

## PRESIDENTIAL POLICY DIRECTIVE/PPD-8 REFRESH

### WORKING DRAFT—MITIGATION FEDERAL INTERAGENCY OPERATIONAL PLAN

#### NATIONAL ENGAGEMENT

August 3, 2015

Attached for your review is the working draft of the Mitigation Federal Interagency Operational Plan (FIOP), second edition. The Mitigation FIOP builds upon the National Mitigation Framework, which sets the strategy and doctrine for how the whole community builds, sustains, and delivers the Mitigation core capabilities identified in the National Preparedness Goal. The purpose of this FIOP is to establish a joint system for supporting local, state, tribal, territorial, and insular area partners and deliver public resources in a coordinated, effective, and proficient manner. Building and sustaining a mitigation-minded culture within Federal department and agency programs can contribute to making the Nation more socially, ecologically, and economically resilient before, during, and after an incident.

As part of the FIOPs National Engagement Period, this draft of the Mitigation FIOP containing proposed updates is being widely distributed for review and feedback. This is a draft document and we feel it is important to seek your input at this critical juncture.

This update of the FIOPs focuses on discrete, critical content revisions, and confirming edits as a result of comments received on the National Preparedness Goal and the National Planning Frameworks. Additional changes are the result of the lessons learned from implementing the FIOPs and recent events, as well as the findings of the National Preparedness Report. As you review the Mitigation FIOP, please pay particular attention to the key updates including:

- The removal and addition of critical tasks for the Mitigation core capabilities;
- Better document alignment to the National Mitigation Framework;
- The draft Mitigation FIOP was updated to reflect the Mitigation Framework Leadership Group (MitFLG) is now operational and a regularly meeting coordination structure for mitigation; and
- Clarifying Continuity Planning and Operations within the Mitigation Mission Area.

To ensure all feedback is properly handled, reviewers are asked to use the provided feedback submission form located at <https://www.fema.gov/learn-about-presidential-policy-directive-8> to submit feedback and recommendations. Please provide any comments and recommendations, using the submission form, to [PPD8-Engagement@fema.dhs.gov](mailto:PPD8-Engagement@fema.dhs.gov) by **Wednesday, September 2, 2015 at 5:00 PM EDT**.

The feedback received supports the development of the second edition of the Mitigation FIOP. Please distribute the draft to any applicable partners, stakeholder, or individuals.

We look forward to receiving your feedback and thank you for your continued contributions on this important endeavor.

V/R,

National Integration Center

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## 27 Introduction

28 Threats and hazards present long-term risks to people and their property. Mitigation is risk  
29 management action taken to avoid, reduce, or transfer those risks. By reducing the impact of  
30 disasters, mitigation supports protection and prevention activities, eases response, and speeds  
31 recovery to create better prepared and more resilient communities. The National Mitigation  
32 Framework (NMF) establishes a common platform and forum for coordinating, addresses how the  
33 Nation manages risk through mitigation capabilities, and describes mitigation roles across the whole  
34 community. The NMF addresses how the Nation will lessen the impact of disaster by developing,  
35 employing, and coordinating core mitigation capabilities to reduce loss of life and property. Building  
36 on a wealth of objective and evidence-based knowledge and community experience, the NMF seeks  
37 to increase risk awareness and leverage mitigation products, services, and assets across the whole  
38 community.

39 The NMF is a component of the National Planning System. The National Planning System includes  
40 the following elements: (1) a set of National Planning Frameworks that describe the key roles and  
41 responsibilities to deliver the core capabilities required across the whole community<sup>1</sup> to prevent,  
42 protect, mitigate, respond, and recover; (2) a set of Federal Interagency Operational Plans (FIOP)—  
43 one for each mission area—that provides further detail regarding roles and responsibilities, specifies  
44 the critical tasks, and identifies resourcing and sourcing requirements for delivering core  
45 capabilities; (3) Federal department and agency operational plans to implement the FIOPs in all  
46 hazards; and (4) comprehensive planning guidance to support planning by local, state, tribal,  
47 territorial, and insular area governments, nongovernmental organizations (NGO), and the private  
48 sector.

49 This Mitigation FIOP builds upon the NMF by describing the concept of operations for integrating,  
50 synchronizing and ensuring the continuity of existing national-level Federal capabilities to support  
51 local, state, tribal, territorial, insular area, and Federal plans, and is supported by Federal  
52 department-level operational plans where appropriate.  
53

### 54 Purpose

55 The Mitigation FIOP describes how the Federal Government delivers core capabilities for the  
56 Mitigation mission area. The purpose of this FIOP is to establish a joint system for supporting local,  
57 state, tribal, territorial, and insular area partners and delivering public resources in a coordinated,  
58 effective, and proficient manner. Building and sustaining a mitigation-minded culture within Federal  
59 department and agency programs can contribute to making the Nation more socially, ecologically,  
60 and economically resilient before, during, and after an incident.

61 To promote these goals, implementation of the Mitigation FIOP will:

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<sup>1</sup> The whole community includes individuals, families, and households; communities; the private and nonprofit sectors; faith-based organizations; and local, state, tribal, territorial, insular area, and Federal governments. Whole community focuses on enabling the participation in national preparedness activities of a wide range of players from the private and nonprofit sectors, including nongovernmental organizations and the general public, in conjunction with the participation of Federal, state, and local governmental partners in order to foster better coordination and working relationships. The National Preparedness Goal is located at <http://www.fema.gov/pdf/prepared/npag.pdf>.

- 62   ▪ Establish opportunities for Federal partners to jointly discuss interagency mitigation priorities  
63    within their existing authorities and resources.
- 64   ▪ Identify gaps and support improvements to address current and future risks in current mitigation  
65    efforts, where needed.
- 66   ▪ Identify programmatic opportunities where appropriate to better align program funds, products,  
67    and services in support of the core capabilities through partnerships with each other and the  
68    whole community.
- 69   ▪ Promote the integration of Continuity planning and operations to ensure that the Mitigation core  
70    capabilities and the coordinating structures can be provided during and after an incident.
- 71   ▪ Describe how programs deliver core capabilities, outputs, and outcomes in the form of  
72    incentives, projects, products, guidance, technical assistance, and other services.

### 73 *Audience*

74 While engaging the whole community is critical to successful integration, the Mitigation FIOP is  
75 directed toward Federal agency operations. This FIOP recognizes that success relies upon a whole-  
76 community approach and is dependent upon Federal interagency collaboration and integration.  
77 Departments, agencies, Federal coordinating structures, and interagency partnerships should use this  
78 FIOP as a guide to build a hazard-resilient Nation through mitigation. Federal departments and  
79 agencies will develop and maintain department-level operational plans, as necessary, to deliver  
80 capabilities to fulfill responsibilities under the NMF and this FIOP. Departments and agencies may  
81 use existing plans, protocols, standard operating procedures, or standard operating guides for the  
82 development of such plans.

### 83 *Mission*

84 Federal departments and agencies will successfully attain the National Preparedness Goal and the  
85 principles of the NMF when specific interagency mitigation outcomes are identified and achieved,  
86 and capability targets are met through implementation of joint objectives in the Concept of  
87 Operations (ConOps).

88 To connect the National Preparedness Goal to the ConOps in this FIOP, mitigation outcomes should  
89 be established through a Federal dialogue with the whole community. The Mitigation Framework  
90 Leadership Group (MitFLG) will serve as a central coordination point for the development of joint  
91 interagency objectives. Some initial outcomes for success might include:

- 92   ▪ Federal department and agency operational plans consider community, regional, or national risk  
93    awareness or resilience.
- 94   ▪ Community policies and planning, whether for economic development, capital infrastructure  
95    investments, or land use decisions, consider disaster-resilient, sustainable measures. They should  
96    also integrate continuity planning and operations inherent in preparedness.
- 97   ▪ A culture of preparedness created when individuals, organizations, communities, and all levels of  
98    government understand risk, plan for it, and take appropriate actions based on a mutually  
99    acceptable level of risk. They strive to promote a risk-conscious culture that makes mitigation  
100    choices part of an adaptive and healthy community.
- 101   ▪ From the Federal level to the individual, mitigation actions reduce long-term risk. Existing  
102    Federal resources, programs, and leadership help individuals, organizations, and communities

103 reduce their vulnerabilities. Actions not only help to mitigate impacts, but also mitigate hazards  
104 as much as possible so incidents do not become disasters.

- 105 ■ Federal entities help reduce the risk and cost of disasters in partnership with local, state, tribal,  
106 territorial, and insular area governments with regard to the environment, social stability, and  
107 economy. Federal programs make the best use of assets and reduce redundancies in an effective  
108 and efficient manner to support local capabilities and build capacity.
- 109 ■ Federal departments and agencies make available standardized, integrated data to support  
110 decision makers on how to assess and mitigate risks.

## 111 *Scope*

112 This document presents a strategy and methodology that recognizes and respects the autonomy of  
113 Federal departments and agencies within their legal authorities and Executive Branch roles and  
114 establishes a system for departments and agencies to jointly discuss and pursue interagency  
115 mitigation initiatives (see the Authorities and References section). It does not organize deployment of  
116 resources, assign or adjudicate resources, or direct Federal departments and agencies in conducting  
117 mitigation actions. Nothing about the FIOP is intended to alter or impede the ability of Executive  
118 Branch departments and agencies to carry out their authorities or perform their responsibilities under  
119 law and consistent with applicable legal authorities and other Presidential guidance.<sup>2</sup>

120 The scope of this FIOP is not limited to disaster-focused authorities and capabilities, but  
121 encompasses a larger scope of authorities as described within the Authorities and References section.  
122 Within this broader scope, Federal departments and agencies deliver a capability or capabilities  
123 during steady state as well as before, during, and after an incident. Delivery may be a direct  
124 mitigation grant to reduce a community's long-term vulnerability, for example. Application may also  
125 be indirect, as when a Federal department or agency incorporates mitigation into its projects and  
126 activities, such as locating a facility in a low-hazard area and complying with hazard resilient codes.

127 Mitigation actions are driven by historical and future risk. As stated above, mitigation is  
128 operationally delivered during steady state operations, not only in anticipation of or in the wake of  
129 disaster; hence this FIOP for mitigation is always in effect. This FIOP does not present a linear or  
130 phased approach to the deployment of resources in support of incidents, but describes how the core  
131 capabilities in the Mitigation mission area support delivery of core capabilities in other mission areas.  
132 For this reason, the focus of this FIOP is on describing the connections among different Mitigation  
133 core capabilities.

134 As the Mitigation FIOP supports the framework and represents an evolving operational paradigm, it  
135 is a living document that should be periodically reviewed and updated (see the Oversight, Plan  
136 Development, and Maintenance section for more detail).

## 137 *Mitigation Core Capabilities*

138 The National Preparedness Goal defines seven Mitigation core capabilities, and the NMF addresses  
139 the critical tasks to deliver the Mitigation core capabilities. This FIOP identifies and describes roles

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<sup>2</sup> Nothing in this FIOP is intended to interfere with the authority of the Attorney General or Director of the Federal Bureau of Investigation (FBI) with regard to the direction, conduct, control, planning, organization, equipment, training, exercises, or other activities concerning domestic counterterrorism, intelligence, and law enforcement activities.

140 and responsibilities and introduces the ConOps for delivering these core capabilities at the Federal  
 141 level. These capabilities are listed and defined below in Table 1 and further described in Appendix B.

142 **Table 1: Description of Mitigation Core Capabilities**

Core Capability	Description
Planning	Conduct a systematic process engaging the whole community, as appropriate, in the development of executable strategic-, operational-, and/or tactical-level approaches to meet defined objectives.
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 and, as appropriate, the actions being taken and the assistance being made available.
Operational Coordination	Establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports execution of core capabilities.
Community Resilience	Enable the recognition, understanding, communication of, and planning for risk, and empower individuals and communities to make informed risk management decisions necessary to adapt to, withstand, and quickly recover from future incidents.
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.
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.
Threats and Hazards Identification	Identify the threats and hazards that occur in the geographic area; determine frequency and magnitude; and incorporate into analysis and planning processes so as to clearly understand the needs of a community or entity.

### 143 **Capability Targets**

144 Mitigation core capability targets were introduced in the National Preparedness Goal. These targets  
 145 set initial performance threshold(s) for each core capability. In setting strategic outcomes for  
 146 mitigation, it is important to be able to measure success and set targets for improvement.

147 The initial capability targets set in the National Preparedness Goal should be reviewed, updated, or  
 148 replaced based on the National Preparedness Goal's revision cycle. That process will inform  
 149 additional vetting and refinement of the initial mission-specific outcomes outlined in this FIOP. This  
 150 vetting and refinement will take into consideration the perspective of the whole community and any  
 151 changes to the risk environment. The strategic direction for interagency mitigation; objectives and  
 152 outcomes; and targets and performance measures can be defined, reviewed, and updated through the  
 153 MitFLG. On an annual basis, the MitFLG will review the strategic direction and identify and assess  
 154 gaps in interagency capabilities and capacity. This type of evaluation will help inform science and  
 155 technology innovations in support of mitigation. Targets for Mitigation core capabilities are  
 156 reiterated in Appendix B, where each of the core capabilities is described in more detail.

## 157 *Situation*

### 158 **Strategic Environment**

159 Mitigation stakeholders exist in a strategic environment that includes threats and hazards from three  
160 categories: natural, technological/accidental, and adversarial/human-caused. Issues including  
161 globalization, technological innovation, demographic shifts, increasing population in vulnerable  
162 areas, escalating resource demands, climate changes, and security concerns, such as proliferation of  
163 weapons of mass destruction and the movement of people across borders, contribute to the  
164 complexity of future disasters. These trends indicate a future environment that presents a wide range  
165 of problems that occur unpredictably and perhaps simultaneously.

166 Constraints on resources at all levels continue to force the Nation to reconsider which resilience  
167 activities are truly affordable and how partnerships can be built to accomplish the objectives for a  
168 resilient Nation. The challenge is to build a culture of preparedness to empower the whole  
169 community to be resilient in the face of disruptions, disasters, and other crises while adapting to  
170 conditions that have changed as a result of an incident.

171 Federal departments and agencies are advocates for and ensure that all populations have equal access  
172 to acquire, use, and contribute to the core capabilities that strengthen resilience. Engaging all  
173 members of the whole community is essential to national preparedness, and individuals and  
174 communities are key components. With equal access to the pertinent knowledge and skills, all  
175 members of the community can contribute to national preparedness. This includes children,  
176 individuals with disabilities, and others with access and functional needs; those from religious, racial,  
177 and ethnically diverse backgrounds; and people with limited English proficiency. Their contributions  
178 must be integrated into preparedness efforts, and their needs must be incorporated as the whole  
179 community plans for and delivers the core capabilities.

### 180 **Strategic National Risk Assessment**

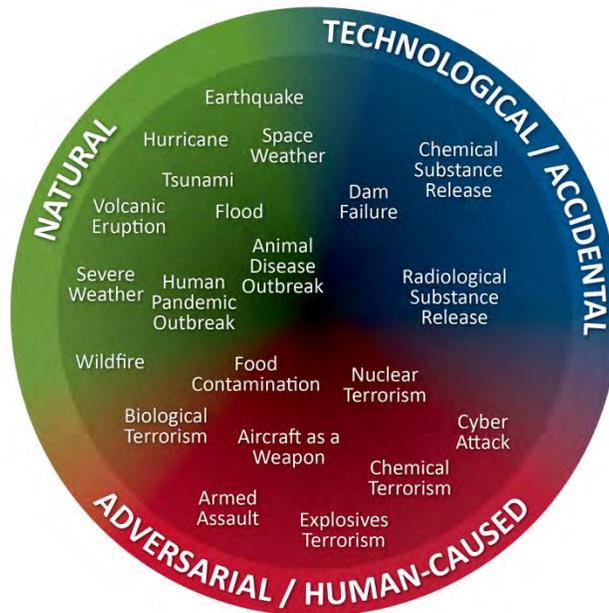
181 Risk is the potential for an unwanted outcome resulting from an incident, event, or occurrence, as  
182 determined by its likelihood and the associated consequences. Risk is assessed based on applicable  
183 threats and hazards, vulnerabilities, and consequences. The Strategic National Risk Assessment  
184 (SNRA) identified the threats and hazards that pose the greatest risk to the Nation and provided the  
185 basis for establishing the National Preparedness Goal and the core capability requirements for all  
186 mission areas. The SNRA supports the National Preparedness Goal and captures the threats and  
187 hazards that pose a significant risk to the Nation, grouped into three categories. Figure 1, from the  
188 NMF, represents examples from the three hazard categories, though it is not an exhaustive list. Other  
189 threats and hazards may also become national-level events that pose significant risk.<sup>3</sup> Implementers  
190 of this FIOP should understand that this threat and hazard information was developed for an SNRA  
191 and does not present a full view of the risks facing local communities or differentiate among  
192 geographic locations. Appendix C introduces a conceptual model for conducting a threat and hazard  
193 identification and risk assessment that is appropriate to the level of risk and complexity of the  
194 environment.

195 Mitigation core capabilities support the continued analysis and development of the SNRA, as well as  
196 the Threat and Hazard Identification and Risk Assessments (THIRA) conducted by local, state, tribal,  
197 territorial, and insular area jurisdictions, the Federal Emergency Management Agency (FEMA), and  
198 other Federal department and agency regional offices. Analysis that combines THIRAs and the

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<sup>3</sup> More information on the SNRA can be found at <http://www.dhs.gov/strategic-national-risk-assessment-snra>

199 SNRA provides a more comprehensive and granular picture for the Mitigation mission area.  
 200 Additionally, specialized risk assessments conducted for specific events or situations also can be  
 201 used by the mitigation community to better understand the risk environment.



202 **Figure 1: Examples of Threats and Hazards by Category**

203 ***Planning Assumptions and Critical Considerations***

204 The following information represents the planning assumptions and critical considerations used in  
 205 the development of this FIOP:

- 206 ■ The NMF and FIOP are based upon a broad definition of mitigation provided by the National  
 207 Preparedness Goal within the context of national preparedness that extends beyond its definition  
 208 in the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, as amended  
 209 (Stafford Act, additional detail can be found in the Authorities and References section).  
 210 Mitigation activities and actions are not limited to what is eligible within the Stafford Act.
- 211 ■ Current authorizations and legislative language are unchanged by the NMF and FIOP. The NMF  
 212 does not create new requirements.
- 213 ■ The term “community resilience” is purposefully used with two distinct meanings.
  - 214 • Community resilience is an inclusive, informed process that addresses social, economic,  
 215 health and well-being, natural and cultural, technical, and organizational dimensions within a  
 216 community—preparing a community to consciously manage rather than ignore risks.
  - 217 • Resilience is an outcome—the state of being able to adapt to changing conditions and then  
 218 withstand and rebound from the impacts of disasters and incidents.<sup>4</sup>

<sup>4</sup> As defined in the National Preparedness Goal and the NMF.

- 219   ▪ The Mitigation FIOP assumes that the interagency and partnering entities, to include local, state,  
220   tribal, territorial, insular area, and Federal governments, will operate within the constructs of  
221   current resources, to include funding sources, authorities, and programs.
- 222   ▪ The Mitigation FIOP will address current and future risks using the best available science to  
223   guide our actions.
- 224   ▪ The Mitigation FIOP will address effects of international incidents on the United States as a  
225   component of the FIOP, but will not specifically address international mitigation efforts.
- 226   ▪ The Mitigation FIOP is based upon input from an extensive, but not exhaustive, group of  
227   representatives from Federal departments and agencies. The FIOP will be revised periodically as  
228   described in the Mitigation FIOP Review Cycle section.
- 229   ▪ Mitigation core capabilities have interdependencies with capabilities in other National Planning  
230   Frameworks. Three core capabilities span the National Planning Frameworks: Planning,  
231   Operational Coordination, and Public Information and Warning. Operations supporting two  
232   Mitigation core capabilities—Threats and Hazards Identification (THID) and Risk and Disaster  
233   Resilience Assessment (RDRA)—will inform and drive operational guidance in the other  
234   National Planning Frameworks.
- 235   ▪ Implementation of this FIOP should capitalize on existing programs and documents that address  
236   mitigation and promote resilience.
- 237   ▪ The Mitigation FIOP acknowledges that the discipline of mitigation does not eliminate all risk or  
238   prevent all threats and hazards, but provides a mechanism for managing risk.
- 239   ▪ “Federal” efforts refer solely to the Federal Government’s supportive role, or primary and  
240   potentially exclusive role such as a military installation or federal facility. “National” efforts  
241   encompass the whole community, including individuals; families; communities; nonprofit  
242   organizations; businesses; local, state, tribal, territorial, and insular area governments; and the  
243   Federal Government.

## 244   **Concept of Operations**

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### 245   *Overview*

246   This ConOps provides the common platform for ensuring that Federal actions operate in concert to  
247   achieve joint interagency objectives and serves as the vehicle for synchronizing Federal mitigation  
248   efforts. It serves to coordinate the delivery of Federal capabilities only. As described in the  
249   introduction, this FIOP is always in effect, spans steady state and incident-driven environments, and  
250   focuses on the connections among Mitigation core capabilities and the integration with other  
251   National Planning Frameworks and FIOPs.

252   The Mitigation core capabilities (listed and defined in Table 1 above and further described in  
253   Appendix B) can be delivered through numerous mechanisms, such as:

- 254   ▪ Effective policy changes
- 255   ▪ Improved program efficiencies
- 256   ▪ A culture of sharing resources and data
- 257   ▪ Transitioning research and innovation into capabilities
- 258   ▪ Incentives that drive behavior

- 259   ▪ Strong partnerships and leadership
  - 260   ▪ Collectively integrating and leveraging analytical capabilities.
- 261 The Mitigation Concept of Operations section is organized into subsections around key concepts,  
 262 which are shown in Table 2 below and discussed in detail in the following pages.

263 **Table 2: Mitigation ConOps Sections**

Section	Description
Overview	The ConOps provides the common platform for synchronizing mitigation efforts.
The Mitigation Space	Mitigation capabilities are delivered both during steady state operations and incident-driven operations, and are impacted by adaptive risk management factors.
Interdependent Core Capabilities	Mitigation’s core capabilities provide mutually supportive actions that are overlapping and seldom delivered in isolation.
Incident-Sspecific Mitigation	Incidents create windows of opportunity for the delivery of Mitigation core capabilities, and the characteristics of an incident dictate the need for certain kinds of Mitigation activity.
Federal Mitigation Mechanisms	Federal Mitigation operations span three broad categories or mechanisms: Federal administrative structures, transfer of resources, and capacity building.
Federal Roles and Responsibilities	Federal roles and responsibilities to guide the Federal Government’s implementation of the National Mitigation Framework
Connections to Other Mission Areas	Description of integration between the Mitigation Mission Area and the other four Mission Areas

264 Tasks and responsibilities identified in this ConOps provide administrative guidance to Federal  
 265 departments and agencies for implementation of mitigation. This document is not directive of Federal  
 266 resources, but serves as the organizing document for how the Federal Government delivers  
 267 mitigation around joint interagency objectives. Table 3 summarizes coordinated mitigation delivery.

268 **Table 3: Coordinated Delivery of Mitigation**

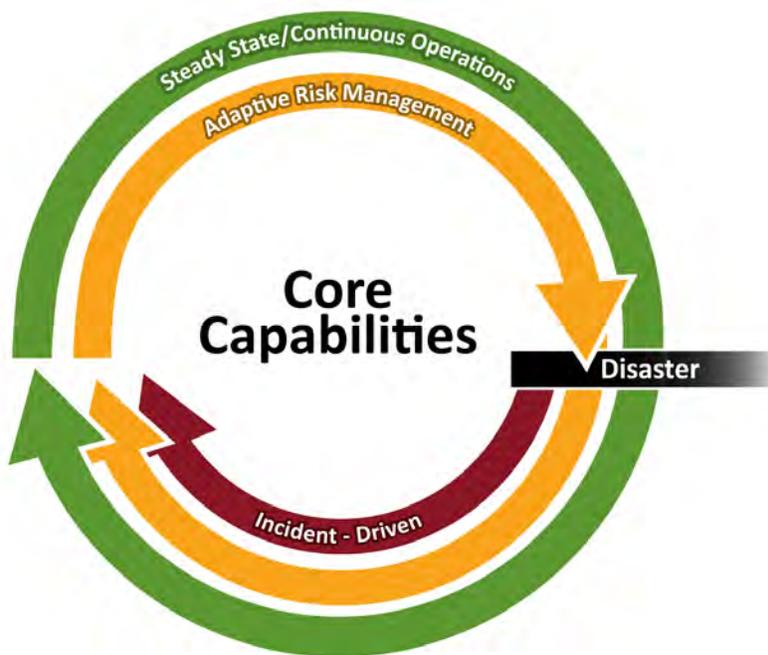
Entity	Role
Mitigation Framework Leadership Group	<ul style="list-style-type: none"> <li>• Identify joint interagency goals and objectives</li> <li>• Provide joint interagency leadership</li> <li>• Representatives promote knowledge and awareness of mitigation mission and goals within departments and agencies</li> </ul>
Federal Coordinating Structures (e.g., memorandums of understanding [MOU], working groups)	<ul style="list-style-type: none"> <li>• Facilitate the preparedness and delivery of capabilities to achieve joint interagency goals and objectives</li> </ul>
Federal Partners	<ul style="list-style-type: none"> <li>• Build, maintain, and deliver Mitigation core capabilities</li> </ul>

269 Mitigation successes are realized at the individual, local, state, tribal, territorial, insular area, and  
 270 national levels, as well as by industry.

271 Federal departments and agencies support mitigation activities (e.g., building capacity, delivering  
 272 resources) and apply specific Mitigation core capabilities using their own resources (e.g., hurricane  
 273 advisories, regulatory risk maps, engineering and design tools for resilience) in conjunction with  
 274 Federal laboratories, testing facilities, and universities. This includes Federal research and  
 275 development programs on new and advanced technology and practices to make Mitigation core  
 276 capabilities more effective and efficient. Many research and development efforts are funded and  
 277 conducted by Federal departments and agencies, often in conjunction with the private sector.  
 278 Mitigation efforts are also coordinated by Federal departments and agencies through existing  
 279 coordination structures such as the National Science and Technology Council (NSTC).

## 280 *The Mitigation Space*

281 Mitigation operations are managed under multiple management systems, and the associated  
 282 Mitigation capabilities are delivered both during steady state operations and incident-driven  
 283 operations. Figure 2 shows that Mitigation core capabilities are delivered across multiple operational  
 284 states on a continuing basis, including when a disaster occurs.



285 **Figure 2: Mitigation Operational Paradigm**

- 286 ■ **Steady state/continuous operations.** Mitigation efforts conducted during routine operations  
 287 incorporate program management structures around shared goals, principles, department and  
 288 agency initiatives, and coordinating structures to maximize Federal performance.
- 289 ■ **Incident-driven operations.** When Mitigation core capabilities are employed to support  
 290 incident-driven operations, departments and agencies follow the National Incident Management  
 291 System (NIMS).
- 292 ■ **Adaptive risk management.** Adaptive risk management applies to both steady state and  
 293 incident-driven activities and offers opportunities for course correction within each. Operational  
 294 paradigms for steady state and incident-driven operations include identifying opportunities for  
 295 continuous improvement. For instance, advances in technology create new and more accurate

296 ways to assess and mitigate hazards, and Federal mitigation action may change based on such  
297 advancements.

298 Mitigation capabilities work effectively as part of all operational environments and bring risk-  
299 informed decisions to support activity across the whole community of national preparedness. The  
300 following sections describe the three conditions—steady state/continuous operations, incident-driven  
301 operations, and adaptive risk management—that shape risk management strategies and operational  
302 paradigms.

### 303 **Steady State/Continuous Operations**

304 Federal departments and agencies conduct mitigation on the basis of current and future risks, not  
305 solely in response to disasters. Mitigation actions conducted during steady state or ongoing  
306 operations may be informally coordinated or bring together differing coordination structures and  
307 diverse program expertise, scientific knowledge, and authorities. Steady state mitigation activities  
308 require clearly articulated goals, shared strategic objectives, and mutually supportive standards of  
309 practice. Mitigation capabilities are delivered continuously in a wide array of departments' and  
310 agencies' programs. These capabilities are delivered by professionals from diverse backgrounds,  
311 under varied operating procedures, policies, and standards, and in a broad range of environments.  
312 Examples of diverse Federal programs and delivery mechanisms are shown below.

#### **Examples:**

- 314 • **Multiple departments or agencies, single mechanism:** Includes alignment of  
315 planning grants from Department of Housing and Urban Development, FEMA, and  
316 Environmental Protection Agency (EPA) to support sustainable and resilient  
317 communities.
- 318 • **Multiple departments or agencies, single mechanism:** Includes shared objective  
319 programs such as risk transfer through insurance (Department of Agriculture [USDA]  
320 crop insurance and FEMA National Flood Insurance Program [NFIP]).
- 321 • **Multiple departments or agencies, multiple mechanisms:** Includes development  
322 of sustainable and stronger, more resilient homes and buildings such as the U.S.  
323 Army Corps of Engineers (USACE) installations research, the Department of  
324 Homeland Security (DHS)/Science and Technology program on resilient, high-  
325 performance design of buildings, and FEMA Building Sciences group.
- 326 • **Multiple programs, single department or agency:** FEMA Hazard Mitigation Grant  
327 Program (HMGP) and hazard mitigation funding under Section 406 of the Stafford  
328 Act, Public Assistance. HHS' At-Risk Resiliency Initiative is providing public health  
329 authorities with data and mapping tools and resources to better anticipate, plan for,  
330 and expedite response and recovery for at-risk populations with functional and  
331 access needs.
- 332 • **Single program, multiple mechanisms:** The FEMA Risk MAP (Risk Mapping,  
333 Assessment, and Planning) program affects different communities at different times.  
334 It is an activity which involves congressional mandate, strategic planning, program  
335 management, procurement action, training, interaction with a community, and a final  
336 deliverable that becomes a regulatory product.

