SECTION 6. MITIGATION STRATEGY

This section presents the process by which Mercer County will reduce or eliminate potential losses from the hazards identified in Section 4.1 (Identification of Hazards) of this HMP. The mitigation strategy focuses on existing and potential future mitigation actions to alleviate the effects of hazards on Mercer County's population, economy, environment, and general building stock.

The Planning Partnership reviewed the results of the risk assessment and capability assessment to identify and develop mitigation actions. This section includes the following. Individual actions are listed within Section 9 (Jurisdictional Annexes).

1. Background and Past Mitigation Accomplishments
2. General Planning Approach
3. Review and Update of Mission Statement, Mitigation Goals and Objectives
4. Mitigation Strategy Development

Hazard mitigation reduces the potential impacts of, and costs associated with, emergency and disaster-related events. Mitigation actions address a range of impacts, including impacts on the population, property, the economy, and the environment.

Mitigation actions can include activities such as: revisions to land-use planning, training and education, and structural and nonstructural safety measures.

2021 HMP CHANGES

- The goals and objectives were updated to align with County and local priorities.
- The capability assessment was moved to Section 5.
- A Strengths, Weaknesses, Obstacles and Opportunities exercise was conducted for the high-ranked hazards to inform the updated mitigation strategy.
- A mitigation toolbox was compiled and distributed to assist with the mitigation strategy update.
- An emphasis to identify problem areas and draft problem statements was integrated into the planning process so that an evaluation of mitigation alternatives could be conducted to reduce/eliminate the identified risk or capability/capacity gap.

6.1 BACKGROUND AND PAST MITIGATION ACCOMPLISHMENTS

In accordance with the requirements of the DMA 2000, a discussion regarding past mitigation activities and an overview of past efforts is provided as a foundation for understanding the mitigation goals, objectives, and activities outlined in this plan update. Mercer County, through previous and ongoing hazard mitigation activities, has demonstrated that it is proactive in protecting its physical assets and citizens against losses from natural hazards. Examples of previous and ongoing Mercer actions and projects include the following. Refer to Section 9.2 through 9.13 for mitigation accomplishments by each municipality.

- The County continues to participate and collaborate with the Delaware Valley Regional Planning Commission (DVRPC) as it works to develop municipal information tools regarding hazard, risk, mitigation and send out to all municipalities in the nine-county region.
- The County continues to review and enhance existing and effective technology to deploy real-time public notification to ensure effective disaster communication within the County's integration system.

6.2 GENERAL MITIGATION PLANNING APPROACH

The overall approach used to update the County and local hazard mitigation strategies are based on FEMA and State of New Jersey regulations and guidance regarding local mitigation plan development, including the following:

- DMA 2000 regulations, specifically 44 CFR 201.6 (local mitigation planning).
- FEMA *Local Mitigation Planning Handbook*, March 2013.
- FEMA *Local Mitigation Plan Review Guide*, October 1, 2011.
- FEMA *Integrating Hazard Mitigation into Local Planning*, March 1, 2013.
- FEMA *Plan Integration: Linking Local Planning Efforts*, July 2015.
- FEMA *Mitigation Planning How-To Guide #3, Identifying Mitigation Actions and Implementing Strategies* (FEMA 386-3), February 2013.
- FEMA *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards*, January 2013.

The mitigation strategy update approach includes the following steps that are further detailed in later subsections:

- Section 6.3 – Strengths, Weaknesses, Obstacles and Opportunities (SWOO) exercise
- Section 6.4 – Stakeholder Surveys
- Section 6.5 – Review and update the mitigation goals and objectives
- Section 6.6 – Prepare an implementation strategy, including:
    - Identification of progress on previous County and local mitigation strategies
    - Development of updated County and local mitigation strategies, and
    - Prioritization projects and initiatives in the updated mitigation strategy

6.3 STRENGTHS, WEAKNESSES, OBSTACLES AND OPPORTUNITIES EXERCISE

The Steering Committee and Planning Partnership participated in a Strengths, Weaknesses, Obstacles and Opportunities (SWOO) exercise focusing on the high-ranked countywide hazards to update the strengths, weaknesses, obstacles and opportunities last conducted in 2016. The discussion of each hazard began with identifying County, local jurisdiction and stakeholder strengths to mitigate the risk and potential future impacts of these hazards. Next, the weaknesses, challenges, and obstacles the planning area faces to reduce each hazard's risk were identified. To conclude the discussion of each high-ranked hazard, the Steering Committee and Planning Partnership members were asked to identify potential opportunities for enhanced mitigation.

