



TOWN OF HILLSBOROUGH

1600 FLORIBUNDA AVENUE

HILLSBOROUGH

CALIFORNIA

94010-6418

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

Town of Hillsborough



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Introduction

The Town of Hillsborough is a moderately-sized city in San Mateo County, California. The Town has a population of approximately 10,825 people, based on the 2000 census¹. The 2009/2010 Budget is \$39,207,214. The Town employs 113 people. While the Town provides local police services, the fire services are supplied by a separate fire district. A map of the Town boundary is included in **Exhibit A**.

The Regional Planning Process

The Town of Hillsborough participated in various Association of Bay Area Governments (ABAG) workshops, conference, and meetings, including the following:

- Water Providers Mitigation Workshop – March 25, 2009
- San Mateo County Local Hazard Mitigation Plan Update Workshop – May 12, 2009
- SewerSmart Summit October 9, 2008

For more information on these meetings and for rosters of attendees, please see **Appendix A** and **H** in the ABAG Multi-Jurisdictional Local Hazard Mitigation Plan 2010 (MJ-LHMP). In addition, the Town of Hillsborough 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 process of preparing this plan was familiar to the Town of Hillsborough. The Town has a Safety Element to its General Plan last updated in 2005 that includes a discussion of fire, earthquake, flooding, and landslide hazards. The Town of Hillsborough is mostly built-out and the General Plan remains accurate. In addition, the Town routinely enforces the requirements of the California Environmental Quality Act (CEQA) which, since 1988, have required mitigation for identified natural hazards. The Town’s effort has focused on building on these pre-existing programs and identifying gaps that may lead to disaster vulnerabilities in order to work on ways to address these risks through mitigation.

Key City staff met to identify and prioritize mitigation strategies appropriate for the City. Staff involved included the Associate Planner, Building Official, Public Works Director, Emergency Services Coordinator, and Fire Marshal. These draft priorities were submitted to the City Council for review and public comment at their September 14, 2009 Council Meeting. The final strategies (as shown in the attached Table) will become part of the General Plan Implementation Strategy.

No formal meeting agendas, minutes, or sign-in sheet were prepared during this part of the process. City staff met in a collaborative approach to identify and review the various elements of the process.

¹ For complete Census information on this city, see <http://www.bayareacensus.ca.gov/>.

Process for Updating Plan Sections

City staff began the update process by reviewing the 2005 Plan. Staff then researched City records in order to provide new information on hazards and susceptibility within the City. The updates include new data regarding recent occurrences of natural hazards as well as updated information on risk assessment with new data provided by ABAG.

Incorporating Other Plans into the Annex

Existing plans, studies, reports, and technical information	Method of incorporation into the City of Burlingame annex
General Plan, Health and Safety Element	Hazards Assessment Mitigation Strategies
Capital Improvement Plan	Mitigation Strategies
Flood Plain Improvement Plan	Hazards Assessment Mitigation Strategies
Emergency Response Plan	Hazards Assessment Mitigation Strategies

Public Meetings

The public will also be afforded an opportunity to comment on the priorities through the Town's website prior to adoption. The priorities will also be presented to the City Council for public comment and review on December 13, 2010. Public meeting announcements are included in **Exhibit B**.

In addition specific areas of concern were discussed at subsequent meetings including the wildfire mitigation recommendations for the open space areas that drew concern from adjacent homeowners. Another presentation from the San Francisco Public Utilities Commission regarding the upgrades of Lower Crystal Springs Dam drew a number of comments relating to the possible flooding that could affect Hillsborough in a dam failure.

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 are shown on the ABAG website at <http://quake.abag.ca.gov/mitigation/>.

The Town of Hillsborough has reviewed that hazards identified and ranked the hazards based on past disasters and expected future impacts. Specific information is provided in the following section regarding the impacts on each of these on the Town except for fault rupture, earthquake-induced landslides, tsunamis, and drought.

