



FEMA

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Operating Guidance No. 1-11

For use by FEMA staff and Flood Hazard Mapping Partners

Title: Risk MAP Guidance for Incorporating Mitigation Planning Technical Assistance and Training into Flood Risk Projects

Effective Date: Immediately

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Background: Risk MAP expands traditional flood mapping to include risk assessment and mitigation planning. Risk MAP is meant to better inform communities as they make decisions related to reducing flood risk by implementing mitigation actions.

Issues: Guidance is needed to more fully implement the Risk MAP program by describing mitigation planning technical assistance and training activities that FEMA's PTS providers and CTPs can perform as part of Risk MAP projects or community engagement.

Actions Taken: This guidance describes the applicable processes and timelines related to mitigation planning technical assistance activities in the context of Risk MAP, identifies and defines a list of activities that meet the intent of this guidance, and suggests a methodology for selecting appropriate activities for a Risk MAP project or community engagement.

It is the Region's responsibility to appropriately resource mitigation planning technical assistance and training activities in concert with all Risk MAP program goals and measures consistent with delivering quality data, raising community awareness, and assisting communities in taking actions to reduce flood risks.

The FEMA Regions, specifically those engaged in scoping work under Risk MAP for PTS providers and CTPs, such as regional engineers and mitigation planners, are to use this guidance. PTS providers or CTPs will deliver technical assistance or training to communities participating in Risk MAP flood risk projects or community engagement.

Supersedes/Amends: This is a new guidance prepared for Risk MAP.

Attachment: Risk MAP Guidance for Incorporating Mitigation Planning Technical Assistance and Training into Flood Risk Projects

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Risk MAP Guidance for Incorporating Mitigation Planning Technical Assistance and Training into Flood Risk Projects

For use by: Risk Analysis Branch Chiefs, Risk Analysis Engineering Staff, and Regional Mitigation Planners

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Table of Contents

- Table of Contents i
- Acronyms and Abbreviations iii
- 1. Introduction.....1
 - 1.1 Risk MAP Overview and Project Timeline.....1
 - 1.2 Mitigation Planning Overview and Timeline3
- 2. Selecting Activities5
 - 2.1 Identifying Budget.....5
 - 2.2 Coordinating Timelines with Appropriate Mitigation Planning Technical Assistance and Training Activities.....5
 - 2.3 Selecting Mitigation Planning Technical Assistance and Training Activities6
 - 2.4 Ordering.....6
- 3. List of Activities8
 - 3.1 Training to Improve a Community’s Capability to Prepare and/or Update Mitigation Plans8
 - 3.2 Assistance Incorporating Flood Risk Datasets and Products to Improve Risk Assessments.....9
 - 3.3 Assistance in Incorporating Flood Risk Datasets and Products to Improve Mitigation Strategies9
 - 3.4 Assistance in Incorporating Flood Risk Datasets and Products with Mitigation Planning Outreach10

Operating guidance documents provide best practices for the Federal Emergency Management Agency's (FEMA's) Risk MAP program. These guidance documents are intended to support current FEMA standards and facilitate effective and efficient implementation of these standards. However, nothing in Operating Guidance is mandatory, other than program standards that are defined elsewhere and reiterated in the operating guidance document. Alternate approaches that comply with program standards that effectively and efficiently support program objectives are also acceptable.

Acronyms and Abbreviations

AoMI	Areas of Mitigation Interest
CFR	Code of Federal Regulations
CTP	Cooperating Technical Partner
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GIS	Geographic Information System
Hazus	Hazards U.S.
HMA	Hazard Mitigation Assistance
HUC	Hydrologic Unit Code
MAP	Mapping, Assessment, and Planning
NFIP	National Flood Insurance Program
PTS	Production and Technical Services
Risk MAP	Risk Mapping, Assessment, and Planning Program
SFHA	Special Flood Hazard Area
SHMO	State Hazard Mitigation Officer
SOW	Statement of Work

1. Introduction

The purpose of this guidance is to more fully implement the Department of Homeland Security, Federal Emergency Management Agency's (FEMA) Risk Mapping, Assessment, and Planning (Risk MAP) program by describing activities that FEMA's Production and Technical Service (PTS) providers and Cooperating Technical Partners (CTPs) can perform as part of Mitigation Planning Technical Assistance for flood risk projects within Risk MAP.

