which serves 95 percent of the customers in the shareholder-owned segment of the U.S. electric power industry and represents approximately 70 percent of the industry overall, has a long-standing Mutual Assistance Program in place.[23] Moreover, over the past decade, more than 815 utilities have signed the American Public Power Association's disaster response mutual aid agreement.

Similarly, public works responders are increasingly participating in mutual aid networks, including state-wide initiatives such as the New Hampshire Public Works Mutual Aid program, the Illinois Public Works Mutual Aid Network, and Washington's Public Works Emergency Response Mutual Aid Agreement. Together, these mutual aid networks ensure that utilities and critical infrastructure partners are able to promptly surge resources following a disaster to stabilize and restore infrastructure systems. The electric industry relied heavily on its mutual aid agreements during the response to Hurricane Irene which, at its peak, disrupted power for nearly six million customers along the East Coast. Utilities and critical infrastructure partners restored power to approximately 90 percent of customers in less than five days (see Figure 37).

While electric utilities are accustomed to rapidly restoring electricity following disasters, a catastrophic disaster would likely result in sustained power outages. Sustained power outages would present significant challenges to other response and recovery capabilities due to identified gaps in emergency power. For example, only 12 percent of the mass care shelters listed in the American Red Cross and

FEMA National Shelter Systems are equipped with on-site generators, and only six percent have self-sufficient power. Private sector contracts would be critical because federal generator inventories are unlikely to be sufficient. To support this identified gap, federal agencies can contract for resources and deploy teams to support response efforts. For instance, USACE within DOD maintains a $450 million contract for generator rentals that can potentially access almost every rental generator in the country. USACE can also deploy the 249th Engineer Battalion (Prime Power) to support disaster response efforts. The 249th can assess critical electricity needs and manage generator installation to provide power to critical community facilities—including hospitals, water and sewer treatment plants, and law enforcement facilities—until power companies can restore the commercial power distribution network. To address the challenges of prolonged power outages, Florida passed a law in 2006 requiring gas stations that meet certain criteria to be able to quickly deploy backup generators that would allow fuel to be pumped during power outages. More broadly, the Federal Government and private sector stakeholders have partnered to invest in smart grid technologies which enable more rapid restoration of electric service following major disruptions.

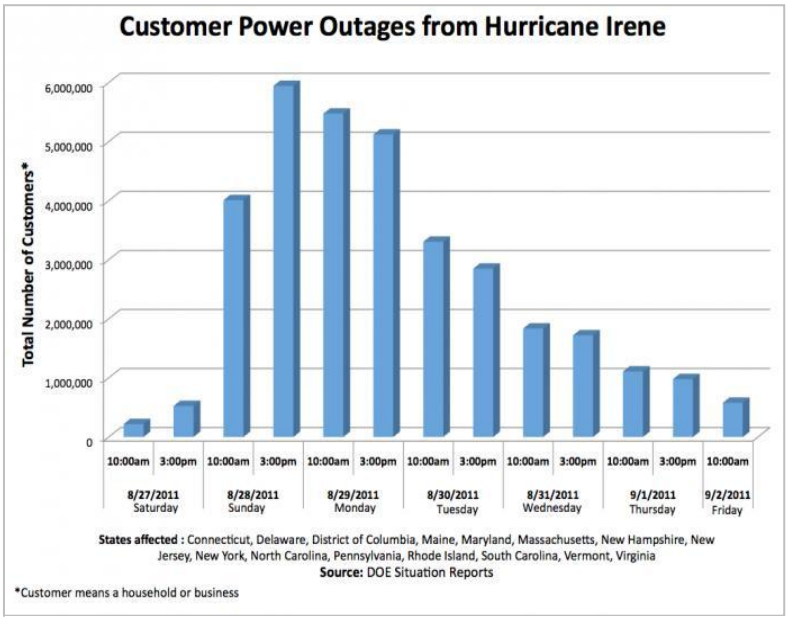


Figure 37: After peaking on August 28 at nearly six million, the number of households without power following Hurricane Irene steadily trended downward.

Key finding: *Long-term infrastructure recovery capabilities are in the early stages of development.*

While federal agencies such as the DOD USACE have experience working with states to support long-term infrastructure recovery, overall coordination processes for infrastructure recovery are still in development. FEMA, in partnership with other federal agencies and whole community stakeholders, only recently published the NDRF (September 2011). The NDRF's Infrastructure Systems RSF annex and a supporting Federal Interagency Operational Plan called for in PPD-8 will guide future development of long-term infrastructure recovery capabilities.

