Chapter 5: Mitigation Strategy

Requirement §201.6(c)(3)(i): [The hazard mitigation strategy shall include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

5.1 Updates to the 2015 Plan Mitigation Goals and Actions

This section of the plan focuses on the mitigation strategies developed by each participating jurisdiction to reduce or avoid long-term vulnerabilities to the 8 identified hazards. For continuing participants from the 2015 Plan, each of the jurisdictions’ mitigation goals and actions identified in the 2015 Plan were reviewed for relevance and updated with current status. Continuing and new participants are noted within the mitigation strategies section (Attachment 2).

These mitigation actions were activities that stakeholders in the hazard mitigation process, especially local governments, could implement over a five-year period. Many of the actions were intended to be implemented in a relatively short period of time, generally less than two years, using existing organizations and resources in each county or across the region. Other actions required a longer implementation timeframe, perhaps two to five years or longer, as well as additional resources, particularly funding.

For the 2015 Plan, an online database was created to allow jurisdictions to evaluate hazards and corresponding mitigation goals and actions for their community. Jurisdictions were instructed to complete information on goals and actions for hazards that were identified threats to their community. For each mitigation action, jurisdictions were asked to designate a project’s status as completed, deleted, deferred or ongoing. If the action was completed, jurisdictions were asked to provide a date of completion. For those deleted or deferred, jurisdictions were asked to provide a narrative explanation. If a project was marked as ongoing, further information was requested to document the current status and expected future effort.

In 2015, the planning team determined that “priority” should be ranked on a qualitative scale of high, medium and low and jurisdictions were instructed to consider a generic cost/benefit analysis when ranking mitigation actions. However, the 2020 planning team decided the qualitative ranking scale was not helpful to jurisdictions when making mitigation decisions. The planning team decided to show the individual values for magnitude, impact, and probability of occurrence instead of assigning a qualitative ranking.

High-priority actions were those for which resources, manpower, political capital, etc., are readily available to accomplish the actions and should generally be accomplished within two years. Medium-priority actions were those that are desirable, but due to various planning limitations, weren’t expected to be implemented for two to five years. Low-priority actions were those that weren’t scheduled to be implemented in the near future (greater than five years). Actions deleted or deferred were either no longer applicable or regarded as “failing” the cost/benefit analysis.
5.1.1. Changes to 2015 Mitigation Goals and Actions Database for 2020 Plan Update

For this 2020 Plan update, continuing participants used the database created in 2015 to update their goals and actions. The database was modified slightly to collect additional information. Two of the added fields were optional and one was required. The new fields were:

- **Type of Mitigation Activity** – *optional* field to describe if the action related to Natural Systems protection, Structure and Infrastructure Projects, Local Plans and Regulations or Education and Awareness Programs.
- **Cost / Benefit Review** – *required* field to discuss a benefit-cost review of each action as part of the evaluation and prioritization process to determine if costs are reasonable compared to probable benefits. Jurisdictions could use cost estimates based on experience and judgment and discuss benefits as losses avoided (such as the number and value of structures and infrastructure protected by the action and the population protected from injury and loss of life). Qualitative benefits, such as quality of life and natural and beneficial functions of ecosystems could also be used for the review.
- **Target Capacity** – *optional* field to project the extent of population or infrastructure the action is intended to serve/protect/mitigate.

5.1.1a. Prioritization of Mitigation Actions

The chronological ranking method of prioritizing mitigation goals and actions (based on implementation timeframes) used for the 2015 Plan was again used for this update and defined as:

- **Low-Priority Actions** – those not scheduled to be implemented in the near future (greater than five years).
- **Medium-Priority Actions** – those that are desirable but due to various planning limitations, are not expected to be implemented for two to five years.
- **High-Priority Actions**: – those for which resources, manpower, political, capital etc. are readily available to accomplish the action within the next one to two years.

Jurisdictions considered the results of the hazard profiles and their current capabilities to protect and mitigate natural hazards. They also looked at actions taken previously, 2015 goals and strategies, and projects that could be supported with FEMA pre-disaster or hazard mitigation grants. Local jurisdictions also considered the increase in risks due to changing climate conditions.

5.1.1b Cost Estimates for Mitigation Action

In 2015, to estimate the cost of mitigation actions a cost estimation process was used where specific costs weren’t known. This same process was used for the 2020 plan. Jurisdictions were encouraged to use a cost estimation range qualifier in accordance with the scale below:

- **Low** – the action is estimated to cost between $0 and $10,000
- **Medium** – the action is estimated to cost between $10,001 and $100,000
- **High** – the action is estimated to cost more than $100,000

Additionally, jurisdictions were asked to consider whether the costs were one-time or recurring.
5.1.1c Status of Jurisdictional 2015 Goals and Actions

As noted above, continuing jurisdictions were required to update the status of their goals and actions and make changes as appropriate. Attachment 2 is the consolidated listing of all participating jurisdictions’ mitigation goals and actions and reflects the most current status of their goals and actions. Where a jurisdiction marked an action as “completed” or “deleted” from the 2015 Plan, these actions have been removed from the listing. To avoid confusion and for ease of reference to the 2015 Plan and Attachment 1, remaining goals and actions were not re-numbered or re-lettered.

