

CITY OF SONOMA

RESOLUTION NO. 35 - 2011

A RESOLUTION OF THE CITY COUNCIL APPROVING THE ABAG REPORT "TAMING NATURAL DISASTERS" AS THE CITY OF SONOMA'S 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 City of Sonoma recognizes that disasters do not recognize city, county, or special district boundaries; and

WHEREAS, the City of Sonoma seeks to maintain and enhance both a disaster-resistant City/County/District 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 City of Sonoma is committed to increasing the disaster resistance of the infrastructure, health, housing, economy, government services, education, environment, and land use systems in the City/County/District, 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 City of Sonoma adopts, and adapts with its local annex, this multi-jurisdictional plan as its Local Hazard Mitigation Plan.

NOW, THEREFORE, BE IT FURTHER RESOLVED that City of Sonoma commits to continuing to take those actions and initiating further actions, as appropriate, as identified in the City of Sonoma Annex of that multi-jurisdictional Local Hazard Mitigation Plan.

ADOPTED this 7th day of November 2011 by the following vote:

AYES:	Rouse, Sanders, Brown, Barbose, Gallian
NOES:	None
ABSENT:	None


Laurie Gallian, Mayor

ATTEST:


Gay Johann, City Clerk



CITY OF SONOMA

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

CITY OF SONOMA

Adopted the Sonoma City Council on November 7, 2011

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Introduction

The City of Sonoma is a small municipality, 2.72 square miles in size, located in Sonoma County, 45 miles north of the San Francisco Golden Gate Bridge. The City has a population of about 10,078, based on the 2010 State Department of Finance estimate. The City employs 56 full time equivalent positions augmented by 69 part-time employees including firefighters, paramedics and emergency medical technicians. The Police Department is operated under contract with the Sonoma County Sheriff's Department. The 2010-2011 general fund budget is \$11,540,600. The City also operates a water utility with a budget of approximately \$4,127,505; public cemeteries with a budget of \$472,235, and has a redevelopment agency (the Sonoma Community Development Agency or "CDA") with a budget of \$6,066,397 including capital projects (including \$1,917,669 affordable housing components). The City/CDA currently owns approximately 86,000 square feet of office, warehouse, and institutional space. Of that amount, approximately 65,000 square feet is operated by the City/CDA, with the remainder leased to third-parties. In addition, the City/CDA owns two senior affordable housing developments totaling 68 units. In terms of property, the City maintains 63 acres of parkland, three cemeteries with an area of 34 acres, as well as other infrastructure including radio towers, water tanks, and well stations.

The City has experienced occasional moderate flooding over the years.

A map of the County's jurisdictional boundary is provided in **Exhibit A**.

The Regional Planning Process

The City of Sonoma submitted a letter of commitment to ABAG to participate in various hazard mitigation workshops, conferences, and meetings, including:

- City representatives participated in the ABAG regional workshop in Sonoma County in April 2009 and reviewed the mitigation strategies from the 2005 plan and recommended regional priorities for each strategy.
- Submitted commitment letter on file with ABAG May 2009.
- Completed Strategies Worksheet in October 2009.
- ABAG Building Official meeting attended by City staff (1) in Oakland, July 7, 2009.
- City/County Workshops Participation – City staff (2) attended ABAG Regional Workshop in Corte Madera, April 30, 2009.

For more information on these meeting and for attendees, please see Appendix A and H in the ABAG Multi-Jurisdictional Local Hazard Mitigation Plan 2010 (MJ-LHMP). In addition, the City of Sonoma has provided information on facilities that are defined as "critical" to ABAG.

The Local Planning Process

The City of Sonoma has a Public Safety Element and an Environment Resources Element as part of its 2020 General Plan. The Safety and Environment Elements include discussions of flooding, geologic hazards, urban and wild land fires, and hazardous materials. In addition, the City

routinely enforces the requirements of the California Environmental Quality Act (CEQA), which since 1988, have required mitigation for identified natural hazards. The City's effort has focused on building on these pre-existing programs and identifying gaps that may lead to disaster vulnerabilities in order to work on ways to address these risks through mitigation.

City staff involved in meetings to discuss hazard mitigation include department directors and managers: City Manager, Assistant City Manager, Development Services Director/Building Official, Planning and Community Services Director, Public Works Director, Engineer, City Clerk, Fire Chief and Police Chief. General meetings are held once a week and mitigation priorities addressed as needed, at least quarterly.

Sonoma's Disaster Council meets every other month with representation from City, Police, Fire, Public Works and a broad representation of businesses, care facilities, schools, hospitals, homeowners' associations, and emergency services providers located in the City of Sonoma and the County of Sonoma.

In August 2009, the Mitigation Strategies data report was presented by staff who had attended the ABAG workshops, with copies given to each department head for review. Copies indicated data reported in the City of Sonoma's 2005 Mitigation Plan, highlighted the new areas to be addressed, and provided a time line for department review, study and response. Departments then met separately to complete their assessments for 2010.

Each department reviewed priorities; mitigation strategies, prioritized strategies, and reviewed preliminary budgets and potential funding sources for strategies designated as "High" priority for City-owned-and-operated facilities. This format was adopted because it was a successful model for the City's 2005 Local Hazard Mitigation Plan.

The City of Sonoma 2010 Mitigation Strategy Spreadsheet can be found in **Exhibit C** to the City of Sonoma 2010 Annex.

Public Meetings

Opportunity for public comments on the draft mitigation strategies document was provided prior to and at the public meeting of Sonoma Disaster Council on September 10, 2009 at the Emergency Operations Center, Sonoma Police Department at 175 First Street West. The meeting was noticed with a press release and required agenda published in the local paper, the *Sonoma Index Tribune*. The draft Hazard Mitigation Plan was available on the City of Sonoma's website for public viewing and comment. The draft was presented at the meeting verbally, in writing and using PowerPoint. Questions and comments were received from the public who reviewed the document at the meeting and no comments received from the internet posting. Copies of the public notices are included as **Exhibit B** to the City of Sonoma's 2010 Annex.

The public participation in disaster mitigation occurs through regular meetings of the Sonoma Disaster Council and the Storm Water Management Program. The City of Sonoma Disaster Council was reinstated by the City Council in May 2008, originally established through Sonoma Municipal Code Section 2.36.010. Per the Code, the membership of the Disaster Council includes the mayor as chair, the city manager as the director of emergency services, the assistant

director of emergency services, chiefs of emergency services such as police and fire chief, and representatives of civic, business, labor, veterans', professional, or other organizations having an official emergency responsibility, as may be appointed by the director with the advice and consent of the city council. (Ord. 446 § 3, 1972). Currently there are 47 members on the Disaster Council.

The City of Sonoma will adopt the plan in a public meeting through an official City Council Resolution upon approval by FEMA. The mitigation strategies will become an implementation Appendix of the Public Safety Element of the City of Sonoma's General Plan.

Review and Incorporation of Existing Information

The following documents were reviewed and incorporated into this annex in addition to those documents referenced in Appendix A of the regional plan.

Existing plans, studies, reports, and technical information	Method of incorporation into the jurisdiction annex
City of Sonoma 2020 General Plan, Public Safety and Environmental Resources Elements	Hazards Assessment and priority mitigation actions
5-Year Capital Improvement Program	Priority mitigation actions and programs
City of Sonoma Emergency Response Plan	Priority mitigation actions and programs
Annual Stormwater Report/Plan	Priority mitigation actions and programs
Greenhouse Gas Reduction Plan (adopted February 20, 2008)	Priority mitigation actions and programs

Process of Updating Plan Sections

The Plan was updated to reflect any code revisions, amendments, or other actions related to the Plan that the City of Sonoma 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 accurate. The Planning Process section was updated to reflect the process undertaken for the update of this Plan.

Changes in Sonoma's policies, including code revisions and amendments, are actions taken by the City Council. One of the Council's highest priorities is community involvement in City actions. It is, therefore, the responsibility of City staff to ensure this priority is met through a variety of methods, such as a hard copy and email subscription service for Council agendas and posting of agendas and staff reports at City Offices and on the City website. Written correspondence is forwarded to all Council members, and verbal comments are welcome at all Council meetings.

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). The City may be impacted by all of these hazards except for surface rupture (faulting) and tsunami inundation. No active faults pass through the City. Tsunamis do not impact the City due to its distance from the open ocean. While the City of Sonoma has undertaken a number of general hazard mapping activities since the first Safety Element was prepared by the City, all of these maps are less detailed and are not as current as those shown on the ABAG website at <http://quake.abag.ca.gov/mitigation/>.

Past Occurrences of Disasters (natural and human-induced)

Due to flooding and water quality concerns, in 2003 the City Council adopted its Stormwater Management Program Implementation Plan. The Stormwater Annual Report is submitted annually to the California Regional Water Quality Control Board with annual presentations to both the City's Community Services and Environment Commission and the City Council, whereby the public has opportunities to comment. In addition the City has finalized a Storm Drain Master Plan, adopted in May 2011. The intent of the Storm Drain Master Plan is to address flooding in the City.