337  
338 Risks addressed by one Federal action are often mutually supportive of other Federal activity, policy,  
339 regulation, and executive responsibility. Coordinating and sharing the value of research,  
340 development, and expended Federal resources enables mutually supportive resilience activity across  
341 all levels of government and the private sector. Discussing opportunities for joint initiatives and

342 demonstrating the shared value of Federal risk management action is the responsibility of the  
343 mitigation coordinating structures, such as the MitFLG.

344 Connecting departments and agencies without compromising their authorities and autonomy requires  
345 a decentralized management model that creates linkages, fosters creativity, and capitalizes on the  
346 strengths of individual partners to maximize the expertise and capability of different groups, teams,  
347 and communities of expertise. This model of management supports autonomous structures and  
348 systems without imposing external organization or command and control structures. Federal partners  
349 deliver Mitigation core capabilities under their legal authorities and around shared interagency  
350 objectives with a set of common principles.

### 351 **Leadership**

- 352 ▪ Leadership articulates shared interagency objectives through Federal departmental and agency  
353 leaders, and the MitFLG serves as the central coordination point for Federal mitigation activities.  
354 Leadership promotes organizational knowledge of how components support mitigation,  
355 composes joint interagency objectives, and empowers action.
- 356 ▪ Federal department and agency leadership provides common vision in delivery of their respective  
357 missions.

### 358 **Autonomy**

- 359 ▪ Federal departments and agencies and programs operate under their existing authorities and  
360 develop and deliver solutions by encouraging initiative at the lowest level possible.
- 361 ▪ Autonomy is the ability to self-direct with the capacity to make decisions. Autonomy is not  
362 isolation, and requires operational coordination and an environment that fosters collaboration.
- 363 ▪ Experts are allowed the independence to define solutions.

### 364 **Contribution and Initiative**

- 365 ▪ Localized change is powered by effective innovation.
- 366 ▪ Federal partners work to maximize the impact of individuals, programs, offices, and departments  
367 and agencies contributing to mitigation.
- 368 ▪ Trust in individual components to deliver their authorized capabilities is based on shared  
369 objectives.

### 370 **Self-Organization**

- 371 ▪ Federal departments and agencies are best suited to determine their own organizational structures  
372 when conducting their authorized responsibilities.
- 373 ▪ Non-uniform organizational structures provide constructive results when coordinated around  
374 shared objectives.

### 375 **Clear Objectives**

- 376 ▪ Departments and agencies deliver Mitigation core capabilities in support of clear joint  
377 interagency objectives.

## 378 Incident-Driven Operations

379 As the other National Planning Frameworks and interagency operational plans identify phases, states,  
 380 or stages, they will serve as the platform for integrating mitigation into their activities. Disasters  
 381 require the use of Mitigation core capabilities. Many integrate into specific operational structures and  
 382 trigger the exercise of additional authorities, funding sources, and program coordination requirements  
 383 for Federal departments and agencies. For the majority of events, when Mitigation core capabilities  
 384 are delivered in support of response and recovery operations, they are subject to the administration  
 385 and implementation of the National Response Framework (NRF), National Disaster Recovery  
 386 Framework (NDRF) or associated response and recovery plans.

### 387 Examples:

- 388 • Informing response and recovery operations with risk analysis, de-escalating an  
 389 incident, and remediating loss following a disaster are considered short-term  
 390 mitigation under this ConOps. In response to flooding in Minot, North Dakota, in  
 391 2011, the U.S. Geological Survey (USGS), FEMA, and Department of Commerce  
 392 (DOC)/National Oceanic and Atmospheric Administration (NOAA) partnered to link  
 393 mitigation expertise in data collection and analysis to support disaster response  
 394 efforts with risk analysis—providing near real-time assessment of flood levels and  
 395 estimated damages to decision makers. This activity highlights the benefits of  
 396 DOC/NOAA's and the National Weather Service's "Weather Ready Nation" initiative  
 397 through the provision of key decision support information to our partners.
- 398 • Hazard Mitigation funding under Section 406 of the Stafford Act provides  
 399 discretionary authority to fund mitigation measures in conjunction with the repair of  
 400 the disaster-damaged facilities. Use of Section 406 of the Stafford Act mitigation  
 401 funds is authorized by disaster declarations and managed primarily through Joint  
 402 Field Offices located near the disaster site, occurring in an operational environment  
 403 administered under NIMS within the NRF and NDRF.

404 When mitigation capabilities are delivered in support of incidents requiring a coordinated response,  
 405 in most cases Federal departments and agencies operate in support of the NRF/NDRF and in  
 406 accordance with NIMS.

407 NIMS provides a systematic, proactive approach to guide departments and agencies at all levels of  
 408 government to work to prevent, protect against, respond to, recover from, and mitigate the effects of  
 409 incidents in order to reduce the loss of life and property and minimize harm to the environment.  
 410 Recommended activities for the private sector and NGOs have also been established that support  
 411 NIMS implementation and closely parallel the implementation activities that have been required of  
 412 local, state, tribal, territorial, and insular area governments. NIMS is applicable regardless of the  
 413 cause, size, location, or complexity of a given event. NIMS provides organized and standardized  
 414 tenets and practices, which enable organizations and departments and agencies to work together in a  
 415 predictable, coordinated manner. Components of NIMS operate under the following principles:

- 416 ▪ **Flexibility:** The components of NIMS are adaptable to any situation, from routine, local  
 417 incidents to incidents requiring the activation of interstate mutual aid to those requiring a  
 418 coordinated Federal response, whether planned (e.g., major sporting or community events),  
 419 notice (e.g., hurricane) or no-notice (e.g., earthquake). This flexibility is essential for NIMS to be  
 420 applicable across the full spectrum of potential incidents, including those that require  
 421 multidepartment, multiagency, multijurisdictional (such as incidents that occur along  
 422 international borders), or multidisciplinary coordination.
- 423 ▪ **Standardization:** Flexibility to manage incidents of any size requires coordination and  
 424 standardization among emergency management and homeland security personnel and their

425 affiliated organizations. NIMS provides a set of standardized organizational structures that  
426 improve integration and connectivity among jurisdictions and disciplines, starting with a  
427 common foundation of preparedness and planning. NIMS provides and promotes common  
428 terminology, including the establishment of plain language (clear text communication standards)  
429 which fosters effective communication among response organizations and agencies.<sup>5</sup>

### 430 **Adaptive Risk Management**

431 Evolving risks and emerging capabilities drive and shape the future operational environment.  
432 Adaptive management is critical to success, allowing Federal mitigation partners to be flexible and to  
433 modify programs and policies, when permissible, to reflect emerging challenges and new  
434 technologies. The importance of understanding risk for the future is vital to mitigation operations.  
435 Innovation, new regulation, climate change, population demographics, population health status,  
436 political and economic realities, international incidents, global trends and changes in Federal  
437 involvement all affect risk management.

438 The study of the effects of evolving change and variability on vulnerability, and the ability to adapt  
439 to changes in hazards, is a relatively new field of research that brings together diverse experts.  
440 Ongoing research influences the field of risk management. FEMA's Strategic Foresight Initiative  
441 conducted and used analysis in this field to identify sociology and demographics, politics,  
442 technology, climate change, economics, and security and terrorism as key focus areas. Analyzing  
443 these efforts allows Federal partners engaged in research to prioritize research and implementation  
444 requirements.

#### 445 **Examples:**

- 446 • The EPA has implemented adaptive management in many projects. Among the  
447 most notable are the Mississippi River Basin project, which uses models and  
448 monitoring to reduce the uncertainties surrounding the biochemical mechanisms  
449 of hypoxia, and the Lake Superior Lakewide Management Plan, which calls for a  
450 less structured periodic refining of management strategies based on new  
451 information and public input.
- 452 • DOC/NOAA uses adaptive management, especially in its coastal management  
453 and coastal habitat restoration activities. The adaptive management process  
454 implemented in these cases is passive, involving iterations of a five-step cycle:  
455 plan, act, monitor, evaluate, and adjust. DOC/NOAA emphasizes the monitoring  
456 and evaluation elements of adaptive management (note, adaptive risk  
457 management follows generally accepted standards of planning, including the  
458 five-step planning process).

459 Changes in the frequency and severity of threats and hazards, along with evolving background  
460 conditions and community evolution and growth, mean that Federal risk management practices must  
461 be adaptive. Evolving risks are drivers that require a coordinated Federal approach to adaptive risk  
462 management in how Federal departments and agencies evaluate and address risks and deliver  
463 Mitigation core capabilities no matter what threats or hazards arise. Federal departments and  
464 agencies exploit technology, innovation, and advances in science and engineering practices in the  
465 delivery of core capabilities. Efforts and developments should be coordinated and shared for  
466 optimized application and utilization. This coordination can be accomplished through the various

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<sup>5</sup> National Incident Management System (<http://www.fema.gov/national-incident-management-system>).

467 multiple department or agency groups and organizations already in place with which the MitFLG  
 468 will establish communication and coordination.

469 **Example:**

- 470 • Local, state, and tribal officials develop and adopt mitigation plans to meet the
- 471 requirements of the Stafford Act. Approved mitigation plans must be updated
- 472 regularly in order to accurately reflect changes in community risk. As hazards
- 473 change, communities evolve, and mitigation takes place, the risk facing that
- 474 community changes. The FEMA role in supporting these plans is to review their
- 475 content, help communities identify risks and emerging options for risk reduction,
- 476 and promote action.

477 **Summary**

478 Mitigation core capabilities are delivered across multiple National Planning Frameworks and  
 479 integrate into multiple organizational structures, which include both decentralized models and  
 480 command and control systems. Under this ConOps, Federal partners adhere to the appropriate  
 481 management systems, which are necessary or required to administer their actions during steady state  
 482 and incident-driven operations. Change outside of incidents (e.g., demographic shifts, calendar  
 483 events, evolving risks, and developing technologies) drives mitigation activity in the same way  
 484 incidents do. Mitigation operational structures by operational state are depicted in Table 4.

485 **Table 4: Mitigation Operational Structures**

Mitigation Operational Structures	
Steady State Operations	Incident-Driven Operations
<b>Adaptive Risk Management</b>	
Federal departments and agencies deliver Mitigation core capabilities around their objectives and shared interagency objectives with a set of common principles: <ul style="list-style-type: none"> <li>• Leadership</li> <li>• Autonomy</li> <li>• Contribution and initiative</li> <li>• Self-organization</li> <li>• Clear objectives</li> </ul>	When Mitigation core capabilities are delivered under incident-driven National Planning Frameworks (NRF and NDRF), Federal departments and agencies will adhere to the appropriate management systems identified for Response or Recovery interagency operations (NIMS): <ul style="list-style-type: none"> <li>• Flexibility</li> <li>• Standardization</li> </ul>

486 **Interdependent Core Capabilities**

487 Mitigation’s core capabilities are mutually supportive, overlapping actions seldom delivered in  
 488 isolation. In order for effective mitigation to occur, understanding the connections among capabilities  
 489 is as critical as understanding the internal disciplines and requirements of each capability.

490 Individual capabilities are examined and categorized in detail in Appendix B, which is designed as a  
 491 reference point for the internal coordination of discrete actions within each capability.

492 Delivering Mitigation core capabilities under this FIOP is an interdependent activity, whether it  
 493 occurs during steady state operations, after an incident, or in response to evolving risks. Table 5  
 494 demonstrates how all Mitigation core capabilities are interdependent activities—each Mitigation core  
 495 capability supports the work of others—and outlines the interdependent model for delivering

496 Mitigation core capabilities in concert under this ConOps. For example, the core capability THID  
497 produces the data required for input to the RDRA capability. More specifically, flood hazard  
498 identification information, such as the likelihood that an area of interest will experience a flood  
499 event, can be combined with population and property data to determine the event's consequences and  
500 a community's flood risk.

501 The interoperability and interdependence described in Table 5 apply to all Federal mitigation action.  
502 Boxes in white describe how the core capability identified in each row supports the core capability  
503 listed in the individual columns. Boxes in grey provide abbreviated definitions for each core  
504 capability. While Table 5 describes the relationship among Mitigation core capabilities, the  
505 Connection to Other Mission Areas section of the ConOps describes the integration points among the  
506 Mitigation FIOP and other FIOPs under the National Planning Frameworks.

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Table 5: Interdependence of Mitigation Core Capabilities

	Threats and Hazards Identification	Risk and Disaster Resilience Assessment	Planning	Community Resilience	Public Information and Warning	Long-Term Vulnerability Reduction	Operational Coordination
Threats and Hazards Identification	Identify threats and hazards, determine frequency and magnitude, and incorporate into analysis and planning processes to clearly understand needs	Provide data and intelligence for current and future risk analysis and resilience assessment	Serve as scientific basis for risk-based prioritization and preparation	Drive community action with sound hazard information	Provide foundation for risk communication	Serve as scientific basis for risk-based decision making	Support operational decisions with data—from long-term to real-time hazard information
Risk and Disaster Resilience Assessment	Identify the need for more refined or focused threat or hazard information	Assess risk and disaster resilience so that decision makers can take informed action to reduce risk and increase resilience	Provide analytic link between threat and hazard information and projected consequences, providing basis for risk reduction strategies	Establish foundational understanding of current and future risk and resilience	Provide vulnerability information that leads to messaging, communication, and risk reduction guidance	Establish connection between risk information and targeted vulnerability reduction activity to increase resilience	Drive risk-informed operations
Planning	Set priorities for re-evaluating threat and hazard data	Identify use and requirements to update risk and disaster resilience information	Conduct a systematic process, engaging the whole community to develop strategic, operational, and community-based approaches to meet objectives	Provide forum to establish risk-based decision making that improves resilience	Assess communication gaps; enact plan to address communication of risk, needs for training, and implementation of guidance	Through community engagement, select appropriate risk reduction measures and establish priorities and sequence for action	Integrate appropriate plans and coordinate planning activities to promote risk-based decisions
Community Resilience	Establish leadership, partnerships, and collaboration that drive the identification of threats and hazards and recognize the need for quality data	Lead an integrated effort to understand, communicate, and promote the benefits of risk and disaster resilience assessment data	Driving force of leadership that engages and mobilizes the community to plan for future resilience	Enable the recognition, understanding, communication of, and planning for risk, and empower individuals and communities to make informed risk management decisions necessary to adapt to, withstand, and quickly recover from future incidents	Credible, influential leaders communicate targeted messages to receptive listeners	Compel communities to prioritize risk reduction activities and consider current and future risk when making investments	Successfully deliver multiple mitigation capabilities through established, trusted relationships and partnerships
Public Information and Warning	Risk communication and a more informed public affect the kinds of threat and hazard communications which can be delivered	Social vulnerabilities and communication factors affect overall risk analysis	The capacity and need to communicate current and future risks to the public following an incident affect planning assumptions	Provide science-based strategies and techniques for delivering information that promotes behavior change to support a resilient community	Deliver coordinated, prompt, reliable, and actionable information to the whole community through clear, consistent, accessible, and culturally and linguistically appropriate methods	Federal stakeholders must deliver information about long-term vulnerability reduction actions, funding, training, and guidance	How well public information is delivered drives operational requirements and vice versa
Long-Term Vulnerability Reduction	Long-term vulnerability reduction actions change the threat and hazard profile of a community, and may lead to re-identification of threats and hazards	Long-term vulnerability reduction actions change the current and future risk profile of a community, and may initiate re-assessment of risk and disaster resilience	Long-term vulnerability reduction actions are executed based on planned priorities and evolving plans	Implementation of risk reduction activities demonstrates progress toward achieving community resilience	Long-term vulnerability reduction actions require notification of stakeholders, communication, the implementation of guidance, training and a wide array of communication efforts	Build and sustain resilient systems and communities to reduce vulnerability by lessening the likelihood, severity, and duration of adverse consequences	Coordinate delivery of risk reduction activities with all appropriate stakeholders
Operational Coordination	Identifying and quantifying threats and hazards requires mitigation stakeholders to coordinate assessment, analysis, and delivery of information	Conducted both during steady state and in incident-driven operations, requiring a combination of command and control and other operational structures	Planning brings together threat, analysis, operational, and community stakeholders and planning professionals; developing plans requires seamless coordination around a single effort	Coordination of stakeholder actions is an essential characteristic of a resilient community	The delivery of training, guidance, forecast, and advisory information is initiated through defined operational requirements in all phases	Effective coordination may result in vulnerability reduction and occurs in both steady state and incident-driven environments	Establish and maintain a unified and coordinated operation structure that integrates stakeholders and supports execution of core capabilities

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## 510 *Incident-Specific Mitigation*

511 Incidents create windows of opportunity for the delivery of some, and focused development of other,  
512 Mitigation core capabilities, and the characteristics of an incident dictate the need for certain kinds of  
513 mitigation activity. As such, incident-specific mitigation actions that support incident-driven  
514 operations include a broad spectrum of activity. These mitigation actions fall under response and  
515 recovery structures in the immediate pre- and post-disaster environment and are administered under  
516 the appropriate framework and FIOP.

517 Near real-time mitigation actions are designed to inform response, remediate impacts, reduce the  
518 cascading effects of incidents, and advise recovery efforts. These actions include certain fire  
519 suppression activities, chemical spill remediation, activities that manage repeat or cascading terrorist  
520 threats, injury prevention, public health interventions, and safety inspections of damaged structures.  
521 The ability to perform these actions must be maintained no matter what the hazard faced.

522 Mitigation tools such as real-time data and analysis and hazard impact modeling inform decision  
523 making—controlling operational risk and managing short-term objectives. Supporting short-term  
524 mitigation actions may also require the deployment of mitigation expertise to collect and analyze  
525 data after an incident. Mitigation also includes longer-term risk management actions, such as  
526 rebuilding, outreach, analysis, planning, and implementation activities—following a disaster—to  
527 produce longer-term risk management gains. Disasters generate critical opportunities to enact  
528 community changes that may result in longer-term and more sustained reductions in risk. They also  
529 present the opportunity and access to resources, such as expertise, data and modeling or better  
530 analysis, and understanding of risk and create a window of opportunity for affecting behavior change  
531 as well as structural and infrastructural mitigation.

532 Longer-term mitigation actions that occur concurrently with response and recovery actions  
533 encompass forensic data collection and post-incident analysis and, as a result, require longer-term  
534 mitigation assets to function as part of response and recovery efforts. These activities may be closely  
535 coordinated through the Federal Disaster Recovery Coordinator and the Hazard Mitigation Advisor,  
536 under the NDRF.

## 537 *Federal Mitigation Mechanisms*

538 Federal departments and agencies support whole-community mitigation efforts by applying their own  
539 programs and capabilities across individual and coordinated operations, both in support of incidents  
540 and in response to risk. Regulatory responsibilities, oversight authorities, and obligations to support  
541 and inform stakeholders also serve to support and encourage mitigation. Leadership to promote  
542 national resilience comes from individual departments and agencies, the MitFLG, and other  
543 coordinating structures.

## 544 *Delivery of Federal Support*

545 Federal support for mitigation includes the following activities to support a culture of preparedness:

- 546 ■ Technical assistance and expertise from subject matter experts
- 547 ■ Training, outreach, and education (e.g., stakeholder engagement, guidance, exercises)
- 548 ■ Products and services (e.g., models; data and information; consultation; planning; technical  
549 assistance; insurance; and technology transfer, commercialization, and deployment)

- 550     ▪ Projects (“bricks and mortar”), including planning, design, construction, operation, and  
551     maintenance
- 552     ▪ Funding, including grants, contracts, cooperative agreements, partnerships, incentives, and tax  
553     policy.

## 554     **Capacity Building**

555     Capacity building is a specialized form of technical assistance that serves the shared objectives of  
556     Federal mitigation partners and provides leverage when applying Federal capabilities within a  
557     community. It is a focused effort to nationally elevate and increase the level of mitigation expertise,  
558     creating a more resilient Nation. It includes planning; research and development; innovation;  
559     partnership; and collaboration. Capacity building also helps identify and execute solutions that link  
560     Mitigation core capabilities and practitioners across the whole community to build a culture of  
561     preparedness which can perform these capabilities no matter what the hazard faced.

## 562     **Federal Roles and Responsibilities**

563     This FIOP identifies and describes Federal roles and responsibilities to guide the Federal  
564     Government’s implementation of the NMF. Interagency activities in the form of coordinating  
565     structures, strategic planning, and cooperative activities, such as those described in the Concept of  
566     Operations section, already exist and should likewise be capitalized upon to implement the NMF.

## 567     **Existing National Strategic Planning and Interagency Activities**

568     National strategic objectives have been set in numerous reports and plans of both Federal and non-  
569     Federal entities. Federal strategic planning can be an effective way to set shared objectives and align  
570     resources. Where these plans currently exist and identify interagency activities supporting mitigation,  
571     Federal departments and agencies should capitalize on those plans and look to align their authorities  
572     and resources in such a way to meet common strategic goals and objectives as discussed in the NMF.  
573     Many current Federal plans identify a broad range of mitigation opportunities designed to make a  
574     more secure and resilient Nation, such as the department- and agency-specific Strategic  
575     Sustainability Performance Plans required under Executive Order 13514 Federal Leadership in  
576     Environmental, Energy and Economic Performance (2009). Additional examples include:

- 577     ▪ “Grand Challenges for Disaster Reduction,” NSTC, Committee on Environment and Natural  
578     Resources, A Report of the Subcommittee on Disaster Reduction, 2005, with implementation  
579     plans in 2008 and 2010.
- 580     ▪ “Federal Actions for a Climate Resilient Nation: Progress Report of the Interagency Climate  
581     Change Adaptation Task Force,” and “National Action Plan for Managing Freshwater Resources  
582     in a Changing Climate,” Council on Environmental Quality (CEQ), 2011.
- 583     ▪ “Strategic Plan for the National Earthquake Hazards Reduction Program (NEHRP), Fiscal Years  
584     2009–2013” submitted to Congress by the Interagency Coordinating Council of NEHRP, 2008.
- 585     ▪ “Crisis Response and Disaster Resilience for 2030, Forging Strategic Action in an Age of  
586     Uncertainty,” FEMA, 2012.
- 587     ▪ “National Strategy for the Marine Transportation System, A Framework for Action,” Committee  
588     on Marine Transportation Systems, 2009.
- 589     ▪ “National Health Security Strategy,” Department of Health and Human Services (HHS), 2009.
- 590     ▪ “Unified National Program Management for Floodplain Management,” 1994.

- 591 ▪ “National Infrastructure Protection Plan, Partnering for Critical Infrastructure Security and  
592 Resilience,” DHS, 2013.
- 593 ▪ Executive Order 12777, “Implementation of Section 311 of the Federal Water Pollution Control  
594 Act of October 18, 1972, as amended, and the Oil Pollution Act of 1990” (as amended), White  
595 House, 1991.
- 596 ▪ “National Critical Infrastructure Protection R & D Plan,” NSTC, Infrastructure Subcommittee,  
597 2004.
- 598 ▪ DOC/NOAA’s Next Generation Strategic Plan, 2010, that includes the long-term goals: “Climate  
599 Adaptation and Mitigation, Weather Ready Nation, Healthy Oceans, and Resilient Coastal  
600 Communities and Economies.”
- 601 ▪ “Strategic Plan for the National Dam Safety Program (NDSP) Fiscal Years 2012–2016,” NDSP,  
602 FEMA, 2012.
- 603 ▪ National Security Presidential Directive 51/Homeland Security Presidential Directive 20 (NSPD  
604 51/HSPD 20)
- 605 ▪ National Continuity Policy Implementation Plan, Federal Continuity Directive 1 (FCD 1)
- 606 ▪ FCD 2

**Example:**

The **Strategic Plan for the NDSP for Fiscal Years 2012 through 2016** sets the national agenda for dam safety, as prescribed by the Dam Safety Act of 2006 (Public Law 109-460), and informs and supports other dam safety programs at the state and Federal levels. The plan’s purpose is aligned with the collaborative approach of FEMA to address dam risk in the context of the emergency management lifecycle and to improve the unity of effort across the entire dam safety community. The successful implementation of this strategic plan over the next five years will support the Nation in preparing for, protecting against, responding to, recovering from, and mitigating dam failures and the risks and vulnerabilities posed by dams.

The plan provides a straightforward, realistic, and executable strategic direction for the NDSP based on the most efficient and effective uses of NDSP resources to reduce losses from dam failures in the United States. The goals, objectives, strategies, and priorities will serve as formal guidelines for all NDSP efforts.

621 Other national and international documents exist that can inform Federal activities and help set a  
622 shared vision from other stakeholder groups and academic institutes. These documents can reflect  
623 global, national, regional, and local perspectives that can align Federal roles and resources to support  
624 those objectives. They include, but are not limited to, reports such as:

- 625 ▪ “Regional Disaster Resilience, A Guide for Developing an Action Plan,” The Infrastructure  
626 Security Partnership, 2011.
- 627 ▪ “Sustainable Critical Infrastructure Systems, A Framework for Meeting 21st Century  
628 Imperatives,” National Research Council of the National Academies, 2009.
- 629 ▪ “Building Community Disaster Resilience Through Private-Public Collaboration,” National  
630 Research Council, 2011.
- 631 ▪ “Recommendations for an Effective National Mitigation Effort,” National Emergency  
632 Management Association White Paper, 2009.

- 633     ▪ “National Earthquake Resilience: Research, Implementation, and Outreach,” National Research  
634     Council, 2011.
- 635     ▪ “Improved Seismic Monitoring—Improved Decisionmaking: Assessing the Value of Reduced  
636     Uncertainty,” National Research Council, 2006.
- 637     ▪ “Effective Emergency Management: Making Improvements for Communities and People with  
638     Disabilities,” National Council on Disability, 2009.
- 639     ▪ “Disaster Resilience: A National Imperative,” The National Academies, Committee on Science,  
640     Engineering, and Public Policy, Committee on Increasing National Resilience To Hazards and  
641     Disasters, 2012.
- 642     ▪ “National Biodefense Science Board Community Health Resilience Report,” National  
643     Preparedness and Response Science Board, HHS-ASPR, 2014.
- 644     ▪ “Building Community Resilience to Disaster: A Way Forward to Enhance National Health  
645     Security,” RAND Corporation, Chandra, A. et al. (2011)

#### 646     **Mitigation Framework Leadership Group**

647     The MitFLG is an interagency and intergovernmental body that facilitates information exchange and  
648     coordinates policy implementation and successful implementation of the NMF. The primary role of  
649     the MitFLG is to serve as the central coordination point for interagency mitigation activities. The  
650     MitFLG coordinates and promotes implementation of the NMF, increases awareness of mitigation  
651     throughout the Federal Government, and supports the advancement of Mitigation core capabilities  
652     through whole-community mechanisms. The MitFLG includes representatives from relevant local,  
653     state, tribal, territorial, insular area, and Federal governments. It is chaired by FEMA in consultation  
654     with leadership in the DHS. The MitFLG coordinates with the Domestic Resilience Group (DRG)  
655     under the National Security Council (NSC), and other Interagency Policy Committees (IPC) or sub-  
656     IPCs as relevant. Membership in the MitFLG will include department and agency senior officials  
657     who can speak authoritatively on behalf of their respective organizations (see MitFLG membership  
658     below, as found in the NMF). The MitFLG may establish ad-hoc working groups as needed.

659     Private industry and nongovernmental coordination with the MitFLG comes through existing  
660     mechanisms, such as structures available to Sector-Specific Agencies (SSA). The MitFLG is a  
661     coordinating structure for integrating Federal efforts, and related councils, task forces, and  
662     committees will coordinate through the MitFLG. Nothing about the operation of the MitFLG is  
663     intended to alter or impede the ability of executive departments and agencies to carry out their  
664     authorities or their responsibilities under law and consistent with applicable legal authorities and  
665     other Presidential guidance.

666     The MitFLG, through its coordination role, helps to set strategic direction and define the shared goals  
667     and objectives of the group; encourages specific and collaborative programs; and provides input to  
668     the annual National Preparedness Report.

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### Mitigation Framework Leadership Group

Non-Federal membership includes:

- Local, state, tribal, and territorial government representatives

Federal membership includes, but is not limited to:

- Department of Agriculture
- Department of Commerce
- Department of Defense
- Department of Energy
- Environmental Protection Agency
- General Services Administration
- Department of Health and Human Services
- Department of Homeland Security
- Department of Housing and Urban Development
- Department of the Interior
- Department of Justice
- Small Business Administration
- Department of Transportation
- Department of the Treasury

### 688 Existing Federal Coordinating Structures

689 Coordinating structures are composed of representatives from multiple Federal departments and  
690 agencies, public and/or private sector organizations, or a combination of such groups. Pursuant to  
691 Presidential directive, the Secretary of Homeland Security is the principal Federal official for  
692 domestic incident management. The Secretary of Homeland Security is responsible for coordinating  
693 the domestic all-hazards preparedness efforts, including mitigation activities, of all Executive  
694 departments and agencies,<sup>6</sup> in consultation with local, state, tribal, territorial, and insular area  
695 governments, NGOs, private sector partners, and the general public; and for achieving the National  
696 Preparedness Goal. The Secretary's preparedness responsibilities also include overseeing the broad  
697 "emergency management," "continuity planning and operations," and "response" activities of FEMA  
698 and other DHS components.

