

## **LHMP ANNEX Santa Clara County**

### **Introduction**

With a diverse population of more than 1.7 million residents (based on the 2000 census<sup>1</sup>), the Santa Clara County Operational Area encompasses the 15 cities and county comprising the southern portion of the San Francisco Bay Area known as Silicon Valley. This includes the three largest cities of San Jose, Santa Clara, and Sunnyvale; the west valley bedroom communities of Los Altos, Los Altos Hills, Los Gatos, Monte Sereno, and Saratoga; the high-tech communities of Campbell, Cupertino, Mountain View, and Palo Alto; industrial Milpitas, and the south county suburban expansion/rural interface areas of Gilroy, Morgan Hill, and their surrounding unincorporated areas. The Fiscal Year '05 budget for Santa Clara County is \$3.4 billion and there are 15,031 approved employees of the county.

### **The Planning Process**

This process of preparing this plan was familiar to Santa Clara County. The County has a Safety Element to its General Plan last updated in 1998 that includes a discussion of fire, earthquake, flooding, and landslide hazards. In addition, the County routinely enforces the requirements of the California Environmental Quality Act (CEQA) requirements (which, since 1988, have required mitigation for identified natural hazards). The County'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.

Many of the activities conducted by the County were fed into the planning process for the multi-jurisdictional plan. A member of the County Board of Supervisors also sits on the ABAG Executive Board. The County participated in various ABAG workshops and meetings, including the general "kick-off" meeting. The County was also represented at the Fire Forum. In addition, the County has provided written and oral comments on the multi-jurisdictional plan. Finally, the County provided information on facilities that are viewed as "critical" to ABAG.

### **Hazard and Risk 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). These hazards also impact this community.

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

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

The County examined the hazard exposure of County urban land based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. Of the 199,139 urban acres in the County,

- ◆ 22,885 acres are in the 100-year flood plain, while an additional 751 acres are in other flood-prone areas;
- ◆ 63,830 acres are subject to dam inundation;
- ◆ 36,836 acres are in areas of existing landslides;
- ◆ 117,872 acres are in areas of moderate, high, or very high liquefaction susceptibility as mapped by the U.S. Geological Survey, and 77,138 acres are in liquefaction study zones mapped by the California Geological Survey, while 34,593 acres have not yet been evaluated;
- ◆ 11,304 acres are in earthquake-induced landslide study zones mapped by the California Geological Survey while 34,593 acres have not yet been evaluated;
- ◆ 3,356 acres are in Alquist-Priolo study zones for active fault surface rupture mapped by the California Geological Survey.
- ◆ 155,781 acres are in the highest two categories of shaking potential, in large part because the County is in the vicinity of several known active and potentially active earthquake faults. These include the San Andreas, Hayward, Calaveras, Monte Vista and the Sargent faults.
- ◆ 17,933 acres are subject to high, very high, or extreme wildfire threat (because of the urban nature of the County), but 78,879 acres are in wildland-urban interface threat areas.

The County 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 8,048 miles of roadway in the County,

- ◆ 752 miles of roadway are in the 100-year flood plain;
- ◆ 2,074 miles of roadway is in an area subject to dam inundation;
- ◆ 2,732 miles of roads are in areas of existing landslides;
- ◆ 3,862 miles of roadway are in areas of moderate, high, or very high liquefaction susceptibility as mapped by the U.S. Geological Survey, and 2,367 miles are in liquefaction study zones mapped by the California Geological Survey, while 2,466 miles have not yet been evaluated;
- ◆ 502 miles of roadway are in earthquake-induced landslide study zones mapped by the California Geological Survey, while 2,466 miles have not yet been evaluated;
- ◆ 192 miles of roadway are in Alquist-Priolo study zones for active fault surface rupture mapped by the California Geological Survey;
- ◆ 5,452 miles of roadway are in the highest two categories of shaking potential;
- ◆ 2,236 miles of roadway are subject to high, very high, or extreme wildfire threat; 2,504 miles of roads are in wildland-urban interface threat areas.

