



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

City of Pacifica
170 Santa Maria Avenue
Pacifica, California 94044

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Introduction

The City of Pacifica is a moderately sized city located in San Mateo County, California, which is comprised of approximately 8742 acres. The city is framed by the ridges of the Coastal Range on the east and the Pacifica Ocean on the west. Pacifica is located on the Pacific coast side of the San Francisco Peninsula, three miles south of San Francisco. The City has experienced its share of disasters including the Loma Prieta earthquake in 1989, tsunami threats, winter storms, landslides, and coastal erosion. Last year, the City's budget was \$45,100,000. The City's services include police, fire, and sewer. Fire services are provided by the North County Fire Authority. Water services are provided by the North Coast County Water District. A map of the City's jurisdictional boundary is provided in Exhibit A.

Pacifica is a mid-sized community in a large metropolitan region. The city's population was estimated at 39,995 in 2009, up slightly from the 38,390 counted in the 2000 Census Department of Finance, 2009, US Census 2000). The city employs 193 people. The city has grown by only 8.5% since 1980. The city's approximately 14,330 households have an average of 2.78 persons, on par with the household size in San Mateo County. As of 2000, Pacifica's Coastal Zone was home to 4,725 people, approximately 12% of the total population of Pacificans.

Major government facilities include City Hall, the Police Department, the planning and building department and parks beaches and recreation department building, a storage facility at the City Hall location which was once the police station, the Little Brown Church; a historic building in Pacifica, two fire stations, two libraries, a water recycling plant, community center, multiple child care facilities located in various neighborhoods of Pacifica, public works offices and the City of Pacifica corporation yard facility.

The Regional Planning Process

The City of Pacifica has participated in various ABAG workshops, conferences, and meetings, including:

- May 12, 2009 - Attended Sub-regional meeting to review draft priorities and reach consensus on priorities for mitigation
- ABAG Regional Planning Committee meetings
- Wildfire Workshop
- Three county work Shops and five city workshops
- August 18, 2010 -Hazard Mitigation Workshop conference call

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

The Local Planning Process

The City of Pacifica facilitates mitigation planning by coordinating with staff across departments to provide for a comprehensive planning process that is carried out under the direction of the City Manager. The Police Departments' Emergency Preparedness and Disaster Response Coordinator facilitate the planning process for updates to the Local Hazard Mitigation Plan. Through a series of in-house meetings that include staff from the planning department, building division, engineering division, public works department, police department, fire department and recycled water department, as well as the North Coast County Water District; details of the intended goal are defined and an outline describing information that is to result from this process is created. The strategy that will be employed to collect such data pertaining to the general priorities and associated mitigation strategies is also identified during these meetings.

Periodically, staff from these departments including the planning management analyst, building official, associate engineer, public works facilities manager and field services manager, police emergency preparedness coordinator, fire emergency preparedness coordinator, recycled water associate engineer, and NCCWD representatives reconvene to assess the progress in drafting the plan and identify gaps within priority and strategy data collected. Also during these meetings, priorities and strategies that have been identified are reviewed in conjunction with preliminary budgets. Discussions cover and identify potential funding sources for strategies designated as 'High Priority' for City-owned-and-operated facilities.

As the majority of the information contained in the Local Hazard Mitigation Plan and Annex comes from the planning and building departments, and given these departments work closely together regularly, the relationship for moving through a mitigation planning process is no different than what would occur for project review processes. Planning and building staff collaborate to outfit all necessary outstanding information for constructing the strategies and priorities list. Associated policy related information is managed at the director level, however the planning director provides guidance to the planning management analyst as well as the building official to see that appropriate mitigation planning and building related policy changes as well as new policy needs are addressed in the correct manner throughout this process.

Primarily, Hazard Mitigation planning is facilitated under the direction of the emergency preparedness coordinator, planning director, and is carried out by the management analyst. This position coordinates with staff planners as is needed, analyses information provided, and then applies what is pertinent and of importance to draft mitigation planning strategies and priorities. These draft mitigation planning priorities and strategies are processed in combination with priorities and strategies provided by the engineering division and waste water department, building division, public works department, police department, fire department, and the North Coast County Water Department. The list of priorities and strategies as well associated policy recommendations that result from this collaborative process is then reviewed by the city manager and city attorney. The City Manager and City Attorney then dictate how the documents resulting

from the mitigation planning process shall be finalized in preparation for presentation to the Emergency Preparedness Commission and ultimately, the City Council, ABAG and FEMA

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 Pacifica 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 Pacifica’s 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.

Incorporating Other Plans into the Annex

Existing plans, studies, reports, and technical information	Method of incorporation into the City of Pacifica jurisdiction annex
General Plan, Health and Safety Element	Hazards Assessment Mitigation Strategies
Capital Improvements Plan	Mitigation Strategies
Emergency Response Plan	Hazards Assessment Mitigation Strategies

Public Meetings

The City of Pacifica facilitated the public comment process on the draft list of strategies and priorities via Emergency Preparedness Commission meetings. The city staff liaison presented a Power Point Presentation at the Emergency Preparedness Commission Meeting of September 16, 2009 and during this presentation, provided answers to questions asked by the Commission. Unfortunately, no members of the public attended this meeting.

