

Name: \_\_\_\_\_

Municipality: \_\_\_\_\_

## FLOOD SOLUTIONS WORKSHEET

As you listen to and participate in discussions of alternative techniques for reducing flood damages, record your ideas and thoughts on this worksheet. Check those ideas that might work in your community. Specify the geographic areas for applying these solutions.

### Alternative Flood Damage Reduction Techniques

#### PUBLIC INFORMATION

##### Information About Flood Insurance Rate Maps

- \_\_\_\_\_ Post floodplain maps in municipal buildings
- \_\_\_\_\_ Map determinations (flood zone for a particular property or structure)
- \_\_\_\_\_ Provide information about additional locations with known flood problems (riverine flooding, shallow water table, bank erosion, etc.)
- \_\_\_\_\_ Other: \_\_\_\_\_

##### Flood Information Outreach Projects

- \_\_\_\_\_ Newsletter article in \_\_\_\_\_
- \_\_\_\_\_ Enclosure in utility bills \_\_\_\_\_
- \_\_\_\_\_ Direct mailing to \_\_\_\_\_
- \_\_\_\_\_ Special outreach project \_\_\_\_\_
- \_\_\_\_\_ Other: \_\_\_\_\_

##### Real Estate Disclosure

- \_\_\_\_\_ Education of potential property buyers
- \_\_\_\_\_ Education of real estate agents
- \_\_\_\_\_ Mandatory disclosure of flood history by real estate agents
- \_\_\_\_\_ Other: \_\_\_\_\_

##### Provide References to Public Library

- \_\_\_\_\_ Current Flood Insurance Rate Maps
- \_\_\_\_\_ Flood insurance information
- \_\_\_\_\_ Information about protecting buildings from flooding
- \_\_\_\_\_ Documents on community floodplain management and flood hazard mitigation
- \_\_\_\_\_ Information about the natural and beneficial functions of floodplains
- \_\_\_\_\_ Local accounts of past flood events
- \_\_\_\_\_ Directory of sources for additional information on these topics
- \_\_\_\_\_ Other: \_\_\_\_\_

**Provide Technical Assistance**

- \_\_\_\_\_ Site-specific information about historic flood events
- \_\_\_\_\_ Names of contractors and consultants knowledgeable or experienced in retrofitting techniques and construction
- \_\_\_\_\_ Material on how to select a qualified contractor and what recourse people have if they are dissatisfied with a contractor’s performance
- \_\_\_\_\_ Site visits to review flooding, drainage, and sewer problems or provide advice on contemplated development
- \_\_\_\_\_ Advice and assistance on retrofitting techniques
- \_\_\_\_\_ Other: \_\_\_\_\_

**Environmental Education**

- \_\_\_\_\_ Education programs for children
- \_\_\_\_\_ Education programs for adults
- \_\_\_\_\_ Other: \_\_\_\_\_

**PREVENTIVE ACTIVITIES**

**Floodplain Regulations**

- \_\_\_\_\_ Training for local officials (Code Enforcement Officer, Planning Board, etc.)
- \_\_\_\_\_ Adopt updated NYS Model Law
- \_\_\_\_\_ Revise law to require building elevation 2 feet above base flood elevation
- \_\_\_\_\_ Revise law to include additional flood-prone areas
- \_\_\_\_\_ Update Flood Insurance Rate Maps (restudy, amend, or revise)
- \_\_\_\_\_ Require that all new buildings in and out of the designated floodplain be elevated above historic high water levels
- \_\_\_\_\_ Other: \_\_\_\_\_

**Conventional Zoning**

- \_\_\_\_\_ Low-density zoning
- \_\_\_\_\_ Depth restrictions for basements at \_\_\_\_\_
- \_\_\_\_\_ Standards for private bridges
- \_\_\_\_\_ Standards for driveways and driveway culverts
- \_\_\_\_\_ Maximum lot coverage for impervious surfaces
- \_\_\_\_\_ Other: \_\_\_\_\_

