RESOLUTION NO. 2846-11

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF WINDSOR ADOPTING THE PLAN "TAMING NATURAL DIASATERS" AS THE TOWN OF WINDSOR ANNEX TO 2010 ASSOCIATION OF BAY AREA GOVERNMENTS LOCAL HAZARD MITIGATION PLAN

WHEREAS, the Bay Area is subject to various earthquake-related hazards such as ground shaking, liquefaction, landsliding, fault surface rupture, and tsunamis; and

WHEREAS, the Bay Area is subject to various weather-related hazards including wildfires, floods, and landslides; and

WHEREAS, the Town of Windsor recognizes that disasters do not recognize city, county, or special district boundaries; and

WHEREAS, the Town of Windsor seeks to maintain and enhance both a disaster-resistant Town and region by reducing the potential loss of life, property damage, and environmental degradation from natural disasters, while accelerating economic recovery from those disasters; and

WHEREAS, the Town of Windsor is committed to increasing the disaster resistance of the infrastructure, health, housing, economy, government services, education, environment, and land use systems in the Town, as well as in the Bay Area as a whole; and

WHEREAS, the federal Disaster Mitigation Act of 2000 requires all cities, counties, and special districts to have adopted a Local Hazard Mitigation Plan to receive disaster mitigation funding from FEMA; and

WHEREAS, ABAG has approved and adopted the ABAG report "Taming Natural Disasters" as the multi-jurisdictional Local Hazard Mitigation Plan for the San Francisco Bay Area;

NOW, THEREFORE, BE IT RESOLVED that the Town Council of the Town of Windsor adopts and adapts with its local annex, this multi-jurisdictional plan as its Local Hazard Mitigation Plan.

NOW, THEREFORE, BE IT FURTHER RESOLVED that the Town Council of the Town of Windsor commits to continuing to take those actions and initiating further actions, as appropriate, as identified in the Town of Windsor Annex (Exhibit "A") of the multi-jurisdictional Local Hazard Mitigation Plan by adopting the list of mitigation strategies as the Implementation Appendix of the Safety Element of its General Plan.

PASSED, APPROVED AND ADOPTED this 21ST day of September 2011, by the following vote:

AYES	**COUNCILMEMBERS GOBLE, SALMON, SCHOLAR AND VICE MAYOR FUDGE**
NOES:	**NONE**
ABSTAIN:	**NONE**
ABSENT:	**MAYOR ALLEN**

Debora Fudge

DEBORA FUDGE, VICE MAYOR

ATTEST

Maria De La O

MARIA DE LA O, TOWN CLERK

Attached: Exhibit "A"

TOWN OF
WINDSOR

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Annex to 2010 Association of Bay Area Governments Local Hazard Mitigation Plan

Taming Natural Disasters

TOWN OF WINDSOR

Exhibit "A"

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Introduction

The Town of Windsor is a small-sized Town in Sonoma County, California. The Town has a population of about 26,000, based on State of California estimates. Census[1] information on the Town is available at this link. Last year, the Town's budget was $57.5 million. The Town employs about 161 full time and part-time people as well as a number of contract employees. While the Town contracts with Sonoma County for local police services, two separate and independent fire districts supply fire services.

The Regional Planning Process

The Town of Windsor submitted a letter of commitment to ABAG to participate in the process in May 2009. City representatives participated in the ABAG-led sub-regional workshop in Sonoma County on April 30, 2009 to review the list of mitigation strategies from the 2005 plan and recommend regional priorities for each strategy. At that meeting some of the strategies were modified or deleted and participants made recommendations on strategies that should be added to the list. In August 2010, the Town reviewed the Draft regional LHMP and provided written comments on the content of the plan to ABAG.

For more information on these meetings and for rosters of attendees, please see Appendix A and H in the ABAG Multi-Jurisdictional Local Hazard Mitigation Plan 2010 (MJ-LHMP). In addition, the Town of Windsor has provided written and oral comments on the multi-jurisdictional plan and provided information on facilities that are defined as "critical" to ABAG.

The Local Planning Process

The Town has a Staff Review Committee (SRC) that meets twice a month, which is an integral communication team for development, construction, and other Town related projects. It was decided that this would be the most appropriate body to oversee the process of the LHMP. The SRC Committee members consist of representatives from the Town's various departments and divisions. Planning representatives address issues related to environmental resources, land use and structures, engineering representatives address public utilities, infrastructure, drainage, public right-of-way, streets and roads, and building representatives address construction and building code requirements. In addition, representatives from the Windsor Police Department, Windsor Fire Protection District, and Rincon Valley Fire Department bring expertise in public safety and emergency response. At varying times, representatives from the school district, finance department, and consultants are invited to the meeting for comments and input from their areas of expertise. One of the purposes of the committee is to address infrastructure, services, and potential funding sources for both existing and future development.

The Committee reviewed the mitigation strategy spreadsheet finalized in the sub-regional workshops and designated priorities for mitigation. The list Was submitted to ABAG to post on its website on May 30, 2009. At that time, the Committee also submitted a list of facilities it deemed critical to response and recovery operations of the Town. The Local Hazard Mitigation

[1] For complete Census information on this Town, see http://www.bayareacensus.ca.gov/.

Strategy Spreadsheet can be found in **Exhibit C** to the Town of Windsor 2010 Annex. The comments received by the committee were incorporated into the spreadsheet.

Public Meetings

Opportunity for public comments on the DRAFT mitigation strategies was provided at a public meeting at the Town of Windsor Planning Commission meeting on September 22, 2009 in the Windsor Town Council Chambers and advertised on the Town of Windsor website. The draft mitigation strategies were also published on the Town of Windsor website for public viewing. The Town hoped to understand the public concerns about risks the Town faces and their suggestions for mitigation activities in the Town. No public comments were received from either the meeting or the internet posting. Copies of the notices and website posting are included as **Exhibit B** to the Town of Windsor 2010 Annex. In future updates of this plan, the Town will consider alternate methods of reaching the public that will be more effective in achieving better public participation.

The Town of Windsor Town Council will adopt the plan in a public meeting via an official Resolution upon approval by FEMA. The mitigation strategies will become an implementation appendix of the Public Health and Safety Element of the Town of Windsor General Plan.

Process for Updating Plan Sections

The Plan was updated to reflect any code revisions, amendments, or other actions related to the plan that the Town undertook between the 2005 Annex and the 2010 Annex. It was determined that a major update was not necessary because most of the information was still relatively accurate. The Planning Process section was updated to reflect the process undertaken for the update of this plan and the Hazards section now incorporates more detailed seismic information adapted from the Town of Windsor General Plan.

Code revisions and amendments are actions taken by the Town Council. The Town Council policy is very clear when in comes to public involvement. All Town Council agendas are posted in at least three off-site locations as well as the Town's website. Agendas and staff reports are made available for public review. Written correspondence is forwarded to all Council members and verbal comments can be provided at Town Council meetings.

Review and Incorporation of Existing Information

In preparation of this Annex, the Town reviewed the studies and information used in the development of the umbrella plan. In addition to those documents, the Safety Elements of the Windsor and Sonoma County General Plans were incorporated into the Hazard Assessment of this Annex.

Hazards Assessment

The ABAG multi-jurisdictional Local Hazard Mitigation Plan, to which this is an Annex, lists nine hazards that impact the Bay Area, five related to earthquakes (faulting, shaking, earthquake-induced landslides, liquefaction, and tsunamis) and four related to weather (flooding, landslides, wildfires, and drought). Tsunamis, landslides, and wildfires have the least impact to the community. The earthquake and weather related hazards have a greater impact on the community due to the Town's proximity to the Warm Spring Dam, fault zones and effects from weather impacts such as drought and flooding There are several creeks that cross through the Town. Tsunamis do not impact the Town of Windsor because the Town is more than 30 miles from the Pacific Ocean with an intervening mountain range. The topography is relatively flat with hillsides to the east of Town, which means minimal landslide concerns. The Town has oak and riparian woodlands, primarily situated towards the hillsides or along riparian corridors, which minimizes the risk of wildfires. The Town is generally more urban than rural in nature.

There are three active faults that have the potential to affect the Town of Windsor: The Healdsburg-Rodgers Creek, the San Andreas, and the Maacama. (Adapted from Windsor General Plan, Health and Safety Element)

Healdsburg-Rodgers Creek: This system combines the Rodgers Creek and Healdsburg faults and runs northwest-southeast approximately 2.5 miles east of Windsor. The fault system is capable of a maximum credible earthquake of magnitude 7.0. Two desctructive earthquakes occurred on this fault in 1969, causing widespread damage in San Rosa. The USGS has estimated the probabilities of a major earthquake of magnitude 7 on this fault are 22% over the next 30 years.

San Andreas Fault Zone: This major fault is located approximately 19 miles southwest of Windsor and is capable of generating a magnitude 8.3 earthquake. This fault is responsible for the 1989 Loma Prieta earthquake (magnitude 7.1) and the 1906 San Francisco earthquake (magnitude 7.8). The USGS has estimated that there is a 22% chance that a rupture of magnitude 6.7 or greater will occur on this fault before 2036.

Maacama Fault Zone: This 30 mile-long fault system is located five miles east of Windsor. It is estimated that this fault is capable of generating a maximum credible earthquake of magnitude 7.8.

There is also potentially active unnamed fault between U.S. 101 and the Healdsburg-Rodgers Creek fault zone. The California Alquist-Priolo Act which requires a geologic investigation before construction of buildings intended for human occupancy near active fault zones, has established two area of required investigation along the Rodgers Creek and Maacama fault zones in the Windsor area.

The Warm Springs Dam is located 12 miles west of Healdsburg. In the event of a breach of that dam, the entire town would experience flooding, except areas above 100 feet of elevation.

The Town has FEMA identified 100-year floodplains along the two creeks and flooding is a significant concern within the Town.

In addition to the maps available on the ABAG website at **http://quake.abag.ca.gov/mitigation/**, hazard maps specific to the Town for earthquake shaking, flooding and other hazards can be found in the Town's General Plan.

Past Occurrences of Disasters (natural and human-induced)

The Town has had a number of landslides in the hills on the east side of the Town, including one that damaged 12 homes in 1980, which was included in the 2005 Town of Windsor Annex.

The Town was also impacted by the 2005-2006 Winter Storms (December 17, 2005 to January 12, 2006) and the 2006 Spring Storms (March 29, 2006 to April 1, 2006). General impacts from the winter storms were flooding and power outages. Public works crews assessed the flooded areas and were able to clean out blocked drainage trash gates, removed debris from ditches and culverts, and placed flooded, road closed ahead, and road closed signs, as needed, on flooded road sections to warn the public of flooded areas. Public works has some provisions for sandbags – primarily available only to areas where living space would be flooded or impacted. In areas where trees fell in the roadway, the trees were moved out of the roadway and when the storm cleared the trees were cut up and removed.

Since 1855, more than 140 earthquakes have been felt in the Santa Rosa area. The 1906 earthquake caused 61 deaths and major damage in Santa Rosa, Sebastopol, Healdsburg and other communities. The last major earthquake in Sonoma County was the 5.7 magnitude event on the Healdsburg fault in Santa Rosa in 1969. Since 1965 nine major earthquakes have resulted in significant physical and structural damage in Sonoma County. Analysis of seismic data indicates that 8.5 and 7.5 magnitude earthquakes can be expected for the San Andreas and the Healdsburg-Rodgers Creek faults respectively. Earthquakes of 8.0 or more on the San Andreas fault can be expected every 50 to 200 years. (From Sonoma County General Plan)

More information on State and Federally declared disasters in Sonoma County can be found at http://quake.abag.ca.gov/mitigation/ThePlan-D-Version-December09.pdf

Risk Assessment

The Town of Windsor has risks that differ from the rest of the Bay Area. There are no railways or fixed rail transit serving the Town that could be vulnerable to earthquakes. Unlike some parts of the Bay Area, the town is influenced by three major faults all with different risks to the Town. The two creeks running through the town make it more susceptible to flooding than many parts of the Bay Area. Drought and reliable drinking water are a particular concern to the Town.

Urban Land Exposure

The Town examined the hazard exposure of Town urban land based on the information on ABAG's website at **http://quake.abag.ca.gov/mitigation/pickdbh2.html**. The Town's hazard exposure is the same as those identified in the 2005 Annex.
The Town examined its hazard exposure of urban land based on information in ABAG's website at http://quake.abag.ca.gov/mitigation/pickdbh2.html. The "*2005 Existing Land Use with 2009 Mapping*" file was used for this evaluation (in the existing plan, the file used was "*Existing Land Use in 2000*"). Of the 2,501 urban acres in the Town,

Exposure (acres of urban land)			
Hazard	**2005**	**2010**	**Change**
Total Acres of Urban Land	*4,296*	*4,299*	*3*
Earthquake Faulting (within CGS zone)	64	69	5
Earthquake Shaking (within highest two shaking categories)[1]	4,204	4,161	(43)
Earthquake-Induced Landslides (within CGS study zone)[2]	-	-	-
Liquefaction (within moderate, high, or very high liquefaction susceptibility[3]	-	-	-
Flooding[4] (within 100 year floodplain)	277	269	(8)
Flooding (within 500 year floodplain)	239	251	12
Landslides (within areas of existing landslides)	12	12	0
Wildfire (subject to high, very high, or extreme wildfire threat)	11	34	23
Wildland-Urban Interface Fire Threat	1,340	1,362	22
Dam Inundation (within inundation zone)	712	707	(5)
Tsunamis[5] (within inundation area)	not applicable		
Drought[6]	4,296	4,299	3

[1] In large part because the Rogers Creek Fault extension of Hayward Fault that runs past the eastern side of the Town
[2] The California Geological Survey continues to map Sonoma County but some areas of the County have not yet been completely mapped.
[3] The California Geological Survey continues to map Sonoma County but some areas of the County have not yet been completely mapped
[4] The decrease of 8 acres is due to better and more accurate mapping.
[5] The Town of Windsor is not subject to tsunami inundation.
[6] The entire Town is subject to drought.

Infrastructure Exposure

The Town also examined the hazard exposure of infrastructure based on the information on ABAG's website at **http://quake.abag.ca.gov/mitigation/pickdbh2.html**. Windsor does not have any fixed rail transit facilities within its limits and only has 4 miles of rail. Only miles of roadway exposure were evaluated.

Exposure (miles of infrastructure)		
Hazard	**Roadway**	
	Plan Year 2005	**Plan Year 2010**
Total Miles of Infrastructure	*106*	*113*
Earthquake Shaking (within highest two shaking categories)	106	113
Liquefaction Susceptibility (within moderate, high, or very high liquefaction susceptibility	42	51
Liquefaction Hazard (within CGS study zone)	-	-
Earthquake-Induced Landslides (within CGS study zone) [1]	-	-
Earthquake Faulting (within CGS zone)	0	0
Flooding (within 100 year floodplain)	4	3
Flooding (within 500 year floodplain)	6	6
Landslides (within areas of existing landslides)	0	0
Wildfires (subject to high, very high, or extreme wildfire threat)	0	0
Wildland-Urban Interface Fire Threat	29	32
Dam Inundation (within inundation zone)	2	22
Tsunamis[2] (within inundation area)	not applicable	
Drought[3]	-	

[1] The California Geological Survey continues to map Sonoma County but some areas of the County have not yet been completely mapped.

[2] Tsunami evacuation planning maps were not available inside the San Francisco Bay in 2005. This map became available in December 2009. Miles of exposed infrastructure is not an appropriate analysis for this hazard. It should be noted that this map is not a hazard map and should be used for evacuation planning purposes only. The inundation line represents the highest inundation at any particular location from a suite of tsunami sources. It is not representative of any single tsunami.

[3] Miles of exposed infrastructure is not an appropriate analysis for this hazard.

Exposure of Town Owned Buildings, Plus Critical Healthcare Facilities and Schools

The Town examined the hazard exposure of critical health care facilities, schools, and Town-owned buildings based on the information on ABAG's website at **http://quake.abag.ca.gov/mitigation/pickcrit2010.html**.