Finally, the County examined the hazard exposure of critical health care facilities, schools, and county-owned buildings based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickcrit.html>. Of the 807 critical health care facilities, schools, and county-owned buildings in the County,

- ◆ 780 critical health care facilities, schools, or county-owned facilities are in either the 100-year flood plain or in other flood-prone areas;
- ◆ 326 critical health care facilities, schools, or county-owned facilities are in an area subject to dam inundation;
- ◆ 30 critical health care facilities, schools, or county-owned facilities are in areas of existing landslides;
- ◆ 248 critical health care facilities, or county-owned facilities are in areas of moderate, high, or very high liquefaction susceptibility as mapped by the U.S. Geological Survey, 317 schools are located in these areas;
- ◆ 53 critical health care facilities, 183 schools, and 81 county-owned critical facilities are in liquefaction study zones mapped by the California Geological Survey, while 24 critical health care facilities, 44 schools, and 29 county-owned critical facilities have not yet been evaluated;
- ◆ No critical health care facilities, 3 schools, and 2 county-owned critical facilities are in earthquake-induced landslide study zones mapped by the California Geological Survey, while 24 critical health care facilities, 44 schools, and 29 county-owned critical facilities have not yet been evaluated;
- ◆ No critical health care facilities, 3 schools, and 1 county-owned critical facility are in Alquist-Priolo study zones for active fault surface rupture mapped by the California Geological Survey.
- ◆ 340 schools and 158 county-owned facilities are in the highest two categories of shaking potential;
- ◆ 280 critical health care facilities, schools, or county-owned facilities are in wildland-urban interface threat areas.

Santa Clara County has recorded, as a result of the flood-prone areas, 27 repetitive loss properties based on the information at <http://quake.abag.ca.gov/mitigation/pickflood.html>.

The County plans to work with ABAG during 2005 to improve the risk assessment information being compiled by ABAG by providing information on unreinforced masonry buildings and soft-story apartments located in the County.

Drought, though a potential problem in the County, is not fully assessed. The County will work with ABAG and various water supply agencies on this issue.

The County 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. The ABAG Annex states that ABAG will be doing this work in 2005 through early 2006.

As these impacts are not fully developed, the County has reviewed the hazards identified and ranked the hazards based on past disasters and expected future impacts. The conclusion is that earthquakes (particularly shaking), flooding, wildfire, and landslides (including unstable earth) pose a significant risk for potential loss. The County is extremely concerned with the effects of earthquakes because seven of the ten forecast earthquakes would cause social and economic disruption at least equivalent to the 1989 magnitude 6.9 Loma Prieta earthquake, which resulted in approximately \$6 billion in direct physical damage and \$10 billion in total economic losses.

## Mitigation Activities and Priorities

As a participant in the ABAG multi-jurisdictional planning process, Santa Clara County staff assisted in the development and review of the comprehensive list of mitigation strategies in the overall multi-jurisdictional plan. The mitigation strategies list was reviewed by the County Roads and Airports, County Fire Department, Facilities and Fleet, Fire Marshall, Department of Planning and Development, Department of Agriculture and Resource Management, Hazardous Material Compliance, Health and Hospitals, American Red Cross, Department of Parks and Recreation, Clerk of the Board, Capital Programs Division, OSEC, and the Office of Emergency Services. Existing programs, responsible offices, and other pertinent information has been provided on the attached spreadsheets.

Many of the strategies are existing programs already a part of the County's planning process through County Ordinance, building and fire code enforcement, and development of the County's General Plan. 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 County will be working to identify potential funding sources. The projects with the highest level of priority in Santa Clara County are:

1. Seismic retrofit of four courthouses.

Seismic retrofit work was completed on 70 Hedding West Wing Penthouse (February 2004), 70 West Hedding East Wing Retrofit (1995), and County Old Historic Courthouse (1992). A seismic retrofit construction contract was awarded (February 2005) for Berger 1 Office and Warehouse buildings, and a seismic study of Valley Medical Center H-1 Building was completed (April 2000).

