

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

City of Sebastopol

2010 Local Hazard Mitigation Plan Annex

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Introduction

The City of Sebastopol is located in western Sonoma County, California. The City has a population of 8,000 people, based on the 2010 census from the State Department of Finance. In fiscal year 2009/2010, the City’s budget was \$11,061,637. The City employs 48 full time employees and has 59 reserve and volunteer staff. The City provides local police and fire services, water and sewer utilities, street and park maintenance, planning, building and engineering services as well as administration and management functions. See Exhibit A for a map of the City boundaries.

The Regional Planning Process

Many elements of the Hazard Mitigation process were familiar to the City through past activities conducted in this area. In 1993 the City prepared its General Plan, which identified mitigation measures for fire, geologic, seismic and flood hazards in the document’s Health and Safety Element. In 1995, the City passed Municipal Code Section 15.32, adopting flood plain management regulations for those areas within flood zones established by the Federal Insurance Administration. In addition, the City routinely enforces the requirements of the California Environmental Quality Act (CEQA) requirements (which, since 1988, have required mitigation for identified natural hazards). In 1970, the City adopted a plan to require property owners to mitigate un-reinforced commercial buildings that did not meet minimum seismic standards. To date, all identified buildings have been retrofitted. The City also has a program in place, utilizing re-development funds, to provide loans to homeowners for rehabilitation including seismic upgrades. The City’s effort has focused on utilizing these pre-existing programs to identifying gaps that may lead to disaster vulnerabilities in order to establish methodologies to mitigate these hazards.

Many of the activities conducted by the City were fed into the planning process for the multi-jurisdictional plan. The City participated in an ABAG workshop on May 27, 2009 and July 1, 2009 and one City/County workshop. Details regarding these activities can be found in Appendix A and H in the ABAG Multi-Jurisdictional Local Hazard Mitigation Plan 2010 (MJ-LHMP).The City has provided written comments on the ABAG multi-jurisdictional plan and provided information on facilities that are viewed as “critical” to ABAG.

The Local Planning Process

Once a draft Annex and Infrastructure Mitigation Strategies were prepared, meetings were held with the Planning, Public Works, Building, Police, Finance and Engineering departments to review the document. After all comments were incorporated, a final draft

was disseminated to all City Department Heads and the City Manager on July 6, 2010. The mitigation strategies will become an implementation appendix to this Safety Element.

At the first meeting, general priorities and appropriate departments were identified. Subsequent meetings identified mitigation strategies, prioritized said strategies, and reviewed preliminary budgets and potential funding sources for strategies designated as “High” priority for City-owned-and-operated facilities.

Public Meetings

Opportunity for public comments on the DRAFT mitigation strategies was provided at a public meeting at the Sebastopol Fire Department, 7425 Bodega Ave., Sebastopol on October 27, 2009 and advertised on the City of Sebastopol website. The draft mitigation strategies were also published on the City of Sebastopol website for public viewing. No public comments were received from either the meeting or the internet posting. Copies of the Public Notice posting are included as **Exhibit B** to the City of Sebastopol 2010 Annex

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

Review and Incorporation of Existing Information

This process involved consideration of both the hazard and risk information developed by ABAG and discussed in the overall multi-jurisdictional Local Hazard Mitigation Plan. These meetings also discussed the City of Sebastopol General Plan – Public Health and Safety Element, the Capital Improvement Program, and the City of Sebastopol Emergency Operations Plan already in place at the City, as well how these plans could be best integrated.

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 Sebastopol 2010 General Plan, Health and Safety Element	Hazards Assessment and priority mitigation actions
City of Sebastopol Capital Improvements Plan	Priority mitigation actions and programs
City of Sebastopol 2010 Draft Emergency Response Plan	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 Sebastopol 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 the City of Sebastopol policies, including code revisions and amendments, are actions taken by the City Council. The Council's highest priority 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). Maps of these hazards and risks are shown on the ABAG website at <http://quake.abag.ca.gov/mitigation/>.

The City of Sebastopol has reviewed the hazards identified and ranked the hazards based on past disasters and expected future impacts. The conclusion is that earthquakes (particularly shaking and liquefaction), flooding (including dam failure), wildfire, and landslides (including unstable earth) pose a significant risk for potential loss.

