

Local Hazard Mitigation Plan Quality Protocol

Center for Sustainable Community Design
UNC Institute for the Environment*

**Center for the Study of Natural Hazards and
Disasters**

DHS Coastal Hazards Center of Excellence *

***University of North Carolina at Chapel Hill**

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Part 1: Plan Basics		
	Code	Comments
Coding Categories: 0 = not present 1 = present		
1.1	Date	
1.2	Multi-Jurisdictional	
1.3	Update	

Part 2: Participation		
	Code	Comments
Coding Categories: 0 = not present 1 = present		
2A - Public Engagement Techniques		
2A.1	Citizen Advisory Committee	
2A.2	Identifying Emergency Organizations Post-Event	
2A.3	Information Distribution	
2A.4	Open Meetings/Workshops	
2A.5	Public Notice	
2A.6	Targeted Outreach	
2A.7	Website	
Coding Categories: 0 = not present 1 = mentioned, but not detailed 2 = mentioned and detailed		
2B - Develop and Update Plan		
2B.1	Documents Planning Process	
2C - Organizational Roles		
2C.1	Support Plan Development	
2C.2	Why Involved	

Part 3: Inter-Organizational Coordination		
	Code	Comments
Coding Categories: 0 = not present 1 = present		
3A - Organizational Involvement		
3A.1	Budget/Revenue/Finance Agency	
3A.2	Business Groups	
3A.3	County Building Department/Permit Office	
3A.4	County Emergency Management Agency	
3A.5	County Executive's Office	
3A.6	County Legislative Body	
3A.7	County Planning/Community Development Agency	
3A.8	Developers/Homebuilders	
3A.9	Economic Development	
3A.10	Environmental Groups	
3A.11	Federal Other Agency	
3A.12	FEMA	
3A.13	Fire Department	
3A.14	Housing Agency	
3A.15	Media	
3A.16	Municipal Building Department/Permit Office	
3A.17	Municipal Emergency Management Agency	
3A.18	Municipal Executive's Office	

(3A - continued)	Code	Comments
3A.19 Municipal Legislative Body		
3A.20 Municipal Planning/Community Development Agency		
3A.21 Neighborhood Groups		
3A.22 NFIP Coordinator/Floodplain Management Office		
3A.23 NOAA/NWS		
3A.24 Other Local Jurisdictions		
3A.25 Parks/Land Conservation/Environment Agency		
3A.26 Police Department		
3A.27 Professional Organizations		
3A.28 Public Health Agency		
3A.29 Public Works		
3A.30 Regional Planning Government/Organization		
3A.31 School District		
3A.32 State Coastal Department/Agency		
3A.33 State Emergency Management Department/Agency		
3A.34 State Natural Resources/Environment Department/Agency		
3A.35 State Other Department/Agency		
3A.36 State Planning Department/Agency		

(3A - continued)	Code	Comments
3A.37 State Sea Grant		
3A.38 State Transportation Department/Agency		
3A.39 Transportation Agency		
3A.40 Unaffiliated Individuals		
3A.41 Utilities		
3A.42 Water/Sewerage District		

3B - Plan Integration		
Coding Categories:		
0 = not present		
1 = mentioned, but not detailed		
2 = mentioned and detailed		
3B.1 Adjacent Jurisdiction Hazard Plans		
3B.2 Climate Change Plan		
3B.3 Comprehensive Land Use Plan Overall		
3B.4 Comprehensive Land Use Plan Fact Base		
3B.5 Comprehensive Land Use Plan Goals		
3B.6 Comprehensive Land Use Plan Monitoring and Implementation		
3B.7 Comprehensive Land Use Plan Strategy and Policies		
3B.8 Disaster Recovery Plan		
3B.9 Emergency Operations Plan		
3B.10 Flood Mitigation Plan		
3B.11 State Hazard Mitigation Plan		