SWOO results were recorded to assist with the problem statement development to update to the mitigation strategy. Refer to Appendix B (Participation Documentation) which provides the information captured for each hazard during the SWOO exercise.

6.4 STAKEHOLDER SURVEYS

As discussed in Section 2 (Planning Process), stakeholder surveys were developed and distributed to solicit input regarding vulnerabilities, capabilities, and mitigation projects. The County distributed directly via email to identified points of contact in the following sectors. In addition, all Planning Partners were asked to distribute broadly within their jurisdictions.

- Academia
- Emergency services
- Transportation/Department of Public Works

- Utilities
- Hospital and health care
- Business/commerce
- Social services
- General - for planning agencies and other stakeholders that do not fit within one of the above categories

Information gathered from these surveys was shared with all plan participants and used to inform the updated mitigation strategy development and finalization of the annexes (Section 9). Refer to Appendix D (Public and Stakeholder Outreach) for a copy of the survey results.

6.5 REVIEW AND UPDATE OF MITIGATION GOALS AND OBJECTIVES

This section documents the County's efforts to develop hazard mitigation goals and objectives that are established to reduce or avoid long-term vulnerabilities to the identified hazards.

6.5.1 GOALS AND OBJECTIVES

According to CFR 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." The mitigation goals were developed based on the risk assessment results, discussions, research and review of updated planning documents, and input from the Steering and Planning Committees, existing authorities, polices, programs, resources, stakeholders, and the public.

The Steering Committee reviewed the 2016 HMP goals and objectives at the March 2021 Steering Committee kickoff meeting. The updated goals and objectives were then presented to the Planning Partnership at the April 2021 municipal kickoff meeting. The goals and objectives were updated in consideration of the hazard events and losses since the 2016 plan, the goals and objectives established in the updated State HMP, county and local risk management plans/priorities, as well as direct input from the Steering Committee (representing the County and participating jurisdictions) recognizing the need to move forward to best manage their hazard risk.

FEMA defines ***Goals*** as general guidelines that explain what should be achieved. Goals are usually broad, long-term, policy statements, and represent a global vision.

FEMA defines ***Objectives*** as strategies or implementation steps to attain mitigation goals. Unlike goals, objectives are specific and measurable, where feasible.

FEMA defines ***Mitigation Actions*** as specific actions that help to achieve the mitigation goals and objectives.

For the purposes of this plan, goals and objectives are defined as follows:

Goals are general guidelines that explain what is to be achieved. They are broad, long-term, policy-type statements that represent global visions. Goals help define the benefits that the plan is trying to achieve. The success of the plan, once implemented, should be measured by the degree to which its goals have been met (that is, by the actual benefits in terms of hazard mitigation).

Objectives are short-term aims, which when combined form a strategy or course of action to meet a goal. Unlike goals, objectives are specific and measurable.

The goals and objectives update provides clear guidelines for how the County and all jurisdictions can move forward to best manage their hazard risk. Amendments include additions and edits to goals and objectives to express the plan participants' interests in integrating this plan with other planning mechanisms/programs and to support mitigation through the protection and preservation of natural systems, incorporate resilience of lifelines, and integrate green infrastructure.

As a result of this review process, the goals and objectives for the 2021 update were amended as presented in Table 6-1. *Italicized* text indicates the updates made to the 2016 mitigation goals and objectives. A new goal (Goal #7) and several new objectives were added. Although an objective is listed with each goal, the objectives were developed to meet multiple goals.

