

## Land Use Mitigation Strategies

2009-2010 Strategy Number	2005 Original Strategy Number	Specific Mitigation Strategy	Applicable Hazards	Priority (CHECK ONLY ONE)							Responsible Agency or Department (Required if Existing Program, Existing Program under funded, Very High, High, or Under Study)	Ordinance or Resolution # (if existing program), Estimated Cost and Possible Funding Agency (if high priority), Estimated Date of Completion (if study), WHY if not same as regional priority, OR Other	
				Existing Program	Existing Program, underfunded very high	Unofficial Program- Becomes Official on Plan Adoption, no funding needed	High - Actively Looking for Funding	Moderate	Under Study	Not Applicable, Not Appropriate, or Not Cost Effective			Not Yet Considered
<b>LAND - a - Earthquake Hazard Studies for New Private Developments</b>													
a-1	a-1	Enforce and/or comply with the State-mandated requirement that site-specific geologic reports be prepared for development proposals within Alquist-Priolo Earthquake Fault Zones, and restrict the placement of structures for human occupancy. (This Act is intended to deal with the <b>specific</b> hazard of active faults that extend to the earth's surface, creating a surface rupture hazard.)	EQ	X								CDA	CWP programs EH-2.a, EH-2.b, EH-2.c, EH-2.d
a-2	a-2	Require preparation of site-specific geologic or geotechnical reports for development and redevelopment proposals in areas subject to earthquake-induced landslides or liquefaction as mandated by the State Seismic Hazard Mapping Act in selected portions of the Bay Area where these maps have been completed, and condition project approval on the incorporation of necessary mitigation measures related to site remediation, structure and foundation design, and/or avoidance.	EQ	X								CDA	CWP programs EH-2.f
a-3	a-3	Recognizing that some faults may be a hazard for surface rupture, even though they do not meet the strict criteria imposed by the Alquist-Priolo Earthquake Fault Zoning Act, identify and require geologic reports in areas adjacent to locally-significant faults.	EQ	X								CDA	CWP programs EH-2.a, EH-2.c, EH-2.d
a-4	new	<b>Ensure that development proposed near faults with a history of complex surface rupture (multiple traces, warping, thrusting, etc.) has larger setbacks than the minimum fifty feet.</b>	EQ								X	CDA	No existing resource to implement
a-5	new	<b>Consider imposing requirements similar to the Alquist-Priolo Earthquake Fault Zoning Act for structures without human occupancy if these buildings are still essential for the economic recovery of the community or region.</b>	EQ								X	CDA	No existing resource to implement
a-6	a-4	Recognizing that the California Geological Survey has not completed earthquake-induced landslide and liquefaction mapping for much of the Bay Area, identify and require geologic reports in areas mapped by others as having significant liquefaction or landslide hazards.	EQ	X								CDA	Ord 3451 or 3380 22.16.030(L)(5);CWP program EH-2.a Require Geotechnical Reports
a-7	a-5	Support and/or facilitate efforts by the California Geological Survey to complete the earthquake-induced landslide and liquefaction mapping for the Bay Area.	EQ	X								OES, CDA, DPW	CWP programs EH-1.d, EH-2.o, EH-3.b

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a-8	a-6	Require that local government reviews of geologic and engineering studies are conducted by appropriately trained and credentialed personnel.	EQ	X								CDA	CWP program EH-2.b, EH-2.j Seek Supplemental Expertise
<b>LAND - b - Wildland and Structural Fires</b>													
b-1	b-1	Review <b>new</b> development proposals to ensure that they incorporate required and appropriate fire-mitigation measures, including adequate provisions for occupant evacuation and access by emergency response personnel and equipment.	WF	X								County Fire Department/Fire Districts, EOC	CWP Program EH-4.g Develop and Maintain Fuel Breaks and Access Routes, EH-2.l Reliability of Lifelines and access
b-2	b-2	Develop a clear legislative and regulatory framework at both the state and local levels to manage the wildland-urban-interface consistent with <i>Fire Wise</i> and sustainable community principles.	WF	X								CDA, County Fire Districts/Departments, BOS	CWP Program EH-4.c, EH-4.d, EH-4.k, EH-4.l, EH-4.o; Chapter 16.17 (Ordinance 3453)
<b>LAND - c - Flooding</b>													
c-1	c-1	Establish and enforce requirements for new development so that site-specific designs and source-control techniques are used to manage peak stormwater runoff flows and impacts from increased runoff volumes.	FL	X								DPW, MCSTOPPP, UCCCE-FA,	CWP Program PFS-2.r Offset New Water Demand, WR-1.a Support Watershed Education and Outreach, WR-1.b Establish Development Standards for Infiltration
c-2	c-2	Incorporate FEMA guidelines and suggested activities into local government plans and procedures for managing flood hazards.	FL	X								CDA, DPW	CWP Program EH-3.e Restrict Development in Flood Prone Areas
c-3	c-3	Provide an institutional mechanism to ensure that development proposals adjacent to floodways and in floodplains are referred to flood control districts and wastewater agencies for review and comment (consistent with the NPDES program).	FL	X								CDA, DPW, OES	CWP Program EH-3.a Regulate Development in Flood and Inundation Areas; Ordinance 3293 (Title 23.09 Floodplain Management)
c-4	c-4	Establish and enforce regulations concerning new construction (and major improvements to existing structures) within flood zones in order to be in compliance with federal requirements and, thus, be a participant in the Community Rating System of the <i>National Flood Insurance Program</i> .	FL	X								CDA, DPW, OES	CWP Program EH-3.a Regulate Development in Flood and Inundation Areas; Ordinance 3293 (Title 23.09 Floodplain Management)
c-5	new	<b>Encourage new development near floodways to incorporate a buffer zone or setback from that floodway to allow for changes in stormwater flows in the watershed over time.</b>	FL				X					CDA, DPW	CWP Program EH-3.k Anticipate Sea Level Rise, EH-3.n Plan for Sea Level Rise

