

APPENDIX A

The Planning Process

Introduction

Development of this multi-jurisdictional plan addressing the diverse concerns and challenges of a region of seven million people has required a multi-layered planning process that employs a variety of forums and techniques. These are described in the sections that follow.

The development of the initial plan in 2004-2005 began with a discussion of the overall scope of work and selection of the key hazards to be addressed and our vulnerabilities. The process then proceeded to a framing of policy goals and finally to a selection of specific mitigation strategies to address the hazards and risks.

The update of the plan that resulted in this 2010 document began in 2007. While the update has been comprehensive in scope, two issues have been most in need of expansion:

- ◆ disaster recovery and the need for speeding up the recovery process as one of the criteria used in designing mitigation strategies; and
- ◆ climate change as related to impacts on wildfires, drought, and flooding (including sea level rise).

Climate change is the only new hazard in the updated LHMP. No hazards from the original plan were removed in the updated plan. A complete list of hazards evaluated in the plan can be found in Appendix C. In addition, a major effort was undertaken to determine the overall regional priority for implementing these mitigation strategies. The planning process has been designed to accomplish these improvements. 114 local governments are full participants in the 2010 LHMP. See **Section (4) of the Planning Team** for an explanation of the requirements for participating jurisdictions. An additional 16 local governments have participated in the planning process, but are not full participants in the plan. These local governments have been termed “partnering jurisdictions.” In general, the difference is due to the addition of new cities, counties, and special districts that did not participate in the original LHMP. However, some jurisdictions are no longer participating, including Contra Costa County, and the City and County of San Francisco. Our update effort has focused on building upon these pre-existing efforts and identifying gaps that may lead to disaster vulnerabilities in order to work on ways to address risks through mitigation.

It is anticipated that this Local Hazard Mitigation Plan will be adopted at a public meeting of ABAG’s Executive Board in March 2010 following conditional approval of the plan by FEMA.

ABAG Background

By submitting letters of commitment to ABAG, the participating cities, counties, and special districts of the Bay Area have authorized ABAG to lead the update of this multi-jurisdictional Local Hazard Mitigation Plan. ABAG is a unique regional entity, well-suited to lead this effort. ABAG was formed as a Council of Governments by the cities and counties of the Bay Area to address social, environmental and economic issues that transcend local borders. ABAG is a local government as defined by 44 CFR sec. 201.2. The mission of ABAG is to facilitate and strengthen cooperation and coordination among local governments. The mission of ABAG is carried out by ABAG staff and overseen by ABAG’s General Assembly and Executive Board. The General Assembly adopts the annual budget and work program of ABAG and reviews policy actions of the Executive Board. Delegates to the Assembly are member cities and counties, each having one vote.

The Planning Team

Instead of developing a planning team from scratch, several existing committees involved in disaster mitigation were used. This LHMP has been prepared using a Combination Model. The committees described below provided authorized representation for local jurisdictions in the Bay Area. In addition, Direct Representation was required for each jurisdiction participating in the plan update. The planning team developed to update this multi-jurisdictional LHMP is comprised of:

1. ABAG staff
2. ABAG Executive Board
3. existing ABAG committees
 - a. Regional Planning Committee (RPC)
 - b. Earthquake and Hazards Outreach Committee
 - c. Lifeline Infrastructure and Hazards Committee
4. local participating jurisdictions

The roles and responsibilities are described in the following sections.

(1) ABAG Staff

ABAG staff (see **Credits**) led the update process of this multi-jurisdictional Local Hazard Mitigation Plan. Their role was to facilitate coordination and collaboration between the various members and components of the planning team. This included facilitating committee meetings, hosting regional workshops for local jurisdiction staff and developing a public outreach campaign. In addition, ABAG led the effort to develop chapters for each functional area and update the Appendices. All of the work produced by ABAG staff was extensively reviewed and approved by the planning team and members of the public.

(2) ABAG Executive Board

The Executive Board is composed of elected officials- members of county boards of supervisors and city councils. The function of the Executive Board is to receive, review, and act on recommendations from other Association committees, including RPC and to carry out policies established by the General Assembly. For purposes of the LHMP, the Executive Board's responsibility is to adopt the plan upon conditional approval by FEMA. The membership of the Executive Board is composed of 38 voting members. Thirty-five of these members are appointed to reflect the population size of each county, as follows:

- ◆ Alameda County (7) two for the county; two for the cities; three for the City of Oakland
- ◆ Contra Costa County (4) two for the county; two for the cities
- ◆ Marin County (2) one for the county; one for the cities
- ◆ Napa County (2) one for the county; one for the cities
- ◆ San Francisco County (5) two for the county; two for the city; one alternating appointment
- ◆ San Mateo County (4) two for the county; two for the cities
- ◆ Santa Clara County (7) two for the county; two for the cities; three for the City of San José
- ◆ Solano County (2) one for the county; one for the cities
- ◆ Sonoma County (2) one for the county; one for the cities

The president, vice president, and immediate past president also serve as voting members of the Executive Board. Advisory, non-voting members representing state or federal agencies may be invited to serve at the pleasure of the Executive Board. County representatives are selected by their boards of supervisors. City representatives are appointed by the mayors of member cities in each county. (Those officials representing the City of Oakland and the City of San José are appointed by their respective councils; the City of San Francisco representative is appointed by the mayor.) Each of these appointing

authorities may appoint alternates to the members selected.