**Subdivision Regulations**

- \_\_\_\_\_ Require that each lot include a safe building site at an elevation above selected flood heights (either by a lot layout that enables out-of-the-floodplain construction or by filling a portion of each lot)
- \_\_\_\_\_ Require placement of streets above selected flood protection elevations
- \_\_\_\_\_ Require placement of public utilities above selected flood protection elevations
- \_\_\_\_\_ Prohibit encroachment of floodway
- \_\_\_\_\_ Require that flood hazard areas be shown on plat
- \_\_\_\_\_ Require adequate drainage facilities
- \_\_\_\_\_ Other: \_\_\_\_\_

**Cluster Development**

- Cluster development provisions
  - in zoning ordinance
  - in subdivision ordinance
  - as a separate ordinance
- Other: \_\_\_\_\_

**Open Space Preservation**

- Stream setback requirement
- Lake shore setback requirement
- Vegetated buffer strips along \_\_\_\_\_
- Conservation District or other restrictive development regulations \_\_\_\_\_
- Agricultural districts
- Parks, preserves, or recreation areas \_\_\_\_\_
- Transferable development rights
- Land use easements \_\_\_\_\_
- Apply floodway development standards to wider area along \_\_\_\_\_
- Other: \_\_\_\_\_

**Stormwater Management**

- Stormwater management plan for \_\_\_\_\_ watershed(s)
- Stormwater management regulations
  - in zoning ordinance
  - in subdivision ordinance
  - as a separate ordinance
- Stormwater management regulations for timber harvesting
- Education and technical assistance
- Design and construction of regional stormwater management facilities
  - to address existing problems at \_\_\_\_\_
  - in anticipation of future development at \_\_\_\_\_
- Inspection and maintenance of stormwater management facilities
- Other: \_\_\_\_\_

**Drainage System Maintenance**

- Line item in budget for drainage system maintenance
- Debris removal when problems occur
- Routine inspection and removal of debris \_\_\_\_\_ times per year
- Written drainage system maintenance plan (specifying maintenance needs and responsibilities)
- Establish a drainage district
- Channel/bank stabilization on \_\_\_\_\_
- Debris basin(s) on \_\_\_\_\_
- Other: \_\_\_\_\_

**NATURAL RESOURCE PROTECTION**

**Wetlands**

- \_\_\_\_\_ Protect existing wetlands at \_\_\_\_\_
- \_\_\_\_\_ Enlarge existing wetlands at \_\_\_\_\_
- \_\_\_\_\_ Create new wetlands at \_\_\_\_\_
- \_\_\_\_\_ Other: \_\_\_\_\_

**Erosion and Sediment Control**

- \_\_\_\_\_ Channel/bank stabilization of \_\_\_\_\_
- \_\_\_\_\_ Erosion and sediment control at new development
  - \_\_\_\_\_ through regulation
  - \_\_\_\_\_ through education and technical assistance
- \_\_\_\_\_ Other: \_\_\_\_\_

**Best Management Practices**

- \_\_\_\_\_ Agriculture
  - \_\_\_\_\_ education and technical assistance
  - \_\_\_\_\_ financial incentives
- \_\_\_\_\_ Timber harvesting
  - \_\_\_\_\_ regulations
  - \_\_\_\_\_ education and technical assistance
- \_\_\_\_\_ Other: \_\_\_\_\_

**PROPERTY PROTECTION**

**Relocation**

- \_\_\_\_\_ Relocation of building(s) from \_\_\_\_\_
- \_\_\_\_\_ Other: \_\_\_\_\_

**Acquisition**

- \_\_\_\_\_ Acquisition of undeveloped flood-prone property at \_\_\_\_\_
- \_\_\_\_\_ Acquisition and demolition of buildings at \_\_\_\_\_
- \_\_\_\_\_ Acquisition of development rights or easements at \_\_\_\_\_
- \_\_\_\_\_ Other: \_\_\_\_\_

**Building Elevation**

- \_\_\_\_\_ Elevate existing building(s) at \_\_\_\_\_
- \_\_\_\_\_ Other: \_\_\_\_\_