5.1.2 Updates to School District/College/University 2015 Mitigation Goals and Actions

Those school districts and colleges and universities that participated in the 2015 plan were asked to review their 2015 goals and strategies similarly to cities and counties. For school districts that did not participate in 2015, they were asked to identify goals and strategies for the 2020 plan. These have been consolidated in Attachment 2 in a table format and include the same information elements discussed above that cities and counties were required to complete.

5.2 Mitigation Goals and Actions for 2020 Plan

Jurisdictions that participated in the 2015 plan were invited to participate in the 2020 plan. In addition, all cities, school districts and public colleges and universities that did not participate in 2015 were invited to be a part of the plan. Continuing participants were encouraged to develop new goals and actions using the online tool (or an excel spreadsheet). Some jurisdictions chose to add new goals and actions, others elected to continue focusing on previously identified strategies. Both the old (2015) and new (2020) mitigation goals and actions were consolidated into Attachment 2. The column labeled “Plan year” indicates if the goal or action is from the 2015 plan or newly added as part of the 2020 update. New (2020) goals continue to mirror the numbered list from the 2010 goals and actions (see Attachment 1), but new actions are unnumbered, both to avoid confusion and denote them as new actions.

5.3 Implementation of the National Flood Insurance Program (NFIP)

The hazard mitigation strategy must also address the jurisdiction’s participation in the NFIP, and continued compliance with NFIP requirement, as appropriate.

In accordance with regulatory requirements, all hazard mitigation plans must describe each jurisdiction’s participation in the NFIP by identifying, analyzing and prioritizing actions related to continued compliance with the NFIP. These three basic components include:

1) Adoption and enforcement of floodplain management requirements, including regulating new construction in Special Flood Hazard Areas (SFHAs);
2) Floodplain identification and mapping, including any local requests for map updates; or
3) Description of community assistance and monitoring activities

Three sections of this 2020 updated plan were developed to show compliance with the above requirements: 1) and 3) The Local Capabilities Section (Section 3, table 3.7) shows which jurisdictions have floodplain management plans or ordinances in effect and describe community assistance and monitoring activities where applicable. 2) Floodplains were identified and mapped for all participating jurisdictions as part of the Flood risk assessment and are available as part of the data layers for the online planning tool (Section 4.5.4).
Additionally, several goals and actions were identified in the 2010 and 2015 Plans that jurisdictions could adopt in order to meet the deliverables of NFIP compliance and are listed below. These have been grouped below according to NFIP component and are notated by double asterisks (***) within each jurisdiction’s mitigation strategy (Attachment 2). New strategies developed for the 2020 Plan which fall into these categories are likewise identified by a double asterisk:

1) Floodplain management

**Discourage new development in floodplains and flood-prone areas.**

a.) Adopt ordinances prohibiting residential and commercial development in flood plains or flood-prone areas.

b.) Consider using the 500-year floodplain rather than the 100-year floodplain or consider adopting a stream setback ordinance.

c.) Develop or amend comprehensive and/or land use plans to specifically address development in flood-prone areas and recommend strategies for decreasing the jurisdiction’s vulnerability to flooding.

d.) Consider fees on new residential, commercial and infrastructure development in floodplains or flood-prone areas to finance flood mitigation, preparedness, response and recovery actions.

**Participate in, and ensure compliance with, flood mitigation and floodplain management programs.**

a.) Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS).

b.) Obtain the latest copies of flood insurance rate maps (FIRMs), floodplain maps and similar documents. Evaluate current and planned development in areas where risks from flooding have increased due to changes in the FIRMs.

c.) Designate a Floodplain Manager and support training to become certified.

2) Floodplain identification and mapping

**Improve flood hazard assessments and flood mapping.**

a.) Obtain parcel data (assessed valuation and other information) for flood boundary areas and enhance vulnerability assessments for these areas.

b.) Partner with FEMA in the Cooperating Technical Partners (CTP) Program to increase local involvement in, and ownership of, the flood mapping process.

c.) Purchase HAZUS-Flood software from FEMA, possibly in conjunction with other local or regional stakeholders.
d.) Coordinate the collection of demographic, economic, watershed, land use and other data required by the HAZUS-Flood software program and/or GIS systems.

e.) Conduct an in-depth flood risk analysis utilizing HAZUS data and create detailed maps based on GIS technology to identify areas at risk from flooding.

3) Community assistance and monitoring activities

Examine repetitive flood loss properties in each county and determine feasible and practical mitigation options.

a.) Work with owners of repetitive flood loss properties to identify feasible mitigation strategies and potential opportunities; determine property owners’ interest in specific mitigation options.

b.) Identify potential funding opportunities to implement mitigation options for repetitive flood loss properties.

c.) As funding allows, repetitive flood loss properties and structures will be targeted for buyout.

d.) With stakeholders, explore incentive options to encourage property owners to take action to prevent or reduce future flood losses

Reduce flood-related damage to public, residential and commercial property in flood-prone areas through structural and nonstructural retrofits or removal of property.

a.) Identify incentives to offer property owners to remove or retrofit structures in flood-prone areas.

The Metropolitan Emergency Managers Committee has committed to review the Hazard Mitigation Plan annually and assist local jurisdictions with updated information and guidance to maintain the plan and to consider steps to integrate the HMP into other plans and policies. The Kansas City region is preparing a climate action plan (KC Climate Coalition with support from MARC) and the results of that analysis will be used to engage local officials to take more proactive steps to mitigate risks from natural hazards.

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1 FEMA Local Mitigation Planning Handbook, 6-B, March 2013