(3) Existing ABAG Committees

Three ABAG committees were extensively involved in the planning process of the original development and update of the Local Hazard Mitigation Plan. These committees are composed of a cross section of elected officials, local jurisdiction staff, state and federal government staff, members of academia, private companies, NGOs and members of the public. ABAG, using these and other committees, has been committed to actively reducing the risk of natural hazards in the Bay Area for over 30 years. These committees have all been meeting regularly throughout the planning process to provide input, make recommendations, finalize regional priorities, and review chapters and appendices. The following is a description of the function of each committee. A roster of committee members can be found at the end of **Appendix A. The Section, Process for Updating the Plan**, describes in more detail the specific actions taken by each of the following committees.

RPC meetings are always publicly noticed. When the LHMP was an agenda item for the Lifelines or Outreach committee, the meetings were opened to the public and local jurisdictions not on the committee.

(a) Regional Planning Committee (RPC)

RPC is a unique regional forum composed of a minimum of 18 elected officials, including at least one elected county supervisor from each member county and a city elected official from each county. Members also include the Chairperson of the Bay Area Planning Directors' Association or designee; one representative each from the Bay Area Air Quality Management District (BAAQMD), Bay Conservation and Development Commission (BCDC), Metropolitan Transportation Commission (MTC), Regional Water Quality Control Board; and not less than ten citizens to represent the following categories: business, minorities, economic development, recreation/open space, environment, housing, labor, public interest, special districts. The function of RPC is to study regional issues of environmental management, housing, and infrastructure planning. **All RPC meetings were open to the public, advertised, and the public was allowed and encouraged to comment on the discussion.**

(b) Earthquake and Hazards Outreach Review Committee

Membership of this committee is split between technical experts and potential users of the hazard information, including elected officials, building officials, contractors, engineers, state and federal government staff, and members of the public. The purpose of this committee is to study and review background materials, reports and maps being prepared by ABAG related to earthquake hazards outreach including: housing vulnerability and retrofit, small business preparedness.

(c) Lifelines Infrastructure and Hazards Review Committee

Members of this committee represent a mix of lifeline planners and transportation users, including representatives from water districts, transit districts, California Geologic Survey, USGS, PG&E, MTC, and members of the public. The purpose of this committee is to

- ◆ Studies and reviews materials related to planning for transportation and lifeline system disruptions following future earthquakes:
- ◆ Review modeling approaches for estimating disruptions to the regional transportation and water system
- ◆ Review techniques for estimating the importance of various transportation and lifeline facilities to post-earthquake repines
- ◆ Review and propose recommendations for improving transportation and lifeline systems

(3) Participating Local Jurisdictions

Many local jurisdictions participated in the development of the update to the Local Hazard Mitigation Plan, but only jurisdictions that have met the following requirements set forth by ABAG and CalEMA are considered an **Actively Participating Jurisdiction**:

- ◆ submitted a letter of commitment to this effort to ABAG and CalEMA;
- ◆ submitted a list of critical facilities to ABAG for its use in developing this plan that included, at a minimum, the location and use of the facility (additional information included structural system type, insured value, capacity, year built, number of stories, roofing material, sprinkler system, alternate power, anchorage of equipment and contents, recent seismic retrofitting, and configuration irregularities);
- ◆ as applicable, submitted information on unique local hazards, vulnerabilities, and risks not identified or evaluated regionally;
- ◆ submitted comments and feedback on the multi-jurisdictional plan at a minimum of two workshops or other forums (including written or oral comments) as priorities for regional hazards, risks, and mitigation activities were identified.
- ◆ submitted a spreadsheet showing the local priorities for implementation of the various mitigation strategies, including department or group responsible for implementation;
- ◆ provide at least two opportunities for the public to comment on the local priorities for implementation of the mitigation strategies.
- ◆ an understanding that, for FEMA approval, they must supply ABAG, CalEMA, and FEMA with a formal resolution adopting both the multi-jurisdictional Local Hazard Mitigation Plan and their local annex.

Descriptions of how these requirements were implemented are detailed in the following sections. The individual contributions of each local government to the development of this overall plan are detailed in **Appendix H**. The tables in this appendix specify which local governments attended which ABAG forum or workshop, those that provided written or oral comments on various aspects of the overall plan. Meeting minutes for RPC or Executive Board meetings described in this section and in **Appendix H** may be obtained by visiting the ABAG website <http://www.abag.ca.gov/meetings/>. Minutes for all other meetings are available upon request to ABAG. **Appendix I** provides the name and contact information for those individuals who worked directly on this effort.

The 2007-2010 Planning Process for Updating the Plan

In order to achieve the goal of the Local Hazard Mitigation Plan to maintain and enhance a disaster-resistant region, extensive involvement from local governments, special districts and the public was considered crucial. Therefore, the planning process has been designed to:

- ◆ encourage genuine, collaborative planning where local governments, special districts, residents, and ABAG work together to identify regional hazards, mitigation strategies, and mitigation priorities.
- ◆ help ensure that through collaboration those identified needs are incorporated into a comprehensive regional plan as well as locally adopted plans and policies
- ◆ ensure that strong connections are made between local and regional mitigation activities.

The planning process included several phases: (1) reevaluate the functional areas of the plan based on prioritizing mitigation strategies that facilitate long-term recovery, (2) mitigation priority setting by cities, counties, special districts, and the public, (3) developing chapters highlighting the functional areas of the plan, (4) raising public awareness, and (5) focused outreach activities in partnership with local jurisdictions or community-based organizations.