The City of Sebastopol does not face any natural disasters not listed in the ABAG multi-jurisdictional plan and new hazards have been identified by the City of Sebastopol since the original development of this plan in 2005.

While the City of Sebastopol has undertaken a number of general hazard mapping activities since the first Safety Element was prepared by the city of Sebastopol, 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/>.

The City has reviewed the hazards identified and ranked the hazards based on past disasters and expected future impacts. The conclusion is that earthquakes (particularly shaking), flooding, wildfire, and landslides (including unstable earth, pose a significant risk for potential loss.

Past Occurrences of Disasters (natural and human-induced)

The City of Sebastopol has experienced a number of different disasters over the last 50 years, including numerous earthquakes, floods, droughts, wildfires, energy shortages, landslides, and severe storms.

The Loma Prieta Earthquake of 1989 is an example of the kind of large scale disaster which can strike the Bay Area. It killed 63 persons, injured 3,757, and displaced over 12,000 persons. With over 20,000 homes and businesses damaged and over 1,100 destroyed, this quake caused approximately \$6 Billion of damage. Reconstruction continues some two decades later as the replacement for Oakland-Bay Bridge is still several years from completion.

More information on State and Federally declared disasters in the City of Sebastopol can be found at <http://quake.abag.ca.gov/mitigation/ThePlan-D-Version-December09.pdf>

In addition to the declared disasters noted in Appendix D, locally significant incidents that have also impacted Sonoma County in the last several years include:

- Localized freeze in 1990 causing widespread damage throughout the county.
- Flood events on the Russian River and Laguna de Santa Rosa watersheds in 1995 (2), 1997, 1998, and 2005.
- Winter Storm event in 2006 causing widespread rain and wind damage.
- Weather, Summer Heat and Winter Cold. During weather extremes Sonoma County OES monitors situation with cities that are affected.
- February 27, 2010 – Chile Earthquake/Tsunami. State EOC activated. Sonoma County EOC monitored situation.

Risk Assessment

Urban Land Exposure

The City of Sebastopol examined the hazard exposure of the City of Sebastopol 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").

In general, the hazard exposure of the City of Sebastopol has remained constant over time as the amount of urban land has not increased (In the last 5 years, 0 acres of land has become urban). The following table described the exposure of urban land within the City of Sebastopol to the various hazards.

Exposure (acres of urban land)			
Hazard	2005	2010	Change
<i>Total Acres of Urban Land</i>	1225	1225	0
Earthquake Faulting (within CGS zone) ¹	Unk.	Unk.	-
Earthquake Shaking (within highest two shaking categories)	1225	1225	0
Earthquake-Induced Landslides (within CGS study zone)	Unk.	Unk.	-
Liquefaction (within moderate, high, or very high liquefaction susceptibility)	183	183	0
Flooding (within 100 year floodplain)	192	192	0
Flooding (within 500 year floodplain)	218	218	0
Landslides (within areas of existing landslides)	1063	1063	0
Wildfire (subject to high, very high, or extreme wildfire threat)	15	15	0
Wildland-Urban Interface Fire Threat	1099	1099	0
Dam Inundation (within inundation zone)	195	195	0
Tsunamis (within inundation area)	-	0	0
Drought ²	1225	1225	0

¹ The California Geological Survey has not yet mapped Sonoma County

² The entire Sebastopol area is subject to drought.

Infrastructure Exposure

The City of Sebastopol 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 23 miles of roadway in the City of Sebastopol, the following are exposed to the various hazards analyzed. Sebastopol does not have any rail or fixed transit within the City limits.

Exposure (miles of roadway)		
Hazard	Roadway	
	2005	2010
<i>Total Miles of Roadway</i>	30	33
Earthquake Shaking (within highest two shaking categories)	2	2
Liquefaction Susceptibility (within moderate, high, or very high liquefaction susceptibility)	1	2

Liquefaction Hazard (within CGS study zone) ¹	Unk.	Unk.
Earthquake-Induced Landslides (within CGS study zone) ²	Unk.	Unk.
Earthquake Faulting (within CGS zone)	0	0
Flooding (within 100 year floodplain)	2	2
Flooding (within 500 year floodplain)	1	1
Landslides (within areas of existing landslides)	0	0
Wildfires (subject to high, very high, or extreme wildfire threat)	0	0
Wildland-Urban Interface Fire Threat	29	32
Dam Inundation (within inundation zone)	3	3
Tsunamis	-	0
Drought ³	n/a	

¹ The California Geological Survey has not yet evaluated Sonoma County for this hazard.

