Mitigation Strategy Workshop Notes

Welcome!

FEMA Region II has prepared this workshop to present the key points needed for each town and village to prepare or update their mitigation strategy. The mitigation strategy is the section in the hazard mitigation plan where goals are set, actions are listed, and a sketch plan for implementing each mitigation action is specified.

Any workshop, including this one, can only cover the essential points in brief. A more thorough explanation is available in FEMA's publication, *Local Mitigation Planning Handbook*. You are encouraged to review the *Handbook*: http://www.fema.gov/media-library/assets/documents/31598?id=7209

Beyond the Basics is essentially that same information in a format some find more user friendly. It is a website designed by the University of North Carolina at Chapel Hill (UNC) to help guide local communities through the process of developing or updating their local hazard mitigation plan. In addition to covering the material from the FEMA *Handbook*, it includes additional material on best practices and addresses weaknesses or shortfalls commonly found in hazard mitigation plans. Suggestions are given on ways plans could be strengthened; hence the name, *Beyond the Basics*. http://mitigationguide.org/

The Mitigation Strategy section of the hazard mitigation plan is the heart of a mitigation plan, but there is a larger goal that FEMA hopes to accomplish. FEMA's overarching goal for mitigation is: "*Mitigation becomes a way of doing business in the community*" and as a result, "*The community becomes less susceptible to losses from natural hazards*." Mitigation needs to be more than something that is thought about every fifth year when plan updates are required.

Mitigation Plans – include specific mitigation actions to address specific vulnerabilities.

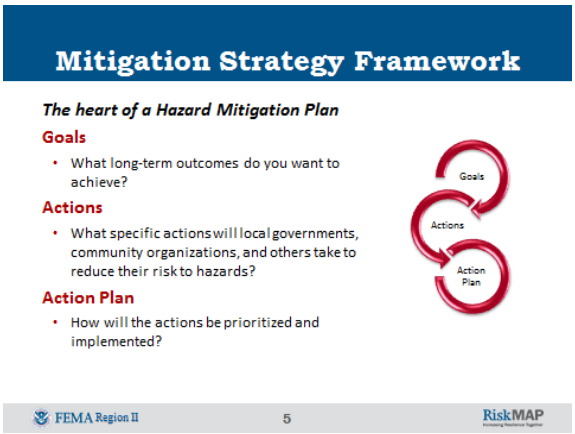
Mitigation Planning (when done correctly) – creates an ongoing appreciation for mitigation. "Ongoing" is a long time. Over the long haul there will be hundreds of decisions made by a town or village where it would be appropriate to include a consideration of mitigation in the decision process.

There are two purposes for today's workshop:

- First, to begin or continue on the process of developing a Mitigation Strategy. Developing a Mitigation Strategy involves a systematic process that ensures the selection of the best mitigation action for the problem (specific vulnerability) at hand, and builds support for and facilitates implementation.

- Second, the workshop is to emphasize the importance of government officials in each town and village having an ongoing appreciation for mitigation. This should be an appreciation shared by all key village and town employees. When they have this appreciation, daily decisions for years to come will consider mitigation.

While today's workshop focuses on the Mitigation Strategy Section of the plan, there are other sections in a typical hazard mitigation plan. The other sections are important, but the Mitigation Strategy is the heart of the mitigation plan because the first two sections of the plan provide the information necessary to develop the Mitigation Strategy, and the fourth section explains how implementation of the Mitigation Strategy will be monitored and evaluated, so the plan can be kept current.



The Mitigation Strategy includes goals, actions, and an action plan.

Mitigation goals represent visions for reducing or avoiding losses from the identified hazards.

- For example – *Protect vital communication and transportation infrastructure, which if damaged by a natural hazard could cause widespread hardship.*
- Often communities choose to develop specific objectives to supplement their goals.

Mitigation actions are specific projects or activities that help advance the goals and address vulnerabilities.

- For example – *Elevate County Route 12 from Chapman Street to Maple Road to ensure this evacuation route remains open during flood events.*

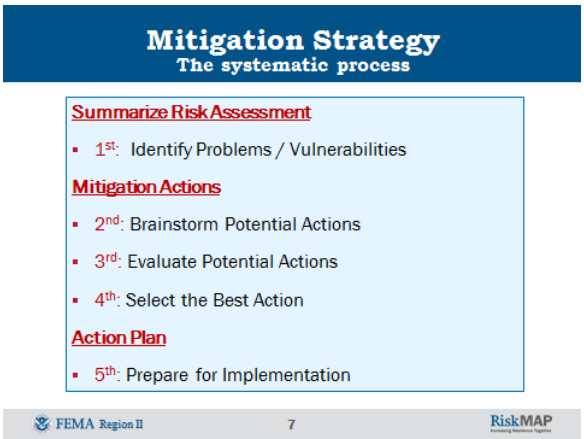
The **action plan** describes how mitigation actions will be implemented, including how they will be prioritized, administered, and incorporated into the community's existing planning mechanisms.

A Hazard mitigation plan must have a set of common goals. The goals must be adopted for all the participating jurisdictions when a multi-jurisdictional plan is be prepared

.

While there are no wrong goals, the best goals help guide the selection of mitigation actions. If a goal simply states that a given hazard will be mitigated, there is not much value being added by the goal.