699 The Federal Government has several established structures for coordination of a variety of activities  
700 that address the range of natural, technological, and human-caused/adversarial threats and hazards.  
701 These include Government Coordinating Councils (GCC), Sector Coordinating Councils (SCC),  
702 Committees, and Task Forces. Understanding the relationships between the implementation of the  
703 FIOP and these existing organizations is critical. The MitFLG will define the appropriate

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<sup>6</sup> The Secretary of Homeland Security is not responsible for those law enforcement response, counterterrorism, counterintelligence, and criminal investigative activities of the Attorney General and the Director of the FBI.

704 relationships between these existing organizations and mitigation efforts. Structures that have  
705 mitigation-related missions include:

- 706     ▪ The NSC is the President’s principal forum for considering national security policy matters with  
707       senior national security advisors and cabinet officials.
- 708     ▪ The DRG is a senior level IPC under the NSC.
- 709     ▪ CEQ coordinates Federal environmental efforts and works closely with departments and agencies  
710       and other White House offices in the development of environmental policies and initiatives. The  
711       Interagency Climate Change Adaptation Task Force is co-chaired by CEQ, DOC/NOAA, and the  
712       Office of Science and Technology Policy (OSTP).
- 713     ▪ OSTP, NSTC, Committee on Environment, Natural Resources, and Sustainability, Subcommittee  
714       on Disaster Reduction serve as part of the internal deliberative process for the NSTC on disaster  
715       reduction issues.
- 716     ▪ OSTP, NSTC, Committee on Homeland & National Security, Infrastructure Subcommittee serve  
717       as part of the internal deliberative process for the NSTC on issues related to resilient and  
718       sustainable design of buildings, lifelines, and other types of physical infrastructure.
- 719     ▪ OSTP, NSTC, Committee on Technologies, Subcommittee on Standards enable responsive and  
720       timely coordination among Federal departments and agencies for more effective Federal  
721       department or agency engagement in the development and use of standards and raise awareness  
722       of best practices in standard policy issues affecting national priorities.
- 723     ▪ The Federal Interagency Floodplain Management Task Force improves coordination,  
724       collaboration, and transparency among the Federal departments and agencies in floodplain  
725       management efforts, and works closely with local, state, tribal, territorial, and insular area  
726       governments, the private sector, and nonprofit organizations.
- 727     ▪ The National Response System is the Federal Government’s mechanism for mitigation planning  
728       of hazards associated with, and emergency response to, discharges of oil and the release of  
729       hazardous substances to navigable waters or environment of the United States. The National Oil  
730       and Hazardous Substances Pollution Contingency Plan is the framework for the National  
731       Response System, which functions through a network of interagency and intergovernmental  
732       relationships, such as the National Response Team and the Regional Response Teams.
- 733     ▪ SSAs were designated by Presidential directive and given the responsibility to provide  
734       institutional knowledge and specialized expertise, as well as lead, facilitate, or support the  
735       security and resilience programs and associated activities of its designated critical infrastructure  
736       sector in the all-hazards environment.
- 737     ▪ NDSP has two supporting coordinating structures: the National Dam Safety Review Board and  
738       the Interagency Committee on Dam Safety.
- 739     ▪ NEHRP, Interagency Coordinating Committee acts in the public interest to assess trends and  
740       developments in the science and engineering of earthquake hazards reduction; effectiveness in  
741       carrying out the activities under Section 103(a)(2) of the Earthquake Hazards Reduction Act of  
742       1977, as amended; the need to revise the Program; and its management, coordination,  
743       implementation, and activities.
- 744     ▪ National Institute of Building Sciences provides a forum for government and private sector  
745       interaction on research, development, codes, and standards for the built environment and by  
746       supporting advances in building sciences and technologies for the purpose of improving the

747 performance of buildings and structures while reducing waste and conserving energy and  
748 resources.

- 749 ■ The Public Health Information Network is an HHS Centers for Disease Control and Prevention  
750 initiative to establish and support shared policies, standards, practices, and services that facilitate  
751 efficient public health information access, exchange, use, and collaboration among public health  
752 agencies and with their clinical and other partners.
- 753 ■ The National Community Health Resilience Coalition is coordinated by the HHS Office of the  
754 Assistant Secretary for Preparedness and Response to provide an ongoing venue for federal and  
755 national stakeholders to share information and promising practices and develop collaborative  
756 opportunities to assist communities to build resilience, particularly as this involves health, social  
757 connectedness, and well-being.

758 The coordinating structures for mitigation should focus on creating a national culture shift that  
759 embeds risk management and mitigation in all planning, decision making, and development, as  
760 practicable. They should also ensure connectivity with the efforts of the whole community through  
761 mechanisms described in further detail in Appendix B. The primary role of the MitFLG will be to  
762 serve as the central coordination point for interagency mitigation activities.

763 The NDRF is an interagency directive that provides a flexible structure enabling disaster recovery  
764 managers to restore, redevelop, and revitalize the health, social, economic, natural, and  
765 environmental fabric of the community and build a more resilient Nation, citing mitigation as a key  
766 component throughout the framework.

### 767 **Guidance for Department- and Agency-Level Plans**

768 As required by the National Planning System, “all executive departments and agencies with roles in  
769 the National Planning Frameworks shall develop department-level operational plans to support the  
770 interagency operational plans, as needed.” Department- and agency-level operations plans will  
771 describe how the organization’s capabilities support the application of Mitigation core capabilities,  
772 within the respective agency’s authorities and funding limitations. Existing plans, standard operating  
773 procedures, or guides may be used for the development of these plans. The department- and agency-  
774 level plan should contain the level of detail necessary to clearly identify the department’s or agency’s  
775 specific critical tasks, responsibilities, and resources required to fulfill mission area tasks as  
776 appropriate under the FIOP. The frequency for reviewing and updating these plans will depend on  
777 each department’s or agency’s internal business practices.

778 Suggested plan elements include:

- 779 ■ Description of department’s or agency’s vision for mitigation
- 780 ■ Description of authorities, responsibilities, and ability to implement Mitigation core capabilities
- 781 ■ Incorporation of continuity planning and operations to ensure Mitigation capabilities are resilient
- 782 ■ Summaries of overall trends visible within mitigation
- 783 ■ Identification of Mitigation core capabilities that show the highest degree of progress
- 784 ■ Identification of Mitigation core capabilities that show the most significant gaps/needs for  
785 improvement
- 786 ■ Interagency coordination
- 787 ■ Identification of resources to support activities

- 788     ▪ Submission date and updated/current schedule consistent with department business practices  
789     ▪ Evaluation and consideration of methods to integrate mitigation strategies across department or  
790     agency programs to ensure and supplement the civil rights of individuals with disabilities, from  
791     religious, racially, and culturally diverse backgrounds and with limited English proficiency.

792 In addition, the departmental- and agency-level operational plans could be used to:

- 793     ▪ Help promote understanding of mitigation to department mission and operations to increase  
794     efficiency of national-level operations and identify possible changes to regulations, guidance, or  
795     policy to further the implementation of the Mitigation core capabilities
- 796     ▪ Serve as a means through which a self-assessment of department activities can be conducted that  
797     have a mitigation connection and/or have mitigation effects and be used as an internal department  
798     document and inform plan development
- 799     ▪ Develop an action plan with milestones to be consistent with department business practices
- 800     ▪ Serve as a source of information for sharing lessons learned.

801 Federal roles and responsibilities to improve the Nation’s resilience should focus, where possible, not  
802 only on using and expanding existing strategic planning documents, interagency implementation  
803 activities, and coordinating structures, but also on supporting the guidance set forth in this FIOP and  
804 in departmental operating plans.

## 805 *Connection to Other Mission Areas*

### 806 **Cross Cutting Themes**

807 National preparedness activities occur simultaneously across the five mission areas. Therefore, the  
808 National Planning Frameworks should be integrated to ensure the greatest degree of coordination  
809 possible and, where appropriate, the smoothest transition from one mission area to another. Further,  
810 each framework is inextricably linked to the successful implementation of the core capabilities  
811 described in the other National Planning Frameworks.

812 The core capabilities of each mission area should operate in concert with each other to best serve the  
813 Nation. For the purpose of the FIOP, integration is the means by which the Federal Government  
814 synchronizes operations and works to enhance operations conducted at the local, state, tribal,  
815 territorial, and insular area levels either during steady state operations, in support of adaptive risk  
816 management, or when a disaster strikes.

817 Continuity planning and operations are an inherent component to all of the mission areas, especially  
818 when faced with ever-changing threats, hazards, and risks. The continuation and resiliency of the  
819 core capabilities that support the mission areas are essential to national preparedness, and continuity  
820 is the planning paradigm and operational mechanism to ensure its success.

### 821 *Common Core Capabilities*

822 Three common capabilities cut across all five mission areas and serve to provide needed  
823 integration—Planning; Public Information and Warning; and Operational Coordination. As  
824 established in the ConOps, the goal of integration among the mission areas and across governmental  
825 levels is achieved through the three common core capabilities. Each of these capabilities must be  
826 coordinated and integrated across mission areas in order to successfully deliver the capability.

827 The **Planning** capability acts as a foundation for all mission areas and the entire preparedness  
828 system. It calls for the whole community, as appropriate, to use a systematic process to develop and

829 maintain plans for meeting objectives within all mission areas. Within the Mitigation mission area,  
830 Planning builds upon existing processes, focusing on the incorporation of risk information to inform  
831 decision makers. Planning for critical infrastructure will be coordinated between the Protection and  
832 Mitigation mission areas to support shared objectives. Pre- and post-disaster recovery planning will  
833 also build on the community-based planning developed through mitigation.

834 The **Public Information and Warning** capability helps ensure an engaged, resilient public that can  
835 support any of the five mission areas. In mitigation, Public Information and Warning focuses on  
836 sharing information and communicating risk awareness and mitigation messages among elements of  
837 the whole community. This information is generated by engineers who support the development of  
838 building codes, departments and agencies such as DOC/NOAA and USGS, and information from  
839 DHS and the Intelligence Community (IC).

840 Within a unified and coordinated operational structure and process that integrates all critical  
841 stakeholders, mitigation activities establish protocols for mitigation data elements. These activities  
842 facilitate risk-informed decisions to support the whole community. This can include being a part of  
843 command and control structures during response; of collaborative coordination structures during  
844 recovery; and of decentralized structures during steady state operations.

#### 845 **Mitigation Integration with Other Mission Areas**

846 Mitigation activities reduce the impact of disasters by supporting protection and prevention activities,  
847 easing response, and speeding recovery to create better prepared and more resilient communities.  
848 Within the entire network of core capabilities, each is dependent on the others to yield results that  
849 reduce damage and save lives. Mitigation core capabilities enhance the execution of core capabilities  
850 found in each of the other mission areas through information, assessments, and long-term  
851 vulnerability reduction strategies to achieve community resilience. When fully and successfully  
852 executed, Mitigation core capabilities may support the prioritization of Protection efforts by  
853 identifying threats and hazards, optimizing Response by helping to reduce the impact of disaster, and  
854 quickening and enhancing efforts in Recovery by analyzing disaster impacts. Through science and  
855 research, Mitigation capabilities may also help to synchronize efforts to update and rebuild improved,  
856 more resilient communities.

#### 857 ***Prevention Mission Area***

858 Threat identification and risk assessment information provide decision makers with awareness of and  
859 context for an incident. Once specific threats and risks are ascertained, communities can then devise  
860 appropriate measures for mitigating those threats, thereby reducing vulnerability. Prevention reduces  
861 threats or the consequences of an attack through effective Federal law enforcement, investigative,  
862 intelligence, and operational responses to threatened or actual acts of terrorism within the United  
863 States and its territories. It unifies the collective capabilities of the Federal Government to respond to  
864 an imminent threat, terrorist attack, and/or follow-on attack. Prevention efforts interact with  
865 Mitigation efforts to ensure a coordinated Federal effort and, as necessary, to establish joint priorities  
866 across mission space. Prevention and mitigation must be in communication during times of imminent  
867 threat so that mitigation assets, to the extent practical and appropriate, may be pre-positioned.

868 Prevention mission area outreach and community involvement help to establish and maintain strong  
869 partnerships to increase awareness of potential threats. Intelligence-focused relationships among  
870 local, state, tribal, territorial, and Federal law enforcement; intelligence and homeland security  
871 entities; and with the public and private sector, academia, and other community organizations and  
872 NGOs facilitate information sharing. In turn, this creates more opportunities to thwart acts of  
873 terrorism and to lessen the effects of large-scale, manmade catastrophes should they occur. Through

874 these dialogues, communities may better deter and detect specific threats and mitigate vulnerabilities.  
875 They may also develop new ways of reducing risks and reporting successful practices.

### 876 ***Protection Mission Area***

877 Activities in the Mitigation and Protection mission areas are typically performed in a steady state or  
878 well before an incident. Protection places particular attention on security and deterrence of threats,  
879 while mitigation emphasizes reducing vulnerabilities. Both seek to minimize consequences and have  
880 a shared focus on critical infrastructure. Addressing the security of critical infrastructure falls within  
881 the Protection mission area, while addressing the resilience of the infrastructure falls within the  
882 Mitigation mission area. Threats and hazards risk information and analysis are necessary to  
883 effectively design successful strategies for mitigation and protection. Integration of risk information,  
884 planning activities, and coordinating structures reduces duplication of effort and streamlines risk  
885 management actions in both mission areas.

### 886 ***Response Mission Area***

887 Effective community mitigation efforts directly reduce loss of life, property damage, and the required  
888 scale of response operations. Therefore, they can reduce the overall financial cost. Threats and  
889 hazards information and risk assessment data can trigger crucial life-saving and life-sustaining  
890 operations. Tools such as inundation mapping for flood events can be used to plan and determine  
891 appropriate life-saving actions. Most importantly, these data can be used to develop a better  
892 understanding of the situation in order to deliver information for decision making, while easing  
893 transition to recovery. When incidents impede the ability to communicate effectively or develop  
894 impact assessments, risk analysis and hazard modeling can provide operational assumptions for first  
895 responders to help them understand more about the situation and better prepare to respond.

### 896 ***Recovery Mission Area***

897 Mitigation and recovery share a focus on sustainable recovery and overall resilience. Cross-mission-  
898 area integration activities, such as planning, are essential to ensuring that risk avoidance and risk  
899 reduction actions are taken during the recovery process. Integrating mitigation actions into pre- and  
900 post-disaster recovery plans provides systematic risk management after the incident. During the  
901 recovery process actions can be taken to address the resilience of population's health and wellness,  
902 social systems, the economy, housing, natural and cultural resources, and critical infrastructure.  
903 Lessons learned during the recovery process also inform future mitigation actions. Linking recovery  
904 and mitigation can help us to break the cycle of damage-repair-damage resulting from rebuilding  
905 without mitigation following disasters.

### 906 ***An Integrated Approach***

907 Meeting the challenges of current and future disasters requires the concerted effort of all Federal  
908 agencies in partnership with local, state, tribal, territorial, and insular area governments; NGOs; and  
909 the private sector to integrate their efforts. The principle of integration ensures unity of effort among  
910 all levels of government and all elements of a community. Achieving integrated effort is often  
911 complicated by crisis-driven planning and divergent organizational processes and cultures. The FIOP  
912 expands upon how integration can be improved through operational coordination and establishment  
913 of joint interagency objectives.

914 Another critical element for consideration when achieving integration is the organizational structure  
915 or mechanism in which organizations and individuals operate and interact. Integration can be

916 approached from three different organizational perspectives: internal, horizontal, and vertical.<sup>7</sup>  
917 **Internal** integration occurs within Federal departments and agencies and within their respective  
918 programs. Communities of practice, or groups that are bound together by mutual interests, are  
919 examples of **horizontal** structures that can achieve integration. Integrated decisions are based on  
920 consensus and group acceptance of the governing structure. **Vertical** integration seeks to ensure  
921 compatibility among entities and levels by encouraging standardization within broad parameters.  
922 Vertical integration is much more hierarchical and relies on more directive methodologies.  
923 Integration among mission areas will continue to evolve as the ConOps are exercised and  
924 implemented and the FIOPs are updated to capture lessons learned.

## 925 **Oversight, Plan Development, and Maintenance**

### 926 *Mitigation FIOP Review Cycle*

927 This FIOP must reflect current conditions, realities, and stakeholder perspectives. Through a standard  
928 review, monitoring, and update cycle, the FIOP will remain relevant, credible, and sound for the  
929 whole community.

### 930 **Monitoring Process**

931 The MitFLG will monitor actions taken in accordance with this FIOP. It will identify and document:

- 932 ▪ Previously unused, new, or innovative coordination forums/groups/committees that enable the  
933 successful and coordinated delivery of Mitigation core capabilities
- 934 ▪ Mitigation lessons learned from exercises, disaster incidents, and other events
- 935 ▪ Any systemic and capability-level challenges and obstructions
- 936 ▪ Gaps in coordination and missed opportunities
- 937 ▪ Stakeholder engagement and information provided regarding mitigation.

### 938 **Review and Update Process**

939 This FIOP will be regularly reviewed to evaluate consistency with existing and new policies;  
940 evolving threats and hazards; and experience gained from use. Interagency partners will be engaged  
941 in the review and maintenance process for this FIOP. Reviews of this FIOP will be conducted on a  
942 quadrennial basis. The review and maintenance process may include developing incident-specific  
943 and classified annexes, which include the delivery schedule for federally coordinated assets and  
944 resources, as appropriate. The FIOP will be updated periodically, as required, to incorporate new  
945 executive guidance and statutory and procedural changes, as well as lessons learned from exercises  
946 and actual incidents.

947 Significant updates to the Mitigation FIOP will be vetted through a Federal senior-level interagency  
948 review process. The review process provides an opportunity to reassess the FIOP's direction and to  
949 address current conditions and realities by engaging stakeholders, revising the document, and  
950 publishing an amended version for the whole community. Information reported through the  
951 monitoring process will be integrated into the FIOP, as appropriate. Where conditions, realities, and

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<sup>7</sup> FEMA, Emergency Management Institute, Principles, Practice, Philosophy and Doctrine of Emergency Management, Session 6, Integrated Emergency Management, April 2011.

952 stakeholder perspectives have changed little or not at all, the FIOP may remain unchanged. The FIOP  
953 review will accomplish the following:

- 954 ▪ Provide an assessment of, and updated information on, the delivery of core capabilities
- 955 ▪ Ensure that the FIOP is consistent with other mission areas
- 956 ▪ Incorporate lessons learned and effective practices
- 957 ▪ Reflect progress in the Federal Government's mission activities.

### 958 **FIOP Application to the Non-Federal Audience**

959 Local governments and state, tribal, territorial, and insular area governments, NGOs, and private  
960 sector entities can adapt and reference the comprehensive operational approach to reducing loss of  
961 life and property offered in the FIOP when conducting their own planning and implementation  
962 activities. The Mitigation FIOP:

- 963 ▪ Can serve as a resource for interrelated Federal and non-Federal efforts to build and sustain  
964 preparedness
- 965 ▪ Provides a transparent description of the existing organization, strategy, and methodology that  
966 the Federal Government uses to deliver Mitigation core capabilities
- 967 ▪ Merges operational information from across Federal departments and agencies into one  
968 document, streamlining endeavors to explain how the Federal Government supports  
969 accomplishment of the Mitigation mission
- 970 ▪ Describes the scope of the MitFLG, a group that works to ensure appropriate integration of  
971 Federal mitigation efforts across the whole community.

## 972 **Authorities and References**

973 Federal departments and agencies deliver the Mitigation core capabilities as authorized by Federal  
974 law including Presidential executive orders, other Presidential directives, and Federal statutes.  
975 Authority and direction for the delivery of the core capabilities is further provided in Federal  
976 regulations and in department and agency policies, guidelines, and directives. Pursuant to the  
977 National Preparedness Goal, and as stated above, the NMF defines mitigation broadly,  
978 encompassing, but not limited to, more specific definitions of mitigation, such as that found under  
979 the Stafford Act. This section highlights some of the key existing authorities that Federal mitigation  
980 partners rely on to execute their mitigation programs and activities. These are intended to be  
981 illustrative and not comprehensive. A more complete set of relevant Presidential directives, laws, and  
982 authorities can be developed as needed or coordinated by the MitFLG. An initial review identified  
983 more than 100 legal authorities that may be relevant to Federal mitigation operations. This document  
984 is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at  
985 law or equity, against the United States, its departments, agencies, or other entities, its officers or  
986 employees, or any other person.

### 987 **National Preparedness Goal and Executive Orders**

988 The National Preparedness Goal describes the Nation's approach to national preparedness. The intent  
989 of the National Preparedness Goal is to catalyze integrated preparedness planning across departments  
990 and agencies, the private and nonprofit sectors, and the general public to strengthen the security and  
991 resilience of the Nation. The National Preparedness Goal builds on existing authorities and directs

992 Federal action, including that which led to the creation of the NMF and this Mitigation FIOP. This  
993 directive is not intended to interfere with or impede the current authorities in place that have already  
994 established or reformed mitigation or other preparedness operations across the Federal Government.  
995 The NMF sets the strategy and doctrine for mitigation, while this FIOP provides guidance to Federal  
996 departments and agencies for implementation of the NMF and its core capabilities.

997 Examples of Executive Orders relevant to the National Preparedness Goal include Executive Order  
998 12333 and Executive Order 11988:

999 **Executive Order 12333, United States Intelligence Activities, 1981** enables the IC to mitigate the  
1000 effects of human-caused/adversarial threats. It provides direction to departments and agencies on the  
1001 collection, analysis, production, and dissemination of intelligence, reducing the threat to national  
1002 security through the use of current and accurate information about the activities, capabilities, plans,  
1003 and intentions of foreign entities.

1004 **Executive Order 11988, Floodplain Management, 1977** requires Federal departments and agencies  
1005 to take action to reduce the adverse effects of flooding, to preserve the natural benefits provided by  
1006 floodplains, and to consider alternatives to floodplain development. This Order, in furtherance of the  
1007 National Environmental Policy Act of 1969, the National Flood Insurance Act of 1968, and the Flood  
1008 Disaster Protection Act of 1973, directs Federal departments and agencies to mitigate flood risk  
1009 through risk identification, assessment, and reduction.

1010 Other key Executive Orders relevant to this FIOP include:

- 1011 ▪ Executive Order 11990, Protection of Wetlands, 1977
- 1012 ▪ Executive Order 12898, Federal Actions to Address Environmental Justice in Minority  
1013 Populations and Low-Income Populations, 1994
- 1014 ▪ Executive Order 13007, Indian Sacred Sites, 1996
- 1015 ▪ Executive Order 13166, Access for Persons with Limited English Proficiency, 2000
- 1016 ▪ Executive Order 13514 Federal Leadership in Environmental, Energy, and Economic  
1017 Performance, 2009
- 1018 ▪ NSPD 51/HSPD 20 and National Continuity Policy Implementation Plan.

### 1019 *Department and Agency Directives and Congressional Acts*

1020 Federal departments and agencies are responsible for executing the laws enacted by Congress. As  
1021 part of that responsibility, they promulgate regulations and issue department or agency directives that  
1022 provide internal policy guidance, delegate authority, establish programs, define procedures, or assign  
1023 responsibilities. These authorities can be specific to certain conditions, such as steady state or  
1024 incident-driven operations, and be directed toward more than one department or agency. Examples of  
1025 statutory authorities relevant to steady state operations include:

- 1026 ▪ **The Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988**, as amended,  
1027 constitutes the statutory authority for most Federal disaster response activities, but it also  
1028 includes certain provisions for hazard mitigation. Specifically, it authorizes steady state activities  
1029 conducted by FEMA, such as support for communities to develop effective public-private natural  
1030 disaster hazard mitigation partnerships, hazard vulnerability assessments, and documentation of  
1031 hazard mitigation priorities and plans.
- 1032 ▪ **The Pandemic and All Hazards Preparedness Reauthorization Act** was enacted to prepare  
1033 the Nation for public health and medical emergencies. This Act includes provisions for the

1034 development of a National Health Security Strategy, which promotes community resilience and  
1035 strong and sustainable health and emergency response systems, and expanded preexisting grant  
1036 programs to enhance community and hospital preparedness for health emergencies.

1037 Departments and agencies implement steady state mitigation actions that come before incidents but  
1038 also mitigate disasters, by enforcing regulations or providing incentives to support more resilient new  
1039 construction, including roads, bridges, and homes. Examples of departments that take mitigating  
1040 action based on incident-driven triggers are:

- 1041 ▪ **The Federal Highway Administration in the Department of Transportation (DOT)** has an  
1042 Emergency Relief program for the repair or reconstruction of Federal-aid highways and roads on  
1043 Federal lands that have suffered serious damage as a result of natural disasters and catastrophic  
1044 failures from an external cause.<sup>8</sup> Emergency Relief funds are available at the pro-rata cost share  
1045 that would normally apply to the Federal-aid facility damaged. These actions attempt to mitigate  
1046 further loss due to damaged Federal highways.
- 1047 ▪ The **Federal Mine Health and Safety Act of 1977**, which enabled the Department of Labor to  
1048 work with HHS to mitigate the risk of death and disease in American miners. This interagency  
1049 group was directed to establish health and safety standards in mining, and to work with the states  
1050 to implement them. The purpose was to not only reduce the risk to miners' health and safety, but  
1051 also to prevent the economic impacts that follow such conditions.

1052 Additionally, Federal departments and agencies can use MOUs and memorandums of agreement  
1053 (MOA) to cooperatively carry out mitigation activities as allowed by law.

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<sup>8</sup> 23 U.S.C. § 125, as amended, Emergency Relief–Consolidated and Further Continuing Appropriations Act, 2012 (Public Law 112-55).

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## 1055 Appendix A: Key Terms and List of 1056 Abbreviations

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### 1057 *Key Terms*

1058 **Access and Functional Needs:** Persons who may have additional needs before, during, and after an  
1059 incident in functional areas, including but not limited to: maintaining independence, communication,  
1060 transportation, supervision, and medical care. These may include those individuals who have  
1061 disabilities; live in institutionalized settings; are seniors; are children; are from diverse cultures; have  
1062 Limited English Proficiency or are non-English speaking; or are transportation disadvantaged.

1063 **Access/Accessible:** Suitability or adaptability of programs, services, activities, goods, facilities,  
1064 privileges, advantages or accommodations provided by a public or private (for-profit or not-for-  
1065 profit) entity, or by any entity to which it contracts for all members of the population, including  
1066 individuals with disabilities.

1067 **Adaptive Risk Management:** Applies to both steady state and incident-driven activities, and offers  
1068 opportunities for course correction within each. Operational paradigms for steady state and incident-  
1069 driven operations include identifying opportunities for continuous improvement. Activities that are  
1070 driven by cycles, indicators, and changes that occur outside of incidents. This includes demographic  
1071 and technological changes and advancements, and evolving hazards and changing risk landscapes.  
1072 For instance, advances in technology create new and more accurate ways to assess and mitigate  
1073 hazards, and Federal mitigation action may change based on such advancements.

1074 **Capability Targets:** Performance threshold(s) for each core capability.

1075 **Community:** Unified groups that share goals, values, or purposes rather than geographic boundaries  
1076 or jurisdictions. Communities bring people together in different ways for different reasons, but each  
1077 provides opportunities for sharing information and promoting collective action. They have the ability  
1078 to promote and implement mitigation activities without necessarily holding a formal position of  
1079 authority within a jurisdiction.

1080 **Concept of Operations:** A statement that clearly and concisely expresses what is intended to be  
1081 accomplished and how it will be done using available resources.

1082 **Continuity Planning and Operations:** The inherent practice of ensuring the execution of essential  
1083 functions in support of the core capabilities and mission areas through all circumstances. It is a  
1084 fundamental responsibility of public and private entities to their stakeholders.

1085 **Coordinating Structures:** Composed of representatives from multiple departments or agencies,  
1086 public and/or private sector organizations, or a combination of these. Coordinating structures are able  
1087 to facilitate the preparedness and delivery of capabilities, and they provide guidance, support, and  
1088 integration to aid in the preparedness of the whole community and building resilience at the local,  
1089 regional, and national levels. They ensure ongoing communication and coordination between all  
1090 parties involved in preparing and delivering capabilities.

1091 **Core Capabilities:** Distinct critical elements necessary to achieve the National Preparedness Goal.

1092 **Critical Infrastructure:** Systems and assets, whether physical or virtual, so vital that the incapacity  
1093 or destruction of such may have a debilitating impact on the security, economy, public health or  
1094 safety, environment, or any combination of these matters, across any local, state, tribal, territorial,  
1095 and Federal jurisdiction.

1096 **Cultural Resources:** Aspects of a cultural system that are valued by or significantly representative  
1097 of a culture or that contain significant information about a culture. Cultural resources may be tangible  
1098 entities or cultural practices. Tangible cultural resources are categorized as districts, sites, buildings,  
1099 structures, and objects for the National Register of Historic Places and as archaeological resources,  
1100 cultural landscapes, structures, museum objects and archives, and ethnographic resources for Federal  
1101 management purposes. Also includes cultural items as that term is defined in section 2(3) of the  
1102 Native American Graves Protection and Repatriation Act [25 U.S.C. § 3001(3)]; and archaeological  
1103 resources, as that term is defined in section 3(1) of the Archaeological Resources Protection Act of  
1104 1979 [16 U.S.C. § 470bb(1)].

