The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation.
WE NEED TO BE SURE WE’RE USING ALL THE TOOLS IN THE CORPS’ TOOLBOX.  SENATOR OBERSTAR, 2008
CONNECTING THE DOTS
CONNECTING THE DOTS
SUCCESS IS WHEN AWARENESS LEADS TO ACTION
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MAIN BENEFITS
BESIDES RELYING ON RECOVERY FUNDRAISERS AND DISASTER ASSISTANCE

- Elected official can justify local funding requests
- A playbook for how to beat flooding
- Integrates across departments, communities, borders
- The process avoids pitfalls of flood hazard unawareness
- The community thrives
LIFE-CYCLE OF FLOOD RISK MANAGEMENT

“Getting Ready”
Actions taken BEFORE the event, including planning, training, and preparations
- Flood Risk Management system assessment / inspections
- Monitoring / forecasting threats
- State and Local Coordination
  - Reservoir operations
  - Flood Fight Preparation

“Driving Down the Risks”
Measures that PREVENT a disaster, reduce its chance of happening, or reduce its damaging effects.
- Modify mitigation plans
- Identify future mitigation opportunities
- Develop system improvements

“The Flood Fight”
Actions taken DURING the initial impact of a disaster, including those to save lives and prevent further property damage
- Emergency system strengthening
- Monitor and report flood impact
- Monitor system performance
- Support State / Local Flood Fight

“Getting back on our feet”
Actions taken AFTER the initial impact, including those directed toward returning to normalcy.
- Repair damaged systems
- Assess and document system performance
- Implement mitigation measures / system improvements
“Driving Down the Risks”

Measures that PREVENT a disaster, reduce its chance of happening, or reduce its damaging effects.

- Modify mitigation plans
- Identify future mitigation opportunities
- Develop system improvements
The benefits of doing and maintaining a floodplain management plan (FMP) are listed below:

- A local hazard mitigation plan can be enhanced with the addition of a new FMP by a community, which helps address the most costly natural hazard: flooding.
- The FMP toolbox is an effective way to help local elected officials **justify the funding** needed from city councils or county commissioners.
- Brings mitigation back as a focus, as opposed to struggling to recover
- Communities with FMPs most effectively allocate resources appropriately.
- FMPs provide a comprehensive review of all possible flood risk management measures allowing them to pursue the most feasible, appropriate, and highest priority mitigation actions.
- FMPs ensure that mitigation actions are in alignment with community goals for land use.
- FMPs ensure that land use and development account for the flood hazards.
MAIN BENEFITS

The benefits (continued)

• A constituency stands behind each FMP and wants the mitigation actions implemented.
• The FMP captures the planning process and leverages the documented story as a resource and risk management tool for a local community to use to improve resiliency to floods but also to ensure the long-term economic viability of the community.
• Communities in the FEMA NFIP can get a reduction in flood insurance premiums when this process of risk management is captured in an FMP.
• A floodplain management plan is not a tool, rather, it is the toolbox that assembles all the tools for mitigating flood impacts in one place.
MAIN BENEFITS

The benefits (continued)

- FMPs offer a rational product and a logical process for budgeting mitigation actions considering the increasingly competing demands for funding, as well as limited staff resources.
- FMPs develop the coordination between communities geographically, as well as interdepartmentally inside communities.
  - Public works
  - Planning
  - Engineering
  - Zoning
  - Codes
  - Emergency management
  - Emergency response
  - Administrative office
- FMPs educate property owners about the flood hazards and the full menu of flood risk management measures that can be selected to meet economic and/or environmental land use needs.
- FMPs build public and political support for the flood mitigation actions, especially the nature of long-term activities and the limitations of any built features.
MAIN BENEFITS

The benefits (continued)

• FMPs’ development process provides a full understanding of the implications behind every flood risk management measure prior to committing to a measure that may not provide the most effective risk mitigation for particular stakeholders.
• FMPs help in integrating mitigation efforts across departments and jurisdictions to more effectively reduce risks.
• FMPs provide a decision history and can help elected officials address the public’s questions about flood impacts.
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A floodplain management plan (FMP) is a written description of the flood risks and actions a community has taken and will take to address how to mitigate those flood hazards.
USACE uses the ISO Risk Management Model at the right as a main principle of flood mitigation within the Civil Works Program.