Additionally, within the Emergency Preparedness WebPages of the City of Pacifica’s website, the draft list of strategies and priorities was posted for public review and comment. (See **Exhibit C**) for an example of this page. The meeting that was held for review and discussion of the draft list of strategies and priorities was advertised in the local newspaper (**See Exhibit D**) and an article that was written by the emergency preparedness coordinator was run in the local

newspaper to offer additional information to members of the public and interested parties on the drafting process, the need for such a process and document and additional steps the City takes on a regular basis to better prepare for an emergency situation and associated coordinated disaster response. No public comments were received from either the meeting or the internet posting.

The Pacifica City Council will adopt the Local Hazard Mitigation Plan after consideration during a public meeting by authorizing a resolution. This authorization will be granted by City Council following FEMA's approval of the Local Hazard Mitigation Plan. The mitigation strategies could become an implementation appendix of the Safety Element of the City of Pacifica's General Plan if decision makers feel this is appropriate. As the City is currently in the process of updating the General Plan, the general plan update consultant team has been kept abreast of the progress on the Local Hazard Mitigation Plan (LHMP) Update, and has initiated work on the Safety Element; which will speak to this process and allow for easy integration of language from the LHMP as well as Exhibits / Appendices to the GP's safety element. This includes the list of strategies and priorities. This will also offer an additional opportunity for public review and comment, hopefully stimulating more interest in this Local Hazard Mitigation Plan and disaster related public education.

Hazards Assessment

The City of Pacifica's Local Hazard Mitigation Plan; which is an Annex Plan to the ABAG Multi-Jurisdictional Local Hazard Mitigation Plan, defines nine hazards that impact the Bay Area most frequently. Five of these hazards are synonymous with seismic activity and include tsunamis, earthquake-induced landslides, fault-line disturbance / expansion or shifting ground shaking, and, liquefaction. Four of these hazards are related to weather events and include flooding (including berm / revetment failure and ocean intrusion, bluff erosion expedited from wave action), landslides, wildfires, and drought. Maps of these hazards and risks are shown on the ABAG website located at <http://quake.abag.ca.gov/mitigation/>.

The City of Pacifica has reviewed the hazards identified above and ranked the hazards from greatest probability of recurrence to lowest probability of recurrence based on past disasters and expected future impacts. The conclusion is earthquakes (particularly fault-line disturbance / expansion or shifting ground line), flooding, including berm / revetment failure and ocean intrusion from wave action / bluff erosion), wildfire, and landslides (including unstable earth) pose a significant risk for potential loss.

The City of Pacifica does not face any natural disasters not listed in the ABAG multi-jurisdictional plan and new hazards have been identified by the City of Pacifica since the original development of this plan in 2005. Additional Hazards identified in this iteration of the LHMP include: sea-level rise and impacts from climate change on coastal cities, as well as expedited bluff erosion from wave action.

While the City of Pacifica has undertaken a number of general hazard mapping activities since the first Safety Element was prepared by the City of Pacifica, 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)

The City of Pacifica has experienced a number of different disasters over the last 50 years, including, flooding, tsunami related wave run up, earthquakes, wildfires, energy shortages, civil disturbances, landslides, and severe storms.

At various times throughout the last several decades, severe weather has led to damage of private property and public facilities. Coastal Erosion resultant from heavy wave action has impaired properties along the northern edge of the City. Landslides have been a consistent problem throughout Pacifica due to the steep topography, and flooding has continued to be a burden for various neighborhoods that are either at or just below sea level. Numerous weather related incidents resulted in proclamations of a Federal Disaster; the most recent being severe weather that occurred in 2005 /2006 and that triggered Federal Disaster Proclamations 1628 and 1646. On March 30th-April 2nd, 2010 – Extreme wave action impacted the northern coastline of Pacifica causing significant bluff erosion at numerous points along the coast. Projects resulting from these two disasters were in large part weather related. Shoreline protection was damaged, landslides occurred at various locations throughout the City on public and private property, outfalls that connect to the storm drain system were compromised and emergency protective measures were necessary in many places throughout Pacifica.

More information on State and Federally declared disasters in the City of Pacifica 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 The City of Pacifica in the last several years include:

- November 7, 2007 – Cosco Busan Oil Spill; Oil impacts various beaches along Pacifica Coastline
- March 2009 – Coastal erosion caused by extreme wave action along the northern coastline of Pacifica
- September 9, 2010- San Bruno Fire/Explosion: we didn't open Pacifica's EOC, however, numerous Pacifica staff worked at the San Bruno EOC and disaster site for weeks following the incident and in various capacities – EOC team members from finance assisted in San Bruno's EOC operations. Staff also assisted with the Incident Command Post in the following weeks.
- March 11, 2011- the National Weather Service issued a Tsunami Warning for the California Coast.

