Chapter 17
Developing and Implementing a Local Floodplain Management Program

Chapter Overview
A local program can consist of both community and individual actions. This chapter outlines the procedures and components of a program and touches on problems that might be encountered.

Community Action
A comprehensive community floodplain management program should include the broad objectives of:
- Flood damage reduction
- Preserving and restoring the floodplain’s natural and beneficial resources

Whether there is a commitment to a comprehensive program will depend on several factors:
- Past flood history (frequency of flooding) – local action is often a response to flooding
- Nature and extent of flood damage (some property owners have more political power)
- Type and extent of development
- Citizen interest and involvement
- Available resources and their commitment (funding for studies, staff for planning and implementation)
- Involvement of influential community leaders
- View that floodplain management is in the community interest, that flood damage reduction and prevention and resource protection outweigh unwise development that may in the short-term means jobs and community revenue, but in the long term become a liability
- Sources and extent of outside assistance and expertise (including paid consultants)
- State and federal requirements (laws and programs, e.g., National Flood Insurance Program [NFIP])

Program Development
Development of a program needs to involve
1. Understanding of the magnitude and extent of the flood problem. A start is a community flood study, typically prepared by a federal agency for a program (NFIP) or through a service, e.g., U.S. Army Corps of Engineers, Natural Resources Conservation Service.
2. Understanding the reasons and approaches for effective management of floodplain natural and beneficial resources, including their restoration and associated outdoor recreational opportunities.
3. Establishing of objectives
   - Meeting state and federal requirements
   - Community flood loss reduction and prevention
     - Existing structures and facilities
     - Preventing or limiting future development
Preserving natural and beneficial resources (few communities have adopted this objective)

Multi-faceted, multi-purpose, multi-objective programs are likely to be more effective and supportive

4. Organizing for planning

- Leadership assigned to a single office or department
- Floodplain study committee: composition – citizen, engineer, natural resources manager, architect, builder, planning commission member, neighborhood representative, realtor, business representative, civic group representative, special interests
- Community consultant (prepare report or study)

All of the above program development activities may involve the provision of data and technical assistance from a state and/or federal agency. Study results and recommendations are reviewed with the public and community decision-makers.

Selection of Measures

The local legislative body, using the study recommendations and input from professional staff and affected citizens, usually carries out the selection of measures to be implemented. Selected measures may be both short-term and long-term.

Short-term strategies

These strategies usually are those within community capability; which establish future community policies, e.g., development controls and provision of services and facilities; and which satisfy state and/or federal laws and requirements. At little extra cost, they ensure at least some relief of existing problems and slow the further growth of potential problems while other measures requiring longer periods of analysis are planned and implemented.

In nearly all instances and situations, recommendations are made to:

- Adopt or strengthen floodplain regulations
- Continue community participation in the NFIP and encourage individual purchase of flood insurance
- Expand public information about floods, causes, and individual measures and adjustments that can be carried out
- Expand public information about the need to protect floodplain natural resources and the tools available for maintenance and restoration of these resources
- Adjust public policies on provision of services and utilities

Long-term strategies

These strategies may require additional studies and investigations to determine relative costs, benefits, financing (including outside funding), and implementation scheduling. They include:

- Structural flood control measures (dams, levees, floodwalls, detention measures, channel modifications
- Redevelopment of damaged/blighted areas
- Structural adjustments to buildings (elevation, retrofitting)
- Flood warning and emergency preparedness measures
- Evacuation and relocation
- Acquisition of properties or neighborhoods for flood loss reduction, including resource restoration where applicable
- Other resource protection/restoration measures

Before implementation they require:
- Development of construction plans or specifications
- Financing
- Arrangements for construction or implementation

They may require years or even decades to implement, particularly if federal agencies are involved in providing major financial assistance.

Approximately 18,000 of some 20,000 – 21,000 identified flood-prone communities and counties have adopted floodplain management measures. With few exceptions, they have adopted floodplain regulations and participate in the National Flood Insurance Program. Those that have more comprehensive programs only number in the hundreds.