Whole Community Accomplishment: Restoring Transportation After Hurricane Irene

Tropical Storm Irene struck Vermont on August 28, 2011, damaging more than 500 miles of state highways and closing 34 state bridges. The resulting damage isolated 13 communities, forcing Vermont's National Guard to airlift food and water. By August 31, crews had restored emergency access to all isolated communities. Within 30 days, 98 percent of the roads were reopened. Four months later, Vermont officials celebrated the final repair of Route 107, the last state highway to reopen after sustaining severe flood damage. In the three-mile section of Route 107 hit the hardest, a strip of road about 4,000 feet long was completely missing (see Figure 38). However, a repair project that would normally take two years took only 119 days. The new roadway can withstand another "Irene, plus two feet."[24] More than 46 companies worked with the Vermont Agency of Transportation, National Guard units, and law enforcement to complete repairs.

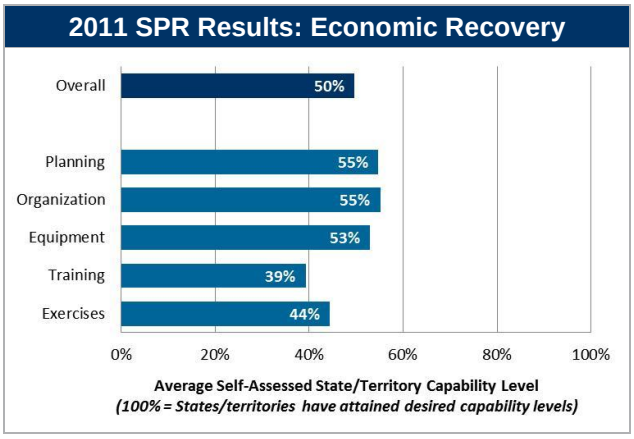
Figure 38: Washed-out roadways in Vermont following Hurricane Irene were restored rapidly to "better than new" condition despite considerable damage.

Recovery Core Capabilities

Economic Recovery

Return economic and business activities (including food and agriculture) to a healthy state and develop new business and employment opportunities that result in a sustainable and economically viable community.

Key Finding: *More than half of all states have assumed significant roles in long-term economic recovery through programs to provide financial recovery assistance to individuals and businesses.*



At least 28 states have established assistance programs to help both businesses and individuals rebound after disasters that do not meet the threshold for Presidential disaster declarations.[25] States pay for these assistance programs through emergency management operating budgets, general state appropriations, emergency disaster relief funds, or contingency funds. Usually, a separate state disaster fund exists with funding appropriated regularly to ensure the availability of sufficient resources during crises. In addition to financial assistance, some recovery planning activities are also under way. Ten states have approved enhanced mitigation plans that address economic revitalization. In addition, 28 states have met the requirements of the EMAP accreditation process to develop recovery plans or strategies, considering both short- and long-term needs for restoring critical functions, services, vital resources, facilities, programs,

and infrastructure to the affected area. The planning and coordination functions established under the NDRF will continue to advance recovery planning efforts by state, local, tribal, and territorial partners.

Key finding: *Many private sector firms have developed disaster recovery plans that address information technology issues. Emerging voluntary accreditation programs for private sector entities will encourage more comprehensive preparedness and recovery planning.*

Pre-event business continuity and disaster recovery planning can help private firms return to normal operations more quickly after a disaster. A 2010 survey of 200 companies of various sizes found that approximately 79 percent had disaster recovery plans in place. However, funding to support plan updates had dropped since 2007, affected by the recent economic downturn. In 2007, 58 percent of surveyed firms reported updating disaster recovery plans twice a year or more, but that number dropped to 42 percent in 2010. Similarly, in 2007, 82 percent of surveyed firms reported testing disaster recovery plans once a year or more, but that number declined slightly to 78 percent in 2010 (see Figure 39).[26]

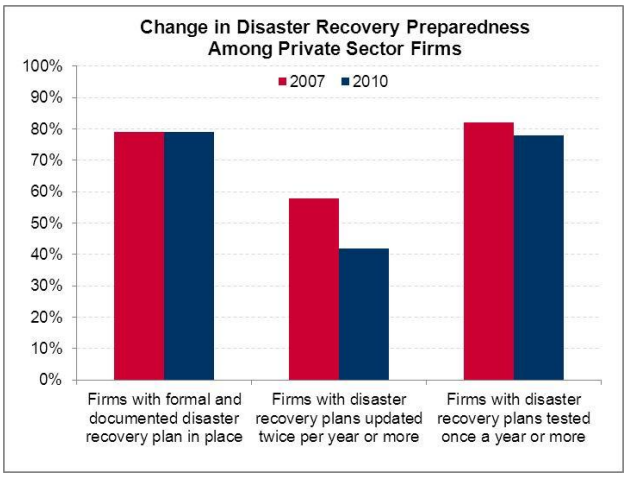


Figure 39: The economic downturn has challenged private sector efforts to prepare for recovery activities.