Risk Assessment

The City of Pacifica examined the hazard exposure of the City of Pacifica's urban land based on information on 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 Pacifica has remained unchanged over time. A minimal reduction of urban land has occurred within the various 100 year flood zones over the last five years due to changes in the new FEMA flood maps. The following table describes the exposure of urban land within the City of Pacifica to the various hazards.

Exposure (acres of urban land)			
Hazard	Plan Year 2005	Plan Year 2010	Change
<i>Total Acres of Urban Land</i>	4,269	4,269	0
Earthquake Faulting (within CGS zone)	210	210	0
Earthquake Shaking (within highest two shaking categories)	3,969	3,970	1
Earthquake-Induced Landslides (within CGS study zone)	0	N/E	N/A
Liquefaction (within moderate, high, or very high liquefaction susceptibility)	753	1,329	576
Flooding (within 100 year floodplain)	141	141	0
Flooding (within 500 year floodplain)	119	119	0
Landslides (within areas of existing landslides)	2,095	2,095	0
Wildfire (subject to high, very high, or extreme wildfire threat)	374	534	160
Wild land-Urban Interface Fire Threat	3,246	3,263	17
Dam Inundation (within inundation zone)	0	0	0
Sea Level Rise			
Tsunamis (within inundation area)			
Drought	4212	4269	57

Infrastructure Exposure

The City of Pacifica 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 124 miles of roadway in the City of Pacifica, the following are exposed to the various hazards analyzed.

Exposure (miles of infrastructure)						
Hazard	Roadway		Transit		Rail	
	Plan Year 2005	Plan Year 2010	Plan Year 2005	Plan Year 2010	Plan Year 2005	Plan Year 2010
<i>Total Miles of Infrastructure</i>	120	124	0	0	0	0
Earthquake Shaking (within highest two shaking categories)	115	116	0	0	0	0
Liquefaction Susceptibility (within moderate, high, or very high)	30	46	0	0	0	0

liquefaction susceptibility						
Liquefaction Hazard (within CGS study zone)			0	0	0	0
Earthquake-Induced Landslides (within CGS study zone)			0	0	0	0
Earthquake Faulting (within CGS zone)	6	7	0	0	0	0
Flooding (within 100 year floodplain)	3	4	0	0	0	0
Flooding (within 500 year floodplain)	6	6	0	0	0	0
Landslides (within areas of existing landslides)	49	51	0	0	0	0
Wildfires (subject to high, very high, or extreme wildfire threat)	7	5	0	0	0	0
Wild land-Urban Interface Fire Threat	94	98	0	0	0	0
Dam Inundation (within inundation zone)	0	0	0	0	0	0

Sea Level Rise ¹	not applicable
Tsunamis ²	not applicable
Drought ³	not applicable

¹ The sea level rise map is not a hazard map. It is not appropriate to assess infrastructure exposure to sea level rise.

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

³ Drought is not a hazard for roadways.

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

Finally, the City of Pacifica examined the hazard exposure of critical health care facilities and schools located within Pacifica, and city-owned buildings based on the information on ABAG’s website at <http://quake.abag.ca.gov/mitigation/pickcrit2010.html>. The City of Pacifica provided a list of the critical facilities it owns to ABAG. ABAG provided a detailed assessment of the hazard exposure for each of Pacifica’s facilities. The following numbers of facilities are 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>	0	0	36	36	53	53	15	15
Earthquake Shaking (within highest two shaking categories)	0	0	31	31	29	29	6	6
Liquefaction Susceptibility (within moderate, high, or very high liquefaction susceptibility)	0	0	16	16	25	25	2	2
Liquefaction Hazard (within CGS study zone)	0	0	15	15	15	15	2	2
Earthquake-Induced Landslides (within CGS study zone)	0	0	0	0	2	2	6	6
Earthquake Faulting (within CGS zone)	0	0	0	0	2	2	0	0
Flooding (within 100 year floodplain)	0	0	1	1	3	3	0	0
Flooding (within 500 year floodplain)	0	0	0	0	0	0	0	0
Landslides (within areas of existing landslides)	0	0	0	0	4	4	2	2
Wildfires (subject to high, very high, or extreme wildfire threat)	0	0	3	3	25	25	3	3
Wild land-Urban Interface Fire Threat	0	0	16	16	10	10	2	2
Dam Inundation	0	0	4	4	8	8	0	0
Sea Level Rise (exposed to 16in sea level rise) ⁴	-	-	-	-	-	-	-	-
Sea Level Rise (exposed to 55in sea level rise) ⁵	-	-	-	-	-	-	-	-
Tsunamis ⁶ (within inundation area)	-	-	-	-	-	-	-	-
Drought ⁷	-	-	-	-	-	-	-	-

Repetitive Loss Properties

⁴Sea level rise data was not available in 2005

⁵Sea level rise data was not available in 2005

⁶Tsunami evacuation planning maps were not available inside the San Francisco Bay area 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.