The examples in this slide are shown to demonstrate the desired structure for a Goal Statement. It is up to local jurisdictions to decide what their goals should be.

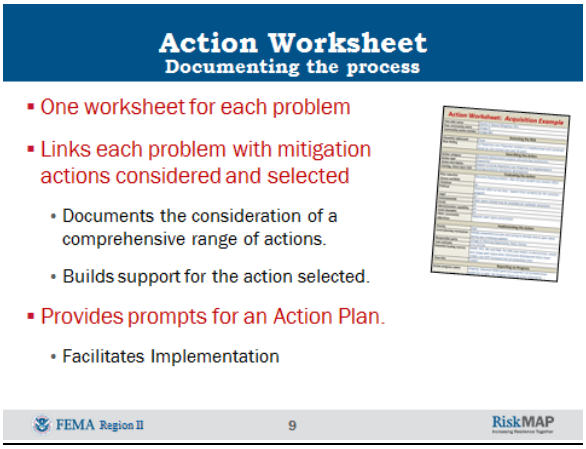


Once goals are established or the goals from the previous plan confirmed as remaining valid**,** these are the steps that will lead to the best mitigation actions and an action plan that prepares the actions for implementation. Following these steps ensures no preferable mitigation action is overlooked because it was not thought of immediately. In other words, the systematic process guards against "top of the head decisions" dominating the decision process.

Planning in its purest sense is thinking. It is critical that within each town and village a functionally diverse team be involved in gathering and analyzing information, weighing alternatives, and making informed decisions. This slide goes over the types of people that should be on the team and why. Citizens could be included as well.

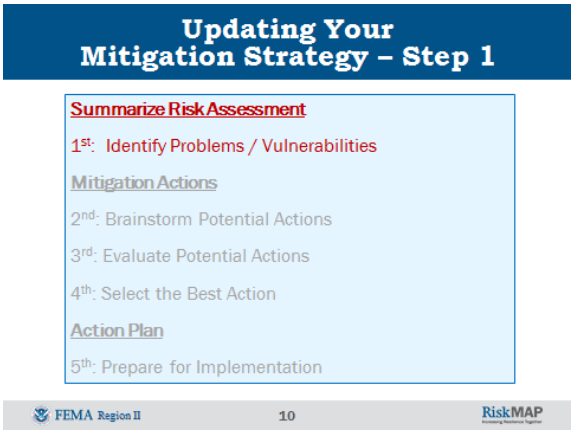
The lead person for the village / town will know best how to involve the members of their jurisdiction's team. It may involve one-on-one discussions with various team members, supplemented by meetings of the entire team. For example, identifying current problems could be done through one-on-one discussions, while brainstorming is always done as a group.

A diverse team improves decision-making and will build support for the decisions made. Potential members of the team at the very least must be invited to participate and the extending of this invitation must be documented in the plan. FEMA has a handout that can be completed to document the invitation and hopefully the participation of a diverse team.



<u>Action Worksheet</u>

FEMA Region II created an *Action Worksheet* that the New York State Department of Homeland Security – Emergency Services adopted and now requires in all hazard mitigation plans. Tetra Tech uses a slightly different version of this worksheet, which is acceptable. The format is not critical. It is the documentation of the thought process that goes into selecting mitigation actions that is important.



Step 1 is identifying current problems. There are several potential sources for identifying vulnerabilities or current problems. We will cover these in the next few slides.

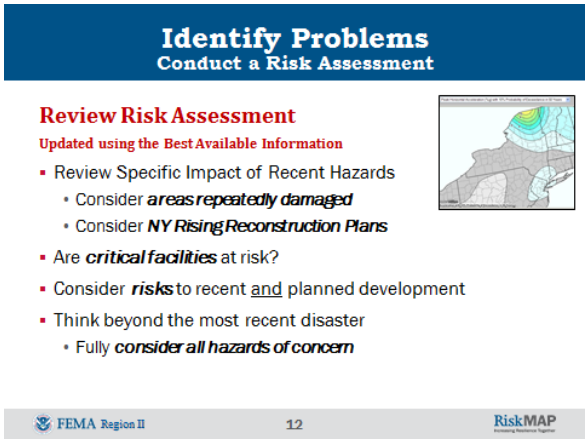
The public and stakeholders are a good source for identifying specific problems and concerns.

Inviting the public and other stakeholders to participate in the planning process is required by FEMA. The plan must provide documentation that a genuine offer to participate was made. For example, press releases and public notices might have been issued, hearings held, or surveys distributed. Having received comments, document in the plan what issues were raised and how they were dealt with in the plan. Some of these issues may rise to the level of requiring a mitigation action.

What problems have been cited by the public?

What problems have been cited by stakeholders? Stakeholders include other officials in the jurisdiction as well as outside stakeholders, like local colleges, local businesses, and external regulatory agencies.

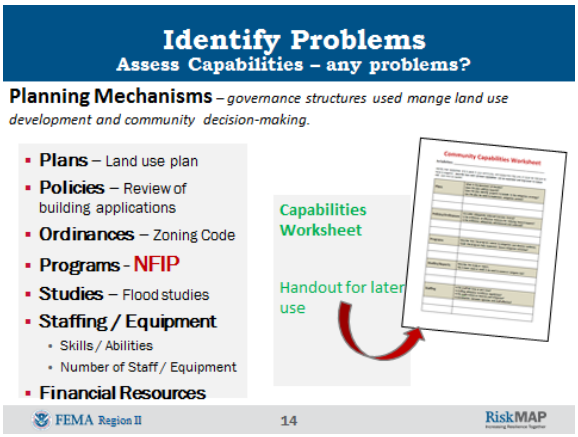
Finally, because problems and/or solutions can be regional, neighboring jurisdictions should also be given the opportunity to review and comment on the draft plan. That is, when the plan is a County led multi-jurisdictional effort, neighboring counties must be offered this opportunity.



