

# APPENDIX C: MITIGATION ALTERNATIVES AND PRIORITIZATION

## Example Mitigation Action Items

Alternative Mitigation Actions	Dam Failure	Floods	Hazardous Materials	Avalanche Landslides/ Debris Flows/ Rockfalls	Weather Extremes (hail, lightning, wind, temps, drought)	Earthquakes	Wildland Fires	Severe Winter Storm
<b>PREVENTION</b>								
Building codes and enforcement		■	■	■	■	■	■	■
Comprehensive Watershed Tax		■						
Density controls	■	■	■	■			■	
Design review standards		■	■	■		■	■	
Easements		■	■	■			■	
Environmental review standards		■	■	■		■	■	
Floodplain development regulations	■	■	■					
Hazard mapping	■	■	■	■			■	
Floodplain zoning	■	■	■					
Forest fire fuel reduction			■				■	
Housing/landlord codes			■		■			
Slide-prone area/grading/hillside development regulations				■			■	
Manufactured home guidelines/regulations		■			■	■		
Minimize hazardous materials waste generation			■					
Multi-Jurisdiction Cooperation within watershed	■	■						
Open space preservation	■	■		■			■	
Performance standards	■	■		■	■	■	■	■
Periodically contain/remove wastes for disposal			■					
Pesticide/herbicide management regulations			■					
Special use permits	■	■	■	■			■	
Stormwater management regulations		■	■					
Subdivision and development regulations	■	■	■	■		■	■	
Surge protectors and lightning protection					■			

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Tree Management					■		■	■
Transfer of development rights		■		■			■	
Utility location			■	■	■			■
<b>PROPERTY PROTECTION</b>								
Acquisition of hazard prone structures	■	■		■			■	
Facility inspections/reporting	■	■	■			■		
Construction of barriers around structures	■	■	■					
Elevation of structures	■	■						
Relocation out of hazard areas	■	■	■	■			■	
Structural retrofits (e.g., reinforcement, floodproofing, bracing, etc.)		■	■		■	■	■	■
<b>PUBLIC EDUCATION AND AWARENESS</b>								
Debris Control		■		■				
Flood Insurance	■	■						
Hazard information centers	■	■	■	■	■	■	■	■
Public education and outreach programs	■	■	■	■	■	■	■	■
Real estate disclosure	■	■	■	■	■	■	■	■
Crop Insurance					■	■		
Lightning detectors in public areas					■			
<b>NATURAL RESOURCE PROTECTION</b>								
Best Management Practices (BMPs)		■	■	■	■		■	
Forest and vegetation management	■	■		■	■		■	■
Hydrological Monitoring	■	■	■	■	■			
Sediment and erosion control regulations	■	■	■	■				
Stream corridor restoration		■		■				
Stream dumping regulations		■	■					
Urban forestry and landscape management		■		■	■		■	■
Wetlands development regulations		■	■	■			■	

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<b>EMERGENCY SERVICES</b>								
Critical facilities protection	■	■	■	■	■	■	■	■
Emergency response services	■	■	■	■	■	■	■	■
Facility employee safety training programs	■	■	■	■	■	■	■	■
Hazard threat recognition	■	■	■	■	■	■	■	■
Hazard warning systems (community sirens, NOAA weather radio)	■	■	■	■	■	■	■	■
Health and safety maintenance	■	■	■	■	■	■	■	■
Post-disaster mitigation	■	■	■	■	■	■	■	■
Evacuation planning	■	■	■	■			■	
<b>STRUCTURAL PROJECTS</b>								
Channel maintenance		■						
Dams/reservoirs (including maintenance)	■	■						
Isolate hazardous materials waste storage sties			■					
Levees and floodwalls (including maintenance)		■						
Safe room/shelter					■	■		■
Secondary containment system			■					
Site reclamation/restoration/revegetation		■	■	■				
Snow fences								■
Water supply augumentation					■			

## ***Mitigation Action Selection and Prioritization Criteria***

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Does the proposed action protect lives?

Does the proposed action address hazards or areas with the highest risk?

Does the proposed action protect critical facilities, infrastructure, or community assets?

Does the proposed action meet multiple objectives (multi-objective management)?

### **STAPLE/E**

Developed by FEMA, this method of applying evaluation criteria enables the planning team to consider in a systematic way the social, technical, administrative, political, legal, economic, and environmental opportunities and constraints of implementing a particular mitigation action. For each action, the HMPC should ask, and consider the answers to, the following questions:

#### ***Social***

Does the measure treat people fairly (different groups, different generations)?

#### ***Technical***

Will it work? (Does it solve the problem? Is it feasible?)

#### ***Administrative***

Is there capacity to implement and manage project?

#### ***Political***

Who are the stakeholders? Did they get to participate? Is there public support? Is political leadership willing to support it?

#### ***Legal***

Does your organization have the authority to implement? Is it legal? Are there liability implications?

#### ***Economic***

Is it cost-beneficial? Is there funding? Does it contribute to the local economy or economic development? Does it reduce direct property losses or indirect economic losses?

#### ***Environmental***

Does it comply with environmental regulations or have adverse environmental impacts?