⁷Drought will not affect locally owned facilities directly.

There are two repetitive loss properties in the City of Pacifica based on the information obtained from FEMA through the Community Rating System Program. In 2004 the City of Pacifica had two repetitive loss properties that were outside of a flood plain. Both repetitive loss properties were residential dwellings. Since 2004, there has been no new repetitive loss properties defined in Pacifica.

Other risks

Other risks that exist for the City of Pacifica and that differ from the rest of the ABAG Hazard Mitigation Planning Area include:

- Tsunami Inundation
- Storm Surge
- Wild lands Fire Hazards (differing from some local communities) and Protection of Endangered Species in Wild lands
- Significant Seismic Activity (the San Andreas Fault runs directly through the northern portion of the City of Pacifica)
- Levee Breaches (Sharp Park)
- Recycled Water Plant Failure (differing from some local communities)
- Intersection Lights Failure Following Power Outage / Natural Disaster
- Slow Response Time for Emergency Services Due to Limited Arterial and Major Roadways
- Alternative Water Supply Availability if NCCWD Infrastructure is Breached
- Segregation from the Peninsula Coastal Communities South of Pacifica Resulting from the Failure of Devils Slide
- Lack of Port for a Water Based Transportation System for use in Response to an Emergency Event
- Severe Cliff Erosion at Esplanade Beach
- Minimum Road Widths for Emergency Response of 20 feet with an additional 10 feet of Clearance on Each Shoulder (Older Roads built prior to standards existing)
- Lack of Roadways leading to the Shelter Cove Neighborhood; No Emergency Vehicles may Gain Entry Currently due to Topographical Challenges
- Lack of Continuous Rip Rap Protection Along Pacifica Coast- Higher Rate of Damage Resulting from Natural Disaster
- Lack of GIS Capabilities to Implement Asset Management Protocol (d-18 Infrastructure mitigation)
- Landslide and Mudslide Threat is Significant
- Lack of Medical Facilities in Pacifica; Longer Drive Times to Facilities in Emergency Situations
- Pacifica does not Operate the Local Water Purveyor
- Access to Metropolitan Medical Response System Cities may Become Limited due to Roadway / Infrastructure Breakdown Following a Natural Disaster
- Multiple FEMA NFIP (National Flood Insurance Program) Flood Zones and Inundation Areas due to proximity to Pacific Ocean and Number of Watersheds In the Community
- Flood Zones Owned by CCSF (City and County of San Francisco; Sharp Park Golf Course), and Pacifica does not participate in the Management of these Areas.

- Limited Educational Facilities that may Function as Makeshift Hospitals or for Local Long Term Accommodations for Families and Individuals in the Event of a Natural or other Type of Disaster
- Lack of Funding to Conduct Demonstration Projects of Various Types for LHMP Compliance
- Mobile Homes / Mobile Home Parks that are Located in Pacifica are Regulated by the State; the City may not Require Retrofits for Safety or any Proven Issues that will result in Damage or Destruction of Such Units (similar to other communities with Mobile Home Parks in San Mateo County)
- Providing Defensible Space due to Endangered Species Habitat Areas in and around such Areas
- Storm Drainage Improvement Dollars may not be Arbitrarily Increased without Proceeding Through A Proposition 218 Vote Process (H-3 Housing Mitigation Strategies)

The City of Pacifica plans to continue to work with ABAG to improve the risk assessment information being compiled by ABAG, including developing ways to assess how many soft-story buildings are located in Pacifica.

The City plans to work with ABAG to develop specific information about the kind and level of damage to buildings, infrastructure, and critical facilities which might result from any of the hazards previously noted.

National Flood Insurance Program

The City of Pacifica has participated in the National Flood Insurance Program since 1981. The city has recently taken steps to expedite participation in the Community Rating System Program and is awaiting FEMA's findings from our program assessment meeting in May 2010.

The following actions have been taken recently regarding the City's NFIP Program:

- a. Meet with FEMA to assess the existing program and determine compliance with CRS minimum requirements*
- b. Joined NFIP in 1981*
- c. Assessment of updated FEMA maps*
- d. LOMR Initiation*
- e. Community Interest in the CRS*
- f. General hurdles for effective implementation of the NFIP are the regularly changing requirements, lag time for reports from FEMA for compliance with the minimum requirements*
- g. Summarize actions related to continued compliance with NFIP (c-2 and c-4)*
- h. Repetitive Loss Properties*

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 Pacifica in designing its mitigation program.

Additionally, Pacifica has the specific objective of reducing the number of public and private buildings within the City that are vulnerable to the effects of earthquakes, as well as increasing the number of public/private buildings protected from flooding, wildfire, etc.