Of the critical facilities in the Town,

Exposure (number of facility types)								
Hazard	**Hospitals**		**Schools**		**Locally owned bridges and interchanges**		**Locally owned critical facilities**	
	Plan Year 2005	**Plan Year 2010**	**Plan Year 2005**	**Plan Year 2010**	**Plan Year 2005**	**Plan Year 2010**	**Plan Year 2005**	**Plan Year 2010**
Total Number of Facilities	*1*	*2*	*7*	*13*	*5*	*12*	*26*	*8*
Earthquake Shaking (within highest two shaking categories)	1	2	7	13	0	8	0	8
Liquefaction Susceptibility (within moderate, high, or very high liquefaction susceptibility	0	1	3	0	6	1	14	0
Liquefaction Hazard (within CGS study zone)[1]	-	-	-	-	-	-	-	-
Earthquake-Induced Landslides (within CGS study zone)[2]	-	-	-	-	-	-	-	-
Earthquake Faulting (within CGS zone)	0	0	0	0	0	0	0	0
Flooding (within 100 year floodplain)	0	1	0	0	0	2	0	0
Flooding (within 500 year floodplain)	0	0	0	0	0	1	0	2
Landslides (within areas of existing landslides)	0	0	0	0	0	0	0	0
Wildfires (subject to high, very high, or extreme	0	0	2	0	0	0	0	0

[1] Two county-owned critical facilities are outside the area that has been evaluated by CGS for this hazard

[2] The California Geological Survey continues to map Alameda County and added the Livermore-Altamont area in late 2009. Though some areas of the County have not yet been completely mapped, the densely populated areas in Alameda County are mostly done.

wildfire threat)								
Wildland-Urban Interface Fire Threat	0	0	4	7	0	2	6	4
Dam Inundation	0	1	0	3	0	3	0	2
Sea Level Rise (within 16 in inundation zone)	-	0	-	0	-	0	-	0
Sea Level Rise (within 55 in inundation zone)	-	0	-	0	-	0	-	0
Tsunamis[3] (within inundation area)	-	0	-	0	-	0	-	0
Drought[4]	not applicable							

Repetitive Loss Properties -

In spite of the areas of the Town located in flood-prone areas, there are no repetitive loss properties in the Town of Windsor based on the information at **http://quake.abag.ca.gov/mitigation/pickflood.html**.

Other risks

The Town is subject to periodic drought conditions as part of the climacteric cycle for the region. Since the Town is a domestic drinking water provider, the Windsor Water Master Plan contains mitigation programs for proving drinking water during drought conditions. The Town will continue to work with ABAG, the Sonoma County Water Agency, and the various other water supply agencies on this issue.

In summary, the major potential disaster impacts to the Town are flood and earthquake effects. The Town through its cooperative disaster planning agencies including the Windsor Fire District and the Sonoma County Office of Emergency Services has done extensive planning to mitigate disasters. The Town plans to continue to work with ABAG to develop specific information about the kind and level of damage to buildings, infrastructure, and critical facilities which might result from any of the hazards previously noted.

National Flood Insurance Program

The Town of Windsor has participated in the National Flood Insurance Program (NFIP) since 1992. To date, the Town has not participated in the Community Rating System. Staff anticipates seeking Town Council direction for participation in the Community Rating System. The Town started participation in the NFIP on September 23, 1992. On May 7, 2008, an update was adopted, which reflected the current requirements of the NFIP for non-coastal communities. In

[3] Tsunami evacuation planning maps were not available inside the San Francisco Bay in 2005. This map became available in December 2009. It should be noted that this map is not a hazard map and should be used for evacuation planning purposes only. The inundation line represents the highest inundation at any particular location from a suite of tsunami sources. It is not representative of any single tsunami.

[4] Drought will not affect locally owned facilities directly.

addition to using FEMA maps to regulate flood hazard areas the Town may require elevation certificates at the building permit stage to verify compliance with NFIP requirements.

Mitigation Goals and Objectives

The goal of the ABAG MJ-LHMP is to maintain and enhance a disaster-resistant region by reducing the potential for loss of life, property damage, and environmental degradation from natural disasters, while accelerating economic recovery from those disasters. This goal is unchanged from the 2005 plan and continues to be the goal of the Town of Windsor in designing its mitigation program.

Additionally, the Town has the specific objective of reducing the number of public and private buildings within the Town that are vulnerable to the effects of earthquakes.

Mitigation Activities and Priorities

Evaluation of Progress from 2005 Plan

In 2005, general mitigation actions and priorities were identified, but no specific projects were identified for implementation. However the town has been focused on mitigation since the development of that plan and those actions are summarized here.

Economy Mitigation Strategies: The Town reviews current code requirements and adopts the most current and applicable building code standards. In addition, the Town's Zoning Ordinance has provisions for the protection of historic structures and encourages the preservation of historic resources. The Town has adopted a Fire Sprinkler Ordinance and works closely with the local Fire Protection Districts on requiring fire sprinklers systems. The Town's departments and divisions work closely in reviewing plans for compliance with current code requirements to reduce the risks of damage due to flooding and fires.

Education Mitigation Strategies: Education facilities are under the Windsor Unified School District/Sonoma County Office of Education. However, the Town does have a close working relationship with the School District.

Environmental Mitigation Strategies: The Town continues to enforce the California Environmental Quality Act (CEQA) requirements for all development. Mitigation is incorporated to ensure protection and preservation of the environment. The Town has adopted sustainable building practices and standards such LEED and Green Building Code and requires compliance in all construction and development projects. The Town adopted a Water Efficient Landscape Ordinance and encourages the use of reclaimed water or at a minimum plumbing for future use of reclaimed water. Other energy saving measures are incorporated into development projects such as installation/plumbing for photovoltaic's, drought tolerant landscape materials, water saving plumbing fixtures, etc.

Government Mitigation Strategies: The Town is an active participant in the local disaster preparedness program, EOC and continues to work closely with the local Fire Protection

District and Police/Sheriff Departments. The Town's Staff Review Committee (SRC) meets twice monthly to review development projects. The SRC includes representatives from fire and police.

Health Mitigation Strategies: Sonoma County is the responsible agency for these strategies. The County would be notified of any health related facility construction within the Town's boundaries.

Housing Mitigation Strategies: The Town continues to review and adopt current building codes. The Town adopted a Fire Sprinkler Ordinance and uses the California Historical Building Code for historically significant structures. The Town has adopted a Master Fee Schedule that is updated on a regular basis. The fees are collected on development projects to ensure that development pays its fair share for improvements to storm drain and utility systems.

Infrastructure Mitigation Strategies: The Town has adopted an ordinance that requires the undergrounding of overhead utilities as a condition of development. In addition, the Town continues to work closely with the Regional Water Quality Control Board and other resources agency to ensure the protection of local creeks and waterways. The Town recently updated their Design and Construction Standards to ensure compliance with new local, state, and federal requirements. In June 2009, the Town of Windsor completed a Draft Water Master Plan Update (WMP) to replace the 2000 Water Master Plan that was certified nearly a decade earlier. The goal of the WMP Update is to establish a Capital Improvement Program (CIP) for the Town of Windsor to ensure the water distribution system continues to reliably deliver sufficient water for existing and future water customers. In 2010, Town adopted the Storm Water Quality Manual and Storm Water Management Plan.

Land Use Mitigation Strategies: The Town continues to enforce relations of new development in or near floodplains, encouraging buffer/setback area from waterways. The Town's Zoning Ordinance has established creek setbacks to ensure creek protection and to limit impacts from flooding. The Town incorporates Best Management Practices for all development practices and requires the installation of erosion control measures prior to the start of construction. These measures are monitored to ensure that they are in good repair and in place during the course of construction.

Future Mitigation Actions and Priorities

As a participant in the 2010 ABAG multi-jurisdictional planning process, the staff of the Town of Windsor helped in the development and review of the comprehensive list of mitigation strategies in the overall multi-jurisdictional plan. The decision on priority was made based on a variety of criteria, not simply on an economic cost-benefit analysis. These criteria include being technically and administratively feasible, politically acceptable, socially appropriate, legal, economically sound, and not harmful to the environment or our heritage. Representatives from multiple departments then met on a regular basis to review progress on the Town's 2005 strategies, to identify and prioritize additional mitigation strategies to update the list. In selecting

projects for implementation in the next 5 years, the participants selected projects where the benefits out-weighed the costs.

The draft priorities will be provided to the Windsor Town Council for adoption pending approval of this LHMP by FEMA.

The Town has established priorities related to pedestrian activity, climate change, infrastructure, and building construction. The Town is undertaking the following:

- In October 2010, the Town Council considered adoption of the 2010 California Code of Regulations, Title 24. The code became effective January 1, 2011 and applies to all construction activity within the Town boundaries. The California Building Code is comprised of 11 parts that incorporate public health, safety, energy, green building and access standards used in the design and construction of all buildings. The new code provisions will allow the Town to utilize the latest technologies, advances in construction standards and seismic design for use in residential and commercial construction.
- In June 2010, the Town did an RFP for the Preparation of the 2010 Urban Water Management Plan. In July 2010, the Town Council approved the professional services agreement for preparation of the plan. The plan addresses adequate water supply for existing and projected growth for the Town. Funding for this plan comes from the Town's rate payers.
- The Town adopted the Windsor Bicycle and Pedestrian Plan in May 2008. The Town's recognizes the need to connect the newly constructed downtown area with older housing supply. New developments are required to provide for the addition of pedestrian trails and bike lanes within their development plans. This includes improvements along creek corridors, pedestrian pathways, and addition/improvements related to bike lanes. Staff's goal is to develop a policy to address dedications, level of and location of improvements, etc. to address the goals of the plan. Reducing reliance on automobiles reducing green house gases and mitigated the effects of global warming.
- The Town recently awarded a contract to complete drainage upgrade improvements on Pleasant Avenue and Pueblo Viejo Park.
- The Town of Windsor was awarded Community Development Block Grant (CDBG) funding in Fiscal Year 2008-09 in the amount of $65,000 for the design and construction of the Joe Rodota Way Sidewalk Improvement Project. The project includes ADA compliant pedestrian improvements along the north side of Joe Rodota Way between the Town of Windsor Civic Center and Windsor Road. Improvements include installation of a sidewalk from the Civic Center to Windsor Road, ADA accessible pedestrian ramps and appropriate street signage. The project improves access to Old Downtown Windsor. Currently, no ADA compliant route for pedestrians is available between the Civic Center and Windsor Road, making it necessary to walk in the right of way of Joe Rodota Way in order to access the Civic Center from Windsor Road which resulted in potentially unsafe conflicts between automobiles and pedestrians. The project is under construction and should be completed in the near future.
- The Town recently awarded a contract for the development of the North Old Redwood Highway Infrastructure Plan to address utility infrastructure (potable water, sanitary sewer, and storm drain facilities) to serve undeveloped and underdeveloped properties in

The Town continues to search for funding opportunities through Tax Increment money redevelopment funds, and other grant sources to implement the Town's plans and Capital Improvement projects related to public improvements and upgrades with an emphasis on public safety including bike, pedestrian, and drainage facilities.

On-Going Mitigation Strategy Programs

The Town has many on-going mitigation programs that help create a more disaster-resistant region. The following list highlights those programs identified as *Existing Programs* in the mitigation strategy spreadsheet. Others are on-going programs that are currently underfunded. It is the Town's priority to find additional funding to sustain these on-going programs over time.

- Adoption and Training on California Code of Regulations, Title 24. (HSNG)
- Continue to be involved in the EOC through partnerships with local emergency response teams (ECON, GOVT, HSNG);
- Ensure that new development complies with CEQA and new Greenhouse Gas and Energy Requirements (ENV a-3, b-1 through b-13)
- Participation in FEMA's National Flood Insurance Program (GOVT-d-5)
- Participation in general mutual-aid agreements and agreements with adjoining jurisdictions for cooperative response to fires, floods, earthquakes, and other disasters (GOVT-c-13);
- Coordinate with Town staff and local utilities to ensure emergency power and backup for critical power needs; (INFR-a-9);
- Ensure that new development undergrounds above ground utilities (INFR-a-12);
- Incorporate FEMA guidelines and suggested activities into local government plans and procedures for managing flood hazards (LAND-c-2);
- Continue to repair and make structural improvements to storm drains, pipelines, and/or channels to enable them to perform to their design capacity in handling water flows as part of regular maintenance activities (INFR)

Incorporation into Existing Planning Mechanisms

The Town has several planning mechanisms:

- General plan Public Health and Safety Element
- Capital Improvement Plan

The Town has a Public Health and Safety Element in its General Plan that includes a discussion of seismic and geologic, flood, fire, and emergency preparedness. In addition, the Town enforces the requirements of the California Environmental Quality Act (CEQA), which, since 1988, requires mitigation for identified natural hazards. The Town has used these pre-existing programs as a basis for identifying gaps that may lead to disaster vulnerabilities in order to work on ways to address these risks through mitigation.

The Town has a bi-annual budget and a 5-year Capital Improvement Program. The budget review and adoption includes review of the CIP and funding for the first two years of the CIP with review and priority ranking of the remaining threes years of the CIP. The budget is reviewed 2-4 times a year by the department heads and updates are forwarded to the Town Council by the finance department every six months. Public health or safety issue identified in this plan that have not been budgeted for, could be approved by the Town Council through an amendment during the budget review process to address any funding needed to correct or address the issue. The amendment then becomes an adjustment to the current budget.

The Staff Review Committee (SRC) will continue to evaluate ways in which mitigation strategies identified in this planning process can be incorporated into other projects going on within the Town to support risk reduction across a broad range of projects and plans.

Plan Update Process

As required Disaster Mitigation Act of 2000, the Town of Windsor will update this plan annex at least once every five years, by participating in a multi-agency effort with ABAG and other agencies to develop a multi-jurisdictional plan.

The Town of Windsor Planning Department will ensure that monitoring of this Annex will occur. The plan will be monitored on an on-going basis. However, the major disasters affecting the Town, legal changes, notices from ABAG as the lead agency in this process, and other triggers will be used. Finally, the Annex will be a discussion item on the agenda of the meeting of Department heads at least once a year in April. At that meeting, the department heads will focus on evaluating the Annex in light of technological and political changes during the past year or other significant events. The Department heads will be responsible for determining if the plan should be updated.

The Town is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The Town of Windsor Planning Department will contact ABAG four years after this plan is approved to ensure that ABAG plans to undertake the plan update process. If so, the Town again plans to participate in the multi-jurisdictional plan. If ABAG is unwilling or unable to act as the lead agency in the multi-jurisdictional effort, other agencies will be contacted, including the County's Office of Emergency Services. Counties should then work together to identify another regional forum for developing a multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the County will provide the opportunity for the public to comment on the updates. A public notice will be posted prior to the meeting to announce the comment period and meeting logistics.

Mitigation Plan Point of Contact

Name: Jim Bergman
Title: Planning Director
Mailing Address: P.O. Box 100, Windsor, CA 95492
Telephone: 707-838-5335
Email: jbergman@townofwindsor.com

Alternate Point of Contact

Name: Pauletta Cangson
Title: Associate Planner
Mailing Address: P.O. Box 100, Windsor, CA 95492
Telephone: 707-838-5332
Email: pcangson@townofwindsor.com

Exhibit A - Jurisdiction Boundary Map

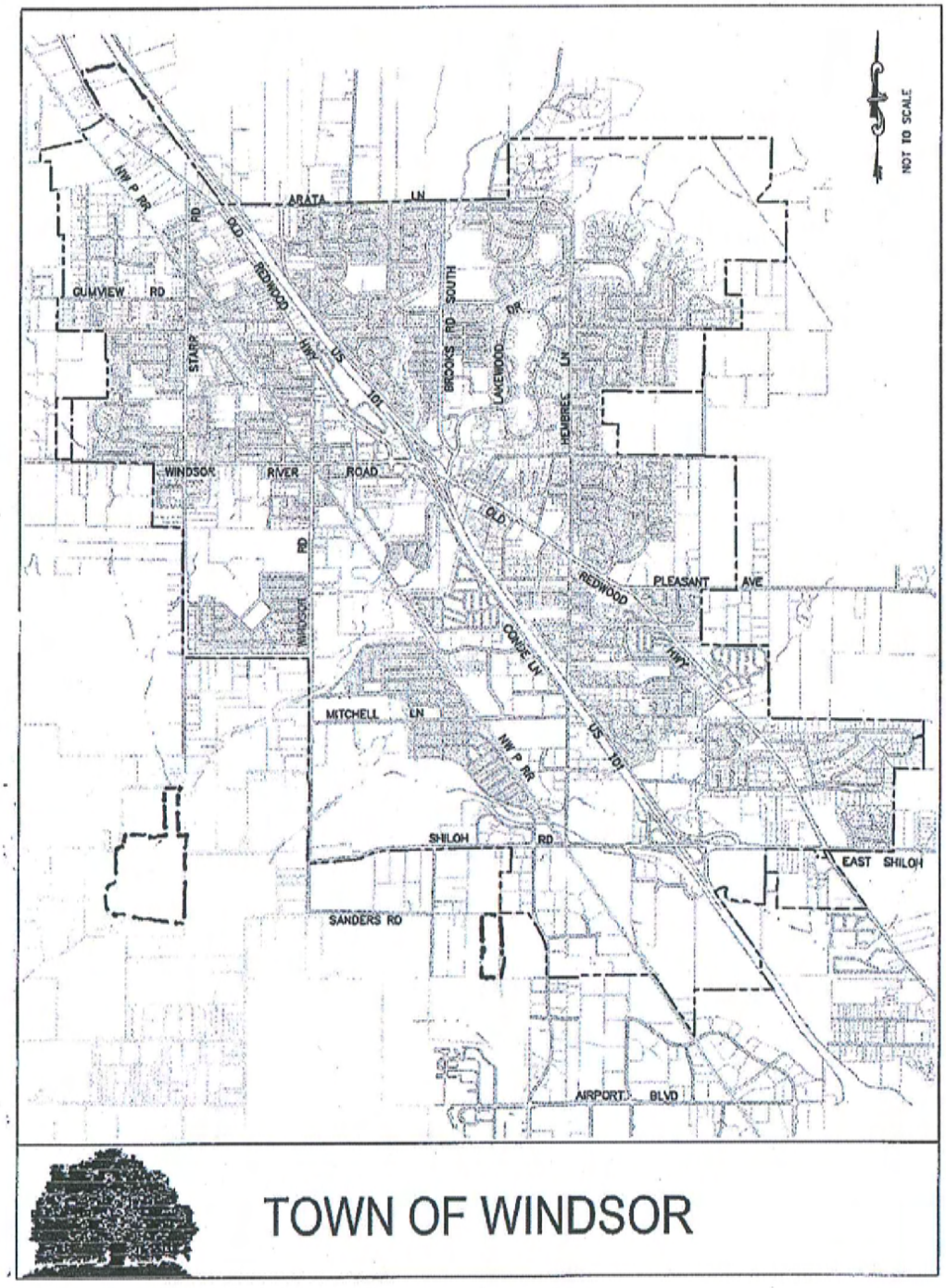


Exhibit B - Public Meeting Announcements

Town of Windsor Website Notice
Request for Public Input Notice
Notice of Public Hearing – Planning Commission
Staff Review Committee – Report July 23, 2009



Admin. Permit Hearings: Agendas & Notices
Department Contacts
Design Review
Entitlements
General Plan Amendment & Rezoning
Historic Register
Housing
Permits
Planning Commission
Planning Review Options
Subdivisions
Trees
Zoning
Opportunity Parcel Map
Local Hazard Mitigation Plan

Local Hazard Mitigation Plan

Request for Public Input

A natural disaster could strike the Bay Area at any time. The Town of Windsor is part of a multi-jurisd potential losses via its Local Hazard Mitigation Plan.