This guidance focuses on using the support and expertise of a PTS provider or CTP to provide technical assistance or deliver training to a local or Tribal jurisdiction. In this document, both local and Tribal jurisdictions are referred to as "communities." This guidance will describe the applicable processes and timelines related to mitigation planning technical assistance activities in the context of Risk MAP, identify and define a list of activities that meet the intent of this guidance, and suggest a methodology for selecting appropriate mitigation planning technical assistance and training activities for a flood risk project.

The technical assistance provided through Risk MAP should focus on building the capability of a community to plan for and reduce risk, and should not necessarily be limited to assistance with preparing or updating a plan. Through the implementation of this guidance, the following activities are to be emphasized:

- Training to improve a community's capability to prepare and/or update mitigation plans.
- Assistance incorporating flood risk datasets and products to improve risk assessments.
- Assistance incorporating flood risk datasets and products to improve mitigation strategies.
- Assistance incorporating flood risk datasets and products with mitigation planning outreach.

1.1 Risk MAP Overview and Project Timeline

Risk MAP is the successor to FEMA's Map Modernization and expands the focus to include risk assessment, mitigation planning, and traditional hazard identification (flood mapping) activities. Risk MAP is meant to better inform communities as they make decisions related to reducing flood risk by implementing mitigation actions. **Mitigation planning technical assistance should be offered as part of every Risk MAP project or community engagement, as it will help communities increase awareness and take action.** It is the Region's responsibility to appropriately resource mitigation planning technical assistance and training activities in concert with all Risk MAP program goals and measures consistent with delivering quality data, raising community awareness, and assisting communities in taking actions to reduce flood risks.

FEMA's vision is that Risk MAP will deliver quality data that increases public awareness of natural hazards and leads to action that reduces risk to life and property. The following goals have been developed for Risk MAP:

- *Goal 1:* Address gaps in flood hazard data to form a solid foundation for flood risk assessments, floodplain management, and actuarial soundness of the National Flood Insurance Program (NFIP).
- *Goal 2:* Ensure that a measurable increase of the public's awareness and understanding of risk management results in a measurable reduction of current and future vulnerability to flooding.
- *Goal 3:* Lead and support States, communities, and Tribes to effectively engage in risk-based mitigation planning resulting in sustainable actions that reduce or eliminate risks to life and property from natural hazards.
- *Goal 4:* Provide an enhanced digital platform that improves management of limited Risk MAP resources, stewards information produced by Risk MAP, and improves communication and sharing of risk data and related products to all levels of government and the public.
- *Goal 5:* Align Risk Analysis programs and develop synergies to enhance decision-making capabilities through effective risk communication and management.

The risk assessment products that will be produced as part of flood risk projects include the following:

- *Flood Risk Database.* The Flood Risk Database will contain raw data and risk assessment datasets, including Hazards U.S. (Hazus) data for a project area, and will be provided to communities and Tribes in the project area. It will include pre-existing data and/or data collected during the Discovery phase.
- *Flood Risk Report.* The Flood Risk Report will summarize key elements of the Flood Risk Database, including land and flood zone area changes since the last Flood Insurance Rate Map (FIRM), loss data by jurisdiction, identification (not visualization) of key flood depth and analysis grids, and Areas of Mitigation Interest (AoMI), where applicable. For watershed studies, it is important to note that loss data will only be published in the report for the portion of the watershed within a community and not as a community-wide total, unless the watershed includes the boundaries of the entire community.
- *Flood Risk Map.* The Flood Risk Map will visually portray flood risk, including areas of high, medium, and low flood risk (as determined by annualized losses at the census block level), Areas of Mitigation Interest, and a visual display of the project study areas. The Flood Risk Map will be delivered as part of the Flood Risk Report.

The *User Guidance for Flood Risk Datasets and Products* will be provided as a companion document to assist with the provision of mitigation planning technical assistance. It is intended to help local officials (e.g., floodplain administrators, planners, emergency managers, and engineers) and others understand how to best utilize these datasets and products to prepare new (or build on existing) hazard mitigation plans, enhance public safety management activities, identify potential mitigation projects and collaborate with other local officials on important planning processes where land suitability is a key consideration (e.g., comprehensive plans or capital improvement plans).

1.2 Mitigation Planning Overview and Timeline

Hazard mitigation is defined as sustained action(s) taken to reduce or eliminate long-term risk to people and their property from hazards. Hazard mitigation plans are required by the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288), as amended by the Disaster Mitigation Act of 2000, as well as the National Flood Insurance Act of 1968, as amended by the Flood Insurance Reform Act of 2004 (Public Law 108-264), in order to receive certain types of non-emergency disaster assistance, such as funding for mitigation projects awarded through FEMA's Hazard Mitigation Assistance (HMA) programs. Hazard mitigation plans form the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage. The planning process is as important as the plan itself. It creates a framework for risk-based decision making to reduce damages from future disasters to lives, property, other natural and cultural resources, and the economy.