As noted in the following chart, the North Coast County Water District also continues to improve its service to the citizens of Pacifica.

North Coast County Water District

INFRASTRUCTURE MITIGATION STRATEGIES	
INFR-a-Multi-Hazard (owned by the infrastructure provider, e.g. special district)	
INFR-a-1	No change.
INFR-a-3	Efforts being made to become more familiar with surrounding agencies.
INFR-a-4	Replaced approx. 600 feet of T-1 primary transmission pipeline.
INFR-a-5	No change.
INFR-a-6	Have purchased an additional 1,000 feet of 2-1/2" temporary piping hose system; have added a bulldozer to heavy equipment fleet; and have also shared equipment and materials inventory with a number of neighboring agencies.
INFR-a-7	No change.
INFR-a-8	No change.
INFR-a-11	Have installed standby emergency generator at Main Pump Station.
INFR-a-12	No change.
INFR-a-14	No change.
INFR-a-17	No change.
INFR-a-18	No change.
INFR-a-19	No change.
INFR-a-20	No change.
INFR-a-21	No change.
INFR-a-22	No change.
INFR-b-Earthquakes	
INFR-b-1	In process of working with Caltrans on San Pedro Bridge crossing project.
INFR-b-3	Replaced/upgraded approx. 600 feet of transmission pipeline in crossing through San Andreas Fault.
INFR-b-4	Refer to b-3.
INFR-b-5	Have upgraded/replaced two 3 million gallon water tanks and are in the process of replacing a third tank with a seismically sound structure.

INFR-b-6	Will install two seismic jumpers within the next few months on the T-1 transmission main.
INFR-b-7	Currently working with Caltrans to supply water to Devil's Slide Bridge and Tunnel.
INFR-b-8	No change.
INFR-b-9	No change.
INFR-b-10	No change.
INFR-c-Wildfire	
INFR-c-1	No change.
INFR-c-2	No change.
INFR-c-3	No change.
INFR-d-Flooding	
INFR-d-1	No change.
INFR-d-9	No change.
INFR-d-15	No change.
INFR-e-Landslides	
INFR-e-1	No change.
INFR-f-Building Reoccupancy	
INFR-f-1	No change.
INFR-g-Public Education	
INFR-g-3	Existing program underfunded.
INFR-g-5	No change.
HOUSING MITIGATION STRATEGIES	
HSNG-g-Wildfire and Structural Fires	
HSNG-g-8	Installing transmission main and hydrants in Shamrock Ranch area and Devil's Slide Tunnel.
GOVERNMENT MITIGATION STRATEGIES	
GOVT-a-Focus on Critical Facilities	
GOVT-a-1	No change.
GOVT-a-2	No change.
GOVT-a-3	Ongoing staff training.
GOVT-a-4	Have moved important files to offsite locations.
GOVT-a-5	No change.
GOVT-a-6	No change.
GOVT-a-7	No change.
GOVT-a-9	No change.
GOVT-a-10	No change.
GOVT-a-11	No change.
GOVT-a-12	No change.
GOVT-b-Maintain and Enhance Local Government's Emergency Recovery Planning	
GOVT-b-1	Ongoing periodic table-top planning exercises.
GOVT-b-2	No change.
GOVT-b-3	No change.
GOVT-b-4	All drawings have been scanned and electronic copies have been made.
GOVT-b-5	No change.

GOVT-c-Maintain and Enhance Local Government's Emergency Response Capacity	
GOVT-c-1	Existing program underfunded.
GOVT-c-2	No change.
GOVT-c-3	No change.
GOVT-c-4	No change.
GOVT-c-5	NCCWD has had a reduction in workforce.
GOVT-c-6	No change.
GOVT-c-7	No change.
GOVT-c-8	No change.
GOVT-c-10	No change.
GOVT-c-11	Continued periodic participation in training exercises.
GOVT-c-12	No change.
GOVT-c-13	No change.
GOVT-c-15	Not applicable to NCCWD.
GOVT-c-17	No change.
GOVT-c-18	Not applicable to NCCWD.
GOVT-c-22	Not applicable to NCCWD.
GOVT-c-25	No change.
GOVT-d-Participate in National, State, Multi-Jurisdictional and Professional Society Efforts to Identify and Mitigate Hazards	
GOVT-d-1	No change.
GOVT-d-2	No change.
GOVT-d-6	No change.
ENVIRONMENTAL MITIGATION STRATEGIES	
ENVI-b-Climate Change	
ENVI-b-2	No change.
ENVI-b-4	No change.
ENVI-b-5	No change.
ENVI-b-8	No change.
ENVI-b-9	Have purchased multi-fuel truck capable of running on bio-diesel.
ENVI-b-10	No change.
ENVI-b-11	No change.
ENVI-b-13	No change.
LAND USE MITIGATION STRATEGIES	
LAND-f-Smart Growth to Revitalize Urban Areas and Promote Sustainability	
LAND-f-1	No change.