Each plan must include a formal risk assessment. At this point in your planning process the Risk Assessment should be nearly complete. Summarize the general assessments of risk and vulnerabilities by describing specific vulnerabilities or problems.

One strong indicator of a problem is when damage repeatedly occurs at the same location. Give these areas due consideration. And, take care not to overlook hazards that occur less frequently, but nevertheless present a risk.

A Risk Assessment should also determine if there are critical facilities that should be mitigated? NYS requires mitigation actions / projects for any critical facility that has ever sustained flooding, regardless of whether it is in a 100-year floodplain. Critical facilities should be protected to a 500-year flood event.



The planning process requires an assessment of local capabilities. This is for two reasons.

- First, communities are not expected to go beyond their capabilities when determining the number of mitigation actions to take on and the amount of work required carrying out those actions.

- Second, steps taken to strengthen local capabilities are mitigation actions.

Capabilities are existing authorities, policies, programs, and resources, which are sometimes called "planning mechanisms." This slide includes a generic list of capabilities that local communities might have. For example:

- Plans, like Land Use Plans, or Comprehensive Plans, or Master Plans – whatever plans you have, use the formal name of the plan when describing it.

- Policies, like those that indicate who is to be conclude in the review of building applications. Give the official name for the policy and describe how it works relative to mitigating hazards.

- Ordinances – For example, the zoning code.

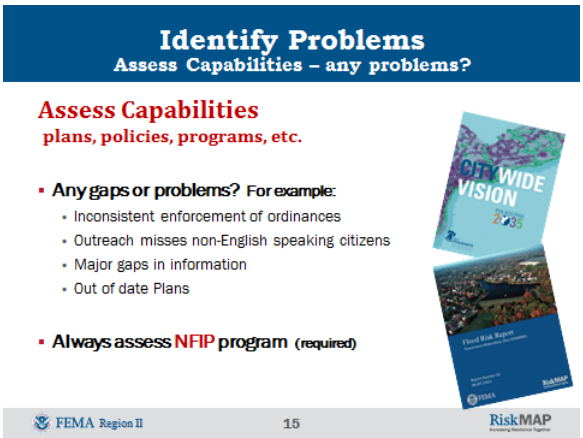
- Programs – again the National Flood Insurance Program will be among the programs cited for most communities in New York State.

- Studies – give the name of studies that have been completed or are underway

- Staffing / Equipment – skills/abilities and the number of staff and equipment.

- Financial Resources – this could be the annual budget, taxing authority, etc.

The description of local capabilities provides a foundation for mitigation planning. It can describe what measures are already in place to manage risk and it allows small jurisdictions with limited resources and capabilities to distinguish themselves from larger and more capable communities. Since each jurisdiction is unique, their capabilities are unique and should be described jurisdiction by jurisdiction. A generic list of capabilities is not appropriate.



Once having described the community's capabilities, these capabilities should be assessed to determine if there are gaps or deficiencies. These might be articulated as problem statements.

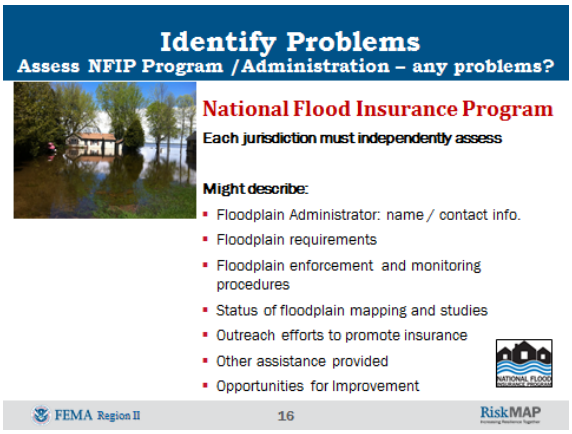
For example, problems such as:

- *Inconsistent enforcement of ordinances* - This is the problem. The root cause of the problem should be determined before brainstorming possible solutions. In this case, perhaps the procedures are unclear, or staff has not been trained, or there is not enough staff to perform the enforcement.

- *Outreach misses non-English speaking citizens* - The root cause could be the method by which educational media is delivered, or the need to produce written material in a second language.

- *Major gap in information* - For example, maybe it is unknown whether critical facilities have reinforced masonry. A structural study might be called for to fill in the gaps.

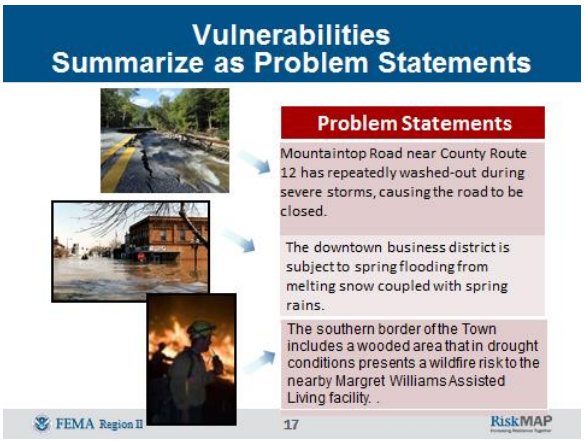
- *Out of date Plan* - could also be a problem.