The Town of Windsor enourages you to provide comments (see public notice) on its Local Hazard M Please submit your comments by **September 21, 2009** to either:

Peter Chamberlin, Planning Director
P.O. Box 100
Windsor, CA 95492
707-838-5335
pchamberlin@townofwindsor.com

or

Pauletta Cangson, Associate Planner
P.O. Box 100
Windsor, CA 95492
707-838-5332
pcangson@townofwindsor.com

REQUEST FOR PUBLIC INPUT
LOCAL HAZARD MITIGATION PLAN
STRATEGY UPDATE

Natural disasters could strike the Bay Area again during the next several years. Lives could be lost, property damage could occur, and our economy could suffer. Bay Area local governments are working to mitigate those losses through the multi-jurisdictional Local Hazard Mitigation Plan (MJ-LHMP) for the Bay Area.

In September 2005, the Town prepared a Local Hazard Mitigation Plan, Annex. The plan identified and prioritized mitigation strategies for nine hazards that impact the Bay Area. Five of the hazards are related to earthquakes (faulting, shaking, earthquake-induced landslides, liquefaction, and tsunamis) and four are related to weather (flooding, landslides, wildfires, and drought). The Towns continues to work with ABAG and other agencies in developing information. The Town committed to updating the plan at least once every five years, as required by the Disaster Mitigation Act of 2000. Town staff has reviewed the plan and prepared a draft update **(insert website location here).**

The Plan consists of Eight (8) Strategies as defined below:
Strategy 1 - Infrastructure – Lifeline transportation and utility facilities and services.
Strategy 2 - Health – Primarily related to hospitals, includes county health offices.
Strategy 3 - Housing and Economy – Residential, Commercial, and Industrial buildings.
Strategy 4 - Housing and Economy – Re-occupancy, repair and reconstruction, Public Education
Strategy 5 - Government – Government facilities emergency response and recovery
Strategy 6 - Education – School districts and county offices of education
Strategy 7 - Environmental – Sustainability, climate change, and agriculture
Strategy 8 – Land Use – Earthquake, fires, flooding, landslides, erosion, Smart Growth, and Sustainability

Please review the documents and provide your comments by September 21, 2009 to:

Peter Chamberlin, Planning Director
P.O. Box 100
Windsor, CA 95492
(707) 838-5335
pchamberlin@townofwindsor.com

or

Pauletta Cangson, Associate Planner
P.O. Box 100
Windsor, CA 95492
(707) 838-5332
pcangson@townofwindsor.com

Additional information may be obtained at the ABAG San Francisco Bay Area Local Hazard Mitigation Plan http://quake.abag.ca.gov/mitigation/

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TOWN OF WINDSOR

Town of Windsor
9291 Old Redwood Highway
P.O. Box 100
Windsor, CA 95492-0100
Planning Department (707) 838-1021
Fax (707) 838-7349

MEMORANDUM

TO: Matt Mullan, Town Manager
Richard Burtt, Town Engineer and Public Works Director
Steve Freitas, Chief of Police
Jim McAdler, Administrative Services Director
Steve Pantazes, Building Official
Matt Gustafson, Windsor Fire Marshall

FROM: Peter Chamberlin, Planning Director
Pauletta Cangson, Associated Planner

DATE: July 23, 2009

SUBJECT: **Local Hazard Mitigation Strategy Update**

The Town prepared a Local Hazard Mitigation Plan that was approved by the Town Council in September 2005. The Town committed to reviewing and updating the plan every five years. Planning staff has prepared a draft update for your review and comment. The Town is requesting public comments on the document. The document has been posted on the Town's website under the Planning Department page.

There are eight strategies to the plan.

1. Please review each strategy.
2. Review the responsible department and the priority to ensure that they are accurately depicted.
3. Please add any ordinance, resolution, or program information which has been adopted or approved.
4. If your priority does not match the regional priority (blue), please provide a short sentence to explain why.

Please address all questions, comments, or corrections by September 21, 2009 to:

Peter Chamberlin, Planning Director
P.O. Box 100
Windsor, CA 95492
(707) 838-5335
pchamberlin@townofwindsor.com

Pauletta Cangson, Associate Planner
P.O. Box 100
Windsor, CA 95492
(707) 838-5332
pcangson@townofwindsor.com

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TOWN OF WINDSOR
PLANNING DEPARTMENT
Windsor Civic Center, Building No. 400
9291 Old Redwood Highway
Windsor, CA 95492

File No. PPR 09-32

NOTICE OF PUBLIC HEARING

The Windsor Planning Commission will receive public comments on the updated Town of Windsor Local Hazard Mitigation Plan Annex Mitigation Strategies. The Local Hazard Mitigation Plan allows the Town to be eligible to receive federal matching funds to mitigate pre-disaster hazardous conditions.

This application has been determined to be categorically exempt from the provisions of the California Environmental Quality Act (CEQA) Section 15262 because it is a planning study.

The Town of Windsor Planning Commission will conduct a public hearing on this project on **Tuesday, September 22, 2009 at 5:30 p.m., or as soon thereafter as the matter may be heard,** in the Town of Windsor Council Chambers, Building 400, 9291 Old Redwood Highway, Windsor, CA.

The Town of Windsor encourages interested parties to attend public meetings and comment on the issues being discussed. If you wish to provide testimony and are unable to attend the meeting, written comments which are delivered to the Planning Department prior to the time of the hearing will be made a part of the public record. Contact: Pauletta Cangson, Associate Planner, at 707-838-5332 or Peter Chamberlin, Planning Director at 838-5335.

If you challenge the decisions on this matter in court, you may be limited to raising only those issues previously raised before the Town of Windsor Planning Commission at the hearing or in written form delivered to the Planning Department prior to or at the hearing.

Prior to the hearing, staff reports and agendas may be requested from the Planning Department for a minimal fee to recover reproduction costs. Staff reports and agendas are also accessible on the Town's web site on prior to the meeting at www.ci.windsor.ca.us .

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in the Planning Commission meeting, please contact the Administrative Specialist at 707-838-1021. Notification at least 48 hours prior to the meeting will assist Town staff in assuring that reasonable accommodations are made to provide accessibility to the meeting.

Exhibit C - Town of Windsor 2010 Mitigation Strategy Spreadsheet

[Available on LHMP CD or at http://www.abag.ca.gov/bayarea/eqmaps/mitigation/strategy.html]

Economy 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 Comments
				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		
ECON - a - Multi-Hazard													
a-1	a-1	Assist in ensuring adequate hazard disclosure by working with real estate agents to improve enforcement of real estate disclosure requirements **for commercial and industrial properties** with regard to seven official natural hazard zones: **1) Special Flood Hazard Areas (designated by FEMA), 2) Areas of Potential Flooding from dam failure inundation, 3) Very High Fire Hazard Severity Zones, 4) Wildland Fire Zones, 5) Earthquake Fault Zones (designated under the Alquist-Priolo Earthquake Fault Zoning Act), and the 6) Liquefaction and Landslide Hazard Zones (designated under the Seismic Hazard Mapping Act).**	EQ LS WF FL SEC							X			
a-2	a-2	Create incentives for **private** owners of historic or architecturally significant **commercial and industrial** buildings to undertake mitigation to levels that will minimize the likelihood that these buildings will need to be demolished after a disaster, particularly if those alterations conform to the federal Secretary of the Interior's *Guidelines for Rehabilitation.*	EQ LS WF FL SEC							X			
ECON - b - Soft-Story Commercial Buildings Vulnerable to Earthquakes													
b-1	b-1	Require engineered plan sets for voluntary or mandatory soft-story **seismic** retrofits **by private owners** until a standard plan set and construction details become available.	EQ	X								Town	
b-2	b-2	Adopt the 2009 **(changed date)** International Existing Building Code or the latest applicable standard for the design of voluntary or mandatory soft-story building retrofits **for use in city/county building department regulations. In addition, allow use of changes to that standard recommended by SEAOC for the 2012 IEBC.**	EQ	X								Town Council	
b-3	b-3	Work to educate building owners, local government staff, engineers, and contractors on **privately-owned** soft-story retrofit procedures and incentives using materials such as those developed by ABAG and the City of San Jose (see **http://quake.abag.ca.gov/eqhouse.html.**)	EQ	X								Town/Building	
b-4	b-4	Conduct an inventory of **privately-owned** existing or suspected soft-story commercial or industrial structures **as a first step in establishing voluntary or mandatory programs for retrofitting these buildings.**	EQ						X			Building	Windsor has minimal soft story construction
b-5	b-5	Use the soft-story inventory to require **private** owners to inform all existing tenants (and **prospective** tenants prior to signing a lease agreement) that they **may** work in this type of building.	EQ						X			Building	Windsor has minimal soft story construction
b-6	b-6	Use the soft-story inventory to require **private** owners to inform all existing **and prospective** tenants that they **may** need to be prepared to work elsewhere following an earthquake if the building has not been retrofitted.	EQ						X			Building	Windsor has minimal soft story construction

Economy Mitigation Strategies

2009-2010 Strategy Number	2005 Original Strategy Number	Specific Mitigation Strategy	Applicable Hazards	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	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 Comments
b-7	b-7	Investigate and adopt appropriate financial, procedural, and land use incentives (such as parking waivers) for **private** owners of soft-story buildings to facilitate retrofit such as those **described** by ABAG (see ***http://quake.abag.ca.gov/fixit***).	EQ								X	Town Council	
b-8	b-8	(reworded) Explore development of State regulations or legislation to require or encourage **private** owners of soft-story structures to strengthen them.	EQ						X			Building	
b-9	b-9	Provide technical assistance in seismically strengthening **privately-owned** soft-story structures.	EQ						X			Building	

Economy Mitigation Strategies

2009-2010 Strategy Number	2005 Original Strategy Number	Specific Mitigation Strategy	Applicable Hazards	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	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 Comments
ECON - c - Unreinforced Masonry Buildings in Older Downtown Areas													
c-1	c-1	Continue to actively implement existing State law that requires cities and counties to maintain lists of the addresses of unreinforced masonry buildings and inform **private** property owners that they own this type of hazardous structure.	EQ	X								Building	
c-2	c-2	Accelerate retrofitting of **privately-owned** unreinforced masonry structures that have not been retrofitted, for example, by (a) actively working with owners to obtain structural analyses of their buildings, (b) helping owners obtain retrofit funding, (c) adopting a mandatory (**rather than** voluntary) retrofit program, and/or (d) applying penalties to owners who show inadequate efforts to upgrade these buildings.	EQ							X			
c-3	c-3	Require **private** owners to inform all existing **tenants (and prospective** tenants prior to signing a lease agreement) that they work in **an unreinforced masonry** building and the standard to which it may have been retrofitted.	EQ							X			
c-4	c-4	As required by State law, require **private** owners to inform all existing tenants that they may need to be prepared to work elsewhere following an earthquake even if the building has been retrofitted, **because** it has probably been retrofitted to a life-safety standard, not to a standard that will allow occupancy following major earthquakes.	EQ							X			
ECON - d - Privately-Owned Structurally **Vulnerable** Buildings													
d-1	d-1	Inventory non-ductile concrete, tilt-up concrete, and other privately-owned structurally **vulnerable** buildings.	EQ							X			
d-2	d-2	Adopt the **2009** International Existing Building Code or the latest applicable standard for the design of voluntary or mandatory retrofit of **privately-owned** seismically vulnerable buildings.	EQ	X								Town Council/Building	
d-3	d-3	Adopt one or more of the following strategies as incentives to encourage retrofitting of privately-owned **seismically vulnerable** commercial and industrial buildings: (a) waivers or reductions of permit fees, (b) below-market loans, (c) local tax breaks, (d) grants to cover the cost of retrofitting or of a structural analysis, (e) land use **(such as parking requirement waivers)** and procedural incentives, or (f) technical assistance.	EQ						X			Town Council/Building	
ECON - e - Wildfire and Structural Fires													
e-1	e-1	Increase efforts to reduce hazards in existing **private** development in wildland-urban-interface fire-threatened communities or in areas exposed to high-to-extreme fire threat through improving engineering design and vegetation management for mitigation, appropriate code enforcement, and public education on defensible space mitigation strategies.	WF							X		County of Sonoma/Fire Protection District	

Economy Mitigation Strategies

2009-2010 Strategy Number	2005 Original Strategy Number	Specific Mitigation Strategy	Applicable Hazards	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	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 Comments
e-2	new	**Tie public education on defensible space and a comprehensive defensible space ordinance to a field program of enforcement.**	WF								X	Fire Protection Districts	
e-3	e-2	Require that new **privately-owned** business and office buildings in high fire hazard areas be constructed of fire-resistant building materials and incorporate fire-resistant design features (such as minimal use of eaves, internal corners, and open first floors) to increase structural survivability and reduce ignitability.	WF	X								Building	
e-4	e-3	Adopt and amend as needed updated versions of the *California Building and Fire Codes* so that optimal fire-protection standards are used in construction and renovation projects **of private buildings.**	WF	X								Town Council/Building/	Town Code Title VII
e-5	e-4	Create a mechanism to enforce provisions of the *California Building and Fire Codes* and other local codes that require the installation of smoke detectors and fire-extinguishing systems **on existing privately-owned buildings** by making installation a condition of (a) finalizing a permit for any work valued at over a fixed amount and/or (b) on any building over 75 feet in height, and/or (b) as a condition for the transfer of property.	WF	X								Town Council/Building/	Town Code Title VII
e-6	e-5	(reworded to more closely match the HSNG strategy) Expand vegetation management programs in wildland-urban-interface fire-threatened communities or in areas exposed to high-to-extreme fire threat to more effectively manage the fuel load through roadside collection and chipping, mechanical fuel reduction equipment, selected harvesting, use of goats or other organic methods of fuel reduction, and selected use of controlled burning.	WF							X		County of Sonoma	
e-7	e-6	Establish **special funding mechanisms (such as** Fire Hazard Abatement Districts **or regional bond funding)** to fund reduction in fire risk of existing properties through vegetation management that includes reduction of fuel loads, use of defensible space, and fuel breaks.	WF							X		County of Sonoma	
e-8	e-7	Establish **special funding mechanisms (such as** Fire Hazard Abatement Districts **or regional bond funding)** to fund fire-safety inspections of private properties, roving firefighter patrols on high fire-hazard days, and public education efforts.	WF							X		County of sonoma	
e-9	e-8	Compile a list of **privately-owned** high-rise and high-occupancy buildings that are deemed, due to their age or construction materials, to be particularly susceptible to fire hazards, and determine an expeditious timeline for the fire-safety inspection of all such structures.	WF							X			
e-10	e-9	Conduct periodic fire-safety inspections of all **privately-owned** commercial and **industrial** buildings.	WF	X								Fire Protection District	

