



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

**MONTARA WATER AND SANITARY DISTRICT**

**8888 Cabrillo Highway  
Montara, California 94037**



## Table of Contents

Introduction.....	1
The Regional Planning Process.....	1
The Local Planning Process.....	1
Review and Incorporation of Existing Information.....	2
Process for Updating Plan Sections.....	2
Public Meetings.....	2
Hazards Assessment.....	2
Past Occurrences Of Disasters (Natural and Human-induced).....	3
Risk Assessment.....	4
MWSD Critical Facility Issues.....	4
Urban Land Exposure.....	5
Infrastructure Exposure.....	6
Exposure of Locally-Owned Buildings, Plus Critical Healthcare Facilities and Schools.....	7
Repetitive Loss Properties.....	8
Other risks.....	8
National Flood Insurance Program.....	8
Mitigation Goals and Objectives.....	8
Mitigation Activities and Priorities.....	8
Existing Mitigation Activities.....	8
Future Mitigation Actions and Priorities.....	8
On-Going Mitigation Strategy Programs.....	10
Incorporation into Existing Planning Mechanisms.....	14
Plan Update Process.....	15
Mitigation Plan Point of Contact.....	17
Exhibit A – Jurisdiction Boundary Map.....	18
Exhibit B - Public Meeting Announcement.....	19
Exhibit C – MWSD Mitigation Strategies.....	21



## **Introduction**

The Montara Water and Sanitary District provides water, sanitary sewer, and solid waste disposal services to the coastal communities of Montara, Moss Beach, and adjacent areas located north of Half Moon Bay and south of Pacifica, in San Mateo County, California. In 2003, the then Montara Sanitary District (MSD) purchased this water system from the California-American Water Company (Cal-Am). Shortly after MSD was re-named Montara Water and Sanitary District (MWSD or District). The District owns and operates water storage, treatment, and distribution facilities that provide domestic water to approximately 1,650 domestic water connections, a population of nearly 5,000 people, most of which (approximately 90%) are single family and multi-family residential connections. The District's total annual operating expenses for fiscal year 2010 to 2011 are \$2.3 million for sewer and \$1.8 million for water. The system currently includes a surface water source, a water treatment plant, nine groundwater wells, three potable water storage tanks, and over 150,000 feet of distribution pipelines. A map of the District's service area is provided in Exhibit A. MWSD has experienced disasters including the 1989 Loma Prieta Earthquake and, more recently, localized flooding.

## **The Regional Planning Process**

Montara Water and Sanitary District has participated in various ABAG workshops, conferences, and meetings, including:

- One (1) Sewer Smart Workshop (October 9, 2008); and
- One (1) Local Hazard Mitigation Plan Workshop (May 12, 2009) to review draft priorities and reach consensus on priorities for mitigation.

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, MWSD 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 MWSD staff met to identify and prioritize appropriate mitigation strategies. Personnel involved in these meetings included General Manager, District Superintendent, operations staff, and the District Engineer. At the meeting, items identified included general priorities, mitigation strategies, prioritization of said strategies, appropriate departments for implementation of strategies, and review of preliminary budgets and potential funding sources for strategies designated as “High” priority for District-owned-and-operated facilities. Typically, each person at the meeting was responsible for communicating existing efforts and thoughts on appropriate future action in their area of expertise. For example, the General Manager and District Superintendent were most familiar with the needed mitigation actions for key critical facilities.



## ***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, as well as the assessments of the age and construction type of structures owned by the District and described on pages 3 through 5. These meetings also discussed the Water System Master Plan (WSMP) and Capital Improvements Plan (CIP) already in place at the District, as well how these plans could be best integrated.

## ***Process for Updating Plan Sections***

The District did not participate in the 2005 multi-jurisdictional Local Hazard Mitigation Plan. Thus, none of the sections in this Annex are updates of a prior Annex.

## ***Public Meetings***

MWSD has provided two opportunities for the public to provide public comments on the DRAFT mitigation strategies:

1. A Board of Director's public meeting on September 3, 2009 at the District's main office, which was advertised on MWSD's website.
2. The draft mitigation strategies were also published for public viewing on the MWSD's website at <http://mwsd.montara.org/>.