Part 4: Hazard Identification/Risk Assessment		
	Code	Comments
Coding Categories: 0 = not present 1 = present		
4A - Hazard ID		
4A.1	Climate Change	
4A.2	Coastal Erosion	
4A.3	Dam Failure	
4A.4	Drought	
4A.5	Earthquakes	
4A.6	Extreme Temperatures (Cold)	
4A.7	Extreme Temperatures (Heat)	
4A.8	Fire	
4A.9	Floods	
4A.10	Hurricanes/Coastal Storms	
4A.11	Landslides	
4A.12	Man Made/Technological	
4A.13	Other	
4A.14	Sea Level Rise	
4A.15	Severe Storms	
4A.16	Subsidence/Sinkholes	
4A.17	Tornadoes	
4A.18	Tsunamis	
4A.19	Volcanoes	
4A.20	Winter Storms	

	Code	Comments
4B - Hazard Prioritization		
4B.1	Factors Used	
4B.2	Prioritization Classification Used	

Coding Categories:

0 = not present

1 = mentioned, but not detailed

2 = mentioned and detailed

4C - Hazard Assessment - Coastal Erosion

4C.1	Delineates Likelihood of Erosion		
4C.2	Delineates Location and Boundaries of Hazardous Areas		
4C.3	Delineates Magnitude and Severity of Erosion		
4C.4	Delineates Separate Characteristics of Coastal Erosion		
4C.5	Includes Information on Past Coastal Erosion		

4D - Hazard Assessment - Earthquakes

4D.1	Delineates Likelihood of Earthquakes		
4D.2	Delineates Location and Boundaries of Hazardous Areas		
4D.3	Delineates Magnitude and Severity of Earthquake Hazards		
4D.4	Delineates Separate Characteristics of Earthquakes		
4D.5	Includes Information of Previous Earthquakes		

4E - Hazard Assessment - Floods

4E.1	Delineates Likelihood of Flood Events		
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(4E - Continued)		Code	Comments
4E.2	Delineates Location and Boundaries of Hazardous Areas		
4E.3	Delineates Magnitude and Severity of Flood Hazards		
4E.4	Delineates Separate Characteristics of Flood Hazards		
4E.5	Includes Information of Previous Flood Events		
4F - Hazard Assessment - Hurricanes/Coastal Storms/Nor'easters			
4F.1	Delineates Likelihood of Storms		
4F.2	Delineates Location and Boundaries of Hazardous Areas		
4F.3	Delineates Magnitude and Severity of Storms		
4F.4	Delineates Separate Characteristics of Storms		
4F.5	Includes Information of Previous Storms		
4G - Risk Assessment			
4G.1	Loss Estimations for Private Structures		
4G.2	Loss Estimations for Public Structures		
4G.3	Multi-Hazard Risk Assessment		
4G.4	Systematic Risk Assessment		
4H - Vulnerability Assessment			
4H.1	Critical Facilities		
4H.2	Environmental Assets		
4H.3	Especially Vulnerable Populations		
4H.4	Land Use Trends		

(4H - Continued)	Code	Comments
4H.5 Population		
4H.6 Private Property		
4H.7 Repetitive Loss Properties		
4I - Jurisdiction-Specific Information in Multi-Jurisdictional Plan		
4I.1 Hazards ID and Assessment		
4I.2 Risk Assessment		
4F.3 Vulnerability Assessment		

Part 5: Capability Assessment		
	Code	Comments
Coding Categories:		
0 = not present		
1 = mentioned, but not detailed		
2 = mentioned and detailed		
5A - Federal		
5A.1	FMA	
5A.2	HMA	
5A.3	HMGP	
5A.4	NFIP/CRS	
5A.5	Other	
5A.6	PDM	
5A.7	Post-Disaster Community Development Block Grant	
5A.3	Public Assistance (406 Program)	
5B - General		
5B.1	Identifies Changes Needed to Policies to Decrease Exposure/Vulnerability/Risk	
5B.2	Identifies Policies that Increase Exposure/Vulnerability/Risk	
5C - Local		
5C.1 - Acquisition and Elevation		
5C.1.a	Elevation of Structures	
5C.1.b	Land Acquisition	
5C.1.c	Structure Acquisition	
5C.2 - Awareness and Knowledge		
5C.2.a	Assessment Tools	
5C.2.b	Develop or Update Data	
5C.2.c	Disaster Warning	
5C.2.d	Educational Awareness	