The City of Sonoma was impacted by the 2005-2006 winter storms as a result of the December 31, 2005 storm event, with permits issued for moderate flood damage repair for nine properties (permit valuation \$83,000) - from January 2006 through August 2006:

For 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

Urban Land Exposure

The City of Sonoma has examined the hazard exposure of the City's 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"). The conclusion is that earthquake effects, wildfires and drought are more important than the other hazards. The City is particularly concerned with wildfires, given the area and the number of facilities located in the wildland-urban interface area. In general, the hazard exposure of the City of Sonoma is increasing slightly over time as the amount of urban land increases (In the last 5 years, 1.76 acres of land has become urban through annexation.) The following table described the exposure of urban land within the City of Sonoma County to the various hazards.

Exposure (acres of urban land)			
Hazard	Plan Year 2005	Plan Year 2010	Change
<i>Total Acres of Urban Land</i>	1,583	1,594	11
Earthquake Faulting (within CGS zone)	0	0	0
Earthquake Shaking (within highest two shaking categories) ¹	0	0	0
Earthquake-Induced Landslides (within CGS study zone) ²	0	0	0
Liquefaction (within moderate, high, or very high liquefaction susceptibility)	108	300	192
Flooding (within 100 year floodplain)	18	44	26
Flooding (within 500 year floodplain)	238	272	34
Landslides (within areas of existing landslides)	150	154	4
Wildfire (subject to high, very high, or extreme wildfire threat)	51	69	18
Wild land-Urban Interface Fire Threat	1002	1022	22
Dam Inundation (within inundation zone)	32	32	0
Tsunamis ³ (within inundation area)	Not applicable		
Drought ⁴	1,583	1,594	11

Infrastructure Exposure

The City of Sonoma also examined the hazard exposure of infrastructure within the jurisdiction based on the information on ABAG's website at:

<http://quake.abag.ca.gov/mitigation/pickdbh2.html>.

Of the 39 miles of roadway in the City of Sonoma, the following are exposed to the various hazards analyzed.

Exposure (miles of infrastructure)				
Hazard	Roadway		Transit	
	Plan Year 2005	Plan Year 2010	Plan Year 2005	Plan Year 2010
<i>Total Miles of Infrastructure</i>	39	43	0	0
Earthquake Shaking (within highest two shaking	0	0	0	0

¹ Rodgers Creek Fault runs to west of City of Sonoma.

² The California Geological Survey continues to map Sonoma County but some areas of the County have not yet been completely mapped.

³ The City of Sonoma is not subject to tsunami inundation.

⁴ The entire area of the City of Sonoma is subject to drought.

categories)				
Liquefaction Susceptibility (within moderate, high, or very high liquefaction susceptibility)	4	9	0	0
Liquefaction Hazard (within CGS study zone)	0	0	0	0
Earthquake-Induced Landslides (within CGS study zone) ¹	0	0	0	0
Earthquake Faulting (within CGS zone)	0	0	0	0
Flooding (within 100 year floodplain)	0	1	0	0
Flooding (within 500 year floodplain)	7	10	0	0
Landslides (within areas of existing landslides)	1	1	0	0
Wildfires (subject to high, very high, or extreme threat)	0	0	0	0
Wildland-Urban Interface Fire Threat	24	26	0	0
Dam Inundation (within inundation zone)	1		0	0
Sea Level Rise ²	not applicable			
Tsunamis ³	not applicable			
Drought ⁴	not applicable			

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

² The sea level rise map is not a hazard map. It is not appropriate to assess infrastructure exposure to sea level rise.

³ 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.

⁴ Drought is not a hazard for roadways.

Exposure of Owned Buildings, Plus Critical Healthcare Facilities and Schools

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

The City of Sonoma provided a list of critical public facilities to ABAG. ABAG provided a detailed assessment of the hazard exposure of each of its facilities. The following number of facilities is exposed to the various hazards analyzed.

Exposure (number of facility types)								
Hazard	Hospitals		Schools		Locally owned critical facilities		Locally owned bridges and interchanges	
	Plan Year 2005	Plan Year 2010	Plan Year 2005	Plan Year 2010	Plan Year 2005	Plan Year 2010	Plan Year 2005	Plan Year 2010
<i>Total Number of Facilities</i>	1	1	5	8	40	15	4	5
Earthquake Shaking (within highest two	0	0	0	0	0	0	0	0

shaking categories)								
Liquefaction Susceptibility (within moderate, high, or very high liquefaction susceptibility)	0	0	0	4	0	5	0	1
Liquefaction Hazard (within CGS study zone) ¹	-	-	-	-	-	-	-	-
Earthquake-Induced Landslides (within CGS study zone) ²	-	-	-	-	-	-	-	-
Earthquake Faulting (within CGS zone)	-	-	-	-	-	-	-	-
Flooding (within 100 year floodplain)	0	0	1	0	0	0	0	0
Flooding (within 500 year floodplain)	0	0	0	3	0	1	4	3
Landslides (within areas of existing landslides)	0	0	0	0	10	3	0	0
Wildfires (subject to high, very high, or extreme wildfire threat)	0	0	0	0	8	1	0	0
Wildland-Urban Interface Fire Threat	0	0	4	5	28	10	4	4
Dam Inundation	0	0	0	0	2	1	0	0
Sea Level Rise (exposed to 16in sea level rise)	-	0	-	0	-	0	-	0
Sea Level Rise (exposed to 55in sea level rise)	-	0	-	0	-	0	-	0
Tsunamis ³ (within inundation area)	-	0	-	0	-	0	-	0
Drought ⁴	-	-	-	-	-	-	-	-

¹ Area not yet evaluated by CGS for this hazard

² Area not yet evaluated by CGS for this hazard

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.

Repetitive Loss Properties

There are 6 repetitive flood loss properties in the City of Sonoma based on the information at <http://quake.abag.ca.gov/mitigation/pickflood.html>. In 2004 the City of Sonoma had 4 residential repetitive loss properties that were outside the flood plain:

<http://quake.abag.ca.gov/mitigation/floodloss/sonoma/#data>

Other risks

The City of Sonoma plans to continue to work with ABAG to improve the risk assessment information being compiled by ABAG by providing information on unreinforced masonry buildings and soft story apartments located in the City. The City of Sonoma is subject to periodic drought conditions (water shortages) as part of the regulatory, hydrologic and weather conditions for the region. The City supplies potable water to its citizens and as the provider, the City has a water system operations plan, an emergency operations plan, an urban water management plan and a water master plan, to address drought conditions and to provide a reliable water supply during various emergency situations.

National Flood Insurance Program

The City of Sonoma has participated in the National Flood Insurance Program (NFIP) since April 28, 1975. On October 9, 2002 an update was adopted (Ordinance 09-2002), which reflected the current requirements of the NFIP for non-coastal communities. The City utilizes FEMA maps to regulate flood hazard areas and requires elevation certificates for buildings located within the Special Flood Hazard Zones at the building permit stage to verify compliance with NFIP requirements. The City has not participated in the Community Rating System due to the limited staffing of a city the size of Sonoma.

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 City of Sonoma in designing its mitigation program.

Mitigation Activities and Priorities

Evaluation of Progress from 2005 Plan

In 2005, mitigation actions and priorities were identified. The attached inventory (Exhibit “C”) indicates each of the strategies identified, along with responsible party, action taken, and current status of progress.

Economy Mitigation Strategies:

The City of Sonoma adopts current building code standards and zoning ordinances to protect historic structures and encourages preservation of historic resources. The City’s departments work closely in reviewing plans for compliance with current code requirements to reduce risks of damage due to flooding and fires.

The City’s Mandatory Seismic upgrading of unreinforced masonry buildings was completed for all privately-owned buildings per Sonoma Municipal Code Section 14.24. Inventory for privately-owned structurally vulnerable buildings was completed.

Education Mitigation Strategies:

Education facilities are under the State and Sonoma Unified School District/Sonoma County Office of Education. The City works closely with the School District and school officials are active members on the City of Sonoma’s Disaster Council.

Environmental Mitigation Strategies:

The City enforces the California Environmental Quality Act (CEQA) requirements for all development. Sonoma's Municipal Code Title 19 through the Planning Department addresses environmental sustainability and pollution reduction. Watershed management is supported by the Sonoma Ecology Center programs, Sonoma County Water Agency (SCWA) for flood control, Streambed Vegetation Management planning also supported by the Sonoma Ecology Center.

The City adopted a Greenhouse Gas Reduction Action Plan in 2008, and the General Plan and Municipal Code Title 19 enforces land-use policies to preserve open space and create walkable urban communities.

The City adopted a Bicycle and Pedestrian Plan in 2008, made energy efficiency a priority with Eco-Audit of all facilities and implemented recommendations of energy efficient lighting and water conservation.

The City of Sonoma, in cooperation with the Valley of the Moon Water District, offers many programs and incentives to conserve water. In 2010, the City adopted updated requirements for water-efficient landscaping (Water-Efficient Landscape Ordinance 05-2010).