No public comments were received from either the meeting or the internet posting. Copies of the internet posting are included as Exhibit B to the Montara Water and Sanitary District 2010 Annex. The MWSD Board of Director's will adopt the plan in a public meeting via an official Resolution upon pre-approval by FEMA.

The District is committed to improving public participation when this plan is updated in five years. To improve this process, the District will consider writing letters to the editor of local newspapers in its service area to promote wider public knowledge of the process or working with local business and advocacy groups to conduct joint 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 District owns 27 critical facilities, including nine groundwater wells, twelve water pump stations, a water treatment plant, three water storage tanks, an office, and a yard, all within the communities of Montara and Moss Beach, California.

**Earthquake:** One of the 27 facilities, the California Street Pump Station, is in the Alquist-Priolo Fault Rupture Study Zone for the Northern San Gregorio fault. (The remaining facilities, though not in the Study Zone, are subject to shaking if that fault ruptures.) Thus, all 27 are in the next to highest tier of



earthquake shaking potential. Thirteen of these facilities are in areas of low or very low liquefaction susceptibility mapped by the U.S. Geological Survey, while five (all three Airport Wells and the Date Heart and California Street Pump Stations) are in areas mapped with moderate liquefaction susceptibility. (None of the facilities are in areas that have been evaluated for liquefaction susceptibility by the California Geological Survey at this time.) While the areas in which these facilities are located also have not been evaluated for earthquake-generated landslides by the California Geological Survey, this hazard should not be a significant concern because all are on flat land or in areas with only a few landslides.

**Tsunami:** The December 2009 version of the CalEMA tsunami evacuation planning maps indicates that the California Street and Airport pump stations are in this area.

**Flooding:** Three facilities (the Date Heart, California Street, and Kanoff sewage pumping facilities) are in the 100-year flood plain as mapped by FEMA, with the Date Heart facility also subject to high velocity wave action.

**Landsliding:** None of these facilities are in an area of significant existing landslides, and have been mapped by USGS as being on flat land or few landslides.

**Wildfire:** Two of these facilities are in an area subject to high wildfire threat (the Alta Vista Water Treatment Plant and the Alta Vista Water Storage Tank) and all but the North and South Airport Wells and the Airport Pump Station are in a wildfire urban interface threat area.

**Sea Level Rise:** None of these facilities are in an area subject to either 16 or 55 inches of sea level rise.

**Dam Failure Inundation:** None of these facilities are in an area subject to dam inundation.

**Delta Levee Failures:** The District facilities are not in an area protected by Delta levees.

**Drought:** The operations of District are not significantly impacted by drought conditions.

**Hazards Conclusion:** The District 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, to a lesser extent, tsunamis, pose a significant risk for potential loss. This conclusion was based on the hazard exposure information for the District's facilities, as well as past occurrences of disasters impacting the District's service area described in the following section. However, the probability information for tsunami inundation does not yet exist, and the facility in question has no people working at it.

## **Past Occurrences Of Disasters (Natural and Human-induced)**

San Mateo County has experienced a number of different disasters over the last 50 years, including numerous earthquakes, floods, droughts, wildfires, energy shortages, civil disturbances, landslides, and severe storms. MWSD has most recently experienced localized flooding which impacted the Montara Pump Station, a sewerage pump station, owned and operated by the Sewer Authority Mid-Coastside. Although this critical facility is not owned by the District flooding of the sewerage station can cause severe impacts to other MWSD critical facilities.



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

## **Risk Assessment**

### ***MWSD Critical Facility Issues***

The buildings and facilities of the District should be evaluated for performance during an earthquake. Most District facilities were constructed over 20 years ago.

Since the groundwater wells and pump stations are largely underground, the risk to fire is minimal. The office building is of fire-resistant construction, as are other above-ground facilities.

Flooding could be a concern if the Montara Pump Station is impacted and causes issues at other MWSD critical facilities.