Economy Mitigation Strategies

2009-2010 Strategy Number	2005 Original Strategy Number	Specific Mitigation Strategy	Applicable Hazards	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	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 Comments
e-11	e-10	Work with the State Fire Marshal, the California Seismic Safety **Commission, Pacific Earthquake Engineering Research Center** (PEER), and other experts to identify and manage gas-related fire risks of **privately-owned** soft-story mixed use buildings that are prone to collapse and occupant entrapment consistent with the natural gas safety recommendations of Seismic Safety Commission Report SSC-02-03. **Note** - See http://www.seismic.ca.gov/pub/CSSC_2002-03_Natural%20Gas%20Safety.pdf. **Also note** - any values that are installed may need to have both excess flow and seismic triggers ("hybrid" valves).	EQ WF					X		X		County of Sonoma/Fire Protection District	
e-12	e-11	Ensure that **city/county-initiated** fire-preventive vegetation-management techniques and practices for creek sides and high-slope areas do not contribute to the landslide and erosion hazard.	WF	X								Town/Building/Fire Proection District	
e-13	e-12	Work with insurance companies to create a public/private partnership to give a discount on fire insurance premiums to "Forester Certified" *Fire Wise* landscaping and fire-resistant building materials **on private property.**	WF							X			
ECON - f - Flooding													
f-1	f-1	To reduce flood risk, thereby reducing the cost of flood insurance to **private** property owners, work to qualify for the highest-feasible rating under the Community Rating System of the National Flood Insurance Program.	FL							X			
f-2	f-2	Balance the needs for **private** commercial and industrial development against the risk from potential flood-related hazards.	FL	X								Building	Town Code Title IX
f-3	f-3	Ensure that new **private** development pays its fair share of improvements to the storm drainage system necessary to accommodate increased flows from the development, ***or*** does not increase runoff by draining water to pervious areas or detention facilities.	FL	X								Building/Public Works	Adopted Master Fee Schedule
f-4	f-4	Provide sandbags and plastic sheeting to **private** businesses in anticipation of rainstorms, and deliver those materials to **vulnerable populations** upon request.	FL	X								Public Works	
f-5	f-5	Provide information **to private business** on locations for obtaining sandbags and deliver those sandbags to those various locations throughout a city and/or county.	FL	X								Public Works	
f-6	f-6	Apply floodplain management regulations for **private** development in the floodplain and floodway.	FL	X								Building/Public Works	Town Code Title IX
f-7	f-7	Encourage **private** business owners to participate in building elevation programs **within flood hazard areas.**	FL							X			
f-8	f-8	As funding becomes available, encourage **private** business owners to participate in acquisition and relocation programs for areas within floodways.	FL							X			

Economy Mitigation Strategies

2009-2010 Strategy Number	2005 Original Strategy Number	Specific Mitigation Strategy	Applicable Hazards	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	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 Comments
f-9	f-9	Require an annual inspection of approved flood-proofed **privately-owned** buildings to ensure that (a) all flood-proofing components will operate properly under flood conditions and (b) all responsible personnel are aware of their duties and responsibilities as described in their building's *Flood Emergency Operation Plan* and *Inspection & Maintenance Plan*.	FL							X			

Economy Mitigation Strategies

2009-2010 Strategy Number	2005 Original Strategy Number	Specific Mitigation Strategy	Applicable Hazards	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	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 Comments
ECON - g - Landslides and Erosion													
g-1	g-1	Increase efforts to reduce landslides and erosion in existing and future development by improving appropriate code enforcement and use of applicable standards **for private property**, such as those appearing in the *California Building Code* , California Geological Survey *Special Report 117 – Guidelines for Evaluating and Mitigating Seismic Hazards in California,* American Society of Civil Engineers (ASCE) report *Recommended Procedures for Implementation of DMG Special Publication 117: Guidelines for Analyzing and Mitigating Landslide Hazards in California,* and the California Board for Geologists and Geophysicists *Guidelines for Engineering Geologic Reports.* Such standards should cover excavation, fill placement, cut-fill transitions, slope stability, drainage and erosion control, slope setbacks, expansive soils, collapsible soils, environmental issues, geological and geotechnical investigations, grading plans and specifications, protection of adjacent properties, and review and permit issuance.	LS	X								Building	Town code Title VII
g-2	g-2	Increase efforts to reduce landslides and erosion in existing and future **private** development through continuing education of design professionals on mitigation strategies.	LS							X			Town is relatively flat
ECON - h - **New** Construction **and Earthquakes**													
h-1	h-1	Continue to require that all new **privately-owned** commercial and industrial buildings be constructed in compliance with **(deleted "structural")** requirements of the most recently adopted version of the *California Building Code* .	EQ	X								Building	Town Code Title VII
h-2	h-2	Conduct appropriate employee training and support continued education to ensure enforcement of construction standards **for private development.**	EQ	X								Building	
h-3	h-3	**Work with private building owners to help them** recognize that many strategies that increase earthquake resistance also decrease damage in an explosion. In addition, recognize that ventilation systems can be designed to contain airborne biological agents.	EQ SEC	X								Building	

Economy Mitigation Strategies

2009-2010 Strategy Number	2005 Original Strategy Number	Specific Mitigation Strategy	Applicable Hazards	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	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 Comments
ECON - i - Building Reoccupancy													
i-1	i-1	Institute a program **to encourage owners of private builldings to participate in a program** similar to San Francisco's Building Occupancy Resumption Program (BORP). This program permits owners of private buildings to hire qualified structural engineers to create building-specific post-disaster inspection plans and allows these engineers to become automatically deputized as City/County inspectors for these buildings in the event of an earthquake or other disaster.	EQ LS WF FL SEC	X								County of Sonoma/Town	
i-2	i-2	Actively notify **private** owners of historic or architecturally significant buildings of the availability of the local BORP-type program and encourage them to participate to ensure that appropriately qualified structural engineers are inspecting their buildings, thus reducing the likelihood that the buildings will be inappropriately evaluated following a disaster.	EQ LS WF FL SEC							X			
i-3	i-3	Actively notify owners of ***educational facility*** buildings of the availability of the local BORP-type program and encourage them to participate to ensure that appropriately qualified structural engineers are inspecting their buildings, thus reducing the likelihood that the buildings will be inappropriately evaluated following a disaster.	EQ LS WF FL SEC							X			
i-4	i-4	Allow **private building** owners to participate in a BORP-type program as described above, but not actively encourage them to do so.	EQ LS WF FL SEC							X			
i-5	i-5	Develop and enforce a **repair and reconstruction** ordinance to ensure that **damaged** buildings are repaired in an appropriate and timely manner and retrofitted concurrently. **This repair and reconstruction ordinance should apply to all public and**	EQ LS WF FL SEC						X			Building	
i-6	i-6	Establish preservation-sensitive measures for the repair and reoccupancy of historically significant **privately-owned** structures, including requirements for temporary shoring or stabilization where needed, arrangements for consulting with preservationists, and expedited permit procedures for suitable repair or rebuilding of historically or architecturally valuable structures.	EQ LS WF FL SEC	X								Building	Town Code
ECON - j - Public Education													
j-1	j-1	Provide information to **private** business owners and **their** employees on the availability of interactive hazard maps on ABAG's web site.	EQ LS WF FL SEC								X		Town Manager

Economy Mitigation Strategies

2009-2010 Strategy Number	2005 Original Strategy Number	Specific Mitigation Strategy	Applicable Hazards	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	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 Comments
j-2	j-2	Develop printed materials, utilize existing materials (such as developed by FEMA and the American Red Cross), conduct workshops, and/or provide outreach encouraging **private** businesses' employees to have family disaster plans that include drop-cover-hold earthquake drills, fire and storm evacuation procedures, and shelter-in-place emergency guidelines.	EQ LS WF FL SEC							X			
j-3	j-3	Develop **and** print materials, conduct workshops, and provide outreach to Bay Area **private** businesses focusing on business continuity planning.	EQ LS WF FL SEC							X			
j-4	j-4	Inform Bay Area **private** business owners of mitigation activities, including elevation of appliances above expected flood levels, use of fire-resistant roofing and defensible space in wildland-urban-interface fire-threatened communities or in areas exposed to high-to-extreme fire threat, structural retrofitting techniques for older buildings, and use of intelligent grading practices through workshops, publications, and media announcements and events.	WF FL	X							X	Building	
j-5	j-5	Sponsor the formation and training of Community Emergency Response Teams (CERT) training **for other than your own employees** through partnerships with local **private** businesses. [Note – these programs go by a variety of names in various cities and areas.]	EQ LS WF FL SEC	X								County of Sonoma	
j-6	j-6	Assist **private** businesses in the development of defensible space through the use of, for example, "tool libraries" for weed abatement tools, roadside collection and/or chipping services (for brush, weeds, and tree branches) in wildland-urban-interface fire-threatened communities or in areas exposed to high-to-extreme fire threat.	WF							X			
j-7	j-7	Make use of the materials developed by others (such as found on ABAG's web site at ***http://quake.abag.ca.gov/business***) to increase mitigation activities related to earthquakes **by groups other than your own agency.** ABAG plans to continue to improve the quality of those materials over time.	EQ							X			
j-8	j-8	Develop a "Maintain-a-Drain" campaign, similar to that of the City of Oakland, encouraging **private** businesses and residents to keep storm drains in their neighborhood free of debris.	FL						X			Public Works	
j-9	j-9	Encourage the formation of a community- and neighborhood-based approach to wildfire education and action through local Fire Safe Councils and the *Fire Wise Program*. **This effort is important because grant funds are currently available to offset costs of specific council-supported projects.**	WF							X		County of Sonoma/Fire Protection District	

Economy Mitigation Strategies

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j-10	j-10	Encourage **private** businesses and laboratories handling hazardous materials or pathogens increase security to a level high enough to create a deterrent to crime and terrorism, including active implementation of "cradle-to-grave" tracking systems.	SEC EQ							X		County of Sonoma	
j-11	j-11	Encourage joint meetings of security and operations personnel at major **private** employers to develop innovative ways for these personnel to work together to increase safety and security.	SEC EQ							X		County of Sonoma/Police	
j-12	j-12	Inform **private** shoreline-property owners of the possible long-term economic threat posed by rising sea levels.	FL							X			No shoreline in Windsor
j-13	j-13	Distribute appropriate materials related to disaster mitigation and preparedness **to private business owners. Appropriate materials are (1) culturally appropriate and (2) suitable for special needs populations. For example, such materials are available on the** http://www.preparenow.org website **and from non-governmental organizations that work with these communities on an on-going basis.**	EQ LS WF FL SEC							X		County of Sonoma	

Education 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 Comments
				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		
EDUC - a - Focus on Critical Facilities (...Owned by School Districts)													
a-1	a-1	Assess the vulnerability of critical public education facilities to damage in natural disasters and make recommendations for appropriate mitigation.	EQ LS WF FL SEC							X			
a-2	a-2	Retrofit or replace critical public education facilities that are shown to be vulnerable to damage in natural disasters.	EQ LS WF FL SEC							X			
a-3	a-3	Conduct comprehensive programs to identify and mitigate problems with facility contents, architectural components, and equipment that will prevent critical public education buildings from being functional after major disasters.	EQ LS WF FL SEC							X			
a-4	a-4	As a secondary focus, assess the vulnerability of non-critical educational facilities (that is, those that do not house students) to damage in natural disasters based on occupancy and structural type, make recommendations on priorities for structural improvements or occupancy reductions, and identify potential funding mechanisms.	EQ LS WF FL SEC							X			
a-5	new	Assess the vulnerability of critical private education, pre-school, and day care facilities to damage in natural disasters and make recommendations for appropriate mitigation.	EQ LS WF FL SEC							X			
a-6	a-5	(Major Rewording) Work with CalEMA and the Division of the State Architect to ensure that there will be an adequate group of Safety Assessment Program (SAP) inspectors trained and deployed by CalEMA to schools for post-disaster inspection. In addition, if a school district is uncomfortable with delays in inspection due to too few SAP inspectors available in catastrophic disasters, formalized arrangements can also be created with those inspectors certified by the Division of the State Architect as construction inspectors to report to the district, assess damage, and determine if the buildings can be reoccupied.	EQ LS WF FL SEC							X			
EDUC - b - Use of Educational Facilities as Emergency Shelters													
b-1	b-1	Work cooperatively with the American Red Cross, cities, counties, and non-profits to set up memoranda of understanding for use of education facilities as emergency shelters following disasters.	EQ LS WF FL SEC						X			EOC/Town	This is a goal of the EOC and is still being considered
b-2	b-2	Work cooperatively to ensure that school district personnel and relevant staff understand and are trained that being designated by the American Red Cross or others as a potential emergency shelter does NOT mean that the school has had a hazard or structural evaluation to ensure that it can be used as a shelter following any specific disaster.	EQ LS WF FL SEC						X			EOC/Town	This is a goal of the EOC and is still being considered

Education Mitigation Strategies

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b-3	b-3	Work cooperatively to ensure that school district personnel understand and are trained that they are designated as disaster service workers and must remain at the school until released.	EQ LS WF FL SEC							X			
EDUC - c - Actions Related to Disaster Preparedness and Recovery Planning													
c-1	new	Encourage employees of schools to have family disaster plans and conduct mitigation activities in their own homes.	EQ LS WF FL SEC							X			
c-2	c-2	Develop plans, in conjunction with fire jurisdictions, for evacuation or sheltering in place of school children during periods of high fire danger, thereby recognizing that overloading of streets near schools by parents attempting to pick up their children during these periods can restrict access by fire personnel and equipment.	EQ LS WF FL SEC							X			
c-3	c-3	Offer the 20-hour basic CERT training to teachers and after-school personnel.	EQ LS WF FL SEC							X			
c-4	c-4	Offer the 20-hour basic **Student Emergency Response Training (SERT, rather than** CERT) training to middle school and/or high school students as a part of the basic science or civics curriculum, as an after school club, or as a way to earn public service hours.	EQ LS WF FL SEC							X			
c-5	c-5	Offer the 20-hour basic CERT training course through the Adult School system and/or through the Community College system **(either using instructors with teaching credentials or by making facilities available for classes not run by school personnel themselves).**	EQ LS WF FL SEC							X			
c-6	c-6	Develop and maintain the capacity for schools to take care of the students for the first 48 hours after a disaster, and notify parents that this capacity exists.	EQ LS WF FL SEC							X		Windsor Unified School District/Sonoma County Office of Educations	
c-7	new	**Develop a continuity of operations and disaster recovery plan using models such as that developed by the University of California Berkeley. (The American Red Cross has a role in promoting this activity, as well, in schools that they plan to use as shelters.)**	EQ LS WF FL SEC							X		Windsor Unified School District/Sonoma County Office of Educations	
EDUC - d- Actions Related to Schools as Conduits for Information to Families About Emergencies													
d-1	c-1	Utilize the unique ability of schools to reach families through educational materials on hazards, mitigation, and preparedness, particularly after disasters and at the beginning of the school year. These efforts will not only make the entire community more disaster-resistant, but speed the return of schools from use as shelters to use as teaching facilities, **particularly if coordinated with cities, counties, the American Red Cross and others.**	EQ LS WF FL SEC							X		Windsor Unified School District/Sonoma County Office of Educations	

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d-2	e-7	Develop and distribute culturally appropriate materials related to disaster mitigation and preparedness, such as those on the http://www.preparenow.org website.	EQ LS WF FL SEC							X		Windsor Unified School District/Sonoma County Office of Educations	

Environment Mitigation Strategies

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ENVI - a - Environmental Sustainability and Pollution Reduction												
a-1	a-1	Continue to enforce State-mandated requirements, such as the *California Environmental Quality Act*, to ensure that mitigation activities for hazards, such as seismic retrofits and vegetation clearance programs for fire threat, are conducted in a way that reduces environmental degradation such as air quality impacts, noise during construction, and loss of sensitive habitats and species, while respecting the community value of historic preservation.	EQ LS WF FL DR SEC	X								Town of Windsor	
a-2	a-2	Encourage regulatory agencies to work collaboratively with safety professionals to develop creative mitigation strategies that effectively balance environmental and safety needs, particularly to meet critical wildfire, flood, and earthquake safety levels.	EQ WF FL SEC	X								Town of Windsor	
a-3	a-3	Continue to enforce and/or comply with State-mandated requirements, such as the *California Environmental Quality Act* and environmental regulations to ensure that urban development is conducted in a way to minimize air pollution. For example, air pollution levels can lead to global warming, and then to drought, increased vegetation susceptibility to disease (such as pine bark beetle infestations), and associated increased fire hazard.	LS WF FL DR SEC	X								Town of Windsor	
a-4	a-4	Develop and implement a comprehensive program for watershed **management** optimizing **ecosystem** health with water yield to balance water supply, flooding, fire, and erosion concerns.	LS WF FL DR SEC	X								Town of Windsor	
a-5	a-5	Balance the need for the smooth flow of storm waters versus the need to maintain wildlife habitat by developing and implementing a comprehensive Streambed Vegetation Management Plan that ensures the efficacy of flood control efforts, **mitigates wildfires** and maintains the viability of living rivers.	LS WF FL DR	X								County of Sonoma	
a-6	a-8	Comply with applicable performance standards of any *National Pollutant Discharge Elimination System* municipal stormwater permit that seeks to manage increases in stormwater run-off flows from new development and redevelopment construction projects.	FL	X								Public Works	
a-7	a-9	Enforce and/or comply with the grading, erosion, and sedimentation requirements by prohibiting the discharge of concentrated stormwater flows by other than approved methods that seek to minimize associated pollution.	LS FL	X								Public Works	