The National Flood Insurance Program (NFIP) is an important program and the community's ability to effectively administer this program is an important capability. It is a federal requirement that for jurisdictions that participate in National Flood Insurance Program, they must describe the program and its administration. Each jurisdiction will have its own write-up because each jurisdiction is unique in how it administers the program.

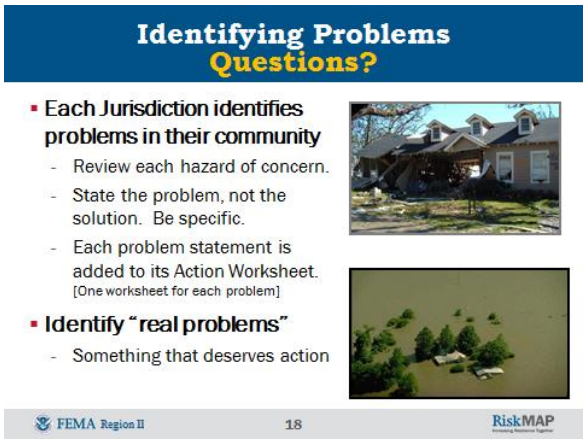
For example, the write-up might discuss:

- Name and contact information for the floodplain administrator
- Adoption and enforcement of floodplain requirements, including regulating new construction in the floodplain
- Floodplain identification and mapping, including the status of map updates
- Describe the jurisdiction's assistance and monitoring activities
- It is not enough the plan to say "we will continue to comply with NFIP"



Having determined what the most pressing problems are, they should be summarized as clear and specific problem statements. These problem statements should be used to summarize your updated Risk Assessment and the statements should be included on the Action Worksheet for reference.

This slide provides examples of a few problem statements.



This slide recaps the "Identify Problems" step in the process and pauses for discussion and questions.

"Real problems" is a reminder that a mitigation plan should not be a verbose plan with vague statements that no-one wants to take the time to work on. We are all too busy for that. The mitigation plan should be a straight forward description of problems that deserve attention. Real problems deserve attention, which will be the mitigation actions we will discuss shortly.

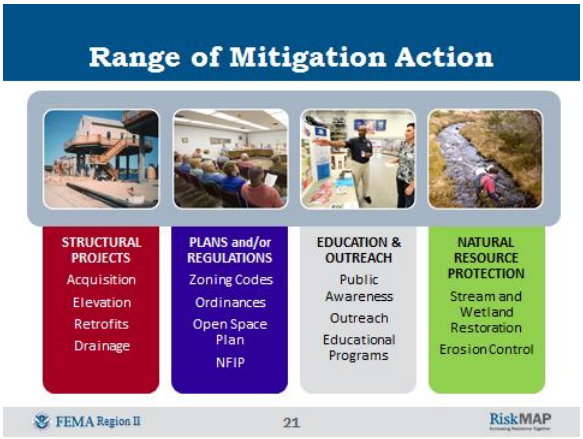
Problem statements are the starting point for deciding on mitigation actions. The process includes brainstorming potential alternative mitigation actions, evaluating these potential actions, and selecting the best action to address the problem. The Action Worksheet is the place to document the actions considered and why they were or were not selected for implementation.

Before brainstorming potential actions, the next few slides explain that mitigation actions (as defined by federal regulations) are different from other emergency management actions, such as emergency preparedness actions and emergency response actions. The official definition of mitigation actions is provided on the slide. Mitigation actions should be specific actions/projects/activities.

Elevating or acquiring a home for removal is a mitigation action. Purchasing equipment to be used to respond to an emergency is not a mitigation action. It is a preparedness & response action.

Mitigation actions lessen or eliminate the need for preparedness & responses actions.

When analyzing risk and identifying mitigation actions, the planning team may also identify emergency preparedness and response actions and these may be included in the plan. However, preparedness and response actions may not be a substitute for mitigation actions. Federal mitigation planning requirements call for each jurisdiction in a multi-jurisdictional plan to have mitigation actions specific to their jurisdiction and vulnerabilities.

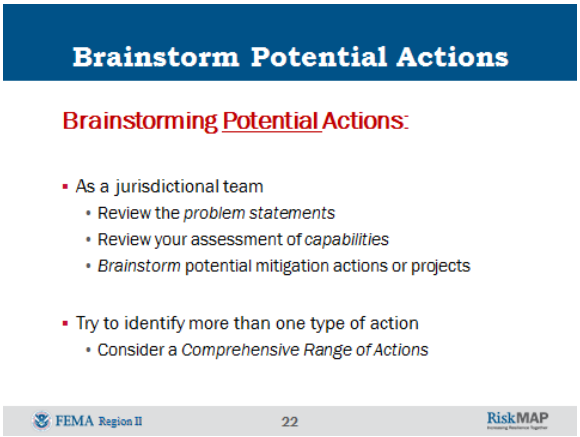


Federal regulations also require that a comprehensive range of mitigation actions be considered when selecting the mitigation actions to be implemented. To help jurisdictional teams think broadly when brainstorming, it may be helpful to consider four potential categories for actions.