1105 **Culture of Preparedness:** A culture of preparedness is built on a shared acknowledgement of the  
1106 certainty of future catastrophes; the importance of initiative and accountability at all levels; the role  
1107 of citizens and stakeholders in preparedness; and finally, the roles of the whole community in  
1108 creating a prepared Nation.

1109 **Federal Disaster Recovery Coordinator (FDRC):** The FDRC works as a deputy to the Federal  
1110 Coordinating Officer (FCO) for all matters concerning disaster recovery. The FDRC is responsible  
1111 for facilitating disaster recovery coordination and collaboration between the local, state, tribal, and  
1112 Federal governments, the private sector, and voluntary, faith-based, and community organizations.  
1113 The FDRC partners with and supports the Local Disaster Recovery Manager (LDRM) and the State  
1114 and/or Tribal Disaster Recovery Coordinator (SDRC/TDRC) to facilitate disaster recovery in the  
1115 impacted state or tribal area.

1116 **Functional Needs:** Needs of an individual who under usual circumstances is able to function on their  
1117 own or with support systems. However, during an emergency, their level of independence is  
1118 challenged.

1119 **Hazard:** Natural, technological, or human-caused source or cause of harm or difficulty.

- 1120 ▪ **Natural:** Source of harm or difficulty created by a meteorological, biological, environmental, or  
1121 geological phenomenon or combination of phenomena.
- 1122 ▪ **Technological/Accidental:** Source of harm or difficulty created by accidents or failures.
- 1123 ▪ **Adversarial/Human-Caused:** Source of harm or difficulty created by an individual, group,  
1124 organization, or government.

1125 **Incident-Driven Operations:** When Mitigation core capabilities are employed to support incident-  
1126 driven operations, departments and agencies follow NIMS. Near real-time mitigation actions are  
1127 designed to inform response, remediate impacts, reduce the cascading effects of incidents, and advise  
1128 recovery efforts. Incident-driven operations also include longer-term risk management actions, such  
1129 as rebuilding, outreach, analysis, planning, and implementation activities—following a disaster—to  
1130 produce longer-term risk management gains.

1131 **Individual with Disability:** Person (child or adult) who has a physical or mental impairment that  
1132 substantially limits one or more major life activities; a person who has a history or record of such  
1133 impairment; or a person who is perceived by others as having such impairment. The term “disability”  
1134 has the same meaning as that used in the Americans with Disabilities Act Amendments Act of 2008,  
1135 Public Law 110–325, as incorporated into the Americans with Disabilities Act. See  
1136 <http://www.ada.gov/pubs/ada.htm> for the definition and specific changes to the text of the Americans  
1137 with Disabilities Act. State laws and local ordinances may also include individuals outside the  
1138 Federal definition. Children and adults may have physical, sensory, mental health, cognitive, and/or

1139 intellectual disabilities resulting in access and functional needs and may require assistance to  
1140 maintain independence.

1141 **Limited English Proficiency:** Individual who does not speak English as his/her primary language  
1142 and who has a limited ability to read, write, speak, or understand English.

1143 **Mission Areas:** Groups of core capabilities, including Prevention, Protection, Mitigation, Response,  
1144 and Recovery.

1145 **Mitigation:** Capabilities necessary to reduce loss of life and property by lessening the impact of  
1146 disasters. Mitigation capabilities include, but are not limited to, community-wide risk reduction  
1147 projects; efforts to improve the resilience of critical infrastructure and key resource lifelines; risk  
1148 reduction for specific vulnerabilities from natural hazards or acts of terrorism; and initiatives to  
1149 reduce future risks after a disaster has occurred.

1150 **Mitigation Advisor:** The FEMA Mitigation Advisor brings broad mitigation expertise as an advisor  
1151 to the FDRC and for all Recovery Support Function (RSF) sections. Mitigation Advisors can make a  
1152 large difference both in how mitigation is used and in how it is perceived by all the Federal and state  
1153 partners in the NDRF and brings a wide range of opportunities to impact national resilience. The  
1154 FDRC and RSF Field Coordinators have access to, and are informed by, the Mitigation Advisor.

1155 **Mitigation Framework Leadership Group:** Interagency and intergovernmental body that facilitates  
1156 information exchange and coordinates policy implementation and successful implementation of the  
1157 National Mitigation Framework. This group serves as the central coordination point for interagency  
1158 mitigation activities; it coordinates and promotes National Mitigation Framework implementation,  
1159 increases awareness of mitigation throughout the Federal Government, and supports the advancement  
1160 of Mitigation core capabilities through whole-community mechanisms.

1161 **National Incident Management System:** Provides a systematic, proactive approach to guide  
1162 departments and agencies at all levels of government, nongovernmental organizations, and the  
1163 private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate  
1164 the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss  
1165 of life and property and harm to the environment. NIMS works hand in hand with the NRF. NIMS  
1166 provides the template for the management of incidents, while the NRF provides the structure and  
1167 mechanisms for national-level policy for incident management.

1168 **National Planning Frameworks:** Address the roles and responsibilities across the whole community  
1169 to deliver the core capabilities. The National Planning Frameworks are built upon scalable, flexible,  
1170 and adaptable coordinating structures to align key roles and responsibilities to deliver the necessary  
1171 capabilities to prevent, protect, mitigate, respond, and recover. The National Planning Frameworks  
1172 provide succinct descriptions, at a high level, of the steps to be taken to prepare to deliver the  
1173 necessary capabilities; the National Planning Frameworks are not intended to be traditional  
1174 operational plans, concept of operations plans, or detailed plans for affirmative action.

1175 **National Preparedness:** Actions taken to plan, organize, equip, train, and exercise to build and  
1176 sustain the capabilities necessary to prevent, protect against, mitigate the effects of, respond to, and  
1177 recover from those threats that pose the greatest risk to the security of the Nation.

1178 **National Preparedness Goal:** The National Preparedness Goal is aimed at strengthening the  
1179 security and resilience of the United States through systematic preparation for the threats that pose  
1180 the greatest risk to the security of the Nation, including acts of terrorism, cyber-attacks, pandemics,  
1181 and catastrophic natural disasters.

1182 **Presidential Policy Directive 21 (Critical Infrastructure Security and Resilience):** Presidential  
1183 Directive which establishes national policy on critical infrastructure security and resilience. Refines  
1184 and clarifies the critical infrastructure-related functions, roles, and responsibilities across the Federal  
1185 Government, as well as enhances overall coordination and collaboration.

1186 **Prevention:** Capabilities necessary to avoid, prevent, or stop a threatened or actual act of terrorism.  
1187 Prevention capabilities include, but are not limited to, information sharing and warning; domestic  
1188 counterterrorism; and preventing the acquisition or use of weapons of mass destruction (WMD). For  
1189 the purposes of the prevention framework, the term “prevention” refers to preventing imminent  
1190 threats.

1191 **Protection:** Capabilities necessary to secure the homeland against acts of terrorism and manmade or  
1192 natural disasters. Protection capabilities include, but are not limited to, defense against WMD threats;  
1193 defense of agriculture and food; critical infrastructure protection; protection of key leadership and  
1194 events; border security; maritime security; transportation security; immigration security; and  
1195 cybersecurity.

1196 **Recovery:** Capabilities necessary to assist communities affected by an incident to recover  
1197 effectively, including, but not limited to, rebuilding infrastructure systems; providing adequate  
1198 interim and long-term housing for survivors; restoring health, social, and community services;  
1199 promoting economic development; and restoring natural and cultural resources.

1200 **Resilience:** Ability to adapt to changing conditions and withstand and rapidly recover from  
1201 disruption due to emergencies.

1202 **Response:** Capabilities necessary to save lives, protect property and the environment, and meet basic  
1203 human needs after an incident has occurred.

1204 **Risk Assessment:** Product or process that collects information and assigns a value to risks for the  
1205 purpose of informing priorities, developing or comparing courses of action, and informing decision  
1206 making.

1207 **Steady State/Continuous Operations:** Mitigation efforts conducted during ongoing operations  
1208 which incorporate program management structures around shared goals, principles, and department  
1209 and agency initiatives and coordinating structures to maximize Federal performance.

1210 **Strategic National Risk Assessment:** Assessment identifying the threats and hazards that pose the  
1211 greatest risk to the Nation and providing the basis for establishing the National Preparedness Goal  
1212 and the core capability requirements for all mission areas. The Strategic National Risk Assessment  
1213 captures the threats and hazards that pose a significant risk to the Nation, grouped into three  
1214 categories.

1215 **Whole Community:** Includes individuals, families, and households; communities; the private and  
1216 nonprofit sectors; faith-based organizations; and local, state, tribal, territorial, and Federal  
1217 governments. Whole community is defined in the National Preparedness Goal as “a focus on  
1218 enabling the participation in national preparedness activities of a wider range of players from the  
1219 private and nonprofit sectors, including nongovernmental organizations and the general public, in  
1220 conjunction with the participation of Federal, state, and local governmental partners in order to foster  
1221 better coordination and working relationships.”

## 1222 *List of Abbreviations*

1223 APHIS            Animal Plant Health Inspection Service

1224 C.F.R.            Code of Federal Regulations

1225	CEQ	Council on Environmental Quality
1226	CMMI	Capability Maturity Model Integration
1227	ConOps	Concept of Operations
1228	CPG	Comprehensive Preparedness Guide
1229	DHS	Department of Homeland Security
1230	DOC	Department of Commerce
1231	DOD	Department of Defense
1232	DOI	Department of the Interior
1233	DOT	Department of Transportation
1234	DRG	Domestic Resilience Group
1235	EOC	Emergency Operations Center
1236	EPA	Environmental Protection Agency
1237	FBI	Federal Bureau of Investigation
1238	FCD	Federal Continuity Directive
1239	FCO	Federal Coordinating Officer
1240	FDRC	Federal Disaster Recovery Coordinator
1241	FEMA	Federal Emergency Management Agency
1242	FIOP	Federal Interagency Operational Plan
1243	FNSS	Functional needs support services
1244	GCC	Government Coordinating Council
1245	GIS	Geographic Information System
1246	HHS	Department of Health and Human Services
1247	HMGP	Hazard Mitigation Grant Program
1248	HSPD	Homeland Security Presidential Directive
1249	HUD	Department of Housing and Urban Development
1250	IC	Intelligence Community
1251	ICS	Incident Command System
1252	IPC	Interagency Policy Committee
1253	JOC	Joint Operations Center
1254	LDRM	Local Disaster Recovery Manager
1255	MAT	Mitigation Assessment Team
1256	MitFLG	Mitigation Framework Leadership Group
1257	MOA	Memorandum of Agreement
1258	MOU	Memorandum of Understanding

1259	MSA	Metropolitan Statistical Area
1260	NDRF	National Disaster Recovery Framework
1261	NDSP	National Dam Safety Program
1262	NEHRP	National Earthquake Hazards Reduction Program
1263	NFIP	National Flood Insurance Program
1264	NGO	Nongovernmental Organization
1265	NIMS	National Incident Management System
1266	NMF	National Mitigation Framework
1267	NOAA	National Oceanic and Atmospheric Administration
1268	NOC	National Operations Center
1269	NRCS	Natural Resources Conservation Service
1270	NRF	National Response Framework
1271	NSC	National Security Council
1272	NSPD	National Security Presidential Directive
1273	NSTC	National Science and Technology Council
1274	OSTP	Office of Science and Technology Policy
1275	PPD	Presidential Policy Directive
1276	RDRA	Risk and Disaster Resilience Assessment
1277	Risk MAP	Risk Mapping, Assessment, and Planning
1278	SCC	Sector Coordinating Council
1279	SDRC	State Disaster Recovery Coordinator
1280	SNRA	Strategic National Risk Assessment
1281	SSA	Sector-Specific Agency
1282	TDRC	Tribal Disaster Recovery Coordinator
1283	THID	Threats and Hazards Identification
1284	THIRA	Threat and Hazard Identification and Risk Assessment
1285	U.S.C.	U.S. Code
1286	USACE	U.S. Army Corps of Engineers
1287	USCG	U.S. Coast Guard
1288	USDA	U.S. Department of Agriculture
1289	USGS	U.S. Geological Survey
1290	WMD	Weapons of mass destruction

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## 1292 Appendix B: Delivery of Mitigation Core 1293 Capabilities<sup>9</sup>

### 1294 *Threats and Hazards Identification*

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

### 1298 **Expanded Capability Description**

1299 The identification of threats and hazards occurs on all political, geographical, and organizational  
1300 levels. Appropriate data that are collected in a standardized and well-defined format can be made  
1301 publicly accessible for analysis and assessment by relevant and appropriate entities. Threat and  
1302 hazard identification is an essential part of all planning processes as part of the National Preparedness  
1303 System.

### 1304 **Federal Role**

1305 Threats and hazards identification involves determining characteristics of the source of harm or  
1306 characteristics associated with impacts, such as the geographic area, frequency, and magnitude. Each  
1307 threat has unique considerations; for example, certain threats and hazards may not be restricted to  
1308 particular geographic locations. Threat and hazard characteristics can be determined through  
1309 modeling, historical data, and other tools and methodologies relevant to the factors that influence the  
1310 manifestation of the threat or hazard.

1311 The Federal Government supports and guides the efforts of the whole community to enable accurate  
1312 and timely availability of threat and hazard data to meet the needs of analysts and decision makers.  
1313 Federal threats and hazards identification activities span across Federal agencies and out to whole-  
1314 community partners and rely on two-way data collaboration—nationally generated and locally  
1315 derived data.

**Target:** Identify the threats and hazards within and across the states, tribes, territories, and the top 100 metropolitan statistical areas (MSA), in collaboration with the whole community, against a national standard based on sound science.

### 1319 **Critical Tasks**

- 1320 ■ **Identify data requirements across stakeholders.**
  - 1321 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
1322 and insular area governments; and Federal Government.
  - 1323 • Mechanism(s): Collaboration with partners, data users, and data providers.
  - 1324 • How/Example(s): Develop data requirements based on the data user needs and consistent  
1325 data formats to develop standards for data and required documentation that promote data use,  
1326 sharing, and further analysis and enhancement; identify appropriate level of security

<sup>9</sup> Capabilities and targets as defined in the National Preparedness Goal, June 2015, and critical tasks as defined in the National Mitigation Framework.

- 1327 classifications for threat and hazard data to promote the broadest sharing without  
1328 compromising data security.
- 1329 **▪ Develop and/or gather required data in a timely and accurate manner in order to**  
1330 **effectively identify threats and hazards.**
- 1331 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
1332 and insular area governments; and Federal Government.
- 1333 • Mechanism(s): Make grants available for data collection and analysis, standardize data, make  
1334 data available and accessible, and improve real-time accessibility and usability of data.
- 1335 • How/Example(s):
- 1336 ○ Surveillance, including health and animal disease surveillance
- 1337 ○ Development of data and documentation standards
- 1338 ○ Agreement on units of measurements
- 1339 ○ Lessons learned from exercises and incidents
- 1340 ○ Consideration of human factors (e.g., whether data collectors are trained, whether  
1341 analysts have the proper skills and qualifications)
- 1342 ○ Validation, vetting, and screening of methods and results
- 1343 ○ Inspection and enforcement of data standards and documentation
- 1344 ○ Event-driven data collection like levee monitoring and inspections as flood waters rise or  
1345 forensic data that can inform short-term recovery or Mitigation Assessment Teams  
1346 (MAT) that assess the damage and vulnerability of buildings after an incident
- 1347 ○ Data catalogues and repositories to enable ready access to available and current data.
- 1348 **▪ Deploy and maintain continuous, long-term hazards data collection systems.**
- 1349 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
1350 and insular area governments; and Federal Government.
- 1351 • Mechanism(s): Make grants available for data collection and analysis, standardize data, make  
1352 data available and accessible, and improve real-time accessibility and usability of data.
- 1353 • How/Example(s): Deployment and maintenance of equipment and data availability from such  
1354 means as remote sensing and surveillance, stream gauges, and sensors on critical  
1355 infrastructure.
- 1356 **▪ Ensure that the right data are received by the right people at the right time.**
- 1357 • Stakeholder(s): Academia; private sector; NGOs; local, state, tribal, territorial, and insular  
1358 area governments; and Federal Government.
- 1359 • Mechanism(s): Pre-incident planning and exercises, public awareness messaging and  
1360 assessment of effectiveness, coordinating structures.
- 1361 • How/Example(s):
- 1362 ○ Identify threats and hazards through national, regional, state, and local level exercises by  
1363 not only conducting the exercise, but also incorporating lessons learned

- 1364           ○ Ensure, via healthcare personnel, that public health agencies receive prompt notification  
1365           upon identifying reportable diseases
- 1366           ○ Develop after-action reports and improvement plans
- 1367           ○ Improve and validate threat and hazard data based upon actual incidents
- 1368           ○ Hurricane warnings
- 1369           ○ Develop partnerships and disseminate information sharing and safeguarding protocols to  
1370           private sector and critical infrastructure partners
- 1371           ○ Social media
- 1372           ○ Alert system
- 1373           ○ Physical communications
- 1374           ○ Environmental regulations
- 1375           ○ Operation centers
- 1376           ○ Employ a consistent data format
- 1377           ○ Standardize data and measurements
- 1378           ○ Customize the medium of communication for audiences
- 1379           ○ Ensure Regional USDA personnel work with rural communities to assist them in  
1380           floodplain identification and mitigating the impact of a flood on their farms (Natural  
1381           Resources Conservation Service [NRCS], formerly the U.S. Soil Conservation Service).
- 1382           ■ **Share appropriate data on natural and manmade hazards in a transparent and usable**  
1383           **manner.**
- 1384           ● Stakeholder(s): Academia; private sector; NGOs; local, state, tribal, territorial, and insular  
1385           area governments; and Federal Government.
- 1386           ● Mechanism(s): Conferences, meetings, mitigation plans, national databases, Web sites, data  
1387           catalogs, modeling tools, local ordinances, and public messaging.
- 1388           ● How/Example(s): Develop Web sites, data repositories, data catalogs, and other means of  
1389           collection and dissemination for open source data. Examples are FEMA’s publicly accessible  
1390           Web site to view and download flood hazard maps and geographic information system (GIS)  
1391           data and documentation and the USGS National Earthquake Information Center’s Web site to  
1392           view and download tectonic fault mapping and current and historical data and maps on  
1393           earthquakes.
- 1394           ■ **Strike a proper balance between dissemination and classification of national security and**  
1395           **intelligence information.**
- 1396           ● Stakeholder(s): Academia; private sector; NGOs; local, state, tribal, territorial, and insular  
1397           area governments; and Federal Government.
- 1398           ● Mechanism(s): Vertical structures among organizational units; local, state, tribal, territorial,  
1399           insular area governments, and Federal laws requiring notification of imminent breach of  
1400           security.
- 1401           ● How/Example(s): Terrorist threats or warnings, regular inspections of facilities, security  
1402           protocols for data access.

- 1403   ▪ **Build cooperation between private and public sectors by protecting internal interests but**  
1404   **sharing threats and hazards identification resources and benefits.**
- 1405   • Stakeholder(s): Academia; private sector; NGOs; local, state, tribal, territorial, and insular  
1406   area governments; and Federal Government.
- 1407   • Mechanism(s): Shared research, patents, accessible and/or shared data banks and repositories  
1408   or Web sites.
- 1409   • How/Example(s):
- 1410   ○ Cyber security
- 1411   ○ Academic research
- 1412   ○ Condition assessments
- 1413   ○ Stakeholder outreach
- 1414   ○ Subject matter expert advisement
- 1415   ○ Participation on committees
- 1416   ○ Participation in exercises
- 1417   ○ Scenario building and simulation
- 1418   ○ Training and participation in common command structure (e.g., Incident Command  
1419   System)
- 1420   ○ Federal Register Request for Information, open comment period
- 1421   ○ Safety commissions
- 1422   ○ Working partnerships.
- 1423   ▪ **Leverage available third-party data, tools, and information; social media; and open-source**  
1424   **technology.**
- 1425   • Stakeholder(s): Academia; private sector; NGOs; local, state, tribal, territorial, and insular  
1426   area governments; and Federal Government.
- 1427   • Mechanism(s): Conferences, open access Web sites and data banks, academia.
- 1428   • How/Example(s): Use existing data that have been or can be validated through  
1429   documentation review or independent review. Examples of potential third-party data include  
1430   World Bank and United Nations data which are available and can be leveraged for threat and  
1431   hazard identification purposes by other entities; geospatial data; and social media.
- 1432   ▪ **Translate data into meaningful and actionable information through appropriate analysis**  
1433   **and collection tools to aid in preparing the public.**
- 1434   • Stakeholder(s): Academia; private sector; NGOs; local, state, tribal, territorial, and insular  
1435   area governments; and Federal Government.
- 1436   • Mechanism(s): Translate data to develop customized messaging that target audiences can  
1437   understand and relate to so that their awareness of the threat or hazard is increased.
- 1438   • How/Example(s): Simplify complex scientific analyses into a format which individuals can  
1439   readily understand, such as maps showing the extents of flooding or hurricane tracks  
1440   predicting the path of a hurricane over multiple days.

## 1441 Risk and Disaster Resilience Assessment

1442 **Definition:** Assess risk and disaster resilience so that decision makers, responders, and  
 1443 community members can take informed action to reduce their entity's risk and increase  
 1444 their resilience.

### 1445 Expanded Capability Description

1446 Risk and Disaster Resilience Assessment (RDRA) is the evaluation of threats, hazards,  
 1447 vulnerabilities, needs, and resources through algorithms or other methods to define and prioritize  
 1448 risks so community members, decision makers, and responders can make informed decisions and  
 1449 take appropriate action. Such an assessment directly connects threat and hazard data and information  
 1450 in order to analyze and understand the potential effects on a community. A robust RDRA capability  
 1451 allows a comparison and prioritization of risks from disparate threats and hazards across a variety of  
 1452 communities and jurisdictions. RDRA outcomes such as analysis and data can be leveraged in  
 1453 planning efforts and resource allocations across the other mission areas.

### 1454 Federal Role

1455 The Federal Government has a responsibility to support and guide the efforts of the whole  
 1456 community through regulatory authorities, funding, incentives, expertise, and leadership. Risk and  
 1457 disaster resilience assessments are part of a comprehensive planning process that involves all  
 1458 organizational levels: local, state, tribal, territorial, insular area, Federal, nongovernmental, and  
 1459 private entities.

1460 **Target:** Ensure that states, tribes, territories, and the top 100 MSAs complete a risk  
 1461 assessment that defines localized vulnerabilities and consequences associated with  
 1462 potential natural, technological, and human-caused threats and hazards to their natural,  
 1463 human, physical, cyber, and socioeconomic interests.

### 1464 Critical Tasks

#### 1465 Data

- 1466 ■ **Share risk assessment data, both new and existing, to establish common operations across**  
 1467 **mission areas and standardized data requirements and guidance. Secure sensitive data as**  
 1468 **appropriate.**
  - 1469 • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
 1470 sector; and nonprofit organizations.
  - 1471 • Mechanism(s): Legislation, policies, grants, publications, professional standards, professional  
 1472 associations.
  - 1473 • How/Example(s):
    - 1474 ○ Flood plain mapping
    - 1475 ○ Dam and levee safety inspections
    - 1476 ○ Protecting proprietary and sensitive information (confidential business information)  
 1477 provided to the Federal Government by whole-community partners and providing risk  
 1478 assessment information to them in return
    - 1479 ○ Maintaining, via the Federal Highway Administration, a National Bridge Inventory which  
 1480 can be used as a risk and resilience assessment dataset

- 1481           ○ Continuing to expand and develop procedures for information sharing and safeguarding  
1482           (imperative, as neither industry, nor government alone can monitor all cyber threats)
- 1483           ○ Monetary value, standards for poverty levels, educational assessments.
- 1484    ■ **Establish standard data formats to enable sharing of vulnerability data and risk assessment**  
1485    **outputs.**
- 1486           • Stakeholder(s): Federal Government, nonprofit organizations, private sector.
- 1487           • Mechanism(s): Legislation, policy, professional standards.
- 1488           • How/Example(s): Monetary value, standards for poverty levels, educational assessments.
- 1489    ■ **Provide the right data to the right people at the right time.**
- 1490           • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
1491           sector; and nonprofit organizations.
- 1492           • Mechanism(s): Legislation, guidance, conferences, open-source data.
- 1493           • How/Example(s):
- 1494           ○ Maps
- 1495           ○ Census data
- 1496           ○ Common operating pictures (e.g., software, guidebook), especially for time sensitive data
- 1497           ○ Timely and relevant information as plans and regulations are being developed at all levels  
1498           of government
- 1499           ○ Partnerships, including NGOs, the private sector, and industry, to ensure delivery to the  
1500           right people
- 1501           ○ Ports and Waterway Safety Assessments offered to industry stakeholders by the U.S.  
1502           Coast Guard (USCG).
- 1503    ■ **Incorporate vulnerability data sets such as population, demographic, infrastructure**  
1504    **inventory, and condition assessment information; climatological, geological, and**  
1505    **environmental factors; critical infrastructure, lifelines, and key resources; building stock;**  
1506    **and economic data to calculate the risk from the threats and hazards identified.**
- 1507           • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
1508           sector; and nonprofit organizations.
- 1509           • Mechanism(s): Legislation, guidance, regulations, policies, grants, open source data.
- 1510           • How/Example(s): Maps, census, financial analysis, models.
- 1511    ■ **Incorporate data from lessons learned and statistical information to target consideration of**  
1512    **populations (such as for people with disabilities or access and functional needs, limited**  
1513    **English proficiency populations, and racially, culturally, and ethnically diverse**  
1514    **communities).**
- 1515           • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
1516           sector; and nonprofit organizations.

- 1517 • Mechanism(s): Policy and regulations, open-source databases, universities, census data, GIS  
 1518 mapping, Language Access Planning Tools, and limited English proficiency government  
 1519 technical assistance materials.
- 1520 • How/Example(s): Analysis of data, studies to identify actions.
- 1521 ▪ **Update risk assessments to include changes to the risks and the physical environment. This**  
 1522 **includes aging infrastructure, new development, new mitigation projects and initiatives,**  
 1523 **post-event verification/validation, new technologies or improved methodologies, and better**  
 1524 **or more current data.**
- 1525 • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
 1526 sector; and nonprofit organizations.
- 1527 • Mechanism(s): Legislation, policies, grants, private sector markets.
- 1528 • How/Example(s): Records of dams, structural monitoring, sensors, weather forecasting.
- 1529 ▪ **Create and maintain redundant systems for storing information and essential records.**
- 1530 • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
 1531 sector; and nonprofit organizations.
- 1532 • Mechanism(s): Policy and regulations, open-source databases, universities.
- 1533 • How/Example(s): Multiple data storage centers, daily back-up of information technology  
 1534 systems.
- 1535 *Analysis*
- 1536 ▪ **Perform credible risk assessments using scientifically valid and widely used risk assessment**  
 1537 **techniques.**
- 1538 • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
 1539 sector; and nonprofit organizations.
- 1540 • Mechanism(s): Legislation, policy, professional associations, research grants, market forces.
- 1541 • How/Example(s): GIS tools, structural condition assessments, remote sensing, and analytical  
 1542 software programs.
- 1543 ▪ **Understand social and structural vulnerabilities.**
- 1544 • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
 1545 sector; and nonprofit organizations.
- 1546 • Mechanism(s): Legislation, policy, professional associations, research.
- 1547 • How/Example(s): Standards for poverty levels, educational assessments, cultural competence  
 1548 and language accessibility, and individuals with disabilities.
- 1549 ▪ **Incorporate knowledge gained by those who have experienced incidents to help understand**  
 1550 **all the interdependencies, cascading impacts, and vulnerabilities associated with threats**  
 1551 **and hazards.**
- 1552 • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
 1553 sector; and nonprofit organizations.
- 1554 • Mechanism(s): Legislation, policy, professional associations, conferences, research.

- 1555      • How/Example(s): Forensic studies, debriefing reports.
- 1556      ■ **Validate, calibrate, and enhance risk assessments by relying on experience and knowledge**  
1557      **beyond raw data or models.**
- 1558      • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
1559      sector; and nonprofit organizations.
- 1560      • Mechanism(s): Legislation, policy, professional associations, research grants, forensic data  
1561      collection.
- 1562      • How/Example(s): After-action reports, expert opinion, educational and skill assessments.
- 1563      ■ **Develop analysis tools to provide information more quickly to those who need it and make**  
1564      **use of tools and technologies, such as Geographic Information Systems (GIS).**
- 1565      • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
1566      sector; and nonprofit organizations.
- 1567      • Mechanism(s): Legislation, policy, professional associations, research grants, market forces.
- 1568      • How/Example(s): GIS, analytical software programs, data standardization.
- 1569      ■ **Consolidate analysis efforts to remove useless duplication and provide a more uniform**  
1570      **picture of the risks.**
- 1571      • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
1572      sector; and nonprofit organizations.
- 1573      • Mechanism(s): Legislation, policy, professional associations, research.
- 1574      • How/Example(s): Open access data, public research funds, and conferences.
- 1575      ***Education and Training***
- 1576      ■ **Build the capability within communities to assess, analyze, and apply the knowledge of risk**  
1577      **and resilience.**
- 1578      • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
1579      sector; and nonprofit organizations.
- 1580      • Mechanism(s): Legislation, policy, professional associations, research.
- 1581      • How/Example(s): Training programs, higher education curriculums.
- 1582      ■ **Ensure that data users and assessment stakeholders get the best available data and**  
1583      **understand the assumptions/estimations made in the methodology.**
- 1584      • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
1585      sector; and nonprofit organizations.
- 1586      • Mechanism(s): Legislation, policy, professional associations, research.
- 1587      • How/Example(s):
- 1588          ○ Training programs
- 1589          ○ Higher education
- 1590          ○ Public awareness
- 1591          ○ Conferences

- 1592           ○ Informed continuity of government and operations planning, to minimize disruption from  
1593 incidents.
- 1594           ■ **Train stakeholders to develop risk assessments and have the same accurate and**  
1595 **comprehensive standards of assessment outputs.**
- 1596           • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
1597 sector; and nonprofit organizations.
- 1598           • Mechanism(s): Legislation, policy, professional associations, research.
- 1599           • How/Example(s): Training programs, higher education, public awareness, and conferences.
- 1600           ■ **Use risk assessments to design exercises for response activities and to determine the**  
1601 **feasibility of mitigation projects and initiatives.**
- 1602           • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
1603 sector; and nonprofit organizations.
- 1604           • Mechanism(s): Legislation, policy, professional associations, research.
- 1605           • How/Example(s): Training programs, higher education, gaming exercises, conferences.