**Problems Involving Implementation, Administration, or Maintenance of Specific Measures**

1. Ordinances – understanding and enforcing special requirements, acceptance of need for regulations, awareness of where to go for assistance. Issues of restricting development for the purpose of protecting natural resources and associated functions.
2. Flood insurance – maintaining interest in having insurance coverage, particularly after long periods between floods.
3. Public information – maintaining programs and interest under above circumstances (how to capture and retain public interest)
4. Public policies – maintaining policies under changing administrations and department personnel; overcoming modifications or elimination of policies to save money to meet other community needs.
5. Structural measures – maintaining interest and local involvement during long periods (sometime decades) required for implementation; operation and maintenance (O&M) budgeting; assignment of responsibilities for O&M
6. Structural adjustments to buildings – maintenance and repair; transfer of information and needed contingency measures to new owners
7. Flood warning and emergency preparedness – maintaining and servicing system; periodic tests and drills; maintaining public awareness, interest and involvement; temporary evacuation issues (e.g., public response, mobility, evacuation routes, shelters, property protection)
8. Acquisition and relocation – loss of tax and utility base; relocation of displaced families; affordable safe and sanitary housing for these families; enforcement of land use regulations and other public policies to prevent redevelopment of acquired properties; property maintenance
9. Resource protection measures – much of the private sector, particularly developers, appear not to be aware of the natural and cultural resources of floodplains, and the benefits these resources provide to the community.
Involving Property Owners

Property owner involvement can take place in one or more of the following ways: 1) in initial siting and construction, 2) mitigating existing problems, and 3) in post-flood recovery. It has not been given a very important role except for participation in the National Flood Insurance Program.

This lack of emphasis has resulted partially from the belief that they were apathetic or unwilling to participate. Because of the lack of success of federal and state solutions to local flood problems and resource management, programs should be developed that provide more emphasis on owner-oriented efforts.

But this strategy begs the question as to whether homeowners would be willing to carry out flood damage reduction and resource protection/restoration measures if there were programs that gave them technical and financial assistance. In addition, there was always the concern regarding the effectiveness of owner-involved measures. Effectiveness would be tied to owner understanding of possible measures that could be applied to owner expertise and skill in constructing or carrying out the measures. Any assistance program would have to recognize these situations.

To successfully involve homeowners in planning and carrying out individual flood damage reduction and resource protection/restoration measures requires:

- Improving information so that what can be done and the results can be adequately understood. Use insurance premium notice mailing as an educational tool.
- Taking advantage of “timing” opportunities, particularly after a flood has occurred, in reconstruction and other recovery activities. Consider measures that can be implemented fairly rapidly while other comprehensive community measures are planned and carried out.
- Financing, including low-interest revolving loan funds.

Homeowners might support individual measures if they were explained fully to them, if government provided financial support, and if implemented in a very timely fashion.
Measures that might be undertaken:

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<thead>
<tr>
<th>Locational Decisions and Construction</th>
<th>Existing Construction</th>
<th>Post-flood Recovery</th>
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<tbody>
<tr>
<td>Avoid flood-prone areas</td>
<td>Protection of additions to the regulatory flood</td>
<td>Generally the same as those under “existing construction” with emphasis on:</td>
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<tr>
<td>Adjust to the flood risk if in a hazard area (elevation, structural modification)</td>
<td>Individual protective measures (dikes, walls, pumps)</td>
<td>What was damaged?</td>
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<tr>
<td>Purchase flood insurance</td>
<td>Structural retrofitting</td>
<td>What caused the damage?</td>
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<td>Avoid locations containing high concentrations of natural resources or that provide important natural functions</td>
<td>Reordering of systems and contents</td>
<td>How it might have been reduced or avoided.</td>
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<td>Minimize resource loss in site preparation and construction activities</td>
<td>Relocation from the floodplain</td>
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<td>Elevation in place</td>
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<td></td>
<td>Flood insurance</td>
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<td></td>
<td>Investigate opportunities to restore lost or diminished natural resources</td>
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