**Floodproofing of Buildings and Sewer Backup Protection**

- \_\_\_\_\_ Distribute information about floodproofing techniques
- \_\_\_\_\_ Technical assistance
- \_\_\_\_\_ Financial assistance \_\_\_\_\_
- \_\_\_\_\_ Other: \_\_\_\_\_

**Infrastructure Protection**

- \_\_\_\_\_ Design standards for new or replaced bridges and culverts
- \_\_\_\_\_ Mitigation of existing problems at \_\_\_\_\_
- \_\_\_\_\_ Debris removal when problems occur
- \_\_\_\_\_ Routine inspection and maintenance
- \_\_\_\_\_ Other: \_\_\_\_\_

**Insurance**

- \_\_\_\_\_ Education of property owners
- \_\_\_\_\_ Education of insurance agents, mortgage lenders, and real estate agents
- \_\_\_\_\_ Community Rating System (to reduce insurance premiums)
- \_\_\_\_\_ Other: \_\_\_\_\_

**STRUCTURAL PROJECTS**

**Reservoirs**

- \_\_\_\_\_ New water retention structures in \_\_\_\_\_ watershed
- \_\_\_\_\_ Identify and maintain existing ponds and retention structures
- \_\_\_\_\_ Other: \_\_\_\_\_

**Levees and Floodwalls**

- \_\_\_\_\_ New levee along \_\_\_\_\_
- \_\_\_\_\_ Increased protection of existing levee along \_\_\_\_\_
- \_\_\_\_\_ Maintain existing dike system
- \_\_\_\_\_ Other: \_\_\_\_\_

**Diversions**

- \_\_\_\_\_ High flow diversion channel at \_\_\_\_\_
- \_\_\_\_\_ Other: \_\_\_\_\_

**Channel Modifications**

- \_\_\_\_\_ Removal of sand bars or islands from \_\_\_\_\_
- \_\_\_\_\_ Straightening, widening, or deepening of \_\_\_\_\_
- \_\_\_\_\_ Channel paving of \_\_\_\_\_
- \_\_\_\_\_ Other: \_\_\_\_\_

**Storm Sewers**

- \_\_\_\_\_ Storm sewer installation at \_\_\_\_\_
- \_\_\_\_\_ Increased storm sewer capacity at \_\_\_\_\_
- \_\_\_\_\_ Inspection and maintenance of existing storm sewer at \_\_\_\_\_
- \_\_\_\_\_ Other: \_\_\_\_\_

**EMERGENCY SERVICES**

**Flood Warning**

- \_\_\_\_\_ Rain gauges
  - \_\_\_\_\_ Automated gauges at \_\_\_\_\_
  - \_\_\_\_\_ Volunteer reporting \_\_\_\_\_
- \_\_\_\_\_ Stream/river/lake level gauges
  - \_\_\_\_\_ Automated gauges at \_\_\_\_\_
  - \_\_\_\_\_ Staff gauges at \_\_\_\_\_
  - \_\_\_\_\_ Historic information for \_\_\_\_\_
  - \_\_\_\_\_ Stage relation information for \_\_\_\_\_
- \_\_\_\_\_ Local flood forecast center (operated by Environmental Emergency Services)
- \_\_\_\_\_ Other: \_\_\_\_\_

**Flood Response**

- \_\_\_\_\_ Flood stage forecast maps for \_\_\_\_\_
- \_\_\_\_\_ Emergency plan for municipality (command structure, communication procedures, emergency flood proofing measures, evacuation procedures, etc.)
- \_\_\_\_\_ Other: \_\_\_\_\_

**Critical Facilities Protection**

- \_\_\_\_\_ Protection or relocation of critical facilities (sites with toxic materials, medical facilities, emergency operation centers, utilities) \_\_\_\_\_
- \_\_\_\_\_ Emergency plan for critical facilities \_\_\_\_\_
- \_\_\_\_\_ Other: \_\_\_\_\_