When a community applies this as a flood risk management program, that establishes floodplain management planning.

Documenting the process is what a floodplain management plan does.
Corps of Engineers’ Feasibility Phase

Step 1 - Specify Problems and Opportunities

Step 2 - Inventory and Forecast Conditions

Step 3 – Formulate Alternative Plans

Step 4 - Evaluate Alternative Plans

Step 5 - Compare Alternative Plans

Step 6 - Select Recommended Plan
FEMA 10-STEP HAZARD MITIGATION PLANNING PROCESS

Planning process
• 1) organize, 2) involve public, 3) coordinate

Risk assessment
• 4) assess hazard, 5) assess the problem

Mitigation strategy
• 6) set goals, 7) review possible measures or activities, 8) draft an action plan

Floodplain Management Plan maintenance
• 9) adopt plan, 10) implement measures, evaluate and revise annually
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A Unified Program for Floodplain Management began in 1994 and the concepts for FMPs are similar across federal programs.

- **FEMA**
  - Along with the regulation of floodplains for flood insurance, an incentive program is available and guides floodplain management planning (NFIP CRS).
  - Communities may be eligible for grants when documenting hazard mitigation plans for all natural hazards, including flooding.

- **USACE**
  - Communities are required to do FMPs when partnering in construction with USACE (law and guidance).
  - The FPMS program can provide technical expertise in setting up FMPs.
DETAILS ON FLOODPLAIN MANAGEMENT PLANS

• FMPs are a tool that helps a community move toward resilience.
• FMPs attempt to lessen the damaging effects of floods and/or storm surges, maintain and enhance natural floodplain values, and balance and make effective use of water and related land resources within the floodplain.
• FMPs stress consideration of the full range of structural and nonstructural measures potentially useful in achieving its objectives.
• FMPs are about the ongoing activity of risk management and are, in themselves, a measure for driving down flood risks.
• Multiple plans about actions or risk management measures can be combined into one plan, which can reduce the communities’ frustration, improve efficiency, enhance actions, and improve coordination.
DETAILS ON FMPS

Multiple plans about actions or risk management measures can be combined into one plan, which can reduce the communities’ frustration, improve efficiency, enhance actions, and improve coordination.

- Capital Improvement Plan
- Master Plans
- Watershed Planning
- Stormwater Management Plan
- Interim Risk Reduction Measures Plan
- System-Wide Improvement Framework Plan
- Flood Risk Management Program Plan
- Local Hazard Mitigation Plan
THE VALUE IN THE PROCESS

– The value is in the planning process, not in satisfying the requirements in law nor the eligibility for a grant.
– The planning process reveals the appropriate measures for the community and those with whom coordination will improve the chance for success in lowering flood risk as much as is feasible for the community.
WHAT THEY ARE...AND AREN’T

Floodplain management plans (FMPs)...
...are not floodplain ordinances,
...are not emergency action plans,
...do not replace all hazard mitigation plans,
...enhanced flood hazard mitigation planning for the local hazard mitigation plan, and
...are not the tool, but rather the toolbox!
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A SHARED RESPONSIBILITY

Floodplain management planning, and risk management in general, is a responsibility shared by many entities including federal, state, local, and individuals.
The USACE Flood Risk Management Program is the umbrella program for all Corps’ programs related to the hazards of flooding.

Silver Jackets
Flood Plain Management Services
Planning Assistance to States
Emergency Response
P.L. 84-99 Levee Program
Dam & Levee Safety
FRM Business Line

Interagency Levee Task Forces
(on Missouri and Mississippi Rivers)
Coastal Storm Damage Reduction
Public Affairs Office
Planning, Regulatory, Environmental
FRM Planning Center of Expertise
Federal Task Force, E011988, Unified National Plan
R&D, Critical Infrastructure, CERB, IWR International
Interagency Flood Risk Management Committee
AGENCIES AND COMMUNITIES AND TRIBES NEED THIS FLOOD RISK MANAGEMENT UMBRELLA

The levee sponsor, communities, counties and tribes also need a *umbrella program*

for all community's programs related to the hazards of flooding.