- ◆ Hillsborough is a very high seismic area, with the San Andreas Fault running adjacent its western boundary and numerous other active faults close enough to affect the Town.
- ◆ Hillsborough is in a very high wildland/urban interface fire hazard area. Fire hazards are exacerbated by steep slopes and canyons with high vegetative fuel loads.
- ◆ The California Geological Survey has not completed its mapping of earthquake-induced landslide susceptibility. Thus, no maps of this hazard exist at this time for risk assessment. Mitigation strategy LAND-a-5 notes that the Town is supportive of CGS in its efforts to complete this mapping. The Town has experienced minor landslides, most recently on Woodridge Road above Crystal Springs Road.
- ◆ Tsunamis do not impact Hillsborough due to its location.
- ◆ Drought, though a potential problem in Hillsborough, is not fully assessed. The Town will be working with ABAG and local water districts on this issue.

While the Town has undertaken a number of general hazard mapping activities since the first Safety Element was prepared by the Town, 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 Occurrence of Disasters

The Town of Hillsborough has experienced a number of different disasters over the last 50 years, including:

- ◆ Major storms in 2006, 2005, 1998, 1997, 1995, 1982, and 1983
- ◆ Swine Flu in 2009
- ◆ Loma Prieta Earthquake in 1989
- ◆ Mediterranean Fruit Fly Infestation in 1981
- ◆ Gasoline shortages in the 1970's.
- ◆ Further information on disasters declared in San Mateo County is at <http://quake.abag.ca.gov/mitigation/ThePlan-D-Version-August10.pdf>.

In addition to the declared disasters noted in Appendix D, locally significant incidents that have also impacted the Town of Hillsborough, include:

10/17/1989:	Loma Prieta Earthquake	
10/28-29/1990:	Presidential Visit – George H. Bush	
09/11/2001:	Terrorist attack World Trade Center resulting in the closure of San Francisco Airport. Coordination of road closure in and out of the airport property with neighboring Law Enforcement and assist with relocation of “stranded” passenger who were driven to the hotels in Burlingame	
11/07-8/2002:	Winter storms	
12/16/2002:	Winter storm	
06/07/2003:	Presidential visit – George W. Bush	EOC Activation
01/01/2004:	Winter Storm	
12/30-31/2005	Winter Storms	
02/27/2006:	Winter Storms	EOC Activation
01/04/2008:	Winter Storms	EOC Activation
01/30/2008:	Presidential visit – George W. Bush	EOC Activation

Risk Assessment

Urban Land Exposure

The Town examined the hazard exposure of City urban land based on the 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. Of the 3,758 urban acres in the Town,

- ◆ 7 acres are in the 100-year flood plain;
- ◆ 407 acres are subject to dam inundation, mostly the area below Lower Crystal Springs Dam (City of San Francisco watershed); it is 140 feet high with a base width of 40 feet which creates Lower Crystal Springs Reservoir with a capacity of 57,910 acre feet.
- ◆ 44 acres are in areas of existing landslides;
- ◆ 173 acres are in areas of moderate, high, or very high liquefaction susceptibility;
- ◆ 2,731 acres are in the highest two categories of shaking potential, in large part because the San Andreas fault runs near the western portion of the Town;
- ◆ 1,691 acres are subject to high, very high, or extreme wildfire threat (because of the urban nature of the Town), but 3,548 acres are in wildland-urban interface threat areas.

Infrastructure Exposure

The Town also examined the hazard exposure of infrastructure based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. Of the 88 miles of roadway in the Town, approximately 23 miles are State or County Highways, and 65 miles are local road. The following are exposed to the various hazards analyzed. The Town has no miles of fixed transit or rail within its limits.

- ◆ No miles of roadway are in the 100-year or 500-year flood plain;
- ◆ 10 miles of roadway are in an area subject to dam inundation;
- ◆ 1 mile of roadway is in areas of existing landslides;
- ◆ 4 miles of roadway are in areas of moderate, high, or very high liquefaction susceptibility;
- ◆ 88 miles of roadway are in the highest two categories of shaking potential;
- ◆ 3 miles of roadway are subject to high, very high, or extreme wildfire threat; 83 miles of roads are in wildland-urban interface threat areas.