Table 6-1. Mercer County Mitigation Goals and Objectives

Goal	Objective Statement
Goal 1: **Protect life**	1.1: Identify the need for, and acquire, any special emergency services, training, and equipment to enhance response and recovery capabilities for specific hazards.
	1.2: Maintain and enhance local regulatory standards with new hazard and risk information including full and effective building code enforcement, floodplain management, land use planning mechanisms and other natural hazard vulnerability-reducing regulations.
	1.3: Incorporate hazard mitigation into community planning mechanisms and projects.
	1.4: Identify, reduce risk exposure, and enhance community resiliency of socially vulnerable populations.
	1.5: Identify and acquire any training or equipment needed to enhance emergency services response and recovery capabilities for specific hazards.
Goal 2: **Protect *the built and natural environment***	2.1: Pursue cost-effective mitigation actions to reduce the impacts of hazards on people, property, and the economy.
	2.2: Protect, preserve, and enhance natural resources and ecologically sensitive land, such as wetlands, wildlife habitat, waterways, slopes, mature woodlands, large stands of forests and ridge lines.
	2.3: Facilitate the development and timely submittal of project applications meeting state and federal guidelines for funding to reduce the number of repetitive and severe repetitive loss properties and hardening/retrofitting infrastructure and critical facilities *and lifelines.*
Goal 3: **Increase preparedness and awareness**	3.1: Increase awareness of natural hazard risks and understanding of the advantages of mitigation to the general public, business and community members, and local government officials.
	3.2: Increase local government official awareness regarding funding criteria and opportunities for mitigation.
	3.3: Provide government officials and the public with educational opportunities and information regarding best practices for preparedness, hazard mitigation planning, project identification, and implementation.
Goal 4: **Develop an understanding *of the dynamic nature of* risks from hazards *and the need for keeping data current, accurate, and accessible***	4.1: *Improve collection, sharing, and access to best available data to support timely mitigation planning.*
	4.2: Acquire and maintain detailed data regarding critical facilities and lifelines such that these sites can be prioritized and risk-assessed for possible mitigation actions.
	4.3: Continue support of hazard mitigation planning, project identification, and implementation at the municipal and county level.
	4.4: Strengthen understanding of climate change and of the means of adapting to it and mitigating the hazards it may present.
Goal 5: **Enhance mitigation capabilities to reduce hazard vulnerabilities**	5.1: Support increased participation in the National Flood Insurance Program and Community Rating System.
	5.2: Support increased integration of municipal/county hazard mitigation planning and floodplain management with effective municipal zoning regulation, and effective municipal/county subdivision regulation, and comprehensive planning.
	5.3: Provide user-friendly hazard-data accessibility for mitigation planning, other planning efforts and for private citizens.
	5.4: Enhance mitigation capabilities among all stakeholders and levels of governance.
Goal 6: Support continuity of operations pre-, during, and post- hazard events	6.1: Ensure continuity of operations *and strengthening of infrastructure in government, commerce, non-profit, and education sectors.*
	6.2: Support and encourage the implementation of back-up and alternative energy sources

Goal	Objective Statement
	6.3: Support and encourage the implementation of local distributed power micro-grids, with an increased input from renewable sources OR Support and encourage the implementation of alternative energy sources
	6.4: Develop the technical capacity to foster the formation and management of volunteer brigades.
	6.5: Implement mitigation measures that promote the reliability of lifeline systems.
Goal 7: *Address Long-Term Vulnerabilities from High Hazard Dams*	*7.1: Ensure dams are regularly assessed and maintained*
	7.2: Ensure Emergency Action Plans are developed, updated for all high hazard and significant hazard dams, and filed with the appropriate state, county, and local authorities.
	7.3: Support the repair/replacement of high hazard dams that fail to meet minimum dam safety standards and pose a risk to the public.

6.6 MITIGATION STRATEGY DEVELOPMENT AND UPDATE

6.6.1 REVIEW OF 2016 HMP MITIGATION ACTION PLAN

To evaluate progress on local mitigation actions, the planning consultant met with each participant to discuss the status of the mitigation actions identified in the 2016 plan. For each action, jurisdictions were asked to provide the status of each action (*No Progress, In Progress, Ongoing Capability, Discontinue, or Completed*) and provide review comments on each. Jurisdictions were requested to quantify the extent of progress and provide reasons for the level of progress or why actions were being discontinued. Each jurisdictional annex in Section 9 (Jurisdictional Annexes) provides a table identifying the jurisdiction's prior mitigation strategy, the status of those actions and initiatives, and their disposition within their updated strategy.

Local mitigation actions identified as *Complete*, and those actions identified as *Discontinued*, were removed from the updated strategies. Local mitigation actions identified as an *Ongoing Capability* were incorporated into the capability assessment of each jurisdictional annex. Those actions identified as *No Progress* or *In Progress* that remain a priority for the jurisdiction, have been carried forward into the updated mitigation strategy.

At the April 2021 kickoff meeting and during subsequent local planning meetings (phone, email, in-person local support meetings), all participating jurisdictions were requested to identify mitigation activities completed, ongoing, and potential/proposed. As new potential mitigation actions, projects, or initiatives became evident during the plan update process, including as part of the risk assessment update and as identified through the public and stakeholder outreach process detailed in Section 2 (Planning Process), jurisdictions were made aware of these either through direct communication (local meetings, email, phone), at Steering and Planning Committee meetings, or via their draft jurisdictional annexes.