(1) Reevaluate the Functional Areas of the Plan Based on Prioritizing Mitigation for Long-Term Recovery Issues

ABAG understands that recovery and mitigation are different processes and that mitigation takes place before a disaster while recovery is the long process of rebuilding after a disaster. Mitigation is intimately tied to recovery as mitigation actions, such as retrofitting structures, speed the process of recovery. If mitigation only addresses strengthening of facilities needed for immediate disaster response, the recovery process will be delayed. Thus, in order to meet the goal of a disaster resistant region, this LHMP must focus on mitigation as it ties to both disaster recovery and disaster response.

Starting in December 2007, ABAG began a series of issue-oriented workshop forums at meetings of its main policy standing committee, the Regional Planning Committee (RPC) relating to long-term disaster recovery. These workshops were the result of several factors, including the need to go beyond the short-term recovery planning of the Bay Area Urban Area Security Initiative (UASI), as well as the painful recovery process currently being conducted following Hurricane Katrina. **These meetings were open to the public, advertized, and the public was allowed and encouraged to comment on the discussion.** In addition, to ensure that a broad spectrum of perspectives has been brought forward, speakers from both government and public and private sectors have presented their views in these workshops. RPC has had meetings discussing the issues related to six of the functional areas of this plan, including:

- ◆ Overall financing of long-term disaster recovery (December 5, 2007)
- ◆ Long-term recovery of housing (April 2, 2008)
- ◆ Long-term recovery of business (particularly smaller local-servicing business) (June 4, 2008)
- ◆ Long-term recovery of government services and facilities (August 6, 2008)
- ◆ Long-term recovery of utilities and transportation systems (December 3, 2008)
- ◆ Long-term recovery of school and education (April 1, 2009)
- ◆ Long-term recovery of health systems (June 3, 2009)
- ◆ Land use change and long-term recovery (December 2, 2009)

(2) Regional Mitigation Priority Setting by Cities, Counties, and Special Districts, with Public Involvement

One of the shortcomings of the 2005 plan was the lack of consistent priorities which detracted from the quality of that plan. To correct that deficiency, ABAG staff created a multi-tiered process that focused on workshops and outreach. These workshops also provided an opportunity for local governments to participate in the planning process for the multi-jurisdictional plan.

At these workshops, attended by local jurisdiction staff, each of the strategies was reviewed for its relevance. Decisions were made by local jurisdictions about which strategies should be deleted, where wording needed to be changed to reflect current conditions, made clarifications and decided when new strategies should be added. At each workshop consensus was reached on what the regional priority for each strategy should be. 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.

- a. To ensure broad representation from transit agencies, sewer agencies, and water districts, separate forums were created for those staff.
 - ◆ *The sewer district forum*, on October 9, 2008, was attended by 78 staff from 30 sewer agencies and departments. Four members of the public were also in attendance at this meeting.
 - ◆ *The water forum*, on March 25, 2009, was attended by 30 staff from 17 water agencies and departments.

- ◆ *The transit district forum*, on February 12, 2009, was attended by 17 staff representing 10 transit agencies.
- b. Five sub-regional meetings held from April 27, 2009 to May 12, 2009 were attended by a total of 110 staff from 83 cities, counties, and special districts, including:
- ◆ 15 staff from 9 jurisdictions on April 27, 2009 in Fairfield, Solano County;
 - ◆ 15 staff from 13 jurisdictions on April 30, 2009 in Corte Madera, Marin County;
 - ◆ 15 staff from 14 jurisdictions on May 4, 2009 in Santa Clara, Santa Clara County;
 - ◆ 36 staff from 30 jurisdictions plus one member of the public on May 8, 2009 in Oakland, Alameda County, and;
 - ◆ 28 staff from 21 jurisdictions on May 12, 2009 in Redwood City, San Mateo County.
- c. Three regional workshops were held to review these draft priorities and receive additional feedback from subject area experts and additional local government staff. Participants at each of these workshops reached consensus on regional priorities where there were discrepancies between the priorities designated in each of the previous workshops. Participants also further refined the language of the strategies and added some new strategies based on their expertise. **These meetings were open to the public, advertized, and the public was encouraged to comment on the discussion.**
- ◆ The workshop on earthquake issues in conjunction with the ABAG Earthquake and Hazards Outreach Committee meeting was held on May 27, 2009, in which several retrofit contractors, private engineers, and members of the public commented on the process.
 - ◆ The workshop on wildfire held on July 2, 2009, was attended by 16 staff from 13 local governments and fire departments. Three members of the public were also in attendance and commented on the process.
 - ◆ The workshop on flooding was held on July 7, 2009, was attended by 21 staff from 16 water agencies, local governments, and a school district. Six members of the public were also in attendance and commented on the process.
- d. The entire revised mitigation strategies and draft priorities were posted online **for public comment** from August 17, 2009 to September 17, 2009. These strategies were announced on ABAG's website, through announcements at public meetings and in newspapers contacted by participating agencies.
- e. The revised mitigation strategies and draft priorities were recommended by ABAG's RPC for endorsement by ABAG's Executive Board in a public meeting on August 5, 2009 and during which the public had an opportunity to comment. One member of the public was in attendance at this meeting, but no comments were made. Several comments were given by RPC members that pertained to the need to include strategies to deal with public health issues and that there needs to be a strategy to deal with issues in the Sacramento-San Joaquin Delta. As a result of these comments, strategies INFR a-22 and HEAL c-6 were added. See Appendix G or Chapters 1-Infrastructure and 2- Health for the wording and discussion of these strategies. RPC also commented on the need to incorporate non-profits into the mitigation planning process. This issue is dealt with in strategies HSNG k-16 and ECON j-13.
- f. The final mitigation strategies and regional priorities were endorsed by ABAG's Executive Board in a public meeting advertized for public comment and during which the public had an opportunity to comment on September 17, 2009. No members of the public were in attendance at this meeting. The Executive Board moved to endorse the strategies and regional priorities with only minor comments. One member requested that we focus more on the impact of the climate change on infrastructure. As a result of that comment and at the request of water agencies at the September 2, 2009 Lifelines