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a-8	a-10	Explore ways to require that hazardous materials stored in the flood zone be elevated or otherwise protected from flood waters.	FL							X		County of Sonoma	
a-9	a-11	Enforce and/or comply with the hazardous materials requirements of the State of California Certified Unified Program Agency (CUPA).	EQ LS WF FL SEC							X		County of Sonoma	
a-10	a-12	Provide information on hazardous waste disposal and/or drop off locations.	EQ LS WF FL SEC							X		County of Sonoma	
a-11	new	**When remodeling existing government and infrastructure buildings and facilities, remove asbestos to speed up clean up of buildings so that they can be reoccupied more quickly.**	EQ LS WF FL SEC	X								Building	
a-12	a-13	Develop and implement a program to control invasive and exotic species that contribute to fire and flooding hazards (such as eucalyptus, cattails, and cordgrass). **This program could include vegetation removal, thinning, or replacement in hazard areas where there is a direct threat to structures.**	WF FL							X			
a-13	a-14	Enforce provisions under creek protection, stormwater management, and discharge control ordinances designed to keep watercourses free of obstructions and to protect drainage facilities to conform with the Regional Water Quality Control Board's Best Management Practices.	FL	X								County of Sonoma	
ENVI - b - Climate Change													
b-1	a-6 + a-7	**Stay informed of scientific information compiled by regional and state sources on the subject of rising sea levels and global warming, especially on additional actions that local governments can take to mitigate this hazard including special design and engineering of government-owned facilities in low-lying areas, such as wastewater treatment plants, ports, and airports.**	LS WF FL DR								X	Planning	
b-2	new	**Inventory global warming emissions in your own local government's operations and in the community, set reduction targets and create an action plan.**	LS WF FL DR	X								Planning	
b-3	new	**Adopt and enforce land-use policies that reduce sprawl, preserve open space, and create compact, walkable urban communities.**	LS WF FL DR	X								Planning	Zoning Ordinance/Design Standards/ Adopted Plans
b-4	new	**Promote transportation options such as bicycle trails, commute trip reduction programs, incentives for car pooling and public transit.**	LS WF FL DR	X								Community Service Dept/Engineering	Town Wide Trail and Bikeways Plan

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b-5	new	**Increase the use of clean, alternative energy by, for example, investing in "green tags", advocating for the development of renewable energy resources, recovering landfill methane for energy production, and supporting the use of waste to energy technology.**	LS WF FL DR							X			
b-6	new	**Make energy efficiency a priority through building code improvements, retrofitting city facilities with energy efficient lighting and urging employees to conserve energy and save money.**	LS WF FL DR	X								Town	
b-7	new	**Purchase only Energy Star equipment and appliances for local government use.**	LS WF FL DR	X								Planning	
b-8	new	**Practice and promote sustainable building practices using the U.S. Green Building Council's LEED program or a similar system.**	LS WF FL DR	X								Planning/Building	Resolution 2007-215
b-9	new	**Increase the average fuel efficiency of municipal fleet vehicles; reduce the number of vehicles; launch an employee education program including anti-idling messages; convert diesel vehicles to bio-diesel.**	LS WF FL DR	X								Town	
b-10	new	**Evaluate opportunities to increase pump efficiency in water and wastewater systems; recover wastewater treatment methane for energy production.**	LS WF FL DR	X								Public Works	
b-11	new	**Increase recycling rates in local government operations and in the community.**	LS WF FL DR	X								Town Manager	
b-12	new	**Maintain healthy urban forests; promote tree planting to increase shading and to absorb CO2.**	LS WF FL DR	X								Planning	Zoning Ordinance
b-13	new	**Help educate the public, schools, other jurisdictions, professional associations, business and industry about reducing global warming pollution.**	LS WF FL DR							X			
ENVI - c - Agricultural and Aquaculture Resilience													
c-1	b-1	Maintain a variety of crops in rural areas of the region to increase agricultural diversity and crop resiliency. **RESPONSIBLE AGENCIES: County Offices of the Agricultural Commissioner.**	Ag DR SEC							X			
c-2	b-2	Promote and maintain the public-private partnerships dedicated to preventing the introduction of agricultural pests into regionally-significant crops, such as the glassy-winged sharpshooter into vineyards. **RESPONSIBLE AGENCIES: County Offices of the Agricultural Commissioner.**	Ag DR SEC							X			
c-3	b-4	Encourage livestock operators to develop an early-warning system to detect animals with communicable diseases (due to natural causes or bioterrorism). **RESPONSIBLE AGENCIES: County Health Department and Office of the County Agricultural Commissioner.**	Ag Flu SEC							X			

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delete	b-3	(deleted since not a disaster-related strategy)											

Government Mitigation Strategies

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GOVT - a - Focus on Critical Facilities (...Owned by the Local Government Filling Out This Form)													
a-1	a-1	Assess the vulnerability of critical facilities (such as city halls, fire stations, **operations and communications headquarters,** community service centers, seaports, and airports) to damage in **natural disasters** and make recommendations for appropriate mitigation.	EQ LS WF FL	X								Town	Town Code - Chapter 19
a-2	a-2	Retrofit or replace critical facilities that are shown to be vulnerable to damage in natural disasters.	EQ LS WF FL SEC							X			
a-3	a-3	Clarify to workers in critical facilities and emergency personnel, as well as to elected officials and the public, the extent to which the facilities are expected to perform only at a life safety level (allowing for the safe evacuation of personnel) or are expected to remain functional following an earthquake.	EQ	X								Town	Town Code - Chapter 19
a-4	a-4	Conduct comprehensive programs to identify and mitigate problems with facility contents, architectural components, and equipment that will prevent critical buildings from being functional after major natural disasters. **Such contents and equipment includes computers and servers, phones, files, and other tools used by staff to conduct daily business.**	EQ LS WF FL SEC							X			
a-5	a-5	Encourage joint meetings of security and operations personnel at critical facilities to develop innovative ways for these personnel to work together to increase safety and security.	EQ LS WF FL SEC	X								Town/EOC	Town Code - Chapter 19
a-6	a-6	**When** Installing micro and/or surveillance cameras around critical public assets tied to web-based software, and develop a surveillance protocol to monitor these cameras, investigate the possiblility of using the cameras for the secondary purpose of post-disaster damage assessment.	EQ LS WF FL SEC							X			
a-7	a-7	Identify and undertake cost-effective retrofit measures **related to security** on critical facilities (such as moving and redesigning air intake vents and installing blast-resistant features) when these buildings undergo major renovations **related to other natural hazards.**	EQ LS WF FL SEC							X			
a-8	a-8	Coordinate with the State Division of Safety of Dams to ensure that cities and counties are aware of the timeline for the maintenance and inspection of dams whose failfure would impact their jurisdtiction	EQ LS WF FL SEC							X			
a-9	a-9	As a secondary focus, assess the vulnerability of non-critical facilities to damage in natural disasters based on occupancy and structural type, make recommendations on priorities for structural improvements or occupancy reductions, and identify potential funding mechanisms.	EQ LS WF FL SEC							X			
a-10	a-10	Ensure that **new** government-owned facilities **comply with and** are subject to the same or more stringent regulations as imposed on privately-owned development.	EQ LS WF FL SEC	X								Town	

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a-11	a-11	Comply with all **applicable building and fire codes, as well as other regulations (such as state requirements for fault, landslide, and liquefaction investigations in particular mapped areas) when constructing or significantly remodeling government-owned facilities.**	EQ LS WF FL SEC	X								Town	Town Code
a-12	a-12	Prior to acquisition of property to be used as a critical facility, conduct a study to ensure the absence of significant **structural** hazards **and hazards associated with the building site.**	EQ LS WF FL SEC	X								Town	
a-13	new	**Ensure that any regulations imposed on private-owned businesses related to repair and reconstruction (see "Economy Section") are enforced and imposed on local government's own buildings and structures.**	EQ LS WF FL SEC	X								Town	Town Code
GOVT - b - Maintain and Enhance Local Government's Emergency Recovery Planning													
b-1	b-1	Establish a framework and process for pre-event planning for post-event recovery that specifies roles, priorities, and responsibilities of various departments within the local government organization, and that outlines a structure and process for policy-making involving elected officials and appointed advisory committees.	EQ LS WF FL SEC		X							Sonoma County/Town/EOC	Town Code Chapter 19 Title III
b-2	b-2	Prepare a basic Recovery Plan that outlines the major issues and tasks that are likely to be the key elements of community recovery, as well as integrate this planning into response planning **(such as with continuity of operations plans).**	EQ LS WF FL SEC		X							Sonoma County/Town/EOC	Town Code Chapter 19 Title III
b-3	b-3	Establish a goal for the resumption of local government services that may vary from function to function.	EQ LS WF FL SEC		X							Sonoma County/Town/EOC	Town Code Chapter 19 Title III
b-4	b-25	Develop a **continuity of operations** plan that includes back-up storage of vital records, such as **plans and back-up procedures to pay employees and vendors if normal finance department operations are disrupted, as well as other essential electronic files.**	EQ LS WF FL SEC		X							Sonoma County/Town/EOC	Town Code Chapter 19 Title III
b-5	new	**Plan for the emergency relocation of government-owned facilities critical to recovery, as well as any facilities with known structural deficiencies or in hazardous areas.**	EQ LS WF FL SEC		X							Sonoma County/Town/EOC	Town Code Chapter 19 Title III
GOVT - c - Maintain and Enhance Local Government's Emergency Response Capacity													
c-1	new (old b-4 moved to HSNG a-3)	Develop a plan for short-term and intermediate-term sheltering of **your employees.**	EQ LS WF FL SEC								X		

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c-2	new	**Encourage your employees to have a family disaster plan.**	EQ LS WF FL SEC		X							Human Resources	
c-3	new	**Offer CERT/NERT-type training to your employees.**	EQ LS WF FL SEC		X							County of Sonoma/Town/EOC	
c-4	b-5 (a)	Periodically assess the need for new or relocated fire or police stations and other emergency facilities.	EQ LS WF FL SEC		X							Town/Police/Fire Protection Districts	
c-5	b-5 (b)	Periodically assess the need for changes in staffing levels, **as well as for** additional or updated supplies, equipment, technologies, and in-service training classes.	EQ LS WF FL SEC		X							Town/Police/Fire Protection Districts	
c-6	b-6	Ensure that **fire, police, and other emergency** personnel have adequate radios, breathing apparatuses, protective gear, and other equipment to respond to a major disaster.	EQ LS WF FL SEC		X							Police/Fire Protection Districts	
c-7	b-7	**Participate in** developing and maintaining a system of interoperable communications for first responders from cities, counties, special districts, state, and federal agencies.	EQ LS WF FL SEC		X							County of Sonoma/Police/Fire Portection Districts	
c-8	b-8	Harden emergency response communications, including, for example, building redundant capacity into public safety alerting and/or answering points, replacing or hardening microwave and simulcast systems, adding digital encryption for programmable radios, and ensuring a plug-and-play capability for amateur radio.	EQ LS WF FL SEC		X							County of Sonoma	
c-9	b-9	Purchase command vehicles for use as mobile command/EOC vehicles if current vehicles are unsuitable or inadequate.	EQ LS WF FL SEC		X							County of Sonoma/Police/Fire Portection Districts	
c-10	b-10	Maintain the local government's emergency operations center in a fully functional state of readiness.	EQ LS WF FL SEC		X							Fire Protection Districts	
c-11	b-11	Expand or participate in expanding traditional disaster exercises involving city and county emergency personnel to include airport and port personnel, transit and infrastructure providers, hospitals, schools, park districts, and major employers.	EQ LS WF FL SEC		X							County of Sonoma/Town/EOC	
c-12	b-12	Maintain and update as necessary the local government's Standardized Emergency Management System (SEMS) Plan **and the National Incident Management System (NIMS) Plan, and submit an appropriate NIMSCAST report.**	EQ LS WF FL SEC							X		County of Sonoma	
c-13	b-13	Continue to participate not only in general mutual-aid agreements, but also in agreements with adjoining jurisdictions for cooperative response to fires, floods, earthquakes, and other disasters.	EQ LS WF FL SEC							X		Police/Fire Protection Districts	

Government Mitigation Strategies

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c-14	b-14 & b-22	Install alert and warning systems for **rapid evacuation or shelter-in-place. Such systems include** outdoor sirens **and/or reverse-911 calling systems.**	EQ LS WF FL SEC							X		County of Sonoma/Police/Fire Portection Districts	
c-15	b-15	Conduct periodic tests of the alerting and warning system. **(deleted some wording)**	EQ LS WF FL SEC							X		County of Sonoma/Police/Fire Portection Districts	
c-16	b-16	Regulate and enforce the location and design of street-address numbers on buildings and minimize the naming of short streets (that are actually driveways) to single homes.	EQ LS WF FL SEC		X							Planning/Fire Protection Districts	
c-17	b-17	Monitor weather during times of high fire risk using, for example, weather stations tied into police and fire dispatch centers.	WF							X		Police/Fire Protection Districts	
c-18	b-18	Establish regional protocols on how to respond to the NOAA Monterey weather forecasts, such as the identifying types of closures, limits on work that could cause ignitions, and prepositioning of suppression forces. A multi-agency coordination of response also helps provide unified messages to the public about how they should respond to these periods of increased fire danger. **Response should also be modified based on knowledge of local micro-climates. Local agencies with less risk then may be available for mutual aid.**	WF							X		County of Sonoma/Police/Fire Portection Districts	
c-19	b-19	Increase local patrolling during periods of high fire weather.	WF							X		County of Sonoma/Police/Fire Portection Districts	
c-20	b-20	Create and maintain an automated system of rain and flood gauges that is web enabled and publicly-accessible. **Work toward creating a coordinated regional system.**	FL LS							X			
c-21	b-21	Place remote sensors in strategic locations for early warning of hazmat releases or use of weapons of mass destruction, **understanding that the appropriate early warning strategy depends on the type of problem.**	EQ LS WF FL SEC							X			
c-22	b-23	Review and update, as necessary, procedures pursuant to the *State Dam Safety Act* for the emergency evacuation of areas located below major water-storage facilities.	EQ LS FL SEC							X			
c-23	a-8	Improve coordination among cities, counties, and dam owners so that cities and counties can better plan for evacuation of areas the could be inundated if a dam failed, impacting their **jurisdiction.**	EQ LS FL SEC							X			
c-24	b-24	Develop procedures for the emergency evacuation of areas identified on tsunami evacuation maps as these maps become available.	EQ (TS)							X			
c-25	**new**	**Support and encourage planning and identification of facilities for the coordination of distribution of water, food, blankets, and other supplies, coordinating this effort with the American Red Cross.**	EQ LS WF FL SEC							X		County of Sonoma	
GOVT - d - Participate in National, State, Multi-Jurisdictional and Professional Society Efforts to Identify and Mitigate Hazards													

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d-1	c-1	Promote information sharing among overlapping and neighboring local governments, including cities, counties, and special districts, as well as utilities.	EQ LS WF FL SEC		X							County of Sonoma/Town/Police/ Fire Protection Districts	
d-2	c-2	Recognize that emergency services is more than the coordination of police and fire response; it also includes planning activities with providers of water, food, energy, transportation, financial, information, and public health services.	EQ LS WF FL SEC							X		County of Sonoma	
d-3	c-3	Recognize that a multi-agency approach is needed to mitigate flooding by having flood control districts, cities, counties, and utilities meet at least annually to jointly discuss their capital improvement programs for most effectively reducing the threat of flooding. **Work toward making this process more formal to insure that flooding is considered at existing joint-agency meetings.**	FL		X							Building/Public Works/Sonoma County Water Agency	
d-4	c-4	As new flood-control projects are completed, request that FEMA revise its flood-insurance rate maps and digital Geographic Information System **(GIS)** data to reflect flood risks as accurately as possible.	FL		X							Building	
d-5	c-5	Participate in FEMA's National Flood Insurance Program.	FL		X							Building	
d-6	c-6	Participate in multi-agency efforts to mitigate fire threat, such as the Hills Emergency Forum (in the **E**ast Bay), various *FireSafe* Council programs, and city-utility task forces. **Such participation increases a jurisidiction's competitiveness in obtaining grants.**	WF		X							Fire Protection Districts	
d-7	c-7	Work with major employers and agencies that handle hazardous materials to coordinate mitigation efforts for the possible release of these materials due to a natural disaster such as an earthquake, flood, fire, or landslide.	EQ LS WF FL SEC							X		County of Sonoma/Town/Police/ Fire Protection Districts	
d-8	c-8	Encourage staff to participate in efforts by professional organizations to mitigate earthquake and landslide disaster losses, such as the efforts of the Northern California Chapter of the Earthquake Engineering Research Institute, the East Bay-Peninsula Chapter of the International Code Council, the Structural Engineers Association of Northern California, and the American Society of Grading Officials.	EQ LS							X			
d-9	c-9	Conduct and/or promote attendance at local or regional hazard conferences and workshops for elected officials **and staff** to educate **them** on the critical need for programs in mitigating earthquake, wildfire, flood, and landslide hazards.	EQ LS WF FL SEC		X							Town/Building	