For communities, mitigation planning begins with the development and adoption of an initial hazard mitigation plan. This plan must then be updated and re-adopted every five years. Within that five-year timeframe, the plan contains a maintenance section that encourages interim updates for purposes such as monitoring the progress of implementation, reflecting new data, and incorporating disaster-related strategies. This is especially relevant to flood risk projects, as this data can be incorporated into a community mitigation plan at any time, rather than waiting for the five-year update.

Hazard mitigation plans can be developed for single or multiple jurisdictions. Most commonly, these plans will be developed according to the boundaries of political jurisdictions; however, some plans may be tied to watersheds. The primary determinant tends to be local, Tribal, and State land use and emergency management authorities. This means that a flood risk project area may affect several mitigation plans with different expiration dates. This timing, in turn, may dictate the type and level of technical assistance needs.

During initial plan development or for a five-year plan update, FEMA identifies four distinct phases of the planning lifecycle:

- *Planning Process*
- *Risk Assessment*
- *Mitigation Strategy*
- *Plan Maintenance*

More details on each phase are as follows:

- *Planning Process.* This step includes securing resources (financial, staffing, etc.) for the development or five-year plan update, defining the planning area, identifying the preferred planning process, and identifying key individuals or stakeholders to participate in the process. For the initial plan development, significant effort is needed to identify the planning team and resources. For a plan update, members of the original planning team may participate, and their experience from the original planning process may guide the update process. This phase also includes identifying how the public and other interested organizations will be involved in the planning process.
- *Risk Assessment.* This step includes developing or updating the risk assessment section of the plan, which involves developing/updating all natural hazard profiles and assessing vulnerabilities. This includes identifying locations, extent, previous occurrences and the probability of future events, as well as vulnerabilities and impacts. For the initial plan development, significant effort is expended in identifying hazards, developing profiles, and utilizing existing data. For a plan update, the focus is on including hazard events that have occurred in the previous five years and refining the risk assessment based on any other new data.
- *Mitigation Strategy.* This step includes developing or updating the mitigation strategy (identifying, prioritizing, and updating goals, objectives, and mitigation actions) and completing a capability assessment. The mitigation strategy addresses how the mitigation actions will be implemented and administered, including the responsible department, existing and potential resources, and timeframes for completion. For a plan update, the focus is on tracking and reporting the implementation status of existing activities, confirming changes in the status of capability or effectiveness, and developing new mitigation actions.
- *Plan Maintenance.* This step includes developing or updating the method and schedule for monitoring, evaluating, and updating the plan within a five-year timeframe.

2. Selecting Activities

Under Risk MAP, mitigation planning technical assistance is envisioned to be a component of every flood risk project. Mitigation planning technical assistance can also be ordered as a stand-alone effort based on relative risk and stakeholder contributions, at the discretion of the FEMA Regions, even though flood mapping and/or creation of flood risk datasets and products may not be part of the flood risk project for a community. Specific activities will vary and may be limited by the availability of funding, but innovative and new activities may be considered. The Regional Mitigation Planner has the resources and experience to help identify and scope out the different types of technical assistance and training activities. Finally, this selection process should be done in consultation with State NFIP and hazard mitigation staff.

2.1 Identifying Budget

Under Risk MAP, projects are prioritized on a watershed basis by evaluating several factors, including risk, need, and the availability of topographic data. Each watershed throughout the nation is ranked, and FEMA Regional offices use this information, along with many external factors, to select potential projects. These projects are intended to include the full suite of flood risk products and services, including flood mapping, risk assessment, and mitigation planning activities. Regions will order standard flood risk datasets and products for projects and will be given the opportunity to order dataset enhancements using *Guidance and Criteria for Selection of Flood Risk Dataset Enhancements*. It is important for Regions to understand the magnitude of each project's budget to determine the resources available to be dedicated to mitigation planning technical assistance activities.

2.2 Coordinating Timelines with Appropriate Mitigation Planning Technical Assistance and Training Activities

The selection of appropriate activities is guided by the point in the mitigation planning process which communities in the project area have reached, as well as their technical assistance and training needs.