(3) Developing Chapters to Highlight the Functional Areas

The decision was made by ABAG staff and members of ABAG's committees, that in order to better make the connection between hazards, risks and mitigation actions, chapters should be developed for the updated LHMP to address in more detail the issues that the mitigation strategies were meant to address. The chapters are organized around each of the eight functional areas. The strategies are grouped together by the common issue they address and are preceded by a short summary of the issue and how it is being addressed by different jurisdictions in the Bay Area today or where more needs to be done. The chapters were drafted by ABAG staff and reviewed at a series of workshops with LHMP participants, partners and the public. All chapters have been posted on ABAG's website for comment since August 30, 2009. These meetings are outlined below:

- a. ABAG's Lifelines Infrastructure and Hazards Committee met May 6, 2009 to review the outcomes of the Water Forum on March 25, 2009. On September 2, 2009, the committee to review the Infrastructure and Environment chapters developed by ABAG staff. This meeting was attended by 16 people representing 12 local lifeline infrastructure providers and local governments. A representative from the Bay Conservation and Development District was also in attendance and commented on the process. The major comments at this meeting had to do with the importance of climate change and its effect on other natural hazards which affect lifeline infrastructure providers. The Infrastructure chapter was updated to incorporate these comments. The update of both chapters was posted online for public comment. Updates to the chapters were reviewed at subsequent meetings of the Lifelines Committee on October 7, 2009 and December 8, 2009.
- b. ABAG's Earthquake and Hazards Outreach Committee met on September 23, 2009 to review the Housing, Economy and Land Use Chapters. This meeting was attended by 15 people representing local governments, retrofit contractors, engineers, the State Seismic Safety Commission, San Jose State University. Two members of the public with no specific affiliations were also in attendance and commented on the chapters. Comments from the meeting were incorporated in the chapters and posted online for further public comment.
- c. ABAG's Regional Planning Committee reviewed all of the LHMP chapters at its meeting on October 7, 2009, focusing on the Government Chapter. While the meeting was advertised and open to the public, no members of the public were in attendance at this portion of the RPC meeting. In general, the Committee agreed with the formatting of the chapters. The priorities identified for ABAG itself were also endorsed. The RPC continued with this process, particularly as related to existing and proposed land uses and land use change following disasters, at a workshop on land use change and disaster recovery at its December 2009 meeting.
- d. The Schools and Health chapters were based on Issue Papers developed for RPC meetings on issues related to Recovery and Health and School systems. These chapters were reviewed by the invited speakers of the meetings and the members of RPC.

(4) Raising Public Awareness

While every effort has been made to make this entire process open and accessible for public participation, the general low level of interest and knowledge of hazards and mitigation by a many members of the public makes outreach more difficult than for other issues, such as traffic, education, or crime. Thus, an extensive effort was made to supplement typical outreach efforts with extensive interaction with "publics" that, by definition, are more interested in this process – existing ABAG committees, local governments, and professional organizations. This conclusion does not mean that the public did not examine the plan.

For example, the “home page” for the “web site” set up for this effort, <http://quake.abag.ca.gov/mitigation>, received thousands of “hits” from 2007 to 2009.

In addition to the information on the website, public information campaigns or “messages” were developed to inform the public about update to the Local Hazard Mitigation Plan and to educate them about the issues addressed in the plan. This was accomplished by:

- ◆ Preparing an op-ed piece on the mitigation plan in conjunction with the 20th anniversary of the Loma Prieta earthquake published on September 29, 2009 by the Oakland Tribune, the Hayward Daily Review, and the Contra Costa Times.
- ◆ Securing opportunity for free print ad/community service space in local media in print and online, a task accomplished by cities, counties, and special districts participating in the update process.
- ◆ Posting information on ABAG’s popular earthquake and hazards website providing background information of the plan, advertising upcoming public meetings, and inviting public comment
- ◆ Working with organizations, local governments and special districts to schedule public meetings to discuss aspects of the plan specific to a particular sub-region or interest group that would also give the community opportunity to comment. Such events included (1) the Earthquake Alliance Meeting on mitigation opportunities for health and school systems on August 27, 2009 and (2) the joint conference on business economic and infrastructure system mitigation and recovery sponsored by the Business Executives for National Security (BENS) Northern California, the Bay Area Response Coalition (of financial institutions) (BARCFirst), and the Business Recovery Managers Association (BRMA) on Thursday, June 25, 2009.

(5) Focused Outreach Activities in Partnership with Local Jurisdictions

To ensure that the public has had an opportunity to review the draft priorities of these cities, counties, and special districts, two opportunities were provided for **public comment**.