(5C.2 - Continued)	Code	Comments
5C.2.e Encourage Insurance Purchase		
5C.2.f Post Signs Indicating Hazardous Areas		
5C.2.g Technical Assistance for City/County Staff		
5C.2.h Technical Assistance for Developers/Public		
5C.2.i Voluntary Real Estate Hazard Disclosure		
5C.3 - Coordination		
5C.3.a County Comprehensive Plan		
5C.3.b Horizontal Coordination		
5C.3.c Internal Coordination		
5C.3.d Municipal Comprehensive Plan		
5C.3.e Vertical Coordination		
5C.4 - Development Incentives		
5C.4.a Density Bonuses		
5C.4.b Tax Abatement		
5C.4.c Voluntary Retrofitting of Private Structures		
5C.5 - Development Regulations		
5C.5.a Building Standards		
5C.5.b Cluster Development		
5C.5.c Density of Land Use		
5C.5.d Density Transfer Provisions		
5C.5.e Floodplain Management Regulations		
5C.5.f Freeboard Requirement		

(5C.5 - Continued)		Code	Comments
5C.5.g	Hazards Included in Land Suitability Analysis		
5C.5.h	Mandatory Real Estate Hazard Disclosure		
5C.5.i	Permitted Land Use		
5C.5.j	Protection of Natural Mitigation Features		
5C.5.k	Setbacks or Buffer Zones		
5C.5.l	Site Review		
5C.5.m	Special Study/Impact Fees Assessment		
5C.5.n	Subdivision Regulations		
5C.5.o	Zoning Overlays		
5C.6 - Financial Assistance			
5C.6.a	Develop Revenue Sources		
5C.6.b	Funding using State and Federal Grants		
5C.6.c	Provides Non-federal Match for Property Owners		
5C.7 - Preparedness/Response			
5C.7.a	Communications and Utilities		
5C.7.b	Emergency Plans		
5C.7.c	Emergency Response Capability		
5C.7.d	Evacuation		
5C.7.e	Sheltering		
5C.7.f	Vegetation and Debris Removal		
5C.8 - Protection of Public Facilities and Infrastructure			
5C.8.a	Adjustment of Public Infrastructure		

(5C.8 - Continued)	Code	Comments
5C.8.b Retrofit Existing Public Facilities		
5C.8.c Site Public Facilities		
5C.9 - Recovery Measures		
5C.9.a Building Design Change		
5C.9.b Development Moratorium		
5C.9.c Land Use Change		
5C.9.d Post-disaster Capital Improvements Adjustments		
5C.9.e Recovery Organizations/Committee		
5C.10 - Structural Controls		
5C.10.a Beach Nourishment		
5C.10.b Physical Structures		
5C.10.c Storm Water Controls		
5D - State		
5D.1 Coastal Management		
5D.2 Emergency Management		
5D.3 Land Conservation Programs		
5D.4 Mitigation Specific Programs		
5D.5 Natural Resources/Environment		
5D.6 Planning		
5D.7 Transportation		

Part 6: Goals		
	Code	Comments
Coding Categories: 0 = not present 1 = present		
6A - General		
6A.1	Objectives (Linked to the Goals)	
6A.2	Jurisdiction-Specific Goals in Multi-Jurisdictional Plan	
6B - Coordination		
6B.1	Increase Information Availability	
6B.2	Local-Local Coordination	
6B.3	State-Local Coordination	
6C - Hazard Loss		
6C.1	Distributes Hazards Management Costs Equitably	
6C.2	Minimize Fiscal Impacts of Disasters	
6C.3	Protect Public Safety	
6C.4	Reduce Damage to Private Property	
6C.5	Reduce Damage to Property in General	
6C.6	Reduce Damage to Public Property	
6C.7	Reduce Impacts on Environment and Natural Resources	
6D - Overarching Vision		
6D.1	Increase Resilience	
6D.2	Promote Sustainability	