The 2010 California Green Building Standards Code (CALGreen) was effective throughout California in January 2011. The City of Sonoma has adopted and amended CALGreen to require CALGreen+Tier 1 level of compliance.

Government Mitigation Strategies:

The City of Sonoma offers Sonoma Citizens Organized to Prepare for Emergencies (S.C.O.P.E.) training - a local disaster preparedness program free to all residents. The City's Disaster Council met monthly in 2009-2010, and are meeting quarterly in 2011. The Disaster Council includes representatives from fire, police, public works, City Council, and well represented by public and private businesses, non-profits, hospital and care services, school district and Home Owners Associations.

The Police Station and Emergency Operations Center (EOC) seismic upgrade and remodeling was completed in January 2009.

Health Mitigation Strategies:

Sonoma County Department of Health Services (DHS); Office of State Health Planning and Development (OSHPD); Sonoma Community Development Agency, and Sonoma Valley Hospital – Health Care District Plant Operations, coordinate with each other to comply with current state law. City Redevelopment funds were provided for the re-roofing of Sonoma Valley Hospital, fire alarm panel and emergency generator switch. The Sonoma Valley Hospital's disaster plan is in place and the hospital participates on the Sonoma Cities Disaster Council. The City's Disaster Council staff works with the County of Sonoma to distribute local information on health emergencies such as the swine flu epidemic.

Housing Mitigation Strategies:

The City continues to review and adopt current California Building Codes. Sheltering plans for residents and tourists are coordinated through the American Red Cross and Sonoma's Disaster

Council. Preliminary survey completed for privately-owned residential suspected soft-story structures. Efforts to reduce hazards in wildland-urban interface communities include Weed Abatement Nuisance Ordinance and Public Resource Code. Sonoma Sprinkler Ordinance SMC 14.10.030 and California Fire Code and California Building Code address installation of fire-extinguishing sprinkler systems on existing residential buildings during a remodel are based on valuation of work permits.

Infrastructure Mitigation Strategies:

City Public Works Department has a retrofitting program in progress for water lines and tanks. Emergency power generators installed for public safety at water facilities, Fire Department and Police Department and Emergency Operations Center (EOC). The Public Works Director sits on the Flood Control Zone 3A technical advisory committee to cooperate with water agencies, flood control districts, Caltrans and transportation agencies to determine appropriate watershed analysis, improve monitoring of creek watercourse flows. The Sonoma Ecology Center and Sonoma County Water Agency (SCWA) provide information using Environmental Protection Agency (EPA) criteria to the County for asset management and capture on a Geographic Information System (GIS) to select locations for creek monitoring. The City has a water system operations plan, an emergency operations plan, an urban water management plan and a water master plan, to address drought conditions and to provide a reliable water supply during various emergency situations.

Land Use Mitigation Strategies:

The City's Municipal Code Chapter 14.25 Flood Damage Prevention Regulations ensure development proposals adjacent to floodways are referred to flood control districts and wastewater agencies; and incorporate FEMA guidelines into local plans for managing flood hazards. The City incorporates Best Management Practices for all development practices and requires the installation of erosion control measures prior to the start of construction. The General Plan and Municipal Code Title 19 also encourage new development near floodways to incorporate buffer zone or setbacks to allow for changes in storm water flows over time.

Future Mitigation Actions and Priorities

As a participant in the 2010 ABAG multi-jurisdictional planning process, the staff of the City of Sonoma 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 jurisdiction's 2005 strategies, to identify and prioritize additional mitigation strategies to update the list

These draft priorities were submitted to the City Manager for review. The draft priorities will be provided to the City Council for adoption pending approval of this LHMP by FEMA.

The City planning team also prioritized specific mitigation tasks for the next 5 years. This list includes implementation process, funding strategy, responsible agency, and approximate time frame:

- Replace or retrofit water-retention structures that are determined to be structurally deficient, including reservoirs and tanks: Projects are included in 5-year CIP and funding request through flood control Zone 3A and 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, and environmental mitigations (INFR b-5)
- Memorandum of Understanding/Agreement with Sonoma Community Center for Disaster Volunteer Center.
- Develop and implement a comprehensive program for watershed management optimizing ecosystem health and water yield to balance water supply, flooding, fire, and erosion concerns – currently under study by the City of Sonoma with support from Ecology Center and SCWA who have responsibility (ENVI a-4)

On-Going Mitigation Strategy Programs

The City 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 (Exhibit C). A selection of these programs are as follows:

- Building Re-occupancy: The City anticipates adoption of measures to repair and re-occupancy of historically significant privately-owned structures, as part of City’s ordinance. (ECON i-6);
- Established S.C.O.P.E. training programs held on regular basis (Sonoma Citizens Organized to Prepare for Emergencies). (ECON j-2, j5, j13);
- Active Storm Water management program for the monitoring private and public properties. (ECON j8);

As detailed in Exhibit B, there are several on-going programs that are currently underfunded. It is the City’s priority to find additional funding to sustain these on-going programs over time.

Incorporation into Existing Planning Mechanisms

The City has several planning mechanisms that are relevant to disaster preparedness:

- General Plan Public Safety Element and Environmental Resources Element
- Capital Improvement Program
- City Climate Action Plan

The City has a Public Safety Element in its General Plan that includes a discussion of fire, earthquake, flooding, and landslide hazards. This plan was adopted as an implementation appendix to the Safety Element. In addition, the City enforces the requirements of the California Environmental Quality Act (CEQA), which, since 1988, requires mitigation for identified natural hazards. The City 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.

Plan Update Process

As required Disaster Mitigation Act of 2000, the City 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 City Manager's office will ensure that monitoring of this Annex will occur on an on-going basis. As a starting point, the Annex is a discussion item on the agenda of the meeting of Department leaders at least once a year, in April. At that meeting, the department heads focus on evaluating the Annex in light of technological and political changes during the past year or other significant events. The Department leaders are responsible for identifying elements of the the plan in need of update. In addition, plan updates and monitoring may also be triggered by the major disasters affecting Sonoma, legal changes, notices from ABAG as the lead agency in this process, and other circumstances.

The City 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 City Manager's Office will contact ABAG four years after this plan is approved to ensure that ABAG plans to undertake the plan update process. If so, the City 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. City's 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 City 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

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Alternate Point of Contact

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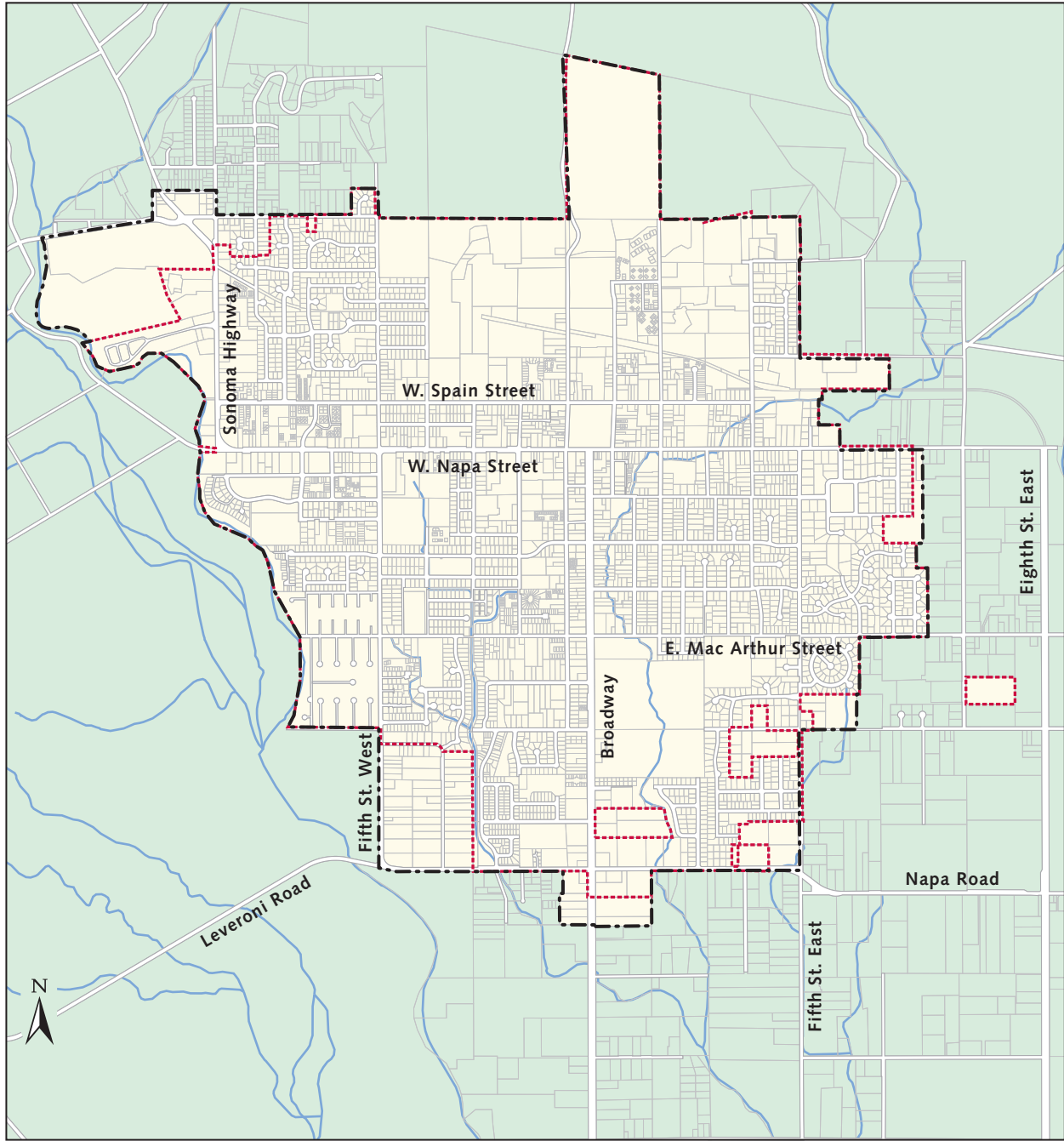
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Exhibit A – Jurisdiction Boundary Map



City Limits - - - - -

Sphere of Influence/Urban Growth Boundary - - - - -



City of Sonoma—Boundaries

Source: City of Sonoma, December 2010.