The Voluntary Private Sector Preparedness Accreditation and Certification Program (PS-Prep) broadens private sector recovery planning from information technology issues to a more holistic view of disaster management, emergency management, and business continuity. PS-Prep is a voluntary third-party accreditation and certification initiative for private sector entities, established to encourage preparedness and to help businesses recover and reopen quickly following disasters. The program is based on three preparedness and business continuity standards developed by the National Fire Protection Association, the British Standards Institution, and ASIS International and adopted by DHS in 2010 as part of PS-Prep. Alternatively, smaller businesses can use the Ready Rating™ program from the American Red Cross, which is a free, self-paced program designed to help businesses, organizations, and schools better prepare for emergencies. Simple steps to enhance basic disaster preparedness can yield benefits in economic and community resilience.

Preparedness Case Study: ResilientSF

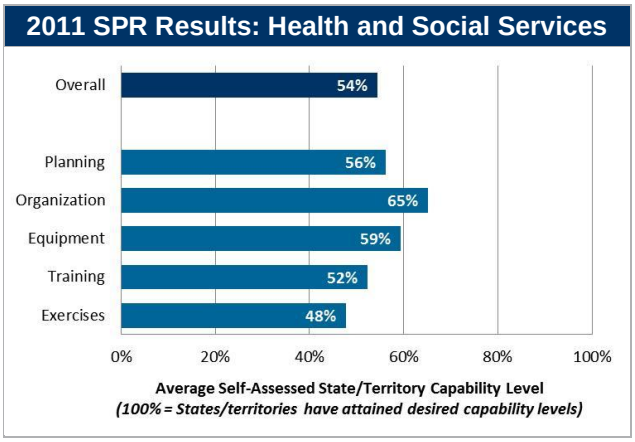
In 2008 the San Francisco City Administrator's Office and the Department of Emergency Management of San Francisco partnered with Harvard University's John F. Kennedy School of Government to initiate a planning process to expedite recovery from a major incident. This effort grew into the ResilientSF initiative, launched in December 2010 to advance San Francisco's overall resilience by providing a framework and road map that coordinates plans, programs, resources, and relationships to boost individual, organizational, and community capacity to collectively solve problems. From the beginning, ResilientSF has emphasized inclusivity, helping stakeholders identify natural entry points in the planning process by breaking down resilience into eight distinct categories, such as environmental, economic, and health issues. ResilientSF initiatives have included:

- Framing the long-term discussion of resilience and recovery by engaging government, non-profit, and private sector partners in traditional and non-traditional opportunities;
- Building an SF Lifelines Council, which is the first locally managed workgroup of agencies and businesses that provide communities with critical services such as power, telecommunications, water, and transportation on a daily basis;
- Developing ONESF, which is a 10-year capital plan that takes a long-term approach to advancing the San Francisco physical infrastructure; and
- Creating SF Heroes, which is a smartphone application that invites users to engage in activities that increase their resilience and challenge their friends to do the same.

Health and Social Services

Restore and improve health and social services networks to promote the resilience, independence, health (including behavioral health), and well-being of the whole community.

Key finding: *Whole community partners have established standards and plans to support short-term health recovery. Integrating social service and behavioral health into recovery activities and assessing long-term health and social services recovery are areas for future improvement.*



Health and medical facilities have significantly improved in the area of short-term health recovery. In 2007, the Business Continuity Planning Workgroup for Healthcare Organizations surveyed more than 1,000 healthcare facilities and found that fewer than half (45 percent) had a business continuity plan in place to guide disaster recovery efforts.[27] In 2008, recognizing the importance of short-term disaster recovery, the Joint Commission instituted a new requirement that hospitals assess their readiness for operating without community support for 96 hours and establish plans accordingly. This standard applies to the more than 4,100 hospitals (approximately 82 percent of hospitals nationwide) that the Joint Commission accredits. Data from HHS's Hospital Preparedness Program (HPP) further emphasize progress made. Based on 2009 data, more than 76 percent of hospitals participating in the HPP met 90 percent or more of the program's metrics for all-hazards preparedness, which promotes overall hospital resilience to disasters.