While two of the Pump Stations are shown on an area of potential tsunami inundation, because this is a conservative map created for evacuation purposes, the principal impact on risk is to employees. Since the pump facilities have no permanent workers, there is no need for an evacuation plan.



### **Urban Land Exposure**

The District examined the hazard exposure of its 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.

The amount of urban land of the San Mateo County unincorporated area is shown to have decreased in the last five years, likely due to better and more accurate mapping capabilities. However, the hazard exposure of the District is increasing over time. The following table describes the exposure of urban land within the unincorporated San Mateo County to the various hazards.

<b>Exposure (acres of urban land)</b>			
<b>Hazard</b>	<b>2005</b>	<b>2010</b>	<b>Change</b>
<i>Total Acres of Urban Land<sup>1</sup></i>	31,277	31,215	-62
Earthquake Faulting (within CGS zone)	1,380	1,404	24
Earthquake Shaking (within highest two shaking categories)	28,410	38,400	9,990
Earthquake-Induced Landslides (within CGS study zone) <sup>2</sup>	0	0	0
Liquefaction (within moderate, high, or very high liquefaction susceptibility)	6,089	6,197	108
Flooding (within 100 year floodplain)	1,084	1,108	24
Flooding (within 500 year floodplain)	238	243	5
Landslides (within areas of existing landslides)	5,932	5,999	67
Wildfire (subject to high, very high, or extreme wildfire threat)	13,078	13,989	911
Wildland-Urban Interface Fire Threat	10,838	11,242	404
Dam Inundation (within inundation zone)	811	832	21
Sea Level Rise <sup>3</sup>	not applicable		
Tsunamis <sup>4</sup> (within inundation area)	not applicable		
Drought <sup>5</sup>	31,277	31,215	-62

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<sup>1</sup> This decrease is likely due to better and more accurate mapping.

<sup>2</sup> The California Geological Survey (CGS) has mapped only a portion of the Bay Area. The values not in or within CGS study zones reflect only those areas for which mapping of seismic hazard study zones is complete.

<sup>3</sup> The sea level rise map is not a hazard map. It is not appropriate to assess infrastructure exposure to sea level rise.

<sup>4</sup> Tsunami evacuation planning maps were not available inside the San Francisco Bay in 2005. This map became available in December 2009. Acres of exposed land are 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.

<sup>5</sup> The entire San Mateo County unincorporated area is subject to drought.



### **Infrastructure Exposure**

The District 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 1,075 miles of roadway in the unincorporated San Mateo County, the following are exposed to the various hazards analyzed.

Exposure (miles of infrastructure)						
Hazard	Roadway		Transit		Rail	
	2005	2010	2005	2010	2005	2010
<i>Total Miles of Infrastructure</i>	1,075	918	3	4	4	4
Earthquake Shaking (within highest two shaking categories)	899	748	3	4	3	3
Liquefaction Susceptibility (within moderate, high, or very high liquefaction susceptibility)	174	185	1	2	3	3
Liquefaction Hazard (within CGS study zone) <sup>1</sup>	0	0	0	0	0	0
Earthquake-Induced Landslides (within CGS study zone) <sup>1</sup>	0	0	0	0	0	0
Earthquake Faulting (within CGS zone)	59	46	0	0	0	0
Flooding (within 100 year floodplain)	38	25	0	0	0	0
Flooding (within 500 year floodplain)	11	8	1	1	0	0
Landslides (within areas of existing landslides)	231	226	0	0	0	0
Wildfires (subject to high, very high, or extreme wildfire threat)	534	414	0	0	0	0
Wildland-Urban Interface Fire Threat	314	309	2	2	1	2
Dam Inundation (within inundation zone)	16	14	0	0	0	0
Sea Level Rise <sup>2</sup>	not applicable					
Tsunamis <sup>3</sup>	not applicable					
Drought <sup>4</sup>	not applicable					

<sup>1</sup> The California Geological Survey (CGS) has mapped only a portion of the Bay Area. The values not in or within CGS study zones reflect only those areas for which mapping of seismic hazard study zones is complete.