Exhibit B - Public Meeting Announcements

City of Sonoma Press Release for Mitigation Review
Sonoma Disaster Council Agenda – Review Mitigation Plan
Minutes of September 10 2009 Review of Local Mitigation Plan

Date: September 4, 2009

Contact: Debra N. Rogers
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FOR IMMEDIATE RELEASE

**CITY OF SONOMA LOCAL HAZARD MITIGATION PLAN
REVIEWED**

On Thursday, September 10th, at 3:30 p.m., in the Emergency Operation Center at the Sonoma Police Station, **Sonoma's Disaster Council** will meet to review:

- Sonoma's Local Hazard Mitigation Plan, being prepared along with other cities in conjunction with ABAG – Association of Bay Area Governments. The draft document is available on our website at www.sonomacity.org. The document is reviewed every five years and approved by FEMA. The plan helps cities prepare for such natural hazards as earthquakes, flooding, climate change, and wildfires. Written comments are welcome or comments can be made at the meeting.
- Scheduled events for the Big Rumble, a Sonoma community-wide earthquake preparedness drill and the Great California Shakeout on October 15th, 2009, at 10:15 a.m.
- **The Disaster Council also promotes S.C.O.P.E., Sonoma Citizens Organized to Prepare for Emergencies** training to organize your neighborhood in the event of a major emergency. Recently held at the Vintage House, there were 51 participants. Joe Morrison, SVPS, can be contacted at 996-2102 x 305 or joem@svfra.org for scheduling training in your neighborhood.



Sonoma Disaster Council

Thursday, September 10, 2009

3:30 p.m.

Emergency Operations Center

Sonoma Police Department

175 First Street West, Sonoma

MEETING AGENDA

1. **INTRODUCTIONS**

2. **COMMENTS FROM THE PUBLIC**

At this time, members of the public may comment on any item not appearing on the agenda. It is recommended that you keep your comments to three minutes or less. Under State Law, matters presented under this item cannot be discussed or acted upon by the Disaster Council at this time. For items appearing on the agenda, the public will be invited to make comments at the time the item comes up for Council consideration.

3. **REVIEW AND APPROVAL OF MINUTES – July 9, 2009**

4. **REVIEW LOCAL HAZARD MITIGATION PLAN**

The Emergency Preparedness plan is done in conjunction with Association of Bay Area Governments (ABAG). The document is reviewed every five years and approved by FEMA. The plan helps cities and counties prepare for natural hazards such as earthquakes, flooding, climate change, and wildfires. [PowerPoint presentation](#).
(City Manager & Management Analyst)

5. **“BIG RUMBLE” EARTHQUAKE DRILL PLANNING FOR OCTOBER 15**
(City Manager & Management Analyst)

6. **PRE-RECORDED DISASTER HOTLINE** (City Manager & Police Chief)

7. **SET NEXT MEETING DATE – November 12, 2009**

8. **ADJOURN**

I do hereby certify that a copy of the foregoing agenda was posted on the City Hall bulletin board on September 4, 2009

Debra N. Rogers,
Management Analyst

Materials related to an item on this agenda submitted to the Council after distribution of the agenda packet are available for public inspection in the City Clerk's office at No. 1, The Plaza during normal business hours.

In accordance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the City Clerk (707) 933-2216. Notification 48-hours before the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

**City of Sonoma Disaster Council
REGULAR MEETING
Emergency Operations Center
175 First Street West
September 10, 2009**

Minutes

Present: Mayor Pro Tem Barbose, City of Sonoma
Linda Kelly, City Manager
Chief Sackett, City of Sonoma
Milenka Bates, City of Sonoma
Debra Rogers, City of Sonoma
Stephan Buffy, Sonoma Valley Library
Richard Dale, Sonoma Ecology Center
Pam Gibson, Sonoma Index Tribune
Herb Golenpaul, Pueblo Serena Mobile Home Park
Jim Hill, Auxiliary Communications Service
Kathleen Hill, Sonoma Valley FOOD
Tim Hunt, Sonoma Valley Hospital
Darrel Jones, Sonoma Skypark Airport
Nanci Mathison, Sonoma Valley United School District
Charlene Rundstrom, Creekside Village Disaster Preparedness Committee
Cindy Scarborough, Vintage House
Bob Smylie, Sonoma County Department of Emergency Services, OES
Rhonda Stallings, Arroyo Veterinary Hospital
Mark Stephens, Search & Rescue
Hans Steuck, Chantarelle Disaster Preparedness Committee
Kathy Swett, Sonoma Community Center
Joan Tillman, Sonoma Valley Dog Owners and Guardians
Sarah Tracy, Sonoma Valley Visitors Bureau

1. Call to Order

The meeting was called to order. Introductions were held.

2. Comments from the Public

None

3. Minutes

The minutes of July 9, 2009, were approved as presented by consensus.

4. Review Local Hazard Mitigation Plan

City Manager Kelly presented a PowerPoint presentation covering the ABAG Earthquake and Hazards Program that includes a five year Mitigation Plan that each city prepares to be eligible to for FEMA funds. The program stresses mitigation before, rather than after disasters, and ties future mitigation funding to cities that have Local Hazard Mitigation Plans completed. This is a joint effort to complete the mitigation strategies by City staff departments and by public input. The Disaster Council received the plan prior to today's meeting and now can provide comment. The Mitigation Plan is also posted on the City of Sonoma's website for review and comment.

Herb Golenpaul reported that he had reviewed the plan, but saw no mention anywhere of mobile home parks which are of particular vulnerability during any disaster. City Manger Kelly said that the issue of mobile home parks would be discussed with ABAG.

Management Analyst Rogers requested that any additional comments be made by September 17 to be incorporated into the plan. The finished plan will be sent to ABAG by September 30, 2009. FEMA will approve the plan, which then will go to our City Council for adoption in January 2010.

Kathleen Hill, Sonoma Valley FOOD, asked if the Disaster Council wanted her to update a list they did several years ago listing inventory of all private properties in City of Sonoma that have water tanks. Public Works Director Bates responded that locations of private wells in city limits were updated annually by staff at City Hall and there were only a few water tanks not documented, but would be easy to access. Kathleen said she would attempt to reconvene the FOOD group.

5. “Big Rumble” Earthquake Drill Planning for October 15

City Manager Kelly summarized her letter distributed to the Disaster Council regarding the City of Sonoma taking part in the Bay Area event called the Big Rumble. The letter invites the City of Sonoma citizens to participate in a community-wide earthquake preparedness drill on October 15 at 10:15am. On the Big Rumble Committee, Captain Joe Morrison, SVFRA, has contacted the SCOPE leaders, hospitals, and care providers about the earthquake drill; Sergeant Martinez, PD, has made contacts with SVHS and is following up with the private schools.

Community participation will be “in place” as a group or business, in the workplace, clubhouse or other locations. This can be an opportunity to discuss disaster preparedness plans or to have a mock disaster drill.

To register for the event, Management Analyst Rogers asked that council members sign-up on the registration log provided in their packets, or call her directly at 933.2218. Participants are asked to call into the EOC center on October 15 to briefly update staff on that their drill was completed, how it went and how many participated. From the announcement made earlier before the meeting, ten groups have already signed up.

6. Pre- Recorded Disaster Hotline – Public Information Line at City Hall

Chief Sackett reported that City Manager Kelly had requested a dedicated phone line for the City of Sonoma, to be used for recorded messages – primarily during a disaster for public updates. Due to the volume of people that would be calling in during a disaster, it will be necessary to have multiple lines for roll-over messages to accommodate the callers. The first option was to contact our local service, AT&T. Chief Sackett was surprised to learn that AT&T does not support such a phone feature. The next avenue looked at was with the Sonoma County Communication staff that set-up the phone systems in the EOC, using some internal switching transoms. The planning process will continue regarding the installation of a dedicated phone line and should have more information by next week, including design and a cost estimate.