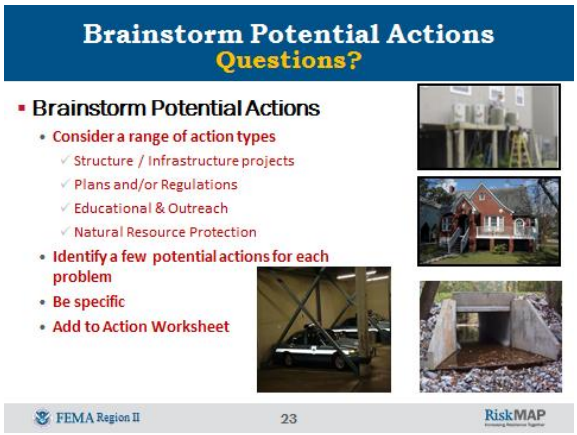
It is possible that for some problems the potential actions brainstormed may all fall under a single category (e.g., education and awareness). This is acceptable so long as potential actions from other categories are considered for other problems. In the end meeting the intent of the federal requirement is

the important thing. The intent is to have jurisdictional teams think comprehensively when identifying potential actions.

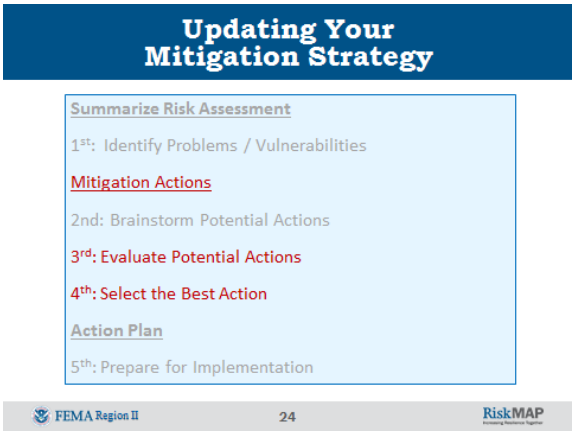
It is also important that teams consider future development when identifying potential actions. What actions might be taken to improve the resilience of new construction? For example it could involve stronger building codes or land use policies that keep new construction out of harm's way.



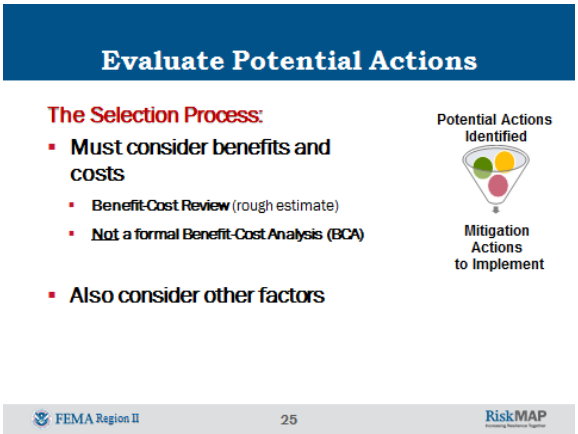
The next step is to brainstorm mitigation actions or projects. Gather a jurisdictional team to review the problem statements and assess local capabilities. Then, brainstorm mitigation actions or projects for each problem.



This slide recaps the "Brainstorming" step and provides a pause for discussion and questions.



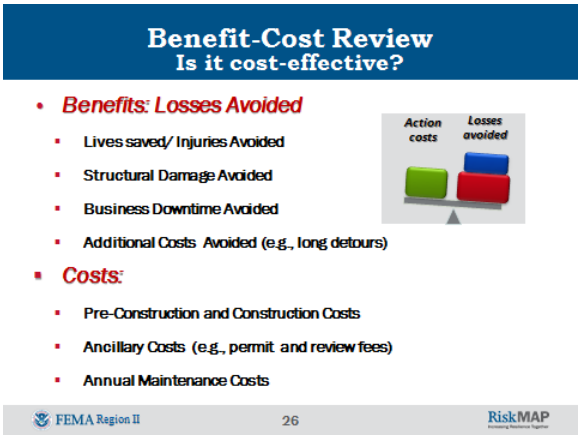
Step 3 is to evaluate the potential actions. Step 4 is the result of the evaluation, the selection of the best action or project. These steps are covered together since they are so closely tied to each other.



The evaluation of potential actions is the process used to select the best action or project for a given problem. The evaluation criteria used are up to the jurisdictional team, except that federal requirements state that benefits versus costs of a mitigation action must be considered. Naturally, many other factors should be used as well.

In considering costs versus benefits, rough estimates may be used. FEMA refers to this as a *Benefit-Cost Review* to distinguish it from a formal *Benefit-Cost Analysis (BCA)*. When applying for grants a formal Benefit-Cost Analysis may be required, but it is not a requirement when preparing a hazard mitigation plan.

As the reasons for not selecting a project become apparent, document this consideration by adding a note on the Action Worksheet next to the potential action. This will complete the required documentation that a range of potential actions was considered.