Throughout the planning process, jurisdictions worked with the planning consultant to assist with the development and update of their annex and include mitigation strategies, focusing on identifying well-defined, implementable projects with a careful consideration of benefits (risk reduction, losses avoided), costs, and possible funding sources (including mitigation grant programs).

6.6.2 IDENTIFICATION AND ANALYSIS OF MITIGATION TECHNIQUES

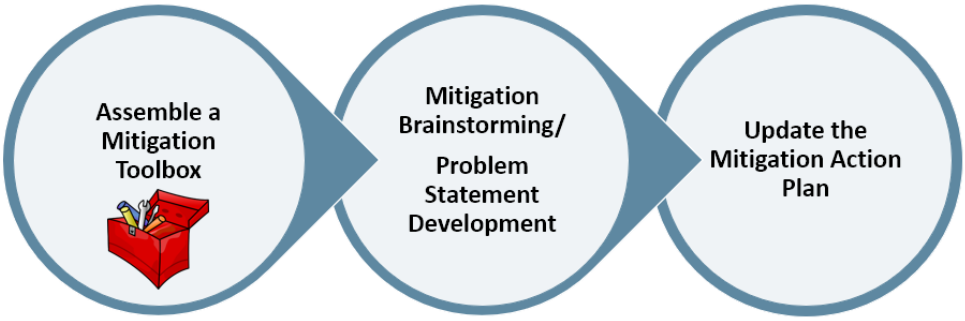
Concerted efforts were made to assure that the jurisdictions develop updated mitigation strategies that included activities and initiatives covering the range of mitigation action types described in recent FEMA planning guidance (FEMA *Local Mitigation Planning Handbook* March 2013), specifically:

- Local Plans and Regulations—These actions include government authorities, policies, or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Projects—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection—These are actions that minimize damage and losses and preserve or restore the functions of natural systems.
- Education and Awareness Programs—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions could include participation in national programs, such as the National Flood Insurance Program and Community Rating System, StormReady (NOAA), and Firewise (NFPA) Communities.

6.6.3 2021 HMP MITIGATION ACTION PLAN

To help support the selection of an appropriate, risk-based mitigation strategy, each annex was updated to provide a summary of hazard vulnerabilities identified during the plan update process, either directly by local representatives or through review of available County and local plans and reports, and through the hazard profiling and vulnerability assessment process.

A mitigation strategy workshop was co-led by NJOEM-Mitigation Unit and the contracted planning consultant on June 16, 2021, for all participating jurisdictions to support the development of the updated mitigation strategy. To assist with the identification of implementable and action-oriented mitigation actions, a three-step process was followed for the 2021 HMP update: 1) Assemble a 'mitigation toolbox'; 2) Identify problem statements through 'mitigation brainstorming' and 3) Update the mitigation action plan. This section describes the process followed by the County and the jurisdictions to develop the 2021 updated mitigation action plan.



The concept of a 'mitigation toolbox' was introduced to the Planning Partnership at the May 2021 risk assessment meeting. A mitigation toolbox contains numerous resources available to the County and participating jurisdictions to assist with the development of an updated mitigation action plan. This toolbox was referred to throughout the 2021 HMP mitigation strategy update. All materials were made available to all participants to access and will continue to serve as a resource over the plan performance period. The toolbox contains, but is not limited, to the following and will be continuously added to over time:

- 2021 HMP goals and objectives
- 2016 HMP Mitigation Strategy
- Risk assessment results
- Capability assessment results
- Outcomes of the SWOO
- Mitigation Catalog
- Subject-matter expertise
- Stakeholder and public input (e.g., citizen survey and stakeholder survey results)
- Existing plans/policies/programs
- FEMA resources (e.g., Mitigation Ideas).
- Potential mitigation funding sources

As discussed in Section 2 (Planning Process) and earlier in this section, the May 2021 risk assessment meeting and individual jurisdiction meetings were focused on understanding risk and capabilities and identifying gaps in capabilities, challenges, and opportunities. This provided context for the next steps in the update of the mitigation strategy and inform the Planning Partnership of the available resources in their 'toolbox.'

At the June 2021 Mitigation Strategy Workshop, the Planning Partnership developed problem statements based on the information gathered to date. The results of the updated risk assessment, challenges and opportunities identified during the capability assessment update and SWOO sessions, and information gathered from the citizen survey were used to inform problem statement development. In addition, a geospatial survey was utilized to identify the locations of problem areas/historic areas of impact. This data was also used to develop the problem statements.