City Manager Kelly said the purpose for the phone line is our concern that when a disaster hits there will be too many people calling 911, versus calling an information hotline. If a disaster occurs when City Hall is closed, we want the public to have access to information. The message would be updated by staff from any location as frequently as needed to stay current with disaster conditions. The City would publicize the number in advance. Once the number is established, a magnet could be made listing all emergency numbers and something citizens could keep on their refrigerator. Sarah Tracy suggested that most people will add the number to their cell phones making it very accessible.

Kathleen Hill asked if KSVY had yet installed an emergency back-up generator for broadcasting during disasters, so if electricity goes out people will be able to listen on their radios. Someone who spoke with Bill Hammett last week reported that the generator was “in progress”.

Mayor Pro Tem Barbose asked people in the back of the room to introduce themselves who had come to the meeting after introductions and asked if there were any comments.

Darrel Jones, representing Sonoma Skypark Airport, said they had a very successful drill on March 14, were planning on having another drill in September, but now will change the date to coincide with the big Rumble on October 15. They will work with evacuation services, disaster relief airlift, and hopefully have the real time aerial service video working by that time, and will be working in conjunction with the Auxiliary Communications Service (ACS) which is an amateur radio organization; ACS is also set-up in the EOC where members go during disaster drills and real emergencies. They anticipate that in a big earthquake, cell towers and phone lines are going to be out of operation – ham radios will be able to facilitate continued emergency communication on radio channels.

Jim Hill, Auxiliary Communications Service, said he was standing in for Ken McTaggart, ACS Unit Leader, who was not able to attend today's meeting. ACS will coordinate communications with Darrel at Skypark Airport. They hope to have the ability on October 15, to take an airplane up and with live video have the capability of providing damage assessment during a disaster, along with the GOPS tracker system that will map exact locations of specific disaster sites such as roads and bridges.

Nanci Mathison, Sonoma Valley School District reported that Dr. Wong, Superintendent of Schools, Sonoma County, had announced that all schools will be participating in the California ShakeOut Drill.

7. Set Next Meeting Date

November 12, 2009 at 3:30 p.m. was set for the next regular Sonoma Disaster Council meeting.

Respectfully submitted,

Debra N. Rogers

Exhibit C – The City of Sonoma 2010 Mitigation Strategy Spreadsheet

Also available on LHMP CD or at

[\[http://www.abag.ca.gov/bayarea/eqmaps/mitigation/strategy.html\]](http://www.abag.ca.gov/bayarea/eqmaps/mitigation/strategy.html)

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 underfunded, 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
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	Vulnerability assessment has been completed for City water system.
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			No dams in city limits.
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								Public Works	Accomplished for City water system. Not applicable for other utilities for which others are responsible.
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	Retrofit program in progress for water lines and tanks.
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	Administration/ Disaster Council	

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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	Temporary pumps and generators stored for use in emergencies
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			SCWA	SCWA has teamed with USGS to evaluate water system vulnerabilities
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							Public Works; Fire; Police	Emergency power generator in place for public safety; & water system facilities
a-9	a-9	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	Not cost effective.
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								Public Works	Bike paths serve as evacuation routes
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		Public Works	Not cost effective.

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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								Engineering	Use Rule 20a funds and require undergrounding in new subdivisions.
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			City has no dams.
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									Administration	
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								Fire	
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									Sonoma County Transit	County responsibility.
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	MTC	

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a-18	new	Develop (with the participation of paratransit providers, emergency responders, and public health professionals) plans and procedures for paratransit system response and recovery from disasters.	EQ LS WF FL Heat SEC								X	Sonoma County Transit	County responsibility.
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 SCWA & Sanitation District	
a-20	new	Establish plans for delivery of fuel to critical infrastructure providers.	EQ LS WF FL SEC	X								Fire	On site fuel tanks at Fire Department (limited)
a-21	new	As an infrastructure operator, designate a back-up Emergency Operations Center with redundant communications systems.	EQ LS WF FL SEC		X							Fire; Police	Primary EOC is located at Police Station; Backup EOC is located at Fire Station
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 sea level rise and more frequent and more severe earthquakes, flooding, and climate change (including 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.									X		

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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, CalTrans	
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		Administration	City not responsible for local transit systems
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	
b-4	b-4	Install specially-engineered pipelines in areas subject to faulting, liquefaction, earthquake-induced land sliding, or other earthquake hazard.	EQ					X				SCWA	Projects are included in 5-year CIP and funding requested through flood control Zone 3A
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	Portable facilities are available to bypass breaks in the City water system
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	Ongoing responsibility
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								Building Department; Fire; Engineering	Ongoing responsibility

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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								Building Department	
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			
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/SCWA	
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								Fire Public Works	Fire Code
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 oaks and routes to critical facilities.	WF	X								Fire	Fire Code, Public Resource Code
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								Fire, Planning, Engineering	Fire Code
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								Fire, Planning, Engineering	Fire Hazard Severity Zone Map; Fire Code Public Resource Code

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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								Fire	Fire Code, Public Resource Code
c-7	c-7	Ensure adequate fire equipment road or fire road access to developed and open space areas.	WF	X								Fire	Public Resource Code
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	City-owned roads and rights-of-way are maintained
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		SCWA	Responsibility of Flood Control zone 3A
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		SCWA	Responsibility of Flood Control zone 3A
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		SCWA	Responsibility of Flood Control zone 3A
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	SCWA	Projects are included in 5-year CIP and funding requested through flood control Zone 3A
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								Engineering	

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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	Ongoing part of regular maintenance
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	City responsible for City drains and portions of creeks; Flood Control Zone 3 A responsible for some creek sections
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	Part of the City's adopted storm water management plan
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			Not cost effective given low flooding risk to City
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			No reservoirs in city limits
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			No critical bridges located above flood risk areas
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			No levees in City limits
d-13	d-13	Ensure that utility systems in new developments are constructed in ways that reduce or eliminate flood damage.	FL	X								Building Department	Sonoma Municipal Code Chapter 14.25

Mitigation Strategies

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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		SCWA	Responsibility of Sonoma Valley County Sanitation District
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, Engineering	Public Works Director sits on the Flood Control Zone 3A technical advisory committee
d-16	d-16	Work for better cooperation among the patchwork of agencies managing flood control issues.	FL	X								Public Works, Engineering	Public Works Director sits on the Flood Control Zone 3A technical advisory committee
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									Engineering, SCWA, Public Works	Public Works Director sits on the Flood Control Zone 3A technical advisory committee
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							SCWA SEC	Sonoma Ecology Center and SCWA provide information to County

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INFR - e-1	e-1	INFR - e - Landslides 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	No public pipelines are located in parts of the City subject to landslide ground failure
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								Planning	Sonoma Municipal Code, Title 19
INFR - f - Building Reoccupancy	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				Building; Administration	Sonoma Valley Healthcare District
INFR - g - Public Education	g-1	Provide materials to the public related to planning for power outages.	EQ LS WF FL SEC		X							City Hall Departments & Sonoma Citizens Organized to Prepare for Emergencies	Materials are available at public counters at City Hall
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								Fire; Disaster Council City Hall Departments	SCOPE Program- Sonoma Citizens Organized to Prepare for Emergencies. Materials are available at public counters at City Hall

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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, SCWA	
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								Disaster Council City Hall Departments	Materials are available on City website and at public counters at City Hall; www.sonomacity.org
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								Disaster Council City Hall Departments	Materials are available at public counters at City Hall and City website: www.sonomacity.org
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								Fire	SCOPE Program: Sonoma Citizens Organized to Prepare for Emergency. (Employees are eligible to participate.)
g-7	new	Develop and distribute culturally appropriate materials related to disaster mitigation and preparedness, such as those on the http://www.prepnow.org website related to infrastructure issues.	EQ LS WF FL DR SEC		X							Disaster Council	

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Priority (CHECK ONLY ONE)													
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).													
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								Administration; Sonoma Valley Healthcare District	Sonoma County DHS; OSHPD; Sonoma Community Development Agency, Funds provided for re-roofing of Sonoma Valley Hospital, fire alarm panel and emergency generator switch.
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								Administration; Sonoma County DHS; OSHPD; Sonoma Valley Healthcare District.	
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		OSHPD; Sonoma Valley Health Care District	
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		Sonoma Valley Healthcare District	Hospital is operated by Sonoma Valley Health Care District Plant Operations

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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		Sonoma Valley Healthcare District	Hospital is operated by Sonoma Valley Health Care District Plant Operations
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		County Health Dept.; Sonoma Valley Healthcare District	City is in support and public information capacity through the Disaster Council.
a-7	a-7	Develop printed materials, utilize existing materials (such as developed by FEMA, the American Red Cross, WF FL and others, including non-profit organizations), conduct SEC 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		Sonoma Valley Healthcare District	
HEAL - b - Ancillary Health-Related Facilities (Including medical offices, pharmacies, free-standing or specialty 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	Fire	County EMS is responsible for ancillary health facilities
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	Fire	County EMS is responsible for ancillary health facilities. Disaster Council publicly encourages disaster mitigation plans.
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									Disaster Council	County EMS is responsible for ancillary health facilities. Chamber of Commerce encourages business continuity plans.
HEAL - c - 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		County DHS	