Integrating social services and behavioral health into recovery activities presents unique challenges. First, in many states and localities, social service and behavioral health programs face significant resource constraints, limiting their ability to prepare for disasters. In addition, privately owned facilities deliver

many of these services, rather than state, local, tribal, and territorial public health personnel. Moreover, many personnel who support social services and behavioral health have not received appropriate disaster-related training. Accordingly, whole community partners, such as the American Red Cross and faith-based organizations, often take lead roles in social services and behavioral health recovery. For example, the American Red Cross' Mental Health Services team has 4,000 mental health professionals who can assess and tend to emotional needs during and after a disaster and connect people with local professionals to address long-term needs.[28] Similarly, Lutheran Social Services of the South, a faith-based organization in Texas, has a dedicated disaster response and recovery operation. Following Hurricane Ike in 2008, the organization led a three-year effort to provide post-disaster case management for over 8,100 households affected by the hurricane.[29]

Preparedness Case Study: Faith-based and Community Organization Activities in Miami-Dade County, Florida

In March 2011, the Office of Emergency Management (OEM) in Miami-Dade County, Florida, partnered with FEMA to launch the Communities Organized to Respond in Emergencies (CORE) program, which engages faith-based and community organizations in planning for, responding to, and recovering from disasters. CORE works to ensure that post-disaster assistance is available throughout the county, including in traditionally underserved areas. Since its inception, CORE has actively recruited faith-based and community organizations, working with them to assess the types of services and resources they could provide after a disaster and tracking that information in a database. As of June 2011, the CORE program had assessed 103 organizations and created ties with 25 affiliates, over 55 percent of which are faith-based organizations. CORE affiliates support the Miami-Dade County OEM by serving as temporary shelters and distribution points for emergency supplies, managing donation drives, offering translation services for non-English speaking residents, and assisting with volunteer coordination, emotional and spiritual care, and other recovery activities.

Measuring the effectiveness of long-term recovery in health and social services is challenging because it requires community-level analysis over an extended period of time. One way to evaluate progress of long-term recovery in health and social services is to identify case studies and track them for a sustained period, comparing metrics from year to year and applying those lessons to future long-term recovery efforts. The recently published NDRF will guide collaboration efforts by whole community partners to support recovery in health and social services.

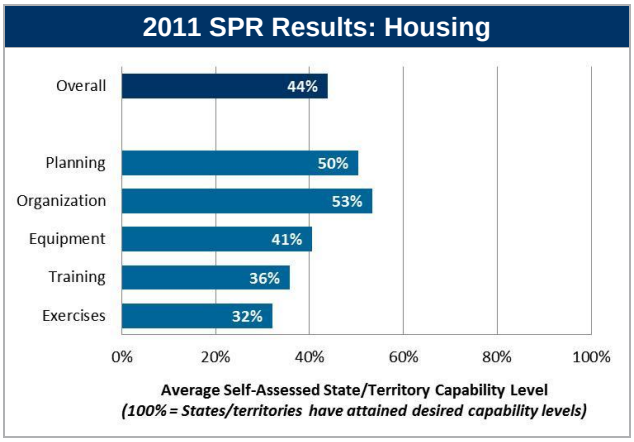
Preparedness Case Study: Health Care in New Orleans Since Hurricane Katrina

Six years after Hurricane Katrina, a new clinic network provides improved primary care for city residents, reaching minority and uninsured residents in particular. This network of over 90 clinics replaces Charity Hospital, a major provider of medical care for New Orleans' poor and uninsured populations prior to its closure post-Katrina. The New Orleans medical community began planning after the storm for a new cost-effective network of clinics to provide neighborhood-based healthcare access. Due in part to these clinics, 55 percent of over 1,500 residents surveyed in 2010 reported that their healthcare needs were being met "very well," up from 36 percent in 2006. However, 77 percent still reported a shortfall in overall healthcare service availability; 84 percent pointed to insufficient services for low-income residents and those without insurance coverage.[30]

Housing

Implement housing solutions that effectively support the needs of the whole community and contribute to its sustainability and resilience.