- Building Codes
- Emergency Management
- Fire Department
- Public Outreach
- Planning Department
- Department of Engineering
- Department of Public Works
- Levee and Drainage Districts
Within a community, multiple departments have a role in risk management, especially those in public works and emergency management, and the departments can more effectively reduce flood risks when working together when these roles are documented.
### ROLES AND RESPONSIBILITIES

**EXAMPLE WITH A LEVEE DISTRICT**

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<td>Community</td>
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<td>Prevent animal burrows</td>
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<td><strong>Levee Risk Management</strong></td>
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<td>Community</td>
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<td>Raise awareness on flood risk</td>
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<td>Develop emergency action plan</td>
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<td>Document evacuation routes</td>
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<td>Raise the levee height</td>
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#### Role Definitions

- **Responsible**
- **Accountable**
- **Consult**
- **Inform**
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FEDERAL ASSISTANCE WITH FLOOD RISK MANAGEMENT

Some federal programs can address mitigation and do it through the processes defined for FMPs.

FEMA has assistance in several forms.
- FEMA provides annual grants to state hazard mitigation teams.
- FEMA assistance encourages local hazard mitigation plans that include flood hazards.
- FEMA regions have hazard mitigation planners on staff to provide guidance.

USACE provides technical assistance in many ways.
- USACE expertise is not limited to doing risk assessments, such as hydraulic modeling to determine flood risks, but also can be used to develop and do planning work about flood risk management measures.
- USACE has emergency management expertise can aid communities in mitigating flood risks.
- USACE planners can help communities develop FMPs through studies and design work, including public involvement efforts.
CORPS OF ENGINEERS HELP

Flood Risk Management (FRM)

Silver Jackets Program, Interagency Program Guide

National Nonstructural / Flood Proofing Committee

FloodPlain Management Services Program, FPMS Factsheet

Planning Assistance to States, PAS Factsheet

Continuing Authorities Program, FRM FAQ and CAP details
OTHER FEDERAL PARTNERS’ PROGRAMS

DOT Emergency Relief

EPA Water Infrastructure and Finance Innovation Act Program
  – https://www.epa.gov/wifia/learn-about-wifia-program

EPA Green Infrastructure Program
  – https://www.epa.gov/green-infrastructure

EPA Clean Water Act Section 319 Grants

FEMA National Flood Insurance Program
  – https://www.fema.gov/national-flood-insurance-program

FEMA NFIP, the Community Rating System
OTHER FEDERAL PARTNERS’ PROGRAMS

FEMA Flood Mitigation Assistance Grant Program
  – https://www.fema.gov/flood-mitigation-assistance-grant-program

FEMA Hazard Mitigation Grant Program
  – https://www.fema.gov/hazard-mitigation-grant-program

FEMA Public Assistance Grants

HUD Community Development Block Grants
  – https://www.hudexchange.info/programs/cdbg-dr/

NOAA Storm Surge and Coastal Inundation Modeling, Forecasting, and Prediction
  – http://www.stormsurge.noaa.gov/models_obs_modeling.html

NRCS Agricultural Conservation Easement Program

NRCS Emergency Watershed Protection Program

NRCS Watershed and Flood Prevention Operations Program
OTHER FEDERAL PARTNERS’ PROGRAMS

NWS Advanced Hydrologic Prediction Services and River and Flood Forecasts
  – http://water.weather.gov/ahps2/

SBA Disaster Loan Program

USGS National Streamflow Information Program
  – http://water.usgs.gov/nsip/

USGS Assessing Societal Vulnerability to Natural Hazards Program helps identify members of community particularly vulnerable to the impacts of flooding.
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FOLLOW THESE STEPS AND MAKE YOUR PLAYBOOK

A good floodplain management plan is a product of an interactive process with the stakeholders, the public, and the community elected officials or decision makers.

- Understand of the flood risk
- Document the process’ decision history
- Get public participation, list the goals, workout the best measures
- Evaluate every single measure
- List your actions about the right measures
  - What will be done
  - Who will be doing it
  - When

Use the plan to define your communities communication processes, including roles & responsibilities, and a charter of commitment.
FLOOD RISKS DEFINED

Flood hazards that need to be discussed in your floodplain management plan:

- Inundation and Depth
- Velocity
- Proximity of the Population / Consequences
- Rate of Rise

Consider amount of warning time.