- a. Each of the cities, counties, and special districts participating in this LHMP held at least one meeting in conjunction with a meeting of their City Council, Board of Supervisors, Planning Commission, or held a separate advertised public meeting. The workshops were held in August, September and October 2009 **and were open to the public**. In general, the focus of the meetings was on the draft mitigation strategies of each of these jurisdictions. While members of the public attended many of these meetings, they largely attended to be briefed on the issues and had no substantive comments. In those cases where members of the public were in attendance, there comments were considered and incorporated into the strategy priorities. Records of these meetings and public comments, if any, are on file with the local governments. Any comments related to the MJ-LHMP were forwarded to ABAG. Most comments had to do with unclear sentences or misspelled words. The only substantive comment related to the need to discuss mobile homes more fully. This change was made in Chapter 3 – Housing.
- b. Finally, the draft strategy priorities were posted online **for public comment** on individual city, county, and special district web sites in August, September and October 2009. Announcements in local newspapers were placed to highlight the need for public comment. Some local governments advertised these meetings through local cable access channels. Those organizations participating in the hazard workshops also participated in advertising the opportunity for public comment.
- c. The strategies were then posted on ABAG’s web site at <http://quake.abag.ca.gov/mitigation/strategy.html>. The only substantive comment received from a member of the public related to the need to discuss private schools more fully. This change was made in Chapter 6 – Schools and Education.

Implementation of Mitigation Strategies

Each local government assigned tentative priorities for the 371 mitigation strategies based on the regional priorities, as well as its own local hazards and risks, as well as on its authority and functions. For example, strategies focused on soft-story apartment buildings are not applicable to a small community with no multifamily housing. In addition, some strategies are appropriate for water districts, others for school districts, and others for county health departments. These preliminary priorities were assigned by local government staff based on a review by people from various agency departments within the local government. 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.

Cities, counties, and special districts held meetings and workshops as part of the process needed to identify their specific hazards, risks, and appropriate mitigation strategies as described in the previous section. At a minimum, the mitigation strategies were reviewed at a public meeting of the organization's Council, Commission, or Board, as well as posted online for comment prior to submission of the draft LHMP and annexes to CalEMA and FEMA. For more information on each jurisdiction's planning process, see the specific annexes prepared by that local government.

The implementation mechanism varies by jurisdiction. General planning policies are being incorporated into the Safety Element of the General Plan by cities and counties. These strategies are typically those implemented by planning, building, and community development departments. Incorporating these mitigation strategies into the Safety Element has become a major priority of cities and counties because of the state legislation waiving local match for Public Assistance funds. Special districts, as well as cities and counties, typically work to retrofit existing facilities and build new or replacement facilities using capital improvement budgeting processes.

Incorporating Comments

Each of the workshops detailed in the above section had as one of its primary purposes to solicit comments on the development of the plan and mitigation strategies. Many of the workshops focused on developing the chapters. These involved a page-by-page review of the text of the chapters by committee members. In addition, some jurisdictions read chapters of particular interest to them and submitted comments via email to ABAG staff. In all cases, whenever comments or suggestions were received, they were incorporated into the text of the plan through a consensus process. Minutes of committee meetings indicate that suggestions translated directly into changes in the text of the chapters. Public comments were also received from the ABAG public outreach campaign, as well as at the public meetings held by local jurisdictions. In general, the public had questions rather than specific comments on the plan. Whenever comments were provided they were incorporated into the plan.

Opportunities for Other Interested Parties Involvement

While outreach to neighboring local governments might normally be appropriate in the development of a plan such as this, because the area covered by this plan is so large, the logical neighboring entity is the State of California. Staff members of the State Seismic Safety Commission, California Geological Survey, OSHPD, Division of the State Architect, and Coastal Regional Office of Emergency Services were all informed of this update and most were actively involved in the development of this plan. In addition, review of the committee rosters provided at the end of this Appendix will demonstrate that

extensive involvement was sought from a variety of parties on the LHMP. This includes non-profits, universities, local businesses, the State.

Review and Incorporation of Earlier Plans and Studies

Because this is an update to an existing LHMP, that was the main document used in this update process. However, this process was familiar to the local governments of the Bay Area even before the development of the original LHMP. All of the local governments involved in the development of this plan have plans, policies, and/or programs that predate this plan because of:

- the vulnerability of the Bay Area to natural hazards;
- our experiences with past disasters;
- the requirements of the State of California for Safety (and, earlier, Seismic Safety)
- Elements in city and county General Plans since the early 1970s;
- California Environmental Quality Act (CEQA) requirements (particularly since 1988);
- the need to develop sophisticated risk and mitigation information on infrastructure as transportation providers and utilities have worked to gain public acceptance for major programs to strengthen the disaster resistance of these facilities; and
- ABAG's long history of developing hazard maps and risk assessment information.

Our effort has focused on building on these pre-existing efforts and identifying gaps that may lead to disaster vulnerabilities in order to work on ways to address risks through mitigation.

ABAG directed local governments to review the plans and studies described above and provide ABAG with relevant information. In addition, ABAG itself examined the existing technical information available on the various hazards affecting the Bay Area and their impacts. ABAG is very familiar with this information because of the extensive amount of research it has conducted with funding from the U. S. Geological Survey, the National Science Foundation, and others. However, many of the relevant flooding, landsliding, and wildfire data and reports were provided to ABAG following extensive outreach to state and federal agencies, as well as to relevant professional organizations. The result was an extensive library of publications, including plans, studies, reports, and technical data. The most relevant are referenced as footnotes or are summarized briefly in **Appendix C**.