Key Finding: *Federal agencies join with state, local, tribal, and territorial partners to provide housing assistance rapidly after disasters and to support long-term housing recovery.*



A key federal post-disaster responsibility is to provide housing assistance to eligible survivors whose primary residence is uninhabitable or who are displaced by disaster. Pursuant to the Stafford Act, FEMA is responsible for temporary housing up to 18 months; HUD is responsible for long-term housing support. In most cases, FEMA provides temporary housing, and most individuals are able to return home or relocate to rental properties quickly. FEMA temporary housing assistance includes transitional sheltering assistance (hotel/motel), rental assistance, repair and replacement assistance, or direct housing (temporary housing units). In FY 2011, FEMA placed eligible applicants in temporary housing within 60 days 99 percent of the time. Since 2005, FEMA has also more than doubled its capacity to conduct housing inspections, speeding eligibility determination for post-disaster aid to an average of three days. In addition, FEMA and HUD partner to provide temporary housing rental assistance and housing counseling services to eligible individuals and households through the Disaster Housing Assistance Program.

HUD provides longer-term housing assistance after disasters through Community Development Block Grant (CDBG) Disaster Recovery Assistance, which has delivered nearly $30 billion in aid to 27 states and territories since 2001. Congress appropriates this funding only in extraordinary circumstances following disasters when standing federal disaster recovery programs are not adequate to meet existing needs. The program supports a range of recovery activities, including relocation payments for displaced residents, rehabilitation of damaged homes and buildings, homeownership support, repair and reconstruction of affordable rental housing, and buyouts of flood-damaged properties. Generally, at least 50 percent of the funds must support activities that principally benefit individuals with low or moderate incomes. Results from CDBG Disaster Recovery Assistance are evident along the Gulf Coast, which received $19.7 billion following Hurricanes Katrina and Rita in 2005. For example, properties receiving CDBG assistance were nearly twice as likely to be rebuilt as properties that did not receive funding. More than $11 billion has helped over 157,000 homeowners in Louisiana and Mississippi rebuild their homes. In addition, communities spent over $1.1 billion to deliver affordable rental housing through CDBG Disaster Recovery Assistance following disasters in 2005 and 2008. These resources supported more than 16,000 affordable rental housing units throughout Florida, Alabama, Mississippi, Louisiana, and Texas following the 2005 hurricane season.

State and federal agencies demonstrated their ability to deliver housing support rapidly in response to the May 2011 Joplin, Missouri, tornado, which destroyed or damaged 7,500 housing units and displaced 9,000 people. By October 2011, FEMA had provided housing assistance to over 2,900 families. In addition, the number of households in temporary housing peaked at 586 in October 2011 and has declined steadily since then as households have found permanent housing solutions in and around Joplin. One of Joplin's priorities was to reopen its schools on time in fall 2011. At the request of the state-led housing task force, FEMA helped to place families with school-aged children in mobile home parks first, ultimately housing all identified families before the start of the school year. In addition, USDA exercised its statutory authority to provide homeownership loan guarantees to the Joplin community through the USDA Rural Housing Service.

Preparedness Case Study: Recovering After the Joplin, Missouri Tornado

The May 2011 tornado in Joplin, Missouri, damaged the community's social services infrastructure, creating new needs for many community residents, particularly among at-risk populations of older adults and children. Partnerships among community residents, community-based organizations, and agencies at all levels of government have proven integral to successful social services recovery. For example, State and local Aging Networks partnered with the HHS Administration on Aging to help older residents who lost their homes obtain relocation assistance. Similarly, an innovative Child Care Task Force—coordinated by the HHS Administration of Children and Families and implemented in partnership with federal, state, local, and nonprofit stakeholders—harnessed resources to meet Joplin's emergency child care needs after the tornado destroyed or damaged 27 child care facilities. When the tornado demolished six school buildings, the Joplin School District relocated classes to alternate facilities, including empty retail space at a local mall. Public-private collaboration allowed schools to open on time in August 2011.[31]

Key Finding: *New doctrine on disaster housing outlines roles and responsibilities for whole community partners to deliver sheltering, interim housing, and permanent housing. Measuring progress in long-term housing recovery is an area for improvement.*

Following Hurricane Katrina, the government, businesses, and nonprofit organizations collaborated to create national guidance on disaster housing. This national guidance includes the *National Disaster Housing Strategy* (NDHS) (January 2009), the *NDHS Implementation Plan* (March 2010), and the Housing RSF of the NDRF (September 2011). HUD leads the Housing RSF, with support from FEMA, DOJ, USDA, and other organizations. Together, this doctrine outlines roles and responsibilities for whole community partners in delivering housing assistance; however, performance measures for long-term housing recovery are needed in order to track annual progress.