Recycled Water Treatment Plant (2011-2016)

Repair, replace and/or upgrade about 21 miles of sewer pipes to re-establish pipe's structural integrity and/or increase capacity.

*Construct equalization basin to increase capacity in the collection system.

*Install 1000kW emergency generator to upgrade the existing 450kW generator at Linda Mar Pump Station

*Install new centrifuges to improve Plant's performance in dewatering treated sludge.

*Continue to modify and upgrade the Plant's ATAD system

Mitigation Activities and Priorities

Evaluation of Progress from 2005 Plan

In 2005, mitigation actions and priorities were identified although in the 2005 Plan projects were not identified as clearly as they are in this plan. The attached list indicates each of the strategies identified, along with responsible party, action taken, and current status of progress. The following projects were completed by the Public Works Department, Police Department, Fire Department, and the Planning and Building Department

- Develop unused or new pedestrian rights-of-ways – No change- Considered (INFR-a10)
- Examine feasibility of developing a water-borne transportation system- No change- Considered (INFR-b10)
- Conduct a watershed analysis at least once every three years – Storm drain master plan currently underway (INFR-d3)
- Balance the housing needs of residents against the risk from potential flood related hazards - Flood maps updated and currently under way (HSG-h2)
- The City of Pacifica and the North County Fire Department participate in CERT Training. (HSNG-k 6)
- The Pacifica Police Dept. has reinstated its neighborhood watch program(HSNG k8)
- With the assistance of the Office of Emergency Services, NOAA weather radios were distributed to the local school district (HSNG –k11)
- Develop a program to provide at-cost NOAA weather radios to residents of flood hazard areas (HSNG-12) – No Change-Not cost Effective
- ABAG links/materials have been placed on the City website (HSNG k13)
- Inter-operable communications for first responders is under study via San Mateo County (GOVT-a7)
- Harden emergency response communications. Improved via San Mateo County Office of Emergency Services, TENS, Sirens, SMC ALERT, Amateur Radio (GOVT-a8)
- (3) Emergency warning sirens have been installed in local inundation areas (GOVT-a14)
- Periodic tests of the alert and warning systems are conducted once per month (GOVT;a15)
- Weather monitoring stations are in place at the Pacifica Police Department, but the City of Pacifica recently outsourced the Communications Center (GOVT-a17)
- The City of Pacifica continues to network with the American Red Cross to improve designated shelters within the community.(EDUC;b1)
- Made modifications in the Recycled Water Treatment Plant operations and upgraded equipment that eliminated regular use of some hazardous chemicals needed for treatment (2005-2010)
- Repaired, replaced and/or upgraded about 21 miles of sewer pipes to re-establish pipes structural integrity and/or increased capacity (2005-2010).

Future Mitigation Actions and Priorities

As a participant in the 2010 ABAG multi-jurisdictional planning process, the staff of the City of Pacifica 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 Pacifica's 2005 strategies, to identify and prioritize additional mitigation strategies in order 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, responsible agency, and approximate time frame.

FLOODING:

Mitigation projects that the City plans to accomplish within the next five years are the Esplanade Storm Drain Relocation Project, the Storm Drain Master Plan Update Project, and the FEMA Flood Maps Project.

- The Esplanade Storm Drain Relocation Project was identified by observation of erosion of the bluffs along Esplanade Boulevard. The hydraulic calculations were performed to analyze the need for relocation of the storm drain outfall to prevent failure of the outfall, which would lead to further erosion. Reinforcing the storm outfall with a seawall is cost prohibitive. The benefit of the project eliminates drainage from the City's storm drain system from potentially causing bluff erosion within close proximity to the adjacent bluff side residential unit. The project calls for relocation of the existing storm drain outfall to an existing rock revetment, 1200 feet south. The City of Pacifica Engineering Division is the lead agency on this project and the California Emergency Management Agency is providing the funding for the project. The project is currently in the Coastal Development Permit phase and will be advertised, bid and construction immediately upon approval of the Coast Development Permit.
- The Storm Drain Master Plan Project was identified due to the age of the current Storm Drain Master Plan. The existing plan was prepared in 1961 and was updated in 2002. Many of the 1961 plans remained in the 2002 update. The Storm Drain Master Plan project will allow the City to determine the cost-benefit analysis in evaluating the need for storm drain repair, replacement and additions. The City of Pacifica Engineering Division is the lead agency on this project and City is the source of the funding for the

project. The Storm Drain Master Plan is expected to be complete in mid 2012. Mitigation Strategy Number INFR -3).