## 1606 *Planning*

1607 **Definition:** Conduct a systematic process, engaging the whole community as  
1608 appropriate, in the development of executable strategic, operational, and/or tactical -level  
1609 approaches to meet defined objectives.

## 1610 **Expanded Capability Description**

1611 At some level, planning is an activity performed by every Federal department and agency. Federal  
1612 departments and agencies conduct strategic planning to establish or reaffirm goals and objectives of  
1613 the organization, they conduct site-specific planning for Federal facilities, or they require planning as  
1614 a condition of program assistance. For the purposes of the Mitigation FIOP, planning is related to  
1615 activities and actions that influence how Federal interagency mission objectives are delivered, no  
1616 matter what threats or hazards arise.

1617 Planning is an ongoing process informed by values, data, demographics, market trends, etc.  
1618 Communities and regions develop plans to guide local decision making regarding community  
1619 development and infrastructure investments. Plans lay out community priorities regarding where,  
1620 when, and how development activity should occur within a community, region, and cumulatively, a  
1621 state. Community planning, including the development of hazard mitigation and land use plans,  
1622 typically happens before a disaster event or incident. By articulating a community vision for where  
1623 development activity can and should occur, local land use or community plans can support a  
1624 development pattern that reduces community risk and vulnerability to multiple hazards.

## 1625 **Federal Role**

1626 The act of community planning is primarily a local, state, tribal, territorial, and insular area activity.  
1627 However, Federal departments and agencies can play a supportive role that builds capacity for local  
1628 planning activities, encouraging the integration of best development practices into local planning  
1629 efforts. The Federal Government also requires plans (e.g., hazard mitigation plans or Department of  
1630 Housing and Urban Development [HUD] consolidated plans) as a prerequisite to qualify for certain  
1631 Federal funds. The Federal Government helps to coordinate and implement Federal programs, they  
1632 provide grant funding to develop program specific plans, and they facilitate the development of plans

1633 to encourage certain behaviors. One example is the HUD–DOT–EPA Partnership for Sustainable  
1634 Communities, which provides grants and assistance to support the efforts of states, communities, and  
1635 tribal nations to encourage development that provides housing and transportation choices, protects  
1636 the environment, and improves the economy. In addition, data and information are developed and  
1637 provided by a variety of Federal departments and agencies to support mitigation planning. Through  
1638 interagency working groups and coordination with agencies, the White House CEQ balances  
1639 competing positions and encourages government-wide coordination, bringing Federal agencies; local,  
1640 state, tribal, territorial, and insular area governments; and others together on matters relating to the  
1641 environment, natural resources, and energy. The CEQ co-chairs (with the OSTP) the Interagency  
1642 Climate Adaptation Task Force, which develops action plans to address issues related to climate  
1643 change.

1644 Federal agencies use planning to help deliver their own projects and programs. Strategic planning  
1645 across departments and agencies is critical in identifying and acting upon shared objectives. For  
1646 example:

- 1647 ■ The Strategic Plan for the NDSP sets the national agenda for dam safety and informs and  
1648 supports other dam safety programs at the state and Federal levels.
- 1649 ■ The National Infrastructure Protection Plan provides a unifying framework that integrates a range  
1650 of efforts designed to enhance the safety of the Nation’s critical infrastructure. The overarching  
1651 goal of the National Infrastructure Protection Plan is to build a safer, more secure, and more  
1652 resilient Nation by preventing, deterring, neutralizing, or mitigating the effects of a terrorist  
1653 attack or natural disaster.
- 1654 ■ The Subcommittee on Disaster Reduction is a Federal interagency body of the NSTC under the  
1655 Committee on Environment, Natural Resources, and Sustainability. The Subcommittee on  
1656 Disaster Reduction developed the Grand Challenges for Disaster Reduction, a 10-year national  
1657 strategy document for prioritizing Federal investments in science and technology to reduce  
1658 disaster risks and promote resilient communities.
- 1659 ■ The National Tsunami Hazard Mitigation Program is designed to reduce the impact of tsunamis  
1660 through planning hazard assessment, warning guidance, and mitigation. The National Tsunami  
1661 Hazard Mitigation Program is a partnership among the DOC/NOAA, USGS, FEMA, National  
1662 Science Foundation, and the 28 U.S. coastal states, territories, and commonwealths.
- 1663 ■ The National Health Security Strategy is developed to ensure that the Nation is prepared for,  
1664 protected from, and resilient in the face of health threats or incidents with potentially negative  
1665 health consequences.

1666 Federal departments and agencies that manage Federal lands are also involved in planning activities.  
1667 From military installations to national parks, planning is essential to the missions of these agencies.  
1668 Federal projects that involve construction of buildings, infrastructure (e.g., dams, highways) or  
1669 management of facilities all depend upon planning to ensure that program commitments are met.  
1670 Integrating planning efforts across sectors, disciplines, and mission areas and sharing risk analysis  
1671 and vulnerability assessments eliminates redundancy and identifies common solutions. There are  
1672 many Federal programs that require or encourage local, state, tribal, territorial, and insular area  
1673 planning. The Federal role is to develop a coordinated approach to planning to reduce redundant  
1674 efforts, leverage resources, and encourage more comprehensive plans.

1675 **Target:** Develop approved hazard mitigation plans that address all relevant  
1676 threats/hazards in accordance with the results of their risk assessment within all states,  
1677 tribes, and territories.

1678 **Critical Tasks**

1679 The critical tasks listed below are ongoing tasks that communities are currently engaged in to support  
 1680 more integrated planning efforts that involve the whole community and that build resilience within a  
 1681 community to hazards. Tasks are interrelated.

1682 ■ **Embed risk-based decision making into the planning process.**

1683 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 1684 and insular area governments; and Federal Government.

1685 • Mechanism(s): Regulations outline planning requirements (which require risk-informed  
 1686 mitigation strategies), agency policies promote integration of mitigation plans, and other  
 1687 land-use based planning and resources (e.g., training, data, and funding) support planning.

1688 • How/Example(s): The Federal role is to provide technical assistance and support to local,  
 1689 state, tribal, territorial, and insular area entities engaged in planning and to also foster  
 1690 integration of mitigation into land-use/comprehensive planning whenever possible. Federal  
 1691 departments and agencies responsible for Federal lands and facilities can integrate findings  
 1692 from risk assessments into their planning activities. FEMA and the American Planning  
 1693 Association have developed a document identifying strategies for integrating mitigation into  
 1694 ongoing community land use planning (Hazard Mitigation: Integrating Best Practices into  
 1695 Planning, American Planning Association Planning Advisory Service Report Number 560).  
 1696 The document has been widely disseminated to comprehensive land use planners across the  
 1697 Nation, and FEMA is continuing to look for opportunities to incentivize the integration of  
 1698 risk-based decision making into local planning processes.

1699 ■ **Collaborate, cooperate, and build consensus across other disciplines that impact plans.**

1700 *Coordination efforts help to maximize Federal investments toward common goals, promote*  
 1701 *interagency collaboration, and deliver Federal resources more efficiently and effectively.*  
 1702 *Coordination can also help to reduce the burden on communities to deliver multiple plans for*  
 1703 *similar or interdependent functional areas (e.g., transportation, housing, hazard mitigation).*

1704 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 1705 and insular area governments; and Federal Government.

1706 • Mechanism(s): Regulations outline planning requirements (which support cross-discipline  
 1707 engagement), Federal department and agency policies promote integration, and resources  
 1708 (e.g., training, data, and funding) are provided to support planning.

1709 • How/Example(s): The Federal Government has a primary responsibility to provide leadership  
 1710 in this area, although local, state, tribal, territorial, and insular area government entities must  
 1711 support this effort. Federal actions affect local and regional development patterns and plans.  
 1712 Within the Federal Government, planning requirements should be aligned when appropriate  
 1713 to support and enhance local, state, tribal, territorial, and insular area government plans.  
 1714 Federal departments and agencies are working collaboratively to reduce redundancy and  
 1715 support consistency. For instance, as part of the HUD–DOT–EPA Partnership for Sustainable  
 1716 Communities, all three agencies are collaborating to ensure that their programs, policies, and  
 1717 investments are aligned and in support of six livability principles that support sustainable  
 1718 communities and community resilience. In addition, DOC/NOAA, USGS, and USACE make  
 1719 up the Integrated Water Resources Science and Services consortium—an innovative  
 1720 partnership of Federal agencies with complementary operational missions in water science,  
 1721 observation, prediction, and management. The Integrated Water Resources Science and

1722 Services consortium has developed a roadmap that identifies the human dimensions,  
 1723 technical components, and science needed to achieve operational goals that include  
 1724 integrating service and service delivery, improving river forecasts, and providing new  
 1725 “summit-to-sea” high resolution water resources information and forecasts.

1726 ■ **Understand the demographics and systems that make up the community and their**  
 1727 **vulnerabilities and interdependencies with each other.** *Knowledge of a community,*  
 1728 *characteristics of its population, and its critical systems are essential to determining the*  
 1729 *community’s vulnerabilities and to identifying appropriate solutions that have the support of the*  
 1730 *whole community.*

1731 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 1732 and insular area governments; and Federal Government.

1733 • Mechanism(s): Technical assistance and training can help build capability and understanding  
 1734 of the need for this task.

1735 • How/Example(s): This is essentially a regional or local responsibility, although the Federal  
 1736 Government can support this task by providing technical assistance and training. FEMA’s  
 1737 Hazard Mitigation Planning tools and guidance assist communities in developing a planning  
 1738 process that includes establishing a planning team and coordination with other planning  
 1739 processes. DOT requires Existing Betterment Plans to facilitate rebuilding of roads and  
 1740 bridges to a higher standard than pre-incident standards.

1741 ■ **Include disability and other access and functional needs subject matter experts in**  
 1742 **mitigation planning to address considerations, such as architectural accessibility through**  
 1743 **compliance with the Americans with Disabilities Act architectural standards; disability and**  
 1744 **other access and functional needs advocacy organizations, such as independent living**  
 1745 **centers; and providers of disability- and other access and functional needs-related**  
 1746 **assistance/functional needs support services (FNSS).**

1747 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 1748 and insular area governments; and Federal Government.

1749 • Mechanism(s): Technical assistance, guidance, and tools are provided to our partners to  
 1750 ensure that these issues are addressed in the development of plans.

1751 • How/Example(s): The Federal Government ensures that every Federal dollar spent complies  
 1752 with the appropriate civil rights law and requirements for non-discrimination, equal  
 1753 opportunity, and accessibility needs. HUD has several initiatives to promote disability rights  
 1754 in public and private housing. In addition, every FEMA Regional Office has a disability  
 1755 integration specialist; numerous Federal departments and agencies have civil rights offices  
 1756 that promote and work to ensure compliance with Federal civil rights laws.

1757 ■ **Understand the full range of animal<sup>10</sup> issues in the community including the unique**  
 1758 **differences between animals generally, as well as service animals, and the civil rights of**  
 1759 **their users, such as not being separated from their service animals and being able to use all**  
 1760 **parts of facilities the public uses. This will ensure that the jurisdiction is equipped to**  
 1761 **comprehensively address human and animal issues and take steps to mitigate**

<sup>10</sup> As members of the community who may be affected by incidents, animals may include household pets, service and assistance animals, working dogs, livestock, wildlife, exotic animals, zoo animals, research animals, and animals housed in shelters, rescue organizations, breeding facilities, and sanctuaries.

- 1762 **vulnerabilities in this area during or after a disaster.** *Understanding and integrating all*  
 1763 *appropriate issues in mitigation planning helps ensure that necessary actions are coordinated*  
 1764 *and implemented to reduce risks.*
- 1765 • Stakeholder(s): The Federal Government supports local and regional governments in this  
 1766 task.
  - 1767 • Mechanism(s): Awareness, technical assistance, and training help build capability and  
 1768 understanding of the full range of animal issues. Animal disease surveillance methods or  
 1769 capability provide tools to accomplish surveillance and analyze results, or in some cases,  
 1770 such as diseases foreign to the United States, provide confirmation services.
  - 1771 • How/Example(s): When appropriate and capable resources exist, the Animal Plant Health  
 1772 Inspection Service (APHIS) will work with local, state, tribal, territorial, and insular area  
 1773 government planners and responders to assist them in identifying local animal issues and  
 1774 training needs to address response gaps, and reach back capabilities that could provide  
 1775 technical assistance. APHIS has tools that can be used by local, state, tribal, territorial, and  
 1776 insular area animal health specialists to develop surveillance plans or provide laboratory  
 1777 services support and confirmation. APHIS also has tools or expertise to develop and run  
 1778 disease spread models that can be used to evaluate response strategies or mitigations as well  
 1779 as develop scenarios to be used in exercises.
- 1780 ■ **Incorporate the findings from the assessment of risk and disaster resilience into planning**  
 1781 **processes.** *These tasks are the foundation of mitigation planning. Building risk information into*  
 1782 *the planning process will raise awareness of risks and vulnerabilities, leading to decisions and*  
 1783 *actions to reduce risk or accept certain levels of risk.*
- 1784 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 1785 and insular area governments; and Federal Government.
  - 1786 • Mechanism(s): Regulations outline planning requirements (which require risk-informed  
 1787 mitigation strategies), agency policies promote integration of mitigation plans, and other  
 1788 land-use based planning and resources (e.g., training, data, and funding) support planning.
  - 1789 • How/Example(s): The Federal role is to provide technical assistance and support to local,  
 1790 state, tribal, territorial, and insular area entities engaged in planning and to also foster  
 1791 integration of mitigation into land-use/comprehensive planning whenever possible. Federal  
 1792 departments and agencies responsible for Federal lands and facilities can integrate findings  
 1793 from risk assessments into their planning activities. FEMA and the American Planning  
 1794 Association have developed a document identifying strategies for integrating mitigation into  
 1795 ongoing community land use planning (Hazard Mitigation: Integrating Best Practices into  
 1796 Planning, American Planning Association Planning Advisory Service Report Number 560).  
 1797 The document has been widely disseminated to comprehensive land use planners across the  
 1798 Nation, and FEMA is continuing to look for opportunities to incentivize the integration of  
 1799 risk-based decision making into local planning processes.
- 1800 ■ **Seek out and incorporate the whole community in planning efforts.** Community and  
 1801 comprehensive plans are expressions of a community's vision for the future. The extent that a  
 1802 community's plan reflects the goals and values of the public depends considerably on whether  
 1803 the whole community participated in its development. Involving the whole community in  
 1804 planning efforts also helps to build and broaden the plan implementation efforts. *Inclusion of the*  
 1805 *whole community and its values necessitates that local, state, tribal, territorial, and insular area*

- 1806 *governments provide accessible and culturally and linguistically appropriate information,*  
 1807 *disseminated through media outlets serving racially and ethnically diverse audiences.*
- 1808 • Stakeholder(s): The Federal Government supports this task, although it is primarily a local,  
 1809 state, tribal, territorial, and insular area government responsibility.
  - 1810 • Mechanism(s): The Federal Government can support this task through technical assistance  
 1811 and by regulation and guidance. Federal guidance can also support the development of  
 1812 coalitions or community workgroups to plan and prepare for public health emergency events.
  - 1813 • How/Example(s): Utah has developed an innovative Web site to encourage broad  
 1814 participation in statewide planning processes (<http://envisionutah.org>). HHS's public health  
 1815 and healthcare capabilities guidance documents are designed to facilitate and guide public  
 1816 health and healthcare preparedness planning and ultimately assure safer, more resilient, and  
 1817 better-prepared communities.  
 1818 (<http://www.phe.gov/preparedness/planning/hpp/reports/documents/capabilities.pdf> and  
 1819 [http://www.cdc.gov/phpr/capabilities/dslr\\_capabilities\\_july.pdf](http://www.cdc.gov/phpr/capabilities/dslr_capabilities_july.pdf)). These documents provide a  
 1820 guide that local, state, tribal, territorial, and insular area jurisdictions can use to better  
 1821 organize their work, plan their priorities, and decide which capabilities they have the  
 1822 resources to build or sustain. The capabilities also help ensure that Federal preparedness  
 1823 funds are directed to priority areas within individual jurisdictions.
- 1824 ■ **Build on the expertise, knowledge, and systems in place within the community.** *This is*  
 1825 *essential to promoting successful ongoing planning processes. Comprehensive planning is an*  
 1826 *ongoing task in many communities, and states often require localities to update plans at regular*  
 1827 *intervals. However, consideration of risk and vulnerability are most often addressed through the*  
 1828 *local hazard mitigation planning process. Integrating hazard mitigation planning into the typical*  
 1829 *comprehensive planning process can help build on the existing capabilities and increase*  
 1830 *consistency across community decisions regarding the built environment and development*  
 1831 *activity.*
  - 1832 • Stakeholder(s): The Federal Government supports this task, but it is primarily a local, state,  
 1833 tribal, territorial, and insular area government responsibility.
  - 1834 • Mechanism(s): The Federal Government can support local efforts to increase community  
 1835 capabilities in ongoing planning processes that integrate risk-based decision making through  
 1836 a range of mechanisms. Federal department and agency policies promote actions and  
 1837 activities, and resources (e.g., training, data, and funding) are provided to support planning.
  - 1838 • How/Example(s): FEMA has issued regulations that require local hazard mitigation plans as  
 1839 a condition of receiving mitigation grants. USACE has developed the Silver Jackets program  
 1840 to support state planning efforts, and FEMA and the EPA are helping two communities in  
 1841 North Carolina identify land use and development strategies that can increase community  
 1842 resilience and further the coordination of local hazard mitigation and land use plans. HUD  
 1843 provides financial support to regions and localities through its Regional Planning Grant  
 1844 program and Local Challenge Grant Program.
- 1845 ■ **Coordinate the planning and development of interconnected initiatives that may have**  
 1846 **geographic, functional, or funding connections.**
  - 1847 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 1848 and insular area governments; and Federal Government.

- 1849 • Mechanism(s): The Federal Government can help identify planning efforts or funding  
1850 mechanisms that may be used to supplement one another.
- 1851 • How/Example(s): The Federal Government can identify programs that support similar  
1852 mitigation efforts without duplicating programs to provide potential linkages or best practices  
1853 to better connect planning and initiatives.
- 1854 ■ **Share success stories where resilience-based planning has demonstrated measureable**  
1855 **effectiveness in creating economic vitality within communities.** *Recognition programs can be*  
1856 *an effective way to share success stories and lessons learned and to encourage increased*  
1857 *innovation in planning practices.*
- 1858 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
1859 and insular area governments; and Federal Government.
- 1860 • Mechanism(s): The Federal Government can provide leadership in defining best practices in  
1861 resilience-based planning, developing recognition programs, and sharing success stories  
1862 through publications and Web sites.
- 1863 • How/Example(s): The Federal Government can recognize communities nationwide for  
1864 innovative solutions and best practices. Programs can be implemented to recognize a range of  
1865 best practices that include but are not limited to resilient and sustainable communities.  
1866 StormReady/TsunamiReady Communities (DOC/NOAA) as part of Weather Ready Nation,  
1867 and National Award for Smart Growth Achievement (EPA).
- 1868 ■ **Engage in a peer-to-peer and regional partnership (coalition) mentoring structure that**  
1869 **promotes best practices, particularly when the planning capability is not present in a**  
1870 **community.** *Interactions among communities can provide a common understanding of local*  
1871 *issues and mechanisms for problem solving and in building interest and capability.*
- 1872 • Stakeholder(s): This is not primarily a Federal responsibility, but can be supported by the  
1873 Federal Government in terms of providing support for various mentoring structures.
- 1874 • Mechanism(s): The Federal Government could provide technical assistance in developing  
1875 mentoring structures and financial support to organizations in implementing the task.
- 1876 • How/Example(s): Hazus is a nationally applicable standardized methodology that contains  
1877 models for estimating potential losses from earthquakes, floods, and hurricanes. Hazus User  
1878 Groups provide a forum for users to meet and collaborate on innovative uses of Hazus, to  
1879 share lessons learned, and to provide support to communities in the use of Hazus.
- 1880 ■ **Foster public-private partnerships to promote resilience and maximize the use of available**  
1881 **resources.** *Engaging private entities in building local capacity for planning related activities can*  
1882 *help reduce vulnerability of all community assets. Public-private partnerships can also help*  
1883 *supplement local planning efforts.*
- 1884 • Stakeholder(s): The Federal Government supports the development of public-private  
1885 partnerships.
- 1886 • Mechanism(s): Federal technical assistance can be used to identify the benefits to private  
1887 entities to demonstrate that mitigation makes good business sense.
- 1888 • How/Example(s): Project Impact was a Federal initiative that worked to create disaster-  
1889 resistant communities through teamwork at all government levels and close partnerships with  
1890 the private and nonprofit sectors. HHS promotes healthcare coalitions and partnerships

1891 among healthcare facilities (both public and private) and other healthcare assets in the  
 1892 community, to organize and implement the mitigation, preparedness, response, and recovery  
 1893 actions of medical and healthcare providers in a jurisdiction's healthcare system.

1894 ■ **Promote planning initiatives through multiple media sources.** *Using media sources, including*  
 1895 *media outlets that serve racially and ethnically diverse audiences, to both raise awareness of*  
 1896 *ongoing planning efforts and also the impact that such efforts are having within a community,*  
 1897 *can help to increase community buy-in to the planning process and help community members get*  
 1898 *behind a community plan.*

1899 • Stakeholder(s): The Federal Government supports this task, although it is primarily a local  
 1900 and regional function.

1901 • Mechanism(s): Federal technical assistance could include support for town hall meetings,  
 1902 public service announcements, and other media outreach efforts, such as ethnic radio and  
 1903 television stations and newspapers.

1904 • How/Example(s): The HUD–DOT–EPA Partnership for Sustainable Communities has  
 1905 developed a robust outreach plan to identify the goals of this initiative. Utah has developed a  
 1906 Web site to promote statewide planning initiatives: <https://sites.google.com/a/utah.gov/utah/>.

1907 ■ **Integrating Continuity Planning and Operations in Planning.**

1908 • Stakeholder(s): Academia, private sector, NGOs, local, state, tribal, territorial, and insular  
 1909 area governments; and the Federal Government.

1910 • Mechanism(s): Incorporating continuity planning and operations to ensure the continued  
 1911 functionality of the core capabilities essential to accomplishing this task.

1912 • How/Example(s): Ensuring plans and operations are resilient by incorporating the essential  
 1913 elements of continuity: identifying essential functions; establishing orders of succession and  
 1914 delegations of authority; having continuity facilities, communications, essential records, and  
 1915 human resources programs; testing, training, and exercising capabilities; and planning for  
 1916 devolution and reconstitution.

## 1917 *Community Resilience*

1918 **Definition:** Enable the recognition, understanding, communication of, and planning for  
 1919 risk, and empower individuals and communities to make informed risk management  
 1920 decisions necessary to adapt to, withstand, and quickly recover from future incidents.

## 1921 **Expanded Capability Description**

1922 Community Resilience requires leadership, collaboration, partnership building, education, and skill  
 1923 building to prepare our communities, property, critical infrastructure resources, and economy to  
 1924 absorb the impact of a threatening event and bounce back in a manner that sustains our way of life. A  
 1925 community uses these skill sets to increase awareness of, understand, and assess its risks and to plan,  
 1926 coordinate, and execute actions that reduce vulnerability over the long term. The Community  
 1927 Resilience capability supports and orchestrates all mitigation activities. A whole-community  
 1928 approach to building sustainable and resilient communities requires finding ways to support and  
 1929 strengthen the culture, institutions, assets, and networks that already work well in communities and  
 1930 are working on a daily basis to address issues important to community members.

## 1931 Federal Role

1932 Federal agencies have a unique opportunity to promote community resilience. Mitigation can protect  
 1933 both people and property from disasters by taking action to prevent consequences before a disaster  
 1934 strikes. Through coordination, cooperation, and collaboration, Federal agencies can work together to  
 1935 more effectively address complex large-scale issues that cut across multiple department and agency  
 1936 missions, developing continuity of operations plans, supporting resilience initiatives, and enabling  
 1937 informed, risk-based decision making at the local level where the effects of disasters are felt. The  
 1938 Federal role in developing and maintaining community resilience is in building and sustaining  
 1939 capacity and capability in communities and organizations across the Nation through grants, technical  
 1940 assistance, products, services, training, and other support mechanisms. In order to address the full  
 1941 range of risk and vulnerability issues across the Nation, Federal agencies must provide coordinated  
 1942 messages and delivery of a variety of programs. Federal activities, regulations, and funding should  
 1943 allow communities to better understand the complexities of risk and vulnerability and to begin to  
 1944 consider not only the high probability issues, but the low probability/high risk scenarios. Support in  
 1945 executing critical tasks to improve community resilience comes from a wide range of Federal  
 1946 partners. See examples below.

1947 **Target:** Maximize the coverage of the U.S. population that has a localized, risk-informed  
 1948 mitigation plan developed through partnerships across the entire community.

1949 **Target:** Empower individuals and communities to make informed risk management  
 1950 decisions to facilitate actions necessary to adapt to, withstand, and quickly recover from  
 1951 future incidents.

1952 To meet the targets, the plans must be up-to-date and include social science aspects (e.g., risk  
 1953 communication) and education aspects (e.g., regular training and exercises). The entire community  
 1954 must include representation across broad sectors, including private, public, academic, and  
 1955 community-based sectors and levels of government, employers, schools, religious groups,  
 1956 professional organizations, advocates for and organizations serving individuals with access and  
 1957 functional needs, etc. The plans must also consider the impacts of cascading or multiple concurrent  
 1958 events.

1959 To date, all states, territories, and the District of Columbia have engaged in the mitigation planning  
 1960 process as defined in 44 C.F.R. Part 201 in developing and maintaining state-level mitigation plans.  
 1961 Thousands of communities, including local and tribal governments, have also engaged in the  
 1962 planning process and developed local or tribal mitigation plans in compliance with 44 C.F.R. Part  
 1963 201.

## 1964 Critical Tasks

1965 The critical tasks under Community Resilience are grouped under the following broad categories:

- 1966 ■ Leadership
- 1967 ■ Collaboration
- 1968 ■ Partnership Building
- 1969 ■ Education and Skill Building

1970 ***Leadership: The ability to bring together a group that collaborates to make well-informed, timely***  
1971 ***decisions.***

1972 A resilient community embodies the risk-based culture—one of vigilance, periodic assessment, and  
1973 continuous improvement. Establishing resilience often requires improvements to the processes, task  
1974 organization, prioritization, and sometimes even the culture of a community’s everyday business.

1975 Leading such change, or merely maintaining the resilient character of a community, requires  
1976 embracing and adopting mitigation principles. Leaders need to demonstrate to community members  
1977 the intrinsic benefits of implementing change, and then project a vision of the future that inspires  
1978 community members to change mindsets and behaviors to adopt a more resilient outlook.

1979 Keeping mitigation activities credible and relevant to a community will also help address  
1980 complacency when there has not been an incident in recent history to highlight the need for ongoing  
1981 mitigation. Maintaining a continual dialogue in a trusted environment is essential for connecting  
1982 public and private sector interests, as well as individual and shared values, interests, and priorities  
1983 across multiple communities.

1984

1985 ***Collaboration: A broad engagement and ongoing dialogue about threats and vulnerabilities and***  
1986 ***meaningful, sustained participation in community preparedness activities, planning, and decision***  
1987 ***making.***

1988 Meaningful risk reduction measures will frequently include collaboration among private-sector  
1989 interests in community development, public-sector or law enforcement interests in community safety,  
1990 and various other interest groups, such as those representing children, seniors, and those with  
1991 disabilities and others with access and functional needs. Creating an environment that capitalizes on  
1992 shared interests and addresses differences is crucial to accomplishing resilience. Collaboration  
1993 among and by communities provides valuable information, resources, knowledge, skills, and support  
1994 that facilitate actions and planning to adapt and withstand an emergency or disaster. Further  
1995 collaboration includes schools and childcare; public, agricultural/animal, and environmental health  
1996 departments; hospitals/hospital associations; and behavioral health services. A community will  
1997 recover more effectively with intact school, childcare, and health and medical systems. Leadership  
1998 should foster inclusion of the whole community, including members with disabilities and others with  
1999 access and functional needs, limited English proficiency, and ethnically and racially diverse groups.