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d-10	c-10	Cooperate with researchers working on government-funded projects to refine information on hazards, for example, by expediting the permit and approval process for installation of seismic arrays, gravity survey instruments, borehole drilling, fault trenching, landslide mapping, flood modeling, and/or damage data collection.	EQ LS WF FL SEC								X		
GOVT - e - Take a Lead in Loss and Risk Assessment Activities													
e-1	e-1	Work with the cities, counties, and special districts in the Bay Area to encourage them to adopt a Local Hazard Mitigation Plan and to assist them in integrating it into their overall planning process. **RESPONSIBILITY: ABAG only; all others are "not applicable."**	EQ LS WF FL DR TS SEC Flu Ag Heat							X			
e-2	e-2	Improve the risk assessment and loss estimation work in the ***Taming Natural Disasters*** report and multi-jurisdictional plan related to natural disasters. **RESPONSIBILITY: ABAG only; all others are "not applicable."**	EQ LS WF FL DR TS Flu Ag Heat							X			

Housing 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 Comments
				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		
HSNG - a - Multi-Hazard													
a-1	a-1	Assist in ensuring adequate hazard disclosure by working with real estate agents to improve enforcement of real estate disclosure requirements **for residential properties** with regard to seven official natural hazard zones: **1) Special Flood Hazard Areas (designated by FEMA), 2) Areas of Potential Flooding from dam failure inundation, 3) Very High Fire Hazard Severity Zones, 4) Wildland Fire Zones, 5) Earthquake Fault Zones (designated under the Alquist-Priolo Earthquake Fault Zoning Act), and the 6) Liquefaction and Landslide Hazard Zones (designated under the Seismic Hazard Mapping Act).**	EQ LS WF FL SEC								X	Building	
a-2	a-2	Create incentives for **private** owners of historic or architecturally significant residential buildings to undertake mitigation to levels that will minimize the likelihood that these buildings will need to be demolished after a disaster, particularly if those alterations conform to the federal Secretary of the Interior's *Guidelines for Rehabilitation.*	EQ LS WF FL SEC	X	X							Building	Historic Building Code
a-3	NEW Was GOV T b-4	Develop a plan for short-term sheltering of residents **of your community in conjunction with the American Red Cross.**	EQ LS WF FL SEC							X			
a-4	NEW Was GOV T b-4	**Develop a plan for interim housing for those displaced by working with the Regional Catastrophic Planning Grant Program (CPGP) that funded this effort in 2009. (Estimated completion is 2011.)**	EQ LS WF FL SEC							X			

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HSNG - b - Single-Family Homes Vulnerable to Earthquakes													
b-1	b-1	Utilize or recommend adoption of a retrofit standard that includes standard plan sets and construction details for voluntary bolting of homes to their foundations and bracing of outside walls of crawl spaces ("cripple" walls), such as **Plan Set A** developed by a committee representing the East Bay-Peninsula-Monterey Chapters of the International Code Council (ICC), California Building Officials (CALBO), the Structural Engineers Association of Northern California (SEAONC), the Northern California Chapter of the Earthquake Engineering Research Institute (EERI-NC), and ABAG's Earthquake Program.	EQ						X			Building	
b-2	b-2	Require engineered plan sets for **seismic** retrofitting of heavy two-story homes with living areas over garages, as well as for split level homes **(that is, homes not covered by Plan Set A)**, until standard plan sets and construction details become available.	EQ						X			Building	
b-3	b-3	Require engineered plan sets for **seismic** retrofitting of homes on steep hillsides **(because these homes are not covered by Plan Set A)**.	EQ							X		Building	Town is relatively flat
b-4	b-4	Encourage local government building inspectors to take classes on a periodic basis (such as the FEMA-developed training classes offered by ABAG) on retrofitting of single-family homes, **including application of Plan Set A.**	EQ	X								Building	
b-5	b-5	Encourage private retrofit contractors and home inspectors doing work in your area to take retrofit classes on a periodic basis (such as the FEMA-developed training classes offered by ABAG **or additional classes that might be offered by the CALBO Training Institute**) on retrofitting of single-family homes.	EQ						X			Building	
b-6	b-6	Conduct demonstration projects on common existing housing types demonstrating structural and nonstructural mitigation techniques as community models for earthquake mitigation.	EQ								X	Building	
b-7	b-7	Provide retrofit classes or workshops for homeowners in your community**, or help promote utilization of subregional workshops in the South Bay, East Bay, Peninsula, and North Bay as such workshops become available through outreach using existing community education programs.**	EQ								X	Building	
b-8	b-8	Establish tool-lending libraries with common tools needed for retrofitting for use by homeowners with appropriate training.	EQ							X			

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b-9	b-9	**(reworded) Provide financial incentives to owners of single-family homes to retrofit if those retrofits comply with Plan Set A or IEBC 2006 in addition to that provided by existing state law State law that makes such retrofits exempt from increases in property taxes.**	EQ								X	Town Council	
HSNG - c - Soft-Story Multifamily Residential Structures Vulnerable to Earthquakes													
c-1	c-1	Require engineered plan sets for voluntary or mandatory soft-story **seismic** retrofits **by private owners** until a standard plan set and construction details become available.	EQ	X								Building	
c-2	c-2	Adopt the 200**9 (changed date)** International Existing Building Code or the latest applicable standard for the design of voluntary or mandatory soft-story building retrofits **for use in city/county building department regulations. In addition, allow use of changes to that standard recommended by SEAOC for the 2012 IEBC.**	EQ	X								Building	
c-3	c-3	Work to educate building owners, local government staff, engineers, and contractors on **privately-owned** soft-story retrofit procedures and incentives using materials such as those developed by ABAG and the City of San Jose (see **http://quake.abag.ca.gov/eqhouse.html.**)	EQ						X			Building	
c-4	c-4	Conduct an inventory of **privately-owned** existing or suspected soft-story residential structures **as a first step in establishing voluntary or mandatory programs for retrofitting these buildings.**	EQ						X			Building	
c-5	c-5	Use the soft-story inventory to require **private** owners to inform all existing tenants (and **prospective** tenants prior to signing a lease agreement) that they **may** live in this type of building.	EQ						X			Building	
c-6	c-6	Use the soft-story inventory to require **private** owners to inform all existing **and prospective** tenants that they **may** need to be prepared to live elsewhere following an earthquake if the building has not been retrofitted.	EQ						X			Building	
c-7	c-7	Investigate and adopt appropriate financial, procedural, and land use incentives (such as parking waivers) for **private** owners of soft-story buildings to facilitate retrofit such as those **described** by ABAG (see ***http://quake.abag.ca.gov/fixit***) .	EQ						X			Building	
c-8	c-8	(reworded) Explore development of State regulations or legislation to require or encourage **private** owners of soft-story structures to strengthen them.	EQ						X			Building	
c-9	c-9	Provide technical assistance in seismically strengthening **privately-owned** soft-story structures.	EQ						X			Building	
HSNG - d - Unreinforced Masonry Housing Stock													

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d-1	d-1	Continue to actively implement existing State law that requires cities and counties to maintain lists of the addresses of unreinforced masonry buildings and inform **private** property owners that they own this type of hazardous structure.	EQ	X								Building	
d-2	d-2	Accelerate retrofitting of **privately-owned** unreinforced masonry structures that have not been retrofitted, for example, by (a) actively working with owners to obtain structural analyses of their buildings, (b) helping owners obtain retrofit funding, (c) adopting a mandatory versus voluntary, retrofit program, and/or (d) applying penalties to owners who show inadequate efforts to upgrade these buildings.	EQ	X								Building	
d-3	d-3	Require **private** owners to inform all existing **tenants (and prospective** tenants prior to signing a lease agreement) that they live in **an unreinforced masonry** building and the standard to which it may have been retrofitted.	EQ						X			Building	
d-4	d-4	As required by State law, require **private** owners to inform all existing tenants that they may need to be prepared to live elsewhere following an earthquake even if the building has been retrofitted, **because** it has probably been retrofitted to a life-safety standard, not to a standard that will allow occupancy following major earthquakes.	EQ						X			Building	

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HSNG - e - Other Privately-Owned Structurally Vulnerable Residential Buildings and Earthquakes													
e-1	e-1	Identify and work toward tying down mobile homes used as year-round permanent residences using an appropriate cost-sharing basis (for example, 75% grant, 25% owner).	EQ						X			Building	
e-2	e-2	Inventory non-ductile concrete, tilt-up concrete **(such as converted lofts),** and other privately-owned potentially structurally **vulnerable** residential buildings.	EQ						X			Building	
e-3	e-3	Adopt the **2009** International Existing Building Code or the latest applicable standard for the design of voluntary or mandatory retrofit of **privately-owned** seismically vulnerable buildings.	EQ	X								Building	
e-4	e-4	Adopt one or more of the following strategies as incentives to encourage retrofitting of privately-owned **seismically vulnerable** residential buildings: (a) waivers or reductions of permit fees, (b) below-market loans, (c) local tax breaks, (d) grants to cover the cost of retrofitting or of a structural analysis, (e) land use **(such as parking requirement waivers)** and procedural incentives, or (f) technical assistance.	EQ						X			Building	
HSNG - f - New Construction and Earthquakes													
f-1	f-1	Continue to require that all new housing be constructed in compliance with **(deleted "structural")** requirements of the most recently adopted version of the *California Building Code*.	EQ	X	X							Building	Town Code Title VII
f-2	f-2	Conduct appropriate employee training and support continued education to ensure enforcement of building codes and construction standards, as well as identification of typical design inadequacies of housing and recommended improvements.	EQ	X	X							Building/Planning	
HSNG - g - Wildfire and Structural Fires													
g-1	g-1	Increase efforts to reduce hazards in existing **private** development in wildland-urban-interface fire-threatened communities or in areas exposed to high-to-extreme fire threat through improving engineering design and vegetation management for mitigation, appropriate code enforcement, and public education on defensible space mitigation strategies.	WF							X		Fire Protection Districts	Wildland Interface Weed/Vegetation Abatement Program
g-2	g-2	Tie public education on defensible space and a comprehensive defensible space ordinance to a field program of enforcement.	WF							X		Fire Protection Districts	

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g-3	g-3	Require that new homes in wildland-urban-interface fire-threatened communities or in areas exposed to high-to-extreme fire threat be constructed of fire-resistant building materials (including roofing and exterior walls) and incorporate fire-resistant design features (such as minimal use of eaves, internal corners, and open first floors) to increase structural survivability and reduce ignitability. **Note** - See Structural Fire Prevention Field Guide for Mitigation of Wildfires at http://osfm.fire.ca.gov/structural.html.	WF							X		Fire Protection Districts	
g-4	g-4	Create or identify "model" **properties showing defensible space and structural survivability** in neighborhoods that are wildland-urban-interface fire-threatened communities or in areas exposed to high-to-extreme fire threat.	WF							X			
g-5	g-5	Consider fire safety, evacuation, and emergency vehicle access when reviewing proposals to add secondary units or additional residential units in wildland-urban-interface fire-threatened communities or in areas exposed to high-to-extreme fire threat.	WF	X								County of Sonoma	
g-6	g-6	Adopt and amend as needed updated versions of the *California Building and Fire Codes* so that optimal fire-protection standards are used in construction and renovation projects **of private buildings.**	WF	X								Building/Fire Protection District	Town of Windsor Fire Sprinkler Ordinance/Fire Vegetation Standards
g-7	g-7	Create a mechanism to enforce provisions of the *California Building and Fire Codes* and other local codes that require the installation of smoke detectors and fire-extinguishing systems **on existing residential buildings** by making installation a condition of (a) finalizing a permit for any work valued at over a fixed amount and/or (b) on any building over 75 feet in height, and/or (b) as a condition for the transfer of property.	WF	X								Building/Fire Protection District	
g-8	g-8	Work to ensure a reliable source of water for fire suppression in rural-residential areas through the cooperative efforts of water districts, fire districts, and residents.	WF	X								Town/Fire Protection District	
g-9	g-9	Expand vegetation management programs in wildland-urban-interface fire-threatened communities or in areas exposed to high-to-extreme fire threat to more effectively manage the fuel load through roadside collection and chipping, mechanical fuel reduction equipment, selected harvesting, use of goats or other organic methods of fuel reduction, and selected use of controlled burning.	WF					X				County of Sonoma/Fire Protection District	Looking for funding
g-10	g-11	Establish **special funding mechanisms** (such as Fire Hazard Abatement Districts **or regional bond funding**) to fund reduction in fire risk of existing properties through vegetation management that includes reduction of fuel loads, use of defensible space, and fuel breaks.	WF							X		County of Sonoma/Fire Protection District	

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g-11	g-12	Work with residents in rural-residential areas to ensure adequate **plans are developed for appropriate** access and evacuation in wildland-urban-interface fire-threatened communities or in areas exposed to high-to-extreme fire threat. **For example, in some areas, additional roads can be created, and in other areas, the communities will need to focus on early warning and evacuation because additional roads are not feasible.**	WF					X				County of Sonoma/Fire Protection District	Funding Needed
g-12	g-13	Require fire sprinklers in new homes located more than 1.5 miles or a 5-minute response time from a fire station or in an identified high hazard wildland-urban-interface wildfire area.	WF	X								Building/Fire Protection District	Municipal Code/Fire Sprinkler Ordinance
g-13	g-14	Require fire sprinklers in all new or substantially remodeled multifamily housing, regardless of distance from a fire station.	WF	X								Building/Fire Protection District	Municipal Code/Fire Sprinkler Ordinance
g-14	g-15	Require sprinklers in all mixed use development to protect residential uses from fires started in non-residential areas.	WF	X								Building/Fire Protection District	Municipal Code/Fire Sprinkler Ordinance
g-15	g-16	Compile a list of **privately-owned** high-rise and high-occupancy buildings which are deemed, due to their age or construction materials, to be particularly susceptible to fire hazards, and determine an expeditious timeline for the fire-safety inspection of all such structures.	WF							X		Fire Protection District	
g-16	g-17	Conduct periodic fire-safety inspections of all multi-family buildings, as required by State law.	WF					X				Fire Protection District	Do with current staffing
g-17	g-18	Ensure that **city/county-initiated** fire-preventive vegetation-management techniques and practices for creek sides and high-slope areas do not contribute to the landslide and erosion hazard. **For example, vegetation in these sensitive areas could be thinned, rather than removed, or replanted with less flammable materials. When thinning, the non-native species should be removed first. Other options would be to use structural mitigation, rather than vegetation management in the most sensitive areas.**	WF LS						X			County of Sonoma/Fire Protection District	Do with current staffing
g-18	g-19	Create a mechanism to require the bracing of water heaters and flexible couplings on gas appliances, and/or (as specified under "**b.** Single-family homes vulnerable to earthquakes" above) the bolting of homes to their foundations and strengthening of cripple walls to reduce fire ignitions due to earthquakes.	EQ WF	X								Building	

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g-19	g-20	Work with the State Fire Marshal, the California Seismic Safety Commission, Pacific Earthquake Engineering Research Center (PEER), and other experts to identify and manage gas-related fire risks of soft-story residential or mixed use buildings that are prone to collapse and occupant entrapment consistent with the natural gas safety recommendations of Seismic Safety Commission Report SSC-02-03. **Note** - See http://www.seismic.ca.gov/pub/CSSC_2002-03_Natural%20Gas%20Safety.pdf. **Also note** - any values that are installed may need to have both excess flow and seismic triggers ("hybrid" valves).	EQ WF						X			Building/Fire Proection District	
g-20	new	**Work with insurance companies to create a public/private partnership to give a discount on fire insurance premiums to "Forester Certified" *Fire Wise* landscaping and fire-resistant building materials on private property.**	WF					X				County of Sonoma/Fire Protection District	
HSNG - h - Flooding													
h-1	h-1	To reduce flood risk, thereby reducing the cost of flood insurance to private property owners, work to qualify for the highest-feasible rating under the Community Rating System of the National Flood Insurance Program.	FL	X								Building	
h-2	h-2	Balance the housing needs of residents against the risk from potential flood-related hazards.	FL	X								Town	Town Code Title 9
h-3	h-3	Ensure that new private development pays its fair share of improvements to the storm drainage system necessary to accommodate increased flows from the development, *or* does not increase runoff by draining water to pervious areas or detention facilities.	FL	X								Town Council	Adopted Master Fee Schedule
h-4	h-4	Provide sandbags and plastic sheeting to residents in anticipation of rainstorms, and deliver those materials to vulnerable populations upon request.	FL	X								Public Works	Public Works provides information on where sandbags can be obtained and upon request will deliver - unwritten policy of the department
h-5	h-5	Provide public information on locations for obtaining sandbags and/or deliver those sandbags to those various locations throughout a city and/or county prior to and/or during the rainy season.	FL	X								Public Works	Public Works provides information on where sandbags can be obtained and upon request will deliver - unwritten policy of the department
h-6	h-6	Apply floodplain management regulations for private development in the floodplain and floodway.	FL	X								Building	Town Code Title 9
h-7	h-7	Ensure that new subdivisions are designed to reduce or eliminate flood damage by requiring lots and rights-of-way be laid out for the provision of approved sewer and drainage facilities, providing on-site detention facilities whenever practicable.	FL	X								Building	Town Code Title 9
h-8	h-8	Encourage home and apartment owners to participate in home elevation programs within flood hazard areas.	FL							X			
h-9	h-9	As funding opportunities become available, encourage home and apartment owners to participate in acquisition and relocation programs for areas within floodways.	FL							X			