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

<sup>3</sup> 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.

<sup>4</sup> Drought is not a hazard for roadways.



### **Exposure of Locally-Owned Buildings, Plus Critical Healthcare Facilities and Schools**

Finally, the District examined the hazard exposure of critical health care facilities and schools located within unincorporated San Mateo County, and the District-owned buildings based on the information on ABAG’s website at <http://quake.abag.ca.gov/mitigation/pickcrit.html>. The District 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.

<b>Exposure (number of facility types)</b>								
<b>Hazard</b>	<b>Hospitals</b>		<b>Schools</b>		<b>Locally-owned critical facilities</b>		<b>Locally-owned bridges and interchanges</b>	
	<b>2005</b>	<b>2010</b>	<b>2005</b>	<b>2010</b>	<b>2005</b>	<b>2010</b>	<b>2005</b>	<b>2010</b>
<i>Total Number of Facilities</i>	1		18		7		95	
Earthquake Shaking (within highest two shaking categories)	1		15		7		88	
Liquefaction Susceptibility (within moderate, high, or very high liquefaction susceptibility)	0		8		1		50	
Liquefaction Hazard (within CGS study zone) <sup>1</sup>	-		-		-		-	
Earthquake-Induced Landslides (within CGS study zone) <sup>1</sup>	-		-		-		-	
Earthquake Faulting (within CGS zone)	0		0		0		4	
Flooding (within 100 year floodplain)	0		0		1		15	
Flooding (within 500 year floodplain)	0		0		0		1	
Landslides (within areas of existing landslides)	0		1		3		14	
Wildfires (subject to high, very high, or extreme wildfire threat)	0		1		4		24	
Wildland-Urban Interface Fire Threat	1		15		5		27	
Dam Inundation	0		0		0		6	
Sea Level Rise (exposed to 16in sea level rise) <sup>2</sup>	-		-		-		-	
Sea Level Rise (exposed to 55in sea level rise) <sup>2</sup>	-		-		-		-	
Tsunamis <sup>3</sup> (within inundation area)	-		-		-		-	
Drought <sup>4</sup>	-	-	-	-	-	-	-	-

<sup>1</sup> CGS Landslide and Liquefaction mapping has been completed only for portions of Alameda, San Francisco, and Santa Clara Counties.

<sup>2</sup> Sea level rise data was not available in 2005

<sup>3</sup> 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.

<sup>4</sup> Drought will not likely affect locally owned facilities directly.



### ***Repetitive Loss Properties***

There is one (1) repetitive loss properties in unincorporated San Mateo County within the 100 year flood plain, based on the information at <http://quake.abag.ca.gov/mitigation/pickflood.html>. It is currently unknown if there are new repetitive loss property is outside the flood plain. It is also unknown whether this property is residential, commercial, institutional, etc.

### ***Other risks***

The District 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 the unincorporated areas of the County.

The District 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 MWSD facilities are not repetitive loss properties for flooding.

### **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 MWSD in designing its mitigation program. Additionally, the District has the specific objective of reducing the number of the District's facilities throughout the MWSD system that are vulnerable to the effects of earthquakes, flooding and landslides.

### **Mitigation Activities and Priorities**

#### ***Existing Mitigation Activities***

The District was not a participant in the 2005 ABAG-led Local Hazard Mitigation Plan. However, the District has been committed to hazard mitigation for many years.

#### ***Future Mitigation Actions and Priorities***

As a participant in the 2010 ABAG multi-jurisdictional planning process, the District's staff helped in the development and review of the comprehensive list of mitigation strategies in the overall multi-jurisdictional plan. However, the decision on specific priorities for the District was made the team identified in the section on the Planning Process, and reviewed by the District's General Manager. The decision on the priority was made based the hazards and risks present in the District service area, as well as the hazards and risks specific to District facilities, and past occurrences of natural disasters. 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

The District's 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.

These draft priorities were submitted to the MWSD Board of Directors. The draft priorities will be provided to the Board of Directors for adoption pending approval of this LHMP by FEMA.