2000

2001 ***Partnership Building: The establishment of long-term relationships—well before, during, and***  
2002 ***after incidents—that support ongoing communication awareness building, decision making, and***  
2003 ***the implementation of plans and decisions.***

2004 Resilient communities utilize education and outreach tools to create opportunities that advance  
2005 mitigation. Partnership building is a key to resilient communities. Mitigation capabilities are  
2006 coordinated through new and existing partnerships at all levels of government with the private sector  
2007 and NGOs. Partnerships and coalitions facilitate the timely exchange of information and provide a  
2008 potential source of shared resources through mutual aid and assistance agreements. Partnerships also  
2009 support a vital educational component, promoting or sharing risk management knowledge and  
2010 strategies within communities, and supporting a variety of skill sets and stakeholders. The continued  
2011 use of a partnership model promotes the coordinated delivery of mitigation capabilities.

2012 ***Education and Skill Building***

2013 Develop and implement education and outreach materials to communicate risk and vulnerability  
 2014 information, as well as to encourage local responsibility to support and implement mitigation  
 2015 strategies and actions to reduce long-term vulnerability.

2016 ■ **Know the systems which make up the community and how to build constructive  
 2017 partnerships among those systems.**

2018 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 2019 and insular area governments; and Federal Government.

2020 • Mechanism(s): The Federal Government can support communities to be more resilient by  
 2021 providing best practices, fostering peer-to-peer mentoring relationships, and providing  
 2022 information through existing coordinating structures.

2023 • How/Example(s): Federal programs that work directly with stakeholders or can reach them  
 2024 through existing coordinating structures can provide case studies of communities that have  
 2025 increased their resilience by understanding the systems that make up the community and  
 2026 reducing vulnerabilities to those systems, and in turn, cascading impacts from the impairment  
 2027 or loss of those systems following an incident.

2028 ■ **Understand the risks facing a community, including physical, social, cultural, economic,  
 2029 and environmental vulnerabilities to all threats and hazards and foster risk-adaptive  
 2030 behaviors.**

2031 • Stakeholder(s): Task is local; coordinate and collaborate with other Federal agencies and  
 2032 state, tribal, territorial, and insular area governments to provide support.

2033 • Mechanism(s): Regulations outline planning requirements (which require risk-informed  
 2034 mitigation strategies), and Federal agencies provide risk and vulnerability data.

2035 • How/Example(s):

2036 ○ FEMA Mitigation planning: <http://www.fema.gov/hazard-mitigation-planning-overview>

2037 ○ Hazus: <http://www.fema.gov/hazus>

2038 ○ Building science: <http://www.fema.gov/rebuild/buildingscience/>

2039 ○ DOC/NOAA Digital Coast: <http://coast.noaa.gov/digitalcoast/>

2040 ○ DOC/NOAA Storm Prediction Center Convective Outlook Web site:  
 2041 <http://www.spc.noaa.gov/products/outlook/>

2042 ○ USGS Natural Hazards: [http://www.usgs.gov/natural\\_hazards/](http://www.usgs.gov/natural_hazards/)

2043 ○ EPA and USCG facilitate regional and area contingency planning for potential releases of  
 2044 hazardous substances and oil with other Federal agencies; local, state, tribal, territorial,  
 2045 and insular area governments; and industry, as outlined by the National Contingency Plan

2046 ○ HHS: National Disease Surveillance and laboratory testing through the Laboratory  
 2047 Response Network

2048 ■ **Recognize and communicate the reinforcing relationships between environmental  
 2049 stewardship and natural hazard risk reduction (e.g., enhancement of flood storage through  
 2050 wetland protection/restoration and holistic floodplain management).**

- 2051 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
2052 and insular area governments; and Federal Government.
- 2053 • Mechanism(s): The Federal Government can highlight the value of environmental  
2054 stewardship and how that stewardship can translate to a risk reduction measure, as well as  
2055 other benefits that stewardship may also offer a community beyond the mitigation benefits  
2056 through programs which support mitigation and resilience.
- 2057 • How/Example(s): The Community Rating System of the NFIP provides incentives through  
2058 insurance rate reductions to policy holders in a participating jurisdiction which take risk  
2059 reduction activities that also preserve the natural environment for the storage of floodwaters  
2060 in wetland areas.
- 2061 ■ **Communicate and utilize the best available, localized climate projections so that the public  
2062 and private sectors can make informed decisions about adaptation.**
- 2063 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
2064 and insular area governments; and Federal Government.
- 2065 • Mechanism(s): Make available and publicize best available climate projections.
- 2066 • How/Example(s): NOAA makes available sea level rise data through a public Web site:  
2067 <http://coast.noaa.gov/digitalcoast/tools/slr>
- 2068 ■ **Know the community's permanent and transient population demographics and use that  
2069 information to plan ahead to address resilience for the whole community, including people  
2070 with disabilities and others with access and functional needs. This includes those from  
2071 religious, racial, and ethnically diverse backgrounds and people with limited English  
2072 proficiency.**
- 2073 • Stakeholder(s): The Federal Government supports these tasks, although they are primarily  
2074 local and regional functions.
- 2075 • Mechanism(s): Examples may include MOAs, interagency agreements, grants, technical  
2076 assistance, or products and services.
- 2077 • How/Example(s):
- 2078 ○ Human Dimensions.gov (<http://www.hud.gov>) is a community of practice and an  
2079 interactive Web portal with featured links related to the human dimensions of natural  
2080 resource management
- 2081 ○ HHS: Provides targeted technical assistance to jurisdictions on both disease prevention  
2082 and community-specific emergency preparedness planning
- 2083 ○ DOC/NOAA: Coastal Resilience provides a framework that supports decisions to reduce  
2084 the ecological and socioeconomic risks of coastal hazards:  
2085 <http://www.coastalresilience.org>; the Coastal Storms Program is a nationwide effort led  
2086 by DOC/NOAA to make communities safer by reducing the loss of life and negative  
2087 impacts caused by coastal storms
- 2088 ○ USACE Silver Jackets initiative: <http://www.nfrmp.us/state/>
- 2089 ○ HUD–DOT–EPA Partnership for Sustainable Communities:  
2090 <http://www.sustainablecommunities.gov/>
- 2091 ○ Environmental Justice: <http://www.epa.gov/environmentaljustice>.

- 2092   ▪ **Foster sustained communication, civic engagement, and the development and**  
 2093 **implementation of proactive planning, response, and long-term risk reduction actions in the**  
 2094 **whole community.**
- 2095   ▪ **Conduct community preparedness activities that empower individuals and communities**  
 2096 **with information and resources that facilitate actions to enhance their resilience and**  
 2097 **consider accessibility and cultural sensitivities based upon the community makeup.**
- 2098   ▪ **Promote mitigation and resilience to the public through preparedness campaigns to**  
 2099 **increase public awareness and motivate individuals to build societal resilience prior to an**  
 2100 **event.**
- 2101   ▪ **Promote neighborhood activities and encourage volunteerism that advances preparedness.**
- 2102   ▪ **Convince community members of the value of mitigation for reducing the impact of**  
 2103 **disasters and the scale of response and recovery efforts.**
- 2104   • Stakeholder(s): The Federal Government coordinates and collaborates with other Federal  
 2105 agencies and local, state, tribal, territorial, and insular area governments, as well as the  
 2106 private sector, to provide support to communities.
- 2107   • Mechanism(s): Examples may include MOAs, interagency agreements, grants, technical  
 2108 assistance, or products and services.
- 2109   • How/Example(s): Many Federal departments and agencies have education and outreach  
 2110 components. See examples in the critical tasks above. Developers are one target audience,  
 2111 since initial development decisions are key to building safety.
- 2112   ▪ **Identify and promote sound choices, and discourage choices that increase vulnerabilities**  
 2113 **and risks.**
- 2114   • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 2115 and insular area governments; and Federal Government.
- 2116   • Mechanism(s): The Federal Government can promote sound practices through data, case  
 2117 studies, and best practices.
- 2118   • How/Example(s): Promote sound risk management practices through Federal programs
- 2119   ▪ **Promote transparency in risk management decision making so that individuals,**  
 2120 **communities, private organizations, and all levels of government demonstrate how**  
 2121 **resilience is considered. Recognize the interdependent nature of the economy, health and**  
 2122 **social services, housing infrastructure, and natural and cultural resources within a**  
 2123 **community.**
- 2124   • Stakeholder(s): The Federal Government coordinates and collaborates with other Federal  
 2125 agencies and programs to develop clear messages on the shared goals and values of these  
 2126 programs. Coordination with appropriate local, state, tribal, territorial, and insular area  
 2127 government agencies is also essential to provide support to communities, and promote risk-  
 2128 based decision making where direct Federal investments are being made.
- 2129   • Mechanism(s): Federal grant programs, regulatory enforcement of storm water management,  
 2130 permitting authorities, and technical assistance.

- 2131 • How/Example(s):
- 2132 ○ FEMA Floodplain Management: [https://www.fema.gov/national-flood-insurance-](https://www.fema.gov/national-flood-insurance-program)
- 2133 program
- 2134 ○ EPA Office of Sustainable Communities: <http://www.epa.gov/smartgrowth>
- 2135 ○ HUD Office of Sustainable Housing and Communities; HUD Community Development
- 2136 Block Grants: <http://portal.hud.gov/>
- 2137 ○ DOC/NOAA Coastal Zone Management: <http://www.coastalmanagement.noaa.gov>
- 2138 ○ USDA Rural Development: <http://www.rurdev.usda.gov/home.html>
- 2139 ■ **Acknowledge and seek out naturally occurring relationships within communities, and build**
- 2140 **partnerships and coalitions before disasters or incidents occur.**
- 2141 ■ **Educate the next generation of community leaders and resilience professionals; learn from**
- 2142 **the past and from what is working in the present.**
- 2143 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,
- 2144 and insular area governments; and Federal Government.
- 2145 • Mechanism(s): Provide opportunities for leaders to learn about risk management, mitigation
- 2146 and resilience.
- 2147 • How/Example(s): Federal Agencies can support activities like the National Preparedness
- 2148 Campaign to help reach the whole community by supporting local, state, tribal, or territory
- 2149 governments with executing their own Preparedness Campaign using the resources provided.

## 2150 *Public Information and Warning*

**Definition:** 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 and, as appropriate, the actions being taken and the assistance being made available.

## 2156 **Expanded Capability Description**

2157 Public Information and Warning incorporates pre- and post-event threat and natural disaster

2158 educational information, warnings, and reports. Information sharing is multidirectional, and Federal

2159 agencies share information through a variety of means before, during, and in response to a threat or

2160 incident in order to guide and inform the public.

## 2161 **Federal Role**

2162 Public Information and Warning includes all information targeted toward creating resilient

2163 communities. For Federal stakeholders this capability encompasses all the ways that the Federal

2164 Government presents risk management information. The government collects hazard data, analyzes

2165 and communicates risks, provides action steps, delivers forecast information, and manages

2166 information and outreach efforts following disasters. Federal agencies also develop and disseminate

2167 risk management guidance.

2168 This FIOP provides an opportunity to identify and apply shared platforms and techniques to

2169 maximize the impact of information and warning efforts, eliminate potential overlaps, and enhance

2170 the credibility and impact of Federal information and warning activity in support of mitigation.

2171 Federal departments and agencies operate under existing authorities and target their communications  
 2172 to specific audiences. Threats and hazards often require different communication methods and  
 2173 restrictions on the use of information that is communicated, but in general Federal departments and  
 2174 agencies conduct Public Information and Warning activities for mitigation under shared assumptions.

2175 **Target:** Communicate appropriate information, in an accessible manner, on the risks  
 2176 faced within a community after the conduct of a risk assessment.

## 2177 Critical Tasks

2178 Federal partners perform critical tasks as identified in the NMF to deliver Public Information and  
 2179 Warning capabilities through a wide range of appropriate mechanisms. This ensures that required  
 2180 stakeholders are reached with the appropriate information at the appropriate time, without  
 2181 interruption, no matter what the threat or hazard faced.

## 2182 Steady State Operations

### 2183 ■ Conduct Public Information and Warning activities outside of disaster activity.

2184 Activities conducted as a part of ongoing risk management by Federal departments and agencies  
 2185 include:

- 2186 ○ Calendared events—scheduled hazard awareness weeks, National Preparedness Month
- 2187 ○ Planning and implementation activities for public information, outreach, and education
- 2188 ○ Audience-specific messaging targeted toward appropriate populations and groups
- 2189 ○ Conducting studies—risk perception, social science analysis, tornado assessments
- 2190 ○ Informing legislative processes
- 2191 ○ Policy making (public level, rule changes)
- 2192 ○ Working with public and private partners (e.g., International Code Council)

2193 ■ **Persuade the public that it is worthwhile to build a resilient community. Encourage private  
 2194 and public sector partners to work together to communicate the benefits of mitigation  
 2195 action and arrive at solutions.** *The Federal role is to consistently communicate Federal  
 2196 capabilities and encourage adoption of mitigation actions through effective communication. By  
 2197 reframing the national dialogue about community resilience so that the messaging focuses not  
 2198 just on a line of business, but on how Federal mitigation capabilities help communities get where  
 2199 they want to go, the Federal Government can better align with non-Federal efforts. This includes  
 2200 recognizing the importance of messaging in reaching the whole community about how mitigation  
 2201 fits into the large contexts of community resilience.*

- 2202 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 2203 and insular area governments; and Federal Government.
- 2204 • Mechanism(s): The Federal Government promotes the benefits of mitigation and working  
 2205 towards achieving a resilient community through Federal administrative structures (defined  
 2206 in the Concept of Operations section), by providing resources to both Federal and non-  
 2207 Federal partners, and by enabling capacity building.
- 2208 • How/Example(s): Federal departments and agencies manage and support calendared events  
 2209 such as National Hurricane Preparedness Week (DOC/NOAA) to raise awareness and foster  
 2210 partnerships. Ongoing, year-round efforts include, public health education (HHS), and the

- 2211 following programs: Storm Ready/Tsunami Ready (DOC/NOAA), Firewise Communities  
 2212 (U.S. Forest Service), Floodsmart (FEMA), Quakesmart (FEMA, National Institute of  
 2213 Standards and Technology, USGS), and the leadership activities of the National Institute for  
 2214 Occupational Safety and Health (Centers for Disease Control and Prevention).
- 2215 ■ **Increase awareness of the risks and the actions they can take to mitigate those risks**  
 2216 **through mechanisms like preparedness campaigns.** *The Federal Government promotes*  
 2217 *mitigation and resilience to the public through a national preparedness campaign to increase*  
 2218 *public awareness and motivate individuals to build societal resilience prior to an event.*
- 2219 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 2220 and insular area governments; and Federal Government.
- 2221 • Mechanism(s): The Federal Government aims to increase public awareness and motivate  
 2222 individuals to build societal resilience through Federal administrative structures, by providing  
 2223 resources to both Federal and non-Federal partners, and by enabling capacity building.
- 2224 • How/Example(s): Examples of national preparedness and resilience campaigns include “Turn  
 2225 Around, Don’t Drown” (DOC/NOAA) and “Be a Force of Nature” (HHS, FEMA,  
 2226 DOC/NOAA). HHS promotes individual health readiness and resilience through its Healthy  
 2227 People 2020 campaign.
- 2228 ■ **Warn people of the risk in their community and the action they can take to mitigate those**  
 2229 **risks.** *Both in regulatory programs and in actions to support the public interest, Federal*  
 2230 *departments and agencies create incentives for risk reduction activity and pursue risk*  
 2231 *communications strategies suited to driving behavior change and reducing risk nationwide.*
- 2232 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 2233 and insular area governments; and Federal Government.
- 2234 • Mechanism(s): The Federal Government warns people of risk and offers options for risk  
 2235 management through Federal administrative structures, by providing resources to both  
 2236 Federal and non-Federal partners, and by enabling capacity building.
- 2237 • How/Example(s): MAT Reports (FEMA), storm assessments (DOC/NOAA), and after-action  
 2238 reports (HHS) are examples of how the Federal Government warns people of risk, or of  
 2239 changes in risk, following a disaster or exercise by communicating findings with Federal and  
 2240 non-Federal partners. FEMA’s Risk MAP program communicates changes in flood risk not  
 2241 only after an event but during steady state. The Risk MAP program is a comprehensive  
 2242 approach to flood risk reduction that aims to raise a community’s risk-consciousness over  
 2243 time while simultaneously offering flood risk management options. Additionally, Emergency  
 2244 Planning and Community Right-to-Know Act helps communities prepare for and respond to  
 2245 potential hazardous substance releases (EPA). HHS provides funding to local and state  
 2246 jurisdictions via the Public Health Emergency Preparedness and Hospital Preparedness  
 2247 Program Cooperative Agreements to support risk reduction activities and capability building,  
 2248 including public information and warning.
- 2249 ■ **Communicate priorities and actions identified through risk analysis and plans to**  
 2250 **stakeholders and those expected to take action to reduce risk.** *Both in regulatory programs*  
 2251 *and in actions to support the public interest, Federal departments and agencies create incentives*  
 2252 *for risk reduction activity, and pursue risk communications strategies suited to driving behavior*  
 2253 *change and reducing risk nationwide.*

- 2254 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
2255 and insular area governments; and Federal Government.
- 2256 • Mechanism(s): The Federal Government communicates incentives for risk reduction actions  
2257 through Federal administrative structures, by providing resources to both Federal and non-  
2258 Federal partners, and by enabling capacity building.
- 2259 • How/Example(s): MAT Reports (FEMA), storm assessments (DOC/NOAA), and after-action  
2260 reports (HHS) are examples of activities the Federal Government uses to support the risk  
2261 management activities of stakeholders and those expected to take action to reduce risk.
- 2262 ■ **Refine and consider options to publicly release potentially sensitive risk information.**  
2263 *Federal departments and agencies determine the suitability of information for the appropriate*  
2264 *audience and make any required security determinations.*
- 2265 • Stakeholder(s): Private sector; NGOs; local, state, tribal, territorial, and insular area  
2266 governments; and Federal Government.
- 2267 • Mechanism(s): The Federal Government uses Federal Administrative Structures to determine  
2268 which risk information is appropriate to publicly release.
- 2269 • How/Example(s): The Federal Government communicates potentially sensitive risk  
2270 information through means such as the National Terrorism Advisory System (DHS) and by  
2271 releasing incident-specific information (e.g., Federal Bureau of Investigation [FBI], HHS,  
2272 DOC/NOAA, FEMA) or epidemiological-specific information (HHS) through existing  
2273 methods such as the Joint Information Center.
- 2274 ■ **Use social media, Web sites, and smartphone applications, as well as more traditional**  
2275 **mechanisms such as community meetings or ethnic media outlets, to inform the public of**  
2276 **actions to take to connect preparedness to resilience. Information and messaging should**  
2277 **ensure effective communication with individuals with disabilities or others with access and**  
2278 **functional needs, including those who are deaf, hard of hearing, blind, or have low vision,**  
2279 **through the use of appropriate auxiliary aids and services, such as sign language and other**  
2280 **interpreters and captioning of audio and video materials.** *Information and messaging should*  
2281 *also be provided in multiple languages and formats in order to ensure effective communication*  
2282 *with individuals with limited English proficiency. The Federal Government aims to leverage all*  
2283 *available and appropriate technology to effectively deliver risk information to the whole*  
2284 *community.*
- 2285 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
2286 and insular area governments; and Federal Government.
- 2287 • Mechanism(s): The Federal Government uses Federal Administrative Structures, including  
2288 mechanisms such as information technology systems, publications, brochures, social media,  
2289 Web sites, and webinars to inform the public of risk management activities that promote  
2290 community resilience.
- 2291 • How/Example(s): Examples of Federal Government communication mechanisms include  
2292 www.Ready.gov (DHS), DOC/NOAA Weather Forecast Office social media pages, and  
2293 department and agency Web sites (all).
- 2294 ■ **Target messages to reach organizations representing children, people with disabilities or**  
2295 **access and functional needs, diverse communities, and people with limited English**  
2296 **proficiency to ensure that the information is accessible and effective so that the full**

2297 **population is able to understand and act on the information.** *The success of mitigation*  
 2298 *activity is measured by the extent to which all populations in a given community have access to*  
 2299 *mitigation-related programs and activities. Public Information and Warning efforts in support of*  
 2300 *mitigation must respect the civil rights and civil liberties of all populations and do not result in*  
 2301 *discrimination on account of race, color, national origin (including limited English proficiency),*  
 2302 *religion, sex, or any form of disability.*

2303 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 2304 and insular area governments; and Federal Government.

2305 • Mechanism(s): The Federal Government prepares appropriate messaging to reach all  
 2306 populations through public outreach and the media.

2307 • How/Example(s): FEMA's Office of Disability Integration and Coordination provides  
 2308 guidance on planning for integrating all populations in planning activities and  
 2309 communications.

2310 ■ **Support and increase the number of communities that develop and share risk reduction**  
 2311 **products (e.g., building codes, design standards, floodplain management principles and**  
 2312 **practices, architectural accessibility standards).** *Federal departments and agencies conduct*  
 2313 *training and education activities targeted to professionals as well as the general public.*  
 2314 *Departments and agencies fund and conduct training to maximize the ability of stakeholders to*  
 2315 *exhibit and practice mitigation and risk management activities.*

2316 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 2317 and insular area governments; and Federal Government.

2318 • Mechanism(s): The Federal Government aims to support and increase the development and  
 2319 sharing of risk reduction products through Federal Administrative Structures, such as creating  
 2320 platforms for information sharing and safeguarding; supporting public and private partners  
 2321 who develop and deliver information; and pursuing MOUs and opportunities for joint  
 2322 deployment of information resources.

2323 • How/Example(s): An examples of Federal support for developing and sharing risk reduction  
 2324 products is the MOU between FEMA and the International Code Council.

### 2325 *Incident-Driven Operations*

2326 ■ **Natural hazard incidents create unique opportunities and requirements for Federal**  
 2327 **departments and agencies to communicate risks, deliver actionable information, and**  
 2328 **activate funding sources for Public Information and Warning activities.**

2329 Actions undertaken following incidents include:

- 2330 ○ Warnings/Alerts
- 2331 ○ Time sensitive messaging (e.g., actions, deadlines)
- 2332 ○ Incident-driven outreach/training
- 2333 ○ Injury prevention
- 2334 ○ Carbon monoxide toxicity/chainsaw safety/generator usage
- 2335 ○ Scam warning
- 2336 ○ Federal advisories for disaster recovery

- 2337           ○ Water safety/sanitation/mold mitigation
- 2338           ○ Situational awareness information
- 2339    ■ **Provide the tools necessary to make decisions quickly, such as a synchronization matrix that allows multiple leaders to make independent decisions.** *Federal departments and*
- 2340            *agencies possess subject matter expertise and technical resources that they can share with other*
- 2341            *agencies and stakeholders and deploy to support partners in delivering Public Information and*
- 2342            *Warning actions. Federal departments and agencies develop decision support tools for Federal*
- 2343            *situational awareness and action that clearly communicate risks to Federal partners in support*
- 2344            *of incident operations.*
- 2345
- 2346            • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,
- 2347            and insular area governments; and Federal Government.
- 2348            • Mechanism(s): The Federal Government uses Federal Administrative Structures to provide
- 2349            the necessary tools for quick decision making.
- 2350            • How/Example(s): Examples of how the Federal Government supports rapid decision making
- 2351            are: the Risk Analyst Position at National Response Coordination Center (FEMA), National
- 2352            Digital Forecast database (DOC/NOAA), Mine Emergency Operations Mapping tool (Mine
- 2353            Safety and Health Administration), and Occupational health warnings (Occupational Safety
- 2354            and Health Administration).
- 2355    ■ **Share information obtained through coordinating activities to inform prevention, protection, response, and recovery decision making by effectively communicating threat and hazard risk analysis. Conduct outreach with atypical partners. Coordinate common messaging and verified source communications through local community leaders.** *The*
- 2356            *Federal Government shares information obtained through coordinating activities to inform*
- 2357            *response and recovery decision making by effectively communicating threat and hazard risk*
- 2358            *analysis. The Federal Government maintains shared situational awareness and responds to*
- 2359            *incident-level information from public- and private-sector partners that identify new or*
- 2360            *previously unidentified stakeholders.*
- 2361
- 2362            • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,
- 2363            and insular area governments; and Federal Government.
- 2364            • Mechanism(s): The Federal Government uses Federal Administrative Structures to share
- 2365            information to inform prevention, protection, response, and recovery activities and to conduct
- 2366            outreach with atypical partners.
- 2367
- 2368            • How/Example(s): Examples of how the Federal Government supports prevention, protection,
- 2369            response, and recovery activities are:
- 2370
- 2371            ○ Risk Analyst Position at National Response Coordination Center (FEMA)
- 2372            ○ National Digital Forecast database (DOC/NOAA)
- 2373            ○ Mine Emergency Operations Mapping tool (Mine Safety and Health Administration)
- 2374            ○ Occupational health warnings (Occupational Safety and Health Administration)
- 2375            ○ Aviation Winter Weather Dashboard (DOC/NOAA)
- 2376            ○ (With atypical partners) Sharing Safe Room guidance with national security partners
- 2377            (FEMA).

2378 ■ **Capitalize on the critical post-disaster window of opportunity and the media information**  
 2379 **cycle to influence public opinion to take steps toward future mitigation.** *The Federal*  
 2380 *Government plans for and delivers messaging, outreach, training, and technical support targeted*  
 2381 *to incident-specific realities.*

2382 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 2383 and insular area governments; and Federal Government.

2384 • Mechanism(s): The Federal Government uses Federal Administrative Structures and enables  
 2385 capacity building to capitalize on post-disaster opportunities.

2386 • How/Example(s): Examples of Federal Government post-disaster outreach activities include  
 2387 issuing Recovery Advisories (FEMA/Federal Insurance and Mitigation Administration),  
 2388 issuing health advisories (HHS), and agricultural insurance marketing (USDA).

### 2389 **Change Management**

2390 ■ **Address evolving risk perception and risk communication within a community.** *The Federal*  
 2391 *Government adapts Federal risk communication tools, methods and procedures to meet adaptive*  
 2392 *risk management requirements. These changes can include demographic and technological*  
 2393 *changes.*

2394 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 2395 and insular area governments; and Federal Government.

2396 • Mechanism(s): The Federal Government addresses evolving risk perception and risk  
 2397 communication through Federal administrative structures by providing resources to both  
 2398 Federal and non-Federal partners, and by enabling capacity building.

2399 • How/Example(s): Examples of Federal Government activities to address changing risk within  
 2400 a community include: seasonal/calendar events, Federal law and policy changes, social  
 2401 science research, MAT Reports (FEMA), storm assessments (DOC/NOAA), and elevated  
 2402 threat levels.

2403 ■ **Practice science-based methods, such as community-based social marketing, to create**  
 2404 **behavior change.** *The Federal Government adapts Federal risk communication tools, methods,*  
 2405 *and procedures to align with the findings of the behavior change research base.*

2406 • Stakeholder(s): Individuals; academia; national laboratories; private sector; NGOs; local,  
 2407 state, tribal, territorial, and insular area governments; and Federal Government.

2408 • Mechanism(s): The Federal Government addresses incorporating science-based behavior  
 2409 change methods through Federal administrative structures, by providing resources to both  
 2410 Federal and non-Federal partners and by enabling capacity building.

2411 • How/Example(s): Examples of the Federal Government employing science-based methods  
 2412 include Federal law and policy changes, supporting social science research, MAT Reports  
 2413 (FEMA), storm assessments (DOC/NOAA), after-action reports (all agencies), threat level  
 2414 communication, and technological changes.

## 2415 *Long-Term Vulnerability Reduction*

**Definition:** 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 the incident.

## 2420 **Expanded Capability Description**

2421 Long-Term Vulnerability Reduction is an outcome-based capability that encompasses a variety of  
2422 actions that reduce risk. A resilient community has taken stock of the threats and hazards it faces;  
2423 assessed its current risk and ability to recover from disaster; developed a plan that addresses  
2424 vulnerabilities; analyzed its available resources, processes, programs, and funding opportunities; and  
2425 adopted successful practices as it promotes individual and community safety and resilience. The  
2426 result is informed action that leads to lasting reductions in vulnerability.

2427 Strengthening this capability enhances resilience and vitality across economic, housing, health and  
2428 social, natural and cultural, and infrastructure domains. Further, it lessens the effects of natural,  
2429 accidental, or adversarial incidents. Long-Term Vulnerability Reduction includes initiatives and  
2430 investments that reduce response and recovery resource requirements in the wake of a disaster or  
2431 incident. Individuals and organizations active across all mission areas can help identify opportunities  
2432 to reduce risk and build resilience through this capability.

## 2433 **Federal Role**

2434 Federal departments and agencies, within the scope of their authorities and funding, provide funding  
2435 opportunities, technical assistance, and resources to stakeholders to help reduce risk and facilitate  
2436 more lasting reductions in vulnerability across the whole community. Agencies and departments  
2437 provide funding for actions that result in a higher level of protection due to upgrades of existing  
2438 infrastructure that meet or exceed current codes and standards. The Federal Government provides  
2439 technical assistance to stakeholders through a variety of mechanisms including technical guidance  
2440 and after-incident performance reports. Resources are also provided by Federal agencies to assist  
2441 local, state, tribal, territorial, and insular area government to promote lasting risk reduction before  
2442 and after disasters.