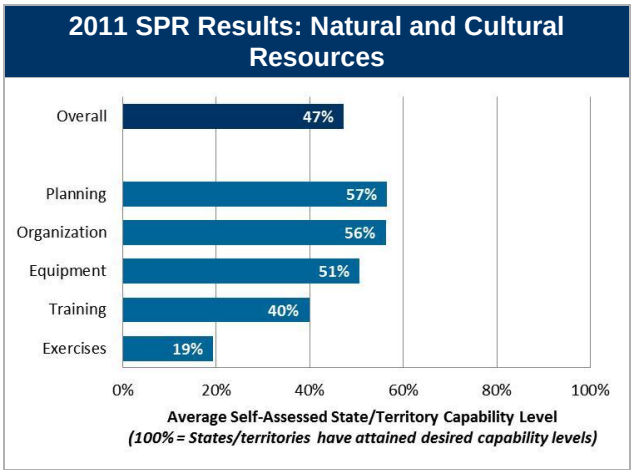
Preparedness Case Study: A Faith-Based Organization Supports Housing Recovery Initiatives

The North Carolina Baptist Men's Disaster Relief Ministry repaired homes after the April 2011 tornadoes affected 30 counties across the state. Initially, the Baptist Men concentrated on temporarily replacing damaged roofs with tarps and clearing debris. Five weeks after the storms, teams had provided 11,400 volunteer days of support to communities across the state. But the group did not just assist with initial response—three months later, relief efforts continued, focusing on reconstruction and repair of houses and mobile homes. Most of the Baptist Men's disaster relief work ended in September, after nearly five months of aid.[32]

Natural and Cultural Resources

Protect natural and cultural resources and historic properties through appropriate planning, mitigation, response, and recovery actions to preserve, conserve, rehabilitate, and restore them consistent with post-disaster community priorities and best practices and in compliance with appropriate environmental and historical preservation laws and executive orders.

Key Finding: *Many state archivists have plans in place to safeguard important records, but review and validation of those plans may not occur regularly. Federal partners have technical expertise that can support recovery functions for records.*



Safeguarding important digital and paper records is critical to a community's ability to recover from disasters. Medical records, maps of utility lines and of gas mains, building layouts, important contracts, and property ownership documentation are just a few examples of information that communities must protect in order to safeguard lives and property. A 2006 evaluation of records management functions at the state level by the Council of State Archivists found that two-thirds of states met only some or few of the 38 records-related preparedness assessment criteria. For example, although most state archivists had emergency preparedness and recovery plans in place, planners did not update the plans or test them through exercises as frequently as needed. In addition, few states had up-to-date information about significant non-governmental record repositories, such as businesses, museums, or historical societies.

Federal agencies share guidance and resources with their federal, state, and local counterparts on sound records management practices for disaster preparedness and recovery. The U.S. Department of the Interior (DOI) leads these efforts, as the coordinator for the Natural and Cultural Resources RSF under the NDRF, and as a co-primary support agency with USDA for ESF #11 (Agriculture and Natural Resources) under the NRF. DOI also works closely with FEMA's Environmental Planning and Historic Preservation Program to provide environmental and historic preservation technical assistance to whole community stakeholders. DOI's support to whole community partners includes deployments of subject-matter experts to support damage assessments and to provide guidance for natural and cultural resources and historical properties. DOI also hosts a website of relevant planning resources, technical guidance, and links (http://www.doi.gov/ProtectNCH).

Preparedness Case Study: Deepwater Horizon Response and Recovery Efforts

The 2010 BP Deepwater Horizon oil spill was one of the worst environmental disasters in U.S. history. The spill discharged an estimated 4.9 million barrels of oil and affected over 600 miles of shoreline along the U.S. Gulf Coast. Response efforts were federally coordinated (with USCG leading) and reimbursed largely by BP. At their peak, response efforts included more than 48,000 responders and 9,700 vessels. Response efforts included resources from federal, state, and local government agencies and the private sector. Thousands of volunteers also supported the response. As of May 31, 2011, BP has paid $712 million of federal and state government costs for oil spill cleanup and $4.2 billion for individual and business claims. Cleanup and long-term recovery efforts continue, guided by a Long-Term Recovery Plan and a Regional Ecosystem Restoration Strategy.

Future National Preparedness Reports

This National Preparedness Report (NPR) represents a step forward in efforts to assess overall national preparedness. Informed by inputs from across the whole community, the 2012 NPR serves as a baseline evaluation of the progress made to date toward building, sustaining, and delivering the core capabilities described in the Goal. Taken together, progress across the 31 core capabilities highlights trends in national preparedness, emphasizing where the Nation has developed significant strengths and underscoring areas to improve.