### 1. New Water Storage Tank

- **Strategy:** INFR-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.
- **Problem:** Existing tank is vulnerable to earthquake damage and inadequate for water storage for fire suppression in a major wildfire.
- **Purpose:** To provide additional fire and emergency storage in the event of a disaster
- **Responsible district:** Montara Water and Sanitary District – General Manager
- **Potential funding sources:** Clean Water State Revolving Fund (CWSRF)
- **Time frame:** Next 5 years

### 2. Main Replacement Program

- **Strategy:** INFR-b-4 Install specially-engineered pipelines in areas subject to faulting, liquefaction, earthquake-induced landsliding, or other earthquake hazard.
- **Problem:** Existing pipelines are degrading and vulnerable to earthquake damage.
- **Purpose:** To increase system reliability by replacing degraded pipelines
- **Responsible district:** Montara Water and Sanitary District – General Manager
- **Potential funding sources:** Clean Water State Revolving Fund (CWSRF)
- **Time frame:** Next 5 years

### 3. Main Replacement Program

- **Strategy:** INFR-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.)



- **Problem:** Sewer Authority Mid-Coastside operates a sewerage pump station in Montara. During flooding events, the pump station often experiences sanitary sewer overflows that, in turn, impact MWSD watershed.
- **Purpose:** The most effective mitigation for this flooding hazard and risk is for MWSD to encourage SAM to retrofit this facility.

### ***On-Going Mitigation Strategy Programs***

The District 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 (attached as a digital file). Others are on-going programs that are currently underfunded. It is the District's priority to find additional funding to sustain these on-going programs over time. The specific department in charge of on-going implementation is identified in the attached digital file.

- INFR-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.
- INFR-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.
- INFR-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.
- INFR-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.
- INFR-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.
- INFR-a-19 – Coordinate with other critical infrastructure facilities to establish plans for delivery of water and wastewater treatment chemicals.
- INFR-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).
- INFR-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.



- INFR-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.
- INFR-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.
- INFR-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.
- INFR-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.
- INFR-c-7 – Ensure adequate fire equipment road or fire road access to developed and open space areas.
- INFR-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).
- INFR-d-13 – Ensure that utility systems in new developments are constructed in ways that reduce or eliminate flood damage.
- INFR-d-16 – Work for better cooperation among the patchwork of agencies managing flood control issues.
- INFR-e-1 – Include “areas subject to ground failure” in the list of criteria used for determining a replacement schedule (along with importance, age, type of construction material, size, condition, and maintenance or repair history) for pipelines.
- INFR-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.
- INFR-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 re-occupancy of the buildings. Note - A qualified engineer is a California licensed engineer with relevant experience.
- INFR-g-1 – Provide materials to the public related to planning for power outages.
- INFR-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.



- INFR-g-3 – Provide materials to the public related to coping with reductions in water supply or contamination of that supply BEYOND regulatory notification requirements.
- INFR-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.
- INFR-g-6 – 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.]
- INFR-g-7 – Develop and distribute culturally appropriate materials related to disaster mitigation and preparedness, such as those on the <http://www.preparenow.org> website related to infrastructure issues.
- GOVT-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.
- GOVT-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.
- GOVT-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.
- GOVT-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.
- GOVT-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.
- GOVT-a-13 – 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.
- GOVT-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.
- GOVT-b-3 – Establish a goal for the resumption of local government services that may vary from function to function.
- GOVT-c-1 – Develop a plan for short-term and intermediate-term sheltering of your employees.
- GOVT-c-2 – Encourage your employees to have a family disaster plan.



- GOVT-c-5 – Periodically assess the need for changes in staffing levels, as well as for additional or updated supplies, equipment, technologies, and in-service training classes.
- GOVT-c-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.
- GOVT-c-17 – Monitor weather during times of high fire risk using, for example, weather stations tied into police and fire dispatch centers.
- GOVT-c-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.
- GOVT-c-24 – Develop procedures for the emergency evacuation of areas identified on tsunami evacuation maps as these maps become available.
- GOVT-d-1 – Promote information sharing among overlapping and neighboring local governments, including cities, counties, and special districts, as well as utilities.
- GOVT-d-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.
- GOVT-d-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.
- GOVT-d-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.
- GOVT-d-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.
- ENVI-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.