Part 7: Proposed Actions (Present) and Implementation Information (Cost, Responsible Agency, Spatial Specificity, and Timetable)

		Code				
Coding Categories:						
0 = not present						
1 = present						
		Present	Cost	Responsible Agency	Spatial Specificity	Timetable
7A - Acquisition and Elevation						
7A.1	Elevation of Structures					
7A.2	Land Acquisition					
7A.3	Structure Acquisition					
7B - Awareness/Knowledge						
7B.1	Assessment Tools					
7B.2	Develop or Update Data					
7B.3	Disaster Warning					
7B.4	Educational Awareness					
7B.5	Encourage Insurance Purchase					
7B.6	Post Signs Indicating Hazardous Areas					
7B.7	Technical Assistance of City/County Staff					
7B.8	Technical Assistance for Developers/Public					
7B.9	Voluntary Real Estate Hazard Disclosure					
7C - Coordination						
7C.1	County Comprehensive Plan					
7C.2	Horizontal Coordination					
7C.3	Internal Coordination					
7C.4	Municipal Comprehensive Plan					
7C.5	Vertical Coordination					

	Present	Cost	Responsible Agency	Spatial Specificity	Timetable
7D - Development Incentives					
7D.1	Density Bonuses				
7D.2	Tax Abatement				
7D.3	Voluntary Retrofitting of Private Structures				
7E - Development Regulations					
7E.1	Building Standards				
7E.2	Cluster Development				
7E.3	Density of Land Use				
7E.6	Density Transfer Provisions				
7E.7	Floodplain Management Regulations				
7E.8	Freeboard Requirement				
7E.9	Hazards included in Land Suitability Analysis				
7E.10	Mandatory Real Estate Hazard Disclosure				
7E.11	Permitted Land Use				
7E.12	Protect Natural Mitigation Features				
7E.13	Setbacks or Buffer Zones				
7E.14	Site Review				
7E.15	Special Study/Impact Fees Assessment				
7E.16	Subdivision Regulations				
7E.17	Zoning Overlays				

	Present	Cost	Responsible Agency	Spatial Specificity	Timetable
7F - Financial Assistance					
7F.1	Develop Revenue Sources				
7F.2	Fund Using State and Federal Grants				
7F.3	Provides Non-federal Match to Property Owners				
7G - Preparedness/Response					
7G.1	Communications and Utilities				
7G.2	Emergency Plans				
7G.3	Emergency Response Capability				
7G.4	Evacuation				
7G.5	Sheltering				
7G.6	Vegetation and Debris Removal				
7H - Protection of Public Facilities and Infrastructure					
7H.1	Adjust Public Infrastructure				
7H.2	Retrofit Existing Public Facilities				
7H.3	Site Public Facilities				
7I - Recovery Measures					
7I.1	Building Design Change				
7I.2	Development Moratorium				
7I.3	Land Use Change				
7I.4	Post-disaster Capital Improvements Adjustments				
7I.5	Recovery Organizations/Committee				

	Present	Cost	Responsible Agency	Spatial Specificity	Timetable
7J - Structural Controls					
7J.1 Beach Nourishment					
7J.2 Physical Structures					
7J.3 Storm Water Controls					

Part 8: Monitoring		
	Code	Comments
Coding Categories: 0 = not present 1 = mentioned, but not detailed 2 = mentioned and detailed		
8A - Monitoring Implementation		
8A.1	Conflict Management/Dispute Resolution	
8A.2	Identifies Obstacles	
8A.3	Tracking Losses Post Disaster Event	
8A.4	Tracking Use of Post-Disaster Funds	
Coding Categories: 0 = not present 1 = present		
8B - Monitoring Plan		
8B.1	Identifies Parties	
8B.2	Indicators	
8B.3	Public Involvement	

Coding Categories: 0 = not present 1 = mentioned, but not detailed 2 = mentioned and detailed		
8B.4	Process for Incorporating into Other Planning Mechanisms	