Housing Mitigation Strategies

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h-10	h-10	Encourage owners of properties in a floodplain to consider purchasing flood insurance. For example, point out that most homeowners' insurance policies do not cover a property for flood damage.	FL	X								FEMA	

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HSNG - i - Landslides and Erosion													
i-1	i-1	Increase efforts to reduce landslides and erosion in existing and future development by improving appropriate code enforcement and use of applicable standards **for private property**, such as those appearing in the *California Building Code* , California Geological Survey *Special Report 117 – Guidelines for Evaluating and Mitigating Seismic Hazards in California, American Society of Civil Engineers (ASCE) report Recommended Procedures for Implementation of DMG Special Publication 117: Guidelines for Analyzing and Mitigating Landslide Hazards in California, and the California Board for Geologists and Geophysicists Guidelines for Engineering Geologic Reports.* Such standards should cover excavation, fill placement, cut-fill transitions, slope stability, drainage and erosion control, slope setbacks, expansive soils, collapsible soils, environmental issues, geological and geotechnical investigations, grading plans and specifications, protection of adjacent properties, and review and permit issuance.	LS							X			Towin is relatively flat
i-2	i-2	Increase efforts to reduce landslides and erosion in existing and future **private** development through continuing education of design professionals on mitigation strategies.	LS							X			Towin is relatively flat

Housing Mitigation Strategies

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HSNG - j - Building Reoccupancy													
j-1	j-1 same as econ i-5	Develop and enforce a **repair and reconstruction** ordinance to ensure that **damaged** buildings are repaired in an appropriate and timely manner and retrofitted concurrently. **This repair and reconstruction ordinance should apply to all public and private buildings, and also apply to repair of all damage, regardless of cause. See http://quake.abag.ca.gov/recovery/info-repair-ord.html.**	EQ LS WF FL SEC		X							Building	Town Code Title VII
j-2	NEW same as econ i-6	Establish preservation-sensitive measures for the repair and reoccupancy of historically significant **privately-owned** structures, including requirements for temporary shoring or stabilization where needed, arrangements for consulting with preservationists, and expedited permit procedures for suitable repair or rebuilding of historically or architecturally valuable structures.	EQ LS WF FL SEC		X							Building	Town Code Title VII
HSNG - k - Public Education													
k-1	k-1	Provide information to residents of your community on the availability of interactive hazard maps showing your community on ABAG's web site.	EQ LS WF FL SEC							X			
k-2	k-2	Develop printed materials, utilize existing materials (such as developed by FEMA and the American Red Cross), conduct workshops, and/or provide outreach encouraging residents to have family disaster plans that include drop-cover-hold earthquake drills, fire and storm evacuation procedures, and shelter-in-place emergency guidelines.	EQ LS WF FL SEC					X				Fire Protection District	3-5 a year - mostly mobile home parks & PSA, Website
k-3	k-3	Inform residents of comprehensive mitigation activities, including elevation of appliances above expected flood levels, use of fire-resistant roofing and defensible space in high wildfire threat and wildfire-urban-interface areas, structural retrofitting techniques for older homes, and use of intelligent grading practices through workshops, publications, and media announcements and events.	EQ LS WF FL SEC							X		Fire Protection District	3-5 a year - mostly mobile home parks & PSA, Website
k-4	k-4	Develop a public education campaign on the cost, risk, and benefits of earthquake, flood, and other hazard insurance **as compared to mitigation.**	EQ LS FL SEC							X		Fire Protection District	3-5 a year - mostly mobile home parks & PSA, Website
k-5	k-5	Use disaster anniversaries, such as April (the 1906 earthquake), September (9/11), and October (Loma Prieta earthquake and Oakland Hills fire), to remind the public **of** safety and security mitigation activities.	EQ LS WF FL SEC							X		Fire Protection District	3-5 a year - mostly mobile home parks & PSA, Website
k-6	k-6	Sponsor the formation and training of Community Emergency Response Teams (CERT) **for residents in your community.** [Note – these programs go by a variety of names in various cities and areas.]	EQ LS WF FL SEC		X							Town/EOC	
k-7	k-7	Include flood fighting technique session based on California Department of Water Resources training to the list of available public training classes offered by CERT.	FL							X			
k-8	k-8	Institute the neighborhood watch block captain and team programs outlined in the Citizen Corps program guide.	EQ LS WF FL SEC		X							Town of Windsor Police/Sonoma Co Sheriff	

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k-9	k-9	Assist residents in the development of defensible space through the use of, for example, "tool libraries" for weed abatement tools, roadside collection and/or chipping services (for brush, weeds, and tree branches) in wildland-urban-interface fire-threatened communities or in areas exposed to high-to-extreme fire threat.	WF							X		County of Sonoma/Fire Protection District	
k-10	k-10	Train homeowners to locate and shut off gas valves if they smell or hear gas leaking.	EQ LS WF FL SEC		X							PGE	
k-11	k-12	Develop a program to provide at-cost NOAA weather radios to residents of flood hazard areas **that request them, with priority to neighborhood watch captains and others trained in their use.**	FL							X			
k-12	k-13	Make use of the materials on the ABAG web site at http://quake.abag.ca.gov/fixit and other web sites to increase residential mitigation activities related to earthquakes. (ABAG plans to continue to improve the quality of those materials over time.)	EQ								X	Town of Windsor/Planning	
k-13	k-14	Develop a "Maintain-a-Drain" campaign, similar to that of the City of Oakland, encouraging **private** businesses and residents to keep storm drains in their neighborhood free of debris.	FL		X							Public Works	
k-14	k-15	Encourage the formation of a community- and neighborhood-based approach to wildfire education and action through local Fire Safe Councils and the *Fire Wise Program*. **This effort is important because grant funds are currently available to offset costs of specific council-supported projects.**	WF							X		County of Sonoma/Fire Protection District	
k-15	k-16	Inform shoreline-property owners of the possible long-term economic threat posed by rising sea levels.	FL							X			No shoreline in Windsor
k-16	k-17	Distribute appropriate materials related to disaster mitigation and preparedness **to residents. Appropriate materials are (1) culturally appropriate and (2) suitable for special needs populations. For example, such materials are available on the** http://www.preparenow.org website **and from non-governmental organizations that work with these communities on an on-going basis.**	EQ LS WF FL SEC		X							County of Sonoma	
deleted	g-10	DELETED - REPLACED BY DISCUSSION OF REVERSE 911 in GOVT c-14.											
deleted	k-11												

Health Mitigation Strategies

To be filled out by cities, counties, and county health departments.				Priority (CHECK ONLY ONE)									
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HEAL - a - Hospitals and Other Critical Health Care Facilities (including those facilities licensed by OSHPD, as well as water agencies, public & private hospitals as noted). To be filled out by cities, counties, and county health departments.													
a-1	a-1	**Work to ensure that cities, counties,** county health departments, and hospital operators **coordinate with each other (and that hospitals cooperate with the California Office of Statewide Health Planning and Development - OSHPD) to comply with current state law** that mandates that critical facilities are structurally sound and have nonstructural systems designed to remain functional following disasters **by 2013. In particular, this coordination should include understanding any problems with obtaining needed funding. RESPONSIBLE AGENCIES: Cities, counties, county health departments, and hospitals**	EQ LS WF FL SEC							X			
a-2	a-2	Encourage hospitals in your community to work with OSHPD to formalize arrangements with structural engineers to report to the hospital, assess damage, and determine if the buildings can be reoccupied. The program should be similar to San Francisco's Building Occupancy Resumption Program (BORP) that permits owners of buildings to hire qualified structural engineers to create building-specific post-disaster inspection plans and allows these engineers to become automatically deputized as inspectors for these buildings in the event of an earthquake or other disaster. OSHPD, rather than city/county building departments, has the authority and responsibility for the structural integrity of hospital structures. **RESPONSIBLE AGENCIES: Cities, counties, county health departments, and hospitals**	EQ LS WF FL SEC							X			
a-3	a-3	Ensure health care facilities are adequately prepared to care for victims with respiratory problems related to smoke and/or particulate matter inhalation. **RESPONSIBLE AGENCIES: Cities, counties, county health departments, and hospitals**	EQ WF SEC							X			
a-4	a-4	Ensure these health care facilities have the capacity to shut off outside air and be self-contained. **RESPONSIBLE AGENCIES: Cities, counties, county health departments, and hospitals**	EQ WF SEC							X			
a-5	a-5	Ensure that hospitals and other major health care facilities have auxiliary water and power sources. **RESPONSIBLE AGENCIES: Cities, counties, county health departments, water suppliers, and hospitals**	EQ LS WF FL SEC							X			
a-6	a-6	Work to ensure that county health departments work with health care facilities to institute isolation capacity should a need for them arise following a communicable disease epidemic. **Isolation capacity varies from a section of the hospital for most communicable diseases to the entire hospital for a major pandemic flu. RESPONSIBLE AGENCIES: Cities, counties, county health departments, and hospitals**	EQ WF FL SEC							X			

Health Mitigation Strategies

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a-7	a-7	Develop printed materials, utilize existing materials (such as developed by FEMA, the American Red Cross, **and others, including non-profit organizations**), conduct workshops, and/or provide outreach encouraging employees of these critical health care facilities to have family disaster plans and conduct mitigation activities in their own homes. **RESPONSIBLE AGENCIES: Cities, counties, county health departments, and hospitals**	EQ LS WF FL SEC							X			
HEAL - b - Ancillary Health-Related Facilities **(including medical offices, pharmacies, free-standing or specialy clinics, etc.)**													
b-1	b-1	Identify these ancillary facilities in your community. **These facilities are not regulated by OSHPD in the same way as hospitals. RESPONSIBLE AGENCIES: Cities, counties, and county health departments**	EQ LS WF FL SEC							X		County of Sonoma	
b-2	b-2	Encourage these facility operators to develop disaster mitigation plans. **RESPONSIBLE AGENCIES: Cities, counties, and county health departments**	EQ LS WF FL SEC							X		County of Sonoma	
b-3	b-3	Encourage these facility operators to create, maintain, and/or continue partnerships with local governments to develop response and **business continuity** plans **for** recovery. **RESPONSIBLE AGENCIES: Cities, counties, and county health departments**	EQ LS WF FL SEC							X		County of Sonoma	
HEAL - c - I: Coordination Initiatives													
c-1	c-1	Designate locations for the distribution of antibiotics to large numbers of people should the need arise, as required to be included in each county's Strategic National Stockpile Plan. **RESPONSIBLE AGENCIES: County Health Departments**	FLU SEC							X			
c-2	c-2	Ensure that you know the Metropolitan Medical Response System (MMRS) cities in your area. Fremont, Oakland, **San Francisco, and San Jose (plus Sacramento and Stockton)** are the MMRS cities **in or near the Bay Area.** MMRS cities are provided with additional federal funds for organizing, equipping, and training groups of local fire, rescue, medical, and other emergency management personnel **to respond to a mass casualty event. (The coordination among public health, medical, emergency management, coroner, EMS, fire, and law enforcement is a model for all cities and counties.) RESPONSIBLE AGENCIES: Cities, counties, county health departments, and hospitals**	EQ LS WF FL SEC							X			
c-3	c-3	Know **that** National Disaster Medical System (NDMS) uniformed or non-uniformed personnel are within one-to-four hours of your community. These federal resources include veterinary, mortuary, and medical personnel. **Teams in or near the Bay Area are headquartered in the cities of Santa Clara and Sacramento. RESPONSIBLE AGENCIES: Cities, counties, county health departments, and hospitals**	EQ LS WF FL SEC	X								Sheriff Dept/County of Sonoma	NDMS is in Santa Rosa

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c-4	c-4	**Plan for hazmat related-issues due to a natural or technological disaster. Hazmat teams should** utilize the State of California Department of Health Services laboratory in Richmond for confirmation of biological agents and Lawrence Livermore National Laboratory or Sandia (both in Livermore) for confirmation of radiological agents. **RESPONSIBLE AGENCIES: Cities, counties, county health departments, and hospitals.**	EQ WF FL SEC	X								County of Sonoma	
c-5	d-1	Create discussion forums for food and health personnel (including, for example, medical professionals, veterinarians, and plant pathologists) to develop safety, security, and response strategies for food supply contamination **(at the source, in processing facilities, in distribution centers, and in grocery stores). RESPONSIBLE AGENCIES: County environmental health departments**	FL SEC							X			
c-6	new	Ensure mental health continuity of operations and disaster planning is coordinated among county departments, (including Public Health and Emergency Services), private sector mental health organizations, professional associations, and national and community-based non-profit agencies involved in supporting community mental health programs. **First**, such planning should ensure that the capability exists to provide both immediate on-site mental health support at facilities such as evacuation centers, emergency shelters, and local assistance centers, as well as to coordinate on-going mental health support during the long-term recovery process. **Second**, this planning should ensure that mental health providers, in collaboration with the county agencies responsible for providing public information, are prepared to provide consistent post-disaster stress and other mental health guidance to the public impacted by the disaster.	EQ LS WF FL SEC							X			
deleted	d-2	(duplicate information to c-2)											
deleted	d-3	(duplicate information to c-3)											
deleted	d-4	(duplicate information to c-4)											

Infrastructure Mitigation Strategies

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INFR - a - Multi-Hazard (...owned by the infrastructure provider filling out this form, including a city, county, or special district)													
a-1	a-1	Assess the vulnerability of critical facilities **owned** by **infrastructure** operators subject to damage in natural disasters or security threats, including **fuel tanks and** facilities owned outside of the Bay Area that can impact service delivery within the region. **Note - Infrastructure** agencies, departments, and districts are those that operate transportation and utility facilities and networks.	EQ LS WF FL SEC					X				Public Works	
a-2	a-2	**If a dam owner,** comply with State of California and federal requirements to assess the vulnerability of dams to damage from earthquakes, seiches, landslides, liquefaction, or security threats.	EQ LS WF FL SEC							X		County of Sonoma	
a-3	a-3	Encourage the cooperation of utility system providers and cities, counties, and special districts, **and PG&E** to develop strong and effective mitigation strategies for infrastructure systems and facilities.	EQ LS WF FL DR SEC	X								Town Manager	
a-4	a-4	Retrofit or replace critical lifeline **infrastructure** facilities and/or their backup facilities that are shown to be vulnerable to damage in natural disasters.	EQ LS WF FL SEC					X				Public Works	
a-5	a-5	Support and encourage efforts of ***other*** (lifeline **infrastructure**) agencies as they plan for and arrange financing for seismic retrofits and other disaster mitigation strategies. (For example, a city might pass a resolution in support of a transit agency's retrofit program.)	EQ LS WF FL DR SEC	X								Town Council	
a-6	a-6	Develop a plan for speeding the repair and functional restoration of **water and wastewater** systems through stockpiling of shoring materials, temporary pumps, surface pipelines, portable hydrants, and other supplies, such as those available through the Water **/Wastewater** Agency Response Network (WARN). **Communicate that plan to local governments and critical facility operators.**	EQ LS WF FL DR SEC	X								Public Works	

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a-7	a-7	Engage in, support, and/or encourage research by others **(such as USGS, universities, or Pacific Earthquake Engineering Research Center-PEER)** on measures to further strengthen transportation, water, sewer, and power systems so that they are less vulnerable to damage in disasters.	EQ LS WF FL DR SEC	X								Town Manager/Town Council	
a-8	a-8	Pre-position emergency power generation capacity (or have rental/lease agreements for these generators) in critical buildings of cities, counties, and special districts to maintain continuity of government and services.	EQ LS WF FL SEC	X								Police/Economic Dev Community Services/Public Works	
a-9	a-9	(REWORDED) **Ensure that critical intersection traffic lights function following loss of power by installing battery back-ups, emergency generators, or lights powered by alternative energy sources such as solar. Proper functioning of these lights is essential for rapid evacuation, such as with hazmat releases resulting from natural disasters.**	EQ LS WF FL SEC					X				Public Works	
a-10	a-10	Develop unused or new pedestrian rights-of-way as walkways to serve as additional evacuation routes (such as fire roads in park lands).	EQ LS WF FL SEC	X								Economic Dev Community Services	
a-11	a-11	Minimize the likelihood that power interruptions **will adversely impact lifeline utility systems or critical facilities by ensuring that they have adequate back-up power.**	EQ LS WF FL SEC					X				Community Services/Police/Public Works	
a-12	a-12	Encourage replacing above ground electric and phone wires and other structures with underground facilities, and use the planning-approval process to ensure that all new phone and electrical utility lines are installed underground.	EQ LS WF FL SEC	X								Public Works/Planning	Ord 2003-171
a-13	a-13	If you own a dam, coordinate with the State Division of Safety of Dams to ensure an adequate timeline for the maintenance and inspection of dams, as required of dam owners by State law, **and communicate this information to local governments and the public.**	EQ LS WF FL SEC							X		County of Sonoma	
a-14	a-14	Encourage communication between State **Emergency Management Agency (CalEMA)**, FEMA, and utilities related to emergencies occurring outside of the Bay Area that can affect service delivery in the region.	EQ LS WF FL DR SEC	X								Police	