To the greatest extent possible, mitigation planning technical assistance activities should be identified during the Discovery phase of a flood risk project. Additions or changes to activities after this time may be very difficult from a contracting and funding perspective. To identify the most appropriate and effective mitigation planning technical assistance activities for a flood risk project, it is necessary to understand and analyze information collected during the Risk MAP Discovery phase regarding the mitigation planning timelines and unique needs for individual communities involved in the flood risk project.

For example, a hypothetical flood risk project includes jurisdictions in two counties – each county containing roughly 50 percent of the geographical area. If both counties have updated

and adopted their hazard mitigation plans in the past year, those jurisdictions will be focused on implementing their plans and monitoring progress. Therefore, the appropriate technical assistance activities would be those that support plan implementation and monitoring progress. Activities such as a mitigation plan writing workshop or assistance related to understanding risk assessment techniques may not be effective, given where the jurisdictions are in their mitigation planning process. On the other hand, if one of the counties is just beginning to develop a hazard mitigation plan or a plan update, mitigation planning technical assistance and training may focus partially on risk assessments and the development of appropriate mitigation actions to reduce risk.

2.3 Selecting Mitigation Planning Technical Assistance and Training Activities

After the budget and timelines are identified, the most appropriate mitigation planning technical assistance activities are selected. Section 3 of this guidance identifies several activities that can be performed by the FEMA PTS providers under Risk MAP. However, innovative or new activities may also be considered. General guidelines for valid mitigation planning technical assistance activities include the following:

1. They tie directly to and support Risk MAP.
2. They do not duplicate Federal assistance that communities have already been awarded, such as a FEMA HMA planning grant.
3. They are implementable on a project level and do not develop/establish a national guidance/tool, etc.
4. They do not involve writing the plan for the community.

Included in this process is consultation with the State NFIP Coordinators and State Hazard Mitigation Officers (SHMOs), who work closely with communities and may have an excellent sense of community needs and statewide priorities. For example, state hazard mitigation program staff track local hazard mitigation plan status and updates. Similarly, they have a broader perspective based on their awareness of active mitigation projects throughout the State. State floodplain management offices understand flood mapping needs and issues within that State and understand State priorities. An active role by the State will be beneficial in obtaining community buy-in.

2.4 Ordering

Early in the process, the Regional Mitigation Planner and the Regional engineering staff should work together to identify and assess the types of technical assistance and training activities. Once desired activities are identified, the Regional Mitigation Planner works with the Regional staff members responsible for procuring production activities to order the selected

activities. The Planner works with the community, the State (especially the NFIP State Coordinator and SHMO), and the Regional engineer during the Discovery process, where potential mitigation planning technical assistance projects are discussed with the Regional engineer during dialogues on study projects. Also, to ensure alignment of proposed efforts, the project charter must be developed in conjunction with the scope of work and ordering process. To appropriately order technical assistance or training, the following activities should be completed:

1. Define the scope of the technical assistance (including communities and/or planning teams involved, number of potential meetings, etc.).
2. Identify deliverables.
3. Develop a schedule.
4. Develop a cost estimate.

The Regional Mitigation Planner works with the appropriate Regional point of contact to include the scope and independent government cost estimate in the procurement documents and Requests for Proposals for the Regional production work. During the Planning and Budgeting phase, the Regional Mitigation Planner should work with the Regional engineer to select projects for the coming year and to develop a high-level cost estimate of the technical assistance that might be needed for those projects, so that projects can be properly sequenced.

For CTPs, scope and budget information must be included in the Mapping Activity Statement, and the procurement process that is normally followed for the individual CTP should be utilized.

3. List of Activities

Mitigation planning technical assistance activities will help communities to effectively execute risk-based mitigation planning, resulting in sustainable actions with a measurable reduction in the loss of life, infrastructure, and property damage, and the associated economic impacts. Communities with effective risk-based mitigation plans can fund their mitigation strategies through an array of Federal programs, including FEMA's HMA programs. The technical assistance provided through Risk MAP should focus on building the capability of a community to plan for and reduce risk, and should not necessarily be limited to assistance with preparing or updating a plan. Training activities are focused on building up a community's capabilities.

The following list of sample activities meets the guidelines in Section 2.3 for FEMA PTS providers and CTPs to perform mitigation planning technical assistance and training (described in more detail in Sections 3.1 through 3.4). Any new or innovative actions in support of these activities may also be considered.

- Training to improve a community's capability to prepare and/or update mitigation plans
- Assistance incorporating flood risk datasets and products to improve risk assessments.
- Assistance incorporating flood risk datasets and products to improve mitigation strategies.
- Assistance incorporating flood risk datasets and products with mitigation planning outreach.