Know where critical structures are and what your critical infrastructure is.
GOALS – THE DESTINATION

Agreement is needed on the general goal or goals.

Is the goal to…

- Prevent loss of life?
- Reduce flood damage?
- Restore environmental areas?
- Preserve cultural resources?

These are some possible examples, but they do not include specifics, which would help.
EVALUATING MEASURES

Each measure needs a community-level decision and evaluated with public input. One of these four terms should be tagged to each measure in order to adequately complete an FMP and effectively include the public in the risk informed decision making process:

“Not Recommended”
“Further Study Needed”
“Recommended”
“Effective”

All these terms are needed, as their definitions helped the community to identify the action items in their hazard mitigation efforts.
“Not Recommended” The tool was evaluated and not found to be appropriate for the community.

A feature like Dams may simply not be possible due to lack of real estate.

An activity like Building Codes may not be useful in entirely undeveloped farm land.

“Further Evaluation Needed” The tool is appropriate, but funds needed to study more.

Freeboard Ordinance might need to be compared to potential Zoning.

Channel Widening may need further hydraulic study to address bridges.
“Recommended” The tool has been studied and is known to work in the community, although has yet to be done.

A feature like a Levee awaiting construction funds, design, real estate

An activity like a land regulation needs time to develop before adoption

“Effective” (or “Highly Effective”) These are the tools that have been chosen and implemented, and has proven reduce flood risk.

A Stream Setback Distance that has proven to prevent flood damage

Channel Deepening feature still requires maintenance and scour repair
This is the most important essential element of the FMP.

The list of actions depends on the decisions about the measures.

These actions will be prioritized.

The action list is the basis for the next steps.
ACTIONS - PRIORITY

The FMP becomes a playbook as the terms help the leader that is champion for the FMP translates each measure’s evaluation into an action. The final step will be prioritizing the actions.

- This is informed by the risk portfolio that comes from the risk assessment.
- Identified actions that will get first budget priority.
- Dates should be generally expressed, where at least short-term and long-term items are defined.
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DEVELOPMENT PROCESS

- Identify a planner that will have **responsibility** for the long-term stewardship of the FMP.
- Organize **public involvement**, including between technical experts and then at the level for those unfamiliar with solutions to flood hazards.
  - Gain **public** understanding of the flood risks including a risk assessment that identifies and analyzes the risks.
  - Have the **public** involved in the goals for addressing the floodplain management planning effort, because floodplains can be used many ways and the goals will determine how each measure is evaluated.
  - Get **public engagement** in reviewing measures to increase agreement about the needed actions and document these meetings, including the stakeholders’ views on whether each and every measure is evaluated as Not Recommended, Further Evaluation Needed, Recommended, or Effective.
- Once developed, the lead planner pursue each action
- Revise the FMP periodically, re-evaluate the measures, adopt new priorities
- Be mindful that one community’s developed FMP will be unique and that no standard FMP exists.
FLOODPLAIN MANAGEMENT PLANS ARE A VEHICLE FOR THE PUBLIC SUCCESS

Good floodplain management planning helps us move from…

Informing and listening to the public

Engage in problem solving

Develop agreements on actions needed
PUBLIC INVOLVEMENT

Orbits of Participation

- **Technical Advisory Group (Co-Decision Makers)**, they explain technical details for outer orbits.
- **Public Awareness Workgroup** (Active Participants)
- **Public stakeholders** in project area (Technical Reviewers)
- **Other public participants** that engage (Commenters)
- **General public** (Observers)
PUBLIC INVOLVEMENT APPROACH

Technical Advisory Group
- Study, review, create & prepare technical aspects
- Speak jargon to themselves, not public
- Serve as interagency partners
- Foresight on future conditions
- Support the Floodplain Management Plan

Public Awareness Work-group
- Become educated in flood risks
- Translate complex issues to the rest of the public
- Take information to neighbors
- Bring information to the Technical Advisory Group (TAG)
- Act as cheerleaders for the wise measures
- Enable 2-way engagement