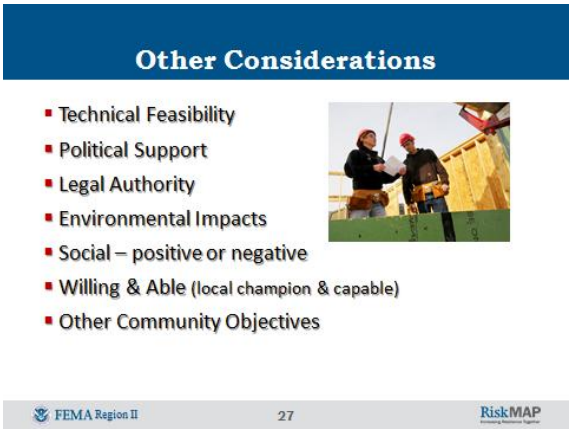
Benefits are the savings from losses avoided. For example:

- Lives saved / injuries avoided
- Structural damage avoided
- Business downtime avoided (or any negative impacts from the loss of a function)
- Additional costs avoided, like avoiding long detours or avoiding emergency management costs

Costs are the total cost for the action or project. For example:

- Pre-construction costs and non-construction costs like design costs
- Construction costs
- Ancillary costs like permit and review fees
- Annualize maintenance costs

Costs are not just the cost to the jurisdiction (e.g. the match for a grant). They are the total cost.



In addition to considering the benefits and costs, other factors should be considered.

- **Technical** – is it technically feasible

- **Political** – Will the public support? Is there political will?
    - Communities may want to include an action even if political will is currently lacking. Political will often changes immediately following a disaster and if the project is in the plan, it can be quickly endorsed and implemented. *Where money was not previously available, it may be made available.*

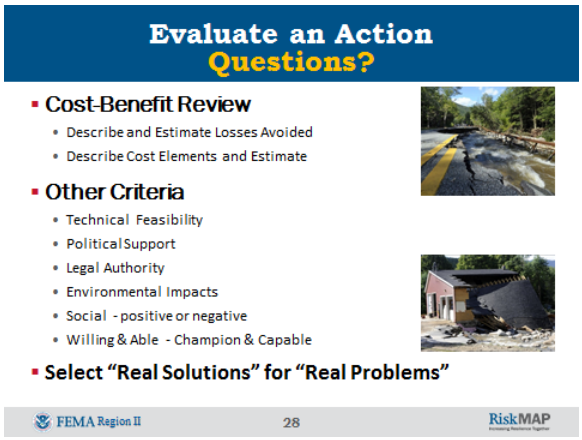
- **Legal Authority** – Is this action or project something that you have the legal authority to do?
    - If it is up to some other entity to do, then they might be consulted as the plan is being prepared or the action could be to lobby them is some specific way to encourage the action to be taken.

- **Environmental Impacts** – Obvious negative impacts could be a fatal flaw. Even if not obvious, many mitigation actions may require environmental reviews as the project is developed. There could also be positive environmental impacts from some actions, such as stream restorations.

- **Social** – Positive social impacts are good, like creating a park in a floodplain by removing structures located there. Actions could also be negative, like adversely affecting one segment of the population or disrupting neighborhoods.

- **Willing & Able** – Is there a local champion for the project? Is the jurisdiction or responsible department administratively able to take on this project?

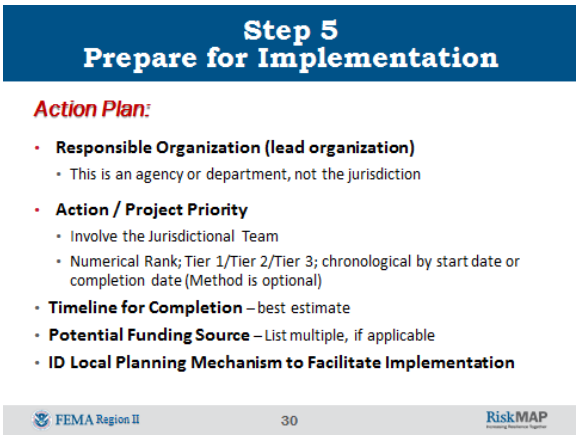
- **Other** – Communities are unique and may want to consider other factors.



The important part of planning is the thinking that goes into the decisions made. Keeping this in mind, the purpose of this slide is to recap the critical decision of deciding what action to take and to provide a pause for discussion and questions.

When it says select "real solutions" for "real problems", the point to be made is that the Plan should not become an academic exercise. Earlier we stressed the need to identify "real" problems, which means problems you really want to mitigate. "Real solutions" would be actions you really want to take. A mitigation plan should not be a verbose plan with vague statements that no-one wants to take the time to work on. We are all too busy for that. The mitigation plan should be a straight forward description of problems that deserve attention and actions that the local community wants to take to make itself more resistant to future hazards.

The 5th and final step is preparing for implementation.



An *Action Plan* is the final element of a *Mitigation Strategy*. It prepares the actions for implementation.

- **Responsible Organization** – An agency or department should be selected to take the lead with implementation. Most actions or projects naturally fall within the purview of an agency or department. It is this organization that will periodically provide status reports. The jurisdiction itself should not be assigned the responsibility for implementation because this leaves it unclear who will manage implementation on a day-to-day basis. Only one agency can have the lead. If other agencies are to be involved, they may also be listed so long as it is clear which agency is in the lead.