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

Finally, the Town examined the hazard exposure of critical health care facilities, schools, and town-owned buildings based on the information on ABAG's website at

<http://quake.abag.ca.gov/mitigation/pickcrit2010.html>. Of the critical facilities in the Town,

- ◆ No critical health care facilities, schools, or city-owned facilities are in either the 100-year flood plain or in other flood-prone areas;
- ◆ 3 city-owned facilities, no critical health care facilities, and 2 schools are in an area subject to dam inundation;

- ◆ 29 city-owned facilities, no critical health care facilities, and 4 schools are in areas of existing landslides;
- ◆ No critical health care facility, 3 city-owned facilities, and no schools are in areas of moderate, high, or very high liquefaction susceptibility;
- ◆ 6 schools and 28 of the 37 city-owned critical facilities are in the highest two categories of shaking potential;
- ◆ 5 schools and 36 city-owned critical facilities are in wildland-urban interface threat areas.

Repetitive Loss Properties

In spite of the areas of the Town located in flood-prone areas, no properties are repetitive loss properties in the City based on the information at <http://quake.abag.ca.gov/mitigation/floodloss.html>.

Other Risks

As the impacts of these hazards are not fully developed, Hillsborough plans to work with ABAG in developing this information. The Town has reviewed the hazards identified and ranked the hazards based on past disasters and expected future impacts. The conclusion is that earthquakes (particularly shaking), wildfires, and dam inundation are more important than flooding, liquefaction, tsunamis and drought.

More specifically, the Town plans to work with ABAG during 2010 to improve the risk assessment information being compiled by ABAG by providing information on wildland-urban interface threat areas located in the Town.

National Flood Insurance Program

- a. The Town of Hillsborough adopted a Floodplain management ordinance in 1999. Since that adoption, the Town has improved its program with a GIS mapping system and a community development soft package that tracks and help manage properties in the flood zone. The Town continues to participate and attend meeting offered pertaining to the flood hazard areas.
- b. Our available records indicated the Town has been involved in the program prior to 1999.
- c. The Building Official has been designated as the Flood Plain manager because he or she is directly related to new development and redevelopment of projects within the flood zone. The building department has also developed a system to identify, manage, and track all projects subject to the NFIP requirements.
- d. The Town participates in CRS programs and attends local classes but is not a member since there are only two properties that are in the X zone and two properties in the special hazard zone. Even though the Town is not a member, it has developed a program to meet the same standards.

- e. The Town uses several tools to regulate and manage the flood hazard area within the Town.
- GIS mapping.
 - Elevation and verification are required on all projects.
 - Elevation certification are required on all properties that abut the flood hazard area.
 - The FEMA map elevations have been input into our community development software so that all parcels within the flood hazard area are red flag during the development and permitting process.
 - The permit card has been modified to include a checklist to identify and regulate construction that may be subject to the NFIP standards.
 - The adopted 2010 California Building Code and California Residential code have included sections that set standards for construction and development in the flood hazard area.
 - The Town has also adopted appendix G in the Building Code, which includes additional regulations for Flood-Resistant Construction.
- f. The Town has had very few hurdles to overcome implementing the program and the flood resistant construction standards. The Town makes it extra effort to inform and educate projects early that may be subject to special conditions because they are high hazard area.
- g. The Town plans to continue its compliance with both the NFIP and CRS programs with continued education and participation in classes, meetings, membership, and available programs.

Mitigation Goals and Objectives

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

Additional, the Town has the specific objective of reducing the number of public and private buildings within the Town that are vulnerable to the effects of earthquakes. [or increase the number of public/private buildings protected from flooding, wildfire, etc.]

