

FLOODING - EXAMPLE MITIGATION PROJECTS

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	Prevention	
1		Create planning and zoning guidelines to preserve open space within the floodplain
2		Develop storm water management guidelines
3		Update floodplain ordinances with new DFIRM to protect future development
4		Implement a policy for residential and non-residential approach permits which includes installation standards and enforcement
5		Use conservation easements in high hazard areas such as flood prone areas to prevent future development.
6		Determine feasibility of regulating development within unmapped flood prone and channel migration zones.
7		Use State model floodplain ordinance to revise county flood ordinance.
	Property Protection	
8		Create structural openings in foundation walls allowing floodwaters in and out, thus avoiding collapse
9		Protect sewers from backing up by installing back-flow valves
10		Installing backflow valves or plugs in drains and toilets to prevent floodwaters from entering buildings
11		Purchase and instal sump pumps with back-up power
12		Obtain river gauges where needed for modeling and flood prediction.
13		Remove woody vegetation from the edge of levees and dikes
14		Relocate, elevate and/or floodproof structures which have been repeatedly flooded
15		Complete an engineering study of what needs to be done to mitigate flooding in flood-prone areas
16		Install security fencing and signage on levees and dikes
17		Consider forming a flood control district to address concerns with the dikes/levees.
18		Perform maintenance on drainage systems
19		Identify and secure use of emergency retention ponds
20		Relocate furnaces, hot water heaters, and electrical panels from flood-prone areas
	Natural Resource Protection	
21		Protect wetlands that can be used for flood control
22		Restore connectivity of floodplain and function around former facilities.
	Structural Projects	
23		Install culverts in areas where water runoff is problematic.
24		Construct levees/floodwalls/dikes
25		Repair impaired bridges
26		Replace culverts with bridges to mitigate impacts of runoff
27		Reduce flooding by installing drainage ditches
28		Resize and upgrade culverts in various locations throughout the county.
29		Identify locations throughout the county where culverts are needed
30		Increase stormwater systems in poor drainage areas.
31		Upgrade bridges, culverts, and roads to allow sufficient passage of floodwaters.
32		Continue to implement storm water plan.
33		Determine mitigation for waste-water lagoons which are in mapped flood hazard area.

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34		Encourage MDT to implement appropriate mitigation for highways that flood.
35		Replace rip-rap to preserve integrity of bridges where compromised.
36		Encourage responsible agency to remove debris in creeks to maintain integrity of culverts and bridge.
37		Consider ice jam mitigation for vulnerable segments of rivers.
38		Elevate community water supply wells where vulnerable to flooding.
39		Maintain the existing stormwater infrastructure to mitigate impacts from flash flooding.
40		Evaluate feasibility of creating a flood channel to redirect a portion of high water flow
41		Review use of detention ponds to mitigate flooding at problem areas within the county.
<i>Emergency Services</i>		
42		Develop flood warning system
43		Establish flood response activities
44		Protect critical facilities
		Conduct exercises on levee failure/breach.
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<i>Public Outreach and Education</i>		
46		Provide flood maps for real estate disclosure
47		Educate homeowners on the advantages of purchasing flood insurance through the National Flood Insurance Program.
48		Work towards achieving a lower rating through the National Flood Insurance Program Community Rating System.
49		Participate in the National Weather Service's Flood Awareness Week
50		Provide awareness training to repetitive loss property owners (and others) on mitigation programs to relocate, elevate, and floodproof structures in the floodplain
51		Provide bulletins as needed in agricultural areas that livestock grazing and farm equipment in floodplains should include a high spot where animals can evacuate to.
52		Educate county residents on what must be done to manage storm water in the community.
53		Distribute information about building in the floodplain.
54		Continue compliance with the National Flood Insurance Program and the County Flood Ordinance.
55		Consider joining the Community Rating System volunteer incentive program.
56		Educate development community (including surveyors, builders, realtors, and developers) on floodplain building requirements.
57		Provide awareness training to repetitive loss property owners (and others) on mitigation programs to relocate, elevate, and floodproof structures in the floodplain.
58		Promote personal responsibility to protect individual private property from flooding.
<i>Mapping/Analysis/Planning</i>		
59		Assess vulnerability of wastewater treatment plant to flooding or levee damage.
60		Complete floodplain mapping
61		Complete elevation survey of structures in floodplain
		Develop a stormwater management plan