Additional reports that are more relevant to specific local government issues and are cited in specific local annexes to this overall plan. In general, local jurisdictions do not have the capability to develop hazard maps and technical documents specifically for their jurisdictions.

Decision Process for Updating Plan Sections

Following the process outlined in the Plan Maintenance and Update Process (Appendix B of the 2005 Plan) ABAG determined that an update of the plan was not required until 2010 because none of the requirements for an update were triggered prior to the required five-year update.

Hazard and Risk Assessment – The first step that ABAG took in the update of this plan was to contact all developers of hazard maps used in the original LHMP to see if there had been any updates. When an update had occurred, it was incorporated into the plan. These new hazard maps were used to update the information on exposures of critical facilities and land uses to hazards. These updated hazard maps were then used to update the Risk Assessment portion of the plan. Although several of the maps had been updated, there was no major change to any of the maps. However, during the last five years, the failure of the levees in New Orleans resulted in a major new section in the Risk Assessment (**Appendix C**). Finally, **Appendix E** and **F** on Assessing Vulnerability were added.

Mitigation Strategies – Early in the process it was decided that to better make the connection between hazards, risks and mitigation strategies, chapters would be developed on each functional area that explain the rationale for each group of mitigation strategies. This decision was supported by the whole planning team and they served as reviewers of the chapters as they were developed by ABAG staff. Wording of some of the strategies were changed, some strategies (particularly related to climate change) were added, others were deleted (largely due to being redundant or no longer applicable), and the regional priorities for those strategies were established for the first time.

Planning Process – The planning process section (this Appendix) was updated to describe the revision of the hazards and risk assessment, the mitigation strategies and chapter development, local jurisdictional involvement, and public involvement.

Plan Maintenance Process – Appendix B was reviewed and only minor changes made.

The 2004-2005 Planning Process

The planning process for the development of the initial plan involved: (1) workshops and interactions with local government staff to identify regional and local hazards and risks, (2) development of a comprehensive list of mitigation strategies or actions, and (3) public outreach.

(1) Interactions with Local Government Staff Focused on Regional and Local Hazard Identification

Sub-Regional Workshops

From June 1 through August 5, 2004, ABAG staff held a series of nine 3-hour forums, one in each of the nine counties in the San Francisco Bay Area. Email invitations were sent to city and town managers, county administrators, planning directors, public works directors, building officials, fire chiefs, and emergency managers of cities and counties. Separate invitations were emailed and faxed to all of the city and county elected officials on ABAG standing committees and the ABAG Executive Board, which represents all 9 counties and 101 cities of the Bay Area. County emergency managers forwarded the information to their contacts in special districts. ABAG worked with staff of the Metropolitan Transportation Commission (MTC) so that transit districts would be notified. A total of 260 staff (and two elected officials) from counties, cities, and special districts attended these workshops.

At these meetings, ABAG staff spent approximately two hours discussing the scope of work in developing this plan, demonstrating proposed Internet-based hazard mapping capabilities, discussing the types of risk assessments to be performed, and talking about the general format of the plan.

An hour during each of these three-hour workshops was spent discussing hazards to be addressed, hazard mapping, risk assessment, and hazard mitigation strategies. Each person was individually queried regarding their views on the process, their concerns, and what they viewed as the most important outcomes of this process. This hour-long discussion became even more focused and interactive in the subsequent workshops than in the earlier ones. It should be noted that the issues identified in later workshops were brought to the attention of the attendees of the earlier workshops through email to ensure adequate feedback.

The immediate result of these workshops and follow-up emails was the “finalization” of the key hazards to be addressed, as well as the draft list of 53 hazard maps to be put into ABAG’s on-line geographic information system (GIS). In addition to the more general issues, some specific concerns were also

addressed. For example, several attendees stressed the need to provide adequate explanatory materials on the hazard maps being developed for non-technical local government staff members, elected officials, and the general public. They had discovered this problem while showing hazard maps at past city council meetings. This discussion resulted in a redesign of the map layouts on the website, making them easier for the public to review and comment.

ABAG outlined the existing technical reports and studies that have been used as a basis for the hazard assessment, exposure, and vulnerability portion of this plan and encouraged feedback to ensure that they are the most comprehensive and technically accurate reports and studies available. These specific reports are discussed and referenced in the applicable plan sections.

ABAG staff also outlined the pros and cons of organizing the mitigation section of the plan based on the traditional categories of hazards versus organizing this section along functional areas. The consensus of these groups was to organize the plan by functional area (health, housing, education, etc. – not fire, earthquake, flood, etc.). The advantages of this organization scheme were viewed as:

- ◆ stressing opportunities for multi-hazard mitigation;
- ◆ focusing on the positive aspects of what we want to have (housing and a functional transportation system, for example), rather than what we do not want (a fire or earthquake disaster, for example);
- ◆ providing stronger opportunities to integrate hazard mitigation into other areas of planning, such as transportation, housing, and land use, rather than isolating it as an offshoot of emergency response; and
- ◆ creating ways to have a large and diverse region containing numerous cities, counties, and special districts identify what we can do together.