Mitigation Activities and Priorities

Evaluation of Progress from 2005 Plan

This is the Town's first time participating in the ABAG LHMP, and as such did not identify mitigation goals in 2005. The Town has worked to improve the resiliency of the Town from natural disasters however, and this a list of the most important mitigation actions the Town has completed to date.

- INFR-c-2 Several capital improvement projects improved pumping capabilities in zones adjacent to open space areas.
- INFR-c-6 Development of high fire hazard areas. Identified high fire hazard areas, adopted International Wildland Urban Interface code. Adopted maps identifying high fire hazard areas for code implementation.
- HSNG-k-10 Train homeowners to locate and shut off gas valves. Implemented Hillsborough Neighborhood Network system to enhance CERT training and train their neighborhood groups in controlling gas leaks.

Future Mitigation Actions and Priorities

As a participant in the ABAG multi-jurisdictional planning process, Town of Hillsborough staff helped in the development and review of the comprehensive list of mitigation strategies in the overall multi-jurisdictional plan. The list was discussed with the Associate Planner, Building Official, Public Works Director, Emergency Services Coordinator, and Fire Marshal at meetings held in 2009. These criteria include being technically and administratively feasible, politically acceptable, socially appropriate, legal, economically sound, and not harmful to the environment or our heritage.

Over time, we are committed to developing better hazard and risk information to use in making those trade-offs. We are not trying to create a disaster-proof region, but a disaster-resistant one. In addition, several of the strategies are existing Town programs.

The highest priority for future mitigation actions are the water system (INFR B-4 & C-1) to insure a reliable water system for fire control, Defensible Space Vegetation Program (INFR C-3) for wildfire control and Town Hall Complex projects (GOV A-1).

These draft priorities were submitted to the City Council for public comment and review on September 14, 2009. The public was also afforded an opportunity to comment on the priorities that were posted on the Town's website. Once approved by FEMA the final strategies (as shown in the attached Table) will become part of the General Plan Implementation Strategy.

In the Town of Hillsborough, many of the mitigation strategies are existing programs already a part of the planning and review process, building and fire code enforcement, and development of the City's General Plan. Any new activities identified as part of this Annex will be incorporated into these existing mechanisms. Other activities will require funds that have not been identified. The City will be working to identify potential funding sources, including capital improvement budgets, bond issues, and federal or state grants.

- ◆ The Town evaluated the condition of its water tanks in the early 1990's and has retrofitted or rebuilt most of its 18 water tanks, and has designed redundancy into the water system to allow water service if a tank failure occurs. The Town needs

- ◆ The Town has identified wildfire threat problems areas in its open spaces that require improvements in its Defensible Space Vegetation Program – Public Works project.
- ◆ Funding is needed to retrofit the portion of the Town Hall facility housing the Police and Finance Departments (built in 1920) – Public Works project.

On-Going Mitigation Strategy Programs

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

A few of examples of our mitigation activities are:

- GOVT-b-1 Process for pre-event planning and post-event recovery is included in our Emergency Operations Plan (EOP) and is part of our ongoing Training and Exercise Plan (TEP).
- GOVT-c-13 Agreements with adjoining jurisdictions for cooperative response. Includes a co-located EOC and joint staffing of positions.
- GOVT-c-14 Alert and Warning systems. Purchased a reverse 911 system as well as an internet alerting system.
- HSNB-a-3 Short term sheltering. Agreements with local school district and ARC.
- HSNB-g-1 Wildland Urban Interface mitigation and education. Existing program.

Incorporation into Existing Planning Mechanisms

The Town has several planning mechanisms which include:

- ◆ General plan safety element
- ◆ Capital Improvements Plan

The Town has a Safety Element in its General Plan that includes a discussion of fire, earthquake, flooding, and landslide hazards. This plan was adopted as an implementation appendix to the Safety Element. In addition, the Town enforces the requirements of the California Environmental Quality Act (CEQA), which, since 1988, requires mitigation for identified natural hazards. The Town has used these pre-existing programs as a basis for identifying gaps that may lead to disaster vulnerabilities in order to work on ways to address these risks through mitigation.