- ENVI-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.
- ENVI-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.
- ENVI-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 Stream bed Vegetation Management Plan that ensures the efficacy of flood control efforts, mitigates wildfires and maintains the viability of living rivers.
- ENVI-a-6 – Comply with applicable performance standards of any *National Pollutant Discharge Elimination System* municipal storm water permit that seeks to manage increases in storm water run-off flows from new development and redevelopment construction projects.
- ENVI-a-7 – Enforce and/or comply with the grading, erosion, and sedimentation requirements by prohibiting the discharge of concentrated storm water flows by other than approved methods that seek to minimize associated pollution.
- ENVI-a-8 – Explore ways to require that hazardous materials stored in the flood zone be elevated or otherwise protected from flood waters.
- ENVI-a-9 – Enforce and/or comply with the hazardous materials requirements of the State of California Certified Unified Program Agency (CUPA).
- ENVI-a-10 – Provide information on hazardous waste disposal and/or drop off locations.
- ENVI-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.

## **Incorporation into Existing Planning Mechanisms**

MWSD has, and will continue to use, a variety of project-specific mechanisms to ensure that the projects and mitigation strategies identified as existing or having relatively high priorities in this LHMP Annex are implemented.

MWSD is not a land use agency, thus does not have a General Plan. This Annex will be made available to San Mateo County and communities in San Mateo County for their use in General Plan elements, as appropriate.

The information in this Annex, including the goals, objectives, and strategies identified, will be incorporated into the District's Capital Improvement Plan for prioritizing capital improvements of the District's infrastructure. For example, this Annex supports the need for these mitigation projects as



integral to the mission of the District, while the CIP is the funding mechanism for processing the request. The District is also looking at ways to apply for grants for hazard mitigation.

MWSD enforces the requirements of the California Environmental Quality Act (CEQA), which, since 1988, requires mitigation for identified natural hazards. MWSD has used these preexisting 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.

There are no other planning mechanisms available to MWSD that are appropriate to incorporate this plan.

The final strategies and Annex will be adopted in the same resolution adopting the overall LHMP on following Approval Pending Adoption by FEMA.

Ongoing integration of the policies and programs identified in this Local Hazard Mitigation Plan will occur at MWSD under the direction of the General Manager.

## **Plan Update Process**

As required Disaster Mitigation Act of 2000, Montara Water and Sanitary District 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 District management, led by the General Manager, 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 District, legal changes, notices from ABAG as the lead agency in this process, and other triggers will be used. For example, if a civil engineer determines that additional risks exist for facilities not identified as currently being a problem, the priority associated with upgrading those facilities will be re-evaluated. 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 District management, led by the General Manager, 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 District will contact ABAG four years after this plan is approved to ensure that ABAG plans to undertake the plan update process. If so, the County 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 District is committed to public participation. All MWSD Board meetings are open to the public and the public is invited to comment on items on the Board Agenda. The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the County will provide the opportunity for the public to comment on the updates. A public notice will be posted prior to the meeting to announce the comment



period and meeting logistics. The District is committed to improving public participation in the update process over the next five years. To improve this process, MWSD will consider writing letters to the editor of local newspapers in its service area, or working with business and advocacy groups, to promote wider public knowledge of the issues related to disaster mitigation and the planning process.