- **Action/Project Priority** – The jurisdiction's team is best suited for setting priorities. The criteria used should be documented in the body of the plan. The consideration of benefits versus costs must be a consideration. In addition to other selection criteria used, the team might also consider factors like:
    - How much can a particular agency or department manage?
    - Would it be better overall to do some easy to implement actions first to build support for the entire mitigation plan?
    - The output is a priority designation for each action, which should be listed on the Action Worksheet. This could be:
        - Numerical ranking – list actions in priority order

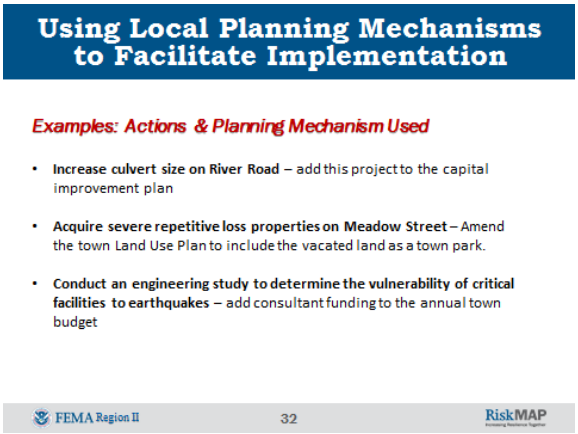
        - Triage Actions: Tier 1 / Tier 2 / Tier 3 - be careful not to make everything a top priority, because that defeats the purpose of prioritizing.

- **Timeline for Completion** – The project manager from the responsible organization may be in the best position to estimate when the action will be completed. The target completion date should be added to the Action Worksheet. The start date could also be added, as could target dates for significant milestones.

- **Potential Funding Sources** – NYS requires that plans include a list of potential Local, State, and Federal fund sources that apply to the project, as well as public-private partnerships worth pursuing. This should include a brief description of the programs and links to webpages for those opportunities.
    - NYS notes that the lack of an identified funding source or program should not prevent the project's inclusion in a community's list of possible mitigation actions.

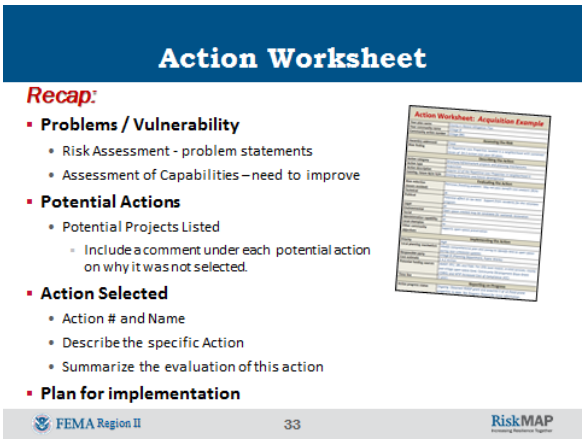
- **Local Planning Mechanisms** – *are covered by the next slide*

Planning Mechanisms are governance structures used by local jurisdictions to manage land use development and community decisions-making, such as comprehensive plans, capital improvement plans, and other long-range plans.



Where possible, the community should implement mitigation actions through existing plans and policies, which already have the support of the community and policy makers. The Action Worksheet has a space to name the local planning mechanism to be used in implementation.

For example, if the action selected for implementation was, "Increase Culvert Size on River Road," then on the line for local planning mechanisms you might have, "Add this project to the capital improvement plan. Other examples are included on the slide.



Problems / Vulnerabilities:

- First we described the risks or vulnerabilities as problem statements, doing our best to be specific.

Potential Actions

- Next we brainstormed potential actions and evaluated them. Those potential actions considered and rejected (at least for the time being) are described and a short explanation is given as to why they were not chosen for implementation.

Action or Project Intended for Implementation

- This is where the selected action or project is added to the worksheet. There will be one worksheet for each action.
    - <u>Assign a number and name to each action</u> - This way in the body of the plan (Action Worksheets will likely be in an appendix.) can succinctly list the actions. In multi-jurisdictional plan it is best to make the jurisdiction's initials part of the action number so the number 1 action, etc. for various jurisdictions do not get confused. For example, the actions for the City of Syracuse might be numbered Syr-1, Syr-2, etc.

- Describe the specific mitigation action – Some actions are regulatory or educational actions, while others may be projects.

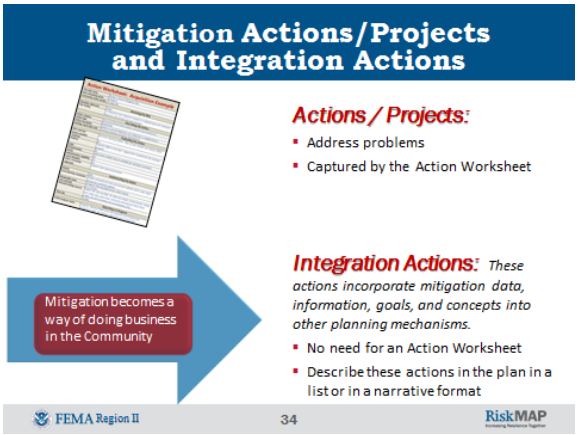
- Summarize the evaluation of the mitigation action - The body of the plan will probably describe the generic consideration of benefits and costs. The Action Worksheet should document the specific reason for selecting the action or project.