The workshop was held remotely due to the coronavirus pandemic. Jurisdictions scheduled follow-up phone call meetings with the planning consultant to brainstorm and develop mitigation actions. Information gathered from the citizen and stakeholder surveys were shared with the Planning Partnership to further inform the updated mitigation strategy development.

As a result, problem statements were developed to detail the problems/challenges/gaps/identified vulnerabilities each jurisdiction faces. Mitigation alternatives were then evaluated to best reduce future risk and address the identified problem. These problem statements were intended to provide a detailed description of the problem area, including impacts to the jurisdiction, past damages, and loss of service. These problem statements helped form a bridge between the hazard risk assessment, which quantifies impacts to each community, with the development of achievable mitigation strategies.

A strong effort has been made to better focus local mitigation strategies to clearly defined, readily implementable projects and initiatives that meet the definition or characteristics of mitigation. Broadly defined mitigation actions were eliminated from the updated strategy unless accompanied by discrete actions, projects, or initiatives.

Certain continuous or ongoing strategies that represent programs that are fully integrated into the normal operational and administrative framework of the community have been identified within the capabilities section of each annex and removed from the updated mitigation strategy.

Throughout the course of the plan update process, additional regional and county-level mitigation actions were identified by the following processes:

- Review of the results and findings of the updated risk assessment.
- Review of available regional and county plans reports and studies;
- Direct input from county departments and other county and regional agencies
- Input received through the public and stakeholder outreach process.

6.7 MITIGATION BEST PRACTICES

Catalogs of hazard mitigation best practices were developed that present a broad range of alternatives to be considered for use in Mercer County, in compliance with 44 CFR Section 201.6(c)(3)(ii). One catalog was developed for each natural hazard of concern evaluated in this plan; referred to as the Mitigation Catalog (Appendix F). The catalogs present alternatives that are categorized in two ways:

- By whom would have responsibility for implementation:
    - Individuals – personal scale
    - Businesses – corporate scale
    - Government – government scale
- By what each of the alternatives would do:
    - Manipulate the hazard
    - Reduce exposure to the hazard
    - Reduce vulnerability to the hazard

- Build local capacity to respond to or be prepared for the hazard

The alternatives presented include actions that will mitigate current risk from hazards and actions that will help reduce risk from changes in the impacts of these hazards resulting from climate change. Hazard mitigation actions recommended in this plan were selected from among the alternatives presented in the catalog, as well as other resources made available to all jurisdictions (i.e., FEMA's Mitigation Ideas). The catalog provides a baseline of mitigation alternatives that are backed by a planning process, are consistent with the established goals and objectives, and are within the capabilities of the planning partners to implement. Some of these actions may not be feasible based on the selection criteria identified for this plan. The purpose of the catalog was to provide a list of what could be considered to reduce risk from natural hazards within the planning area. Actions in the catalog that are not included for the partnership's action plan were not selected for one or more of the following reasons:

- The action is not feasible
- The action is already being implemented
- There is an apparently more cost-effective alternative
- The action does not have public or political support.

6.8 MITIGATION STRATEGY EVALUATION AND PRIORITIZATION

Section 201.c.3.iii of 44 CFR requires an action plan describing how mitigation actions identified will be prioritized. The County and participating jurisdictions utilized a modified STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) mitigation action evaluation methodology based on a set of evaluation criteria suited to the purposes of hazard mitigation strategy evaluation. This method provides a systematic approach that considers the opportunities and constraints of implementing a specific mitigation action.

The Steering Committee applied an action evaluation methodology, which includes an expanded set of 14 criteria to include the consideration of cost-effectiveness, availability of funding, anticipated timeline, and if the action addresses multiple hazards. The 14 evaluation criteria used in the 2021 update process is the same used in the 2016 plan:

1. Life Safety—How effective will the action be at protecting lives and preventing injuries?
2. Property Protection—How significant will the action be at eliminating or reducing damage to structures and infrastructure?
3. Cost-Effectiveness—Are the costs to implement the project or initiative commensurate with the benefits achieved?
4. Technical—Is the mitigation action technically feasible? Is it a long-term solution? Eliminate actions that, from a technical standpoint, will not meet the goals.
5. Political—Is there overall public support for the mitigation action? Is there the political will to support it?
6. Legal—Does the jurisdiction have the authority to implement the action?
7. Fiscal—Can the project be funded under existing program budgets (i.e., is this initiative currently budgeted for)? Would it require a new budget authorization or funding from another source such as grants?
8. Environmental–What are the potential environmental impacts of the action? Will it comply with environmental regulations?
9. Social—Will the proposed action adversely affect one segment of the population? Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of lower income people?
10. Administrative—Does the jurisdiction have the personnel and administrative capabilities to implement the action and maintain it? Will outside help be necessary?
11. Multi-hazard—Does the action reduce the risk to multiple hazards?