**Target:** Achieve a measurable decrease in the long-term vulnerability of the Nation against current baselines amid a growing population base and expanding infrastructure base.

## 2446 **Critical Tasks**

2447 Mitigation actions are successfully implemented with commitment from the community. Engaging  
2448 the whole community stake in vulnerability reduction ensures that public and private entities, as well  
2449 as individuals, are invested, fully active partners.

## 2450 *Individual and Local Community*

- 2451 ▪ **Broaden the use of natural hazards and catastrophic insurance.** *Individuals, households, and*  
2452 *businesses that insure against risks recover more quickly than those who do not and require less*  
2453 *from the Federal Government for disaster aid. By broadening the use of natural hazards and*  
2454 *catastrophic insurance, communities become more resilient. Increasing access to health care for*  
2455 *individuals and increasing access to health insurance through the Affordable Care Act can*  
2456 *reduce the impact on health care institutions during disasters.*

- 2457 • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
2458 sector; and nonprofit organizations.
- 2459 • Mechanism(s): The Federal Government provides insurance; technical assistance through  
2460 training, outreach, and education; regulations; capacity building for local communities.
- 2461 • How/Example(s): Federal agencies and departments provide limited insurance opportunities  
2462 to manage risk when opportunities to purchase insurance are not reasonably available from  
2463 other sources. The Federal Government provides training, education, and outreach to local  
2464 communities and individuals to inform those in affected areas about their risk. The Federal  
2465 Government also helps develop local laws/ordinances to ensure compliance with Federal  
2466 laws. The Federal Government provides flood insurance through the NFIP. Property owners  
2467 with federally-backed mortgages are required to maintain flood insurance if they are sited in  
2468 a Special Flood Hazard Area. State Flood Insurance Coordinators can provide advice and  
2469 assistance to local community floodplain managers regarding coverage and compliance. The  
2470 USDA provides Risk Management Crop Insurance to limit losses due to damaged crops, and  
2471 the USCG manages an Oil Spill Liability Trust Fund.
- 2472 ■ **Develop plans and recognize that a prepared individual or family is the foundation of a**  
2473 **resilient community.**
- 2474 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
2475 and insular area governments; and Federal Government.
- 2476 • Mechanism(s): The Federal Government can support community planning which includes  
2477 long-term development, mitigation, continuity, and other plans.
- 2478 • How/Example(s): FEMA’s Risk MAP identifies mitigation actions for long-term  
2479 vulnerability reduction as part of the Risk MAP community engagement process. The local  
2480 mitigation plan development process incorporates a public process to ensure opportunities for  
2481 partners and stakeholder involvement.
- 2482 ■ **Promote neighborhood activities and encourage volunteerism that advances preparedness**  
2483 **awareness campaigns.** *Resilience starts at the individual level, with each person in the*  
2484 *community, and is locally grown through the contributions of those individuals. Resilience builds*  
2485 *through connections that are fostered within neighborhoods; job markets; social, faith-based,*  
2486 *and professional organizations; neighboring communities; and localities, regions, states, tribes,*  
2487 *territories, insular areas, and the Federal Government until this body of influence has the ability*  
2488 *to impact the social and economic vitality of the community by taking into account, planning for,*  
2489 *and mitigating against disaster events.*
- 2490 • Stakeholder(s): The Federal Government supports this task, although this is primarily a local,  
2491 regional, and private sector function.
- 2492 • Mechanism(s): The Federal Government provides resources through training, outreach and  
2493 education to individuals, local communities, states, tribes, territories, and insular areas; the  
2494 Federal Government has published and produced products and services to assist with public  
2495 outreach.
- 2496 • How/Example(s):
- 2497 ○ www.Ready.gov is a national public service advertising campaign designed to educate  
2498 and empower Americans to prepare for and respond to emergencies. The goal of the

- 2499 campaign is to get the public involved and ultimately to increase the level of basic  
2500 preparedness across the Nation.
- 2501 ○ The Firewise program administered by the National Fire Protection Association and  
2502 sponsored by U.S. Forest Service, the DOI, and state forestry organizations. The Firewise  
2503 program provides information for communities and individuals seeking to reduce their  
2504 risk of fire damage. Their program information is available at <http://www.firewise.org>.
  - 2505 ○ DHS sponsors the “If You See Something, Say Something™” campaign, which serves to  
2506 heighten individual and community situational awareness to threat, hazard, and risk.
- 2507 ■ **Incorporate mitigation measures into construction and development projects that take into**  
2508 **account future conditions based on physical changes as well as climate change.**
- 2509 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
2510 and insular area governments; and Federal Government.
  - 2511 • Mechanism(s): The Federal Government can support the development of new building codes  
2512 and standards through research and by providing available climate projection data.
  - 2513 • How/Example(s): The FEMA Building Sciences Program provides research to help increase  
2514 the resiliency of buildings in the face of hazards.
- 2515 ■ **Capitalize on opportunities during the recovery building process to further reduce**  
2516 **vulnerability.** *Mitigation actions taken after a disaster will break the cycle of disaster damage,*  
2517 *reconstruction, and repeated damage. In order to make most efficient use of the time immediately*  
2518 *after a disaster, a community will need to take action shortly after the disaster.*
- 2519 • Stakeholder(s): The Federal Government is heavily involved in the recovery building process  
2520 after many disasters by supporting local communities; state, tribal, territorial, and insular area  
2521 governments; the private sector; and individuals through the recovery process. Federal  
2522 agencies and departments coordinate to reduce vulnerability during the rebuilding process.
  - 2523 • Mechanism(s): The Federal Government publishes regulations and guidelines; provides  
2524 resources including subject matter expertise, education, outreach, training, and products and  
2525 services; provides funding through grants and loans; and builds capacity through partnership,  
2526 collaboration, leadership, and research and development. Where the FDRC is implemented,  
2527 leverage the HM Advisor to concentrate interagency partnerships for mitigation early in the  
2528 recovery process.
  - 2529 • How/Example(s):
    - 2530 ○ Funding—State, tribal, territorial, insular area, and Federal governments and local  
2531 resources may provide post-recovery assistance. HUD, DOT, and FEMA disaster  
2532 assistance grants may be available. Property, crop, and flood insurance claim payments  
2533 provide funds for recovery and rebuilding. Small Business Administration property  
2534 damage disaster loans can pay for repairs and some mitigation actions. Contributions  
2535 from other sources may provide non-Federal cost matches for FEMA’s HMGP. These  
2536 grants focus on long-term risk reduction. Identifying potential funds to cover the required  
2537 non-Federal cost share is essential to project viability. Examples of potential match  
2538 funding sources are HUD Community Development Block Grants, certain flood  
2539 insurance claim payments, DOI Bureau of Indian Affairs funding, Appalachian Regional  
2540 Commission, HHS Indian Health Services, and funds derived from Title III of the Secure  
2541 Rural Schools and Community Self-Determination Act of 2000.

- 2542           ○ Technical Assistance—USDA’s NRCS, the USGS, and FEMA provide technical  
 2543 assistance regarding building codes and standards to communities and property owners.  
 2544 Technical bulletins and training and outreach materials are available to support local  
 2545 efforts. FEMA’s Building Sciences group assesses damage and evaluates construction  
 2546 performance, which contributes to good practices and case studies.

2547 **Private Sector**

- 2548   ■ **Determine the level of appropriate risk reduction to incorporate in operational and capital**  
 2549 **improvement projects.**
- 2550       • Stakeholder(s): Private and nongovernmental organizations.
- 2551       • Mechanism(s): The Federal Government can provide tools and data to support risk  
 2552 assessments
- 2553       • How/Example(s): FEMA provides the Hazus tool which allows users to do risk assessments  
 2554 based on a number of different hazards and using their own vulnerability data.
- 2555   ■ **Advance projects and activities that do not increase the residual risk in nearby**  
 2556 **neighborhoods and communities.** *Private-sector partners, much like local governments, should*  
 2557 *continue to incorporate mitigation in operational and capital improvement projects to ensure*  
 2558 *disaster impacts are minimized when they occur. Businesses that remain viable after a disaster*  
 2559 *enable individuals to recover more quickly and provide stability to the community. Communities*  
 2560 *rely on their private-sector partners to be active participants and members of the communities in*  
 2561 *which they conduct business.*
- 2562       • Stakeholder(s): The Federal Government supports this task, although this is primarily a  
 2563 private-sector function in coordination with local, state, tribal, territorial, and insular area  
 2564 governments.
- 2565       • Mechanism(s): The Federal Government publishes regulations and guidelines and, where  
 2566 applicable, provides resources including subject matter expertise, education, outreach,  
 2567 training, and products and services; provides funding through grants and loans; and builds  
 2568 capacity through partnership, collaboration, leadership, and research and development.
- 2569       • How/Example(s):
- 2570           ○ Hazard Mitigation Assistance (FEMA)
- 2571           ○ Community Development Block Grants (HUD)
- 2572           ○ Natural Resources Conservation Service (USDA)
- 2573           ○ Technical Assistance Bulletins (FEMA)
- 2574           ○ Disaster Loans (Small Business Administration).
- 2575   ■ **Coordinate with government and community organizations to reduce duplication of effort**  
 2576 **and encourage complementary efforts.** *Private-sector partners, government, and community*  
 2577 *organizations may all perform actions to reduce long-term vulnerability. These entities should*  
 2578 *work together during the local hazard mitigation planning process to identify risks and*  
 2579 *determine what steps can be taken to reduce those risks. All stakeholders can benefit by*  
 2580 *identifying available resources and mitigation actions that have been taken, and working*  
 2581 *together to further reduce risk.*

- 2582 • Stakeholder(s): The Federal Government supports this task, although this is primarily a local  
2583 and regional function.
- 2584 • Mechanism(s): The Federal Government published regulations and guidelines and, where  
2585 applicable, provides resources including subject matter expertise, training, outreach,  
2586 education, and products and services; provides funding through grants and loans; and builds  
2587 capacity through partnership, collaboration, leadership, and research and development.
- 2588 • How/Example(s):
- 2589 ○ Hazard mitigation planning process
- 2590 ○ FBI InfraGard is an information sharing and analysis effort serving the interests and  
2591 combining the knowledge base of a wide range of members. InfraGard, a partnership  
2592 between the FBI and the private sector, is an association of businesses, academic  
2593 institutions; local, state, tribal, territorial, and insular area law enforcement agencies; and  
2594 other participants dedicated to sharing information and intelligence to prevent hostile acts  
2595 against the United States.

## 2596 **Government**

- 2597 ■ **Put community plans which include mitigation and resilience to work.**
- 2598 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
2599 and insular area governments; and Federal Government.
- 2600 • Mechanism(s): The Federal Government can support local mitigation and resilience by  
2601 relying on local, state, tribal, and territorial mitigation plans to identify threats and hazards  
2602 and strategies to manage the risks they pose.
- 2603 • How/Example(s): FEMA's Hazard Mitigation Program supports the development of local,  
2604 state, tribal, and territorial mitigation plans and requires that a plan is in place to be eligible  
2605 for HMGP Assistance.
- 2606 ■ **Execute identified risk management actions and projects resulting from analysis and  
2607 planning processes in the community.** *Mitigation Plans form the foundation for a community's  
2608 long-term strategy to reduce disaster losses and break the cycle of disaster damage,  
2609 reconstruction, and repeated damage.*
- 2610 • Stakeholder(s): The Federal Government supports these tasks, although they are primarily  
2611 local and regional functions.
- 2612 • Mechanism(s): The Federal Government publishes regulations and guidelines and, where  
2613 applicable, provides resources including subject matter expertise, training, outreach,  
2614 education, and products and services; provides funding through grants and loans; and builds  
2615 capacity through partnership, collaboration, leadership, and research and development.
- 2616 • How/Example(s): FEMA's Risk MAP program identifies mitigation actions for long-term  
2617 vulnerability reduction as part of the Risk MAP community engagement process.
- 2618 ■ **Make risk avoidance and reduction a priority in capital improvements projects.**  
2619 *Communities that incorporate mitigation in comprehensive or capital improvement plans can  
2620 make current and future development less susceptible to damage from disaster. As infrastructure  
2621 is updated or replaced by new materials using new technology, mitigation may result.  
2622 Communities should leverage opportunities to improve public infrastructure as those  
2623 opportunities are presented.*

- 2624 • Stakeholder(s): The Federal Government supports this task, although this is primarily a local  
2625 and regional function.
- 2626 • Mechanism(s): The Federal Government provides resources including subject matter  
2627 expertise, education, outreach, training, and products and services; provides funding through  
2628 grants; and builds capacity through partnership, collaboration, and leadership.
- 2629 • How/Example(s): Funding (Grants)—Hazard Mitigation Assistance (FEMA), Technical  
2630 Assistance Bulletins (FEMA).
- 2631 ■ **Adopt and enforce a suitable building code to ensure resilient construction.** *Building code*  
2632 *adoption and enforcement is a primary method of pre-disaster mitigation. Adopting and*  
2633 *enforcing strong building codes consistently in a community will significantly reduce damage*  
2634 *caused by disaster and reduce losses to critical infrastructure, transportations systems,*  
2635 *businesses, and households.*
- 2636 • Stakeholder(s): The Federal Government supports this task, although this is primarily a local  
2637 and regional function.
- 2638 • Mechanism(s): The Federal Government publishes regulations; provides resources to local  
2639 communities and states, tribes, territories, and insular area governments; and builds capacity  
2640 through partnership, collaboration, and leadership.
- 2641 • How/Example(s): National, state, and local building codes, including local floodplain  
2642 ordinances, strengthen community resilience by improving the built environment as  
2643 individuals and communities repair, construct, and develop by providing minimum standards  
2644 for these activities. FEMA’s Building Science section develops and maintains a library of  
2645 technical bulletins for construction that incorporates risk reduction and sound construction  
2646 principles.
- 2647 ■ **Adopt appropriate land use measures to limit development in hazardous areas**  
2648 **commensurate with identified risk.**
- 2649 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
2650 and insular area governments; and Federal Government.
- 2651 • Mechanism(s): Incentivize land use measures that limit development in hazardous areas  
2652 through Federal Programs.
- 2653 • How/Example(s): The Community Rating System through the NFIP provides incentives for  
2654 jurisdictions to restrict development in flood hazard areas by leaving those areas as open  
2655 spaces or wetland areas, providing flood insurance policy rate reductions for these, and other  
2656 mitigation actions.
- 2657 ■ **Employ a variety of incentives, statutory and regulatory requirements, and voluntary**  
2658 **initiatives to implement successful practices throughout communities.** *The Federal*  
2659 *Government has published and made available a number of tools to assist communities with*  
2660 *resilience efforts. Incentives are often tied to higher standards enforced by local communities to*  
2661 *ensure that risk reduction measures are being implemented properly.*
- 2662 • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
2663 sector; and nonprofit organizations.
- 2664 • Mechanism(s): The Federal Government publishes regulations and guidelines; provides  
2665 resources including subject matter expertise, training, outreach, education, and products and

- 2666 services; provides funding through grants; and builds capacity through partnership,  
2667 collaboration, and leadership.
- 2668 • How/Example(s):
- 2669 ○ DOC/NOAA’s Community Resilience Index is a tool communities can use to examine  
2670 their preparedness for storms and recovery.
- 2671 ○ FEMA’s Community Rating System provides discounts to NFIP policyholders in  
2672 communities that exceed minimum NFIP requirements.
- 2673 ○ FEMA’s HMGP allows additional funding for states that have an approved Enhanced  
2674 State Hazard Mitigation Plan.
- 2675 ■ **Be transparent and explicit about mitigation efforts in order to increase and sustain whole-**  
2676 **community investment, reduce duplication of effort, and encourage complementary efforts**  
2677 **by partners.** *Government entities can support transparency by developing and maintaining*  
2678 *partnerships, participating task forces and in regional planning meetings. Technical support can*  
2679 *be obtained through MOAs/MOUs. These actions allow for open collaboration across Federal*  
2680 *partners. The Federal Government supports mitigation efforts through a variety of mechanisms*  
2681 *including grant funding, technical assistance, and outreach.*
- 2682 • Stakeholder(s): Mitigation efforts are primarily local with support from the Federal  
2683 Government.
- 2684 • Mechanism(s): The Federal Government publishes regulations and guidelines; collaborates  
2685 and partners with other Federal agencies through MOAs and MOUs; provides resources  
2686 including training, outreach, education, and products and services; provides funding through  
2687 grants; and builds capacity through partnership, collaboration, and leadership. Where the  
2688 FDRC is implemented, leverage the HM Advisor to concentrate interagency partnerships for  
2689 mitigation early in the recovery process.
- 2690 • How/Example(s): Interagency MOAs/MOUs, Federal task forces, regional meetings.
- 2691 ■ **Establish standards and practices to reduce long-term vulnerability.** *Communities establish*  
2692 *standards and practices for reducing risk as part of the local hazard mitigation planning*  
2693 *process. When communities implement plans and involve their citizens in the plan’s goals long-*  
2694 *term, they can reduce vulnerability.*
- 2695 • Stakeholder(s): The Federal Government supports this task, although this is primarily a local  
2696 and regional function.
- 2697 • Mechanism(s): The Federal Government publishes regulations and guidelines; provides  
2698 resources including training, outreach, education, and products and services; and builds  
2699 capacity through partnership, collaboration, and leadership.
- 2700 • How/Example(s): Although states and local communities establish standards and practices to  
2701 reduce long-term vulnerability, the Federal Government publishes regulations, provides  
2702 technical resources, and performs assessments to determine how buildings perform during  
2703 events, which may encourage the adoption of higher building codes at the local, state, tribal,  
2704 territorial, and insular area levels.
- 2705 ○ FEMA publishes Technical Bulletins regarding the NFIP, which provide guidance  
2706 concerning the NFIP’s building performance standards. The bulletins are intended for use  
2707 primarily by local, state, tribal, territorial, and insular area officials responsible for

- 2708 interpreting and enforcing NFIP regulations and by members of the development  
2709 community, such as design professionals and builders.
- 2710 ○ FEMA’s MAT conducts field inspections and technical evaluations of the performance of  
2711 buildings subjected to forces generated by the event, with the objective of identifying  
2712 design practices, construction methods, and building materials that either failed under the  
2713 forces generated by the event or were successful in resisting such forces. The MAT’s  
2714 findings and recommendations are aimed primarily at construction contractors, architects,  
2715 engineers, planners and local building officials who are involved in permitting,  
2716 inspection, and development of building codes, as well floodplain and land use  
2717 management provisions.
- 2718 ○ Local governments can incorporate higher building codes and standards for all repair and  
2719 new construction. State and local building code officials, community planning offices,  
2720 and floodplain managers can provide resources, training, and technical assistance.
- 2721 ■ **Capitalize on opportunities during the recovery building process to further reduce**  
2722 **vulnerability, including pausing to evaluate and update current codes, policies, and**  
2723 **approaches to redevelopment.** *Mitigation actions taken after a disaster will break the cycle of*  
2724 *disaster damage, reconstruction, and repeated damage. In order to make most efficient use of the*  
2725 *time immediately after a disaster a community will need to take action shortly after the disaster.*
- 2726 • Stakeholder(s): Local, state, tribal, territorial, insular area, and Federal governments; private  
2727 sector; nonprofit organizations
- 2728 • Mechanism(s): The Federal Government publishes regulations and guidelines; provides  
2729 resources including subject matter expertise, education, outreach, training, and products and  
2730 services; provides funding through grants and loans; and builds capacity through partnership,  
2731 collaboration, leadership, and research and development. Where the FDRC is implemented,  
2732 leverage the HM Advisor to concentrate interagency partnerships for mitigation early in the  
2733 recovery process.
- 2734 • How/Example(s): Funding (Grants)—Local communities can use information from plans to  
2735 make decisions for developing grant applications. After a Presidentially Declared Disaster,  
2736 the Federal Government is heavily involved in the recovery building process. Federal  
2737 agencies and departments coordinate to reduce vulnerability during the rebuilding process.  
2738 Post-disaster, local jurisdictions can identify opportunities to use FEMA’s Public Assistance  
2739 Mitigation program (Section 406 of the Stafford Act) funds to mitigate damaged public  
2740 facilities. State governments tasked with administering post-disaster programs can provide  
2741 advice as communities make decisions about rebuilding, and FEMA’s Building Science and  
2742 Mitigation branches offer technical assistance, training, and technical bulletins. Public  
2743 information and outreach services are also available from FEMA after a disaster. FEMA also  
2744 provides grants through the National Flood Insurance Fund to mitigate insured structures and  
2745 property that represent a high risk and vulnerability to flood damage. Grants and program  
2746 funds from HUD Community Development Block Grants and USDA NRCS are potential  
2747 funding sources to assist rebuilding efforts.

## 2748 Operational Coordination

2749 **Definition:** Establish and maintain a unified and coordinated operational structure and  
2750 process that appropriately integrates all critical stakeholders and supports the execution  
2751 of core capabilities.

## 2752 Expanded Capability Description

2753 Mitigation serves the interests of National Preparedness before, during, and after an incident, but has  
2754 greatest effect if done well in advance of disaster. Through a unity of effort among the whole  
2755 community, common objectives should be built with group consensus. Objectives should be  
2756 transparent, based on an all-inclusive planning process, and have clear metrics to measure progress.  
2757 Agencies and departments that operate within the NMF understand the ConOps detailed in this FIOP,  
2758 integrate their activities, and conduct interagency operational coordination across a range of  
2759 operations during steady state, adaptive risk management, and incident-driven timelines, with each  
2760 type of operation involving different communities of interests and structures. Operational  
2761 coordination aids in this by enabling participants to do one or more of the following:

- 2762     ▪ **Facilitate Unity of Effort.** Achieving national objectives to prevent, protect against, respond to,  
2763 recover from, and mitigate all hazards through effective and efficient use of mitigation programs  
2764 requires unity of effort with the whole community and among departments and agencies. This  
2765 requires a holistic approach based on agreed-upon values and supported by operational  
2766 coordination.
- 2767     ▪ **Maintain Continuity of Operations.** The ability to sustain essential services and functions no  
2768 matter what the threat or hazard is another cornerstone of preparedness throughout all levels of  
2769 government and both the public and private sectors. Continuity planning and operations are an  
2770 inherent component to all of the mission areas, especially when faced with ever-changing risks.  
2771 The continuation and resiliency of the operations that provide the core capabilities which support  
2772 the mission areas are essential to national preparedness, and continuity is the planning paradigm  
2773 and operational mechanism to ensure its success.
- 2774     ▪ **Achieve Common Objectives.** Successful operational coordination enables the Federal  
2775 Government to build domestic and, if necessary, international support, conserve resources, and  
2776 conduct coherent operations that more effectively and efficiently achieve common objectives.  
2777 Solutions to a problem seldom reside within the capability of one agency. Operational  
2778 coordination allows mitigation practitioners to recognize and leverage the core competencies and  
2779 capabilities of other agencies while providing support, as appropriate, to the whole community.
- 2780     ▪ **Provide Common Understanding.** Operational coordination is critical to understanding the  
2781 roles and relationships of participating Federal agencies and relevant stakeholders as well as their  
2782 interests, equities, and insights into the challenges faced by threats/hazards. Such common  
2783 understandings will be essential to enable stakeholders to operate effectively in the same space,  
2784 identifying opportunities for cooperation and avoiding unnecessary conflict. For example, during  
2785 incident-driven operations, NIMS provides a systematic, proactive approach to guide  
2786 departments and agencies at all levels of government to work together to prevent, protect against,  
2787 respond to, recover from, and mitigate the effects of incidents. Recommended activities for the  
2788 private sector and NGOs have also been established that support NIMS implementation and  
2789 closely parallel the implementation activities that have been required of local, state, tribal,  
2790 territorial, and insular area governments. NIMS is applicable regardless of the cause, size,  
2791 location, or complexity of a given event.

## 2792 Operational Coordination Actions

2793 At the Federal level, mitigation efforts are intended to support local, state, tribal, territorial, and  
2794 insular area communities that are informed, supported, and funded through a variety of Federal  
2795 outreach and grant programs. To be successful, interagency coordination should bring together the

2796 interests of all stakeholders, creating a holistic approach to mitigation efforts either as a whole or to  
2797 address hazard-specific requirements.

2798 The NMF forms the basis for the implementation of a mitigation strategy at the local, state, tribal,  
2799 territorial, insular area, and Federal level. This framework highlights the interoperability and  
2800 compatibility that is necessary to be effective outside of a disaster or during incident response. It  
2801 speaks to how mitigation capabilities support Protection and Prevention mission areas during steady  
2802 state operations and in efforts to reduce exposure. The NMF fosters a number of actions that assist in  
2803 operational coordination during steady state operations and in applying adaptive risk management.  
2804 These actions include:

- 2805     ▪ **Coordination.** Each organization brings its own culture, philosophy, goals, practices, and skills  
2806     to the interagency table. This diversity is the strength of the interagency process, providing a  
2807     cross-section of expertise, skills, and abilities. Interagency coordination should strive to break  
2808     down barriers and enhance information sharing and safeguarding. Even in the routine of day-to-  
2809     day business, cooperation is best achieved through active interagency involvement, building upon  
2810     both the differences in agency cultures and the core competencies and successful experiences that  
2811     each brings. Coordination conducted and solidified at the Federal level flows downward to local,  
2812     state, tribal, territorial, and insular area governments and outward to the nongovernmental offices  
2813     and the private sector.
- 2814     ▪ **Collaboration.** The most common technique for promoting this collaboration is the identification  
2815     or formation of centers, groups, cells, offices, elements, and planning teams and other enduring  
2816     or temporary cross-functional staff organizations that manage specific processes and accomplish  
2817     tasks in support of mission accomplishment. They facilitate planning by the staff, decision  
2818     making by agency leads, and execution by the staff and assets available to them. Examples of  
2819     these include Tsunami Warning Center, DOC/NOAA Weather Forecast Offices, National  
2820     Centers, River Forecast Centers, USGS Streamgage, USACE Risk Management Centers, and  
2821     USGS Earthquake Notification Service. Basic steps in building collaboration and gaining  
2822     consensus are to:
  - 2823         • Identify all agencies and organizations that are or should be involved in the mitigation effort
  - 2824         • Establish an interagency structure and define the objectives of the effort
  - 2825         • Define courses of action for agency activities
  - 2826         • Solicit from each agency, department, or organization a clear understanding of the role that  
2827             each plays
  - 2828         • Identify potential obstacles to the collective effort arising from conflicting departmental or  
2829             agency priorities
  - 2830         • Identify the resources of each participant in order to reduce duplication and increase  
2831             coherence in the collective effort
  - 2832         • Define the desired end state
  - 2833         • Maximize assets to support the longer-term goals and unity of effort
  - 2834         • Establish interagency assessment teams to conduct risk and resilience assessment based on  
2835             quantifiable measures of effectiveness and performance.
- 2836     ▪ **Interpersonal communication.** Skills that emphasize consultation, persuasion, compromise, and  
2837     consensus contribute to obtaining agreement in response to natural threats that face the Nation

2838 before they occur. Successful directors and their staffs build personal relationships to inspire trust  
2839 and confidence within the Federal Government and amongst the whole community. Various  
2840 formal and informal coordinating structures assist in gaining consensus and creating synergy  
2841 among the engaged Federal and whole-community partners. By developing personal  
2842 relationships, using liaison elements, and making conscious decisions on the degree of reliance  
2843 on those stakeholders for critical tasks, the required trust and confidence is gained.

2844 ■ **Liaison.** In response to an incident, direct, early liaison is a valuable source of accurate, timely  
2845 information on many aspects of a crisis area. An additional benefit is the opportunity to build  
2846 working relationships based upon trust and open communications among all organizations. For  
2847 that reason, ongoing liaison and exchange of liaison personnel with engaged organizations is  
2848 equally important. During an incident, mitigation advisors deployed to support response and  
2849 recovery activities begin research, modeling, and outlining a plan that will contribute to recovery  
2850 efforts and change management, reducing the likelihood of repeat incidents. Key agencies within  
2851 the Mitigation mission area continue to provide weather and geological information in order to  
2852 maintain situational awareness and warn the public of secondary dangers and enhance situational  
2853 awareness. To enhance recovery efforts, mitigation staff members deploy to support Best  
2854 Practices Field Teams jointly with the Public Affairs Office and state counterparts. They  
2855 establish working relationships with the Federal Coordinating Officer, FDRC, State Coordinating  
2856 Officer, and Chief of Staff and become knowledgeable with the Federal and state operating  
2857 priorities to begin planning and outlining objectives in support of those priorities.

2858 ■ **Integrated communication.** Incident communications are facilitated through the development  
2859 and use of a common communications plan and interoperable communications processes and  
2860 architectures. This integrated approach links the operational and support units of the various  
2861 agencies involved with the necessity to maintain communication connectivity and discipline,  
2862 enabling common situational awareness and interaction. Active communication during an  
2863 incident builds upon the interpersonal relationships, trust, and confidence developed during  
2864 steady state.