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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	County DHS & Fire	
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			County DHS; Administration	
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 DHS; County Hazmat; Fire	
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			Sonoma County Environmental Health

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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	Existing Program						X			Sonoma County Dept. of Health Services Coordination

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		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						
2009-2010 Strategy Number	2005 Original Strategy Number															
HSNG - a-1	a-1	Multi-Hazard	Specific Mitigation Strategy	EQ LS WF FL SEC	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				
			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).													1) Maps of Special Flood Hazard Areas (designated by FEMA) are available, including on the City's website. 2) Areas of Potential Flooding from dam failure inundation are available via the Internet. 3) Very High Fire Hazard Severity Zones are depicted in 2020 General Plan and are available at the Fire Station. 4) Wildland Fire Zones are available at the Fire Station, Sonoma is not in an Earthquake Fault Zone designated under the Alquist-Priolo Earthquake Fault Zoning Act. 5) Liquefaction and Landslide Hazard Zones (designated under the Seismic Hazard Mapping Act) are available via the Internet.
	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 <i>Guidelines for Rehabilitation</i> .	EQ LS WF FL SEC		X										Planning: Building
	a-2		Develop a plan for short-term sheltering of residents of your community in conjunction with the American Red Cross.	EQ LS WF FL	X											Planning: Building
	a-3	NEW Was GOV T b-4														Disaster Council

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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 EI								X	Administration	
b-1	HSNG - b-	Single-Family Homes Vulnerable to Earthquakes	EQ										
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	Currently evaluating adoption of a retrofit standard plan set by resolution.
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	
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	No resources for program

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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	Promotion of subregional workshops when available.
b-8	b-8	Establish tool-lending libraries with common tools needed for retrofitting for use by homeowners with appropriate training.	EQ							X		Building	Tools are available via local rental centers
b-9	b-9	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				Building	No available resources
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	California Building Code
c-2	c-2	Adopt the 2009 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	Will study as part of adoption of new California Codes
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	No available resources
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	Preliminary survey completed
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	No available resources
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	No available resources

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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	No available resources
c-9	c-9	Provide technical assistance in seismically strengthening privately-owned soft-story structures.	EQ	X								Building	
HSNG - d-1	d-1	Unreinforced Masonry Housing Stock 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	Sonoma Municipal Code Chapter 14.24
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	Sonoma Municipal Code Chapter 14.24
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	Sonoma Municipal Code Chapter 14.24
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	No available resources

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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								Administration	Contract with County-CDBG grants
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	No residential buildings of this type located within the City
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	Adopted the 2010 California Existing Building Code together with its appendices and referenced standards and based on the 2009 International Existing Building Code published by the International Code Council
e-4	e-4	Adopt one or more of the following strategies as incentives to encourage retrofit 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	CDA Resolution 1999-1
f-1	f-1	Continue to require that all new housing be constructed in compliance with requirements of the most recently adopted version of the <i>California Building Code</i> .	EQ	X								Building	Latest Edition of California Building Standards Code
f-1	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								Building	
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 Building	Weed Abatement/Nuisance Ordinance, Public Resource Code

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g-2	g-2	The public education on defensible space and a comprehensive defensible space ordinance to a field program of enforcement.	WF					X				Fire	Weed Abatement/Nuisance Ordinance, Public Resource Code
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://ostm.fire.ca.gov/structural.html .	WF	X								Fire Building	Building Code Ch. 7A
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	Fire	
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								Fire	Fire Code, Public Resource Code; fire Hazard Severity Zone Maps
g-6	g-6	Adopt and amend as needed updated versions of the <i>California Building and Fire Codes</i> so that optimal fire-protection standards are used in construction and renovation projects of private buildings.	WF	X								Fire, Building	Sonoma Municipal Code Chapter 14.10
g-7	g-7	Create a mechanism to enforce provisions of the <i>California Building and Fire Codes</i> 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								Fire; Building	Sonoma Sprinkler Ordinance SMC 14.10.030; California Fire Code; California Building Code
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								Fire; Public Works	Agreement with YOMWD

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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								Fire	Public Resource Code
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							Fire	Public Resource Code
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							Fire	Public Resource Code
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								Fire; Building	Sonoma Sprinkler Ordinance SMC 14.10.030; Fire Code
g-13	g-14	Require fire sprinklers in all new or substantially remodeled multifamily housing, regardless of distance from a fire station.	WF	X								Fire; Building	Sonoma Sprinkler Ordinance SMC 14.10; Fire Code
g-14	g-15	Require sprinklers in all mixed use development to protect residential uses from fires started in non-residential areas.	WF	X								Fire; Building	Sonoma Sprinkler Ordinance SMC 14.10; Fire Code
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			City has no high-rise buildings; Fire Code
g-16	g-17	Conduct periodic fire-safety inspections of all multi-family buildings, as required by State law.	WF			X						Fire	California Fire Code

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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	Existing Program						X	Not Yet Considered	Fire SCWA	
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	Bracing and flexible couplings are routinely completed during remodeling or sale; b) program to require bolting of foundations & strengthening of cripple walls requires additional resources
g-19	g-20	Work with the State Fire Marshall, 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	
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	Administration; Fire	
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								Planning	General Plan

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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								Engineering	
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; Emergency Operations	
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								Administration; Public Works; Emergency Operations	
h-6	h-6	Apply floodplain management regulations for private development in the floodplain and floodway.	FL	X								Building	Sonoma Municipal Code Chapter 14.25
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								Engineering	Storm Water Management best Practices
h-8	h-8	Encourage home and apartment owners to participate in home elevation programs within flood hazard areas.	FL	X								Building	Sonoma Municipal Code Chapter 14.25
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		Administration	No residences in such area
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								Building	

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i-1	i-1	<p>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 <i>California Building Code</i>, <i>California Geological Survey, Special Report 117 – Guidelines for Evaluating and Mitigating Seismic Hazards in California</i>, <i>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</i>, and the <i>California Board for Geologists and Geophysicists Guidelines for Engineering Geologic Reports</i>. 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.</p>	LS										
i-2	i-2		<p>Increase efforts to reduce landslides and erosion in existing and future private development through continuing education of design professionals on mitigation strategies.</p>	LS	X							Engineering Building	Sonoma Municipal Code Chapter 14.20 - Excavations, Grading and Fills Building and Engineering review grading plans and permits for compliance with the Building Code.

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HSNG - j-1	j-1	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 Department staff working on this as time permits. Anticipated adoption as part of a repair and reconstruction ordinance. No additional appropriation is necessary to accomplish this task.	
j-2	New, same as 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	The City's informal practices and utilization of the State Historic Building Code is consistent with mitigation strategy; CDA provides historic preservation loans.
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								Fire: Building Disaster Council	Annual education, safety fairs, SCOPE, Web site link to http://quake.abag.ca.gov/ provided on City's web site at http://www.sonomacity.org/default.aspx?PageId=520
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, Disaster Council, Administration	Disaster Council. Annual education, safety fairs, SCOPE, Web site link to http://quake.abag.ca.gov/ provided on City's web site at http://www.sonomacity.org/default.aspx?PageId=520 ; The Big Rumble 2009, 2010, 2011 participation.
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				Disaster Council	Building Code, Ch. 7A

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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	Administration	
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	X								Administration; Fire; Police; Disaster Council	Disaster drills are publicized and held on disaster anniversary dates, such as earthquake drills.
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	X								Disaster Council	S.C.O.P.E. Sonoma Citizens Organized to Prepare for Emergencies
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		Disaster Council	Flooding not high risk.
k-8	k-8	Institute the neighborhood watch block captain and team programs outlined in the Citizen Corps program guide.	EQ LS WF								X		Need additional resources.
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	Fire	Public Res. Code, Weed Abatement, Public Nuisance.
k-10	k-10	Train homeowners to locate and shut off gas valves if they smell or hear gas leaking.	EQ LS WF	X								Fire	S.C.O.P.E. Sonoma Citizens Organized to Prepare for Emergencies.
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		Disaster Council, S.C.O.P.E. Sonoma Citizens Organized to Prepare for Emergencies	No resources.
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								Building	Web site link to http://quake.abag.ca.gov/ provided on City's web site at http://www.sonomacity.org/default.aspx?PageId=520

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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	Function currently performed by City crews.
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 <i>Fire Wise Program</i> . This effort is important because grant funds are currently available to offset costs of specific council-supported projects.	WF	X								Fire	Fire Safe Sonoma Weed Abatement: Public Resource Code.
k-15	k-16	Inform shoreline-property owners of the possible long-term economic threat posed by rising sea levels.	FL							X			No shoreline property in City.
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.prepnow.org website and from non-governmental organizations that work with these communities on an on-going basis.	EQ LS WF FL SEC		X							Disaster Council	
deleted	g-10	DELETED - REPLACED BY DISCUSSION OF REVERSE 911 in GOVT c-14.											
deleted	k-11												