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a-15	a-15	Ensure that transit operators, private ambulance companies, cities, and/or counties have mechanisms in place for medical transport during and after disasters that take into consideration the potential for reduced capabilities of roads following these same disasters.	EQ LS WF FL SEC	X								Sonoma County Health Services/Private	
a-16	new	**Recognize that heat emergencies produce the need for non-medical transport of people to cooling centers by ensuring that (1) transit operators have plans for non-medical transport of people during and after such emergencies including the use of paratransit and (2) cities, counties, and transit agencies have developed ways to communicate the plan to the public.**	Heat	X								Sonoma Countyer Health Services	
a-17	a-16	Effectively utilize the **Regional** Transportation Management Center (TMC) **in Oakland**, the staffing of which is provided by Caltrans, the CHP and MTC. The TMC is designed to maximize safety and efficiency throughout the highway system. It includes the Emergency Resource Center (ERC) which was created specifically for primary planning and procedural disaster management. **RESPONSIBLE AGENCY: MTC only.**	EQ LS WF FL SEC	X								Town of Windsor/EOC	
a-18	new	**Develop (with the participation of paratransit providers, emergency responders, and public health professionals) plans and procedures for parasit system response and recovery from disasters.**	EQ LS WF FL Heat SEC								X	Town of Windsor/EOC	
a-19	new	**Coordinate with other critical infrastructure facilities to establish plans for delivery of water and wastewater treatment chemicals.**	EQ LS WF FL SEC					X				Public Works	
a-20	new	**Establish plans for delivery of fuel to critical infrastructure providers.**	EQ LS WF FL SEC								X	Public Works	
a-21	new	**As an infrastructure operator, designate a back-up Emergency Operations Center with redundant communications systems.**	EQ LS WF FL SEC	X								Town of Windsor/EOC	

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a-22	new	**Monitor scientific studies of the Sacramento-San Joaquin Delta and policy decisions related to the long-term disaster resistance of that Delta system to ensure that decisions are made based on comprehensive analysis and in a scientifically-defensible manner. Levee failure due to earthquakes, flooding, and climate change (including sea level rise and more frequent and more severe flooding) are all of concern. The long-term health of the Delta area is critical to the Bay Area's water supply, is essential for the San Francisco Bay and estuary's environmental health, provides recreation opportunities for Bay Area residents, and provides the long-term sustainability of Delta communities. While only part of the Delta is within the nine Bay Area counties covered by this multi-jurisdictional LHMP, the Delta is tied to the infrastructure, water supply, and economy of the Bay Area.**	EQ FL							X			
INFR - b - Earthquakes													
b-1	b-1	Expedite the funding and retrofit of seismically-deficient city- and county-owned bridges and road structures by working with Caltrans and other appropriate governmental agencies.	EQ	X								Public Works	
b-2	b-2	Establish a higher priority for funding seismic retrofit of existing transportation and infrastructure systems (such as BART) than for expansion of those systems.	EQ							X		SMART	
b-3	b-3	Include "areas subject to high ground shaking, earthquake-induced ground failure, and surface fault rupture" in the list of criteria used for determining a replacement schedule for pipelines (along with importance, age, type of construction material, size, condition, and maintenance or repair history).	EQ						X			Public Works	2010
b-4	b-4	Install specially-engineered pipelines in areas subject to faulting, liquefaction, earthquake-induced landsliding, or other earthquake hazard.	EQ						X			Public Works	2010
b-5	b-5	Replace or retrofit water-retention structures that are determined to be structurally deficient, **including levees, dams, reservoirs and tanks.**	EQ	X								Public Works	
b-6	b-6	Install portable facilities (such as hoses, pumps, emergency generators, or other equipment) to allow pipelines to bypass failure zones such as fault rupture areas, areas of liquefaction, and other ground failure areas (using a priority scheme if funds are not available for installation at all needed locations).	EQ	X								Public Works/County of Sonoma	
b-7	b-7	Install earthquake-resistant connections when pipes enter and exit bridges **and work with bridge owners to encourage retrofit of these structures.**	EQ	X								Public Works	
b-8	b-8	Comply with all applicable building and fire codes, as well as other regulations (such as state requirements for fault, landslide, and liquefaction investigations in particular mapped areas) when constructing or significantly remodeling infrastructure facilities.	EQ	X								Public Works	

Infrastructure Mitigation Strategies

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b-9	b-9	Clarify to workers in critical facilities and emergency personnel, as well as to elected officials and the public, the extent to which the facilities are expected to perform only at a life safety level (allowing for the safe evacuation of personnel) or are expected to remain functional following an earthquake.	EQ	X								Town	
b-10	b-10	**Develop** a water-**based** transportation "system" across the Bay for use in the event of major earthquakes. Implementation of such a system could prove extremely useful in the event of structural failure of either the road-bridge systems or BART and might serve as an adjunct to existing transportation system elements in the movement of large numbers of people and/or goods.	EQ							X			No bay in Windsor

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INFR - c - Wildfire													
c-1	c-1	Ensure a reliable source of water for fire suppression (meeting acceptable standards for minimum volume and duration of flow) for existing and new development.	WF	X								Public Works	
c-2	c-2	Develop a coordinated approach between fire jurisdictions and water supply agencies to identify needed improvements to the water distribution system, initially focusing on areas of highest wildfire hazard **(including wildfire threat areas and in wildland-urban-interface areas).**	WF							X			
c-3	c-3	Develop a defensible space vegetation program that includes the clearing or thinning of (a) non-fire resistive vegetation within 30 feet of access and evacuation roads and routes to critical facilities, or (b) all non-native species (such as eucalyptus and pine, but not necessarily oaks) within 30 feet of access and evacuation roads and routes to critical facilities.	WF							X			
c-4	c-4	For new development, ensure all dead-end segments of public roads in high hazard areas have at least a "T" intersection turn-around sufficient for typical wildland fire equipment.	WF	X								Planning/Public Works	
c-5	c-5	For new development, enforce minimum road width of 20 feet with an additional 10-foot clearance on each shoulder on all driveways and road segments greater than 50 feet in length in wildfire hazard areas.	WF							X			
c-6	c-6	Require that development in high fire hazard areas provide adequate access roads (with width and vertical clearance that meet the minimum standards of the *Fire Code* or relevant local ordinance), onsite fire protection systems, evacuation signage, and fire breaks.	WF							X			
c-7	c-7	Ensure adequate fire equipment road or fire road access to developed and open space areas.	WF	X								Public Works	
c-8	c-8	Maintain fire roads and/or public right-of-way roads and keep them passable at all times.	WF	X								Public Works	
INFR - d - Flooding													
d-1	d-1	Conduct a watershed analysis of runoff and drainage systems to predict areas of insufficient capacity in the storm drain and natural creek system.	FL	X								Public Works	
d-2	d-2	Develop procedures for performing a watershed analysis to **examine** the impact of development on flooding potential downstream, including communities outside of the jurisdiction of proposed projects.	FL	X								Public Works	
d-3	d-3	Conduct a watershed analysis at least once every **ten** years **unless there is a major development in the watershed or a major change in the Land Use Element of the General Plan of the cities or counties within the watershed.**	FL	X								Public Works	

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d-4	d-4	Assist, support, and/or encourage the U.S. Army Corp of Engineers, various Flood Control and Water Conservation Districts, and other responsible agencies to locate and maintain funding for the development of flood control projects that have high cost-benefit ratios (such as through the writing of letters of support and/or passing resolutions in support of these efforts).	FL	X								Town	
d-5	d-5	Pursue funding for the design and construction of storm drainage projects to protect vulnerable properties, including property acquisitions, upstream storage such as detention basins, and channel widening with the associated right-of-way acquisitions, relocations, and environmental mitigations.	FL	X								Public Works	
d-6	d-6	Continue to repair and make structural improvements to storm drains, pipelines, and/or channels to enable them to perform to their design capacity in handling water flows as part of regular maintenance activities. **(This strategy has the secondary benefit of addressing fuel, chemical, and cleaning product issues.)**	FL	X								Public Works	
d-7	d-7	Continue maintenance efforts to keep storm drains and creeks free of obstructions, while retaining vegetation in the channel (as appropriate) to allow for the free flow of water.	FL	X								Public Works	
d-8	d-8	Enforce provisions under creek protection, stormwater management, and discharge control ordinances designed to keep watercourses free of obstructions and to protect drainage facilities to **conform** with the Regional Water Quality Control Board's Best Management Practices.	FL	X								Public Works	
d-9	d-9	Develop an approach and locations for various watercourse bank protection strategies, including for example, (1) an assessment of banks to inventory areas that appear prone to failure, (2) bank stabilization, including installation of rip rap, **or whatever regulatory agencies allow** (3) stream bed depth management using dredging, and (4) removal of out-of-date coffer dams in rivers and tributary streams.	FL	X								Public Works	
d-10	d-10	Use **reservoir** sediment **or reed** removal as one way to increase storage for both flood control and water supply.	FL							X			
d-11	d-11	Identify critical **locally-owned** bridges affected by flooding and either **elevate them** to increase stream flow and maintain critical **ingress** and egress routes **or modify the channel to achieve equivalent objectives.**	FL	X								Public Works	
d-12	d-12	Provide **or support the** mechanism to expedite the repair or replacement of levees that are vulnerable to collapse from earthquake-induced shaking or liquefaction, rodents, and other concerns, particularly those protecting critical infrastructure.	FL	X								Public Works	

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d-13	d-13	Ensure that utility systems in new developments are constructed in ways that reduce or eliminate flood damage.	FL	X								Public Works	
d-14	d-14	Determine whether or not wastewater treatment plants are protected from floods, and if not, investigate the use of flood-control berms to not only protect from stream or river flooding, but also **increase** plant security.	FL	X								Public Works	
d-15	d-15	Work cooperatively with water agencies, flood control districts, Caltrans, and local transportation agencies to determine appropriate performance criteria for watershed analysis.	FL	X								Public Works	
d-16	d-16	Work for better cooperation among the patchwork of agencies managing flood control issues.	FL	X								Public Works	
d-17	d-17	Improve monitoring of creek and watercourse flows to predict potential for flooding downstream **by working cooperatively with land owners and the cities and counties in the watershed.**	FL	X								Public Works	
d-18	new	**Using criteria developed by EPA for asset management, inventory existing assets, the condition of those assets, and improvements needed to protect and maintain those assets. Capture this information in a Geographic Information System (GIS) and use it to select locations for creek monitoring gauges.**	FL								X		

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INFR - e - Landslides													
e-1	e-1	Include "areas subject to ground failure" in the list of criteria used for determining a replacement schedule (along with importance, age, type of construction material, size, condition, and maintenance or repair history) for pipelines.	LS	X								Public Works	
e-2	e-2	Establish requirements in zoning ordinances to address hillside development constraints in areas of steep slopes that are likely to lead to excessive road maintenance or where roads will be difficult to maintain during winter storms due to landsliding.	LS							X		Town is relatively flat - no steep slope development	
INFR - f - Building Reoccupancy													
f-1	f-1	Ensure that critical buildings owned or leased by special districts or private utility companies participate in a program similar to San Francisco's Building Occupancy Resumption Program (BORP). The BORP program permits owners of buildings to hire qualified **engineers** to create facility-specific post-disaster inspection plans and allows these engineers to become automatically deputized as City/County inspectors for these buildings in the event of an earthquake or other disaster. This program allows rapid reoccupancy of the buildings. **Note** - A qualified **(deleted structural)** engineer is a California licensed **engineer** with relevant experience.	EQ LS WF FL SEC	X								County of Sonoma/Town/EOC	
INFR - g - Public Education													
g-1	g-1	Provide materials to the public related to planning for power outages.	EQ LS WF FL SEC	X								Police	
g-2	g-2	Provide materials to the public related to family and personal planning for delays due to traffic or road closures, **or due to transit system disruption caused by disasters.**	EQ LS WF FL SEC	X								Police/Economic Dev Community Services	

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g-3	g-3	Provide materials to the public related to coping with reductions in water supply or contamination of that supply **BEYOND regulatory notification requirements.**	EQ LS WF FL DR SEC	X								Public Works/Police/Admin Service Dept	
g-4	g-4	Provide materials to the public related to coping with disrupted storm drains, sewage lines, and wastewater treatment **(such as that developed by ABAG's Sewer Smart Program).**	EQ LS WF FL DR SEC						X			Town Manager/Economic Dev Community Services/	2007 CHECK W/PETER -Done?
g-5	g-5	Facilitate and/or coordinate the distribution of **emergency preparedness or mitigation** materials that are prepared by others, such as by **making the use of the internet or other electronic means,** or placing materials on community access channels or in city or utility newsletters, as appropriate.	EQ LS WF FL DR SEC	X								Police/Economic Dev Community Services/Admin Service Dept	
g-6	**new**	Sponsor the formation **and training** of Community Emergency Response Teams (CERT) **for the employees of your agency.** [Note – these programs go by a variety of names in various cities and areas.]	EQ LS WF FL DR SEC								X		
g-7	**new**	Develop and distribute culturally appropriate materials related to disaster mitigation and preparedness, such as those on the http://www.preparenow.org website **related to infrastructure issues.**	EQ LS WF FL DR SEC								X		

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 Comments
				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		
LAND - a - Earthquake Hazard Studies for New **Private** Developments													
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 ***specific*** hazard of active faults that extend to the earth's surface, creating a surface rupture hazard.)	EQ							X			
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	Building	
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			
a-4	new	**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.**	EQ							X			
a-5	new	**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.**	EQ							X			
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				
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				
a-8	a-6	Require that local government reviews of geologic and engineering studies are conducted by appropriately trained and credentialed personnel.	EQ	X								Building	
LAND - b - Wildland and Structural Fires													

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b-1	b-1	Review **new** 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								Building/Fire Protection Districts	
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 *Fire Wise* and sustainable community principles.	WF						X				
LAND - c - Flooding													
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								Building/Public Works/Sonoma County Water Agency	
c-2	c-2	Incorporate FEMA guidelines and suggested activities into local government plans and procedures for managing flood hazards.	FL	X								Building/Public Works/Sonoma County Water Agency	
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								Building/Public Works/Sonoma County Water Agency	
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 *National Flood Insurance Program* .	FL	X								Building/Public Works/Sonoma County Water Agency	
c-5	new	**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.**	FL	X								Building/Planning	Building Codes/Zoning Ordinance
c-6	new	**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.**	FL	X								Building	
LAND - d - Landslides and Erosion													
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								Building/Public Works	
d-2	d-2	Require that local government reviews of these investigations are conducted by appropriately trained and credentialed personnel.	LS	X								Building/Public Works	

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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								Building/Public Works	
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								Building/Public Works	
d-5	d-5	Establish requirements in zoning ordinances to address hillside development constraints, especially in areas of existing landslides.	LS							X			Town is relatively flat
LAND - e - Hillside - Multi-Hazard													
e-1	e-1	For new development, require a buffer zone between residential properties and landslide or wildfire hazard areas.	LS WF							X			Town is relatively flat
e-2	e-2	Discourage, add additional mitigation strategies, or prevent **new** construction **or major remodels** on slopes greater than a set percentage, such as 15%, due to landslide or wildfire hazard concerns.	LS WF							X			Town is relatively flat
LAND - f - Smart Growth to Revitalize Urban Areas and Promote Sustainability													
f-1	f-1	Prioritize retrofit of infrastructure that serves urban areas **(or urban services areas)** over constructing new infrastructure to serve outlying areas.	EQ LS WF FL DR SEC	X								Public Works	
f-2	f-2	Work to retrofit homes in older **urban neighborhoods** to provide safe housing close to job centers.	EQ LS WF FL DR SEC							X			
f-3	f-3	Work to retrofit older downtown areas **and redevelopment districts** to protect architectural diversity and promote disaster-resistance.	EQ LS WF FL SEC							X			
f-4	f-4	Work with non-profits and through other mechanisms to protect as open space **those** areas susceptible to extreme hazards **(such as through land acquisition, zoning, and designation as priority conservation areas).**	EQ LS WF FL SEC							X			
f-5	f-5	Strive to 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 **or fires** due to an earthquake, **accident,** or terrorism. (Flooding might also result in release or spread of these materials; however, it is unlikely.) **In areas where buffers do not exist or cannot be created, provide alternative mitigation.**	EQ LS WF FL SEC							X			
LAND - g - Hazard Abatement Districts													
g-1	new	**Use hazard abatement districts as a funding mechanism to ensure that mitigation strategies are implemented and enforced over time.**	EQ LS WF FL							X			