The Public
- Seek information from the Public Awareness Work-group (PAW) & TAG
- Provide information to the PAW & TAG
- Can reduce the flood risks for them and their neighbors
YOUR STAKEHOLDERS

- State Hazard Mitigation Officer (SHMO)
- State Floodplain Administrator
- CORPS OF ENGINEERS Lead Silver Jackets Coordinator
- CORPS OF ENGINEERS FloodPlain Mgmt. Services Project Manager
- NOAA NATIONAL WEATHER SERVICE Weather Forecast Office
- FEMA Hazard Mitigation Planner
- FEMA State NFIP Lead
- FEMA Lead Contractor
- U.S. GEOLOGICAL SURVEY
- NATURAL RESOURCE CONSERVATION SERVICE
- DRAINAGE / WATERSHED AUTHORITY or LEVEE DISTRICTS
- COUNTYS Floodplain Administrator
- TRIBE
- COUNTYS Emergency Manager
PUBLIC AWARENESS WORKING-GROUP (PAW)
As identified by the local champion
(10 – 15 individuals)
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The Menu of Measures may be put in two sets. Many of these items are activities, while some are features that can be built.

**F L O O D W A T E R S**

Physical or structural measures include constructible features such as:
- Detention Basins
- Dams
- Floodwalls
- Levees and Berms
- Channel
  - Straightening
  - Widening
  - Deepening
  - Diversions
- Bridge Enlargements
- Conveyance Modifications

And these activities:
- Clearing and Snagging Debris
- Pumping
- Land Treatment And Infiltration

**F L O O D P L A I N S**

Nonstructural flood proofing measures include:
- Elevation
- Relocation
- Buyout / Acquisition
- Dry Flood Proofing
- Wet Flood Proofing

Nonphysical nonstructural measures include:
- Flood Warning Systems
- Flood Insurance
- Floodplain Mapping
- Flood Emergency Preparedness Plans
- Land Use Regulation
- Zoning
- Evacuation Plans
- Risk Communication
The typical FMP includes

- a simple picture of the risks,
- the list of solutions, and
- prioritized next steps,

This is like a playbook that says who does what and when they will do it.
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### TABLE 9. ACTION ITEMS, GOALS, AND RECOMMENDATIONS.

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<thead>
<tr>
<th>Action Item</th>
<th>Goal: Collaborative Approach</th>
<th>Goal: Manage &amp; Reduce Flood Risks</th>
<th>Goal: Protect Riparian Corridor</th>
<th>Goal: Balance Floodplain Functions</th>
<th>Goal: Improve Public Understanding of Flood Risks</th>
<th>City</th>
<th>County</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adopt the Wildcat Creek Floodplain Management Plan (FMP)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>3 months</td>
</tr>
<tr>
<td>Create a City/County Development Coordination Process</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>3 months</td>
</tr>
<tr>
<td>Amend the Multi-Jurisdictional Hazard Mitigation Plan to include the FMP</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>6 - 12 months</td>
</tr>
<tr>
<td>Research and, if acceptable, form a Wildcat Creek Watershed District</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>2+ years</td>
</tr>
<tr>
<td>Develop a comprehensive flood hazard mitigation plan</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>2+ years</td>
</tr>
<tr>
<td>Adopt Future Conditions model and Flood Insurance Rate Maps</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>1 year</td>
</tr>
<tr>
<td>Research and adopt higher standard flood plain regulations</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>1 year</td>
</tr>
<tr>
<td>Develop a Wildcat Creek recreation plan</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>12 - 18 months</td>
</tr>
<tr>
<td>Develop a comprehensive public outreach plan</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>12 months</td>
</tr>
<tr>
<td>Research and update, where needed development policies and regulations</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>12 months</td>
</tr>
<tr>
<td>Adopt stormwater detention/retention policies</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>12 - 18 months</td>
</tr>
<tr>
<td>Join the Community Rating System</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>12 - 18 months</td>
</tr>
<tr>
<td>Maintain and expand the existing flood warning systems</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>On-going</td>
</tr>
</tbody>
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2. Background
3. Floodplain Management Plans
4. Coordination and Floodplain Management Planning
5. Federal Programs on Floodplain Management
6. Essential Elements of a Floodplain Management Plan
   How To Develop a Floodplain Management Plan
7. The Menu of Measures for Flood Risk Management
8. What a Floodplain Management Plan Looks Like
9. Integration and Coordination Across Departments and Communities
10. Conclusion
The reality is mitigation efforts overlap with other activities in the flood risk management life-cycle, and when departments or various disciplines do not coordinate, we frequently miss opportunities.