As PPD-8 implementation matures, so, too, will the NPR. Ongoing National Preparedness System implementation will integrate current preparedness efforts. Specifically, the National Frameworks will describe whole community roles and responsibilities across all five mission areas and define how whole community partners work together to deliver core capabilities. Exercises, a remedial action management program, and a comprehensive assessment system will be synchronized to evaluate and validate current capability levels and monitor progress on building, sustaining, and delivering capabilities.

Building on these efforts, the vision for future NPRs is to establish a routine, repeatable process that engages whole community partners throughout. Future NPR development will focus on establishing and refining core metrics and measures across each of the 31 core capabilities. This, in turn, will enable whole community partners to provide meaningful, consistent NPR inputs and will allow future NPRs to show annual progress and trends. Future NPRs will also work to integrate more data from exercises and real-world operations to validate information collected through self-assessments such as the SPR.

Conclusion

This NPR demonstrates the progress made toward building a secure and resilient Nation while acknowledging that key areas for improvement remain. Key national findings from the NPR include:

- The Nation has developed areas of national strength in several core capabilities, particularly in cross-cutting, common capabilities and those capabilities that support incident response and information sharing across all levels of government;
- Cybersecurity and recovery-focused core capabilities are important—though not the only—areas for improvement nationwide;
- Whole community partners have used significant federal grant investments to support areas of national strength;
- Through the SPR self-assessment survey, states generally reported the highest capability levels in the core capabilities that they identified as high priorities;
- Efforts to address identified preparedness gaps from real-world incidents—such as the 9/11 attacks and Hurricane Katrina—have yielded meaningful improvements;
- Despite some progress, integrating people with disabilities and other access and functional needs, children, pregnant women, older adults, and people with chronic medical conditions into preparedness activities requires more national attention across all mission areas;
- Whole community partners are increasingly using risk analyses to inform policy and programmatic decision-making across all mission areas; and
- While whole community partners have established many programs that support national preparedness, measures and metrics often do not exist to gauge performance and progress over time.

The Nation has achieved significant progress to date in enhancing national preparedness by investing federal, state, and local funding in building core capabilities across all mission areas. Moving forward, whole community partners across the Nation must share the responsibility for implementing a balanced

approach to preparedness investment—making sure to sustain areas of strength built through years of program implementation while also continuing to dedicate resources to ongoing areas of need. The vision for future preparedness assistance is to build and sustain capabilities that create national capacity based on cross-jurisdictional and readily deployable state, local, tribal, and territorial assets.

To achieve the National Preparedness Goal, the Nation will need to build on the significant progress to date and address identified areas for improvement. The complex set of threats and hazards facing the Nation and the underlying interdependencies within critical infrastructure and supply chains require integrated preparedness efforts to build, sustain, and deliver the core capabilities. Achieving the Goal will ultimately require sustained attention to PPD-8 implementation. The components of the National Preparedness System will provide a consistent and reliable approach to support decision-making, resource allocation, and ongoing performance assessment. Equally important, the National Preparedness System will engage the whole community of individuals, families, communities, private and nonprofit sectors, faith-based organizations, and all levels of government to contribute to strengthening national preparedness.

Acronym List

AFRCC	Air Force Rescue Coordination Center
BEOC	Business Emergency Operations Center
BJA	Bureau of Justice Assistance
CALEA	Commission on Accreditation for Law Enforcement Agencies
CBP	U.S. Customs and Border Protection
CBRN	Chemical, biological, radiological, and nuclear
CBRNE	Chemical, biological, radiological, nuclear, and explosive
CDBG	Community Development Block Grant
CDC	Centers for Disease Control and Prevention
CERFP	CBRNE Enhanced Response Force Packages
CERT	Community Emergency Response Team
CIRMEI	Critical Infrastructure Risk Management Enhancement Initiative
CISCP	Cybersecurity Information Sharing and Collaboration Program
C2CRE	Command and Control CBRN Response Elements
COOP	Continuity of Operations
CORE	Communities Organized to Respond in Emergencies
CPG	Comprehensive Preparedness Guide
CRS	Community Rating System
CSI	Container Security Initiative
CST	Civil Support Team
CTOS	Counter Terrorism Operations Support
C-TPAT	Customs-Trade Partnership Against Terrorism
DCRF	Defense CBRN Response Force
DHS	U.S. Department of Homeland Security
DIB	Defense Industrial Base
DNDO	Domestic Nuclear Detection Office
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
DOJ	U.S. Department of Justice
DOT	U.S. Department of Transportation
EAS	Emergency Alert System
ECIP	Enhanced Critical Infrastructure Protection
EMAP	Emergency Management Accreditation Program
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
ERLN	Environmental Response Laboratory Network
ESAR-VHP	Emergency System for Advance Registration of Volunteer Health Professionals
ESF	Emergency Support Function
FBI	Federal Bureau of Investigation
FDA	U.S. Food and Drug Administration
FEMA	Federal Emergency Management Agency
FERN	Food Emergency Response Network
FHWA	Federal Highway Administration
FY	Fiscal Year