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c-6	new	<b>For purposes of creating an improved hazard mitigation plan for the region as a whole, ABAG, and Bay Area cities and counties, jointly request geographically defined repetitive flooding loss data from FEMA for their own jurisdictions.</b>	FL					X				CDA, DPW	CWP Program EH-3.b Update Maps
<b>LAND - d - Landslides and Erosion</b>													
d-1	d-1	Establish and enforce provisions (under subdivision ordinances or other means) that geotechnical and soil-hazard investigations be conducted and filed to prevent grading from creating unstable slopes, and that any necessary corrective actions be taken prior to development approval.	LS	X								CDA, DPW	Ord. 2163 (Chapter 22.20)
d-2	d-2	Require that local government reviews of these investigations are conducted by appropriately trained and credentialed personnel.	LS	X								CDA	Ordinance 1874, 2644, 3315 (Chapter 19.04)
d-3	d-3	Establish and enforce grading, erosion, and sedimentation ordinances by requiring, under certain conditions, grading permits and plans to control erosion and sedimentation prior to development approval.	LS	X								CDA, DPW	Chapter 23.08 Excavating, Grading, and Filling; Ordinance 2802
d-4	d-4	Establish and enforce provisions under the creek protection, storm water management, and discharge control ordinances designed to control erosion and sedimentation.	LS	X								DPW	Chapter 23.18 Urban Runoff Pollution Prevention Ordinance, Ordinance 3225
d-5	d-5	Establish requirements in zoning ordinances to address hillside development constraints, especially in areas of existing landslides.	LS	X								CDA	Chapter 23.08 Excavating, Grading, and Filling; Ordinance 2802; Chapter 24.04 Grading;
<b>LAND - e - Hillside - Multi-Hazard</b>													
e-1	e-1	For new development, require a buffer zone between residential properties and landslide or wildfire hazard areas.	LS WF	X								CDA, County Fire Departments	CWP program EH-2.f Avoid Known Landslide Areas and EH-4.h Require Adequate Clearance
e-2	e-2	Discourage, add additional mitigation strategies, or prevent <b>new</b> construction <b>or major remodels</b> on slopes greater than a set percentage, such as 15%, due to landslide or wildfire hazard concerns.	LS WF	X								CDA, DPW	Chapter 23.08 Excavating, Grading, and Filling; Chapter 22.82 Subdivision Design Standards; Single-Family Residential Design Guidelines
<b>LAND - f - Smart Growth to Revitalize Urban Areas and Promote Sustainability</b>													

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f-1	f-1	Prioritize retrofit of infrastructure that serves urban areas <b>(or urban services areas)</b> over constructing new infrastructure to serve outlying areas.	EQ LS WF FL DR SEC	X								CDA, DPW	CWP policy PS-3.2 Safe Public Structures and Program EH-2.e Retrofit County Buildings and Critical Facilities
f-2	f-2	Work to retrofit homes in older <b>urban neighborhoods</b> to provide safe housing close to job centers.	EQ LS WF FL DR SEC					X				n/a	n/a
f-3	f-3	Work to retrofit older downtown areas <b>and redevelopment districts</b> to protect architectural diversity and promote disaster-resistance.	EQ LS WF FL SEC					X				n/a	n/a
f-4	f-4	Work with non-profits and through other mechanisms to protect as open space <b>those</b> areas susceptible to extreme hazards <b>(such as through land acquisition, zoning, and designation as priority conservation areas)</b> .	EQ LS WF FL SEC	X								MCOSD	CWP program OS-2.c Acquire and Protect Lands Pursuant to the Open Space District's Mission Statement
f-5	f-5	Strive to provide and preserve existing buffers between development and existing users of large amounts of hazardous materials, such as major industry, due to the potential for catastrophic releases <b>or fires</b> due to an earthquake, <b>accident</b> , or terrorism. (Flooding might also result in release or spread of these materials; however, it is unlikely.) <b>In areas where buffers do not exist or cannot be created, provide alternative mitigation.</b>	EQ LS X WF FL SEC									CDA	CWP program PS-4.a Regulate Development Near Waste Sites; Title 16.16 Uniform Fire Code (Ord. 3479)
<b>LAND - g - Hazard Abatement Districts</b>													
g-1	new	<b>Use hazard abatement districts as a funding mechanism to ensure that mitigation strategies are implemented and enforced over time.</b>	EQ LS WF FL				X					Marin Hazardous and Solid Waste Joint Powers Authority	n/a