Local Governments Review and Add to Existing Hazard Information

ABAG directed local governments to review the plans and studies described in the *Introduction* to this appendix and provide ABAG with relevant information. In addition, ABAG itself examined the existing technical information available on the various hazards affecting the Bay Area and their impacts. ABAG is very familiar with this information because of the extensive amount of research it has conducted with funding from the U. S. Geological Survey, the National Science Foundation, and others. However, many more of the relevant flooding, landsliding, and wildfire data and reports were provided to ABAG following extensive outreach to state and federal agencies, as well as to relevant professional organizations. The result was an extensive library of publications, including plans, studies, reports, and technical data. The most relevant are referenced as footnotes or are summarized briefly in Appendix C. Additional reports are more relevant to specific local government issues and are cited in specific local annexes to this overall plan.

(2) Development of Comprehensive Range of Mitigation Strategies or Actions

Mitigation Policy Outline and Review

Having reviewed the discussions at eight of the nine county forums, as well as the draft plans of Berkeley, Napa, and the State of California, ABAG staff developed a draft overall goal and eight basic commitments for the plan. These general policies were presented for comment at the July 15, 2004 meeting of ABAG's Executive Board. This Board is the principal policy Board for ABAG. It meets once every two months and is composed of County Supervisors and City Council members representing all of the nine counties in the Bay Area and the 101 cities in those counties. Meeting agendas are publicly

announced as required by California's Brown Act and are mailed to hundreds of individuals who have requested to receive the agendas. The meetings of this Board are open to the public. While there was considerable discussion regarding the need to address hazard issues, no substantive changes in the goal or commitments were made.

Next, the goal and policies were presented to ABAG's Regional Planning Committee (RPC) at the September 1, 2004 meeting. RPC is the planning policy committee for ABAG. It meets once every two months and is composed of County Supervisors and City Council members representing all of the counties in the Bay Area and the cities in those counties, as well as environmental, economic, and equity groups. Meeting agendas are publicly announced as required by California's Brown Act and are mailed to hundreds of individuals who have requested to receive the agendas. The meeting was also open to the public and the public had the opportunity to comment. The group discussed the general commitments, recommended a change in the way the commitments were ordered, which is reflected in their current order, and supported the commitments in concept.

Use of Two ABAG Special-Issue Review Committees for Mitigation Strategy Development

Two committees were used to develop the sections of the plan that address housing safety, business risk, and lifeline issues.

The ABAG Earthquake and Hazards Outreach Committee was tasked to help with development and review of the mitigation strategies related to housing and business. The committee is chaired by an elected official and has members consisting of city staffs, private construction contractors, California Geological Survey and U.S. Geological Survey scientists, and structural engineers (including both private-sector engineers and an engineer from the State Seismic Safety Commission staff).

At the meetings of this Outreach Committee on June 30, 2004 and September 15, 2004, the continued integration with the International Code Council (ICC) Joint East Bay-Peninsula Chapter effort to develop housing retrofit standards was discussed, and supported. ABAG's proposed new effort to coordinate with the American Association of Grading Officials on landslide mitigation was also presented and discussed. Concerns for soft-story apartments were closely reviewed and the need for a full-day charrette and policy forum was expressed. ABAG has been working with, and was encouraged to continue to work with, Lakeshore Ave. businesses in Oakland in an effort to identify ways to improve the resiliency of downtown retail businesses.

The second committee, the ABAG Lifelines Infrastructure and Hazards Review Committee, is also chaired by an elected official and has members from city and county staffs, local transit districts, the California Highway Patrol (CHP), Caltrans District 4, local water districts, PG&E, SBC Communications, the American Red Cross-Bay Area, the U.S. Geological Survey, and the Coastal Region office of the California Office of Emergency Services. This group met on July 26, 2004, to discuss the development of this plan and to brainstorm potential mitigation strategies, particularly those related to transportation, water supply, sewage, power, and communications systems. The ways these issues interrelate to health, education, and the environment were also discussed. A particular effort was made to develop additional, and improve existing, mitigation strategies related to flooding hazards. Additional comments and ideas were obtained from this committee at its meeting of September 16, 2004.

Creation of First Draft of Mitigation Strategies

ABAG staff drafted an outline of mitigation strategies and circulated the strategies to all participating local government agencies and various professional organizations during September 2004. The strategies

were created based on comments and discussions of the groups listed above, as well as from a review of the State Hazard Mitigation Plan and draft (at the time) Local Hazard Mitigation Plans of Berkeley, Napa (City), Napa County, and Oakland.

Interaction with Professional Groups for Technical Feedback on Mitigation Strategies

From late July 2004 through November 2004, ABAG staff actively approached various professional organizations and advocacy groups to obtain feedback on the preliminary commitment policy statements and mitigation strategies in the plan. These meetings and workshops were invaluable, in part because they generated active involvement of staff members of consulting firms, construction contractors, universities, and non-governmental agencies.

Formal and informal presentations were given to meetings or workshops of:

- ◆ the Earthquake Engineering Research Institute Northern California Chapter (EERI-NC) Government Committee (July 26, 2004),
- ◆ the ICC East Bay/Peninsula Chapter (July 21, 2004),
- ◆ the American Society of Grading Officials (July 21, 2004), and
- ◆ the FireSafe Councils (August 25, 2004).