² The California Geological Survey has not yet evaluated Sonoma County for this hazard.

³ Drought is not a hazard for roadways.

Exposure of City-Owned Buildings, Plus Critical Healthcare Facilities and Schools

Finally, the City examined the hazard exposure of critical health care facilities and schools located within the City of Sebastopol, and City-owned buildings based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickcrit.html>. The City of Sebastopol provided a list of the critical facilities it owns 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 bridges and interchanges		Locally owned critical facilities	
	2005	2010	2005	2010	2005	2010	2005	2010
<i>Total Number of Facilities</i>	5	1	6	5	1	0	18	9
Earthquake Shaking (within highest two)	0	0	0	0	1	0	6	3

shaking categories)								
Liquefaction Susceptibility (within moderate, high, or very high liquefaction susceptibility)	0	0	0	0	0	1	8	3
Liquefaction Hazard (within CGS study zone) ¹	Unk.							
Earthquake-Induced Landslides (within CGS study zone) ²	Unk.							
Earthquake Faulting (within CGS zone)	0	0	0	0	0	0	0	0
Flooding (within 100 year floodplain)	0	0	0	0	0	1	6	3
Flooding (within 500 year floodplain)	0	0	0	0	0	0	2	1
Landslides (within areas of existing landslides)	0	0	0	0	0	0	0	0
Wildfires (subject to high, very high, or extreme wildfire threat)	0	0	0	0	0	0	0	0
Wildland-Urban Interface Fire Threat	5	4	6	11	0	1	14	8
Dam Inundation	0	0	0	2	0	0	12	5
Tsunamis ³ (within inundation area)	-	0	-	0	-	0	-	0
Drought ⁴	-	-	-	-	-	-	-	-

¹ CGS has not yet evaluated this hazard in Sonoma County

² CGS has not yet evaluated this hazard in Sonoma County

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 10 repetitive loss properties in Sebastopol based on the information at <http://quake.abag.ca.gov/mitigation/pickflood.html>. It is currently unknown which of these properties are within the floodplain. It is also unknown whether these properties are residential, commercial, institutional, etc. In 2004 the city had 11 repetitive loss properties with seven of them outside the flood plain.

Other risks

The City has performed a risk assessment survey of un-reinforced masonry buildings located in the City. This information is available at the Sebastopol Building Department.

Drought, though a potential problem in the City, is not fully assessed. The City will work with ABAG and other local water agencies as necessary on this issue.

The City has also worked with ABAG to develop a soft-story inventory of multi-family buildings within its city limits. Owners of the buildings identified in the survey have been notified that their building may be at risk.

National Flood Insurance Program

The City of Sebastopol has participated in the National Flood Insurance Program since 1982. The City also participates in the Community Rating System and is currently class 10.

The City of Sebastopol has participated in the NFIP since 1982 and the most recently adopted Flood Ordinance dates from 2008. That Ordinance is more restrictive than the national program and has been successfully implemented in the community.

The Ordinance requires permits for all developments in the SFHA and insures that construction materials and methods used will minimize future flood damage. Permit files have documentation detailing construction methods used and includes copies of elevation certificates.

The Flood Ordinance has been very successful and has a high degree of support from the community. The City has successfully assisted property owners in obtaining LOMR status with FEMA.

Mitigation Goals

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 Sebastopol in designing its mitigation program.

Mitigation Activities and Priorities

Evaluation of Progress from 2007 Plan

In 2005, mitigation actions and priorities were identified. The attached list indicates each of the strategies identified, along with responsible party, action taken, and current status of progress.

1. Inventory all soft-story structures in the jurisdiction and provided notification to property owners of the findings of those inspections.

The inspections of all soft-story buildings were conducted with the assistance of ABAG staff and a list was prepared of those buildings. Property owners were notified and advised that they should notify their tenants of the issues with these buildings. To date, the City has no regulatory means to require tenant notification.