EARTHQUAKE

- State Route 1 and San Pedro Bridge replacement project. Milestones: Advertisement in September 2012. Complete plans in October 2012. (Mitigation Strategy INFR b-1)
- NCCW – Install two seismic jumpers within the next few months on the T-1 Transmission main (Mitigation Strategy INFR b-6)

WILDFIRES AND STRUCTURAL FIRES

- NCCW – Installing transmission main and hydrants in Shamrock Ranch area and Devil’s Slide tunnel (Mitigation Strategy HSNG g-8)
- The City of Pacifica is located adjacent to the Golden Gate National Recreation area (GGNRA) and San Mateo County properties. Local fire response responsibilities to these areas fall under the North County Fire Authority (City of Daly City). Refer to the City of Daly City’s Local Hazard Mitigation Plan 2010.

On-Going Mitigation Strategy Programs

- INFR–a-Multihazard 3) Utility mitigation strategies through the Franchise Agreements
- INFR–a-Multihazard 4) Retrofit/Replace Critical Lifeline Facilities through Standard Procedure and Capital Improvement Project
- INFR–a-Multihazard 10) Maintain the tsunami evacuation routes.
- INFR–d-Flooding 7) Installed and maintain trash capture devices in storm drain inlet preventing build up of debris in drainage systems minimizing the flooding potential downstream.
- INFR–d-Flooding 8) Require and enforce SWPPP on new development and construction.

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 County facilities and infrastructure (GOVT-a-1) :
- Non-structural mitigation for building contents (GOVT-a-4);

- Installation of micro and/or surveillance cameras at critical public assets tied to web-based software (GOVT-a-6);
- Coordination 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; (GOVT-a-8);
- Development of interoperable communications for first responders from cities, counties, special districts, state, and federal agencies. (GOVT-c-7);
- Maintain and update San Mateo County’s Standardized Emergency Management System Plan (GOVT-c-12);
- Participation in general mutual-aid agreements and agreements with adjoining jurisdictions for cooperative response to fires, floods, earthquakes, and other disasters (GOVT-c-13);
- Participation in FEMA’s National Flood Insurance Program (GOVT-d-5)
- 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 (HEAL-a-7);
- Sponsor the formation and training of Community Emergency Response Teams (CERT) through partnerships with local businesses (GOVT-c-3, ECON-j-5, HWNG-k-6);
- Incorporate FEMA guidelines and suggested activities into local government plans and procedures for managing flood hazards (LAND-c-2);
- Increase efforts to reduce landslides and erosion in existing and future development through continuing education of design professionals on mitigation strategies (HSNG—i-2, ECON-g-2);
- Conduct an inventory of existing or suspected soft-story residential, commercial and industrial structures (HSNG-c-4, ECON-b-4);
- Continue to repair and make structural improvements to storm drains, pipelines, and/or channels to enable them to perform to their design capacity in handling water flows as part of regular maintenance activities (INFR—d-6, INFR-d-7)

Incorporation into Existing Planning Mechanisms

The City has several planning mechanisms which include

- ◆ General plan safety element
- ◆ Capital Improvements Plan
- ◆ Pacifica Climate Action Plan

The City has a Safety Element in its General Plan that includes a discussion of fire, earthquake, flooding, and landslide hazards. This Local Hazard Mitigation Plan will be adopted as an implementation appendix to the Safety Element once the general plan update project is completed. 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 by the Disaster Mitigation Act of 2000, the City of Pacifica 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 Planning Department and the Emergency Preparedness Coordinator will ensure that monitoring of this Annex will occur. The plan will be monitored on an on-going basis. However, the major disasters affecting the City of Pacifica, 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 of Pacifica 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 Emergency Preparedness Coordinator 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 of Pacifica 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.