The Town has a capital improvement plan that includes the funding for many of the identified priorities. Due to limited funding many of the priorities have an extended timeline for completion. Availability of grant funding may improve the timeline.

The Plan Maintenance and Update Process

The Town’s Public Works, Building and Planning Departments in cooperation with the Town’s Emergency Services 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 our community, 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 Town

department heads at least once a year in April. At that meeting, the department heads will focus on *evaluating* the Annex in light of technological and political changes during the past year or other significant events. This group will be responsible for determining if the plan should be updated.

The Town of Hillsborough 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 Services 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 Town again plans to participate in the multi-jurisdictional plan. If ABAG is unwilling or unable to act as the lead agency in the multi-jurisdictional effort, other agencies will be contacted, including the County's Office of Emergency Services. Counties should then work together to identify another regional forum for developing a multi-jurisdictional plan.

The *public* will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the Town 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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Mailing Address: 1600 Floribunda Ave., Hillsborough, CA 94010
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Alternate Point of Contact

Name: John Mullins
Title: Building Official
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Telephone: 650-375-7487
Email: jmullins@hillsborough.net

Exhibit A - Jurisdiction Boundary Map

Hillsborough Boundary Map

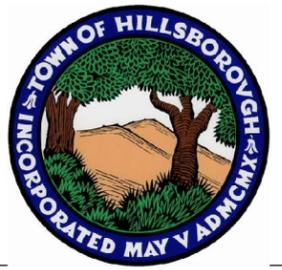


Exhibit B - Public Meeting Announcements

Agenda – Hillsborough City Council
Monday, September 14, 2009
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VII. PUBLIC HEARING:

10. DISCUSSION OF THE LOCAL HAZARD MITIGATION PLAN

Hillsborough News Updates

2010 Local Hazard Mitigation Plan

The public is afforded an opportunity to comment on the priorities through the Town's website prior to adoption.

Please contact Bill Reilly at (650) 558-7601 for any questions.

([View PDF](#))

www.hillsborough.net

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October 11, 2010
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14. CRYSTAL SPRINGS LOWER DAM IMPROVEMENT PROJECT UPDATE

City Manager Anthony Constantouros reported that a meeting was held on Tuesday, October 5, 2010, regarding the Crystal Springs Lower Dam Improvement Project and that Mayor Krolik, Councilmember Fannon, Bay Area Water Supply and Conservation Agency (BAWSCA) General Manager Art Jensen, Hillsborough resident and Hillsborough Financial Advisory Committee Member Joshua Cooperman, City Engineer Cyrus Kianpour, a large contingent including Assistant General Manager Steve Richie from the San Francisco Public Utilities Commission (SFPUC), and Mark Herschman from Assemblymember Jerry Hill's office were in attendance. Mr. Constantouros stated that the meeting was very positive and informative with the SFPUC interested in addressing the Town's issues regarding the seismic condition of the dam, potential flooding downstream of the dam, and emergency preparedness, and he reported that a number of misconceptions about the safety of the dam were dispelled. Mayor Krolik thanked Mr. Constantouros for arranging the meeting. She stated that Hillsborough residents were concerned about the safety of the dam since no real seismic evaluation has been performed since 1977, but she stated that she learned in the meeting with the SFPUC that constant internal monitoring has been ongoing since that time. The Councilmembers, Mr. Kianpour and Mr. Constantouros further discussed the Crystal Springs Lower Dam. Councilmember Benton requested that staff notify residents, especially those near the creek area, about future public meetings regarding the Crystal Springs Lower Dam. Mayor Krolik thanked Mr. Constantouros and Mr. Kianpour.

Exhibit C -Mitigation Strategy Spreadsheet

[Available online at <http://www.abag.ca.gov/bayarea/eqmaps/mitigation/strategy.html>]