2. Inventory all non-ductile concrete, concrete tilt-up and other suspicious buildings.

To date, the inventory is only partially completed. Concrete tilt-up buildings have been identified and inventoried. Other suspicious buildings will require engineering professionals perform the inventory. Funding has not been identified for this project.

3. Inspect all critical infrastructures in the City and create a plan and funding source to correct deficiencies.

No funding has been identified to conduct the thorough review of critical infrastructure (\$50,000 to \$100,000) and no funding has been identified to correct deficiencies (estimated at \$5 to 10 Million Dollars).

4. Insure that Police and Fire department staffs have adequate radio communications systems and equipment.

All staff and apparatus have current and adequate communications equipment.

5. Insure that the back-bone radio and communications systems are current and provide adequate operational use to field responders.

The radio back-bone system has not yet been upgraded to meet current technology. The City is in process of surveying critical communication systems throughout the operational area. It is expected that a regional review will provide a priority list of corrections and grant funding will be sought for the entire regional project.

6. Insure that emergency operational plans meet SEMS and NIMS compliance and are adequate for response and recovery operations.

The City's EOP has been re-written in draft form and has been reviewed by key staff members. The Fire Department is in the process of creating a final document for City Council approval.

Future Mitigation Actions and Priorities

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

These draft priorities were submitted to City Agency Directors and the City Manager's Office 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, and approximate time frame.

1. Develop (with the participation of Para transit providers, emergency responders, and public health professionals) plans and procedures for Para transit system response and recovery from disasters. No funding needed. Meet with providers and create plan by November, 2011.
2. Adopt one or more of the following strategies as incentives to encourage retrofitting of privately-owned seismically vulnerable residential buildings: (a) waivers or reductions of permit fees, (b) below-market loans, (c) local tax breaks, (d) grants to cover the cost of retrofitting or of a structural analysis, (e) land use (such as parking requirement waivers) and procedural incentives, or (f) technical assistance. No funding needed at this date. Planning department to review and incorporate in next General Plan Housing Element Adoption in 2014.
3. 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>). Building Department to research and bring ordinance to City Council by 2013.
4. 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. No funding needed. Building Department to research and create ordinance for City Council approval by 2013.

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. Others are on-going programs that are currently underfunded. It is the County's priority to find additional funding to sustain these on-going programs over time.

- Vulnerability assessments of City facilities and infrastructure
- Non-structural mitigation for building contents
- Development of interoperable communications for first responders from cities, counties, special districts, state, and federal agencies.
- Maintain and update City's Standardized Emergency Management System Plan
- Participation in general mutual-aid agreements and agreements with adjoining jurisdictions for cooperative response to fires, floods, earthquakes, and other disasters
- Participation in FEMA's National Flood Insurance Program
- Develop printed materials, utilize existing materials (such as developed by FEMA and the American Red Cross), conduct workshops, and/or provide outreach encouraging employees of these critical health care facilities to have family disaster plans and conduct mitigation activities in their own homes
- Sponsor the formation and training of Community Emergency Response Teams (CERT) through partnerships with local businesses
- Incorporate FEMA guidelines and suggested activities into local government plans and procedures for managing flood hazards
- Increase efforts to reduce landslides and erosion in existing and future development through continuing education of design professionals on mitigation strategies
- Conduct an inventory of existing or suspected soft-story residential, commercial and industrial structures
- 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

Incorporation into Existing Planning Mechanisms

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

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 Fire Department will contact ABAG four years after this plan is approved to ensure that ABAG plans to undertake the plan update process. If so, the 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. Counties should then work together to identify another regional forum for developing a multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the 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.