## 2865 Scalability, Flexibility, and Adaptability

2866 A vital tenet of the Nation's system of emergency management is the development and execution of  
2867 capabilities in a scalable, flexible, and adaptable manner. Processes and structures must be developed  
2868 in order to rapidly and effectively meet unforeseen, unmet, evolving, and continuous needs of  
2869 varying geographic scope, size, complexity, and intensity, regardless of the threat or incident. As  
2870 incidents change in size, scope, and complexity, operations must adapt to meet evolving  
2871 requirements. The number, type, and sources of resources must be able to expand rapidly to meet the  
2872 needs associated with a given threat or incident and an incident's cascading effects. Participants  
2873 throughout the whole community must remain flexible to adapt to these changing circumstances.  
2874 Therefore, each framework describes structures at the national, local, and, where applicable, the  
2875 sector-specific and cross-sector levels to coordinate planning, operations, and resource augmentation.  
2876 They also describe the decision escalation and resource activation processes if events are or become  
2877 wider in scope, resource intensity, or geography.

## 2878 Federal Role

2879 An operation that supports and performs mitigation at the Federal level spans the full breadth of risk  
2880 management activity. Whether Federal agencies are responding to incidents, delivering steady state  
2881 risk analysis and reduction efforts, or responding to changing conditions or requirements—  
2882 operational coordination describes the way that they will conduct their responsibilities and coordinate

2883 with their stakeholders. In particular, for this FIOP, operational coordination is the mechanism by  
 2884 which Federal agencies work with each other in support of the mitigation goals and the shared vision  
 2885 through strategic planning. In assuring that Federal operational coordination meets the needs of  
 2886 individual agency and department responsibilities, this FIOP outlines how Federal operational  
 2887 coordination occurs across critical tasks identified in the framework.

2888 **Target:** Establish protocols to integrate Mitigation data elements in support of operations  
 2889 within all states, tribes, and territories and in coordination with Federal agencies.

## 2890 Critical Tasks

2891 Mitigation actions are successfully implemented with commitment from the community. Engaging  
 2892 the whole community with a stake in vulnerability reduction ensures that public and private entities  
 2893 and individuals are invested and fully active partners.

### 2894 *Steady State*

- 2895 ■ **Establish procedures and build partnerships and coalitions across the whole community**  
 2896 **that emphasize a coordinated delivery of mitigation capabilities.** *Establish joint objectives*  
 2897 *and foster delivery of mitigation capabilities across all Federal partners through coordinating*  
 2898 *structures and the coordination role of the MitFLG.*
  - 2899 • Stakeholder(s): Local, state, tribal, territorial, and insular area governments; and Federal  
 2900 Government.
  - 2901 • Mechanism(s): Despite increasing vulnerability to natural disasters, many communities resist  
 2902 adopting mitigation programs due to cost and political influences. Progress toward adoption  
 2903 of mitigation practices will require support from Federal Government in the form of grants  
 2904 and programs and community commitment. Through guidance and support, communities  
 2905 overcome barriers and develop innovative solutions.
  - 2906 • How/Example(s): Web sites such as <http://www.data.gov> increase public access to high  
 2907 value, machine-readable datasets generated by the Federal Government. This site promotes  
 2908 use of architectural standards and technology, increases access to geospatial data, and  
 2909 promotes government-to-citizen communication, accountability, and transparency.
- 2910 ■ **Identify mitigation roles and responsibilities and engage stakeholders across the whole**  
 2911 **community to support the information sharing process.** *Operating under the NMF, Federal*  
 2912 *departments and agencies coordinate the delivery of resources and capacity-building efforts to*  
 2913 *provide a unified pursuit of risk management principles for the Nation, supporting whole-*  
 2914 *community stakeholders in a consistent and dynamic way.*
  - 2915 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 2916 and insular area governments; and Federal Government.
  - 2917 • Mechanism(s): The NMF outlines the roles and responsibilities of all levels of government  
 2918 and the whole community. Coupled with the Mitigation FIOP and follow-on local, state,  
 2919 territorial, tribal, and insular area plans, this will provide concepts to enhance vertical  
 2920 coordination in the implementation of mitigation activities.
  - 2921 • How/Example(s): Through the use of general or hazard-specific coordinating structures,  
 2922 stakeholders create a forum to share ideas and receive guidance. Coordinating structures are  
 2923 able to facilitate the preparedness and delivery of capabilities, programs, and grants and

2924 provide guidance and support to the whole community. These structures and forums enhance  
2925 ongoing communication and coordination among all parties involved.

2926 ■ **Recognize the complexity of various interest groups and integrate organizations across**  
2927 **communities, including public-private partnerships.** *Federal partners support local*  
2928 *mitigation efforts and deliver discrete mitigation capabilities with the recognition that*  
2929 *stakeholders from multiple disciplines will operate under varying organizational structures and*  
2930 *produce mitigation products (data, actions, products) to standards they define. The Federal*  
2931 *Government seeks to maximize the use of mitigation outputs by identifying shared objectives,*  
2932 *ensuring interoperability, reducing redundancy, and protecting Federal investments.*

2933 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
2934 and insular area governments; and Federal Government.

2935 • Mechanism(s): Through coordination and collaboration, the government works to develop a  
2936 shared understanding of community needs and capabilities, empower and integrate resources  
2937 from across the community, create stronger social infrastructure, establish relationships that  
2938 facilitate more effective mitigation activities, increase individual and collective preparedness,  
2939 and create greater resilience at both the community and national levels.

2940 • How/Example(s): One example is the Volpe National Transportation Systems Center. As part  
2941 of the DOT Research and Innovative Technology Administration, the Volpe Center is a  
2942 critical resource for innovation in transportation. Their mission is to improve the Nation's  
2943 transportation system by anticipating emerging transportation issues and to serve as a center  
2944 of excellence for informed decision making. This organization engages with the whole  
2945 community and provides information that works to mitigate disasters as related to  
2946 transportation.

#### 2947 ***Incident-Driven***

2948 ■ **Emphasize mitigation technique integration into Incident Command System (ICS)<sup>11</sup>**  
2949 **planning cycles by command and general staff representatives, and educate whole-**  
2950 **community partners.** *The Federal Government will leverage all available data and focus the*  
2951 *post-incident responsibility of mitigation components on informing operations through risk*  
2952 *analysis and implementing long-term mitigation into the delivery of Federal support.*

2953 • Stakeholder(s): Private sector; NGOs; local, state, tribal, territorial, and insular area  
2954 governments; and Federal Government.

2955 • Mechanism(s): The provision of Mitigation experts from Federal departments and agencies  
2956 that serve as technical experts and advisors inform response activities while preparing to  
2957 enhance and strengthen recovery efforts.

2958 • How/Example(s): Section 406 of the Stafford Act's mitigation program (FEMA) presents an  
2959 opportunity for applicants to fortify their infrastructure against future catastrophic events.  
2960 FEMA and most states provide hazard mitigation officers—at the request of the applicant—  
2961 to aid in formulating Section 406 of the Stafford Act mitigation proposals. However, it is the

<sup>11</sup> ICS is a standardized, on-scene, all-hazards incident management approach that allows for the integration of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure; enables a coordinated response among various jurisdictions and functional agencies, both public and private; and establishes common processes for planning and managing resources.

- 2962 applicant's responsibility to identify and document the mitigation opportunities during public  
2963 assistance project formulation.
- 2964 ■ **Use and leverage mitigation products and capabilities, such as the identification of threats  
2965 and the assessment of risk, to support incident operations.** *The delivery of mitigation  
2966 capabilities at the Federal level generates a large amount of risk analysis information and a  
2967 broad suite of risk analysis expertise and tools. Federal partners will bring the value of these  
2968 tools to bear to provide risk analysis in support of incident operations.*
- 2969 • Stakeholder(s): Private sector; NGOs; local, state, tribal, territorial, and insular area  
2970 governments; and Federal Government.
- 2971 • Mechanism(s): The Comprehensive Preparedness Guide (CPG) 201: THIRA Guide and the  
2972 CPG 201 Toolkit provide resources and information, data sources, and templates to support  
2973 the execution of a THIRA.
- 2974 • How/Example(s): One site that serves as the tool to practitioners is Hazards-United States  
2975 (Hazus). Hazus is a nationally applicable standardized methodology that contains models for  
2976 estimating potential losses from earthquakes, floods, and hurricanes. Hazus uses GIS  
2977 technology to estimate physical, economic, and social impacts of disasters. It graphically  
2978 illustrates the limits of identified high-risk locations due to earthquake, hurricane, and floods.  
2979 DOC/NOAA's Incident Meteorologists provide live briefings at wildfires and other incidents.
- 2980 ■ **Contribute to the situational awareness and a common operating picture for the entire  
2981 Federal Government and for local, state, tribal, and territorial governments, as  
2982 appropriate, in the event of a natural disaster, act of terrorism, or other manmade disaster.**  
2983 *Through contributions to the DHS NOC, mitigation practitioners help provide real-time  
2984 situational awareness and monitoring of the homeland, coordinate mitigation support to  
2985 incidents and response activities, and, in conjunction with the DHS Office of Intelligence and  
2986 Analysis, issue advisories and bulletins concerning threats to homeland security and the means  
2987 to help mitigate them through the Public Information and Warning core capability.<sup>12</sup>*
- 2988 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
2989 and insular area governments; and Federal Government.
- 2990 • Mechanism(s): Mitigation professionals through coordination, collaboration, and open  
2991 communication leverage all sources to gain, maintain, and relay important information that

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<sup>12</sup> Pursuant to the Homeland Security Act of 2002, as amended, the NOC is the principal operations center for DHS and shall (1) provide situational awareness and a common operating picture for the entire Federal Government, and for local, state, tribal, territorial, and insular area governments as appropriate, in the event of a natural disaster, act of terrorism, or other man-made disaster; and (2) ensure that critical terrorism and disaster-related information reaches government decision makers. Pursuant to these authorities, the NOC provides situational awareness, collecting and synthesizing all source information, including information from the state and major urban area fusion centers, for all threats and all hazards covering the homeland security enterprise. The SIOC acts as the FBI's worldwide emergency operations center (EOC) by maintaining situational awareness of criminal or terrorist threats, critical incidents, and crises; providing command, control, communications connectivity, and the FBI's common operating picture for managing operational responses; establishing the headquarters command post and developing connectivity to JOCs; and sharing information and intelligence with other EOCs at all levels of government, to include the DHS NOC. The SIOC ensures effective coordination and liaison with partner agencies, strategic communications, and coordination and information sharing with other leaders, as appropriate and in accordance with classification and legal requirements, to manage the threat.

2992 contributes to the situational awareness of leadership at all levels, and decision makers using  
 2993 appropriate methods and products.

2994 • How/Example(s): The National Incident Support Manual outlines the composition of a  
 2995 Situational Awareness Section that can be used to enhance the collection and analysis of  
 2996 information associated with the operations at the DHS NOC, DHS Office of Intelligence and  
 2997 Analysis, and National and Regional Response Coordination Centers.

2998 ■ **Capitalize on opportunities for mitigation actions following disasters and incidents.**  
 2999 *Incidents often present unique opportunities to take mitigation actions. When Federal partners*  
 3000 *support rebuilding efforts and deliver response and recovery support, they will ensure that*  
 3001 *mitigation resources are deployed and delivered to define a resilient response and recovery and*  
 3002 *long-term vulnerability reductions.*

3003 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 3004 and insular area governments; and Federal Government.

3005 • Mechanism(s): Activation of a FDRC following a disaster triggers the appointment of a  
 3006 Mitigation Advisor. This special advisor, who reports to the FDRC, supports recovery  
 3007 operations by providing a critical linkage to content, process, and internal and external  
 3008 networks.

3009 • How/Example(s): The HMGP provides grants to states and local governments to implement  
 3010 long-term hazard mitigation measures after a major disaster declaration. The purpose of the  
 3011 HMGP is to reduce the loss of life and property due to natural disasters and to enable  
 3012 mitigation measures to be implemented during the immediate recovery from a disaster. The  
 3013 HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and  
 3014 Emergency Assistance Act of 1988, as amended. A key consideration during post-disaster  
 3015 rebuilding is planning for future risk to ensure that mitigation efforts anticipate the threats  
 3016 posed by future conditions such as sea level rise due to climate changes.

### 3017 *Private Sector and Government*

3018 ■ **Adapt to evolving risks and changing conditions, including those resulting from climate**  
 3019 **change.** *Changes in demographics, evolving risks, and advancements in risk analysis technology*  
 3020 *and practice drive the level and kind of mitigation activity in the same way the incidents do.*  
 3021 *Federal partners are encouraged to operate under shared interagency goals to deliver mitigation*  
 3022 *capabilities in a mutually supportive way.*

3023 • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,  
 3024 and insular area governments; and Federal Government.

3025 • Mechanism(s): The study of the vulnerability to evolving change and variability, and their  
 3026 ability to adapt to changes in hazards, is a relatively new field of research that brings together  
 3027 experts from a wide range of disciplines. Federal departments and agencies coordinate,  
 3028 through the study and implementation of Adaptive Risk Management, the best ways to  
 3029 counter evolving threats and hazards to the Nation.

3030 • How/Example(s): The Interagency Climate Change Adaptation Task Force identified a set of  
 3031 guiding principles that public and private decision makers should consider in designing and  
 3032 implementing adaptation strategies. They include (but are not limited to) the following:

3033 ○ Adopt integrated approaches

3034 ○ Prioritize the most vulnerable

- 3035           ○ Use best-available science
- 3036           ○ Apply risk-management methods and tools
- 3037           ○ Apply ecosystem-based approaches.
- 3038    ▪ **Integrate Continuity Planning and Operations in Operational Coordination.**
- 3039           • Stakeholder(s): Academia, private sector, NGOs, local, state, tribal, territorial, and insular
- 3040           area governments; and the Federal Government.
- 3041           • Mechanism(s): Incorporate continuity planning and operations to ensure the continued
- 3042           functionality of the core capabilities essential to accomplishing this task.
- 3043           • How/Example(s): Ensuring plans and operations are resilient by incorporating the essential
- 3044           elements of continuity: identifying essential functions; establishing orders of succession and
- 3045           delegations of authority; having continuity facilities, communications, essential records, and
- 3046           human resources programs; testing, training, and exercising capabilities; and planning for
- 3047           devolution and reconstitution.
- 3048    ▪ **Look for ways to include new stakeholders in mitigation capabilities.** As risk management
- 3049           concepts evolve and change, Federal delivery of mitigation needs to identify and include atypical
- 3050           partners to maximize the impact of mitigation. This includes partners in emerging scientific fields
- 3051           such as social vulnerability and providing decision support tools to operational partners who have
- 3052           not historically made use of mitigation tools.
- 3053           • Stakeholder(s): Individuals; academia; private sector; NGOs; local, state, tribal, territorial,
- 3054           and insular area governments; and Federal Government.
- 3055           • Mechanism(s): Through coordination and collaboration, the government works to develop a
- 3056           shared understanding of community needs and capabilities, empower and integrate resources
- 3057           from across the community, create stronger social infrastructure, establish relationships that
- 3058           facilitate more effective mitigation activities, increase individual and collective preparedness,
- 3059           and create greater resilience among stakeholders.
- How/Example(s): By making actual and potential damages more tangible and
- understandable, mitigation tools and data, such as Hazus and USGS Streamgage data, help
- motivate decision makers, private-sector parties, and other stakeholders to come together
- during response, in developing public information campaigns, and in planning and preparing
- for disasters.

## 3060 Appendix C: Conceptual Model for Risk Analysis

### 3061 *Introduction*

3062 The National Preparedness Goal describes the Nation’s approach to preparing for the threats and  
3063 hazards that pose the greatest risk to the security of the United States. While risk analysis supports all  
3064 mission areas, and identifying and assessing risk is a component of the National Preparedness  
3065 System, a thorough awareness and understanding of risk is essential for the Mitigation mission area,  
3066 with its basis being a risk-conscious culture. Understanding risks from threats or hazards requires the  
3067 tools and skills to identify threats and hazards and assess risks and resilience. The core capabilities to  
3068 conduct this risk analysis, THID and RDRA, are found in the Mitigation mission area. Risk analysis,  
3069 for the purposes of this report, encompasses the data, tools, skills, and abilities needed to deliver  
3070 these capabilities. THID is the capability to analyze and understand the threat’s or hazard’s  
3071 probability (likelihood of occurring) and potential magnitude. RDRA is the capability to conduct risk  
3072 and resilience assessments to quantify the consequences of threats and hazards based on the results  
3073 from a threat or hazard identification analysis. Both of these capabilities are necessary to be able to  
3074 perform risk and resilience assessments. Threats and hazard identifications analysis results are the  
3075 foundation for a risk and/or disaster resilience assessment.

3076 Working together across mission areas to share data and assessments can create a common  
3077 understanding of vulnerable community populations, assets, and systems from threats and hazards, as  
3078 well as the level of preparedness capabilities.

3079 The broad components of the THID and RDRA capabilities are Data, Analysis, and Education and  
3080 Training. Building and maintaining these two capabilities requires the ability to produce and  
3081 safeguard data, conduct analyses, and educate and train.

- 3082 ▪ **Data**—The data that are needed to identify and quantify the magnitude and probabilities of  
3083 threats and hazards, as well as to assess risk and resilience, can vary greatly in terms of  
3084 characteristics like accuracy, precision, completeness, uncertainty, and currency.
- 3085 ▪ **Analysis**—The analyses that are performed are not only dependent upon the accuracy, precision,  
3086 and completeness of the data and inputs but also on the analytical complexity, number of  
3087 variables, and interrelationship between variables and expert input.
- 3088 ▪ **Education and Training**—The expertise and skills of the individuals performing threats and  
3089 hazards identification and risk and resilience assessments drive the results and reliability of the  
3090 analysis. Their expertise varies greatly based upon on their training, experience, and aptitude for  
3091 interrelating the components.

### 3092 *Risk Analysis from the User Perspective*

3093 Federal agencies and departments that play a role in threat and hazard identification can work with  
3094 partners from the whole community to develop methodologies to help understand the level of threat  
3095 and hazard identification analysis that needs to be performed based on the purpose or use and the  
3096 level of risk. The level of analysis needed is based on the purpose or use for the results and the level  
3097 of risk associated with the threat and hazard. Thus, the scalability of these capabilities ranges from  
3098 very low complexity to very high. Figure C-1 provides a range of potential uses for THID and RDRA  
3099 products and analysis. The users may range from those that are assessing their risks to identify their  
3100 eligibility and best application for grants to those that need complex and specific types of data and  
3101 models to design critical infrastructure.



3102 **Figure C-1: Potential Uses of Risk Analysis**

3103 The reliability of the results depends on many factors. Factors like accuracy, precision, uncertainty,  
 3104 validity, currency, complexity, and level of expertise can all play in to how reliable the results are for  
 3105 a given purpose or use. Depending on the type of analysis and/or assessment that is performed, these  
 3106 factors describe the characteristics of the results based on either or both quantitative or qualitative  
 3107 tools, methodologies, data, inputs, etc.

### 3108 *Introducing a Conceptual Maturity Model*

3109 Risk analysis can be conducted at varying levels of complexity depending on the needs and  
 3110 perspective of the user. The ability to understand the need for a full range of purposes and risk levels  
 3111 is necessary to help standardize the threats and hazards identification and risk and disaster resilience  
 3112 assessment inputs, analyses, and results for the whole community. This standardization would  
 3113 support both the THID and the RDRA capabilities and how they support or interrelate with  
 3114 capabilities across all five mission areas.

3115 Starting with a basic analysis to help communities understand risk, guidance can be found in  
 3116 FEMA's CPG 201: THIRA Guide. This guidance is adaptable to the needs and resources of local,  
 3117 state, tribal, territorial, and insular area homeland security and emergency management partners. It  
 3118 describes the process in five steps:

- 3119 ▪ **Identify the threats and hazards of concern**—What could happen in my community?
- 3120 ▪ **Give the threats and hazards context**—Describe how a threat or hazard could happen in my  
 3121 community, and when and where it could happen.

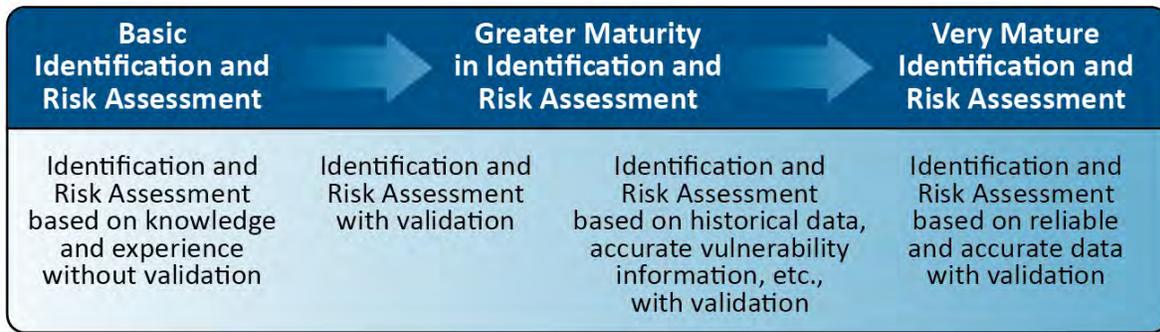
- 3122   ▪ **Examine the core capabilities using the threats and hazards**—How would each threat or  
3123   hazard affect the core capabilities identified in the National Preparedness Goal?
- 3124   ▪ **Set capability targets**—Using the information above, set the level of capability a community  
3125   needs to prevent, protect against, mitigate, respond to, and recover from its risks.
- 3126   ▪ **Apply the results**—Use the capability targets to decide how to use resources from the whole  
3127   community.

3128   Based on the premise above, risk analysis should be viewed through a maturity model under the  
3129   National Preparedness Goal. The use of maturity models began in the software development field,  
3130   and they were introduced by Carnegie Mellon University in the late 1990s.<sup>13</sup> The concept of maturity  
3131   establishes increasing detail or formality of processes over a set of prescribed levels. The premise has  
3132   been adopted in many fields, including project management and government processes. In the  
3133   adaptation of the concept to other uses, typically four to five maturity levels are established that  
3134   range from a basic awareness at the first level to a more detailed and optimized process or analysis to  
3135   comport with certain outcomes at the highest level.

3136   Maturity levels could be adopted to help users understand their risks and provide supportive guidance  
3137   on the level of data and analysis needed to conduct their THID and RDRA. Figure C-2 depicts the  
3138   increasing complexities on the continuum of analysis in the THIRA maturity process. In situations  
3139   where risk and the purpose do not require a high level of maturity in the results, a lower level of risk  
3140   and disaster resilience assessment would be warranted. An example of this situation is a low  
3141   population area where the population is not located near the flooding sources in the area. In instances  
3142   where you have a high risk from a threat or hazard along with a purpose that drives a high level of  
3143   maturity, a more refined analysis would be warranted. Examples of where a high level of maturity of  
3144   results would be needed could be an earthquake risk and disaster resilience assessment for the Los  
3145   Angeles Metro Area, or a hurricane wind and flood risk and disaster resilience assessment for New  
3146   York City. For both of these areas, the consequences of the hazards with certain magnitudes could be  
3147   high and the purpose of the assessment likely to require detailed information to inform preparedness  
3148   decisions.

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<sup>13</sup> Capability Maturity Model Integration (CMMI) Product Team, U.S. Department of Defense. Carnegie Mellon University. CMMI® for Services, Version 1.3. Pittsburgh: Carnegie Mellon, 2010 (<http://www.sei.cmu.edu/reports/10tr034.pdf>).



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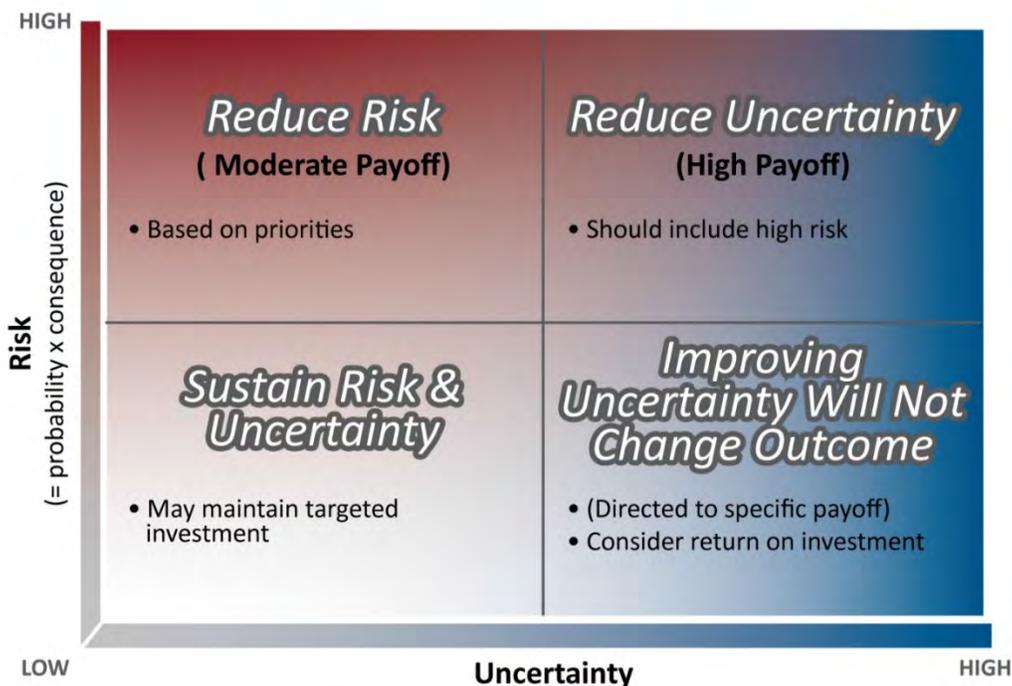
**Figure C-2: THIRA Maturity Process**

3150 The Federal departments and agencies should undertake an effort to work with partners from the  
 3151 whole community to define levels of maturity and create guidelines as to what level of risk and  
 3152 disaster resilience assessment is desired based on factors such as risk and purpose. This would further  
 3153 enhance the RDRA capability by defining the level of risk and disaster resilience assessment that  
 3154 should be performed and justifying higher levels of assessment when necessary.

3155 ***Building and Maintaining Risk Analysis Capabilities***

3156 Building and maintaining the THID and RDRA capabilities through resource allocation and  
 3157 investment across the whole community should be targeted to address the highest risks and to reduce  
 3158 uncertainty.

3159 The risk associated with each threat or hazard and the uncertainty around the threat or hazard  
 3160 identification and assessments should guide the allocation and investment of resources in each of the  
 3161 categories, with the goal of reducing the risk or reducing the uncertainty. Figure C-3 shows a simple  
 3162 four quadrant matrix with Risk and Uncertainty making up the Y and X axes, respectively. This  
 3163 decision support tool helps illustrate when investments should be considered to reduce risk based on  
 3164 high risk, high uncertainty, or both.



3165 **Figure C-3: Resource Investment in Capabilities Based on Risk and Uncertainty<sup>14</sup>**

3166 Investments could be made in the three capability components (data, analysis, and education and  
3167 training) to reduce risk and/or uncertainty. For instance when looking at a specific threat or hazard:

- 3168
- 3169 ▪ **If the risk (or probability and consequence) is high** compared to the other threats and hazards,  
3170 investment would be warranted in all three components. This would enable the risk to be reduced  
3171 by more reliably identifying the threat or hazard and assessing the risk and resilience from that  
3172 threat and hazard.
  - 3173 ▪ **If the uncertainty around the threat or hazard is high** compared to the other threats and  
3174 hazards that exist, investments would be warranted again in all three of the capability  
3175 components to enable the uncertainty of the threat or hazard to be reduced.

3176 This type of resource and investment allocation guidance allows the core capabilities of THID and  
3177 RDRA to be enhanced and maintained, with priority assigned based on the risk and uncertainty of the  
3178 threats and hazards that are being identified and assessed against vulnerabilities.

3179 Some capability components, those not specific to a single threat or hazard, can be applied across  
3180 multiple threats and/or hazards and risk assessments. Investment and allocation in these general  
3181 capabilities, like common risk assessment techniques or datasets to enhance the core capabilities, can  
3182 be justified since the investments would raise the capability levels across multiple threats and/or  
3183 hazards. Developing more accurate population and demographic data is an example of an investment  
3184 that would allow the Data component of RDRA to be enhanced for all threats and hazards where a  
3185 risk and/or resilience assessment would be performed.

<sup>14</sup> Graphics and concepts adapted from Dr. Richard W. Spinrad, "Risk-Informed Investments in Oceanic and Atmospheric Research," The Royal Academy of Engineering, Lloyd's Register Educational Trust, April 2008.

3185 Prioritizing resource investments and allocations is a reality in a limited resource environment. The  
3186 prioritization of resources for these two capabilities is essential to enabling the whole community to  
3187 know what threats and hazards they face and the risk associated with those threats and/or hazards.

3188 Working together across mission areas to share data and assessments can create a common  
3189 understanding of vulnerable community populations, assets, and systems from threats and hazards, as  
3190 well as the level of preparedness capabilities.

### 3191 *Summary*

3192 The THID and RDRA capabilities are similar to one another in terms of being dependent on the same  
3193 components of data, analysis, and education and training. This requires that these components be  
3194 further defined in a way that the whole community can understand when a capability is adequate and  
3195 only needs to be maintained or needs to be built further to provide more reliable results. National  
3196 consistency of these maturity levels will enable the whole community, regardless of the mission  
3197 area(s) to which the capability is being applied, to use the results and products of these capabilities in  
3198 an informed and responsible manner through delivery of the other core capabilities dependent on  
3199 THID and RDRA. Defining what levels of maturity should be met for the data and results of analysis  
3200 for both capabilities will also assist the whole community with understanding what should be  
3201 expected and where deficiencies are present to justify further resource allocations and investments in  
3202 the three components for each of the capabilities to support the five mission areas.