The Santa Clara County Board of Supervisors Agenda Item #30, November 19, 2002 allocated design funds to assess and seismically retrofit courthouses. Santa Clara County Facilities & Fleet Department has identified four courthouses needing seismic retrofit. These courthouses are:

1. Hall of Justice West, 200 West Hedding Street, San Jose, CA 95110-1717
2. Santa Clara Courthouse, 1095 Homestead Road, Santa Clara, CA 95050-5401
3. Palo Alto Courthouse and Justice Offices, 270 Grant Avenue, Palo Alto, CA 94306-1911
4. Los Gatos Courthouse, 14205 Capri Drive, Los Gatos, CA 95032-1515

All four buildings are owned and operated by the County of Santa Clara.

2. Aldercroft Creek Bridge — on Old Santa Cruz Highway, to build a bridge over a box culvert that is failing due to storm damage. Without the bridge, the road will close indefinitely when the culvert fails.

Old Santa Cruz Highway crosses Aldercroft Creek near the creek's outfall into Lexington Reservoir. Currently, the road crosses the creek by running on top of a box culvert. Due to excessive runoff during storm events, the culvert and embankments are failing causing Old

Santa Cruz Highway to collapse. In 1998, the road was reduced to one lane during the El Nino storms. At that time the road was patched with a \$130,000 repair, however, the repair was not expected to be a permanent solution. The road has once more been reduced to one lane during the January 2005 storms and is expected to be completely washed out during the 2006 rain season. The estimated cost to reproduce the same patch repair would be \$500,000 today and would again only hold up for another 5 years. Approximately 812 local residents depend on this road to get to and from their homes. In addition, there is a water supply line serving close to 3,000 residents that runs under the road on top of the culvert. It is vulnerable to damage when the road collapses.

The County of Santa Clara plans to build a bridge over Aldercroft Creek to eliminate dependency on the box culvert and ensure the road remains operational during and after storm events. The water line will be relocated to under the bridge ensuring uninterrupted potable water to the local residences.

3. Burbank Drainage — to install drainage improvements in the Burbank unincorporated area to reduce flooding.

The Burbank/Buena Vista area is located within San Jose near the downtown and is one of the oldest areas in Santa Clara County. It is home to a culturally and ethnically diverse group of residents, is a predominately low-income area, and includes commercial areas on streets surrounding the neighborhoods (e.g., West San Carlos Street). The area is frequently subjected to minor flooding during storms due to an inadequate drainage system. In some locations, there is no drainage system. The problem was further exacerbated with the construction of a new interstate freeway (I-280) in the 1970's that cut off a drainage channel from the Burbank/Buena Vista area to a creek outlet.

The County of Santa Clara has developed a "Master Plan for Correcting Storm Drain Deficiencies for West San Carlos Street." It identifies \$7.9 million in improvements needed to provide a 10-year storm event level of protection for the existing level of development in the area. The Master Plan divides these improvements into 5 priorities of individual distinct projects ranging from \$42,000 to \$2.8 million each. Priority 1 has been implemented. The County is currently seeking funding to implement Priorities 2 and 3.

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.

### **Plan Maintenance and Updating Process**

Santa Clara County Office of Emergency Services will ensure that monitoring of this Annex will occur. The plan will be monitored on an on-going basis. Major disasters affecting our community, legal changes, notices from ABAG as the lead agency in this process, and other triggers will be used in the monitoring process. Santa Clara County Office of Emergency Services will coordinate the process of reviewing and updating this Annex annually. As a part of that process, County 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 public will be involved

whenever the plan is updated and, as appropriate, during the monitoring and evaluation process. All public comments will be reviewed. Publicly initiated changes will be integrated into the plan updates whenever reasonable.