Mitigation Plan Point of Contact

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Alternate Point of Contact

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Title: Police Captain

Mailing Address: 2075 Coast Highway, Pacifica, CA 94044

Telephone: 650-738-7320

Email: realyvasquezf@pacificapolice.org

Exhibit A - Jurisdiction Boundary Map

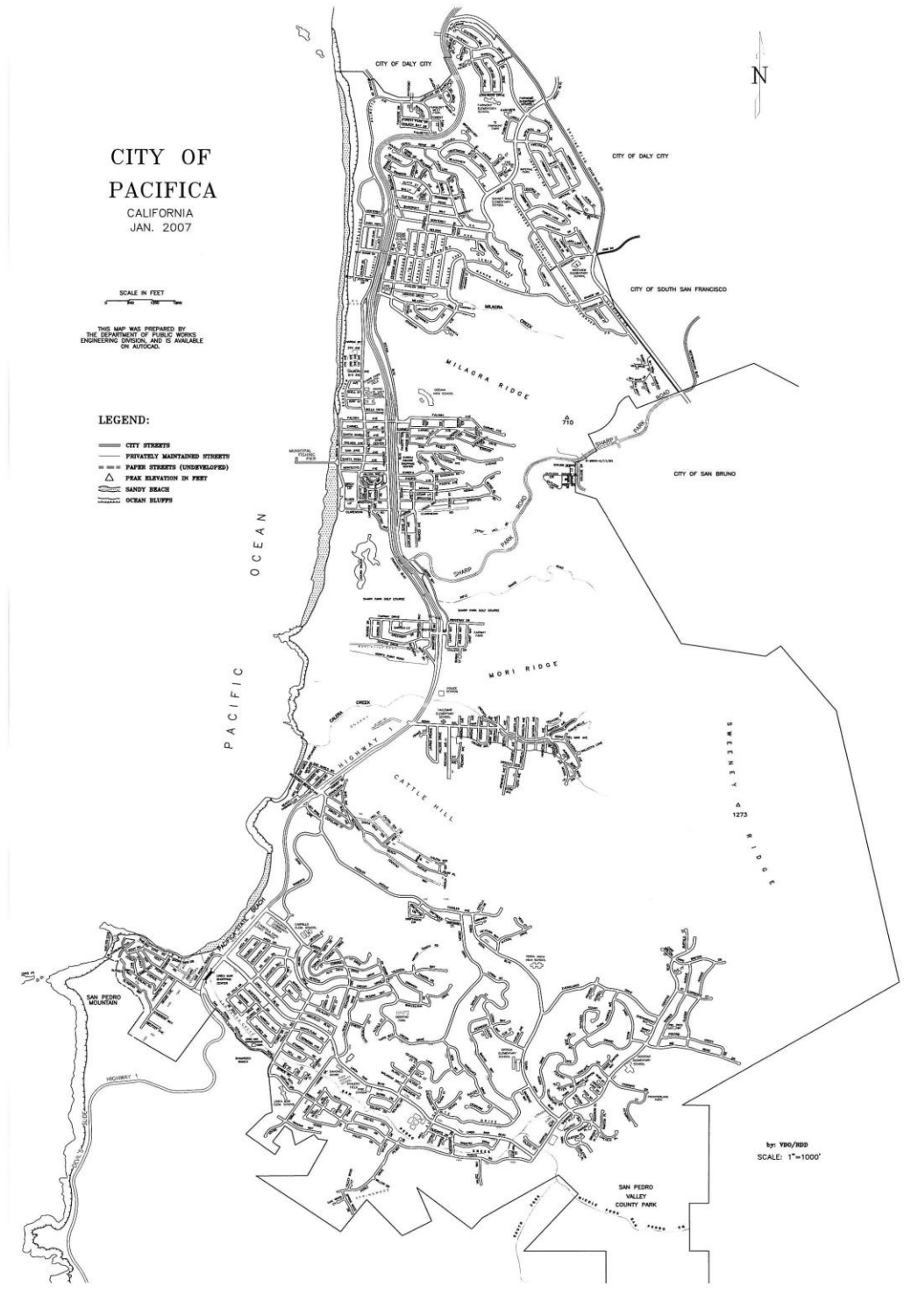


Exhibit B - Public Meeting Announcements

Pacifica Participates in Local Hazard Mitigation Process

Major natural disasters will strike the Bay Area again during the next several years. Lives will be lost, property damage will occur, and our economy will suffer. The City of Pacifica along with other Bay Area local governments is working to mitigate those losses through the multi-jurisdictional Local Hazard Mitigation Plan (MJ-LHMP) for the Bay Area.

ABAG, the Association of Bay Area Governments, is the regional planning and services agency for the nine-county San Francisco Bay Area. The federal Disaster Mitigation Act of 2000 (DMA 2000) requires that cities, counties, and special districts have a Local Hazard Mitigation Plan to be eligible to receive FEMA hazard mitigation funds. To assist local governments in meeting this requirement, ABAG is the lead agency on the multi-jurisdictional Local Hazard Mitigation Plan (MJ-LHMP) for the San Francisco Bay Area. Cities and counties can adopt and use all or part of this multi-jurisdictional plan in lieu of preparing all or part of a Local Hazard Mitigation Plan themselves. They need to have participated in the development of the multi-jurisdictional plan to adopt it.

The City of Pacifica's Local Hazard Mitigation Plan 2005 is currently in the update process. FEMA requires that each participating jurisdiction update their plans once every five years in order to be eligible for emergency reimbursement funds.

The Local Hazard Mitigation Plan 2010, which is due September 30, 2009, is available for public view on the City of Pacifica's website (<http://www.cityofpacifica.org/>). Anyone who would like to comment on the plan should submit their written comments to Captain Fernando Realyvasquez of the Pacifica Police Department, 2075 Coast Highway, Pacifica, CA 94044, by September 16, 2009, or email him at realyvasquezf@pacificapolice.org. Citizens who wish to do so can also attend the Emergency Preparedness & Safety Commission meeting on September 16, 2009 at 6:00 PM at the Pacifica Police Department, to comment on the plan.

Exhibit C - Website Page where info is displayed

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Exhibit D

Newspaper article placed in paper for public information on update

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Pacifica participates in local hazard mitigation process

Pacifica Tribune
Posted: 09/10/2009 01:00:00 AM PDT

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