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				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					
Specific Mitigation Strategy																	
ECON - a - Multi-Hazard																	
a-1	a-1	2005	a-1	EQ LS WF FL SEC	X												Accomplished through existing real estate disclosure laws, counter hand-outs and contacts, and the City's website.
a-2	a-2			EQ LS WF FL SEC	X												CDA Resolution 1999-1
ECON - b - Soft-Story Commercial Buildings Vulnerable to Earthquakes																	
b-1	b-1			EQ	X												Currently required
b-2	b-2			EQ	X												Adopted the 2010 California Existing Building Code, together with its appendices and referenced standards and based on the 2009 International Existing Building Code published by Web site link to http://quake.abag.ca.gov/ provided on City's web site at http://www.sonomacity.org/default.aspx?PageId=520
b-3	b-3			EQ	X												
b-4	b-4			EQ												X	

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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	
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	
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			Building	
b-8	b-8	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	
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	Sonoma Municipal Code Chapter 14.24
c-2	c-2	Accelerate retrofit 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								Building	Mandatory Seismic Upgrading completed for all Buildings
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								Building	Mandatory Seismic Upgrading completed for all Buildings per Sonoma Municipal Code Chapter 14.24

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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				Building	
ECON - d-1	d-1	Privately-Owned Structurally Vulnerable Buildings Inventory non-ductile concrete, tilt-up concrete, and other privately-owned structurally vulnerable buildings.	EQ	X								Building	Mandatory Seismic Upgrading completed for all Buildings per Sonoma Municipal Code Chapter 14.24
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								Building	Adopted the 2010 California Existing Building Code, together with its appendices and referenced standards and based on the 2009 International Existing Building Code published by the International Code Council
d-3	d-3	Adopt one or more of the following strategies as incentives to encourage retrofit 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								Administration	Redevelopment loans and grants may be available; CDA Resolution 1999-1
ECON - e-1	e-1	Wildfire and Structural Fires 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	Sprinklers required for major remodeling; Fire Safe Sonoma; Pub. Res. Code; Weed Abatement
e-2	new	Tie public education on defensible space and a comprehensive defensible space ordinance to a field program of enforcement.	WF								X	Fire	Fire Safe Sonoma; Pub. Res. Code; Weed Abatement

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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	Not Yet Considered		No business or office buildings in high fire hazard areas
e-4	e-3	Adopt and amend as needed updated versions of the <i>California Building and Fire Codes</i> so that optimal fire-protection standards are used in construction and renovation projects of private buildings.	WF	X								Fire; Building	Ord. 07-2010
e-5	e-4	Create a mechanism to enforce provisions of the <i>California Building and Fire Codes</i> 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								Fire; Building	California Fire Code and California Building Code
e-6	e-5	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	Fire	
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		Fire	
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		Fire	Fire Code

Mitigation Strategies

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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	Existing Program ■		Very High ■ - Unofficial Program, no funding needed	High ■ - Actively Looking for Funding	Moderate	Under Study ■	Not Applicable, Not Appropriate, or Not Cost Effective	Not Yet Considered	Fire	Fire Code; No high-rises in City
e-10	e-9	Conduct periodic fire-safety inspections of all privately-owned commercial and industrial buildings.	WF	Existing Program ■								Fire	
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	Fire	
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		Fire	
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		Fire	
ECON - 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	Existing Program ■								Building	
f-2	f-2	Balance the needs for private commercial and industrial development against the risk from potential flood-related hazards.	FL	Existing Program ■								Planning	General Plan, through the Land Use Plan of the Community Development Element.
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	Existing Program ■								Engineering	City Engineer reviews development plans for consistency with the Subdivision Ordinance.

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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; Emergency Operations	
f-5	f-5	Provide information to private business owners on locations for obtaining sandbags and deliver those sandbags to those various locations throughout a city and/or county.	FL	X								Public Works; Administration	
f-6	f-6	Apply floodplain management regulations for private development in the floodplain and floodway.	FL	X								Building	Sonoma Municipal Code Chapter 14.25
f-7	f-7	Encourage private business owners to participate in building elevation programs within flood hazard areas.	FL	X								Building	Sonoma Municipal Code Chapter 14.25
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			No buildings in floodway
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 <i>Flood Emergency Operation Plan</i> and <i>Inspection & Maintenance Plan</i> .	FL							X			No flood-proofed buildings

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ECON - g - 9-1	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 <i>California Building Code</i> , <i>California Geological Survey Special Report 117 – Guidelines for Evaluating and Mitigating Seismic Hazards in California</i> , <i>American Society of Civil Engineers (ASCE)</i> report <i>Recommended Procedures for Implementation of DMG Special Publication 117: Guidelines for Analyzing and Mitigating Landslide Hazards in California</i> , and the <i>California Board for Geologists and Geophysicists Guidelines for Engineering Geologic Reports</i> . 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	Existing Program ■	■	■	■	■	■	■	■	■	
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		Engineering; Building	Latest Edition of the California Building Code and S.M.C Chapter 14.20 EXCAVATIONS, GRADING AND FILLS
ECON - h - 9-1	h-1	New Construction and Earthquakes 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 <i>California Building Code</i> .	EQ	X								Building	
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	

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ECON - i-1	i-1	Institute a program to encourage owners of private buildings 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	Existing Program ■							Not Yet Considered		
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		Building	
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	Existing Program ■								Building	
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 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	Building Department staff working on this as time permits. Anticipated adoption as part of a repair and reconstruction ordinance. No additional appropriation is necessary to accomplish this task

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j-6	j-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	Existing Program ■	■	Very High ■ - Unofficial Program, no funding needed	High ■ - Actively Looking for Funding	Moderate	Under Study ■	Not Applicable, Not Appropriate, or Not Cost Effective	Not Yet Considered	Building	Building Department staff working on this as time permits. Anticipated adoption as part of a repair and reconstruction ordinance. No additional appropriation is necessary to accomplish this task
ECON - j-1	j-1	Public Education 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				Disaster Council	
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								Fire & Disaster Council	SCOPE Program - Sonoma Citizens Organized to Prepare for Emergencies
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							Disaster Council	Chamber of Commerce Encourages business continuity planning
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				Disaster Council	
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								Disaster Council	SCOPE Program - Sonoma Citizens Organized to Prepare for Emergencies

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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	Existing Program							X	Fire	
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				Administration	
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	Storm Water Management Program
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									Fire	Fire Safe Sonoma
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			CUPA responsibility
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		Disaster Council	
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 properties

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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.prepnow.org website and from non-governmental organizations that work with these communities on an on-going basis.	EQ LS WF FL SEC	Existing Program ■	■							Administration: Disaster Council	Web site link to http://www.prepnow.org and other preparedness resources are available on the City's web site at http://www.sonomacity.org/default.aspx?PageId=520

Mitigation Strategies

		Priority (CHECK ONLY ONE)										Applicable Hazards					
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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	SEC	X								Fire, Police Public works	California Fire Code
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								Building Police	Police and EOC seismic upgrade completed in 2008. Backup EOC completed in 2002.
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								Administration; Building	
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					Administration; Public Works	Administration staff is working on this program as time allows. No additional appropriation is necessary to accomplish this task.
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								Police	Completed
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 possibility of using the cameras for the secondary purpose of post-disaster damage assessment.	EQ	LS	WF	FL	SEC							X		Administration	Not cost effective
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		Administration	Not cost effective
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 failure would impact their jurisdiction.												X			No dams in city limits

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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			Not cost effective
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								Building	City facilities (other than Essential Facilities) are held to the same standards as other buildings (i.e. California Code of Regulations - Title 24)
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								Fire; Building	California Code of Regulations - Title 24
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								Administration	
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								Building; Fire	California Code of Regulations - Title 24
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								Administration; Disaster Council	Part of disaster planning process. Adopted updated Emergency Operations Plan in 2009
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								Administration	Adopted updated Emergency Operations Plan in 2009
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								Administration	Adopted updated Emergency Operations Plan in 2009

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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								Administration	Adopted updated Emergency Operations Plan in 2009
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								Administration	Adopted updated Emergency Operations Plan in 2009
GOVT - c - Maintain and Enhance Local Government's Emergency Response Capacity													
c-1	new (old b-4 moved to HSWG a-3)	Develop a plan for short-term and intermediate-term sheltering of your employees.	EQ LS WF FL SEC	X								Administration	Adopted updated Emergency Operations Plan in 2009
c-2	new	Encourage your employees to have a family disaster plan.	EQ LS WF FL SEC	X								Administration	Adopted updated Emergency Operations Plan in 2009
c-3	new	Offer CERT/NERT-type training to your employees.	EQ LS WF FL SEC	X								Disaster Council	SCOPE is available to employees
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								Fire Police	Police and Fire have the ability to relocate to other facilities (substations) located within Sonoma Valley.
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								Fire	
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								Fire & Police	
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								Police	County Dispatch - REDCOM; County EMS