GAO	Government Accountability Office
GCC	Government Coordinating Council
GETS	Government Emergency Telecommunications Service
GIS	Geographic Information Systems
GSA	General Services Administration
HHS	U.S. Department of Health and Human Services
HIRA	Hazard Identification and Risk Assessment
HPP	Hospital Preparedness Program
HRF	Homeland Response Force
HSPD	Homeland Security Presidential Directive
HUD	U.S. Department of Housing and Urban Development
I&A	Office of Intelligence and Analysis
IBC	International Building Code
ICE	U.S. Immigrations and Customs Enforcement
ICS	Incident Command System
ILEAS	Illinois Law Enforcement Alarm System
IOC	Interagency Operations Center
IPAWS	Integrated Public Alert and Warning System
IPS	International Port Security
IS-RSF	Infrastructure Systems Recovery Support Function
ISAC	Information Sharing and Analysis Center
JCTAWS	Joint Counterterrorism Awareness Workshop Series
JTTF	Joint Terrorism Task Force
LEPC	Local Emergency Planning Committees
LRN	Laboratory Response Network
MERS	Mobile Emergency Response Support
NAHLN	National Animal Health Laboratory Network
NAR	National Critical Infrastructure Protection and Resilience Annual Report
NCFI	National Computer Forensics Institute
NCFTA	National Cyber Forensics and Training Alliance
NCIJTF	National Cyber Investigative Joint Task Force
NCSD	National Cyber Security Division
NCTC	National Counterterrorism Center
NDHS	National Disaster Housing Strategy
NDMS	National Disaster Medical System
NDRF	National Disaster Recovery Framework
NECP	National Emergency Communications Plan
NFIP	National Flood Insurance Program
NGRF	National Guard Reaction Force
NIMS	National Incident Management System
NIPP	National Infrastructure Protection Plan
NOAA	National Oceanic and Atmospheric Administration
NPR	National Preparedness Report
NPS	National Park Service
NRCC	National Response Coordination Center
NRF	National Response Framework
NRS	National Response System
NRT	National Response Team
NSI	Nationwide Suspicious Activity Reporting (SAR) Initiative
ODNI	Office of the Director of National Intelligence
OEM	Office of Emergency Management
PHEMCE	Public Health Emergency Medical Countermeasures Enterprise

PHEP	Public Health Emergency Preparedness
PIV	Personal Identity Verification
PPD	Presidential Policy Directive
PRND	Preventive Radiological/Nuclear Detection
PS-Prep	Voluntary Private Sector Preparedness Accreditation and Certification Program
RSF	Recovery Support Function
SAR	Suspicious Activity Reporting
SAVER[2]	Situational Awareness Viewer for Emergency Response and Recovery
SCC	Sector Coordinating Council
SHSP	State Homeland Security Program
SLATT	State and Local Anti-Terrorism Training
SNS	Strategic National Stockpile
SOP	Standard Operating Procedure
SPR	State Preparedness Report
STEP	Student Tools for Emergency Planning
SWAT	Special Weapons and Tactics
TEMA	Tennessee Emergency Management Agency
THIRA	Threat and Hazard Identification and Risk Assessment
TPD	Tampa Police Department
TSA	Transportation Security Administration
TWIC	Transportation Worker Identification Credential
UASI	Urban Areas Security Initiative
US&R	Urban Search and Rescue
USACE	U.S. Army Corps of Engineers
US-CERT	U.S. Computer Emergency Readiness Team
USCG	United States Coast Guard
USDA	U.S. Department of Agriculture
USFA	U.S. Fire Administration
USPHS	U.S. Public Health Service
USPS	United States Postal Service
WMD	Weapons of Mass Destruction
WPS	Wireless Priority Service

Endnotes

[1] FEMA has established an online collaboration forum (http://fema.ideascale.com/) where the public is encouraged to contribute to and comment on different topics related to preparedness and emergency management. The site includes the FEMA Think Tank and information on PPD-8 and FEMA's Strategic Foresight Initiative.
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