## **Mitigation Plan Point of Contact**

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### *Alternate*

**Name:** Jeff Page  
**Title:** Superintendent, Montara Water and Sanitary District  
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## Exhibit A – Jurisdiction Boundary Map





## Exhibit B - Public Meeting



### **MONTARA WATER & SANITARY DISTRICT**

Serving the Communities of Montara and Moss Beach  
P.O. Box 370131 Tel: (650) 728-3545  
8888 Cabrillo Highway Fax: (650) 728-8556  
Montara, CA 94037-0131 E-mail: [msd@montara.com](mailto:msd@montara.com)  
Visit Our Web Site: <http://www.mwsd.montara.com>

**NOTICE OF SPECIAL MEETING**  
**(Special Meeting begins at 6:15 p.m.; see Agenda for Special Meeting below)**

# AGENDA

Regular Meeting  
**District Board of Directors**  
8888 Cabrillo Highway  
Montara, California 94037

**September 3, 2009 at 7:30 p.m.**  
**(Regular Meeting)**

**CALL TO ORDER**  
**ROLL CALL**  
**PRESIDENT'S STATEMENT**  
**ORAL COMMENTS** (Items other than those on the agenda)  
**PUBLIC HEARING**  
**CONSENT AGENDA**

1. Approve Minutes for Meeting of August 6, 2009.
2. Approve Financial Statements for August 2009.
3. Approve Warrants for September 1, 2009.
4. SAM Flow Report for July 2009.
5. Monthly Review of Current Investment Portfolio.
6. Connection Permit Applications Received.
7. Monthly Water Production Report for July 2009.

NOTE: In accordance with the Government Code, members of the public may address the Board on specific agenda items when that matter is discussed by the Board. Any other items of interest that is within the subject matter jurisdiction of the District may be addressed during the Oral Comments portion of the meeting. Upon request, this agenda will be made available in appropriate alternative formats to persons with a disability. Request for a disability-related modification or an accommodation in order to participate in the public meeting should be made at (650) 728-3545. Materials related to an item on this Agenda submitted to the Board after distribution of the agenda packet are available in the District Clerk's office during normal business hours. Such documents may also be available on the District's web site ([www.mwsd.montara.org](http://www.mwsd.montara.org)) subject to staff's ability to post the documents before the meeting.

## Announcement



8. Rain Report.
9. Solar Energy Report.

## **OLD BUSINESS**

1. Review and Possible Action Concerning Mid-coast Groundwater Study Phase 3.

## **NEW BUSINESS**

1. Review and Possible Action Concerning Multi-Jurisdictional Hazard Mitigation Plan.
2. Review and Possible Action Concerning Sewer Service Charge Adjustment for 600 Sierra Street.
3. Review and Possible Action Concerning Association of California Water Agencies Region 5 Election for the 2010-2011 Term.
4. Review and Possible Action Concerning Association of California Water Agencies Committee Appointment Nominees.
5. Review and Possible Action Concerning Cancellation of Next Regular Scheduled Meeting September 17, 2009.

## **REPORTS**

1. Sewer Authority Mid-Coastside Meetings (Harvey)
2. MidCoast Community Council Meeting (Slater-Carter)
3. ACWA Board of Directors Report (Ptacek)
4. CSDA Report (Slater-Carter)
5. Integrated Regional Water Management Plan (Ptacek)
6. Attorney's Report (Schricker)
7. Directors' Reports
8. General Manager's Report (Heldmaier)

## **FUTURE AGENDAS**

# **AGENDA – SPECIAL MEETING** **(6:15 p.m.)**

## **CALL TO ORDER**

## **ROLL CALL**

## **ORAL COMMENTS** (Items other than those on the agenda)

NOTE: In accordance with the Government Code, members of the public may address the Board on specific agenda items when that matter is discussed by the Board. Any other items of interest that is within the subject matter jurisdiction of the District may be addressed during the Oral Comments portion of the meeting. Upon request, this agenda will be made available in appropriate alternative formats to persons with a disability. Request for a disability-related modification or an accommodation in order to participate in the public meeting should be made at (650) 728-3545. Materials related to an item on this Agenda submitted to the Board after distribution of the agenda packet are available in the District Clerk's office during normal business hours. Such documents may also be available on the District's web site ([www.mwsd.montara.org](http://www.mwsd.montara.org)) subject to staff's ability to post the documents before the meeting. 2



## **Exhibit C – MWSD Mitigation Strategies**

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