12. Timeline—Can the action be completed in less than 5 years (within our planning horizon)?
13. Local Champion—Is there a strong advocate for the action or project among the jurisdiction's staff, governing body, or committees that will support the action's implementation?
14. Other Local Objectives—Does the action advance other local objectives, such as capital improvements, economic development, environmental quality, or open space preservation? Does it support the policies of other plans and programs?

Specifically, for each mitigation action, the jurisdictions were asked to assign a numeric rank (-1, 0, or 1) for each of the 14 evaluation criteria, defined as follows:

- 1 = Highly effective or feasible
- 0 = Neutral
- -1 = Ineffective or not feasible

Further, jurisdictions were asked to provide a summary of the rationale behind the numeric rankings assigned, as applicable. The numerical results were totaled to assist each jurisdiction in selecting mitigation actions for the updated plan.

As step one in the prioritization process, actions that had a numerical value between 0 and 4 were initially prioritized as *low*; actions with numerical values between 5 and 8 were initially categorized as *medium*; and actions with numerical values between 9 and 14 were initially categorized as *high*. As step two, jurisdictions were then asked to consider the benefits and costs, as well as the desired timeline for implementation and project completion timeline when finalizing each action's priority as *high/medium/low*. These attributes are included in the mitigation strategy table and for FEMA-eligible projects in the mitigation worksheets (Section 9 – Jurisdictional Annexes).

In addition, municipalities were asked to identify the most important project(s) that they would like to begin implementation on as quickly as possible once resources are available. These actions are listed at the beginning of the list of proposed mitigation actions for each annex.

For the plan update there has been an effort to develop more clearly defined and action-oriented mitigation strategies. These local strategies include projects and initiatives that are seen by the community as the most effective approaches to advance their local mitigation goals and objectives within their capabilities. In addition, each jurisdiction was asked to develop problem statements. With this process, participating jurisdictions were able to develop action-oriented and achievable mitigation strategies.

6.9 BENEFIT/COST REVIEW

Section 201.6.c.3iii of 44 CFR requires the prioritization of the action plan to emphasize the extent to which benefits are maximized according to a cost/benefit review of the proposed projects and their associated costs. Stated otherwise, cost-effectiveness is one of the criteria that must be applied during the evaluation and prioritization of all actions comprising the overall mitigation strategy.

The benefit/cost review applied in for the evaluation and prioritization of projects and initiatives in this plan update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Assistance (HMA) grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with project, action, or initiative.

Costs are the total cost for the action or project, and could include administrative costs, construction costs (including engineering, design and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to the implementation of the project, and could include life-safety, structure and infrastructure damages, loss of service or function, and economic and environmental damage and losses.

When possible, jurisdictions were asked to identify the actual or estimated dollar costs and associated benefits. Often numerical costs and/or benefits were not identified and may be impossible to quantify. In this case, jurisdictions were asked to evaluate project cost-effectiveness using *high*, *medium*, and *low* ratings. Where estimates of costs and benefits were available, the ratings were defined as the following:

Low <= $10,000 Medium = $10,000 to $100,000 High >=$100,000

Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the following definitions were used:

Table 6-2. Qualitative Cost and Benefit Ratings

Costs	
High	Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases).
Medium	The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Low	The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program.
Benefits	
High	Project will have an immediate impact on the reduction of risk exposure to life and property.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property.
Low	Long-term benefits of the project are difficult to quantify in the short term.

Using this approach, projects with positive benefit versus cost ratios (such as high over high, high over medium, medium over low) are considered cost-effective. For some of the Mercer County initiatives identified, the planning partnership might seek financial assistance under FEMA's HMA programs. These programs require detailed benefit/cost analysis as part of the application process. These analyses will be performed when funding applications are prepared, using the FEMA benefit/cost analysis model process. The planning partnership is committed to implementing mitigation strategies with benefits that exceed costs. For projects not seeking financial assistance from grant programs that require this sort of analysis, the planning partnership reserves the right to define "benefits" according to parameters that meet its needs and the goals and objectives of this plan.