People in specific roles and departments are proponents for various measures.
Sound floodplain management planning depends on communities coordinating across multiple entities (cities, counties, levee sponsors, drainage districts) and can clarify overlapping responsibilities to more effectively manage risks.
COORDINATING - EXTERNALLY

Should there be one way communication?

Should there be two way communications in some cases?
Should just the floodplain administrators be talking?

Does the drainage district know the community they are in has to comply with the FEMA NFIP?

This is a good reason to have a charter included within the FMP.
Geographically, FMPs can be adjusted for scale and complexity.

1) A community’s decision about using a particular flood risk management (FRM) measure should be coordinated with adjacent communities because of needed agreement on potential “induced damages” or “adverse impacts” and also to enhance the effectiveness of a measure.
Geographically, FMPs can be adjusted for scale and complexity.

2) a) A community may cover multiple reaches of a stream (and its tributaries) as opposed to one single reach of stream or river.

In situation a), the FMP is scaled for on reach (blue) of the creek.
Geographically, FMPs can be adjusted for scale and complexity.

2) b) A community may cover multiple reaches of a stream (and its tributaries) as opposed to one single reach of stream or river.

But when time, money, and multiple communities are ready, b), the FMP is effort can be more expanded, such as 5 reaches.
Geographically, FMPs can be adjusted for scale and complexity.

3) A watershed approach (systems approach) can be used and may help resolve multiple issues when multiple communities share a basin, although the effort (and cost) begins to significantly increase, but the rewards may be found in long-term understandings and responsibilities for agreed FRM measures that all parties in the watershed gain consensus on.
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9. Integration and Coordination Across Departments and Communities
10. **Conclusion**
ONE EXAMPLE SET OF TOOLS

RESILIENCE

COMBINED ACTIONS THAT MAY BE DONE OVER TIME

Improved Level of Resilience Using a Variety of Tools

Combined Effect To Level of Resilience with Various Actions
To achieve the highest level of resilience requires collaboration. We’re better together. That’s how you achieve lower risk and a resilient state.
Floodplain Manager / Administrator
Flood Risk Manager
Floodplain Leader
Newly elected local official

Awareness of community’s flood risk

Decision to address missing flood resiliency

Interactive problem solving

Local Champion
PERIODIC DIALOGUE ACROSS DEPARTMENTS, ROLES, AND WITH ALL THE STAKEHOLDERS WILL RESULT IN SHARED RESPONSIBILITY AND MOVE THE ENTIRE COMMUNITY TOWARD RESILIENCY

Like the thread in a patch-work quilt, a Floodplain Management Plan weaves it all together.
THANKS FOR YOUR TIME!
A floodplain management plan is a playbook for managing flood risks. These plans typically have the following main elements:

- **Risk Assessment** - Understand the flood risk
- **Evaluation of All Measures** - Document the decision history about the full menu of flood risk management measures (physical and nonphysical) (features and activities)
- **Risk Informed Decision Making** - Get public participation
- **List** - Prioritize the community’s risk management actions (measures)
  - What will be done
  - When
  - Who will be doing it

**Funding Justification** - Use the plan to help local elected officials understand the prioritized actions, as well as communication processes, roles & responsibilities, and flood story
FOR MORE INFORMATION

Corps of Engineers Silver Jackets interagency FMP example
http://silverjackets.nfrmp.us/Portals/0/doc/Kansas/19068.pdf

City of Manhattan, KS website for adopted plans Big Blue and Wildcat
http://knowyourfloodriskmhk.com/
http://cityofmhk.com/2150/Wildcat-Creek-Floodplain-Management-Plan

Conflict Resolution & Public Participation Center of Expertise
www.iwr.usace.army.mil/cpc

Corps of Engineers Nonstructural Flood Proofing Committee

Corps of Engineers IWR Public Awareness and Communication Team
Brian Rast: brian.t.rast@usace.army.mil