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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								Police	Auxiliary Communications (Volunteer program)
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								Fire	
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								Administration, Police & Fire	Part of Adopted Emergency Operations Plan (2009)
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								Administration, Disaster Council	Disaster exercises have been integrated with the Disaster Council's programs
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								Fire	NIMCAST
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								Fire	County Operational Area
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			Not cost effective. Can utilize County reverse 911 system.
c-15	b-15	Conduct periodic tests of the alerting and warning system.	EQ LS WF FL SEC							X			No systems in place
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								Building; Planning; Fire	California Fire Code
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								Fire	

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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			Cal Fire responsibility
c-19	b-19	Increase local patrolling during periods of high fire weather.	WF							X		Fire	
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		Public Works	Not cost effective. Not a high flood risk area.
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			Not cost effective
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			No City dams. County program.
c-23	a-8	Improve coordination among cities, counties, and dam owners so that cities and counties can better plan for evacuation of areas that could be inundated if a dam failed, impacting their jurisdiction.	EQ LS FL SEC							X		SCWA	
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			City not identified as a tsunami hazard area
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							Administration; Planning; Building, Disaster Council, Public Works	In current emergency plan
GOVT - d-1	c-1	Participate in National, State, Multi-Jurisdictional and Professional Society Efforts to Identify and Mitigate Hazards	EQ LS WF FL SEC	X								All departments, Disaster Council	Staff participation in County-wide organizations

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 under funding, 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
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								All departments, Disaster Council	
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								City Engineer, Public Works	Public Works Director sits on the Flood Control Zone 3A Technical Advisory Committee
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	SMC 14.25
d-6	c-6	Participate in multi-agency efforts to mitigate fire threat, such as the Hills Emergency Forum (in the East Bay), various FireSafe Council programs, and city-utility task forces. Such participation increases a jurisdiction's competitiveness in obtaining grants.	WF		X							Fire	Fire Safe Sonoma
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								Fire	Fire Safe Sonoma
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								All departments	Included in annual budgets
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								All departments	Participation in ABAG training and conferences

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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								Building	Strong motion implementation program
GOVT - d	e-1	Take a Lead in Loss and Risk Assessment Activities 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		ABAG	
e-2	e-2	Improve the risk assessment and loss estimation work in the <i>Turning Natural Disasters</i> 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		ABAG	

Mitigation Strategies

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			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					
a-1	a-1	Specific Mitigation Strategy	EQ LS WF FL SEC															
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															
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															
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															
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															
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															

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a-6	a-5	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	Existing Program		Adoption, no funding needed	High - Actively Looking for Funding	Moderate	Under Study	Not Applicable, Not Appropriate, or Not Cost Effective	Not Yet Considered	School District	
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			School District	Discussed at Disaster Council
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		School District	Not applicable for a city
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		School District	Not applicable for a city
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									School District	

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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		School District	
c-3	c-3	Offer the 20-hour basic CERT training to teachers and after-school personnel.	EQ LS WF FL SEC							X		School District	SCOPE is open to teachers and school personnel
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		School District	
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		Community College	
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		School District	
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		School District	
EDUC - d- Actions Related to Schools as Conduits for Information to Families About Emergencies													

Mitigation Strategies

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1-p													
	c-2	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			Administration	School District participates on Disaster Council
d-2	c-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				Administration	Web site link to http://www.preparenow.org is provided on City's web site at http://www.sonomacity.org/de_fault.aspx?PageId=520

Mitigation Strategies

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		Applicable Hazards	Existing Program	** Existing Program, undervalued	Very High - Unofficial 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			
2009-2010 Strategy Number	2005 Original Strategy Number	Specific Mitigation Strategy											
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								Planning	CEQA; Sonoma Municipal Code - Title 19
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								Planning	Sonoma Municipal Code - Title 19
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								Planning	Sonoma Municipal Code - Title 19
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				SCWA and flood control zone have responsibility	Supported by Sonoma Ecology Center programs
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				SCWA Public Works	Supported by Sonoma Ecology Center programs
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									Public Works	Storm Water Management Best Practices
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	Storm Water Management Best Practices

Mitigation Strategies

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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		CUPA responsibility	
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								City complies with CUPA and County programs	
a-10	a-12	Provide information on hazardous waste disposal and/or drop off locations.	EQ LS WF FL SEC	X								City participates in Waste Management Agency	
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	Best Practices - informal policy
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		Not cost effective	Not cost effective
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								Public Works, SCWA	
ENVI - b - Climate Change	b-1	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								Administration	
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								Administration	Adopted Greenhouse Gas Reduction Climate Protection Action Plan in 2008
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	General Plan and Sonoma Municipal Code - Title 19
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								Planning	General Plan and Sonoma Municipal Code - Title 19. Bicycle and Pedestrian Plan adopted in 2008.

Mitigation Strategies

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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			Administration	
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							All Departments	Eco-Audit; Adopted Greenhouse Gas Reduction Climate Protection Action Plan
b-7	new	Purchase only Energy Star equipment and appliances for local government use.	LS WF FL DR						X			All Departments	
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								Building	Adopted CALGreen+Tier1
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			Public Works	
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								All Departments	per Eco-Audit 2009
b-12	new	Maintain healthy urban forests; promote tree planting to increase shading and to absorb CO2.	LS WF FL DR	X								Public Works Planning	Sonoma Municipal Code, Chapter 12.08 (Tree 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			Administration	Promoted through Earth Day events such as the National Conversation on Climate Action held 4/22/09. Energy efficiency grants available through Sonoma Community Development Agency.
ENVI - c-1	b-1	ENVI - c - Agricultural and Aquaculture Resilience 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			

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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. (deleted since not a disaster-related strategy)	Ag, Flu, SEC							X			
deleted	b-3												

Mitigation Strategies

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2009-2010 Strategy Number	2005 Original Strategy Number	Specific Mitigation Strategy											
LAND - a - Earthquake Hazard Studies for New Private Developments													
a-1	a-1	EQ							X			City not in Alquist-Priolo Earthquake Fault Zone	
a-2	a-2	EQ										Sonoma Municipal Code Chapter 14.20	
a-3	a-3	EQ	X									Sonoma Municipal Code Chapter 14.20	
a-4	new	EQ						X				No such areas have been identified in the City of Sonoma.	
a-5	new	EQ								X		Sonoma supports such efforts	
a-6	a-4	EQ							X			The City Engineer performs the review and is a licensed civil engineer.	
a-7	a-5	EQ	X										
a-8	a-6	EQ	X										

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LAND - 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								Fire	Fire Code & Public Resource Code
b-2	b-2	Develop a clear legislative and regulatory framework at both the state and local levels to manage the wildland-urban-interface consistent with <i>Fire Wise</i> and sustainable community principles.	WF							X			Not cost effective
LAND - 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								Engineering	Drainage reviews are referred to the Sonoma County Water Agency for compliance with Flood Control Design criteria.
c-2	c-2	Incorporate FEMA guidelines and suggested activities into local government plans and procedures for managing flood hazards.	FL	X								Building Planning	Sonoma Municipal Code Chapter 14.25
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								Planning; Engineering	Municipal code Chapter 14.25 - Flood Damage Prevention Regulations
c-4	c-4	Establish and enforce regulations concerning new construction (and major improvements to existing structures) within flood zones in order to be in compliance with federal requirements and, thus, be a participant in the Community Rating System of the <i>National Flood Insurance Program</i> .	FL	X								Building	Municipal code Chapter 14.25 - Flood Damage Prevention Regulations
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								Planning	General Plan; Sonoma Municipal Code - Title 19; Storm Water Management Best Practices
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					Planning	
LAND - d - 1		Landslides and Erosion											

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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								Engineering	The Building Official and City Engineer review grading plans and permits for compliance with the Building Code.
d-2	d-2	Require that local government reviews of these investigations are conducted by appropriately trained and credentialed personnel.	LS	X								Engineering	The City Engineer performs the review and is a licensed civil engineer.
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								Engineering	The City Engineer reviews grading plans and requires erosion control plans prepared by an erosion control specialist.
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								Engineering	The City Engineer reviews grading plans and requires erosion control plans prepared by an erosion control specialist.
d-5	d-5	Establish requirements in zoning ordinances to address hillside development constraints, especially in areas of existing landslides.	LS	X								Planning	Sonoma Municipal Code, Title 19
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			Not cost effective
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								Planning	Sonoma Municipal Code, Title 19
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								Planning	General Plan (Community Development Element)
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	Sonoma Community Development Agency	Redevelopment Plan
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								Building	URM program - Sonoma Municipal Code Chapter 14.24

Mitigation Strategies

2009-2010 Strategy Number	2005 Original Strategy Number	Specific Mitigation Strategy	Applicable Hazards	Existing Program	** Existing Program, underfunded	Very High - Unofficial 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 underfunded, 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-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								Planning	General Plan (Environmental Resources Element), open space purchases (e.g., Montini property), and creek setbacks (title 19).
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		No users of large amounts of hazardous material in the City
LAND - g-1 new		Hazard Abatement Districts Use hazard abatement districts as a funding mechanism to ensure that mitigation strategies are implemented and enforced over time.	EQ LS WF FL									Administration	