At these meetings, ABAG staff stressed the need for feedback and assistance in drafting mitigation strategies that could be incorporated into the general outline of the eight key commitments of this multi-jurisdictional plan. The EERI-NC meeting resulted in a revised draft of the mitigation strategies related to various types of privately-owned and local government buildings vulnerable to earthquake damage. The ICC meeting resulted in an outline of the mitigation strategies related to vulnerability of single-family homes. The ASGO meeting resulted in strategies related to mitigation of landslides. Finally, the FireSafe Councils meeting resulted in the development of the range of strategies related to fire.

Additional outreach to professional organizations occurred in October and November after the first formal plan release on October 6, 2004. (More information on the October 6th event is included in the following section.) These efforts focused on obtaining comments and peer review for the draft strategies and were more outreach than plan development. Presentations were made to the following groups:

- ◆ the Geotechnical Engineering Earthquake Reconnaissance (GEER) group (October 7, 2004) related to landslide mitigation strategies,
- ◆ the Earthquake Engineering Research Institute Northern California Chapter (EERI-NC) Lifeline Committee (October 28, 2004) related to the **Infrastructure** area,
- ◆ San Francisco Community Agencies Responding to Disasters (SF-CARD) (November 4, 2004) related to the **Health** area,
- ◆ the Structural Engineers Association of Northern California (SEAONC) (November 9, 2004), and
- ◆ the California Preservation Foundation (November 18, 2004) related to historic issues under the **Housing, Economy, and Government** areas.

(3) Public Participation

Initial General Public Outreach

The DRAFT Local Hazard Mitigation Plan was distributed at the ABAG General Assembly conference on “Taming Natural Disasters” on October 6, 2004. This conference was widely advertised with printed and email fliers sent to 60,000 people representing local governments, business, social services,

engineering, and environmental groups. Comments on additional strategies were solicited at the conference. More than 200 conference attendees were encouraged to submit comments.

ABAG used the October 6th conference to encourage the media to help publicize the plan and posted a request for comments on our web site to collect comments from the public. Additional press outreach occurred before October 17, 2004, the 15th anniversary of the Loma Prieta earthquake, including an article in the San Jose Mercury News, the largest circulation newspaper in the region. We encouraged the public to mail in or email suggestions.

Based on the comments received, the DRAFT Local Hazard Mitigation Plan was revised. All of the comments were addressed. Most were incorporated directly in the plan. People who suggested changes that were not incorporated into the plan were sent replies explaining why the changes were not made. Largely the changes that were not made would have added duplication or would have put the plan's focus on emergency response, rather than on mitigation. The revised Local Hazard Mitigation Plan was forwarded to FEMA Region IX and the California Office of Emergency Services on October 27, 2004.

Focused Issue Workshops and Additional Outreach and Review

Based on the comments received on the Draft Local Hazard Mitigation Plan distributed at the October General Assembly on "Taming Natural Disasters," four issues were identified that would benefit from immediate further work – health and disasters, education and schools, historic structures, and soft-story multi-family residential buildings. ABAG held focused workshops were held on each of these issues:

- ◆ Health and Disasters on December 14, 2004 – attended by 8 people (including local government public health experts and non-profits),
- ◆ Education and schools on December 16, 2004 – attended by 22 people (largely school district employees), and
- ◆ Soft-Story Residential January 27, 2005 – attended by 45 people (including private contractors, architects, and engineers as well as local government building officials, planners, and elected officials).

ABAG staff used an existing forum organized by the City and County of San Francisco on historic buildings attended by approximately 20 people on January 12, 2005, to gain insight on how to modify the plan rather than holding the meeting at ABAG.

Comments received from OES, FEMA, and professional organization outreach in late October and November, and the first two of the focused workshops listed above, were incorporated into another version of this Local Hazard Mitigation Plan. These revisions were provided to cities, counties, and special districts for a final round of comment in early January 2005.

Again, *all* of the comments received were reviewed and most suggestions were incorporated directly in the plan. People who suggested that changes be made that were not incorporated into the plan were sent replies explaining why the changes were not made. Almost all suggested changes that were not incorporated were not made because they would have added duplication or made the plan's focus on emergency response, rather than on mitigation. All changes to the mitigation portion of this plan were finalized on January 28, 2005.

A Note on General Public Participation and Outreach during Plan Development

While every effort has been made to make this entire process open and accessible for public participation, the general low level of interest and knowledge of hazards and mitigation by a many members of the

public makes outreach more difficult than for other issues, such as traffic, education, or crime. Thus, an extensive effort was made to supplement typical outreach efforts with extensive interaction with “publics” that, by definition, are more interested in this process – existing ABAG committees, local governments, and professional organizations. This conclusion does not mean that the public did not examine the plan. For example, the home page for the web site set up for this effort, <http://quake.abag.ca.gov/mitigation>, received 2,870 hits from October-December 2004. In addition, the plan was developed by focusing outreach both on each *hazard*, and on each commitment (or *functional area*).

While outreach to local governments in adjacent regions might normally be appropriate in the development of a plan such as this, because the area covered by this plan is so large, we determined that the logical neighboring entity is the State of California. Staff members of the State Seismic Safety Commission, California Geological Survey, California Department of Forestry, and Coastal Regional Office of Emergency Services were all involved in the development of this plan. It was also determined that some additional outreach with reclamation districts that own levees in the delta areas will be brought into future workshops held by the ABAG Lifelines Infrastructure and Hazards Review Committee. In addition, extensive outreach occurred with Bay Area local governments that developed independent plans, including Napa County and its cities, Sonoma County, Marin County, and the City of Berkeley.