Plan for Implementation

- The final section of the Action Worksheet is the Plan for Implementation. In this section information is added explaining which department or agency will be responsible for implementation, the priority category assigned to the actions, an estimate of how long it will take to implement the actions (subject to budget and environmental reviews), potential fund sources, and existing

Progress Report

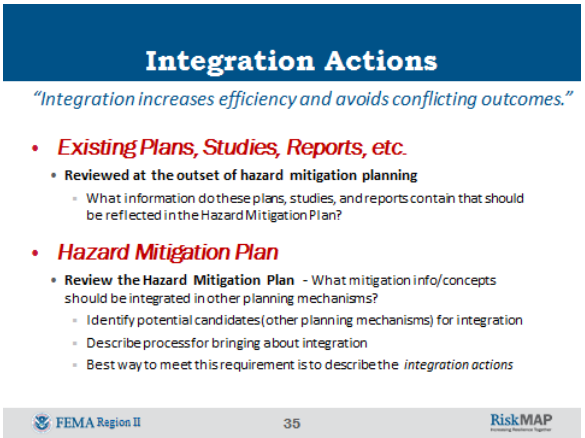
- Although not covered during the workshop, the final section of the Action Worksheet may be used when periodically reporting progress as overall implementation of the plan is monitored and evaluated for effectiveness. [Five years after a plan is approved it must be updated in order for a community to remain eligible for certain mitigation grants. At that time the status of each action from this plan will need to be summarized in the updated plan.]



Up to this point in the workshop we have been focused on mitigation actions that address specific problems. These are very important and the Action Worksheet was designed to accommodate these projects.

Integration Actions are another important type of mitigation action. These are actions to integrate mitigation data, information, goals, and concepts into existing planning mechanisms. Thus they integrate mitigation with the fabric of governing. For example, when appropriate, mitigation may be integrated with the jurisdiction's comprehensive plan or its capital improvement plan.

Integration Actions do not go on an Action Worksheet because they are fairly simple to implement. They should be included in the plan as a simple list. An explanation of why Integration Actions are important and sample listing of Integration Actions follow on the next two slides.

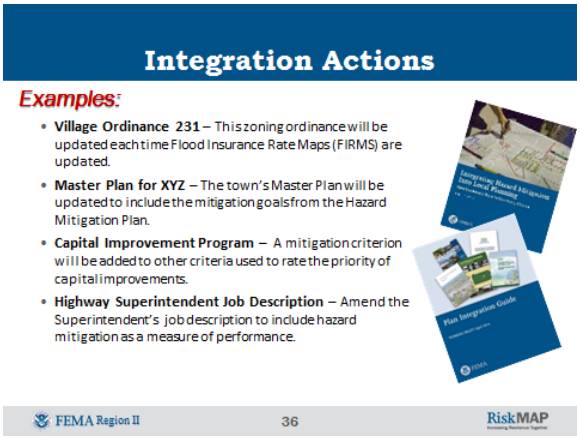


Integration increases efficiency and avoids conflicting outcomes.

At the start of the planning process existing plans, studies and reports should have been reviewed to determine what information they contained should be incorporated into the Hazard Mitigation Plan. Now that the Hazard Mitigation Plan is nearly complete, the reverse consideration should take place. Each jurisdiction should ask *what information in the Hazard Mitigation Plan should be incorporated into other planning mechanisms.*

The integration actions will be unique to each jurisdiction. They should be listed in the plan by jurisdiction, where the planning mechanism that will incorporate the information is named and a brief explanation is given stating how the integration will take place.

Examples are given on the next slide.



Here are some examples of Integration Actions.

In summary, some of the key point we hope you take away from today's workshop are:

- The overarching goal is for Mitigation to become a way of doing business in all jurisdictions.

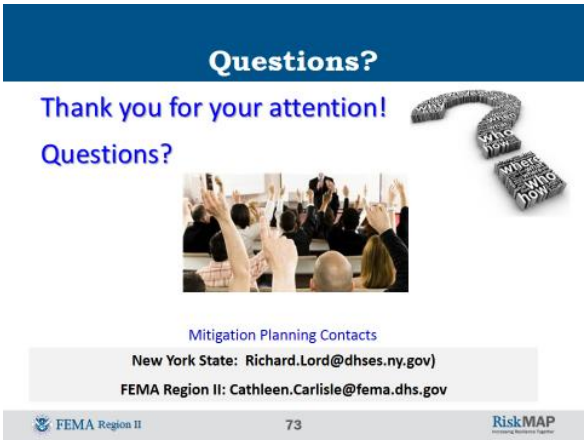
- Involve a diverse team in making key judgments and decisions for your jurisdiction.

- The Mitigation Strategy is the heart of the Mitigation plan. Other sections of the plan support the decisions reflected in the Mitigation Strategy.
    - Make sure there is a link between the Risk Assessment section in the plan and the Mitigation Strategy.

    - Problem Statements, when used to summarize the Risk Assessment, are a powerful link to the mitigation actions

- Assess Capabilities – Opportunities to strengthen capabilities can be mitigation actions.
    - The NFIP program is very important. Make sure it is well described and working well.

- Finally, write specific mitigation actions and include integration actions in the plan.



Thank you for your attention and commitment to mitigation planning.

This can be confusing. Rely on your consultant and FEMA publications for guidance, and do not hesitate to contact New York State with questions. The State is your primary contact. FEMA is here to support the State and County in any way we can.