Exhibit A - Jurisdiction Boundary Map

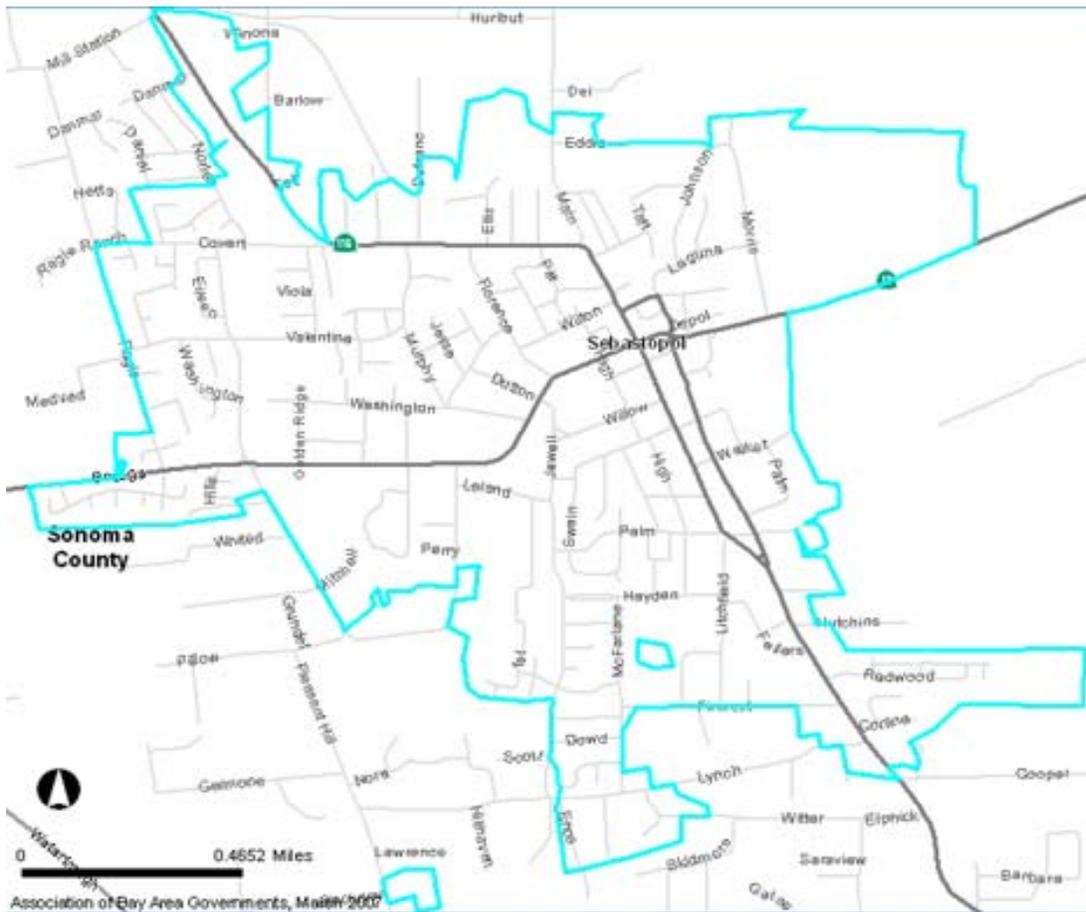


Exhibit B - Public Meeting Announcements

CITY OF SEBASTOPOL

OFFICE OF THE CITY CLERK

PUBLIC NOTICE

NOTICE IS HEREBY GIVEN, in accordance with the Disaster Mitigation Act of 2000 (Public Law 106-390), in order to be eligible to receive pre and post disaster Federal Funding, a local Government must have an approved *Local Hazard Mitigation Plan* (LHMP) approved by the Federal Emergency Management Agency (FEMA). To meet this requirement, the City is participating with the Association of Bay Area Governments (ABAG) to develop a LHMP annex under the “umbrella” LHMP ABAG is preparing.

As part of the public participation process the draft Annex and Mitigation Strategies will be available for public review and comment from October 8th, 2009 to October 27th, 2009 by appointment at the Sebastopol Fire Department, 7425 Bodega Avenue, Sebastopol California. Please call the Fire Department at (707) 823-8061 for a reservation to review the documents.

In addition, a public meeting on the LHMP process will be held on Tuesday, October 27th at 11 A.M.. to solicit input at the Sebastopol Fire Department.

Public comments will be accepted through October 27th 2009 and can be delivered or mailed to the Sebastopol Fire Department, Attn: John Zanzi, 7425 Bodega Ave., Sebastopol, CA 95472

Dated:

Mary Gourley, City Clerk

Exhibit C - Sebastopol Regional Mitigation Strategies