3.1 Training to Improve a Community's Capability to Prepare and/or Update Mitigation Plans

Description. These activities include training related to preparing and/or updating mitigation plans. The outcome is to improve a community's capability for mitigation planning in order to implement hazard mitigation strategies and actions to reduce risk.

Examples of training include, but are not limited to, the following:

- *G318: Preparing and Reviewing Local Plans*, Tribal Mitigation Planning Workshop, or similar modules
- Use of flood risk datasets and products, including information from the *User Guidance for Flood Risk Datasets and Products* document
- Risk assessment methodologies and the incorporation of locally available data
- Best practices in hazard analysis, risk reduction, and resilience

Training can be provided at any time during the flood risk project, and it may be desirable to include a series of training activities over the course of the project. G318 and Tribal Mitigation

Planning training is most helpful prior to developing or updating a mitigation plan, while training on how to use flood risk datasets and products can be beneficial at any time, especially after those datasets and products have been provided to the community.

3.2 Assistance Incorporating Flood Risk Datasets and Products to Improve Risk Assessments

Description. Technical assistance to interpret technical data (i.e., explaining the Flood Risk Report, Flood Risk Map, or Flood Risk Database, or presenting other Risk MAP products and outcomes) can be provided to assist communities in improving their risk assessments.

Examples of technical assistance may include, but are not limited to, the following:

- Assist the community in using the risk assessment data provided as part of the flood risk project as well as understanding any gaps with using the data to meet requirements under mitigation planning regulations (i.e., numbers of vulnerable structures and potential losses for buildings, critical facilities, and infrastructure).
- Assist the community in extracting, manipulating, and interpreting grids provided as part of the Flood Risk Database to meet the risk assessment requirements of the mitigation planning regulations.
- Assist the community with conducting more detailed risk assessments, such as conducting scenario-based Hazus analyses related to a historic flood event or a future development scenario, or the incorporation of community GIS data.

Technical assistance activities described in this section can be provided at any time during the flood risk project but is most effective during the plan update process, prior to the development of an updated or new risk assessment. The primary objective of this technical assistance is to build local capability.

Flood risk datasets and products can help communities meet the mitigation planning regulations for developing or updating their risk assessments. For example, flood depth grids generated as part of the Flood Risk Database include the location, extent, and probability of future occurrences. However, these datasets need to be extracted and manipulated for meaningful analysis and use in a community hazard mitigation plan. Providing technical assistance in this regard means helping a community to extract and manipulate the data.

3.3 Assistance in Incorporating Flood Risk Datasets and Products to Improve Mitigation Strategies

Description. Technical assistance to improve mitigation strategies may include assistance with the new tools, techniques, data, and products that are being provided to communities as part of new flood risk projects. These elements can be incorporated into the update of a local or Tribal

mitigation plan as part of an updated mitigation strategy, leading to more effective mitigation actions.

Examples of technical assistance include, but are not limited to, the following:

- Assistance in understanding the Risk MAP Areas of Mitigation Interest dataset. By better analyzing and understanding such areas, communities can develop targeted mitigation strategies and actions to reduce risk and damage. For example, the identification of Areas of Mitigation Interest may not include the in-depth analysis necessary to formulate an informed mitigation strategy or action. Technical assistance in this regard would help communities to better understand the Areas of Mitigation Interest.
- Refining and prioritizing existing mitigation actions based on an understanding of new flood risk datasets and products. The *User Guidance for Flood Risk Datasets and Products* document and other Risk MAP guidance provide good basic information on the datasets themselves and identify ways to use them. This type of technical assistance would help communities use the flood risk datasets and products to inform their mitigation strategies.

Technical assistance activities described in this section can be provided at any time during the flood risk project, but it is most effective during an active plan update process, prior to the development of an updated or new mitigation strategy.

3.4 Assistance in Incorporating Flood Risk Datasets and Products with Mitigation Planning Outreach

Description. Extensive outreach to stakeholders and the public is required as part of mitigation plan development and updates. Such efforts can lead to a more informed community, better input into the draft plan, and greater acceptance and enthusiasm for the mitigation strategy.

An example of technical assistance may include, but is not limited to, assistance developing materials to incorporate risk awareness and reduction into existing community planning or implementation mechanisms.

Technical assistance activities described in this section can be provided at any time during the flood risk project but may not duplicate other assistance (such assistance provided during Risk MAP meetings or provided as part of a FEMA HMA planning grant).